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ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LIMITED  
MINERAL RESOURCES DIVISION

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EXPLORATION LICENCE NO. 4/78 - ZEEHAN

PROGRESS REPORT ON EXPLORATION ACTIVITY

14TH JANUARY, TO 14TH JUNE, 1984.

E.Z. REPORT No. T192

I.J. MATHISON,

AUGUST, 1984.

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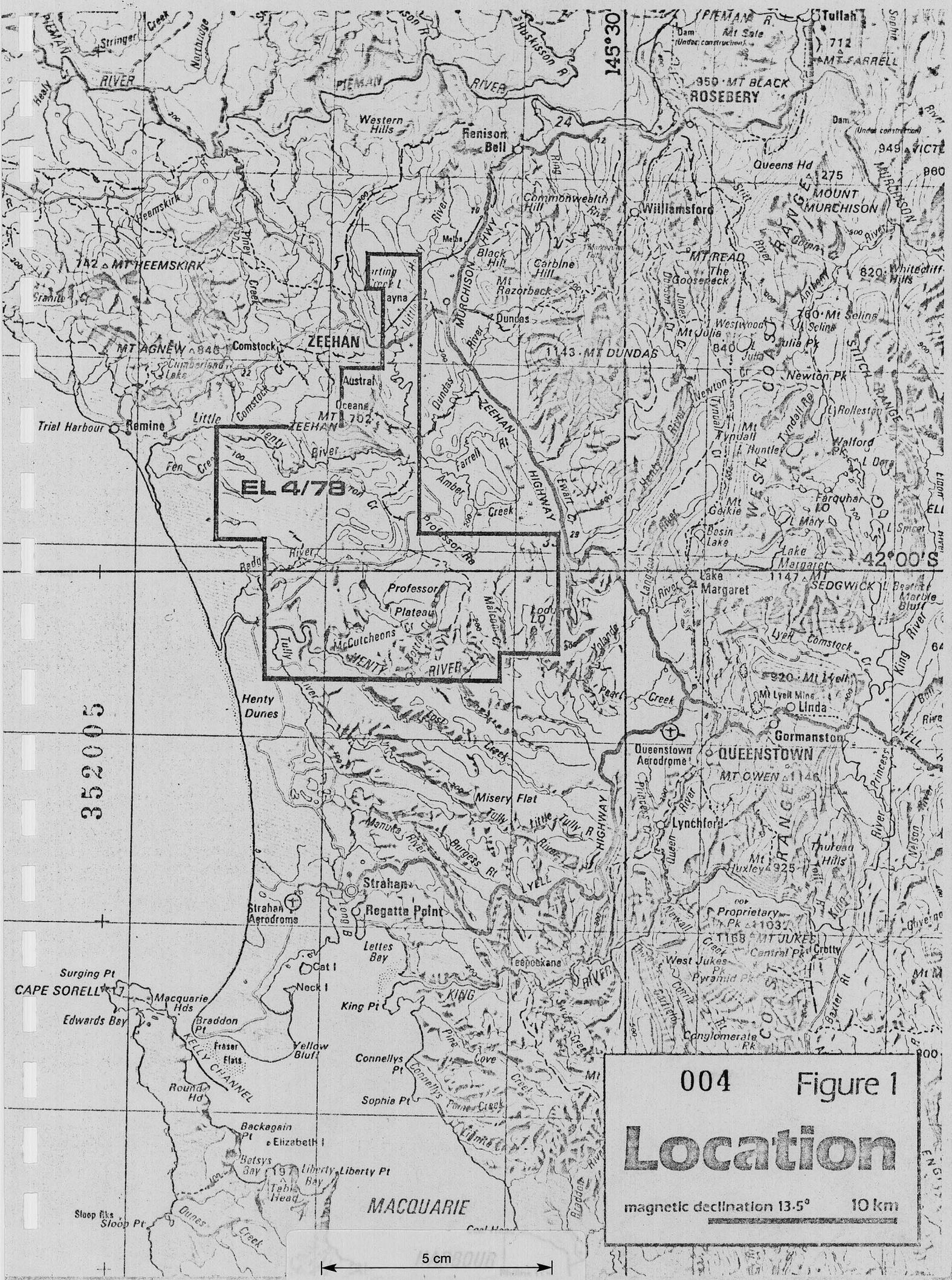
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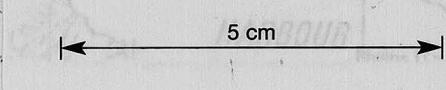
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004 Figure 1  
**Location**  
 magnetic declination 13.5° 10 km



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## 1. INTRODUCTION

### 1.1. Location

E.L. 4/78 (Zeehan) of 208km<sup>2</sup> 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. The location of E.L. 4/78 is 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. All reports by Amoco Minerals on exploration in E.L. 4/78 are listed. For details see E.Z. Report T177.

### 1.3. Prospect Locations

Plate 1 shows grid and prospect locations within E.L. 4/78. There are eight major grids - six covering areas of Ordovician Limestone and two over Cambrian sediments.

### 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 mineralisation within the Cambrian basement shales and carbonates are secondary exploration targets.

## 2. EXPLORATION UNDERTAKEN 14TH JANUARY, TO 14TH JUNE, 1984

Exploration in E.L. 4/78 during this period was restricted to the Gordon Limestone. Geochemical analyses and petrology of drill core from the North Austral Grid were completed, costeans were excavated in the Pyramid, Myrtle, Grieves, Baura and Rose Valley Grids, diamond drill holes were completed in the Myrtle and Grieves Grid, and Wacker sampling of the Myrtle, Grieves and Baura Grids commenced. All field work carried out and results to hand at 14th July, 1984 are described in detail below.

### 2.1. Costeaning

#### 2.1.1. WORK COMPLETED

20 costeans totalling 2,068m were dug on the Pyramid, Myrtle, Grieves, Baura and Rose Valley Grids. Most costeans were designed to test areas where Jacro auger samples had returned highly anomalous lead and/or zinc values. Others were to test strike extensions of known mineralisation.

Costeans were dug to solid bedrock or to the maximum reach of the O & K excavator (5.5m). Samples were collected over 2m intervals from the bottom of the trench. Where trenches were shallow (<1.5m deep) and had stable walls, channel samples were collected. However, the majority of samples were collected by the excavator. Samples were dried, split, pulverised and digested using mixed acids (nitric, perchloric, hydrochloric and hydrofluoric acids). Cu, Pb, Zn, Ag, Fe and Mn were determined by AAS and Ba by pressed powder XRF.

Geology of the costeans is based on sample descriptions. Few structural data were collected because most costeans were very unstable. Many trenches collapsed soon after excavation.

All results were transferred to data sheets. Geology, sample depth, mineralisation and significant assays are illustrated on costean profiles and costean locations and significant results are summarised on grid plans.

These plans and data sheets often show gaps in the costeans. Not all samples could be collected. Sometimes the excavator could not penetrate the overburden. In others the excavator was shifted because of boggy ground or costean collapse and occasionally sampling was prevented by excessive water.

2.1.2. RESULTS (See Table 1 for a brief summary of results.  
Appendix A for details and profiles  
Plates 2, 3, 10, 11 and 12 for locations.)

Very encouraging results were obtained from the costeaning programme. Results supported the high lead and zinc values obtained from Jacro auger samples and, in most cases, extended the width of known mineralisation.

A significant finding of the costeaning programme is the extent and depth of the clay layer over the area. In many costeans, the excavator could not reach bedrock and clay was sampled instead. While some of these clays may be in situ pugs developed by the decomposition of limestone, others are certainly transported clays deposited in peat bogs. No simple way of distinguishing this transported clay from in situ clay has yet been determined.

While most clay had elevated geochemistry and some mineralisation occurs in clay, several costeans exposed zinc-lead mineralisation in bedrock. Mineralised bedrock was either sideritised or dolomitised limestone. Significant mineralisation in bedrock suggest three mineralised horizons within the Gordon Limestone in the Grieves area: these are:-

- i) Mineralised siderite and sideritised oolitic limestone at the base of the Gordon Limestone near the old Grieves Mine (costeans 47,800N, 47,900N, 48,000N and 48,400N).
- ii) Mineralised dolomite and dolomitic breccias towards the middle of the Gordon Limestone (costean 47,100N).
- iii) Mineralised sideritic limestone near the top of the Gordon Limestone (costean 47,600N).

Encouraging mineralisation also occurs in the northern part of the Myrtle Grid. Structural and stratigraphic relationships are much less clear in this area.

Significant features of individual costeans are outlined below:

TABLE 1 - BRIEF COSTEAN SUMMARY

<u>Line</u>	<u>Interval</u>	<u>Best Assays (2m sample intervals)</u>
<u>PYRAMID GRID</u>		
1,800N	1,404- 1,452E	Zn 3,300 ppm and Pb 375 ppm
1,750N	1,424- 1,506E	6m ave 7.18% Pb, 2.13% Zn
1,700N	1,426- 1,500E	2m of 1.55% Pb, 0.15% Zn
<u>MYRTLE GRID</u>		
50,600N	60,350-60,478E	2m of 17.83% Zn, 3.78% Pb, 23 g/t Ag
50,500N	60,300-60,526E	8m ave 6.93% Zn, 0.78% Pb and 23 gt/ Ag
50,300N	60,050-60,430E	2m of 7.1% Zn, Pb <0.5% throughout
50,200N	59,750-59,900E	2m of 1.59% Zn, 0.3% Pb
48,600N	60,300-60,376E	Zn 3,650 ppm and Pb 500 ppm
<u>GRIEVES GRID</u>		
48,400N	61,062-61,134E	2m of 2.38% Zn, 2.9% Pb
48,000N	60,300-60,334E	Zn 0.76% and Pb 0.35%
47,900N	61,278-61,378E	10m ave 3.67% Zn and 0.53% Pb
47,800N	61,290-61,352E	8m ave 10.18% Zn and 0.55% Pb
47,600N	60,550-60,686E	12m ave 3.1% Zn and 0.4% Pb
47,100N	61,148-61,200E	20m ave 7.04% Zn and 1.09% Pb
<u>BAURA GRID</u>		
46,200N	60,924-60,950E	Zn 6,400 ppm and Pb 5,300 ppm
45,300N	60,876-60,950E	Zn 7,800 ppm and Pb 4,600 ppm
45,222N	61,000-61,028E	Zn 3,000 ppm and Pb 4,000 ppm
45,200N	60,924-60976E	Zn 3,500 ppm and Pb 1,325 ppm
<u>ROSE VALLEY</u>		
44,200N	60,700-60,900E	Zn 1,750 ppm and Pb 750 ppm
44,000N	61,016-61,122E	Zn 4,550 ppm and Pb <500 ppm

**Pyramid Grid**

Line 1,800N Interval 1,404 - 52E  
 Total Length 48m Intervals Sampled 1,404 - 1,440; 1,450 - 1,452.  
 Purpose: To test anomalous Jacro auger sampling near the old Pyramid workings. Assays range up to 2,800 ppm Zn and 240 ppm Pb.

Result: Samples collected consist of peaty clay, sandy clay and limestone. Elevated Zn geochemistry (1,150-3,300 ppm) and minor Pb (155-375 ppm) were reported from 8m of brown, pyritic, peaty clay.

Line 1,750N Interval 1,424 - 1,506E  
 Total Length 82m Intervals Sampled 1,424 - 1,464E; 1,468 - 1,506E.  
 Purpose: As for 1,800N.  
 Assays range up to 2,800 ppm Pb and 2,100 ppm Zn.

Result: Samples collected consist of limestone, black puggy clay and minor mineralised dolomite. 6m of black, puggy, pyritic clay averaged 7.18% Pb and 2.13% Zn while the 2m of mineralised dolomite reported 2.78% Pb and 0.27% Zn.

Line 1,700N Interval 1,426 - 1,500E  
 Total Length 74m Intervals Sampled Total Length  
 Purpose: As for 1,800N.  
 Assays range up to 1,900 ppm Zn and 1,050 ppm Pb.

Results: Fresh limestone was intersected throughout. Assay results were generally less than 500 ppm Zn and Pb. The westernmost sample assayed 1.55% Pb and 1,500 ppm Zn in a grey micrite limestone.

**Myrtle Grid**

Line 50,600N Interval 60,350 - 60,478E  
 Total Length 128m Interval Sampled Total length.  
 Purpose: To test anomalous geochemistry from a hand auger sampling programme. Assays range up to 2.1 % Zn and 1.45% Pb.

Results: Samples consist of weathered siltstone, black puggy pyritic clay, green to brown silty or sandy clay, and minor limestone. Thin layers or veins of banded galena and sphalerite occur in a well cleaved siltstone within one 2m sample. This sample assayed 17.83% Zn, 3.78%<sup>Pb</sup> and 23 g/t Ag. All clay samples and some siltstone samples reported elevated Zn geochemistry (0.1-1.5%) while Pb values between 0.03 and 0.7% are common.

Line 50,500N Interval 60,300 - 60,526E  
 Total length 226m Interval Sampled Total length.  
 Purpose: To test anomalous Jacro auger sampling.  
 Assays range up to 4.1% Zn and 1.05% Pb.

Results: Samples range from pyritic black clay and dark grey clay in the east through limestone with barite, to a friable, silty, weathered rock followed by well cleaved, weathered siltstone. Best assays of 54m of 2.76% Zn and 1.07% Pb were obtained from black pyritic clays. This 54m includes 8m averaging 6.93% Zn, 0.78% Pb and 23 g/t Ag and 6m averaging 3.20% Zn and 3.79% Pb. Lying stratigraphically just above this interval are 8m of limestone with coarsely crystalline barite and minor galena and sphalerite. This 8m averaged 16.9% Ba, 1.39% Zn and 1.62% Pb.

011

Line	50,300N	Interval	60,050 - 60,430E
Total Length	380m	Intervals Sampled	60,050-60,128; 60,140-60,340; 60,370-60,412; 60,420-60,430.

Purpose: To test strike extent of mineralisation encountered in the costean on L50,500N. Jacro auger samples along this line assayed up to 7,500 ppm Zn and 1,300 ppm Pb.

Result: Most samples are clay. Others consist of a decomposed, friable, silty rock and of well cleaved, weathered siltstone. Some oxidised clays include quartz and sandstone pebbles and are probably overburden. Other clays are black and pyritic and may represent decomposed limestone. Minor sphalerite and galena were observed in some pyritic clays. Assay results were erratic with several zones of elevated lead and zinc values. The 36m east of 60,182E assayed from 0.4-7.1% Zn and up to 0.5% Pb. Structural data and the trend of mineralised zones indicate an almost east-west strike in this area.

Line	50,200N	Interval	59,750 - 59,900E
Total Length	150m	Intervals Sampled	59,750-59,814E; 59820-59,900E

Purpose: To test anomalous Jacro auger geochemistry. Assays range up to 7,900 ppm Zn and 740 ppm Pb.

Result: Brown peaty and sandy clay with minor siltstone and sandstone fragments were collected from the western 16m. All other samples consist of fresh limestone. Assay results from limestone were generally low. The two westernmost limestone samples reported 0.54-1.59% Zn. Clays further west assayed from 500 to 1,150 ppm Zn.

012

Line 48,600N Interval 60,300 - 60,376E  
 Total Length 76m Interval Sampled 60,300-332; 60,344-376E  
 Purpose: To test anomalous Jacro auger geochemistry.  
 Assays range up to 4,300 ppm Zn and 4,400 ppm Pb.

Result: Samples collected from the eastern 48m consist of dark green clay with occasional silty fragments. In the west, siltstone and minor dolomitic tectonic breccia predominate. Zn values throughout range from 275-3,650 ppm. Pb values are less than 500 ppm in the clay and even lower in the siltstone.

#### Grieves Grid

Line 48,400N Interval 61,062 - 61,134E  
 Total Length 72m Interval Sampled 61,062-61,068; 61,070-61,134E  
 Purpose: To test anomalous Jacro auger geochemistry.  
 Assays range up to 1.15% Zn and 670 ppm Pb.

Result: Samples collected consist of peaty clay, calcareous clay, limestone and sideritised oolitic limestone. Best assay results were obtained from peaty clay. The easternmost 8m section averaged 1.9% Zn and another 8m section averaged 1.1% Zn. Zn values in limestone and sideritic limestone were less than 1,000 ppm.

Line 48,000N Interval 60,330 - 344E  
 Total Length 14m Interval Sampled Total length  
 Purpose: To test anomalous Jacro auger geochemistry and to determine the extent of mineralisation north of the old Grieves Mine.

Result: Samples consist of green to brown clay and sandy clay. These probably represent transported overburden. Assays range up to 0.76% Zn and 0.35% Pb.

013

Line 47,900N Interval 61,278 - 61,378E  
 Total Length 100m Interval Sampled 61,278-298; 61,294-320;  
 61,324-326; 61,336-378E

Purpose: To test anomalous Jacro auger geochemistry and to check the extent of mineralisation south of the old Grieves Mine.

Result: Samples range from 28m of black peaty clay in the west through oolitic limestone and sideritic limestone to grey pebbly clay in the east. Zn values throughout were greater than 950 ppm. 10m of siderite averaged 3.67% Zn and 0.53% Pb and 8m of peaty clay averaged 3.82% Zn and 0.1% Pb. All samples described as peaty clay assayed >1% Zn.

Line 47,800N Interval 61,290 - 61,352E  
 Total Length 62m Interval Sampled Total length

Purpose: To provide information on the extent of mineralisation south of the old Grieves Mine.

Result: Samples range from oolitic limestone and peaty clay in the east through dolomitic limestone to 72m of clay. The 8m of peaty clay between the limestone sections averaged 10.18% Zn and 0.55% Pb. All other samples reported elevated zinc and lead values with most samples reporting Zn >0.4% and Pb >300 ppm.

Line 47,600N Interval 60,550-664; 66,682-686E  
 Total length 118m Interval Sampled 60,550-642; 60,648-664;  
 60,682-686E.

Purpose: To test anomalous Jacro auger geochemistry.  
 Assays range up to 5.03% Zn and 0.53% Pb.

Result: 22m of clay and sandy clay were sampled in the west and small chips of limestone and dolomite in most of the remainder. Frequently hard, fresh limestone or dolomite with a smooth surface was encountered under thick, wet gravel or clay. Samples here consisted of the few chips of rock the excavator could detach and retain. Best assays came from a section of dolomite and limestone breccia with minor peaty clay. 12m here averaged 3.1% Zn and 0.4% Pb.

014

Line 47,100N Interval 61,148 - 61,200E  
 Total Length 52m Interval Sampled Total length.  
 Purpose: To follow-up anomalous Jacro auger geochemistry.  
 One sample assayed 1.4% Pb and 2.5% Zn.

Result: Partially weathered bedrock was sampled throughout. Rock types described include muddy limestone, silty dolomite and dolomite and shale breccia. Best assay results were obtained from mineralised dolomite and dolomitic breccias. 20m averaged 7.04% Zn and 1.09% Pb (see Section 2.5 - Petrology).

#### Baura Grid

Line 46,200N Interval 60,924 - 60,950E  
 Total Length 26m Interval Sampled 60,924-926; 60,930-940;  
 60,946-950.  
 Purpose: To test anomalous Jacro auger geochemistry.  
 Assays range up to 0.97% Pb and 0.83% Zn.

Result: All samples consisted of dark grey to brown clay. Only one sample included some limestone chips. Zn values range from 1,600-6,400 ppm and Pb values from 200-5,300 ppm.

Line 45,300N Interval 60,876 60,950E  
 Total Length 74m Interval Sampled 60,876-908; 60,910-950.  
 Purpose: To test anomalous Jacro auger geochemistry.  
 Assays range up to 3.4% Pb and 2,300 ppm Zn.

Result: All samples consist of dark grey to black clay. Large pyrite columns were commonly encountered in peaty clay lying on the black clay. Zn assays >1,000 ppm are common and range up to 7,800 ppm. Pb values are slightly lower and range up to 4,600 ppm.

Line 45,222N Interval 61,000 - 61,028E  
 Total Length 28m Interval Sampled Total length  
 Purpose: As for L45,200N below.

Result: Samples consist of dark grey clay, weathered siltstone and cherty ?siltstone. Best assays were reported from cherty ?siltstone and clay. Zn values from 1,000-3,000 ppm and Pb values from 1,000-4,000 ppm are common.

Line 45,200N Interval 60,924 - 60,976E  
 Total Length 52m Interval Sampled 60,924-952; 60,956-966; 60,968-976.  
 Purpose: To test anomalous Jacro auger geochemistry.  
 Assays range up to 7,300 ppm Pb and 2,000 ppm Zn.

Result: The four easternmost samples consist of limestone. All other samples are dark grey to black clay. Best assays were reported from the clays. Assays range up to 3,500 ppm Zn and 1,325 ppm Pb.

Rose Valley Grid

Line 44,200N Interval 60,700-60,900E  
 Total Length 200m Interval Sampled 60,700-716; 60,730-732;  
 60,750-752; 60,830-852;  
 60,860-882; 60,898-900

Purpose: To test anomalous Jacro auger geochemistry and to investigate a gravity anomaly near the base line. Assay values range up to 3,800 ppm Zn and 600 ppm Pb.

Result: Silicified siltstone was sampled in the west and moderately to intensely veined limestone was sampled in the east. Only a few samples were described as clay or sandy clay. Assay results were generally low with the best Zn assay of 1,750 ppm in clay and best Pb assay of 750 ppm in cherty siltstone. All Zn assays >1,000 ppm were from clay.

Line 44,000N Interval 61,016 - 61,122E  
 Total length 106m Interval Sampled Total length  
 Purpose: To test anomalous Jacro auger geochemistry.  
 Assays range up to 1,400 ppm Zn and 300 ppm Pb.

Result: Most samples consist of clay. Some limestone was sampled at the western end. Most Zn assays exceed 1,000 ppm ranging up to 4,550 ppm. Pb values are less than 500 ppm.

## 2.2. Drilling

### 2.2.1. WORK COMPLETED

Three diamond drill holes were completed in the Myrtle and Grieves areas. Drill holes were designed to test zinc and lead mineralisation sampled in costeans. Drilling details are summarised below:

Hole No. : ZG 1001  
 Collar Co-ordinates : Grieves 47,066N 61,066E  
 Azimuth : 143.5° A.M.G.  
 Dip : 50°  
 Total Depth : 149.4m  
 Target : Down dip extension of mineralised dolomitic breccia unit exposed by costean on L47,100N.

Hole No. : ZG 1002  
 Collar Co-ordinates : Grieves 47,891N 61,198E  
 Azimuth : 142° A.M.G.  
 Dip : 50°  
 Total Depth : 150.0m  
 Target : Lead-zinc mineralisation in sideritised oolitic limestone along the contact between the Gordon Limestone and the underlying Moina Sandstone.

Hole No. : ZM 1003  
 Collar Co-ordinates : Myrtle 50,524N 60,320E  
 Azimuth : 120° A.M.G.  
 Dip : 55°  
 Total Depth : 303.0m  
 Target : Down dip extension of lead-zinc mineralisation overlain by barite as exposed by the costean on L50,500N.

Sampling of drill holes ZG 1001 and ZG 1002 has been completed. A very weakly mineralised section of ZM 1003 was sampled. Not all results have yet been received. Preliminary drill logs have been completed.

Sampling of the North Austral drill holes was completed and assay results have been received. Final drill logs and drill hole summary sheets were prepared.

### 2.2.2. RESULTS (See Appendix B for drill logs & Plates 4 & 5, Summary Sheets.)

#### North Austral

Details of ZMG 249, 249A and 252 were reported in the previous 6 monthly report (E.Z. Report T177). Assay results supported the initial geological observations. Best assays are summarised below:

Hole No.	Interval	Assays	Geology
ZMG 249	107.7-108.7	Pb 1.67%; Zn 2.58%	Galena and sphalerite in siderite veins through siltstone.
ZMG 249A	108.0-108.5	Pb 1.02%; Zn 2.32%	As above.
	152.5-153.5	Pb 0.32%; Zn 13.4%	Sphalerite and galena in dolomite vein in fault through sandstone.
ZMG 252	108.3-110.3	Zn 1.6%	Sphalerite in sideritised limestone breccia.

**Grieves**

Hole ZG 1001 intersected unmineralised limestone throughout. Pb and Zn values did not exceed background levels for unmineralised Gordon Limestone. Core showed evidence of extensive faulting subparallel to the drill hole (see Summary Log below).

Hole ZG 1002 collared in Gordon Limestone and finished in Crotty Quartzite. Zinc mineralisation was intersected in siderite and sideritised limestone near the ~~base~~ <sup>top</sup> of the Gordon Limestone. Because of intense, closely spaced fracturing of the sideritised limestone, core recovery in this zone was very poor. Both HQ and NQ triple tube drilling were attempted without much improvement in core recovery. The interval 106.4-110.2 averaged 3.17% Zn and had good core recovery. However the interval 102.0-106.4 which averaged 1.0% Zn had only 10% recovery and the interval 110.2-113.2, no recovery.

**ZG 1001 - Summary Log**

0	-	3.0m	Non core drilling.
3.0	-	10.4	Bioclastic limestone.
10.4	-	12.4	Probable fault.
12.4	-	75.5	Bioturbated muddy limestone and bioclastic limestone.
75.5	-	82.0	Probable fault.
82.0	-	90.1	Bioturbated muddy limestone and bioclastic limestone.
90.1	-	91.5	Probable fault.
91.5	-	95.5	Muddy and silty limestone.
95.5	-	104.2	Probable fault.
104.2	-	110.5	Muddy limestone and bioclastic limestone.
110.5	-	111.5	Probable fault.
111.5	-	149.4m	Muddy limestone and bioclastic limestone.

**ZG 1002 - Summary Log**

0	-	9.0m	Non core drilling.
9.0	-	11.0	Laminated limestone.
11.0	-	51.8	Bioturbated muddy limestone and clastic limestone.
51.8	-	63.5	Siltstone, sandstone and silty and sandy limestone.
63.5	-	102.0	Slumped and bioturbated muddy limestone and clastic limestone.
102.0	-	110.2	Sideritic limestone.
110.2	-	125.4	Recrystallised oolitic limestone.
125.4	-	137.0	Black sandy and silty clay - decomposed black siltstone and sandstone.
137.0	-	150.0m	Quartz sandstone and quartzite.

**Myrtle**

Hole ZM 1003 intersected an essentially unmineralised limestone sequence. Bedding ranged from 30 to 50° to core axis except in faulted or intensely cleaved zones. A small irregular patch of white sphalerite occurs in sheared muddy limestone at 202.0m.

**ZM 1003, 1003A - Summary Log**

0	-	6.0m	Non core drilling.
6.0	-	68.0	Black clay with silty fragments.
68.0	-	110.0	Bioturbated muddy limestone and bioclastic limestone.
110.0	-	122.0	Laminated limestone.
122.0	-	132.2	Muddy limestone and bioclastic limestone.
132.2	-	138.7	Laminated limestone.
138.7	-	166.0	Fine grained limestone with corals.
166.0	-	190.0	Sheared and disrupted bioclastic limestone and muddy limestone.
190.0	-	212.8	Sheared and disrupted limestone with thin beds of silty limestone. Minor pyrite and sphalerite mineralisation.
212.8	-	218.0	Sheared bioclastic and muddy limestone.
218.0	-	226.4	Dolomite, dolomitic limestone and quartz-carbonate veins.
226.4	-	252.8	Sheared muddy limestone and clastic limestone.
252.8	-	256.0	Laminated limestone.
256.0	-	268.0	Cavity.
268.0	-	285.8	Sheared and deformed mixed limestone - mostly muddy.
285.8	-	303.0m	Muddy and bioclastic limestone with silty and sandy limestone and siltstone.

**2.3. Wacker Sampling**

Deep bedrock under parts of the Myrtle, Grieves and Baura Grids has been sampled using a portable percussion drill. This system, developed by N. Poltock, consists of a hardened cutting head with a flow through sample tube, a series of solid screw on drill rods, and a Wacker portable percussion drill.

Using this system a small sample of weathered rock and sometimes chips of fresh limestone are collected from the bottom of sample holes. The last material drilled is retained in the sample tube. Any clay retained in the sample tube is separated and discarded.

2.3.1. WORK COMPLETED

312 samples of weathered bedrock have been collected so far. Sampling is continuing.

Sampling Details (to 14th July)

Grid	Lines Sampled	No. Samples
Myrtle	4	69
Grieves	10	227
Baura	1	16

Wacker samples are described in the field by the sampler. The entire sample is then dried and submitted for analysis. Sample preparation is as for costean samples. Cu, Pb, Zn, Ag, Fe and Mn are determined by A.A.S. and Ba by pressed powder X.R.F. Samples are too small to permit splitting off a portion for geological description.

2.3.2. RESULTS (See Appendix C and Plates 6, 7, 8, & 9)

Sample details and assay results have been transferred to data sheets and results are being plotted onto base plans. As sampling is still in progress and will continue for some time, detailed analysis of results has not yet been attempted. The following comments are preliminary only.

Sample depths in the Myrtle, Grieves and Baura areas ranged from 1m to 22m with an average depth between 8m and 9m. The Wacker was able to penetrate sandstone scree, gravel, peat and thick clay and successfully sample all sites attempted. When fresh limestone was encountered, several attempts were often necessary to collect enough sample.

In the Myrtle area no pattern of results are yet obvious. Results are summarised below.

## Myrtle Grid n = 69

Element	Range	Estimated Mean	Anomalous
Cu	< 5 - 200	20	> 80
Pb	5 - 560*	60*	>200
Zn	10 - 2400	200	>400
Ag	< 0.5 - 15.0	< 0.5	> 1.0
Fe	0.12 - 4.1%	-	-
Mn	5 - 250	-	-
Ba	< 10 - 1080	200-300	> 800

(\* One exceptionally high Pb value of 2.1% excluded from mean.)

In the Grieves Grid, however, more sampling has been completed and several preliminary comments can be made. Main features described below are illustrated in Figure 2.

- i) The mapped siltstone unit forming a ridge in the Grieves area correlates with a zone of higher barium values. Ba values >400 ppm are confined to the siltstone.
- ii) A small zone of elevated Zn geochemistry occurs around the mineralisation exposed by the costean on L47,100N. This zone appears to be offset 100-150m to the south east.

Assay results from Grieves are summarised below.

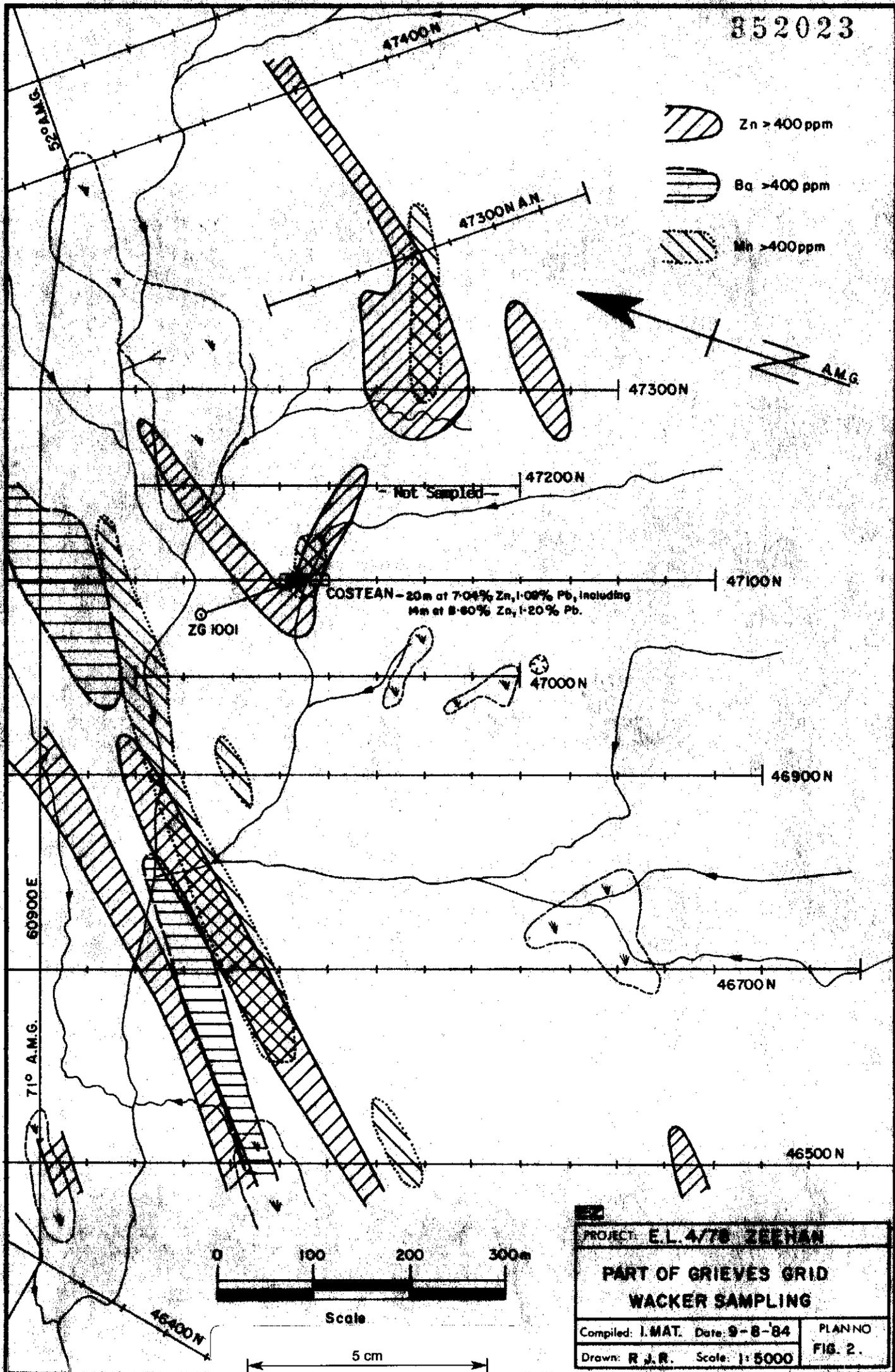
## Grieves Grid n = 227

Element	Range	Estimated Mean	Anomalous
Cu	5- 60	-	> 60
Pb	5-3700*	50*	>200
Zn	10-4900*	150*	>400
Ag	< 0.5-3.0*	< 0.5*	> 1.0
Fe	0.12-6.84*	-	-
Mn	5-1275*	150*	>400
Ba	< 10- 518	-	-

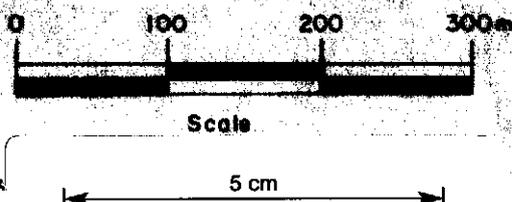
(\* Sample 62765 assayed 2.45% Pb, 19.5% Zn, 6.0 g/t Ag, 17.50% Fe and 0.58% Mn and was excluded from the table above.)

352023

-  Zn > 400 ppm
-  Ba > 400 ppm
-  Mn > 400 ppm



PROJECT: E.L. 4/78 ZEEHAN	
PART OF GRIEVES GRID WACKER SAMPLING	
Compiled: I.MAT. Date: 9-8-84	PLAN NO
Drawn: R.J.R. Scale: 1:5000	FIG. 2.



### 2.3.3. COMPARISON OF WACKER, JACRO AUGER AND COSTEAN SAMPLING

Table 2 and Table 3 list sample details and results for samples collected from the same locations by different methods. In general, agreement is not good. Assay values are in agreement only when soft, partially weathered carbonate rock occurs close to the surface. When, as is more usual, the Jacro Auger and the Costean sampled clay, assay results for Pb and Zn are often many times higher than those for the corresponding Wacker sample. Secondary geochemical dispersion of lead and zinc in the clay appears widespread.

## 2.4. Geophysics

### 2.4.1. DOWN HOLE SIROTEM

#### **Work Completed**

Down hole SIROTEM surveys of drill holes ZMG 249A and ZMG 252 were completed. Two (200m)<sup>2</sup> loops were used for each hole. Loop 1 was laid out behind the collar and Loop 2 was 100m in front of the collar.

#### **Results (see Appendix D)**

Results from the two drill holes have not yet been subjected to expert appraisal. Preliminary comments below are based on field observations only.

A cross over occurs in the results from Loop 2 at around 90m down ZMG 252. This is not reflected in the results from Loop 1. As illustrated in Figure 3, the cross over may be related to a conductor lying near the contact between the Gordon Limestone and the overlying Crotty Quartzite. Alternatively, it may be related to the swamp under Loop 2 but not under Loop 1.

Other possible anomalies occur in the top 30m of both holes. These are tentatively attributed to the effects of the logging vehicle. Because of access and collar relationships, the vehicle had to be parked closer to the drill collars than is normal.

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

GEOCHEMICAL SAMPLE DATA SHEET

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

MATERIAL: ? WEATHERED BEDROCK  
SAMPLE METHOD: W. = WACKER; J. = JACO  
P. = COSTERN  
DATE: ..

SIZE FRACTION ANALYSED: .. WHOLE ..  
ANALYSED BY: N.C. by ANAKOS, J. by COM.ABS  
METHOD: A.A.S. by X.R.F.

SAMPLE NUMBER	SAMPLE DATA		DEPTH	COLOUR	CLAY, ROCK ETC	MINERALS IDENTIFIED	Geology	METAL CONTENT (ppm unless specified)								
	GRID LINE NO.	GRID EASTING						Cu	Pb	Zn	Ag	Au	Fe %	Mn	Ba	
	45200N															
60422	60850	10.0	BK	CLAY				X	14.25	4500	X		1.98	25		
60427	60850	12.8	BK	CLAY				25	17.25	4575	X		3.39	125		
72026	60850	5.0	GY	CLAY				10	200	580	X					
60435	60875	9.6	BK	CLAY; Q.M. RK.				25	1575	3900	X		2.06	50		
72027	60875	5.0	GY	CLAY				26	2900	4100	/					
60431	60900	6.2	GY	WTHD ROCK				X	50	50	X		0.23	50		
72028	60900	5.0	BK	CLAY				10	380	210	X					
60432	60925	7.8	GY	WTHD ROCK				X	50	50	X		0.44	125		
72029	60925	3.5		GRAVEL				2	16	4	X					
52000	60925	3.5	DK GY	CLAY				50	975	2375	2		2.19	50	251	
60433	60950	9.4	GY	WTHD ROCK				X	50	150	X		0.32	75		
72030	60950	5.0	BK	CLAY				80	7300	130	X					
52013	60929	4.5	DK GY	CLAY	py			50	750	2150	3		13.25	50	222	
60434	60975	7.8	GY	WTHD ROCK				75	50	75	X		0.27	50		
72031	60975	5.0	BK	CLAY				16	1000	410	/					
52023	60975	4.5	GY	WIMESTONE				25	675	550	/		0.90	25	126	
60435	61000	5.6	GY CRWH	WTHD ROCK				X	225	150	X		0.67	150		
72032	61000	5.0	BK	CLAY				18	1700	3000	/					
60436	61025	7.3	GY	WTHD ROCK				X	50	50	X		0.61	125		
72033	61025	3.5	BK	SLIMY LST				15	230	320	/					
60437	61050	7.8	DK GY	WTHD ROCK				X	50	100	X		0.26	50		
60438	61050	7.8	DK GY	WTHD ROCK				10	30	160	/					

TABLE 2 - SAMPLING COMPARISON - BAURA

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

GEOCHEMICAL SAMPLE DATA SHEET

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

MATERIAL: ? *WEATHERED BEDROCK*  
SAMPLE METHOD: *W = Wacker; J = Joffe*  
*C.F. Costean*.....  
DATE: .....

SIZE FRACTION ANALYSED: *Whole*.....  
ANALYSED BY: *W.C. by Analysts; J. by Combs*  
METHOD: *AAS; Ba. by XRF*

SAMPLE NUMBER	SAMPLE DATA		SAMPLE COMPOSITION DATA			Geology	METAL CONTENT (ppm unless specified)																	
	GRID LINE NO.	Depth	Colour	CLAY, ROCK ETC	MINERALS IDENTIF'D		Cu	Pb	Zn	Ag	Au	Fe %	Mn	Ba										
	47100N														GRID EASTING									
62770	61050	1.8	Gy	WITH ROCK		10	35	75	0.5		1.45	230	78											
62769	61075	2.8	Gy	CLAY ON R		15	45	95	x		1.50	115	30											
79533	61075	2.5		GRAVEL		6	12	18	5															
62768	61100	2.6	Gy	WITH ROCK		10	35	45	x		0.47	85	36											
79532	61100	2.5		GRAVEL		6	24	26	4															
62767	61125	2.0	Gy	WITH ROCK		10	205	1250	x		1.30	270	40											
79531	61125	2.5		GRAVEL		4	60	80	1															
62766	61150	4.2	Gy	WITH ROCK		10	50	205	x		0.73	150	30											
52549	61151	1.5	Gy BK	WITH LST	cg vdg	x	75	450	x		0.61	100	17											
62765	61175	5.4	Gy	FRESH ROCK		10	2.5%	19.5%	6.0		17.50	5750	25											
79530	61175	2.3	BK	WITH LST		8	1.4%	2.5%	3															
52537	61175	1.5	DK Gy	DLST LST		x	1.6%	3.9%	2		4.06	2150	47											
52538	61173	2.0	Gy	DLST LST		x	2.2%	16.4%	2		24.20	6900	x											
62764	61200	2.3	Gy	WITH ROCK		5	45	220	0.5		0.77	155	30											
79529	61200	3.5	BK	CLAY		26	220	250	1															
52525	61179	1.5	DK Gy	LST		25	325	100	x		0.52	100	121											
62763	61225	12.2	Gy	WITH ROCK		10	30	130	0.5		0.55	115	27											
79528	61225	5.0	DK BK	CLAY		90	34	165	1															
62762	61250	6.3	Gy	WITH ROCK		5	30	285	x		0.28	55	11											
79527	61250	2.5		GRAVEL		x	0	2	2															

TABLE 3 - SAMPLING COMPARISON - GRIEVES

352026

2.4.2. SURFACE SIROTEM**Work Completed**

A trial SIROTEM survey using a fixed loop and a moving receiver was attempted over one line on the Myrtle Grid. A 300m x 150m loop was set up with long sides along lines 50,500N and 50,350N. The centred line, 60,200E, was read at spacings ranging from 10m to 50m.

**Results (see Appendix D and Fig. 4)**

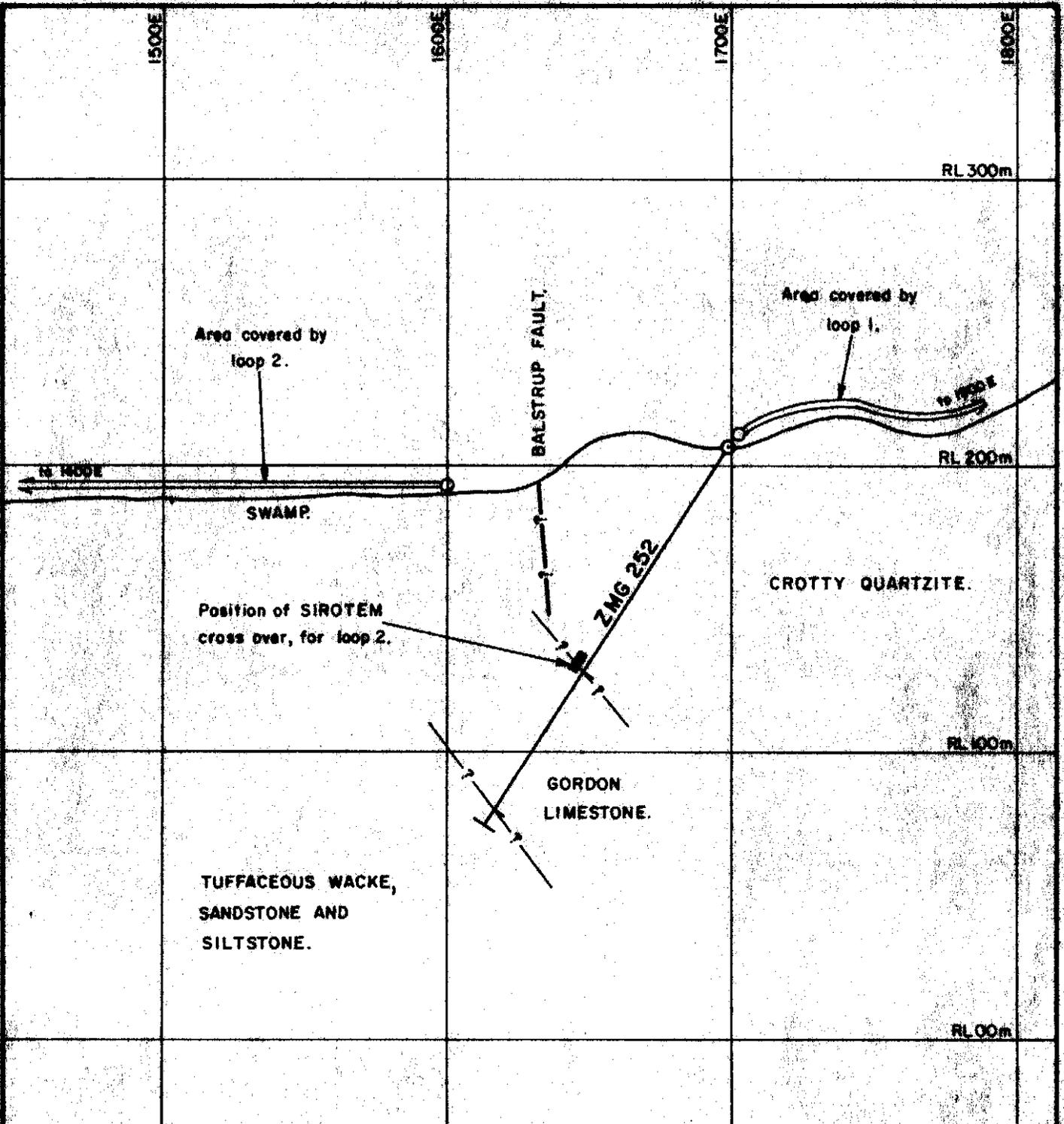
A small conductor was detected very close to the costean on line 50,300N. A TURAM survey carried out by Tenneco in 1972 detected an east-west striking conductor in approximately the same position. Sporadic sphalerite, galena and pyrite mineralisation was noted along costean 50,300N. The relationships between these features are illustrated in Fig. 4.

2.4.3. GENIE**Work Completed**

Trial GENIE surveys were attempted in the Grieves and Myrtle areas. Areas were selected after mineralisation was exposed by the costeaning programme. Coverage is listed below.

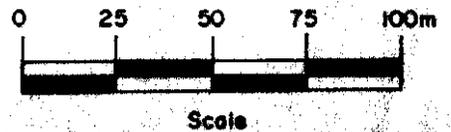
Grid	Line	Interval	Rx - Tx
Grieves	46,900N	60,800-61,600E	100m
	47,100N	60,950-61,550E	100m
		60,625-61,575E	50m
Myrtle	50,400N	59,700-60,850E	100m
	50,500N	60,050-60,850E	"
	50,600N	60,250-60,850E	"
	50,700N	60,250-60,750E	"
	50,800N	60,250-60,650E	"
	50,900N	60,250-60,650E	"

027



ZMG 252 - Showing SIROTEM anomalies and significant geological and topographical features.

LOOKING NORTH



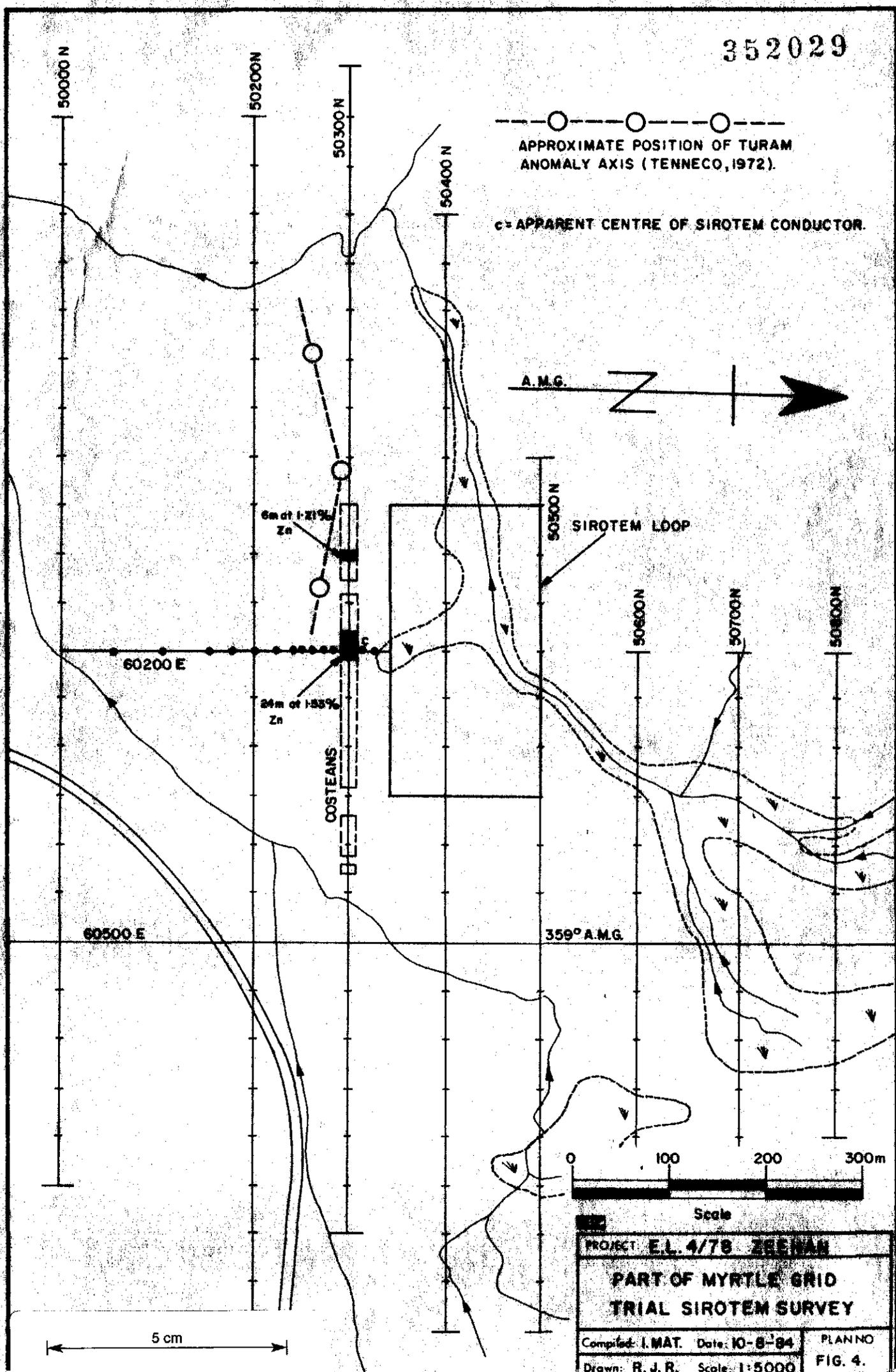
352028



PROJECT <b>E.L. 4/78 ZEEHAN</b>	
<b>NORTH AUSTRAL GRID</b>	
<b>SECTION AT 2700N</b>	
Compiled: I. MAT. Date: 13-8-84	PLAN NO
Drawn: R. J. R. Scale: 1:2000	FIG. 3.

028

352029

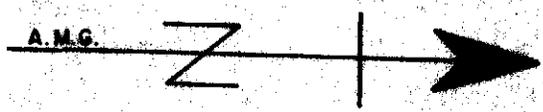


○ — — — ○ — — — ○ — — —

APPROXIMATE POSITION OF TURAM ANOMALY AXIS (TENNECO, 1972).

● — — — ● — — — ● — — —

c = APPARENT CENTRE OF SIROTEM CONDUCTOR.



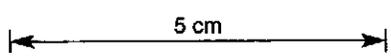
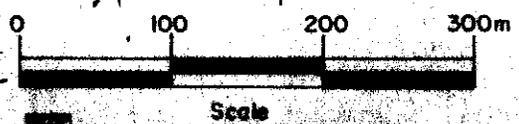
6m of 1.21% Zn

24m of 1.53% Zn

COSTEANS

SIROTEM LOOP

359° A.M.G.



PROJECT <b>E.L. 4/78 ZEBAN</b>	
PART OF MYRTLE GRID TRIAL SIROTEM SURVEY	
Compiled: J. MAT. Date: 10-8-84	PLAN NO
Drawn: R. J. R. Scale: 1:5000	FIG. 4.

## Results (see Appendix E)

Profiles have not yet been subjected to expert evaluation. No obvious anomalies were detected. Base levels are slightly elevated and profiles appear rather noisy. However the noise has been exaggerated by the very detailed scale used for plotting. Results appear typical for a thick conductive overburden.

## 2.5. Petrology

### 2.5.1. WORK COMPLETED

Rocks from the Myrtle, Grieves, Baura and Rose Valley Grids, rock from Bubs Hill near Queenstown, costean samples from Grieves Grid, core samples from the North Austral drill holes and core samples from a single drill hole (ZT-80-4) through the Oceana mineralisation were submitted for microscopic examination. All samples were studied in thin section and polished sections of mineralised samples were prepared. A preliminary paragenetic sequence of alteration and mineralisation was interpreted by comparison of samples from all areas.

Lead isotope ratios in six samples of the Oceana mineralisation were determined.

### 2.5.2. RESULTS (See Appendix F for C.M.S. reports and C.S.I.R.O. report.)

Carbonate rocks from the areas listed above can be divided into two groups (C.M.S. 84/1/15). Group 1 comprises variably altered impure, weakly laminated and poorly fossiliferous fine grained limestones. Group 2 is characterised by a variety of clastic limestones. These include strongly fossiliferous breccias, oolitic limestones and coarser calciruditic types. These rocks reflect a relatively shallow marginal biohermal to banktype, medium to high energy depositional environment. All rocks are variably dolomitised and sideritised. Sphalerite, galena and pyrite mineralisation were observed in many rocks. It appears significant that mineralisation is much more common in the clastic limestones than in the weakly laminated, impure limestones.

At least three phases of sphalerite mineralisation were detected. Syngenetic early diagenetic sphalerite was described in clastic carbonates from the Zeehan area. Sphalerite associated with cavity and fracture filling and replacement dolomite occurs at Bubs Hill. Similar replacement mineralisation associated with siderite is common around Zeehan. At North Austral and Oceana the earlier phases of mineralisation are overprinted by sphalerite and galena mineralisation associated with a complex and repetitive sequence of carbonate veins. A possible paragenetic sequence is outlined below.

Order of Phases	Description of Event	Associated Mineralisation	Areas
1.	Deposition of calcareous sediments.	Ultrafine to fine pyrite and white to very pale yellow sphalerite	ZMG 252 Oceana
2.	Early diagenetic calcite veining.	(Either syngenetic or early diagenetic.)	
3.	Partial to complete replacement of micritic calcite by fine, sparry, ferroan dolomite.	Fine grained massive to disseminated pyrite, galena and pale yellow sphalerite in clasts of dolomite siltstone.	Grieves Costean L47,100N
4A.	Cavity & fracture filling & replacement by medium grained ferroan dolomite or calcite associated with minor quartz.	Pale yellow to brown coarse sphalerite with galena.	Bubs Hill
4B.	Cavity & fracture filling & replacement by siderite. Siderite alteration enhanced by Stage 3 dolomitisation.	Pale yellow to brown coarse sphalerite with galena. Some smithsonite and zincian siderite.	Grieves Mine ZMG 252 Oceana, Grieves Costean L47,100N

Order of Phases	Description of Event	Associated Mineralisation	Areas
5.	Complex carbonate vein phase. Phases range from intermediate to late stage and vein compositions are repetitive.	Brown or reddish brown sphalerite with galena.	ZMG 252 Oceana
6.	Stress related calcite veins or quartz-carbonate veins.		
7.	Fault related silicification.		

Cowan (C.M.S. 84/3/15) points out that the Oceana Pb-Zn mineralisation shows a close relationship with siderite and that the galena hosted inclusions of tetrahedrite and disseminations of boulangerite and bournonite suggest a strong analogy with Zeehan-type sideritic mineralisation as described by Both & Williams. However Cowan also suggests that the occurrence of syngenetic or early diagenetic sphalerite and galena indicates that a reconsideration of carbonate hosted mineralisation is warranted. Lead isotope ratios of samples of mineralised drill core from the Oceana Mine support this contention (see C.S.I.R.O. report by B. Gulson). These ratios indicate an Ordovician or Cambrian age for the Oceana mineralisation. Results are very homogeneous.

### 3. DISCUSSION AND CONCLUSIONS

Results of exploration during the six months to July, 1984 have increased our knowledge and improved our understanding of carbonate hosted lead-zinc mineralisation in E.L. 4/78. In addition, attempts have been made to determine the significance of lead-zinc mineralisation in deep black clays over limestone. Such clays are widespread in the Myrtle, Grieves, Baura and Rose Valley Grids.

### 3.1. Oceana Area

Earlier evaluation of data from the Oceana area and a careful interpretation of geology and mineralisation indicated that the Oceana mineralisation closely resembled the Irish style of carbonate hosted lead zinc mineralisation. The detection of a primary phase of syngenetic or very early diagenetic sphalerite mineralisation, together with the determination of a lead isotope age of Cambrian to Ordovician for the mineralisation, strongly support this conclusion.

### 3.2. North Austral - Montagu No. 1

Drilling under the Montagu No. 1 workings have confirmed the presence of a sliver of Gordon Limestone in this area. Low grade lead-zinc mineralisation in limestone was intersected as well as minor vein associated mineralisation. A small proportion of primary syngenetic or syndiagenetic sphalerite was observed in thin section and polished section examination of the carbonate hosted mineralisation. This, together with the nearby Balstrup Fault, indicate that the Montagu mineralisation also fits the Irish model suggested by the Oceana.

However, room for a significant base metal deposit in the Montagu area appears limited. Further work to determine the position of the Balstrup Fault the dip of the limestone unit and whether any limestone outcrops in the valley should be attempted before additional drilling is proposed for this area.

### 3.3. Pyramid

Three costeans were dug around the old Pyramid Mine. While the results of costeaning were not conclusive because of gravel and clay cover, no strong indications of extensive lead-zinc mineralisation were detected.

### 3.4. Myrtle

The costean on L50,500N intersected an extensive zone of lead-zinc mineralisation in pyritic black clay. A drill hole designed to hit the down dip extent of this mineralisation did not encounter any significant mineralisation. Nevertheless

the occurrence of siltstone hosted mineralisation in the costean on L50,600N and the overlying barite-galena-sphalerite mineralisation in L50,500N costean suggest that the mineralisation tested is related to bedrock mineralisation. Further geological, geochemical and geophysical techniques should be applied to locate targets for drilling in this very prospective area. Deep bedrock sampling of the area is already in progress.

### 3.5. Grieves

Carbonate hosted zinc ( $\pm$ lead) mineralisation has been exposed in bedrock in three areas. These areas suggest at least three mineralised horizons within the Gordon Limestone. preliminary interpretation of deep bedrock geochemistry indicates an additional horizon of interest.

#### 3.5.1. GRIEVES MINE AREA (See Fig. 5)

Zinc mineralisation in variably sideritised oolitic limestone and limestone breccia has been exposed by three costeans, by the old Grieves Mine workings and intersected by drill hole ZG 1002. Lead values are subordinate. A strike extent greater than 600m is indicated.

Mineralisation is generally low grade (1-5% Zn) and occurs within the more intensely sideritised parts of the clastic limestone unit along the base of the Gordon Limestone. Geological considerations suggest that this clastic unit represents a carbonate bank complex deposited in a moderate to high energy environment. Shales and siltstones under the oolites probably represent a supra tidal facies while the more common intertidal facies and shallow subtidal muddy limestones overlie the clastic unit.

At the Grieves Mine, pale sphalerite and coarse galena occur in vughs within the clastic limestone. Similar mineralisation has not been seen in either costeans or drill core. Smithsonite and/or zincian siderite are suspected.

5 cm

ZG 1002

Peat and clay, under gravel.

1.2-4.7% Zn in peaty clay

0.3-1.7% Zn in sideritic oolitic limestone.

0.7-4.2% Zn in sideritized oolitic limestone. Includes 10m of 3.7% Zn in siderite.

COSTEAN

Clay & shale

RL 150m

RL 100m

1.0-3.7% Zn in siderite.

Dolomitic and silty limestone.

Oolitic variably

limestone sideritized.

Unconformity P

Quartz sandstone.

61400 E

LOOKING NORTH

352035

Correlation of costean and drill hole geology and mineralization.

RL 50m

Black siltstone and clay.

ZG 1002

61200 E

61000 E

61500 E



Scale

PROJECT: E.L. 4/78 ZEEHAN

GRIEVES GRID

SECTION THROUGH 47900 N

Compiled: I. MAT. Date: 10-8-84	PLAN NO
Drawn: R.J.E. Scale: 1:1000	FIG. 5.

035

3.5.2. GRIEVES COSTEAN L47,100N

Good zinc mineralisation with dolomitic breccias and dolomites were exposed in this costean. Although some smithsonite and zincian siderite were observed a significant proportion of the mineralisation occurs as pale sphalerite and galena. Sulphides occur as clasts of massive pyritic banded sulphides, as disseminations in dolomitic siltstone clasts and throughout the matrix. The mineralised clasts demonstrate primary syngenetic or syndiagenetic mineralisation.

Drill hole ZG 1001 designed to intersect this mineralisation down dip did not encounter any mineralisation. However, considerable faulting subparallel to the drill hole is evident. As illustrated on Fig. 2, bedrock geochemistry also suggests faulting in this vicinity.

3.5.3. GRIEVES COSTEAN L47,600N

Low grade zinc mineralisation in sideritised limestone breccia was also exposed in the costean on L47,600N. This mineralisation is stratigraphically near the top of the Gordon Limestone. No follow-up work has yet been attempted in this area.

3.6. Baura

Elevated lead and zinc values have been reported from both clay and bedrock samples from these three areas. No zinc and lead sulphides have been observed. However, a peaty clay horizon contains up to 30% pyrite as pyrite columns. The unusual pyritic columns occur in a clay horizon well above bedrock and demonstrate sulphide deposition within the overburden. The significance of mineralisation within clays of this and similar areas needs to be determined so that the large quantity of data already available can be interpreted. Deep bedrock sampling of these areas is continuing.

4. PROPOSED EXPLORATION PROGRAMME FOR E.L. 4/78

14TH JULY, 1984 TO 14TH JANUARY, 1985.

\* Completion of Wacker sampling of parts of the Myrtle, Grieves and Baura Grids.

- \* Completion of sampling and analysis of core from ZG 1001, ZG 1002 and ZM 1003.
- \* Grid extensions of the Baura and Rose Valley Grids to provide complete coverage of the Gordon Limestone areas.
- \* Establishment of a grid over the limestone east of the Professor Range (The Professor Grid).
- \* Ground magnetometry, bedrock sampling and geological mapping of the new grid and grid extensions.
- \* Petrological studies of core from ZG 1001, ZG 1002 and ZM 1003.
- \* Trial SIROTEM surveys of parts of the Baura and Myrtle Grids.

#### CITED REFERENCES

- E.Z. Report No. T177      Progress Report on Exploration Activity 14th June, 1983  
to 14th January, 1984.
- Both & Williams (1968)      Mineralogical Zoning in the Lead Zinc Ores of the Zeehan  
Field, Tasmania.  
J. Geol. Soc. Aust., 15(2): pp 217-243.

037

APPENDIX A.

Costean Results.

038

352039

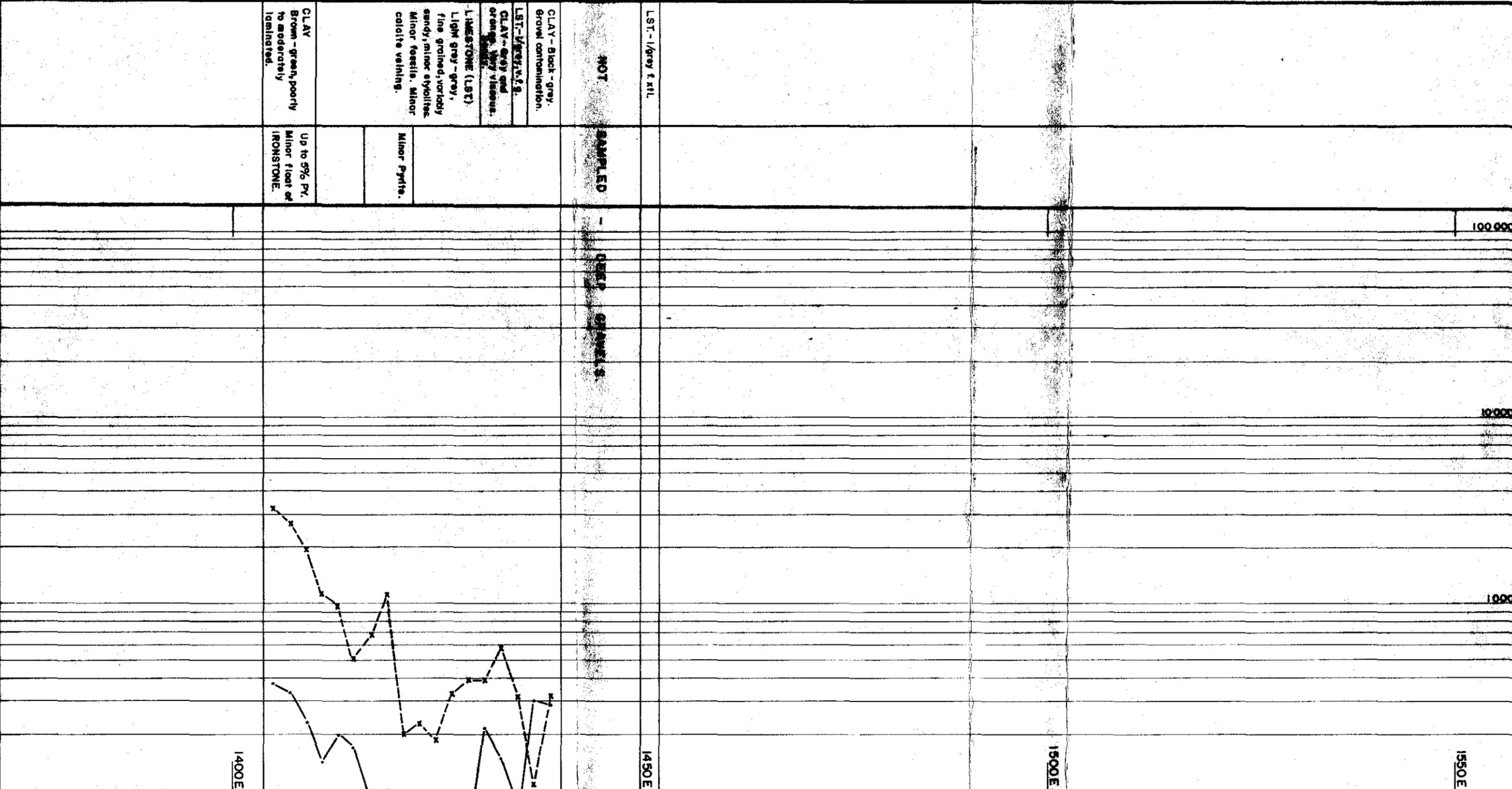
RL 160.0m

PROFILE

LITHOLOGY

MINERALIN

GEOCHEMISTRY (ppm)



EASTINGS  
1404 - 1452

SAMPLE INTERVAL  
2 m

SAMPLED BY  
G. KARY, L. WALSH.

DATE  
31-1-'84

AZIMUTH  
Grid East

TOTAL LENGTH  
48 m

ELECTROLYTIC ZINC CO. of A'ASIA LTD.

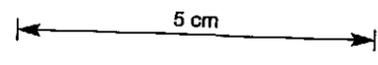
PROJECT: E.L. 4/78 ZEEHAN TAS.

COSTEAN RESULTS  
LINE - 1800N

LEGEND  
PY = Pyrite.  
SP = Sphalerite.  
GN = Galena.

• - - - • Pb  
x - - - x Zn  
o - - - o Ag

PURPOSE OF COSTEAN  
To test for mineralization, north of old Pyramid workings.  
Follow up soil geochem. anomaly.



PYRAMID GRID

SCALE: 1:500	SURVEY: G. KARY	REVISED:
EXC. BY: GROVES, O.B.K.	DATE: 14-4-'84	REF. No.
DRAWN: R J R	CHECKED:	A3-532-0070

ELECTROLYTIC ZINC CO. of ASIA. LTD.  
ROSEBERY, TASMANIA.

COSTEAN SAMPLE DATA  
LINE: 1800 N

PROJECT: EL 4/78  
SAMPLED BY: G.K. - L.W.  
AZIMUTH:

LOCALITY: Py. and  
SAMPLE INTERVAL: 2m  
DATE: 31-1-84

039

SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe	Ba
60501	1404-6	Brown clay, bituminous odour, trace pyrite	CLAY	20	375	3300	0.5	90	7450	251
60502	1406-8	Laminated grey and tan clay, bit. odour, tr. pyrite	CLAY	35	340	2750	0.5	125	1702	278
60503	1408-10	Brown sandy clay, <5% pyrite	CLAY	35	235	1950	X	90	1152	245
60504	1410-12	Pale grey part weathered limestone - mnr vng	LST	25	155	1150	0.5	300	1552	114
60505	1412-14	Pale grey sandy part withrd limestone, mnr clay	LST	25	200	960	0.5	545	1252	87
60506	1414-16	Grey f. gr limestone, carb stringers, mnr fossils	LST	20	180	500	0.5	820	1452	55
60507	1416-18	Pale grey sandy limestone, mnr fossils, tr. py	LST	25	95	685	0.5	900	1752	66
60508	1418-20	Grey sandy limestone, mnr fossils, carb stringers	LST	20	100	1200	X	1000	4202	72
60509	1420-22	Pale grey f. gr. limestone, mnr pyrite	LST	15	30	200	X	215	4700	37
60510	1422-24	Pale grey limestone, stylolitic	LST	15	35	235	X	145	4350	31
60511	1424-26	" " " mnr pyrite	LST	20	50	190	X	250	5000	35
60512	1426-28	" " " rare stylolites	LST	20	70	335	X	125	6350	28
60513	1428-30	" " "	LST	15	70	395	0.5	170	4200	27
60514	1430-32	Grey/orange viscous clay and brown sandy clay	CLAY	50	235	395	0.5	80	2152	311
60515	1432-34	Sandy clay as above	CLAY	40	165	580	0.5	30	1252	360
60516	1434-36	Pale grey v. f. gr. limestone, mnr stylolites	LST	15	80	320	X	140	5750	44
60517	1436-38	Black clay, slightly sandy	CLAY	50	300	110	2.5	30	5400	326
60518	1438-40	Pale grey clay (with gravel)	CLAY	40	285	310	1.0	50	1702	344
nil	1440-42	} Deep gravel - not sampled								
"	1442-44									
"	1444-46									
"	1446-48									
60519	1448-50									
60519	1450-52	Pale grey f. gr crystalline limestone	LST	10	30	50	0.5	195	3800	11

352040

040

352041

RL 160.0m

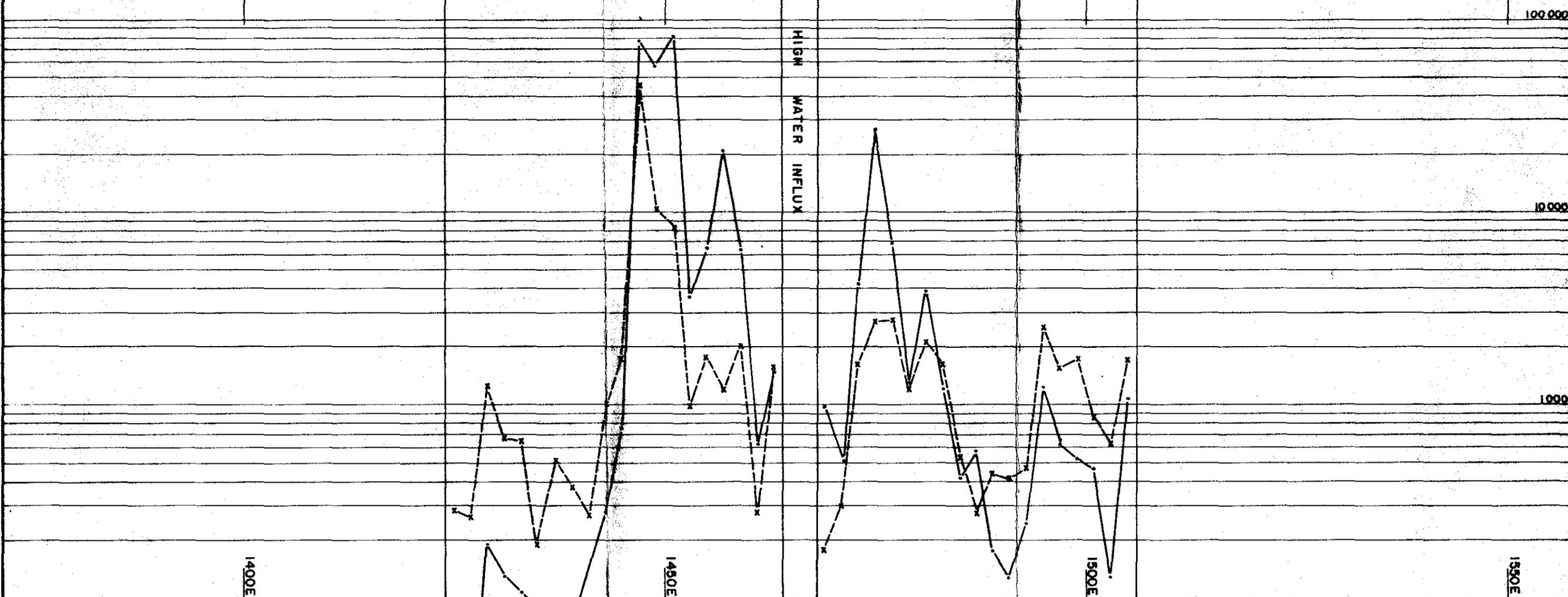
PROFILE

LITHOLOGY

MINERAL

GEOCHEMISTRY (ppm)

NOT	LIMESTONE Light grey, fine grained. Trace DOLOMITE. Minor calcite veining. Moderate stylolites.	Minor PY.	1% Pyrite, up to 1% GN.	Minor PY.	Up to 5% GN, trace SP	Rare GN, SP	Fossiliferous LIMESTONE Grey, finely crystalline. Minor dolomite. Minor calcite veining.	LIMESTONE Light grey, fine grained.



EASTINGS 1424 - 1506	SAMPLE INTERVAL 2m	SAMPLED BY G. KARY, L. WALSH.	DATE 2-2-'84	AZIMUTH Grid East	TOTAL LENGTH 82m	ELECTROLYTIC ZINC CO. of A'ASIA LTD.	
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<p><b>LEGEND</b></p> <p>—•—•—•— Pb</p> <p>-x-x-x-x-x Zn</p> <p>o-o-o-o-o Ag</p> <p>PY = Pyrite</p> <p>SP = Sphalerite</p> <p>GN = Galena</p>		<p>PURPOSE OF COSTEAN</p> <p>To test for mineralization near old Pyramid workings.</p> <p>Follow up soil geochem. anomaly.</p> <p>5 cm</p>	<p>PROJECT: E.L. 4/78 ZEEHAN TAS.</p> <p><b>COSTEAN RESULTS</b></p> <p><b>LINE - 1750N</b></p>
<p><b>PYRAMID GRID</b></p>		<p>SCALE: 1:500</p> <p>EXC. BY: GROVES, O &amp; K.</p> <p>DRAWN: R J R.</p>	<p>SURVEY: G. KARY.</p> <p>DATE: 13-4-'84</p> <p>CHECKED:</p>
			<p>REVISED:</p> <p>REF. No. A3-532-0069</p>

ELECTROLYTIC ZINC CO. of A'ASIA. LTD.  
ROSEBERRY, TASMANIA.

COSTEAN SAMPLE DATA  
LINE: 1750 N

PROJECT: EL 4/78  
SAMPLED BY: G.K. L.M.F.  
AZIMUTH:

LOCALITY: Pyramid  
SAMPLE INTERVAL: 2m  
DATE: 1-2-84

SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe	Ba
60520	1424-26	Grey f.gr. crystalline fossiliferous limestone	LST	10	55	290	X	790	9750	22
60521	1426-28	"	LST	10	60	260	0.5	2450	3002	11
60522	1428-30	Grey f.gr. limestone, mod. calcite veining	LST	20	195	1300	0.5	160	4850	65
60523	1430-32	Pale grey f.gr. limestone	LST	15	140	670	0.5	155	3600	35
60524	1432-34	Pale grey f.gr. limestone and silty limestone	LST	15	110	655	X	255	4650	21
60525	1434-36	Grey laminated limestone, fractured, dense	LST	10	45	195	0.5	405	4450	16
60526	1436-38	Grey f.gr. limestone and silty limestone	LST	10	100	510	X	475	6350	25
60527	1438-40	Mottled grey part dolomitized limestone	LST	10	90	375	X	515	6900	15
60528	1440-42	Mottled limestone + clay + grey v.f.gr. limestone	LST	15	105	270	0.5	460	6500	27
60529	1442-44	Pale grey f.gr. limestone	LST	25	280	1000	X	645	1558	73
60530	1444-46	Black pug with fragments pale grey f.gr. limst	PUG + LST	35	755	1750	3.5	370	2102	134
60531	1446-48	Black pug, 1% Py + 1% gn	PUG	465	7.66%	4.57%	121	45	2.16%	305
60532	1448-50	Black silty pug	PUG	255	5.75%	1.01%	43	20	1.05%	240
60533	1450-52	Black pug and green sandy pyritic clay	PUG	60	8.11%	0.82%	18	1900	1.95%	205
60534	1452-54	Black sandy pug	PUG	80	3650	980	0.5	60	1.50%	298
60535	1454-56	Grey weathered limestone	LST	30	0.65%	1850	7	440	1.34%	180
60536	1456-58	Green pyritic clay with pale grey LST frags	CLAY + LST	65	2.07%	1250	3.0	660	1.25%	332
60537	1458-60	"	CLAY + LST	30	6400	2000	2.0	65	1.45%	151
60538	1460-62	Grey f.gr. crystalline limestone, tr py	LST	15	620	280	0.5	180	4250	55
60539	1462-64	Grey/orange clay, minor ferruginous frags	CLAY	50	1650	1650	1.0	45	1.15%	316
60540	1468-70	Pale grey f.gr. limestone, mod py + calcite eyes	LST	15	955	180	X	170	4000	28
60541	1470-72	"	LST	10	500	300	0.5	435	3950	33
60542	1472-74	Pale grey f.gr. limestone, calcite vng. Rare gn	LST	40	4200	1700	3.0	2350	7600	39
60543	1474-76	Black dolomite, mod calcite vng, 5% gn in veins	DLST min	20	2.78%	2700	13	1.60%	4.61%	27
60544	1476-78	Pale grey limestone, abdt cal vng, mod gn, sp	LST	30	6900	2700	4.0	3800	1.65%	30
60545	1478-80	Pale grey mottled carbonaceous limestone	LST	15	1200	1300	1.0	1450	9550	29

ELECTROLYTIC ZINC CO. of A'ASIA. LTD.  
ROSEBERRY, TASMANIA.

COSTEAN SAMPLE DATA  
LINE: 1750 N

PROJECT: EL 4/78  
SAMPLED BY: G.K. -L.W.  
AZIMUTH:

LOCALITY: Pyramid  
SAMPLE INTERVAL: 2m  
DATE: 1-2-84-2-2-84

SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe	Ba
60546	1480-82	Pale grey limestone, lattice of carb stringers	LST	20	3950	2100	4.0	1950	9200	62
60547	1482-84	Grey f.gr. cryst. limestone, mnr cal. vng	LST	20	1250	1700	2.0	1350	8350	47
60548	1484-86	Grey limestone, fossiliferous, mnr sp. in cal vng	LST	10	430	535	X	420	6000	192
60549	1486-88	Dark grey carbonaceous limestone	LST	10	475	280	X	365	6850	37
60550	1488-90	Grey sandy limestone - mnr blk laminae	LST	10	185	450	X	395	7050	52
60551	1490-92	"	LST	10	140	420	0.5	355	5600	29
60552	1492-94	Grey bioclastic limestone, mod calcite vng	LST	10	245	480	X	630	4950	28
60553	1494-96	As above plus dk grey f.gr limestone	LST	15	1350	2550	2.5	950	8300	59
60554	1496-98	As above	LST	10	630	1650	2.0	610	7200	29
60555	1498-1500	Dark grey f.gr. limestone abundant intracryst	LST cal. vng.	15	530	1800	2.5	1450	190%	31
60556	1500-1502	Mottled dolomite (black) and limestone (pale grey)	LST + DLST	15	475	860	1.5	690	5200	34
60557	1502-4	Pale grey f.gr limestone, mnr stylolites	LST	10	145	620	X	650	4500	33
60558	1504-6	Grey f.gr limestone, mod. calcite vng	LST	10	1100	1800	1.5	1550	8450	55

043

352044

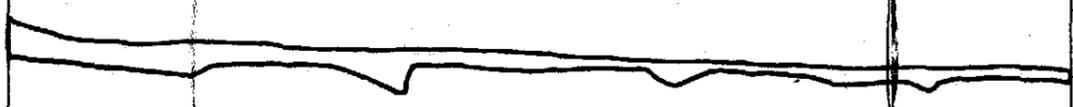
RL 160.0m

PROFILE

LITHOLOGY

MINERAL

GEOCHEMISTRY (ppm)



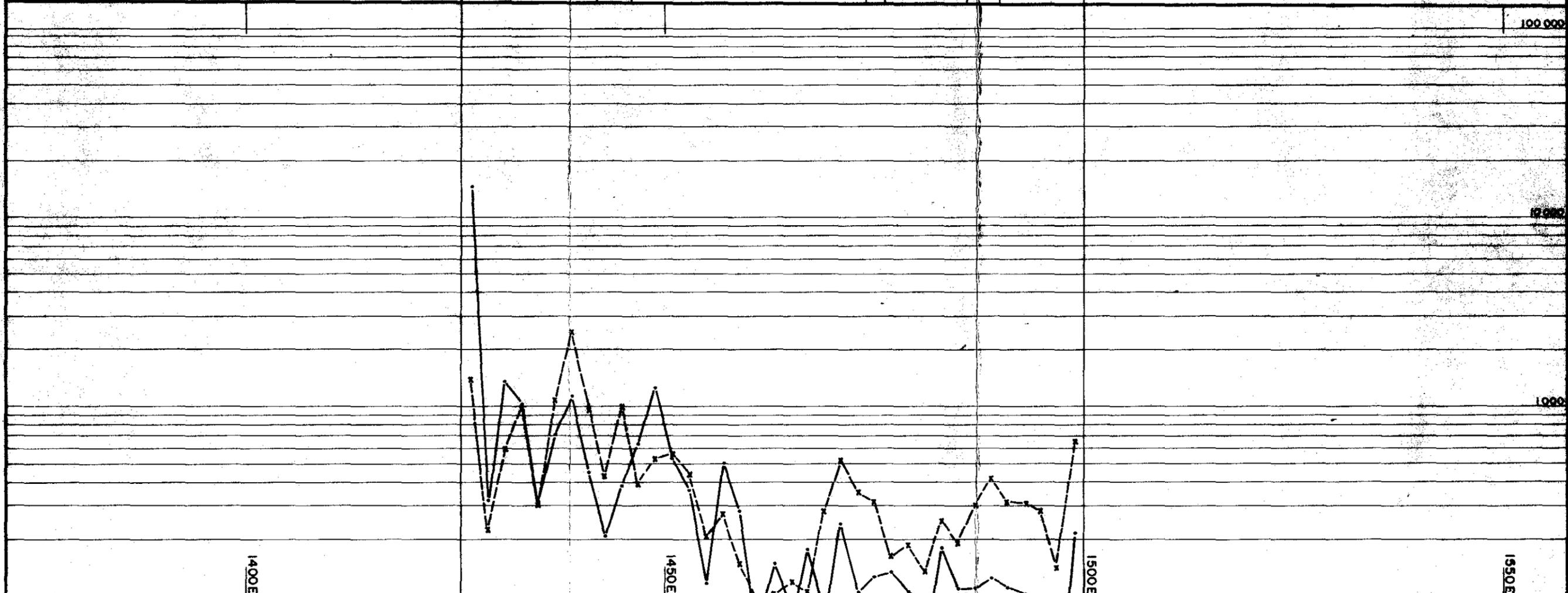
MICRITE  
LIGHT GRAY,  
fossiliferous.

LIMESTONE  
Grey minor stylolites,  
slightly carbonaceous.  
Finely crystalline in  
patches. Minor to  
moderate calcite  
cementation.

Rare Galena  
and Sphalerite.

Rare SP

Minor Pyrite.



100 000

1000

1000

1400E

1450E

1500E

1550E

EASTINGS  
1426 - 1500

SAMPLE INTERVAL  
2m

SAMPLED BY  
G. KARY, L. WALSH.

DATE  
3-2-'84

AZIMUTH  
Grid East

TOTAL LENGTH  
74m

ELECTROLYTIC ZINC CO. of A'ASIA LTD.

PROJECT: E.L. 4/78 ZEEHAN

TAS.

COSTEAN RESULTS

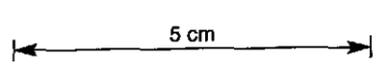
LINE - 1700 N

**LEGEND**

- Pb
- x-x-x- Zn
- o-o-o- Ag

- PY = Pyrite
- SP = Sphalerite
- GN = Galena

PURPOSE OF COSTEAN  
Follow up anomalous geochemistry from  
JS bedrock sampling program.  
To test for mineralization near old  
Pyramid workings.



PYRAMID GRID

SCALE: 1:500  
EXC. BY: GROVES, O&K  
DRAWN: R.J.R.

SURVEY: G. KARY  
DATE: 13-4-'84  
CHECKED:

REVISED:  
REF. No.  
A3-532-0068

LECTROLYTIC ZINC CO. of A'ASIA. LTD.  
ROSEBERY, TASMANIA.

COSTEAN SAMPLE DATA  
LINE: 1700 N

PROJECT: EL 4/78  
SAMPLED BY: G. K. - L. W.  
AZIMUTH:

LOCALITY: Pyramid  
SAMPLE INTERVAL: 2m  
DATE: 3-2-84

044

SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe	Ba
60559	1426-28	Pale grey micritic limestone - fossiliferous	LST	20	1.558	1500	4	485	0.588	22
60560	1428-30	"	LST	5	325	230	X	600	6100	24
60561	1430-32	"	LST	15	1450	605	0.5	320	4200	40
60562	1432-34	Grey v.f.gr limestone - mod. calcite xyst. mar. var.	LST	15	1050	1000	X	315	3850	47
60563	1434-36	Grey fossiliferous limestone, abundant sparry calc.	LST	10	320	310	0.5	210	2050	19
60564	1436-38	Fragments of grey limestone	LST	15	710	1150	1.0	1000	1.608	107
60565	1438-40	Khaki clay - minor pyrite	CLAY	20	1200	2600	2.0	1350	1.858	175
60566	1440-42	Dark grey finely crystalline limestone	LST	10	465	960	1.0	1150	1.408	43
60567	1442-44	Grey f.gr limestone with mar. d. grey, tr. gr. sp.	LST	10	205	440	1.0	1500	1.258	53
60568	1444-46	"	LST	10	385	1000	1.5	455	2800	25
60569	1446-48	Grey f.gr limestone with network carb. stringers	LST	10	640	395	1.5	845	3450	39
60570	1448-50	Grey f. crystalline limestone, mar. cal. var.	LST	10	1350	540	1.5	1200	6000	40
60571	1450-52	Pale grey f.gr limestone ? interbedded + dk. grey	LST	10	540	580	0.5	545	4450	17
60572	1452-54	Pale grey limestone, slightly fissile	LST	10	370	450	1.0	575	4650	24
60573	1454-56	Dark grey f. crystalline limestone - rare carb. bed	LST	10	120	205	1.0	330	7500	43
60574	1456-58	Grey f.gr limestone with carb. laminae - fissile	LST	15	505	280	1.0	330	8150	67
60575	1458-60	"	LST	10	285	160	0.5	190	5550	55
60576	1460-62	Pale grey f. crystalline limestone	LST	5	70	100	0.5	245	5100	44
60577	1462-64	As above, stylolites	LST	5	165	105	X	140	3300	58
60578	1464-66	As above	LST	5	90	130	X	255	3750	37
60579	1466-68	As above	LST	5	190	110	X	135	2500	34
60580	1468-70	As above + minor small sparry calcite	LST	10	90	290	X	350	3750	39
60581	1470-72	As above	LST	15	245	530	0.5	300	4650	39
60582	1472-74	As above	LST	10	105	360	0.5	420	5500	59
60583	1474-76	As above, trace sp	LST	10	135	320	0.5	365	3300	47
60584	1476-78	Grey carb. limestone, mar. py. r. cal. var.	LST	10	150	175	X	190	3100	20

352045

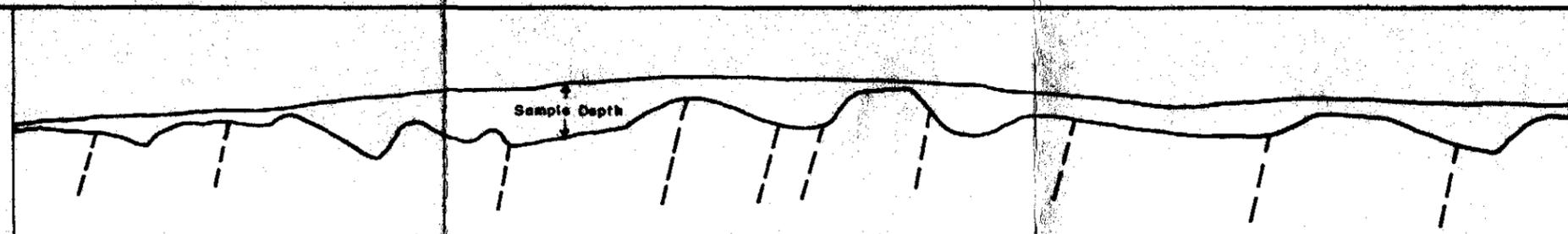


046

352047

RL 140.0m

Sample Depth



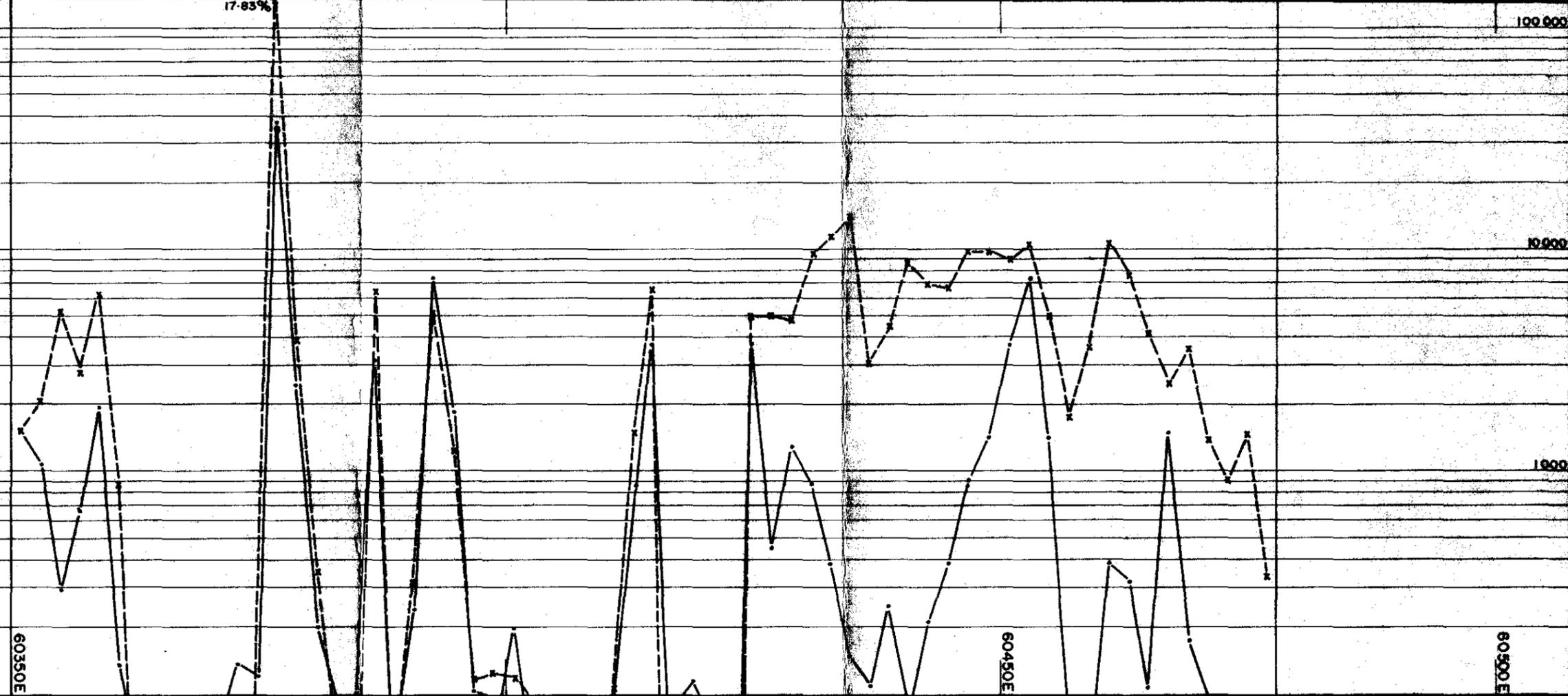
PROFILE

LITHOLOGY

MINERAL

GEOCHEMISTRY (ppm)

LIMESTONE Grey, poorly bedded, plus black CLAY.	1-5% Pyrite.
CLAY Khaki, variably silty, moderately dense.	1-5% Pyrite.
BRECCIA? Black CLAY fragments in green- black matrix, moderately dense.	1% Pyrite.
SILTSTONE Black, quite friable.	1-2% Pyrite, Trace SP.
SILTSTONE Pale green to grey, micaceous.	
FOSSILIFEROUS SILTSTONE.	
LAMINATED SILTSTONE and SANDSTONE.	
FOSSILIFEROUS SILTSTONE Green to grey, moderately limonitic.	
SILTSTONE Dark green to black. Vertically cleaved, cleavage at 135°/80° W. Minor SANDSTONE beds.	GN/SP.
SILTSTONE and SHALE Green-grey, variably cleaved.	1-2% Pyrite.
SILTSTONE Grey, siliceous variably micaceous.	1-5% Pyrite.



EASTINGS  
60350-60478

SAMPLE INTERVAL  
2m

SAMPLED BY  
G. KARY, L. WALSH

DATE  
4-2-'84 to 6-2-'84

AZIMUTH  
Grid E-089°AM.G.

TOTAL LENGTH  
128m

ELECTROLYTIC ZINC CO. of A'ASIA LTD.

—•—•— Pb  
-x-x-x- Zn  
o-o-o-o- Ag

**LEGEND**  
PY = Pyrite.  
SP = Sphalerite.  
GN = Galena.

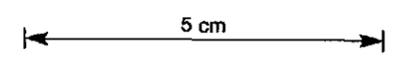
**PURPOSE OF COSTEAN**  
To test anomalous Pb-Zn geochemistry,  
from a hand auger soil sampling program.  
Assays up to 2.1% Zn, 1.45% Pb

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

**COSTEAN RESULTS**  
LINE- 50600N

SCALE: 1:300	SURVEY: G. KARY.	REVISED:
EXC. BY: GROVES, O.B.K.	DATE: 12-4-'84	REF. No.
DRAWN: R.J.R.	CHECKED:	A3-532-0066

MYRTLE GRID



ELECTROLYTIC ZINC CO. of A'ASIA. LTD.  
ROSEBERY, TASMANIA.

COSTEAN SAMPLE DATA  
LINE: 50600N

PROJECT: EL 4/78  
SAMPLED BY: G.K. - L.W.  
AZIMUTH:

LOCALITY: Myrtle  
SAMPLE INTERVAL: 2m  
DATE: 4.2.84 - 6.2.84

SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe	Ba
60596	60350-52	Grey, siliceous, variably micaceous SILT-5% pyrite	SILTSTONE	50	1600	1600	X	65	7100	233
60597	60352-54	A <sub>2</sub> Above plus rare fossils	SILTSTONE	35	1150	2000	X	50	1.45%	223
60598	60354-56	A <sub>3</sub> Above	SILTSTONE	40	295	5100	X	25	2.10%	379
60599	60356-58	Green-grey siltstone, minor shale	SILTSTONE + SHALE	40	665	2800	0.5	15	9600	469
60600	60358-60	A <sub>2</sub> Above	SILTSTONE + SHALE	95	1950	6150	X	15	2.20%	496
60601	60360-62	A <sub>2</sub> Above	SILTSTONE - SHALE	20	140	870	0.5	30	7950	731
60602	60362-64	Pale grey shale, Well cleaved @ 135°/80°W	SHALE	15	30	45	X	20	1400	757
60603	60364-66	A <sub>2</sub> Above Trace pyrite	SHALE - SILTSTONE	15	65	50	0.5	10	1800	805
60604	60366-68	Dark green micaceous siltstone - cleaved	SILTSTONE	10	25	50	X	10	1050	1050
60605	60368-70	Coral rich siltstone, limonite stained	SILTSTONE	10	90	40	X	10	1200	1250
60606	60370-72	A <sub>2</sub> Above	SILTSTONE	10	65	25	0.5	5	1150	1490
60607	60372-74	Black siltstone, cleaved	SILTSTONE	10	145	25	1.0	10	1250	1470
60608	60374-76	Green siltstone, poorly cleaved	SILTSTONE	10	130	95	2.5	10	1150	2820
60609	60376-78	Black siltstone Thin bands galena + sp	SILTSTONE	70	3.78%	17.83%	23	10	1.76%	1490
60610	60378-80	Dark green siltstone, rare fossils	SILTSTONE	95	2450	3850	7.0	5	2550	1100
60611	60380-82	Dark grey and green-tan laminated siltstone	SILTSTONE	40	200	360	3.0	5	1900	698
60612	60382-84	Cream sandstone - Green siltstone, laminated	SILTST - SANDSTONE	35	85	65	1.5	5	1400	674
60613	60384-86	A <sub>2</sub> Above	SLT - SST	40	100	80	1.0	5	1950	526
60614	60386-88	Grey silty clay, minor siltstone	CLAY + SLT	80	3150	6500	0.5	15	1.15%	543
60615	60388-90	Finely bedded carbonaceous clay	CLAY =? SLST	30	75	85	2.5	5	3200	609
60616	60390-92	Fossiliferous, siltstone, limonitic	SILTSTONE	90	240	315	2.0	5	3150	586
60617	60392-94	A <sub>2</sub> Above	SILTSTONE	320	7200	5050	2.0	10	1.35%	524
60618	60394-96	A <sub>2</sub> Above	SILTSTONE	85	1850	1300	X	5	3400	580
60619	60396-98	A <sub>2</sub> Above	SILTSTONE	45	105	120	0.5	5	2700	600
60620	60398-60400	A <sub>2</sub> Above	SILTSTONE	40	70	130	1.0	5	2300	611
60621	60400-02	Light grey siltstone, slightly limonitic	SILTSTONE	50	200	125	0.5	5	6950	537

048

352049

LECTROLYTIC ZINC CO. of ASIA. LTD.  
ROSEBERRY, TASMANIA.

COSTEAN SAMPLE DATA  
LINE: 50600N

PROJECT: EL 4778  
SAMPLED BY: G.K.-L.W.  
AZIMUTH:

LOCALITY: Myrtle  
SAMPLE INTERVAL: 2m  
DATE: 4-2-84 - 6-2-84

SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe	Ba
60622	60402-04	Fossiliferous siltstone, limonitic	SILTSTONE	45	55	75	X	5	2550	483
60623	60404-06	Laminated siltstone-sandstone	SLT - SST	65	20	50	0.5	5	3600	447
60624	60406-08	As Above Very limonitic	SLT - SST	40	30	30	X	5	1000	486
60625	60408-10	As Above	SLT - SST	70	35	45	0.5	5	1-05%	587
60626	60410-12	Laminated clay and siltstone frag.	SILTSTONE	80	100	115	X	5	2050	782
60627	60412-14	Fossiliferous siltstone. Dense	SILTSTONE	65	870	1600	0.5	10	5600	735
60628	60414-16	As Above	SILTSTONE	185	3750	6500	X	10	1-70%	728
60629	60416-18	Micaceous siltstone, well bedded	SILTSTONE	15	75	40	0.5	5	2400	936
60630	60418-20	As Above Dense	SILTSTONE	15	115	35	0.5	5	4550	909
60631	60420-22	Pale green micaceous siltstone	SILTSTONE	10	30	25	X	X	950	984
60632	60422-24	As Above	SILTSTONE	15	55	40	0.5	5	1950	1070
60633	60424-26	Black fossiliferous clay 1-2% pyrite	PUG	30	3700	4950	X	20	2-60%	1380
60634	60426-28	As Above tr. sphalerite	PUG	30	445	5000	X	25	2-05%	1730
60635	60428-30	Green-Black silty clay mar pyrite	CLAY = ? SLST	35	1350	4700	X	25	1-90%	2640
60636	60430-32	Green-Black fissile siltstone	SILTSTONE	30	875	9550	0.5	25	2-15%	2670
60637	60432-34	As Above	SILTSTONE	25	385	1-15%	X	20	2-08%	2270
60638	60434-36	As Above plus minor breccia	SILTSTONE + BX	25	165	1-46%	X	15	3-54%	2010
60639	60436-38	Black piggy clay - possible bx. text. 1% pyrite	? BX / PUG	35	110	3000	X	20	3-50%	1750
60640	60438-40	As Above	? BX / PUG	70	255	4600	1-0	15	6-20%	2200
60641	60440-42	Br-gn clay - occasional ? fragments	CLAY = ? BX	25	95	8500	0.5	15	4-10%	1170
60642	60442-44	As Above 1% py	CLAY = ? BX	30	215	6900	0.5	20	4-40%	1210
60643	60444-46	As Above	CLAY = ? BX	30	380*	6650	0.5	15	4-75%	1880
60644	60446-48	As Above 1% py	CLAY = ? BX	30	900	9700	0.5	20	3-20%	1310
60645	60448-50	As Above	CLAY = ? BX	35	1500	9600	1-0	20	5-20%	848
60646	60450-52	As Above 1-5% py	CLAY = ? BX	60	3658	8800	0.5	20	1000	732
60647	60452-54	As Above	CLAY = ? BX	375	0-73%	1-02%	2	25	2-59%	783

352050 49

LECTROLYTIC ZINC CO. of A'ASIA. LTD.  
ROSEBERY, TASMANIA.

COSTEAN SAMPLE DATA  
LINE: 50600N

PROJECT: EL 4/78  
SAMPLED BY: G.K. -L.W.  
AZIMUTH:

LOCALITY: Myrtle  
SAMPLE INTERVAL: 2m  
DATE: 4.2.84 - 6.2.84

SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe	Bn
60648	60454-56	Khaki clay, moderately dense 5% py	CLAY	40	1500	4950	0.5	20	2.95%	768
60649	60456-58	Green-grey clay, abundant qtz mnr py	CLAY	30	90	1800	0.5	30	3.40%	693
60650	60458-60	As Above	CLAY	25	90	3600	X	25	3.10%	578
60651	60460-62	Khaki, sandy clay, mnr qtz veins	CLAY	35	390	1.04%	X	20	3.08%	395
60652	60462-64	Khaki silty clay	CLAY	45	320	7600	0.5	25	2.20%	511
60653	60464-66	Green-grey viscous clay	CLAY	35	115	4050	0.5	35	3.90%	430
60654	60466-68	Green silty clay, abundant qtz frag.	CLAY	370	1650	2550	0.5	10	1.95%	325
60655	60468-70	Black poorly bedded clay 1% py	CLAY	50	190	3650	X	15	4.00%	311
60656	60470-72	Dark grey bedded clay 5% py	CLAY	40	90	1450	0.5	15	5.50%	335
60657	60472-74	As Above, plus grey limestone	CLAY + LST	35	65	900	X	60	3.45%	303
60658	60474-76	As Above	CLAY + LST	35	80	1650	0.5	20	4.25%	302
60659	60476-78	Grey poorly bedded limestone	LIMESTONE	15	55	340	X	140	1.85%	104

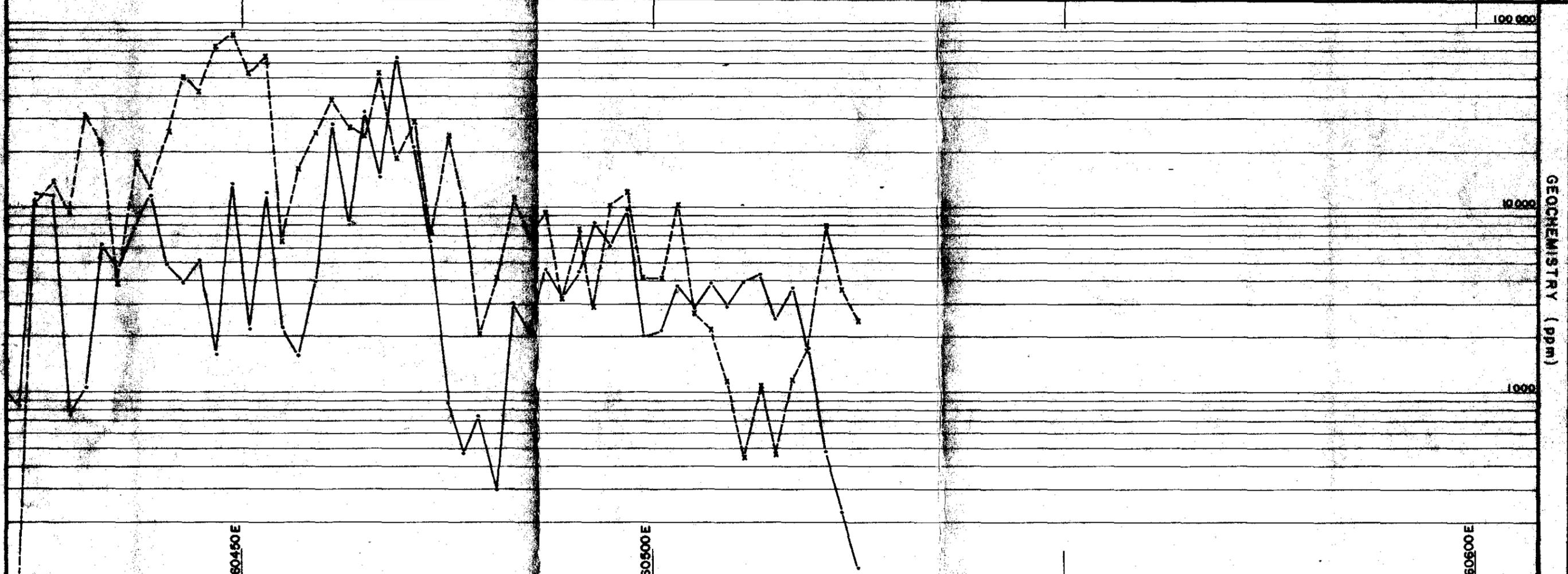


051

352052

RL 140.0m

PROFILE		LITHOLOGY		MINERAL	
		CLAY Dark grey to black. Minor Quartz fragments.	CLAY Light grey, calcareous.	CLAY Light khaki, silty. Minor Siltstone fragments.	CLAY Khaki-green, poorly bedded, rare fossils, possible BRECCIA texture.
Up to 5% Pyrite.		Up to 10% Pyrite.		Up to 20% Pyrite. Up to 5% Sphalerite. Up to 1% Galena.	



EASTINGS 60300-60526	SAMPLE INTERVAL 2 m	SAMPLED BY G. KARY, L. MARTIN, L. W. LSH.	DATE 6-2-'84 to 10-2-'84	AZIMUTH Grid E./089°AMG.	TOTAL LENGTH 226 m	ELECTROLYTIC ZINC CO. of A'ASIA LTD.	
<p>LEGEND</p> <p>—•—•— Pb</p> <p>—x—x— Zn</p> <p>—o—o— Ag</p> <p>PY = Pyrite</p> <p>SP = Sphalerite</p> <p>GN = Galena</p>						<p>PURPOSE OF COSTEAN</p> <p>To test anomalous Pb-Zn geochemistry from a Jacro auger bedrock sampling program. Assays up to 4.1% Zn, 1.05% Pb.</p>	
<p>MYRTLE GRID</p> <p>5 cm</p>						<p>PROJECT: E.L. 4/78 ZEEHAN TAS.</p> <p>COSTEAN RESULTS</p> <p>LINE - 50500M (PART II of II)</p>	
SCALE: 1:500		SURVEY: G. KARY		REVISED:		REF. No.	
EXC. BY: GROVES, O&K		DATE: 9-4-'84		DRAWN: R.J.R.		CHECKED:	
						A3-532-0063	

LECTROLYTIC ZINC CO. of ASIA. LTD.  
ROSEBERRY, TASMANIA.

COSTEAN SAMPLE DATA  
LINE: 50500N

PROJECT: EL 4178  
SAMPLED BY: G.K.-L.W.  
AZIMUTH:

LOCALITY: Myrtle  
SAMPLE INTERVAL: 2m  
DATE: 6.2.84 - 10.2.84

SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe	Ba
60660	60526-24	Dk gy clay - breccia texture 1-5% py	CLAY = ? BX	30	120	2550	1.0	25	6.50%	435
60661	60524-22	As above 1-5% py	CLAY = ? BX	25	235	3600	0.5	20	4.40%	394
60662	60522-20	Bk clay - abdt 9% xst + rock fr. 5% py	CLAY	25	485	7950	0.5	25	3.60%	436
60663	60520-18	Lt gy lamr clay + mnr gn gy pyritic clay	CLAY	30	1800	1800	4.0	15	1.65%	448
60664	60518-16	Gy clay - mnr dk gy sandy layers	CLAY	50	3700	1300	5.5	10	5.15%	547
60665	60516-14	Bn + bk sandy clay	CLAY = ? O/B	50	2500	470	5.5	5	4.85%	901
60666	60514-12	Banded lt gy + bk viscous clay	CLAY	115	4375	1125	22	5	0.55%	765
60667	60512-10	Bn + bk clay with rounded 9% pebbles	CLAY + pebbles	85	4000	455	18	5	0.52%	382
60668	60510-08	Khaki green clay mnr 9% xst 1% py	CLAY	45	2950	1200	3.5	15	3.30%	362
60669	60508-06	Dk gn gy clay - rounded sandy frags - tr py	CLAY = ? O/B	75	3900	2250	2.5	10	2.70%	282
60670	60506-04	As above + 9% frags 1-5% py	CLAY = ? O/B	50	2900	2750	2.0	15	6.15%	295
60671	60504-02	Khaki green silty clay	CLAY	45	3800	1.05%	3	10	5.13%	267
60672	60502-60500	Khaki green clay 1-5% py	CLAY	210	2200	4100	2	10	15.50%	260
60673	60500-60498	As above 5-10% py	CLAY = LST	30	2000	4100	1.5	35	1.35%	212
60674	60498-96	As above - mnr lim frags 1-5% py	CLAY = LST	35	0.96%	1.32%	3	10	4.61%	288
60675	60496-94	Dk gy viscous clay mnr py, tr sp	CLAY	40	0.61%	1.03%	5	20	5.80%	371
60676	60494-92	Dk gy - bk clay - angular + blocky	CLAY = LST/SIST	85	0.84%	2850	15	5	1.22%	551
60677	60492-90	Dk gy - khaki clay - 9% pods - mnr py	CLAY	40	4450	7650	1.0	20	1.75%	299
60678	60490-88	Black carb. clay -	PUG = ? LST	70	3325	3275	12	15	1.67%	408
60679	60488-86	As above	PUG = ? LST	95	4650	0.92%	7	20	4.30%	388
60680	60486-84	Bk clay + pebble + cobbler layers	CLAY + pebbles	80	2150	6900	8.0	10	2.90%	369
60681	60484-82	Dk gy clay + mnr lim frags mnr py	CLAY = ? BX	80	3025	1.19%	8	5	2.14%	406
60682	60482-80	As above + lt gy calc clay on LST	CLAY = ? BX = LST	25	300	4100	1.0	40	2.95%	173
60683	60480-78	Lt gy calc clay - calcite veins	CLAY = LST	15	755	2050	0.5	55	6650	156
60684	60478-76	Lt gy calc clay - mnr bk clay	CLAY = LST	X	475	1.03%	X	25	3.23	638
60685	60476-74	mottled bk - gn bk - gn bn clay 10% py	CLAY	25	875	2.49%	4	X	8.30	1060

ELECTROLYTIC ZINC CO. of A'ASIA. LTD.  
ROSEBERY, TASMANIA.

COSTEAN SAMPLE DATA  
LINE: 50500N

PROJECT: EL 4/78  
SAMPLED BY: G.K. -L.W.  
AZIMUTH:

LOCALITY: Myrtle  
SAMPLE INTERVAL: 2m  
DATE: 6.2.86 - 10.2.84

SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe	Ba
60686	60474-72	Dk - lt gy clay abdt quartz 1-5% py	CLAY	100	0.66%	0.72%	3	X	6.03	1950
60687	60472-70	lt brn clay + with siltstone 1-5% py	CLAY = ? SLST	150	2.13%	2.92%	12	X	14.73	2180
60688	60470-68	As above, py nodules galena veins, 1-5% py	CLAY = ? SLST	25	6.49%	1.85%	5	X	4.10	2790
60689	60468-66	lt brn clay mar py	CLAY	25	1.63%	5.34%	2	X	2.84	2070
60690	60466-64	As above finely bedded galena	CLAY	X	3.26%	2.43%	2	X	2.39	1300
60691	60464-62	lt brn clay - silty mar py	CLAY = ? SLST	X	0.80%	2.77%	X	X	1.61	1260
60692	60462-60	As above mar slst frags	CLAY = SLST	25	2.90%	3.81%	5	X	1.81	848
60693	60460-58	As above 1-2% py + sp	CLAY = SLST	25	4000	2.62%	X	X	6.39	966
60694	60458-56	Dk gy gn clay - fx texture 1-5% py	CLAY = ? Bx	X	1700	1.75%	X	25	4.77	1270
60695	60456-54	Dk gy gn clay - bx texture tr gn + sp, 2% py	CLAY = ? Bx	25	2325	0.65%	2	25	3.07	4490
60696	60454-52	As above - mass. py gn + sp + py	CLAY = ? Bx	25	1.29%	6.57%	18	25	6.84	5060
60697	60452-50	As above 20% py; tr gn	CLAY = ? Bx	25	2225	5.13%	18	25	13.99	5510
60698	60450-48	As above 10-20% py; tr gn	CLAY = ? Bx	75	1.43%	8.79%	28	25	7.49	4090
60699	60448-46	gn gy clay - nodular py + qz vng 30% py	CLAY	25	1725	7.26%	28	X	22.95	931
60700	60446-44	As above 5-15% py	CLAY	25	5150	4.31%	12	25	5.03	4750
60701	60444-42	gn bk clay - qz. xyst 5-10% py, 1-5% sp	CLAY	25	3900	4.99%	8	25	4.24	4660
60702	60442-40	As above 1% py	CLAY = ? SLST	X	4850	2.65%	4	25	1.55	4830
60703	60440-38	As above - mar bit - tr sp	CLAY = ? SLST	X	1.16%	1.31%	5	25	1.79	3780
60704	60438-36	dk gy - bk clay - rd'd rk frags mar py	CLAY	25	0.77%	1.86%	4	25	1.47	3740
60705	60436-34	dk gy - bk clay - breccia texture tr py	CLAY = ? Bx	25	4575	3.87%	2	25	1.85	3850
60706	60434-32	khaki clay - breccia text. 1% sp, mar gn	CLAY = ? Bx	25	0.64%	2.24%	2	25	1.47	3670
60707	60432-30	As above 2% sp + py	CLAY = Bx	25	1075	3.17%	2	50	3.14	2450
60708	60430-28	As above	CLAY = ? Bx	25	750	0.91%	X	100	2.73	3220
60709	60428-26	Bk clay - breccia texture + or clay	CLAY = ? Bx	175	1.19%	1.47%	6	25	4.21	2590
60710	60426-24	As above	CLAY	75	1.18%	1.03%	5	X	2.71	2480
60711	60424-22	Pale gy to tan clay - mar peat	CLAY = O/B	X	825	100	3	X	1450 <sup>t</sup>	3860

054

352055

LECTROLYTIC ZINC CO. of A'ASIA. LTD.  
ROSEBERRY, TASMANIA.

COSTEAN SAMPLE DATA  
LINE: 50500N

PROJECT: E L 4/78  
SAMPLED BY: G. K. - L. W.  
AZIMUTH:

LOCALITY: Myrtle  
SAMPLE INTERVAL: 2m  
DATE: 6.2.84 - 10.2.84

SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe	Ba
60712	60422-20	Pale grey to tan clay - mnr bitumen	CLAY = O/B	X	1050	75	4	X	550 <sup>t</sup>	2790
60713	60420-18	Dk gn blk clay + bn + gy clay	CLAY = O/B	X	450	75	3	X	275 <sup>t</sup>	5180
60714	60418-16	Bk cherty siltstone	SILTSTONE	25	975	125	3	X	X	2.89%
60715	60416-14	Dk gy siltstone + peat and pyrite py	SILTSTONE	100	0.55%	0.68%	4	X	11.35	2.12%
60716	60414-12	Dk gy limestone py + sp	LIMESTONE	100	0.66%	1.52%	3	25	6.00	12.9%
60717	60412-10	Wth'd limestone + carbonate + bitum + gn + sp	LIMESTONE	100	1.49%	1.29%	7	25	4.95	11.2%
60718	60410-08	Barite with limestone patches ha + gn + sp	BARITE + LST	125	1.76%	1.65%	5	25	1.33	20.5%
60719	60408-06	As above ha + gn + sp	BARITE + LST	175	2.57%	1.10%	11	X	1.18	23.2%
60720	60406-04	Dk gy wth'd siltstone - no cleavage py	SILTSTONE	100	0.90%	0.61%	4	25	1.30	1.15%
60721	60404-02	As above py	SILTSTONE	25	1900	0.51%	3	25	1.04	8240
60722	60402-60400	Dk gy - gy siltstone tr py	SILTSTONE	50	1775	2475	3	25	0.89	8610
60723	60400-60398	As above tr py	SILTSTONE	75	1550	0.60%	2	25	1.51	6500
60724	60398-96	Dk gy wth'd siltstone	SILTSTONE	25	525	4975	2	25	1.48	3730
60725	60396-94	Dk gy wth'd siltstone tr py	SILTSTONE	25	225	3000	1	25	1.60	1970
60726	60394-92	Gy - bn wth'd siltstone	SILTSTONE	25	400	4175	1	25	0.83	1350
60727	60392-90	Dk gy wth'd siltstone - mnr peat veins tr py	SILTSTONE	25	450	0.64%	1	25	1.10	1010
60728	60390-88	As above	SILTSTONE	25	375	0.68%	X	25	1.39	896
60729	60388-86	As above	SILTSTONE	25	200	0.80%	X	25	3.97	782
60730	60386-84	As above	SILTSTONE	25	75	0.71%	X	25	2.17	658
60731	60384-82	As above	SILTSTONE	25	25	3600	X	X	1.31	542
60732	60382-80	Lt br siltstone + peat veins	SILTSTONE	25	25	2175	X	X	0.57	535
60733	60380-78	Dk gy bn - lt bn siltstone - foss tr py	SILTSTONE	25	25*	3550	X	X	0.81	615
60734	60378-76	Lt br wth'd siltstone	SILTSTONE	25	25	0.58%	X	X	1.03	638
60735	60376-74	Lt br + dk gy siltstone py	SILTSTONE	25	25	0.67%	X	X	1.24	596
60736	60374-72	As above	SILTSTONE	25	50	4200	X	X	0.80	579
60737	60372-70	As above	SILTSTONE	25	125	2950	X	X	0.75	658

055

ELECTROLYTIC ZINC CO. of A'ASIA. LTD.  
ROSEBERY, TASMANIA.COSTEAN SAMPLE DATA  
LINE: 50500NPROJECT: EL 4/78  
SAMPLED BY: L.M. - L.W.  
AZIMUTH:LOCALITY: Myrtle 352056  
SAMPLE INTERVAL: 2m  
DATE: 6.2.84 - 10.2.84

SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe	Ba
60738	60370-68	Dk gy siltstone - no cleavage	SILTSTONE	25	75	0.54%	X	X	0.80	528
60739	60368-66	As above mnr py	SILTSTONE	50	50	1700	X	X	0.77	503
60740	60366-64	As above mnr py	SILTSTONE	75	325	0.59%	X	X	2.15	514
60741	60364-62	As above mnr py	SILTSTONE	25	50	4600	X	X	1.79	524
60742	60362-60	Dk gy siltstone with py patches + qz xyst py	SILTSTONE	25	275	0.62%	X	X	4.07	473
60743	60360-58	As above	SILTSTONE	25	50	3825	X	X	1.76	591
60744	60358-56	Gn gy banded siltstone - mnr py + qz py	SILTSTONE	25	50	0.53%	X	X	1.89	530
60745	60356-54	yl gy - gy siltstone - rare dis py + qz	SILTSTONE	75	150	925	X	X	0.82	505
60746	60354-52	Gn gy siltstone - bands fine qz xyst	SILTSTONE	100	125	1400	X	X	1.02	543
60747	60352-50	Dk gy cl'd siltstone - siliceous patches	SILTSTONE	25	25	1325	X	X	1.43	548
60748	60350-48	As above	SILTSTONE	25	25	1450	X	X	1.33	518
60749	60348-46	Siltstone breccia - mnr qz vugs - mnr py	SILT - BX	25	50	2725	X	X	1.33	469
60750	60346-44	As above	SILT - BX	25	25	2275	X	X	1.06	431
60751	60344-42	Dk gy siltstone - cleaved - siliceous bands	SILTSTONE	75	75	1750	X	X	1.07	506
60752	60342-40	Gy slst + gn gy slst mnr py	SILTSTONE	25	50	1475	X	X	0.95	451
60753	60340-38	Dk gy - khaki siltstone	SILTSTONE	50	75	1650	X	X	0.81	454
60754	60338-36	Gn - gy sandy siltstone - cl'd - Fe staining	SILTSTONE	25	100	2875	X	X	0.80	513
60755	60336-34	Dk gy siltstone	SILTSTONE	X	50	75	X	25	2950 <sup>t</sup>	721
60756	60334-32	As above - good cleavage	SILTSTONE	X	25	25	X	X	2475 <sup>t</sup>	537
60757	60332-30	As above	SILTSTONE	X	75	25	X	X	1400 <sup>t</sup>	413
60758	60330-28	As above	SILTSTONE	25	50	25	X	X	2550 <sup>t</sup>	434
60759	60328-26	<sup>-yl gy</sup> Gy siltstone finely banded and foliated	SILTSTONE	75	50*	175	X	X	2900 <sup>t</sup>	395
60760	60326-24	As above	SILTSTONE	50	100	3150	X	X	3.83	425
60761	60324-22	As above	SILTSTONE	25	200	0.67%	X	X	0.77	460
60762	60322-20	lt yl siltstone - bedded	SILTSTONE	25	200	3425	X	X	1.36	520
60763	60320-18	As above	SILTSTONE	25	25	0.70%	X	X	0.89	477



057

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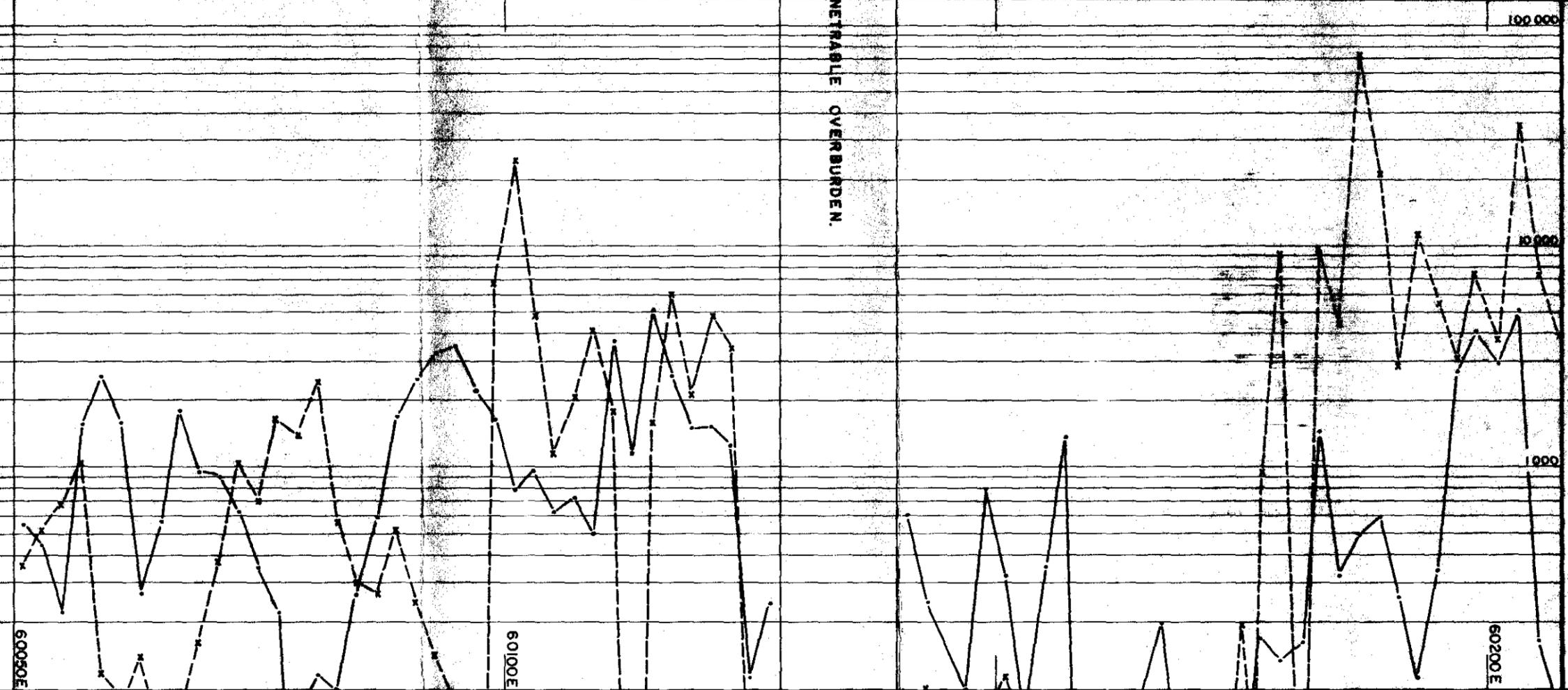
R.L. 140.0m

Sample Depth

PROFILE

CLAY Khaki, minor Siltstone fragments.	CLAY Black, variably bedded. Minor BRECCIA. Minor black siltstone fragments.	CLAY Light grey to grey.	FOSSILIFEROUS SILTSTONE Pale green to grey.	SILTSTONE/SHALE Grey to dark grey.	SILTSTONE Grey, micaceous.	CLAY = OVERBURDEN?	NOT SAMPLED - IMPERMEABLE OVERBURDEN.	CLAY = OVERBURDEN?	CLAY Black, possible BRECCIA texture.	SILTSTONE Light grey to black.	SILTSTONE Light grey to black.	CLAY Light grey and orange, silty. Minor Siltstone, Sandstone and shale fragments. Minor fossils.	FOSSILIFEROUS SILTSTONE Light grey.	SILTSTONE Light grey.	1-5% Pyrite. Up to 10% SP. Minor Galena.
															Up to 25% PY. & 4% SP.

GEOCHEMISTRY (ppm)

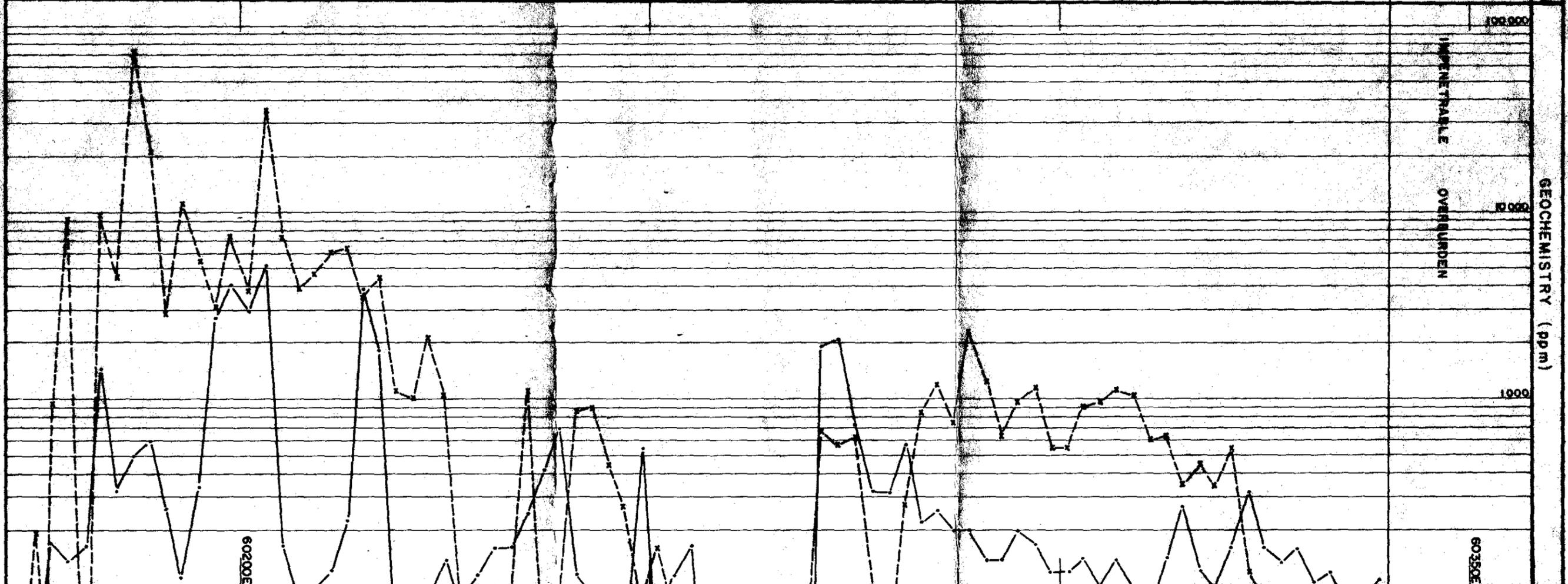


EASTINGS 60050 - 60430	SAMPLE INTERVAL 2m	SAMPLED BY G. KARY, G. BERESFORD	DATE 7-3-84 to 12-3-84	AZIMUTH Grid E, 089°A.M.G.	TOTAL LENGTH 380 m	ELECTROLYTIC ZINC CO. of A'ASIA LTD.		
<p><b>LEGEND</b></p> <p>—•—•— Pb -x-x-x- Zn -o-o-o- Ag</p> <p>PY = Pyrite SP = Sphalerite GN = Galena</p> <p>N.B. - Sample N° 62062 represents a 4m interval 60260-60264 E</p>						<p><b>PROJECT: E.L. 4/78 ZEEHAN TAS.</b></p> <p><b>COSTEAN RESULTS PART (1 of III)</b></p> <p><b>LINE - 50300N</b></p>		
<p>PURPOSE OF COSTEAN</p> <p>To test anomalous geochemistry, from a Jackro bedrock sampling program.</p> <p>To test for extension of mineralization found on Line 50500N.</p>			<p>SCALE: 1:500</p> <p>EXC. BY: GROVES, O&amp;K</p> <p>DRAWN: R. J. R.</p>			<p>SURVEY: G. KARY</p> <p>DATE: 10-4-84</p> <p>CHECKED:</p>		
<p>MYRTLE GRID</p>			<p>5 cm</p>			<p>REVISED:</p> <p>REF. No.</p> <p>A3-532-0064</p>		

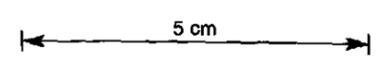
058

352059

PROFILE		LITHOLOGY		MINERAL	
RL 140.0m		CLAY Orange-grey to brown. Probable OVERBURDEN.		NOT SAMPLED	
CLAY Light grey to grey.		CLAY Grey, calcareous. Minor LIMESTONE and trace DOLOMITE fragments.		Minor Pyrite.	
CLAY Black, variably bedded. Minor BRECCIA. Minor black SILTSTONE fragments.		CLAY Green-black, poorly bedded.		Up to 3% Pyrite.	
CLAY Black. Minor fossil content.		CLAY Brown to black. Moderate rounded SANDSTONE beds. Probable OVERBURDEN.		Minor Pyrite. Ironstone.	
CLAY Khaki to black. Minor SILTSTONE fragments.		SILTSTONE Grey, variably micaceous. Minor black CLAY.		Up to 2% PY.	
CLAY Grey, probable oxidized Limestone, with minor calcite veins.		SILTSTONE Grey, variably micaceous. Minor black CLAY.		Minor Pyrite.	
CLAY Black. Minor fossil content.		SILTSTONE Grey, variably micaceous. Minor black CLAY.		Up to 10% Pyrite.	
CLAY Black, variably bedded. Minor BRECCIA. Minor black SILTSTONE fragments.		CLAY Black. Minor fossil content.		Up to 10% Pyrite. Sphalerite. Minor Galena.	



EASTINGS 60050 - 60430	SAMPLE INTERVAL 2m	SAMPLED BY G. KARY, G. BERESFORD.	DATE 7-3-'84 to 12-3-'84	AZIMUTH Grid E, 069°A.M.G.	TOTAL LENGTH 380 m	ELECTROLYTIC ZINC CO. of A'ASIA LTD.	
<p><b>LEGEND</b></p> <p>—●—●— Pb - - - - - Zn —○—○— Ag</p> <p>PY = Pyrite SP = Sphalerite GN = Galena</p>						<p><b>PURPOSE OF COSTEAN</b></p> <p>To test anomalous geochemistry, from a Jackro bedrock sampling program.</p> <p>To test for extension of mineralization found on Line 50500N.</p>	
<p>N.B. - Sample N° 62062 represents a 4m interval 60260 - 60264 E.</p>						<p><b>PROJECT: E.L. 4/78 ZEEHAN TAS.</b></p> <p><b>COSTEAN RESULTS (PART II of III)</b></p> <p><b>LINE - 50300N</b></p>	
SCALE: 1:500		SURVEY: G. KARY		REVISED:		REF. No.	
EXC. BY: GROVES, O.B.K.		DATE: 10-4-'84		CHECKED:		A3-532-0064	
DRAWN: R.J.R.							



059

352060

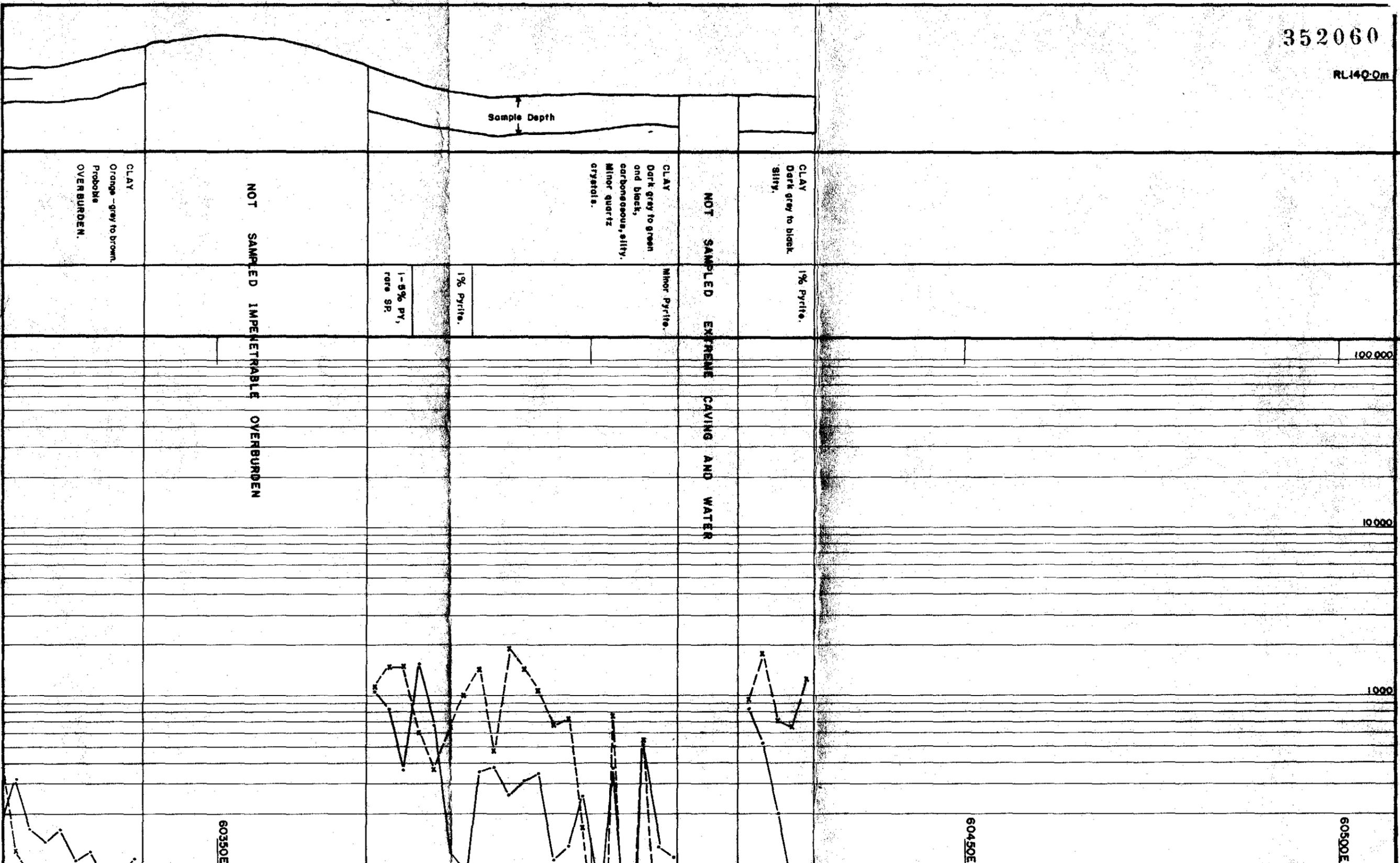
RL140.0m

PROFILE

LITHOLOGY

MINERAL

GEOCHEMISTRY (ppm)



EASTINGS 60050 - 60430	SAMPLE INTERVAL 2m	SAMPLED BY G. KARY, G. BERESFORD.	DATE 7-3-'84 to 12-3-'84	AZIMUTH Grid E - 089°AM.G.	TOTAL LENGTH 380 m	ELECTROLYTIC ZINC CO. of A'ASIA LTD.	
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**LEGEND**

—•—•—	Pb	PY = Pyrite
-x-x-x-	Zn	SP = Sphalerite
o---o---	Ag	GN = Galena

**PURPOSE OF COSTEAN**

To test anomalous geochemistry from a Jackro bedrock sampling program.

To test for extension of mineralization found on Line 50300N.

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

**COSTEAN RESULTS (PART III of III)**  
**LINE - 50300N**

N.B. - Sample N° 62062 represents a 4m interval 60260-60264E

**MYRTLE GRID**

5 cm

SCALE: 1:500	SURVEY: G. KARY	REVISED:
EXC. BY: GROVES, O&K	DATE: 10-4-'84	REF. No.
DRAWN: R. J. R.	CHECKED:	A3-532-0064

ELECTROLYTIC ZINC CO. of A'ASIA. LTD.  
ROSEBERY, TASMANIA.

COSTEAN SAMPLE DATA  
LINE: 50300N

PROJECT: EL 4/78  
SAMPLED BY: G.K. - G.B.  
AZIMUTH:

LOCALITY: Myrtle 352061 060  
SAMPLE INTERVAL: 2m  
DATE: 7-3-84

SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe	Ba
59559	60050-52	lt gy wth'd siltstone in orange clay	CLAY + SILTSTONE	100	550	350	X	25	2.48	581
59560	60052-54	As above	CLAY + SILTSTONE	50	450	525	X	50	2.52	650
59561	60054-56	As above	CLAY + SILTSTONE	50	225	675	X	50	4.37	667
59562	60056-58	lt gn gry siltstone to fg sandstone + orange clay	SILTSTONE + SST	50	1650	1025	X	75	4.46	563
59563	60058-60	fragments of grey siltstone - trace mica	SILTSTONE	25	2550	125	X	X	0.71	423
59564	60060-62	lt gy foss. siltstone and dk gy fg sandst.	SILTSTONE + SST	25	1750	75	X	25	0.46	442
59565	60062-64	lt grey clay	CLAY = ? SLT	25	275	150	X	X	0.38	648
59566	60064-66	lt gy silty clay and orange clay	CLAY = ? SLT	25	575	25	X	X	0.35	670
59567	60066-68	gy fg sandstone with thin dk gy shale	SANDSTONE + SHALE	25	1900	50	X	X	0.20	422
59568	60068-70	gy sandy clay + orange clay	CLAY	25	950	175	X	25	0.31	539
59569	60070-72	grey + yellow + orange clay	CLAY	25	900	375	X	25	1.18	587
59570	60072-74	As above	CLAY	50	625	1025	X	25	1.85	689
59571	60074-76	As above	CLAY	25	350	700	X	25	2.45	656
59572	60076-78	br-or viscous clay	CLAY	25	225	1725	X	100	8.29	622
59573	60078-80	As above	CLAY	50	25	1450	X	100	8.38	646
59574	60080-82	As above + siltstone frags	CLAY + SLT	50	125	2650	X	75	6.93	550
59575	60082-84	grey + yellow + orange clay + siltstone frags	CLAY + SLT	25	100	575	X	25	3.50	589
59576	60084-86	lt grey clay + br-or mud	CLAY	25	275	300	X	X	0.82	633
59577	60086-88	lt grey viscous clay	CLAY = ? SLT	25	600	275	X	X	0.32	712
59578	60088-90	lt gn gy clay with minor black clay	CLAY	75	1800	525	X	X	0.56	708
59579	60090-92	lt gn gy wth'd siltstone + pale clay	SILTSTONE	75	2525	250	X	X	0.36	591
59580	60092-94	As above	SILTSTONE	75	3225	150	X	X	0.21	449
59581	60094-96	As above	SILTSTONE	100	3525	50	X	X	0.18	431
59582	60096-98	As above	SILTSTONE	25	2250	X	X	X	0.25	493
59583	60098-100	As above + black clay 5% py	SILTSTONE + PUG	75	1775	0.67%	X	25	3.42	583
59584	60100-102	black carbonaceous clay 1-4% sp 25% py	PUG	50	800	2.47%	X	25	21.72	480

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061

ELECTROLYTIC ZINC CO. of A'ASIA. LTD.  
ROSEBERY, TASMANIA.

COSTEAN SAMPLE DATA  
LINE: 50300N

PROJECT: EL 4/78  
SAMPLED BY: G.K - G.B.  
AZIMUTH:

LOCALITY: Myrtle  
SAMPLE INTERVAL: 2m  
DATE: 7-3-84

SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe	So
59585	60102-104	Black carbonaceous clay 5% py, tr sp	PUG = ? BX	25	975	4900	X	25	6.77	719
59586	60104-06	Possible breccia - mnr pale clay frags in pug	PUG = ? BX	50	625	1200	X	25	3.03	759
59587	60106-08	As above 1-5% py	PUG = ? BX	25	725	2050	X	25	2.73	812
59588	60108-10	Speckled g clay + black + cream clay - mnr 5% py	CLAY	25	500	4025	X	25	2.89	777
59589	60110-12	frags gy siltstone, shale + blk cherty slst tr gn	SILT + SHALE	25	3750	1850	X	25	1.35	1090
59590	60112-14	gy siltstone + some shale	SILTSTONE	X	1175	X	X	X	0.18	1450
59591	60114-16	gy siltstone + lam dk gy + speckled clay 3% py	SILTSTONE + CLAY	125	5050	1700	2	25	2.47	1380
59592	60116-18	blk - gn blk carbonaceous clay 5% py	CLAY = PUG	50	2600	0.60%	X	25	5.36	1830
59593	60118-20	As above + gy siltstone	CLAY + SILTSTONE	125	1625	2125	X	25	4.09	1310
59594	60120-22	blk - gy clay mnr sp tr gn 5% py	CLAY = ? BX	200	1700	4925	X	25	8.80	1270
59595	60122-24	lt gy clay + gy slst frags mnr py	CLAY + SILTSTONE	525	1350	3575	7	25	1.67	1350
59596	60124-26	Crn - br banded clay	CLAY = O/B	50	125	75	X	25	0.27	1110
59597	60126-28	gy silty clay	CLAY = O/B	75	250	X	X	25	0.19	1660

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062

ELECTROLYTIC ZINC CO. of A'ASIA. LTD.  
ROSEBERY, TASMANIA.COSTEAN SAMPLE DATA  
LINE: 50300NPROJECT: E.L. 4/78  
SAMPLED BY: G.K. - G.B  
AZIMUTH:LOCALITY: Myrtle  
SAMPLE INTERVAL: 2m  
DATE: 8-3-84 -10-3-84

SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe	Bo
62014	60140-42	lt gy & or br clay	CLAY = ?O/B	25	600	25	X	X	2.23	1190
62013	60142-44	as above	CLAY = ?O/B	50	250	100	X	25	8.64	973
62012	60144-46	Grey weathered siltstone	SILTSTONE	25	100	50	X	25	1.76	709
62011	60146-48	as above	SILTSTONE	25	800	25	X	25	1.04	651
62010	60148-50	as above	SILTSTONE	50	325	125	X	X	0.87	706
62009	60150-52	Gy with'd siltstone tr mica with lt gy clay	SILTSTONE	25	75	X	X	X	0.98	692
62008	60152-54	Pale grey clay with with'd siltstone - tr fossils	SILTSTONE	X	375	25	X	X	0.43	635
62007	60154-56	Pale grey clay with weathered siltstone frags	SILTSTONE	X	1100	X	X	X	0.20	647
62006	60156-58	Pale gy clay with siltstone and shale fragments	SLST - SHALE	X	25	X	X	25	0.15	612
62005	60158-60	Weathered siltstone, Fe sting	SILTSTONE	25	50	75	X	25	1.01	635
59600	60160-62	lt gn gy bedded clay mnr foss	CLAY = SLST	25	75	50	X	25	2.24	647
59599	60162-64	As above + fossil frags	CLAY = SLST	50	100	X	X	25	0.50	736
59598	60164-66	gn gy bedded clay + fossil frags	CLAY = ?SLST	25	200	X	X	25	0.82	747
62015	60166-68	lt gn gy with'd siltstone, rare corals	CLAY = SLST	25	25	X	X	X	0.54	657
62016	60168-70	lt gy clay, mnr corals/bryozoa	CLAY = SLST	X	50	X	X	X	0.32	631
62017	60170-72	lt gy clay with Fe stained spots	CLAY = ?SLST	25	75	X	X	X	0.83	603
62018	60172-74	Grey clay - mnr or-rd mottling	CLAY	50	25	200	X	25	2.35	601
62014	60174-76	lt gy clay	CLAY	25	50	X	X	X	0.98	714
62020	60176-78	lt gy clay + mnr. bk - gn bk clay tr py	CLAY	25	175	950	X	X	1.69	609
62021	60178-80	Bk clay, sp in silty frags 1% sp 1-5% py	CLAY	125	150	0.91%	X	25	2.02	497
62022	60180-82	Bk to gn bk clay 1-5% py	CLAY	225	175	50	X	25	4.81	542
62023	60182-84	As above 5% py	CLAY	25	150	0.99%	X	25	1.96	525
62024	60184-86	As above - rare bk siltstone frags	CLAY + SLST	50	325	4475	X	25	3.59	496
62025	60186-88	Bk - gn bk clay, pyritic 1-10% sp mivre py	CLAY	125	500	7.16%	X	25	30.34	54

LECTROLYTIC ZINC CO. of A'ASIA. LTD.  
ROSEBERRY, TASMANIA.

COSTEAN SAMPLE DATA  
LINE: 50300N

PROJECT: EL 4/78  
SAMPLED BY: G. K. - G. B.  
AZIMUTH:

LOCALITY: Myrtle  
SAMPLE INTERVAL: 2m  
DATE: 8.3.84 - 10.3.84

SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe	Ba
62026	60188-90	Bk - gn bk pyritic clay py + sp	CLAY	125	600	2.02%	X	25	11.18	366
62027	60190-92	Bk clay - some quartz crystals mnr py, tr sp	CLAY	25	275	2950	X	25	3.00	396
62028	60192-94	Bk clay mnr py + sp	CLAY	25	125	1.21%	X	25	3.25	280
62029	60194-96	Bk bedded clay 1-5% py	CLAY	25	350	0.56%	X	25	9.22	195
62030	60196-98	As above 5% py	CLAY	25	2750	3100	X	25	7.60	321
62031	60198-200	Bk bedded clay + khaki clay mnr sp + gn	CLAY	25	4100	0.74%	X	X	8.25	336
62032	60200-02	As above	CLAY	75	2975	3725	X	X	2.06	533
62033	60202-04	khaki clay 1-2% sp, mnr gn	CLAY	525	5025	3.51%	X	X	2.50	488
62034	60204-06	gn bk silty clay mnr sp, mnr py	CLAY	25	175	0.74%	X	25	2.86	337
62035	60206-08	gn bk - bk clay - py pads mnr py, tr sp	CLAY	25	75	3925	X	25	3.39	319
62036	60208-10	gn bk - bk clay	CLAY	25	100	4675	X	25	5.10	318
62037	60210-12	khaki + gn bk clay + siltstone frags 1-2% py	CLAY + SILTSTONE	25	125	0.60%	X	25	3.65	221
62038	60212-14	As above	CLAY + SLST	25	225	0.64%	X	25	2.51	290
62039	60214-16	Bk clay frags in gn bk matrix 1% py	CLAY = ? Bx	25	3850	3575	X	25	2.54	301
62040	60216-18	As above tr eg py	CLAY = ? Bx	25	1900	4500	X	25	2.96	239
62041	60218-20	Bk clay 1-2% py	CLAY	25	75	1175	X	25	2.73	246
62042	60220-22	As above - fossil frags 2-3% py	CLAY	25	75	1000	X	50	3.02	278
62043	60222-24	As above 5-10% py	CLAY	25	75	2100	X	25	2.63	283
62044	60224-26	Grey mottled clay	CLAY	125	150	1050	X	X	1.99	265
62045	60226-28	Grey/white/orange mottled clay	CLAY	100	50	75	X	X	1.19	250
62046	60228-30	As above	CLAY = ? O/B	75	125	100	X	X	1.12	219
62047	60230-32	Gy clay with bk + wh angular clay frags	CLAY = ? O/R	75	175	100	X	X	0.85	277
62048	60232-34	As above	CLAY = ? O/B	50	175	100	X	X	0.67	319
62049	60234-36	Gy sloppy clayey mud	CLAY	100	250	1125	X	X	0.54	298
62050	60236-38	Gy - Bk mottled clay, mnr dk gy slst frags	CLAY + SLST	50	425	50	X	X	0.84	223
62051	60238-40	Gy siltstone fragments + mnr bk clay	SILTSTONE	100	700	100	X	X	1.16	320

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064

ELECTROLYTIC ZINC CO. of A'ASIA. LTD.  
ROSEBERY, TASMANIA.COSTEAN SAMPLE DATA  
LINE: 50300 NPROJECT: EL 4/78  
SAMPLED BY: G.K. B.M.  
AZIMUTH:LOCALITY: Myrtle  
SAMPLE INTERVAL: 2m  
DATE: 8.3.84 - 10.3.84

SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe	Ba
62052	60240-42	Lt gy - bk clay frags in dk gy clay mnr py	CLAY	25	125	875	X	25	1.73	397
62053	60242-44	As above mnr py	CLAY	X	75	900	X	25	2.38	370
62054	60244-46	Bk clay - mnr gy mic slst frags: 1-5% py	CLAY + SILTSTONE	X	50	450	X	25	6.39	346
62055	60246-48	Bk clay - py pods - mnr gy mic slst py	CLAY + SILTSTONE	X	50	275	X	25	2.91	377
62056	60248-50	Bn clay	CLAY = ? O/B	75	550	75	X	X	0.60	343
62057	60250-52	Bk pyritic clay 1-2% py	CLAY	25	75	175	X	25	1.85	333
62058	60252-54	Bn mud and clay	CLAY = O/B	25	125	50	X	X	0.38	348
62059	60254-56	As above	CLAY = O/B	75	175	50	X	X	0.51	377
62060	60256-58	Lt bn clay + bn clay + qz pebbles	CLAY + pebbles = O/B	X	X	X	X	X	0.19	226
62061	60258-60	As above	CLAY + PBLs = O/B	X	25	25	X	X	0.22	234
62062	60260-64	As above	CLAY + PBLs = O/B	X	25	25	X	X	0.30	154
62063	60264-66	As above	CLAY + PBLs = O/B	X	25	50	X	X	0.17	81
62064	60266-68	Lt bn poorly banded clay + boulders	CLAY = O/B	X	25	X	X	X	0.21	450
62065	60268-70	As above	CLAY = O/B	X	25	25	X	X	0.29	382
62066	60270-72	Lt gy poorly banded clay	CLAY = O/B	X	50	25	X	X	0.27	352
62067	60272-74	Gn bk - bk pyritic clay 1-3% py	PUG	350	1975	675	X	X	2.15	287
62068	60274-76	As above	PUG	550	2075	575	X	25	1.94	356
62069	60276-78	Gn bk clay mnr py	CLAY	125	725	625	X	X	2.63	291
62070	60278-80	Bk clay mnr py	CLAY	X	325	100	X	X	0.97	426
62071	60280-82	Lt gy + or clay	CLAY	X	325	50	X	100	2.27	396
62072	60282-84	Wh + or clay mnr lim frags	CLAY	25	575	275	X	400	8.33	363
62073	60284-86	Or br clay with hollow lim nodules	CLAY + LIM	25	225	850	X	1150	20.79	282
62074	60286-88	Bk carb clay, mnr qz frags tr py	CLAY	25	250	1225	X	50	2.97	343
62075	60288-90	As above 1-5% py	CLAY	50	200	750	X	50	3.51	327
62076	60290-92	Bk + wh mottled clay - silty frags	CLAY + ? SLST	50	200	2350	X	25	1.37	340
62077	60292-94	Bk clay + gy calc clay on limestone	CLAY = LST	X	150	1325	X	125	2.35	331

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ELECTROLYTIC ZINC CO. of A'ASIA. LTD.  
ROSEBERRY, TASMANIA.

COSTEAN SAMPLE DATA  
LINE: 50300 N

PROJECT: EL 4/78  
SAMPLED BY: G.K. - B.M.  
AZIMUTH:

LOCALITY: Myrtle  
SAMPLE INTERVAL: 2m  
DATE: 8.3.84 - 10.3.84

SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe	Ba
62078	60294-96	Bk sloppy mud, mar gy limestone frags + qz	MUD + LST	25	150	625	X	75	4.48	331
62079	60296-98	As above - no limestone	MUD	25	200	975	X	125	8.07	306
62080	60298-300	As above	MUD	25	175	1200	X	175	13.75	293
62081	60300-02	Or clay + bk mud + vughy calcareous frags	MUD + ?LST	X	125	550	X	325	10.73	164
62082	60302-04	As above	MUD + ?LST	X	150	900	X	175	3.87	226
62083	60304-06	Gy calc clay - mar vughy frags	CLAY = LST	X	100	975	X	225	4.97	185
62084	60306-08	Bk clay and mud, or clay, mar frags	CLAY + MUD + ?LST	X	150	1175	X	175	4.96	293
62085	60308-10	As above + dk gy dolomite frags	CLAY + DLST	X	100	1050	X	200	4.53	235
62086	60310-12	As above	CLAY + DLST	25	50	600	X	100	2.03	339
62087	60312-14	Or - lt gy mottled clay	CLAY	100	150	625	X	50	2.27	427
62088	60314-16	As above plus quartz frags	CLAY	75	275	350	X	50	2.60	416
62089	60316-18	As above	CLAY	75	125	450	X	25	1.86	397
62090	60318-20	As above - mar bk clay	CLAY	75	100	350	X	25	1.65	405
62091	60320-22	Tan to orange clay	CLAY	25	175	550	X	75	3.90	427
62092	60322-24	lt brn clay with siliceous frags	CLAY = ? TILL	25	325	125	X	25	0.57	393
62093	60324-26	lt gn clay with quartz pods	CLAY = O/B	X	175	50	X	X	0.35	390
62094	60326-28	As above	CLAY = O/B	X	150	50	X	25	0.29	344
62095	60328-30	As above	CLAY = O/B	X	175	75	X	25	0.51	376
62096	60330-32	As above - abdt qz grains	CLAY = O/B	25	110	60	X	X	0.20	362
62097	60332-34	As above	CLAY + SAND = 90	25	125	25	X	X	0.09	448
62098	60334-36	As above	CLAY = O/B	25	65	X	X	X	0.04	371
62099	60336-38	As above	CLAY = O/B	25	75	X	X	X	0.06	371
62100	60338-40	As above	CLAY = O/B	25	115	X	X	X	X	403

086

352067

ELECTROLYTIC ZINC CO. of A'ASIA. LTD.  
ROSEBERY, TASMANIA.COSTEAN SAMPLE DATA  
LINE: 50300NPROJECT: E.L. 4/78  
SAMPLED BY: G.K. - B.M.  
AZIMUTH:LOCALITY: Myrtle  
SAMPLE INTERVAL: 2m  
DATE: 11-3-84

SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe	Ba
2101	60370-72	Dk gy - bk clay 1-2% py	CLAY	125	1075	1200	X	X	1.20	272
2102	60372-74	Bk carbo clay - rare sp xyst 1-2% py	CLAY	265	825	1590	X	X	2.16	353
2103	60374-76	Gn bk silty pyritic clay 2-5% py	CLAY	25	375	1600	X	X	3.07	278
2104	60376-78	Bk - gn bk viscous clay tr py	CLAY	225	1625	600	X	X	0.83	330
2105	60378-80	Gn bk clay abdt bk & gy clay clasts tr py	CLAY	150	675	375	X	X	2.30	335
2106	60380-82	As above - py + lim nodules 1% py	CLAY	50	125	650	X	X	3.49	310
2107	60382-84	As above	CLAY	50	75	1000	X	X	7.65	294
2108	60384-86	BK silty clay with silty frags	CLAY + ? SLST	50	360	1575	X	X	3.15	338
2109	60386-88	As above	CLAY + ? SLST	50	385	675	X	X	0.87	363
2110	60388-90	BK silty clay - mnr qz grains	CLAY	50	265	1925	X	X	2.45	286
2111	60390-92	As above tr py	CLAY	125	310	1575	X	X	2.00	360
2112	60392-94	BK silty clay with silty frags - mnr qz xyst	CLAY	50	350	1110	X	X	2.11	360
2113	60394-96	Bk clay mnr py	CLAY	50	110	675	X	X	3.59	325
2114	60396-98	BK carbo clay mnr py	CLAY	75	140	725	X	X	3.14	343

ELECTROLYTIC ZINC CO. of ASIA. LTD.  
ROSEBERRY, TASMANIA.

COSTEAN SAMPLE DATA  
LINE: 50300N

PROJECT: EL 4/78  
SAMPLED BY: G.K. - B.M.  
AZIMUTH:

LOCALITY: Myrtle  
SAMPLE INTERVAL:  
DATE: 11.3.84

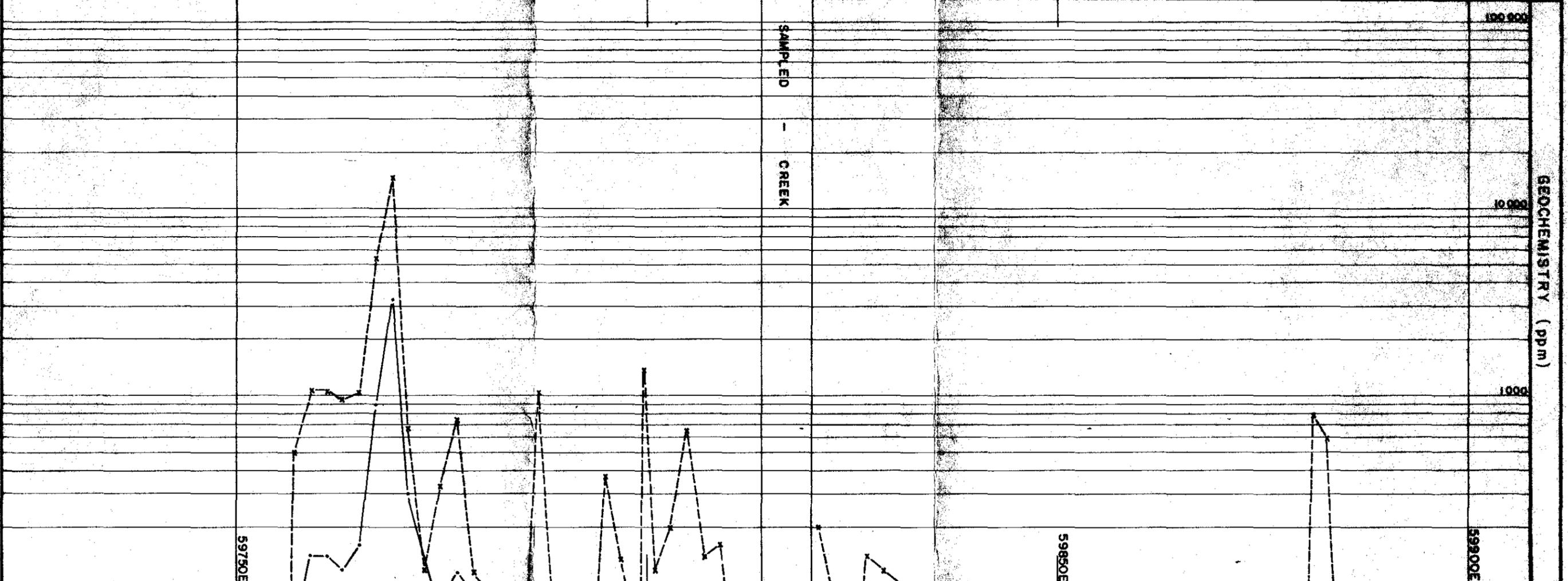
SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe	Ba
62115	60398-400	Bk carb clay + angular qz frags	CLAY	150	265	180	X	X	3.53	343
62116	60400-02	Gy clay	CLAY	100	85	X	X	X	0.03	340
62117	60402-04	Dk gn clay mnc py	CLAY	100	385	760	X	X	1.24	319
62118	60404-06	As above rare py	CLAY	90	35	40	X	X	X	353
62119	60406-08	Dk gn silty clay	CLAY	125	525	550	X	X	0.30	362
62120	60408-10	As above	CLAY	100	135	50	X	X	X	340
62121	60410-12	As above	CLAY	75	115	60	X	X	X	323
62122	60420-22	Dk gn - dk gy clay with clay frags	CLAY	100	835	960	X	X	1.58	317
62123	60422-24	Dk gy - gn bk viscous clay - mnc tan clay 1% py	CLAY	50	515	1850	X	X	4.56	272
62124	60424-26	Dk gn - bk viscous clay	CLAY	50	200	700	X	X	6.04	248
62125	60426-28	Dk gn - bk silty clay + silty frags 1% py	CLAY	30	65	660	X	X	2.99	275
62126	60428-30	As above mnc py	CLAY	25	50	1290	X	X	2.57	284

352069

RL 130.0m



PROFILE	LITHOLOGY	MINERAL
	Fossiliferous LIMESTONE Grey, fine grained pale of coarse grained LIMESTONE.	Minor Pyrite.
	LIMESTONE Grey, fine grained. Minor calcite veining.	Minor SP. Trace Pyrite.
	LIMESTONE Black carbonaceous. Minor to intense calcite veining.	Trace Pyrite.
	LIMESTONE Dark grey, fine grained. Minor calcite veining.	Trace Pyrite.
	NOT	
	LIMESTONE Dark grey, fine grained. Minor calcite veining.	Trace Pyrite.
	Fossiliferous LIMESTONE.	
	LIMESTONE Black to dark grey, argillaceous. Minor to intense calcite veining.	Minor Pyrite.
	LIMESTONE Grey to black. Moderate calcite veins.	Trace GN, SP
	CLAY Dark brown to dark green.	Minor Pyrite.
	SILTSTONE Light brown. Minor CLAY.	



EASTINGS 59750-59900	SAMPLE INTERVAL 2m	SAMPLED BY G. KARY, G. BERESFORD.	DATE 13-3-'84 to 14-3-'84	AZIMUTH Grid E -089°A.M.G.	TOTAL LENGTH 150m	ELECTROLYTIC ZINC CO. of A'ASIA LTD.	
<p><b>LEGEND</b></p> <p>—•—•— Pb</p> <p>- - - - - Zn</p> <p>o - - - - o Ag</p> <p>PY = Pyrite.</p> <p>SP = Sphalerite.</p> <p>GN = Galena.</p> <p>LST = Limestone.</p>						<p>PROJECT: E.L. 4/78 ZEEHAN TAS.</p> <p><b>COSTEAN RESULTS</b></p> <p>LINE - 50200N</p>	
<p>PURPOSE OF COSTEAN</p> <p>To test anomalous Pb-Zn values from the Jackro bedrock sampling program. Assays up to 7900 ppm Zn and 740 ppm Pb.</p>						<p>SCALE: 1:500</p> <p>EXC. BY: GROVES, O&amp;K</p> <p>DRAWN: R. J. R.</p>	
<p>MYRTLE GRID</p> <p>5 cm</p>						<p>SURVEY: G. KARY.</p> <p>DATE: 12-4-'84</p> <p>CHECKED:</p> <p>REVISED:</p> <p>REF. No.</p> <p>A3-532-0065</p>	

069

352070

ELECTROLYTIC ZINC CO. of A'ASIA. LTD.  
ROSEBERY, TASMANIA.

COSTEAN SAMPLE DATA  
LINE: 50200N

PROJECT: EL 4/78  
SAMPLED BY: G.K.G.B.  
AZIMUTH:

LOCALITY: Myrtle  
SAMPLE INTERVAL: 2m  
DATE: 12.3.84 - 14.3.84

SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe	Ba
62127	59750-52	Bn sandy clay - mar bitumen	CLAY	25	50	25	X	X	0.21	354
62128	59752-54	Dk gn-brn clay with rare siltstone chips	CLAY	25	100	75	X	X	0.25	418
62129	59754-56	Khaki + tan well bedded siltstone + sandstone	SILTSTONE	25	50	25	X	X	0.42	481
62130	59756-58	Creamily dk br-dk gn clay	CLAY	25	50	500	X	X	1.50	384
62131	59758-60	Ga-bk clay - tan clay - qz + fg py ~ 1%	CLAY	25	150	1150	X	X	4.68	344
62132	59760-62	Dk gn clay - abdt angular qz + fr py	CLAY	25	150	1125	X	X	4.50	363
62133	59762-64	Gn clay	CLAY	25	125	950	X	X	3.85	416
62134	59764-66	Gn + gy clay on gy limestone - py in clay	CLAY ON LST	50	175	1050	X	X	3.05	550
62135	59766-68	Gy-bk carbonaceous limestone - qz, vng	LIMESTONE	25	900	0.54%	X	50	2.36	399
62136	59768-70	Gy stylolitic micritic limestone - qz + ch tag	LIMESTONE	50	3250	1.59%	X	75	0.54	149
62137	59770-72	As above	LIMESTONE	X	300	675	X	125	0.29	54
62138	59772-74	Gy f gr limestone - mar cal vng tr py	LIMESTONE	X	150	125	1	150	0.40	41
62139	59774-76	Bk f gr limestone + argillaceous lst	LIMESTONE	X	50	325	X	100	0.36	62
62140	59776-78	As above	LIMESTONE	25	125	750	X	175	0.56	121
62141	59778-80	As above	LIMESTONE	X	50	125	X	250	0.35	46
62142	59780-82	As above mod cal vng	LIMESTONE	X	50	50	X	225	0.34	43
62143	59782-84	As above	LIMESTONE	X	25	50	X	200	0.31	35
62144	59784-86	Lt gy f gr limestone	LIMESTONE	X	25	75	X	200	0.45	56
62145	59786-88	Bk f gr limestone with mar muddy carb bands	LIMESTONE	X	25	1050	X	250	0.80	66
62146	59788-90	As above	LIMESTONE	X	X	75	X	250	0.59	45
62147	59790-92	As above	LIMESTONE	X	X	50	X	200	0.70	36
62148	59792-94	Dk gy - bk f gr limestone mar cal vng	LIMESTONE	X	25	50	X	200	2.65	21
62149	59794-96	As above	LIMESTONE	X	25	375	X	150	0.35	16
62150	59796-98	As above	LIMESTONE	X	25	150	X	175	0.64	36
62151	59798-99	Gy foss f gr limestone - corals	LIMESTONE	X	25	25	X	200	0.87	53
62152	59799-800	As above	LIMESTONE	X	25	1475	X	300	1.13	59



ELECTROLYTIC ZINC CO. of ASIA, LTD.  
ROSEBERRY, TASMANIA.

COSTEAN SAMPLE DATA  
LINE: 50200N

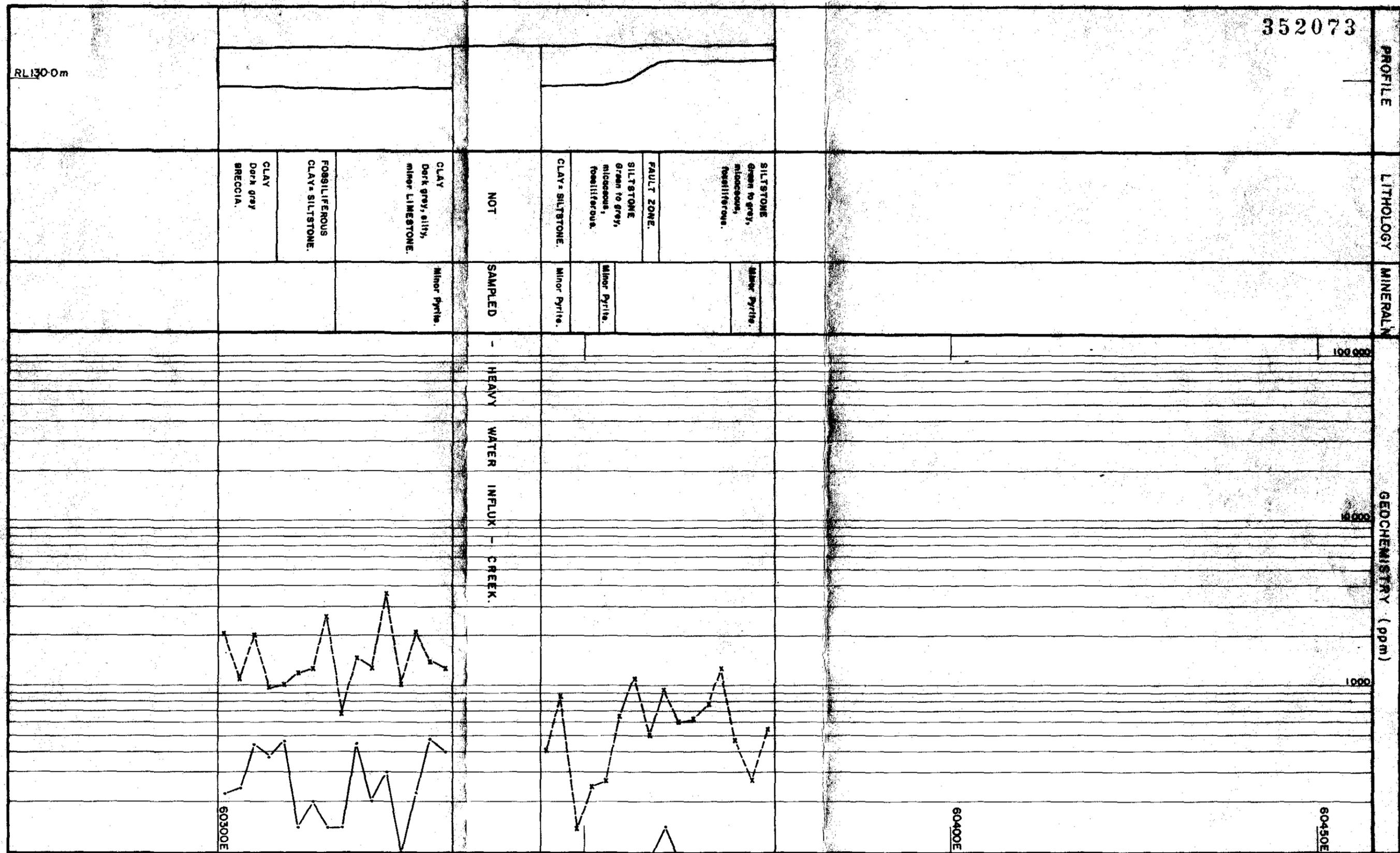
PROJECT: EL 4/78  
SAMPLED BY: G.K. - G.B.  
AZIMUTH:

LOCALITY: Myrtle 352072  
SAMPLE INTERVAL: 2m  
DATE: 12.3.84 - 14.3.84

SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe	Ba
2176	59852-54	Black carbonaceous limestone	LIMESTONE	X	25	25	X	50	0.29	23
2177	59854-56	Gy micritic limestone	LIMESTONE	X	X	25	X	50	0.19	29
2178	59856-58	As above	"	X	25	25	X	100	0.20	32
62179	59858-60	As above cal. vng	"	X	25	25	X	75	0.17	29
62180	59860-62	Gy f. gr massive limestone	"	X	25	25	X	75	0.24	23
62181	59862-64	As above	"	X	25	25	X	75	0.14	15
62182	59864-66	Gy f. gr lam. limestone	"	X	X	25	X	50	0.13	X
62183	59866-68	As above	"	X	25	25	X	75	0.13	X
62184	59868-70	Gy f. gr massive limestone	"	X	X	X	X	75	0.11	10
62185	59870-72	As above	"	X	25	25	X	50	0.15	15
62186	59872-74	As above	"	X	25	25	X	75	0.18	X
62187	59874-76	As above tr py	"	X	25	25	X	75	0.16	10
62188	59876-78	As above - mar lam	"	X	25	25	X	150	1.01	12
62189	59878-80	As above	"	X	XX	25	X	75	0.21	12
62190	59880-82	As above tr sp	"	X	25	800	X	75	0.15	11
62191	59882-84	As above	"	X	25	600	X	50	0.67	X
62192	59884-86	Dk gy lst with lenses of gy cgr lst - tr py	"	X	50	25	X	50	0.30	X
62193	59886-88	As above	"	X	25	25	X	50	0.21	X
62194	59888-90	As above	"	X	25	50	X	50	0.23	15
62195	59890-92	As above	"	X	50	75	X	50	0.17	15
62196	59892-94	As above tr py	"	X	X	25	X	50	0.19	18
62197	59894-96	As above	"	X	X	25	X	75	0.22	12
62198	59896-98	As above	"	X	50	50	X	75	0.23	X
62199	59898-900	Gy bedded fissile limestone	"	X	25	25	X	125	0.36	40

C32

352073



EASTINGS 60300-60376	SAMPLE INTERVAL 2m	SAMPLED BY L. MARTIN, G. BERESFORD.	DATE 5-3-84	AZIMUTH Grid E, 089° A.M.G.	TOTAL LENGTH 76m	ELECTROLYTIC ZINC CO. of A'ASIA LTD.
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**LEGEND**

—•—•— Pb  
 x---x Zn  
 o---o Ag

PY = Pyrite  
 SP = Sphalerite  
 GN = Galena

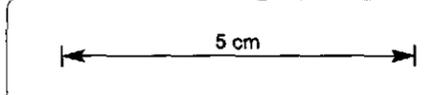
**PURPOSE OF COSTEAN**  
 To test anomalous Pb-Zn geochemistry from a Jackro auger bedrock sampling program. Assays up to 4300 ppm Zn and 4400 ppm Pb.

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

**COSTEAN RESULTS**  
**LINE - 48600N**

SCALE: 1:500	SURVEY: G. KARY	REVISED:
EXC. BY: GROVES, O&K.	DATE: 12-4-84	REF. No.
DRAWN: R.J.R.	CHECKED:	A3-532-0067

MYRTLE GRID



352074 073

ELECTROLYTIC ZINC CO. of A'ASIA. LTD.  
ROSEBERRY, TASMANIA.

COSTEAN SAMPLE DATA  
LINE: 48600N

PROJECT: EL 4/78  
SAMPLED BY: L.M.F. - G.B.  
AZIMUTH:

LOCALITY: Myrtle  
SAMPLE INTERVAL: 2m  
DATE: 5.3.84

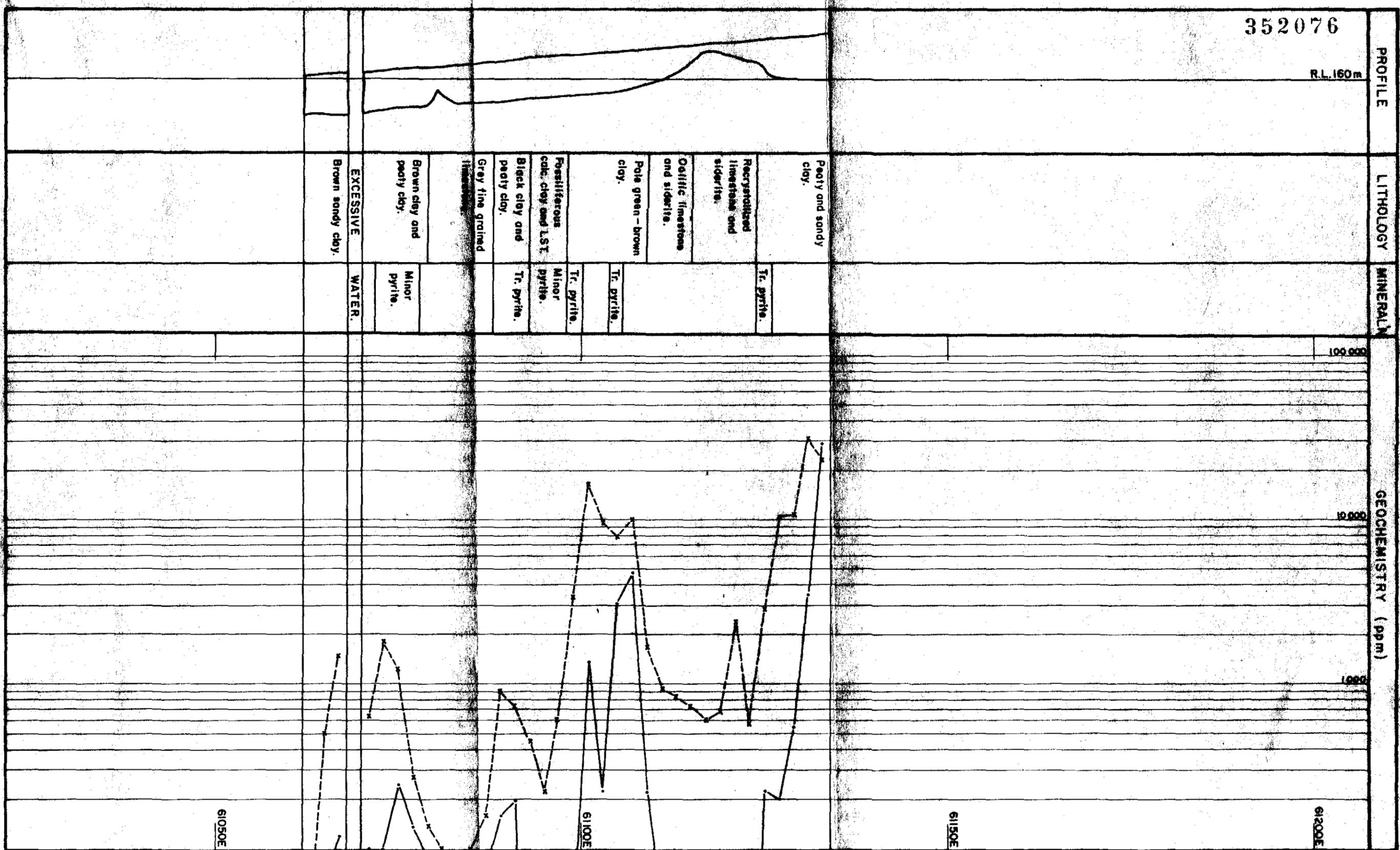
SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe	Bg
59673	60300-02	Dk gy - dk bn clay - bx texture - mnr peat	CLAY = BX	X	225	2050	X	25	3.92	283
59674	60302-04	As above	CLAY = BX	25	250	1150	X	25	3.61	311
59675	60304-06	As above	CLAY = BX	25	450	2000	X	25	3.41	311
59676	60306-08	As above	CLAY = BX	25	375	975	X	25	3.17	311
59677	60308-10	Dk gy wth'd silty frags + clay - foss	CLAY = SILTSTONE	25	475	1050	X	25	1.97	313
59678	60310-12	As above	CLAY = SILTSTONE	25	150	1225	X	25	2.20	371
59679	60312-14	As above	CLAY = SILTSTONE	25	200	1300	X	25	2.88	331
59680	60314-16	Dk gy wth'd silty limestone/siltstone	CLAY = LST	25	150	2650	X	25	1.97	345
59681	60316-18	Dk gy silty pyritic clay - py nodules. - py	CLAY	25	150	675	X	50	4.29	414
59682	60318-20	As above	CLAY	25	450	1625	X	25	8.79	328
59683	60320-22	As above	CLAY	25	200	1300	X	25	8.59	314
59684	60322-24	As above	CLAY	25	300	3650	X	25	4.66	376
59685	60324-26	As above	CLAY	25	100	1025	X	50	3.32	445
59686	60326-28	As above - mnr peat	CLAY	25	225	2100	X	25	8.01	317
59687	60328-30	Dk gy clay with Hgy fragments - peat tr	CLAY	25	475	1450	X	25	3.76	400
59688	60330-32	Dk gy + gy clay with breccia texture	CLAY	25	400	1300	X	25	4.00	397
		Flowing creek								
59689	60344-46	Dk gy silty clay	CLAY	25	X <sup>o</sup>	600	X	25	2.67	572
59690	60346-48	As above	CLAY	25	X	850	X	25	3.09	573
59691	60348-50	Dk gy wth'd siltstone/silty limestone	SLST	25	X	150	X	50	2.23	607
59692	60350-52	gy wth'd siltstone - mic - abdt foss	SLST	X	X	250	X	25	3.83	491
59693	60352-54	As above	SLST	X	X	275	X	25	2.34	437



075

352076

R.L. 160m



PROFILE

LITHOLOGY

MINERAL

GEOCHEMISTRY (ppm)

100 000

10 000

1 000

61050E

61100E

61150E

61200E

EASTINGS  
61062 - 61134

SAMPLE INTERVAL  
2m

SAMPLED BY  
G. KARY, G. BERESFORD.

DATE  
14, 15/3/84

AZIMUTH  
GRID EAST

TOTAL LENGTH  
72m

ELECTROLYTIC ZINC CO. of A'ASIA LTD.

PROJECT: E.L. 4/78 ZEEHAN

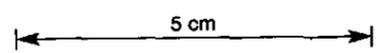
TAS.

COSTEAN RESULTS  
LINE - 48400 N

**LEGEND**  
tr. = trace.  
calc. = calcareous.  
LST. = limestone.

—•—•— Pb  
- - - - - Zn  
o - - - - - Ag

PURPOSE OF COSTEAN  
To follow up anomalous zinc geochemistry  
(to 1-15% Zn.), from Jacec Auger sampling  
programme.



BRIEFER GRID

SCALE: 1:500  
EXC. BY: GROVES, Q.B.K.  
DRAWN: R.J.R.

SURVEY: G.K.  
DATE: 3-5-84  
CHECKED:

REVISED:  
REF. No.  
A3-532-0082

LECTROLYTIC ZINC CO. of A'ASIA.LTD.  
OSEBERY, TASMANIA.

COSTEAN SAMPLE DATA  
LINE: 48400 N

PROJECT: EL 4178  
SAMPLED BY: G.K. - G.B.  
AZIMUTH:

LOCALITY: GRIEVES 352077  
SAMPLE INTERVAL: 2m  
DATE: 14.3.84 - 15.3.84

SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe	Ba
62200	61134-32	gn + br sandy clay - rounded qz grains	CLAY = ? O/B	1550	2.90%	2.38%	X	25	0.81	66
62201	61132-30	As above with bitumen	Peaty CLAY = O/B	225	3525	3.10%	X	25	3.25	45
62202	61130-28	As above	Peaty CLAY = O/B	50	550	1.10%	X	50	2.02	55
62203	61128-26	As above	Peaty CLAY = O/B	25	200	1.01%	X	50	2.13	29
62204	61126-24	As above + chips siderite	CLAY + SIDERITE	25	225	2850	X	250	1.40	X
62205	61124-22	Recrystallized limestone + siderite	LST	X	25	575	X	450	0.70	X
62206	61122-20	Recrystallized limestone	LST	X	50	2350	X	675	1.10	X
62207	61120-18	Recrystallized limestone + siderite	LST	X	25	675	X	450	0.66	11
62208	61118-16	As Above	LST	X	50	600	X	625	1.04	11
62209	61116-14	As above - some oolites	LST	X	X	725	X	525	0.81	X
62210	61114-12	Gy oolitic limestone + siderite	LST	X	25	825	X	475	0.82	X
62211	61112-10	As above	LST	X	50	925	X	475	1.00	X
62212	61110-08	gn clay + oolitic limestone chips	CLAY + LST	25	225	1750	X	475	1.15	16
62213	61108-06	lt bn - gn clay + dk gn viscous clay	CLAY	75	4775	0.99%	X	1075	4.77	225
62214	61106-04	gn clay tr. py	CLAY	50	3050	0.78%	X	75	3.83	315
62215	61104-02	gn clay with bitumen	Peaty CLAY	25	225	0.95%	X	50	4.15	277
62216	61102-61100	mottled gn - bn clay	CLAY	50	1475	1.72%	X	X	1.67	219
62217	61100-98	dk gn clay, lt bn clay, + bk clay in mud	CLAY	25	75	0.33%	X	275	4.09	172
62218	61098-96	Foss dk gn - bk fig calc with'd rock	?LST	25	50	600	X	635	2.91	78
62219	61096-94	Foss dk gn clay + with'd calc rock	?LST	25	X	225	X	775	1.59	67
62220	61094-92	lt gn calc clay + limestone + dol.	LST	X	X	450	X	825	2.28	55
62221	61092-90	dk gn bk clay + bn - gn sandy clay	CLAY	25	200	725	X	50	2.93	260
62222	61090-88	br clay with bitumen	Peaty CLAY	25	175	900	X	100	2.77	160
62223	61088-86	lt gn - gy limestone - calcite vng	LST	X	75	175	X	375	0.73	22
62224	61086-84	gy limestone + mnc dolomite	LST	X	X	100	X	250	0.55	12
62225	61084-82	lt gn - gy limestone	LST	X	X	75	X	175	0.26	X



078

352079

PROFILE

LITHOLOGY

MINERAL

GEOCHEMISTRY (ppm)

Depth of sample.

R.L. 160m

Brown and green  
clay, with rounded  
quartz grains.  
= OVERBURDEN.

102000

10000

1000

61300E

61350E

61400E

61450E

EASTINGS  
61330-61344

SAMPLE INTERVAL  
2m

SAMPLED BY  
G. KARY, L. WALSH.

DATE  
12/2/84

AZIMUTH  
GRID EAST

TOTAL LENGTH  
14m

ELECTROLYTIC ZINC CO. of ASIA LTD.

PROJECT: E.L. 4/78 ZEEHAN

TAS.

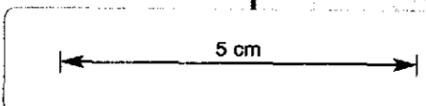
LEGEND

- Pb
- x-x-x-x Zn
- o-o-o-o-o Ag

PURPOSE OF COSTEAN  
To follow up elevated geochemistry, from  
the Jacro Auger sampling programme.

COSTEAN RESULTS  
LINE - 48000 N

GRIEVES GRID



SCALE: 1:500m	SURVEY: G.K.	REVISED:
EXC. BY: GROVES, O.B.K.	DATE: 2-5-84	REF. No.
DRAWN: R.J.R.	CHECKED:	A3-532-0081





ELECTROLYTIC ZINC CO. of A'ASIA. LTD. ROSEBERY, TASMANIA.	COSTEAN SAMPLE DATA LINE: 47900N	PROJECT: EL 4/78 SAMPLED BY: L.M-D.W. AZIMUTH:	LOCALITY: Grieves SAMPLE INTERVAL: 2m DATE: 11.2.84 -16.3.84
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SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe	Ba
0773	61373-76	Pale to dark grey banded (> bedded)	CLAY	25	475	4600	X	X	0.96	212
0774	61376-74	Pale brown to grey banded with minor pebbles	CLAY	25	1250	3600	X	X	0.74	264
0775	61374-72	As above	CLAY	25	2375	2875	X	X	1.35	265
0776	61372-70	Dark grey bedded clay to shale with tr. pyrite	SHALE/CLAY	25	1800	0.88%	X	X	1.68	242
0777	61370-68	Dark grey banded with minor silty bands	CLAY	X	550	0.96%	X	X	2.89	210
0778	61368-66	Pale brown cryst. carbonate with galena grains	SIDERITE	X	0.71%	3.09%	2	0.73%	19.58	59
0779	61366-64	Pale brown crystalline carbonate	SIDERITE	X	4800	4.18%	2	1.00%	24.98	46
0780	61364-62	As above minor coarse carbonate veins	SIDERITE	X	2325	3.75%	X	3075	6.48	X
0781	61362-60	Pale brown crystalline carbonate	SIDERITE	X	1.10%	4.18%	6	2800	4.74	X
0782	61360-58	As above	SIDERITE	X	3050	3.11%	X	2225	3.79	13
0783	61358-56	Mottled pale brown/grey crystalline carb.	Recrystallized Limestone	X	1050	0.77%	X	825	1.55	22
0784	61356-54	As above	Recryst. oolitic limestone	X	525	4.10%	X	1025	1.87	26
0785	61354-52	Pale brown/grey mottled carb. minor red clay	Recryst. oolitic limestone	X	350	0.68%	X	1050	1.79	13
0786	61352-50	Mottled pale brown/grey carbonate	Recryst. oolitic limestone	X	200	0.75%	X	650	1.34	X
0787	61350-48	Mottled pale brown/pink/grey carb. ? oolitic	Oolitic limestone	X	150	1800	X	525	1.26	X
0788	61348-46	Dark grey to red cgr. carbonate, oolitic, tr. pyrite	Oolitic limestone	X	125	3350	X	725	1.41	31
0789	61346-44	As above	Oolitic limestone	X	75	950	X	325	0.71	10
0790	61344-42	As above - with siderite and sphalerite in vugs	Oolitic limestone	X	400	2725	X	525	1.25	X
0791	61338-36	As above - ? oolite	Oolitic limestone	X	75	1275	X	325	0.90	X
0792	61326-24	As above	Oolitic limestone	X	675	0.58%	X	400	1.01	12
0793	61320-18	As above but finer grained	Oolitic limestone	X	275	0.68%	X	1000	2.38	52
0794	61318-16	As above with siderite and sphalerite in vugs	Oolitic limestone	X	175	3575	X	1025	2.46	75
0795	61316-14	Pale grey to pink crystalline carbonate	Oolitic limestone	X	350	0.60%	X	1525	3.76	62
0796	61314-12	As above plus fine limestone - 1% sphalerite in vugs	LIMESTONE	X	1150	1.68%	X	1950	4.92	73
0797	61312-10	Tan muddy matrix and coarsely cryst. patches	LST + BX	X	850	0.69%	X	1550	4.44	74
0798	61310-08	As above - tr. galena + sphalerite	LST + BX	X	125	0.62%	X	1950	6.73	57

LECTROLYTIC ZINC CO. of A'ASIA. LTD.  
ROSEBERY, TASMANIA.

COSTEAN SAMPLE DATA  
LINE: 47900N

PROJECT: EL 4/78  
SAMPLED BY: G.K. -L.W.  
AZIMUTH:

LOCALITY: Gieves 352083  
SAMPLE INTERVAL: 2m  
DATE: 12.2.84 -16.3.84

SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe	Ba
60799	61308-06	Gy vuggy limestone ?oolitic trgn+sp	LIMESTONE OOLITIC	X	125	0.55%	X	1950	6.65	27
60800	61306-04	As above	LIMESTONE OOLITIC	X	75	3325	X	1525	5.75	21
59501	61304-02	As above tr sp	LIMESTONE OOLITIC	X	150	0.63%	X	1700	5.54	43
59502	61302-300	Black shiny clay	CLAY	X	675	3.22%	X	550	2.45	256
59503	61300-61298	Black viscous clay	CLAY	X	775	3.52%	X	175	1.26	393
59504	61298-96	Black + green to tan clay mnr py	CLAY	25	1100	4.77%	X	X	2.26	330
59505	61296-94	Dk gn clay + bitumen	CLAY	X	300	3.78%	X	X	1.63	288
62254	61298-96	Gn clay - silty mnr py	CLAY	25	150	1.88%	X	25	3.34	340
62255	61296-94	As above mnr py	CLAY	25	150	1.58%	X	25	3.10	340
62256	61294-92	As above	CLAY	25	125	1.55%	X	25	2.94	348
62257	61292-90	As above mnr py	CLAY	25	175	1.53	X	25	3.14	350
62258	61290-88	As above + peaty clay	CLAY + PEAT	25	100	1.66	X	25	2.41	327
62259	61288-86	green silty clay + bitumen (mnr) + lim. lumps	CLAY + PEAT	25	175	1.99	X	50	2.83	241
62260	61286-84	As above lim. lumps	CLAY + PEAT	25	1075	1.99	X	25	3.75	251
62261	61284-82	As above	CLAY + PEAT	25	400	1.72	X	25	4.42	251
62262	61282-80	As above	CLAY + PEAT	25	600	1.41	X	X	6.51	266
62263	61280-78	As above	CLAY + PEAT	25	1925	1.25	X	25	6.21	246

083

352084

R.L. 160m

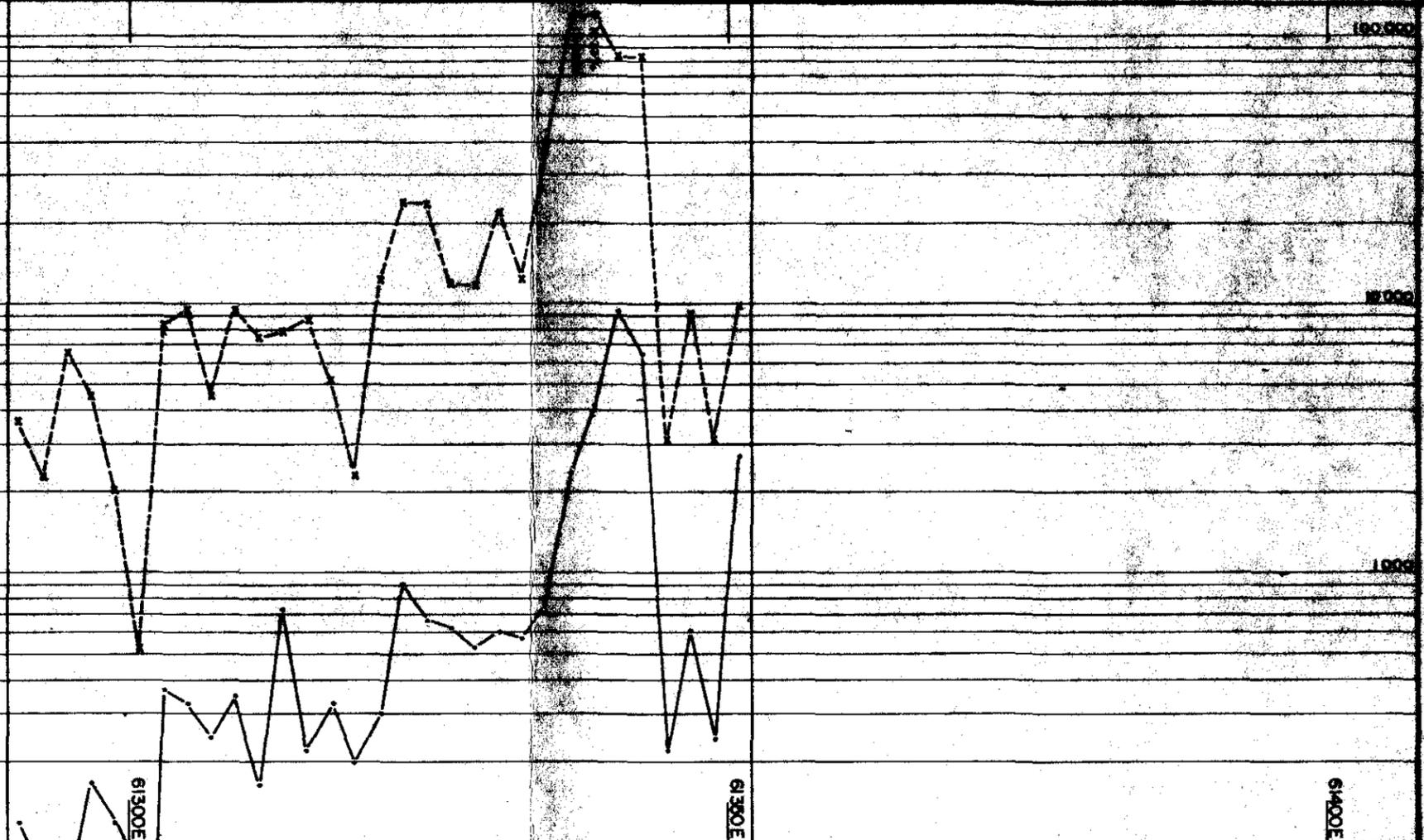
PROFILE

LITHOLOGY

MINERAL

GEOCHEMISTRY (ppm)

Oolitic limestone.	
Pale clay, brown clay and peaty clay.	
Dolomitic limestone.	
Clay = dolomitic limestone.	
Pale brown, green and grey banded clay.	Mar. pyrite.
Mottled green and brown clay.	Minor pyrite.
Dark green to black clay.	Minor pyrite.
Brown peaty clay.	Minor pyrite.



EASTINGS 61290-61352		SAMPLE INTERVAL 2 m		SAMPLED BY G. KARY, L. WALSH, G. BRESFORD		DATE 12-16/2/84		AZIMUTH GRID EAST		TOTAL LENGTH 62 m		ELECTROLYTIC ZINC CO. of ASIA LTD.	
<p><b>LEGEND</b></p> <p>—•—•— Pb</p> <p>- - - - - Zn</p> <p>..... Ag</p> <p>mar. = minor.</p> <p>5 cm</p> <p><b>GRIEVES GRID</b></p>		<p><b>PURPOSE OF COSTEAN</b></p> <p>To sample limestone along strike from the Grieves Mine, in an area where Jacro Auger sampling was unsuccessful.</p>				<p><b>PROJECT: E.L. 4/78 ZEEHAN TAS.</b></p> <p><b>COSTEAN RESULTS</b></p> <p><b>LINE - 47800 N</b></p>		<p>SCALE: 1:500</p> <p>EXC. BY: GROVES, O.B.K.</p> <p>DRAWN: R. J. R.</p>		<p>SURVEY: G. K.</p> <p>DATE: 2-5-84</p> <p>CHECKED:</p>		<p>REVISED:</p> <p>REF. No. A3-532-0079</p>	

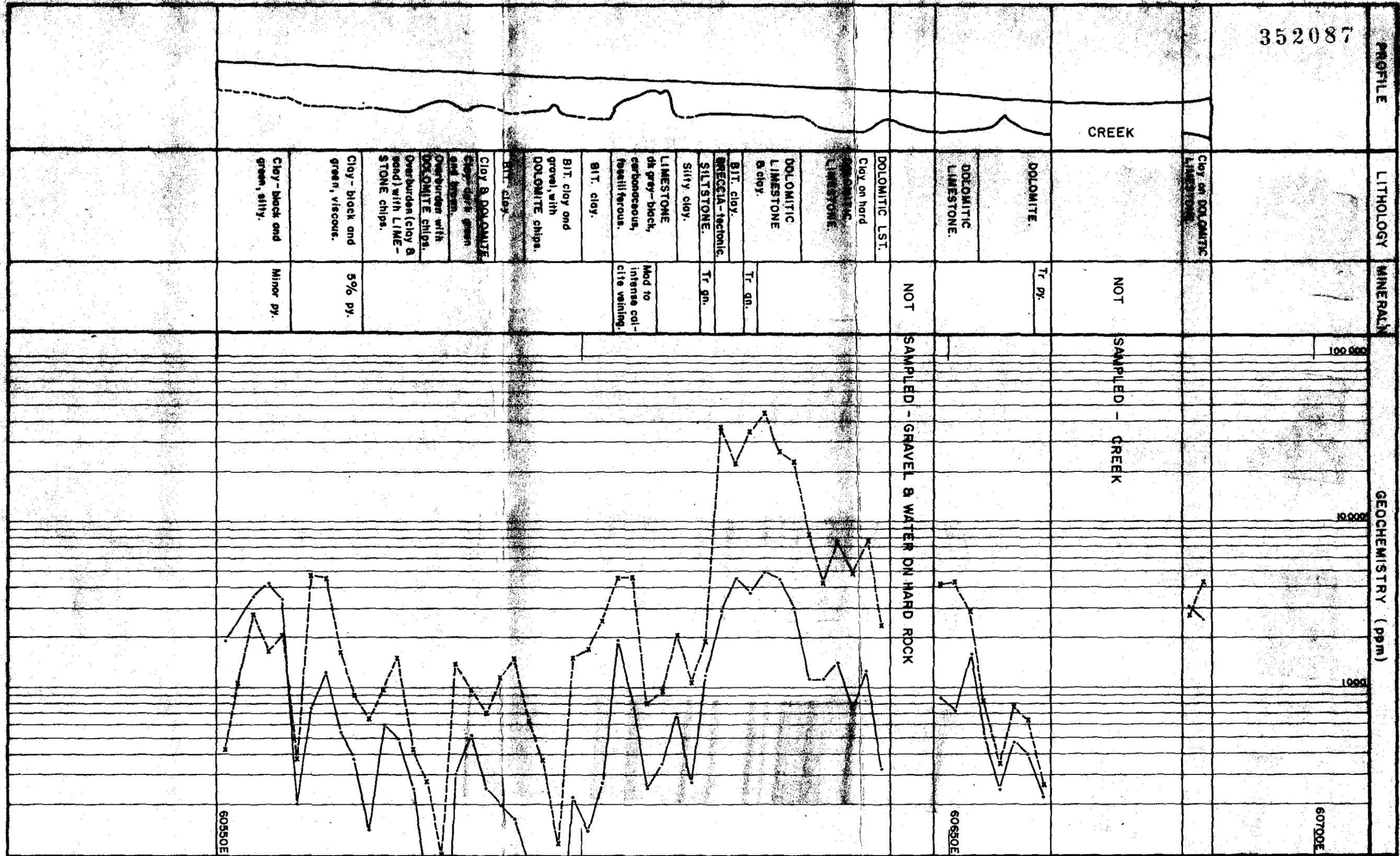
ELECTROLYTIC ZINC CO. of A'ASIA. LTD. ROSEBERY, TASMANIA.	COSTEAN SAMPLE DATA LINE: 47800N	PROJECT: EL 4/78 SAMPLED BY: G.K. - L.W. - G.B. AZIMUTH:	LOCALITY: Grieves SAMPLE INTERVAL: 2m DATE: 12. 2. 84 - 1.3.84
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SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe	Bo
59513	61352-50	Lt bn oolitic limestone + minor siderite	LIMESTONE	100	2750	0.99%	X	4425	12.73	42
59514	61350-48	Lt bn oolitic limestone	LIMESTONE	X	250	3125	X	550	0.93	13
59515	61348-46	As above	LIMESTONE	25	600	0.91%	X	775	1.15	23
59516	61346-44	Cream clay	CLAY	X	225	3100	X	375	0.63	15
59517	61344-42	gn and bn clay + rounded qz. grains	CLAY = ? LST	50	0.64%	8.20%	2	125	0.71	158
59518	61342-40	As above + peat	CLAY = ? LST	50	0.93%	8.14%	2	25	1.62	124
59519	61340-38	Brown peaty clay	CLAY = ? LST	50	4100	12.33%	3	25	2.80	76
59520	61338-36	Lt bn - gn clay	CLAY = ? LST	25	2350	12.06%	2	X	2.94	142
62235	61336-34	gn bk clay	CLAY	25	750	3.75%	X	75	3.73	366
62236	61334-32	Lt bn clay in gn-gy clay matrix ? Breccia	CLAY	25	575	1.37%	X	50	2.02	445
62237	61332-30	Gy f-gr dolomitic limestone - dense	Dolomitic limestone	25	600	2.22%	X	1025	5.04	216
62238	61330-28	As above - oolitic	Dol. limestone	25	525	1.24%	X	850	3.25	188
62239	61328-26	Lt bn - gn clay = with'd oolitic limestone	? Dol limestone	X	625	1.27%	X	825	3.85	223
62240	61326-24	Recrystallized dense dol. lst - gn-bn clay	CLAY	25	675	2.33%	X	2775	10.94	184
62241	61324-22	Lt bn - gn banded clay - mar py	CLAY	50	900	2.39%	X	2325	10.68	325
62242	61322-20	As above + fragments dense ? siderite	CLAY + SIDERITE	25	300	1.38%	X	0.65%	20.55	225
62243	61320-18	Grey banded clay	CLAY	50	200	2225	X	500	2.95	429
62244	61318-16	As above	CLAY	25	325	5125	X	3125	12.17	273
62245	61316-14	As above mar py	CLAY	50	225	0.88%	X	1100	6.80	312
62246	61314-12	As above mar py	CLAY	25	725	0.79%	X	75	3.42	328
62247	61312-10	Mottled gy - gn clay	CLAY	25	175	0.74%	X	50	3.45	266
62248	61310-08	gn & br clay mar py	CLAY	25	350	0.94%	X	50	3.68	310
62249	61308-06	pk gn sandy clay mar py	CLAY	25	250	4575	X	25	3.11	235
62250	61306-04	pk gn clay mar py	CLAY	25	325	0.94%	X	50	4.47	331
62251	61304-02	pk gn clay mar py	CLAY	25	375	0.82%	X	50	2.95	332
62252	61302-300	As above	CLAY	25	50	525	X	50	2.59	362



086

352087



GEOCHEMISTRY (ppm)

EASTINGS  
60550 - 60686

SAMPLE INTERVAL  
2m

SAMPLED BY  
G. KARY, G. BERESFORD.

DATE  
19/3/84

AZIMUTH  
GRID EAST

TOTAL LENGTH  
136 m

ELECTROLYTIC ZINC CO. of A'ASIA LTD.

PROJECT: E.L. 4/78 ZEEHAN

TAS.

COSTEAN RESULTS  
LINE - 47600 N

**LEGEND**

- Pb
- - - - - Zn
- Ag
- BIT. = bitumenous.
- tr = trace.
- py = pyrite.
- sp = sphalerite.
- gn = galena.
- LST = limestone.

PURPOSE OF COSTEAN  
To test high Pb/Zn geochemistry, from  
the Jacro auger sampling program.

SCALE: 1:500

SURVEY: G. K.

REVISED:

BY: GROVES, O.B.K.

DATE: 2-5-84

REF. No.

CHECKED:

A3-532-0078

5 cm

ELECTROLYTIC ZINC CO. of A'ASIA. LTD.  
ROSEBERY, TASMANIA.

COSTEAN SAMPLE DATA  
LINE: 47600N

PROJECT: EL 4/78  
SAMPLED BY: G.K. - G.B.  
AZIMUTH:

LOCALITY: Grievess 352088  
SAMPLE INTERVAL: 2m  
DATE: 19.3.84 - 20.3.84

SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe	Ba
62264	60550-52	bk-gy bk carb clay - 1% py	CLAY = ? LST	100	1975	425	X	25	4.30	322
62265	60552-54	gn silty clay ~ 1% py	CLAY = ? LST	25	1025	1050	X	50	6.50	354
62266	60554-56	gn silty clay - 5% py	CLAY = ? SLST	75	3500	2800	X	50	10.47	258
62267	60556-58	gn silty clay - mnr py	CLAY = SLST	75	4175	1700	X	50	12.79	316
62268	60558-60	dk gn sandy clay, mnr bk clay, mnr py	CLAY = ? SST	150	3375	2025	X	25	6.91	298
62269	60560-62	bk viscous clay under o/b orm clay	CLAY = LST	200	200	375		50	3.89	363
62270	60562-64	bk-dk gn viscous clay - 5% py	CLAY	X	750	4800	X	25	18.93	232
62271	60564-66	bk-dk gn viscous clay - 5% egr py	CLAY	50	1225	4425	X	50	10.82	296
62272	60566-68	bk-dk gn viscous clay - mnr bitumen - 5% py	CLAY	25	550	1725	X	25	9.12	298
62273	60568-70	bk-br clay - gypsum around 5% py	CLAY	25	375	900	X	25	8.25	316
62274	60570-72	bk-br clay + sand	O/B	X	150	650	X	25	12.75	292
62275	60572-74	bk-br clay + sand on hard LST-sandy	O/B on LST	25	600	975	X	75	6.45	246
62276	60574-76	bk-br clay + sand on hard sandy LST	O/B on LST	25	500	1650	X	25	7.76	251
62277	60576-78	bk-br clay + sand on fg xyst LST	O/B on LST	25	250	425	X	50	2.02	236
62278	60578-80	gy fgr xyst dolomite + bn-gn mud	O/B on DLST	X	75	275	X	150	2.57	166
62279	60580-82	fgr limestone + dolomite + bn-gn mud	O/B on LST+DLST	X	50	100	X	250	1.03	72
62280	60582-84	gn gy + bn clay tr py	CLAY = ? O/B	25	300	1475	X	25	10.22	238
62281	60584-86	dk gn silty clay on hard rock	CLAY = ? SLST	25	525	975	X	25	2.21	312
62282	60586-88	gn clay + frags bedded fgr xyst dk gy DLST	CLAY + DLST	X	250	700	X	200	3.31	201
62283	60588-90	dk gn-gn bk clay abundant carb flakes + bit	CLAY	25	200	1200	X	50	5.03	252
62284	60590-92	as above	CLAY	X	175	1575	X	50	6.56	253
62285	60592-94	as above on dk gy DLST	CLAY on DLST	X	75*	625	X	250	2.87	155
62286	60594-96	mud and gravel on hard DLST	O/B on DLST	X	50	375	X	400	1.31	72
62287	60596-98	as above + DLST boulders	O/B on DLST	25	50	125	X	425	0.83	45
62288	60598-600	10% clay + 90% gravel on hard rock	O/B on ? DLST	25	225	1675	X	150	2.17	236
62289	60600-02	bn-gn clay with bitumen - mnr py	O/B CLAY	25	150	1850	X	75	5.02	237

ELECTROLYTIC ZINC CO. of A'ASIA. LTD.  
ROSEBERRY, TASMANIA.

COSTEAN SAMPLE DATA  
LINE: 47600N

PROJECT: EL 4/78  
SAMPLED BY: G.K. - G.B.  
AZIMUTH:

LOCALITY: GRIEVES 352089  
SAMPLE INTERVAL: 2m  
DATE: 19.3.84 - 20.3.84

SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe%	Ba
62290	60602-04	ln + gn clay with bitumen tr py	CLAY = ? O/B	50	275	2525	X	50	4.13	321
62291	60604-06	Intensely calcite veined carb LST - ? fault	LST	25	1975	4550	X	250	1.31	80
62292	60606-08	lk carb LST - mnr slickensides + corals - cal vng	LST	25	800	4675	X	300	0.82	32
62293	60608-10	lk carb LST - mnr slickensides + corals - cal vng	LST	25	250	800	X	150	0.39	35
62294	60610-12	dk gy foss LST about shell + corals	LST	25	350	950	X	150	0.83	94
62295	60612-14	dk gy foss LST + dk gn foss silty clay	LST + SLST (CLAY)	25	700	2075	X	75	1.95	400
62296	60614-16	dk gy - lk silty clay tr mica + fossils	CLAY = SLST	X	275	3150	X	175	1.60	252
62297	60616-18	calc SLST, mod bedded - on fr surf tr gn	SLST	X	1250	1975	X	125	1.64	380
62298	60618-20	Breccia - frags DLST in creamy cal + dol - heavy	BX - DLST	X	2900	370%	3	1450	4.3	89
62299	60620-22	ln - gn clay with bitumen on hard rock	CLAY = ? O/B	50	4500	2.20%	2	75	1.51	303
62300	60622-24	lk fg DLST, coral fossils + LST patches - tr gn	DLST + LST	25	3750	3.46%	3	675	2.07	115
62301	60624-26	Frags of lk DLST, DLST BX, + dk gy LST + mud	DLST + LST + BX	25	4975	4.56%	6	1150	2.99	74
62302	60626-28	grey clay + frags of lk DLST + dk gy LST	CLAY + DLST + LST	25	4425	2.70%	5	250	1.68	152
62303	60628-30	gn clay + mnr frags lk DLST + dk gy LST	CLAY + DLST + LST	25	3050	2.30%	4	425	2.80	218
62304	60630-32	gn - gy clay mnr shell moulds	CLAY = ? LST	25	1175	0.82%	X	25	2.50	289
62305	60632-34	gn - gy clay with chips lk fg DLST	CLAY on LST + DLST	25	1150	4.225	2	50	2.28	171
62306	60634-36	as above	CLAY on LST + DLST	25	1525	0.76%	X	25	3.41	253
62307	60636-38	as above	CLAY on LST + DLST	25	750	4.875	X	125	1.98	146
62308	60638-40	as above	CLAY on LST + DLST	25	1350	0.77%	1	100	1.92	264
62309	60640-42	chips lk fg DLST with LST	DLST + LST	X	325	2400	X	125	0.78	57
		} GRAVEL + WATER FLOW OVER HARD FRESH ROCK								
62310	60648-50	lk fg DLST and LST pods	DLST + LST	25	875	4175	X	150	1.34	117
62311	60650-52	as above	DLST + LST	X	725	4300	1	125	1.25	132
62312	60652-54	as above tr py	DLST + LST	25	1700	2925	2	200	0.81	2370
62313	60654-56	qu for x-st DLST with calcite pods	DLST	X	500	825	X	300	0.82	64

ELECTROLYTIC ZINC CO. of A'ASIA. LTD. ROSEBERY, TASMANIA.	COSTEAN SAMPLE DATA LINE: 47600N	PROJECT: EL 4178 SAMPLED BY: G.K. GB AZIMUTH:	LOCALITY: GRIEVES 352090 SAMPLE INTERVAL: 2m DATE: 20-3-84 - 21-3-84
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SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)							
				Cu	Pb	Zn	Ag	Mn	Fe %	Ba	
62314	60656-58	gy fgr xyst DLST with calcite pods	DLST	X	250	350	X	325	0.70	42	
62315	60658-60	as above	DLST	X	475	775	X	225	1.39	129	
62316	60660-62	as above	DLST	X	400	650	X	300	0.93	84	
62317	60662-64	as above tr py	DLST	X	225	275	X	300	0.94	81	
		} CREEK									
62318	60682-84	dk gy clay with frags Lk DLST + mn LST	CLAY on DLST + LST	50	3025	2700	X	100	2.10	242	
62319	60684-86	gy-gn ls clay with frags dk gy DLST	CLAY on DLST	175	2600	4350	1	75	3.43	147	

090

352091

PROFILE  
LITHOLOGY  
MINERAL

SAMPLE DEPTH

Shaly Limestones, dark grey, fine grained.

LIMESTONE grey, with carbonaceous spherulites.

Dolomitic LIMESTONE

BRACCIA Dolomite & Limestone in carbonate matrix.

BRACCIA Dolomite, Chert, Siltstone, Muck Shale & Sphalerite clasts.

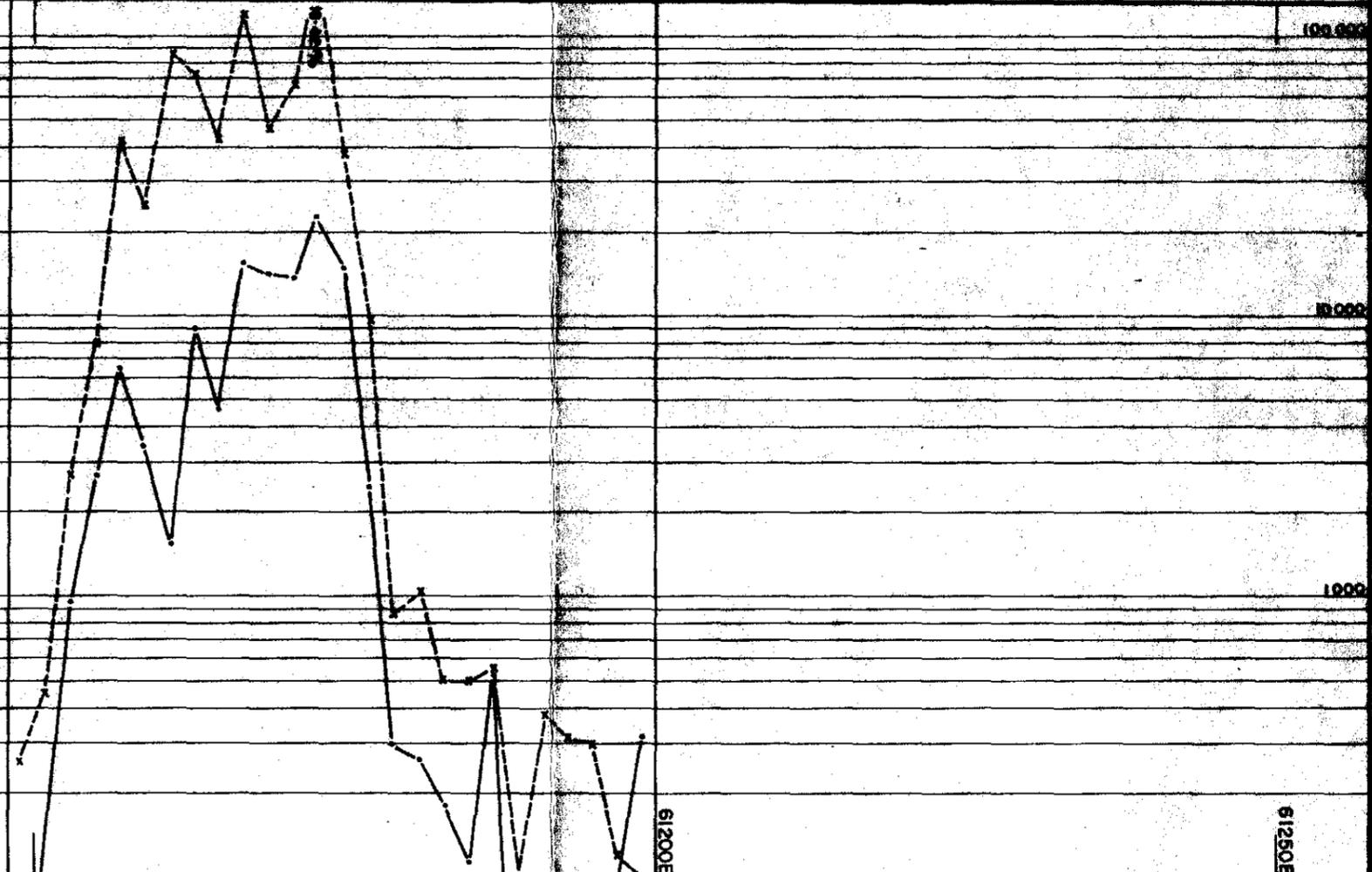
SILTY DOLOMITE.

MUDDY LIMESTONE Dark grey with oxide veins.

Dia. gn. & spherulites.

py & gn/sp clasts & dia. gn & sp.

BIOCHEMISTRY (ppm)



EASTINGS  
61148 - 61200

SAMPLE INTERVAL  
2 m

SAMPLED BY  
L. M. F., G. BERESFORD.

DATE  
/2/84

AZIMUTH  
GRID EAST

TOTAL LENGTH  
52 m

ELECTROLYTIC ZINC CO. of A'ASIA LTD.

PROJECT: E.L. 4/78 ZEEHAN

TAS.

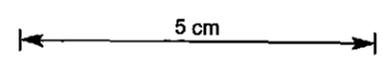
COSTEAN RESULTS  
LINE - 47100N

LEGEND

- Pb
- - - - - Zn
- Ag

- py = pyrite.
- sp = sphalerite.
- gn = galena.
- diss = disseminated

PURPOSE OF COSTEAN  
To test anomalous Pb-Zn values from the Jacro bedrock sampling programme.  
One sample reported 2.5% Zn and 1.4% Pb.



GRIEVES GRID

SCALE: 1:500  
EXC. BY: GROVES, O B K  
DRAWN: R. J. R.

SURVEY: G. K.  
DATE: 1-5-84  
CHECKED:

REVISED:  
REF. No.  
A3-532-0077

ELECTROLYTIC ZINC CO. of A'ASIA. LTD.  
ROSEBERY, TASMANIA.

COSTEAN SAMPLE DATA  
LINE: 47100N

PROJECT: EL 4/78  
SAMPLED BY: L.M.F. - G.B.  
AZIMUTH:

LOCALITY: Grieves 352092  
SAMPLE INTERVAL: 2m  
DATE: .2.84

SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe %	Ba
59525	61200-61198	Dark grey shaly limestone	LIMESTONE	25	325	100	x	100	0.52	129
59526	61198-96	Dk gry f.gr limestone - white veins minor	LIMESTONE	x	100	125	x	150	0.79	25
59527	61196-94	Dk gry shaly limestone	LIMESTONE	25	50	300	x	150	1.12	77
59528	61194-92	Dk gry shaly limestone with black laminae	LIMESTONE	x	25	325	x	175	1.06	91
59529	61192-90	Dk gry limestone with calcite veins & masses	LIMESTONE	x	75	375	x	200	0.54	30
59530	61190-88	Dk gry shaly limestone	LIMESTONE	x	25	100	x	1.75%	0.54	61
59531	61188-86	Dk gry shaly limestone with mar calcite & sdolite	LIMESTONE	x	525	550	x	200	0.66	43
59532	61186-84	Grey f.gr limestone with carb. stylolites	LIMESTONE	x	125	500	x	200	0.60	36
59533	61184-82	Grey limestone with calcite veins	LIMESTONE	x	175	500	x	400	0.84	32
59534	61182-80	Grey limestone with carb. stylolites	LIMESTONE	x	275	1025	x	350	0.94	88
59535	61180-78	Grey f.gr limestone minor calcite veins	LIMESTONE	x	300	875	x	275	0.56	34
59536	61178-76	Grey limestone with carb. stylolites	LIMESTONE	x	2575	0.95%	x	450	1.25	38
59537	61176-74	Dk grey dolomitic limestone, carb. stylolite	Dol. LIMESTONE	x	1.61%	3.88%	2	2150	4.06	47
59538	61174-72	Dk gy dolomite/limestone breccia Diss gn	BX (Dist + Lst)	x	2.23%	16.42%	2	0.69%	24.20	x
59539	61172-70	Dk gry dlst/lst breccia tr gn	BX (Dist + Lst)	x	1.43%	6.53%	2	2750	9.05	59
59540	61170-68	Dk gy dolomite breccia Diss gn	BX DOLOMITE	x	1.46%	4.73%	2	2000	4.31	80
59541	61168-66	Dk gy breccia, dlst, chert + slst + Py fragments	BX (Dist + Chert + SH)	x	1.67%	12.41%	x	0.68%	19.95	x
59542	61166-64	Dk gry breccia, dlst, sh, slst + massive sulphide clasts	BX (SH + SST)	25	4775	4.29%	x	1625	5.78	98
59543	61164-62	As above + silty dlst & shale	BX + Dist + SH	25	0.90%	7.12%	x	2525	8.72	107
59544	61162-60	As above	BX + Dist + SH	x	0.16%	8.51%	x	3875	12.06	55
59545	61160-58	Dk gy silty dolomite	Silty Dolomite	25	3375	2.41%	x	1250	5.60	58
59546	61158-56	Grey silty and sandy dlst	DOLOMITE	x	0.64%	4.14%	x	1825	7.73	128
59547	61156-54	Dk gy silty dlst and lst	Dist + Lst	25	2650	0.80%	x	475	3.41	254
59548	61154-52	Dark gy muddy limestone - calcite vns	Muddy LST	x	950	2750	x	200	0.85	28
59549	61152-50	Black muddy lst with slickensided calcite vns	Muddy LST	x	75	450	x	100	0.61	17
59550	61150-48	Dk gy muddy lst with mar calcite vns	Muddy LST	x	50	250	x	150	0.81	39

092

352093

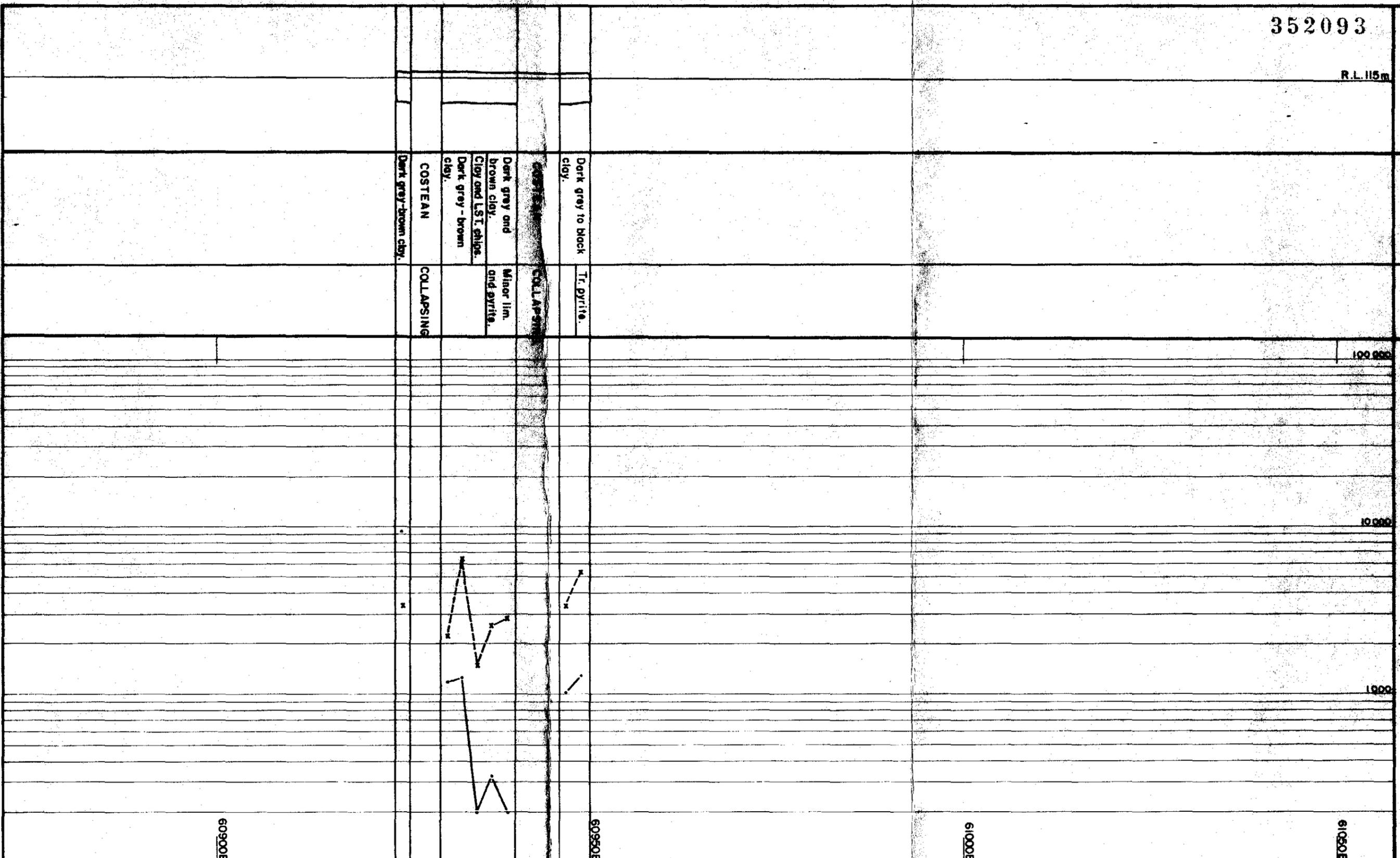
R.L. 115m

PROFILE

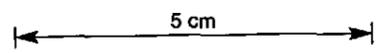
LITHOLOGY

MINERAL

GEOCHEMISTRY (ppm)



EASTINGS 60924 - 60950	SAMPLE INTERVAL 2 m	SAMPLED BY L. M. F., G. BERESFORD.	DATE 27/2/84	AZIMUTH GRID EAST	TOTAL LENGTH 26 m	ELECTROLYTIC ZINC CO. of A'ASIA LTD.	
<b>LEGEND</b> .----- . Pb x----- x Zn o----- o Ag tr. = trace. lim. = limonite. LST. = limestone.						<b>PURPOSE OF COSTEAN</b> To follow up elevated Pb/Zn geochemistry from the Jacro Auger sampling programme.	
<b>BAURA GRID</b>						PROJECT: E. L. 4/78 ZEEHAN TAS. <b>COSTEAN RESULTS</b> <b>LINE - 46200 N</b>	
SCALE: 1:500		SURVEY: G. K.		REVISED:			
EXC. BY: GROVES, O & K		DATE: 1-5-84		REF. No.			
DRAWN: R. J. R.		CHECKED:		A3-532-0076			



093

352094

ELECTROLYTIC ZINC CO. of A'ASIA. LTD.  
ROSEBERY, TASMANIA.

COSTEAN SAMPLE DATA  
LINE: 46200N

PROJECT: EL 4/78  
SAMPLED BY: L.M.F. - G.B.  
AZIMUTH:

LOCALITY: Bauera  
SAMPLE INTERVAL: 2m  
DATE: 27/2/84

SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe %	Ba
59551	60950-48	Dk gy - Gk clay + py	CLAY	25	1300	5300	x	25	2.94	278
59552	60948-46	As above	CLAY	25	1050	3350	x	25	2.30	267
		} Costean collapsing								
59553	60940-38	Dk gy - dk bn clay + lim + mac py	CLAY	25	200	2875	x	25	7.15	245
59554	60938-36	Dk gy clay + lim. patches	CLAY	25	325	2675	x	100	3.76	227
59555	60936-34	Dk gy clay + chips fgr dk gy LST	CLAY + LIMESTONE	25	200	1600	x	25	6.55	235
59556	60934-32	Dk gy - bn clay	CLAY	25	1325	0.64%	x	x	9.51	243
59557	60932-30	As above	CLAY	25	1225	2200	x	50	6.07	246
		} Costean collapsing								
59558	60926-24	Dk gy clay + mac bn clay	CLAY	25	0.93%	3275	x	25	3.20	245

094

352095

R.L. 115m

PROFILE

LITHOLOGY

MINERAL

GEOCHEMISTRY (ppm)

100 000

10 000

1 000

61000E

60950E

60900E

60850E

EASTINGS 60876 - 60950	SAMPLE INTERVAL 2 m	SAMPLED BY L.M.F., G. BERESFORD	DATE 3/3/84	AZIMUTH GRID EAST	TOTAL LENGTH 74 m	ELECTROLYTIC ZINC CO. of A'ASIA LTD.	
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PROJECT: E.L. 4/78 ZEEHAN TAS.

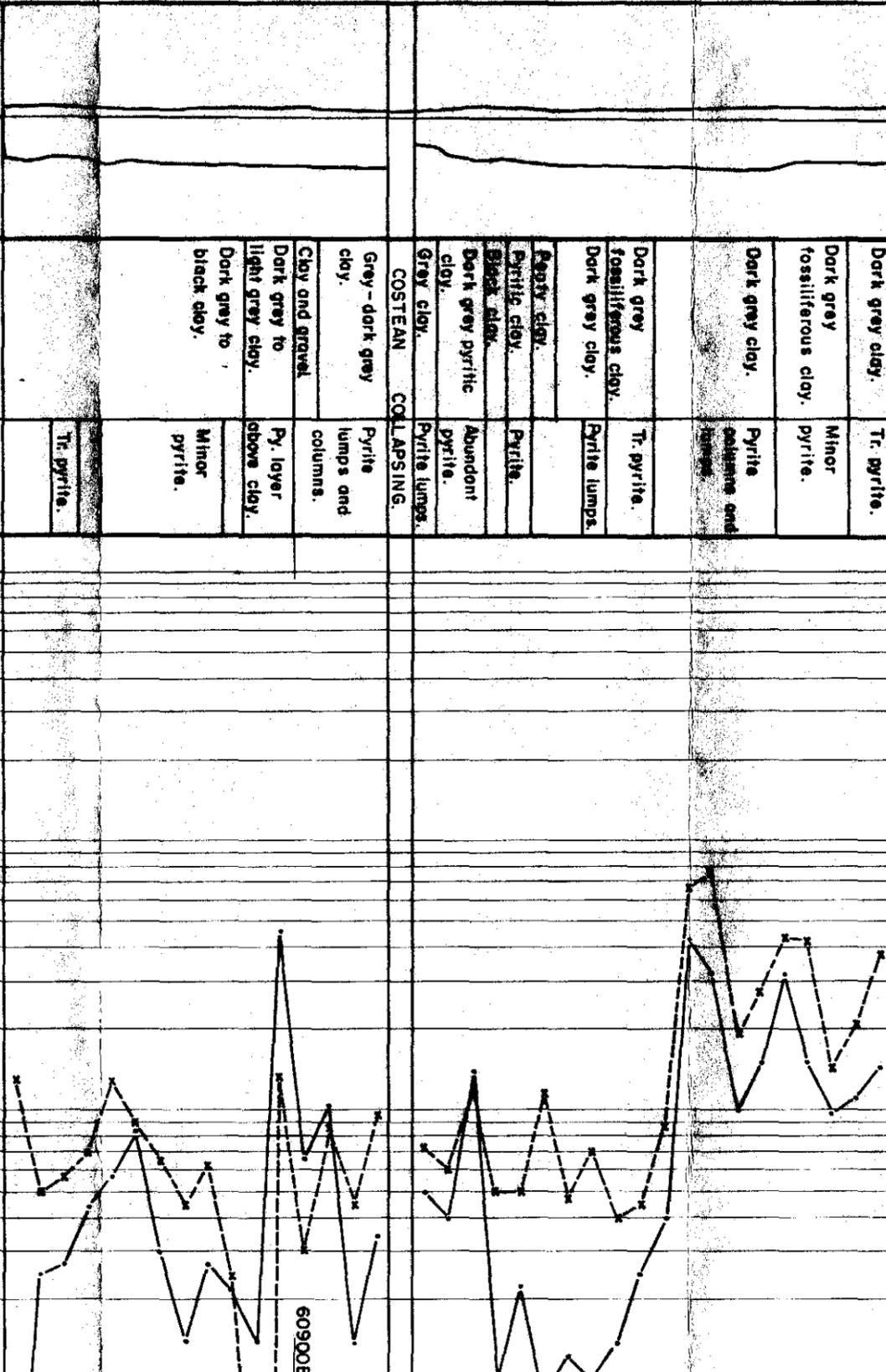
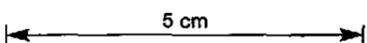
COSTEAN RESULTS  
LINE - 45300 N

SCALE: 1:500	SURVEY: G.K.	REVISED:
EXC. BY: GROVES, O&K	DATE: 1-5-84	REF. No.
DRAWN: R. J. R.	CHECKED:	A3-532-0075

**LEGEND**  
tr. = trace.  
py. = pyrite.

—•—•— Pb  
-x-x-x- Zn  
-o-o-o- Ag

BAURA GRID



Dark grey clay.  
Dark grey fossiliferous clay.  
Dark grey clay.  
Dark grey clay.  
Dark grey clay.  
Dark grey pyritic clay.  
Grey clay.  
COSTEAN COLLAPSING.  
Grey - dark grey clay.  
Clay and gravel.  
Dark grey to light grey clay.  
Dark grey to black clay.  
Tr. pyrite.  
Minor pyrite.  
Pyrite lumps and columns.  
Py. layer above clay.  
Pyrite lumps.  
Abundant pyrite.  
Pyrite.  
Pyrite lumps.  
Tr. pyrite.

LECTROLYTIC ZINC CO. of A'ASIA. LTD.  
 ROSEBERRY, TASMANIA.

COSTEAN SAMPLE DATA  
 LINE: 45300N

PROJECT: EL 4/78  
 SAMPLED BY: L.M.F - G.B.  
 AZIMUTH:

LOCALITY: Bavera  
 SAMPLE INTERVAL: 2m  
 DATE: 3.3.84

SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe	Ba
59637	60876-78	Dk gy blocky clay	CLAY	25	50	1325	X	50	2.52	303
59638	60878-80	Dk gy clay	CLAY	25	250	500	X	25	10.98	320
59639	60880-82	Dk gy clay tr py	CLAY	25	275	575	X	25	10.70	318
59640	60882-84	Dk gy clay	CLAY	25	450	700	X	25	9.98	300
59641	60884-86	Bk - dk gy clay mnr py	CLAY	50	575	1375	X	25	4.02	366
59642	60886-88	Dk gy clay mnr py	CLAY	50	825	900	X	50	10.40	343
59643	60888-90	Dk gy clay	CLAY	50	300	650	X	25	9.63	342
59644	60890-92	Dk gy clay mnr py	CLAY	50	150	650	X	25	4.58	345
59645	60892-94	Dk gy clay mnr py	CLAY	75	275	625	X	X	3.17	383
59646	60894-96	Dk gy - black clay	CLAY	50	225	250	X	X	1.32	434
59647	60896-98	Dk gy - lt gy clay - py on clay mnr py	CLAY	75	150	50	X	X	3.11	413
59648	60898-900	As above - py layer on clay - mnr py	CLAY	50	4625	1400	X	X	3.19	381
59649	60900-02	Dk gy clay + sandstone frags + py	CLAY + GRAVEL	50	675	300	1	X	2.93	328
59650	60902-04	Hbn, lt gy, dk gy clay + pyrite columns py	CLAY	25	1050	875	X	X	14.30	256
59651	60904-06	Dk gy clay py	CLAY	50	150	450	X	X	4.37	293
59652	60906-08	Dk gy - gy clay - pyrite columns py Costean collapsing	CLAY	25	350	950	X	X	13.00	241
59653	60910-12	Dk gy - lt gy clay - pyrite lumps py	CLAY	25	500	725	X	X	2.48	286
59654	60912-14	Black pyritic clay py	CLAY - PYRITIC	25	400	600	X	25	22.80	143
59655	60914-16	Dk gy pyritic clay py	CLAY	25	1450	1275	X	X	12.00	241
59656	60916-18	Black clay.	CLAY	25	100	500	X	25	1.96	309
59657	60918-20	Dk gy pyritic clay py	CLAY	25	225	500	X	25	17.70	192
59658	60920-22	Dk gy clay + peat	CLAY	25	75	1200	X	25	3.14	285
59659	60922-24	Dk gy clay	CLAY	25	125	475	X	25	2.36	324
59660	60924-26	Dk gy clay + pyrite lumps py	CLAY	25	100	700	X	25	2.61	301
59661	60926-28	Dk gy clay + silicified fossils tr py	CLAY	50	150	400	X	25	2.83	320



497

352098

R.L. 115m

PROFILE

LITHOLOGY

MINERAL

GEOCHEMISTRY (ppm)

Grey cherty rock.  
 Dark grey-pale brown clay.  
**COSTEAN COLLAPSING**  
 Grey - brown clay.  
 Grey and weathered limestone.  
 Clay & qz. veins.  
 Dark grey clay and peaty clay.

Tr. pyrite.

100,000

10,000

1,000

60950E

61050E

6100E

EASTINGS  
61000 - 61028

SAMPLE INTERVAL  
2m

SAMPLED BY  
L. M.F., G. BERESFORD

DATE  
3/3/84

AZIMUTH  
GRID EAST

TOTAL LENGTH  
28 m

ELECTROLYTIC ZINC CO. of A'ASIA LTD.

PROJECT: E.L. 4/78 ZEEHAN

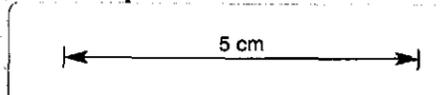
TAS.

**LEGEND**  
 tr. = trace.  
 qz. = quartz.

—•—•— Pb  
 —x—x— Zn  
 —o—o— Ag

PURPOSE OF COSTEAN  
 To follow up elevated Pb/Zn geochemistry from the Jacro Auger sampling programme.

**COSTEAN RESULTS**  
**LINE - 45222 N**



SCALE: 1:500	SURVEY: G. K.	REVISED:
EXC. BY: GROVES, D & K	DATE: 1-5-84	REF. No.
DRAWN: R. J. R.	CHECKED:	A3-532-0074

BAURA GRID

ELECTROLYTIC ZINC CO. of ASIA LTD.  
ROSEBERRY, TASMANIA.

COSTEAN SAMPLE DATA  
LINE: 45222N

PROJECT: EL 4178  
SAMPLED BY: L.M.F.-G.B  
AZIMUTH:

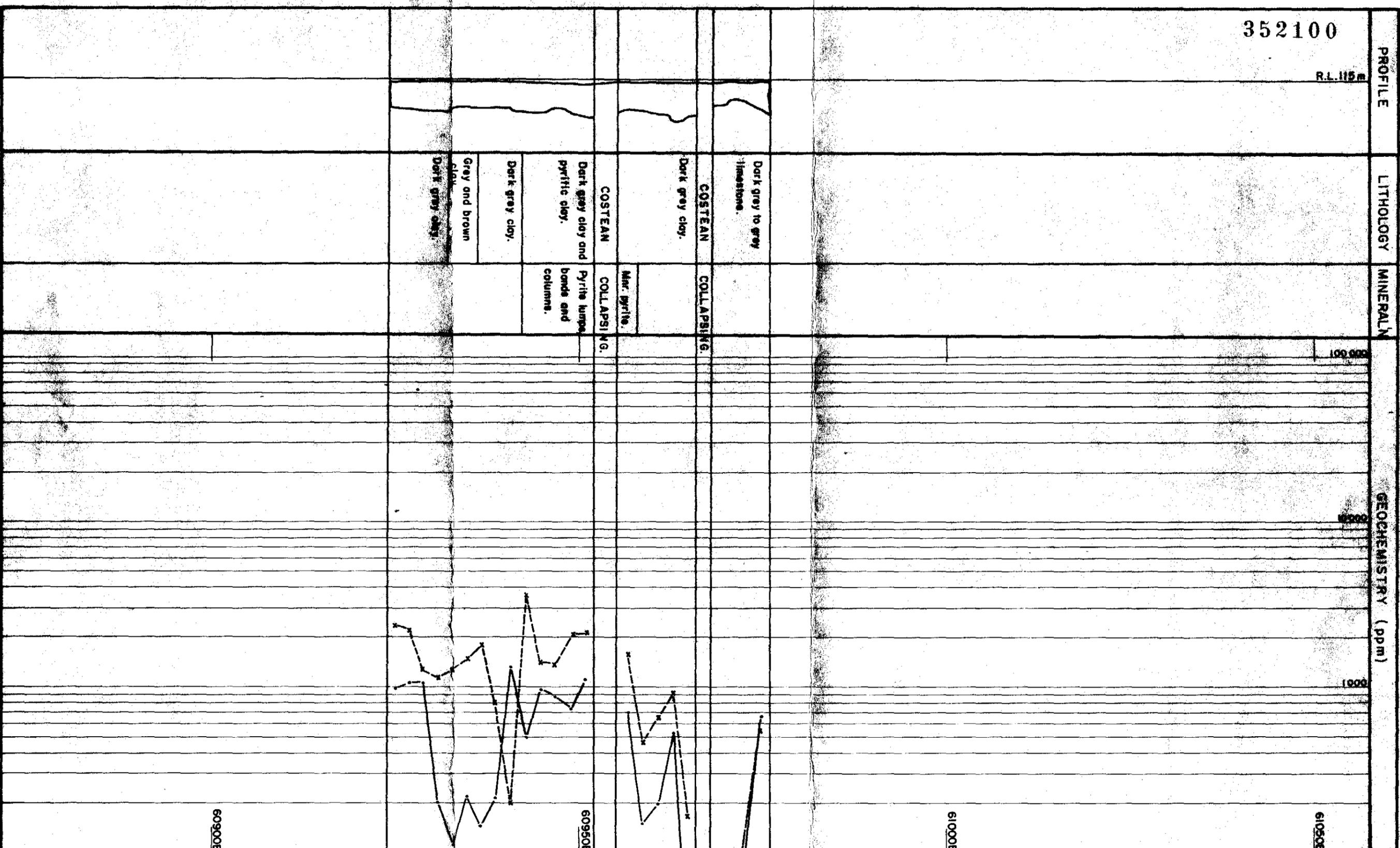
LOCALITY: Bawera 352099  
SAMPLE INTERVAL: 2m  
DATE: 3.3.84

SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe	Ba
9624	61000-02	Dk gy clay	CLAY	50	100	125	1	25	2.30	242
9625	61002-04	Dk gy - brown clay + peat	CLAY + PEAT	25	175	200	X	X	1.82	223
9626	61004-06	Dk gy clay	CLAY	25	1750	3225	X	X	0.48	215
9627	61006-08	Gy - Dk gy clay - mnc g2 stackwk	CLAY = ? BX	25	4025	3600	X	X	0.85	243
9628	61008-10	Gy limestone + clb stringers - py. lumps	LIMESTONE	25	225	400	X	100	15.20	41
9629	61010-12	Dk gy with'd limestone - clb stringers	LIMESTONE	25	175	300	X	100	2.35	56
9630	61012-14	Gy with'd limestone - clb vns + stringers + clay	LIMESTONE + CLAY	25	175	475	1	75	7.85	61
9631	61014-16	Gy - bn clay - "breccia" texture	CLAY	25	1600	1350	X	X	1.83	182
9632	61016-18	Dk gy - lt gy clay + py	CLAY	25	1050	1775	X	X	15.30	144
9633	61020-22	Dk gy clay	CLAY	50	825	1375	X	X	3.50	221
9634	61022-24	Dk gy - lt bn clay	CLAY	50	625	1000	X	25	4.75	267
9635	61024-26	Dk gy cherty rock	? SILTSTONE	25	2450	825	X	25	0.67	195
9636	61026-28	Gy cherty rock	? SILTSTONE	25	3125	1175	X	X	1.30	183

099

352100

R.L. 115m



PROFILE

LITHOLOGY

MINERAL

GEOCHEMISTRY (ppm)

EASTINGS  
60924 - 60976

SAMPLE INTERVAL  
2m

SAMPLED BY  
L. M. F., G. BERESFORD

DATE  
3/3/84

AZIMUTH  
GRID EAST

TOTAL LENGTH  
52m

ELECTROLYTIC ZINC CO. of ASIA LTD.

PROJECT: E.L. 4/78 ZEEHAN

TAS.

COSTEAN RESULTS  
LINE - 45200 N

**LEGEND**  
mnr. = minor.

- Pb
- - - - - Zn
- o - - - - o Ag

PURPOSE OF COSTEAN  
To follow up elevated Pb/Zn geochemistry  
from the Jacro Auger sampling programme.

SCALE: 1:500

SURVEY: G. K.

REVISED:

EXC. BY: GROVES, O&K

DATE: 1-5-84

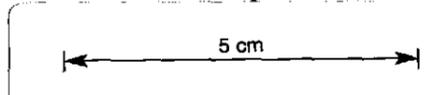
REF. No.

DRAWN: R. J. R.

CHECKED:

A3-532-0073

BAIRA GRID



ELECTROLYTIC ZINC CO. of A'ASIA. LTD.  
ROSEBERRY, TASMANIA.

COSTEAN SAMPLE DATA  
LINE: 45200 N

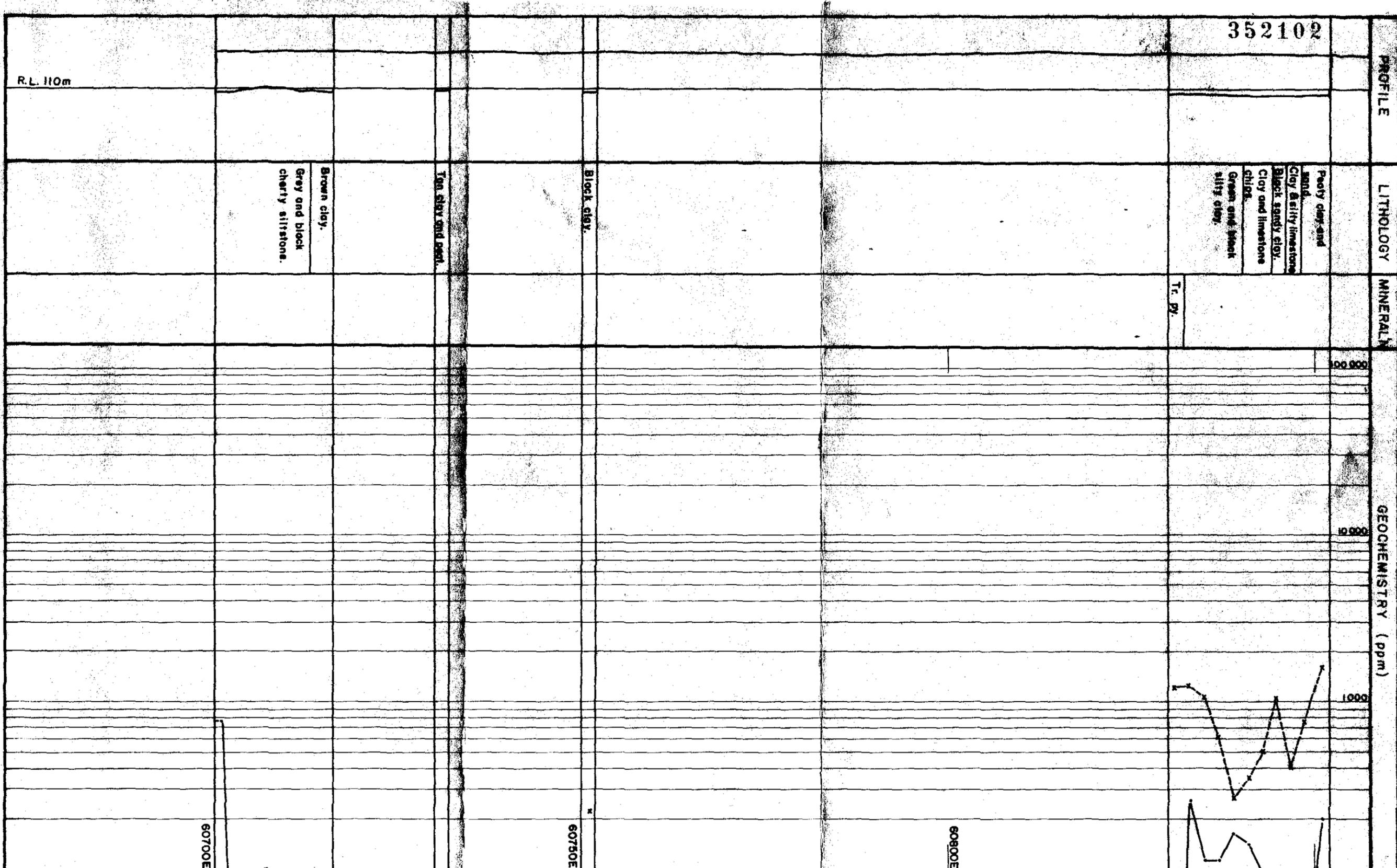
PROJECT: SL 4/78  
SAMPLED BY: L.M.F.-G.B  
AZIMUTH:

LOCALITY: Bavera  
SAMPLE INTERVAL: 2m  
DATE: 3.3.84

100  
352101

SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe	Ba
59601	60924-26	Bk-dk gy clay	CLAY	50	975	2375	2	50	2.19	251
59602	60926-28	Dk gy - lt gy clay	CLAY	50	1050	2275	2	25	1.81	250
59603	60928-30	Dk gy clay under gravel	CLAY	50	1050	1375	X	25	2.00	214
59604	60930-32	Dk gy clay	CLAY	50	200	1125	X	25	1.78	226
59605	60932-34	Gy clay + rd br clay	CLAY	50	125	1375	X	25	1.55	206
59606	60934-36	Gy - lt br clay	CLAY	25	225	1525	X	25	1.62	206
59607	60936-38	Dk gy clay	CLAY	50	150	1775	X	25	1.32	312
59608	60938-40	Dk gy clay	CLAY	50	225	800	X	25	1.27	286
59609	60940-42	Dk gy clay	CLAY	25	1325	200	X	X	1.23	280
59610	60942-44	Dk gy clay + pyrite columns py	CLAY	25	500	3500	X	25	10.48	226
59611	60944-46	Gy clay + pyrite lumps py	CLAY	25	975	1425	X	100	13.62	190
59612	60946-48	Dk gy - lt br clay - mar py band	CLAY	50	875	1400	X	25	4.02	304
59613	60948-50	Dk gy pyritic clay - columns py	CLAY	50	750	2150	3	50	13.25	222
59614	60950-52	Banded lt gy + dk gy clay Costean collapsing	CLAY	50	1100	2050	X	25	2.99	268
59615	60956-58	Dk gy clay with bx texture py	BX = CLAY	25	700	1675	2	25	9.99	196
59616	60958-60	Dk gy clay	CLAY	25	150	475	X	25	2.49	196
59617	60960-62	Dk gy clay	CLAY	25	200	675	X	25	2.92	196
59618	60962-64	Dk gy clay	CLAY	50	525	925	X	25	1.73	237
59619	60964-66	Dk gy clay Costean collapsing	CLAY	25	50	175	X	75	2.03	119
59620	60968-70	Dk gy f.gr limestone	LIMESTONE	25	25	50	X	75	0.99	83
59621	60970-72	As above	LIMESTONE	25	50	100	X	50	1.35	132
59622	60972-74	Weathered dk gy limestone	LIMESTONE	25	25	75	1	25	1.51	165
59623	60974-76	Gy limestone - mar wh stringers	LIMESTONE	25	675	550	1	25	0.90	126

101



352102

R.L. 110m

PROFILE

LITHOLOGY

MINERAL

GEOCHEMISTRY (ppm)

Peaty clay and sand  
Clay & silty limestone  
Black sandy clay  
Clay and limestone chills  
Green and black silty clay

Brown clay  
Gray and black cherty siltstone

Tan silty sand and peat

Black clay

Tr. Py.

100000

10000

1000

60700E

60750E

60800E

EASTINGS  
60700-60900

SAMPLE INTERVAL  
2m

SAMPLED BY  
G. KARY, G. BERESFORD.

DATE  
23,24/3/84

AZIMUTH  
GRID EAST

TOTAL LENGTH  
200m

ELECTROLYTIC ZINC CO. of A'ASIA LTD.

PROJECT: E.L. 4/78 ZEEHAN

TAS.

COSTEAN RESULTS

PART I of II

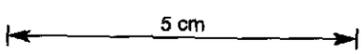
LINE - 44200N

**LEGEND**

- Pb
- x—x— Zn
- o—o— Ag

tr. = trace.  
py. = pyrite.

PURPOSE OF COSTEAN  
To test elevated bedrock geochemistry,  
from the Jacro Auger sampling programme.



SCALE: 1:500

SURVEY: G.K.

REVISED:

EXC. BY: GROVES, O&K

DATE: 30-4-'84

REF. No.

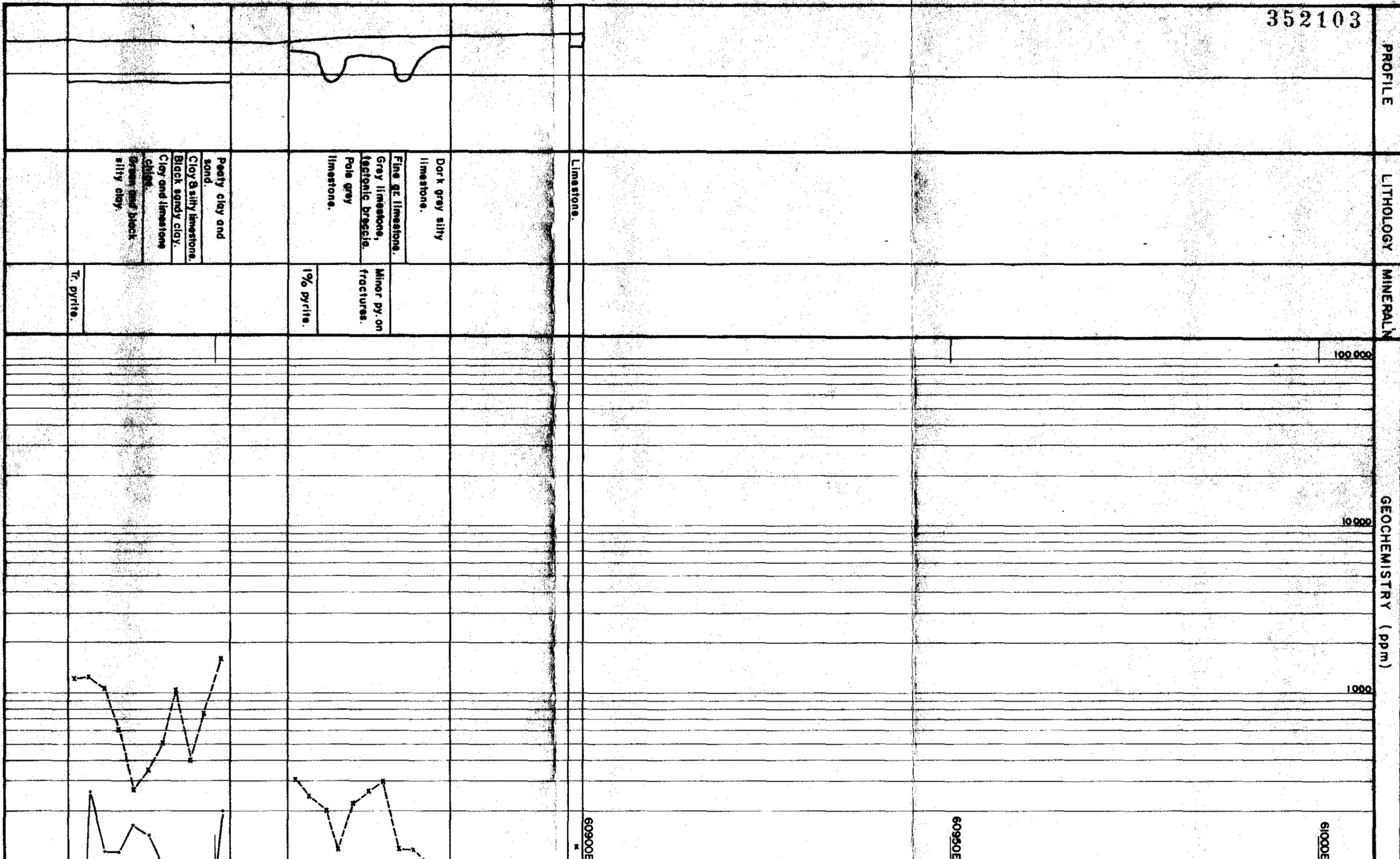
DRAWN: R.J.R.

CHECKED:

A3-532-0072

102

352103



EASTINGS 60700 - 60900	SAMPLE INTERVAL 2m	SAMPLED BY G. KARY, G. BERESFORD.	DATE 23, 24/3/84	AZIMUTH GRID EAST	TOTAL LENGTH 200 m	ELECTROLYTIC ZINC CO. of A'ASIA LTD.	
<b>LEGEND</b> tr. = trace. py = pyrite. gr. = grained.				PURPOSE OF COSTEAN To test elevated bedrock geochemistry, from the Jacro Auger sampling programme.		PROJECT: E.L. 4/78 ZEEHAN TAS.	
Pb ———— Zn - - - - Ag ○ ———○				SCALE: 1:500 SURVEY: G.K. REVISED:		COSTEAN RESULTS PART II of II LINE-44200N	
ROSE VALLEY GRID				5 cm		EX. BY: GROVES, O.B.K. DATE: 30-4-84 REF. No. DRAWN: R.J.R. CHECKED: A3-532-0072	

ELECTROLYTIC ZINC CO. of A'ASIA. LTD.  
ROSEBERRY, TASMANIA.

COSTEAN SAMPLE DATA  
LINE: 44200N

PROJECT: EL 4178  
SAMPLED BY: G.K.G.B.  
AZIMUTH:

LOCALITY: ROSE VALLEY  
SAMPLE INTERVAL: 2m  
DATE: 23.3.84 - 24.3.84

SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe%	Ba
2375	60700-02	Bk siltstone + lt. bn sandstone - qz stockwork	Cherty siltstone	x	750	50	x	x	0.21	365
2376	60702-04	As above	Cherty siltstone	x	50	25	x	x	0.14	387
2377	60704-06	Gy cherty siltstone - qz stockwork	Cherty siltstone	x	25	x	x	275	0.24	258
2378	60706-08	As above + sandstone fragments	Cherty siltstone	x	x	100	x	50	0.18	242
2379	60708-10	Bk cherty siltstone	Cherty siltstone	x	x	x	x	25	0.08	157
2380	60710-12	Bk cherty siltstone chips in bn clay	cherty slst + clay	x	50	75	x	x	0.09	254
2381	60712-14	As above	cherty slst + clay	x	25	x	x	x	0.21	271
2382	60714-16	Tan clay with round qz pebbles	CLAY	x	x	x	x	x	0.26	246
2383	60730-32	Tan clay + sand + pebbles + peat	CLAY	x	25	25	x	x	0.28	271

ELECTROLYTIC ZINC CO. of A'ASIA. LTD.  
ROSEBERRY, TASMANIA.

COSTEAN SAMPLE DATA  
LINE: 44200N

PROJECT: EL 4/78  
SAMPLED BY: G.K.-G.B.  
AZIMUTH:

LOCALITY: Rose VALLEY  
SAMPLE INTERVAL: 2m  
DATE: 23.3.84 - 24.3.84.

SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe%	Ba
62384	60750-52	Bk carb clay - mnr qz = ? fossils	CLAY	50	100	225	x	x	0.37	347
62385	60830-32	Gy-bk silty clay tr py	CLAY	x	75	1300	x	x	1.80	208
62386	60832-34	Gy-bk silty clay + bk sil frags		25	275	1350	x	x	4.65	226
62387	60834-36	gn bk clay		25	125	1125	x	x	2.26	251
62388	60836-38	As above		25	125	600	x	x	1.75	306
62389	60838-40	Bk + gn bedded clay		25	175	275	x	x	3.12	346
62390	60840-42	cm+gn bedded clay + gy LST chips	CLAY + LIMESTONE	x	150	350	x	25	0.85	71
62391	60842-44	DK gy clay + gy limestone chips	CLAY + LIMESTONE	25	75	500	x	x	1.97	208
62392	60844-46	DK gn bk gritty mud + clay	CLAY	25	75	1075	x	50	2.65	201
62393	60846-48	DK gy silty clay + chips silty limestone	CLAY + LIMESTONE	25	50	400	x	75	2.41	163
62394	60848-50	Qz sand in bk clay	SAND + CLAY	25	75	775	x	x	3.20	261
62395	60850-52	Bk peaty clay + bn sandy clay	CLAY + PEAT	25	200	1750	x	x	3.90	312
62396	60860-62	lt gy limestone 1% py	LIMESTONE	x	75	300	x	600	1.40	11
62397	60862-64	lt gy brecciated limestone 1-2% py	LIMESTONE	x	75	250	x	550	1.37	19
62398	60864-66	lt gy limestone - tr py on fractures	LIMESTONE	x	25	200	x	450	0.95	x
62399	60866-68	As above	LIMESTONE	x	50	125	x	475	1.27	22
62400	60868-70	As above	LIMESTONE	x	75	225	x	525	1.21	12
62401	60870-72	Gy limestone - tect brecciation mnr py	LIMESTONE	x	75	275	x	600	1.40	10

205

252106

LECTROLYTIC ZINC CO. of A'ASIA. LTD.  
OSEBERY, TASMANIA.

COSTEAN SAMPLE DATA  
LINE: 44200N

PROJECT: EL 4178  
SAMPLED BY: G.K. - G.B.  
AZIMUTH:

LOCALITY: ROSE VALLEY  
SAMPLE INTERVAL: 2m  
DATE: 23.3.84. 24.3.84

SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe%	Ba
62402	60872-74	Carbonate veining + gy limestone - py on fract.	LIMESTONE	X	50	300	X	550	1.29	X
62403	60874-76	Gy f.gr limestone - mod cal. veining	LIMESTONE	X	50	125	X	200	0.47	X
62404	60876-78	Dk gy silty limestone - mod cal vng	LIMESTONE	X	75	125	X	175	0.80	19
62405	60878-80	As above	LIMESTONE	X	50	100	X	250	1.30	38
62406	60880-82	As above	LIMESTONE	X	50	75	X	200	0.75	20
62407	60898-900	Gy f.gr limestone - mod cal vng	LIMESTONE	X	75	125	X	375	0.52	X

106

352107

PROFILE

R.L. 115 m

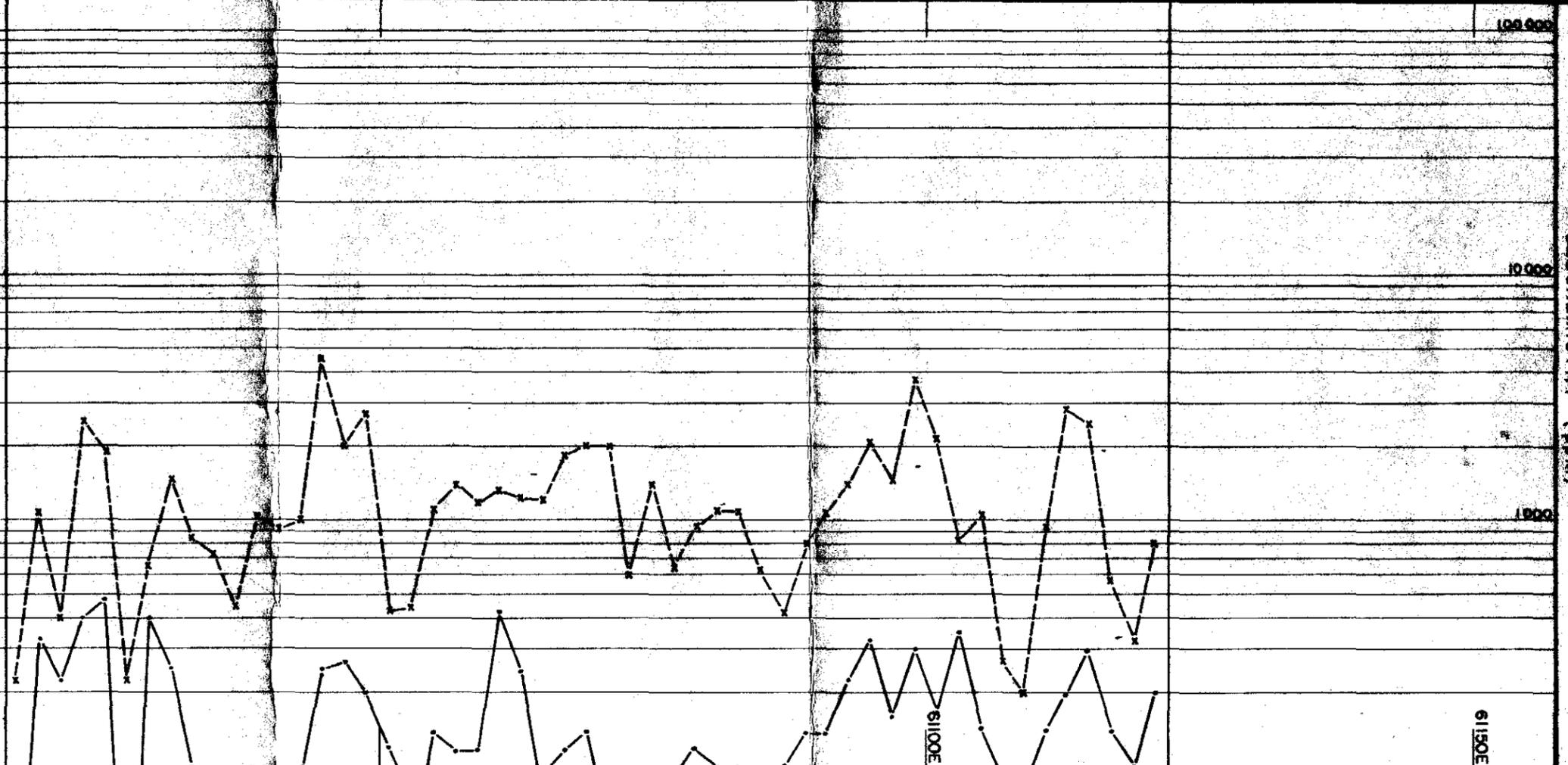
LITHOLOGY

MINERAL

GEOCHEMISTRY (ppm)

Green & dark grey bedded clay.  
 Green fossiliferous clay.  
 Cream clay.  
 Pale grey fossiliferous calc. clay.  
 Dark grey fossiliferous clay.  
 Clay, sand and pebbles.  
 Mottled clay.  
 Pole brown silty clay.  
 Black clay.  
 Khaki silty clay, fossiliferous.  
 Mottled clay.  
 Pale grey stylitic limestone.  
 Black viscous clay.  
 Peaty clay.  
 Black blechy clay.  
 Clay, calc. clay and mottled clay.  
 Grey calc. clay and limestone, chert.  
 Grey sandy limestone.  
 Dark grey clay.  
 Pale grey and sandy limestone.  
 Grey/brown clay.  
 Grey limestone.

Mar. lim.  
 Tr. py.  
 Mar. lim.  
 Mnr. py.  
 Pyrite lumps.  
 Pyrite columns.  
 Py. lumps.



EASTINGS  
61016 - 61122

SAMPLE INTERVAL  
2m

SAMPLED BY  
G. KARY, G. BERESFORD.

DATE  
21-23/3/84

AZIMUTH  
GRID EAST

TOTAL LENGTH  
106 m

ELECTROLYTIC ZINC CO. of A'ASIA LTD.

PROJECT: E.L. 4/78 ZEEHAN

TAS.

COSTEAN RESULTS  
LINE - 44000 N

SCALE: 1:500

SURVEY: I. MAT.

REVISED:

EXC. BY: GROVES, O & K.

DATE: 30-4-'84

REF. No.

DRAWN: R J R

CHECKED:

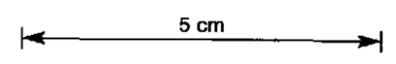
A3-532-0071

LEGEND

- Pb
- - - - - Zn
- o - - - - Ag

- tr. = trace.
- mnr. = minor.
- py. = pyrite.
- calc. = calcareous.
- lim. = limonite.

PURPOSE OF COSTEAN  
To follow up elevated bedrock geochemistry,  
from the Jacro Auger sampling programme.



ROSE VALLEY GRID

ELECTROLYTIC ZINC CO. of ASIA LTD.  
ROSEBERRY, TASMANIA.

COSTEAN SAMPLE DATA  
LINE: 44000 N

PROJECT: EL 4178  
SAMPLED BY: G.K.-G.B.  
AZIMUTH:

LOCALITY: ROSE VALLEY  
SAMPLE INTERVAL: 2m  
DATE: 21.3.84 23.3.84

SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe%	Ba
2322	61122-20	Green bedded clay - mar lim	CLAY	25	200	800	X	X	1.65	250
2323	61120-18	Dk gy bedded clay	"	25	100	325	X	X	1.53	265
2324	61118-16	As above - mar fossils	"	25	150	575	X	X	1.69	312
2325	61116-14	Gy fossiliferous clay	"	25	300	2425	X	X	1.13	304
2326	61114-12	As above	"	25	200	2900	X	X	1.63	306
2327	61112-10	Cr + wh clay in gy clay	"	X	150	950	X	X	1.42	245
2328	61110-08	Lt gy calc. clay	CLAY = LST	X	75	200	X	75	0.31	46
2329	61108-06	As above + fossils	"	X	75	275	X	100	0.64	72
2330	61106-04	As above - many fossils	"	X	150	1075	X	175	1.86	203
2331	61104-02	Gy-gy silty clay + fossils	"	50	350	925	X	X	1.03	277
2332	61102-61100	DK gy - black fossiliferous clay	CLAY	25	175	2125	X	X	1.94	241
2333	61100-98	As above tr py	"	25	300	3800	X	X	2.06	211
2334	61098-96	As above + sandy clay + pebbles	CLAY = O/B	25	175	1600	X	X	1.42	218
2335	61096-94	Lt bn silty clay with quartz grains	"	25	325	2100	X	X	1.50	291
2336	61094-92	Mottled lt bn, dk bn + gy clay	CLAY	25	225	1475	X	X	0.96	247
2337	61092-90	Gy viscous clay	"	25	150	1100	X	X	1.36	333
2338	61090-88	Mottled lt + dk bn clay	"	25	150	800	X	X	0.94	248
2339	61088-86	Lt gy calc. clay mar lim	"	25	100	425	X	25	1.51	254
2340	61086-84	Lt bn bedded silty clay	"	25	50	625	X	X	0.91	344
2341	61084-82	As above	"	25	100	1100	X	X	1.74	297
2342	61082-80	Black clay with carb flakes	"	25	100	1125	X	X	2.07	246
2343	61080-78	As above + orange clay	"	25	125	950	X	X	1.63	298
2344	61078-76	As above + fossil	"	25	75	650	X	X	2.60	347
2345	61076-74	Khaki silty clay + fossils	"	25	50	1475	X	X	2.74	308
2346	61074-72	As above	"	50	75	600	X	X	1.55	290
2347	61072-70	As above	"	25	50	2000	X	X	1.88	311

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ELECTROLYTIC ZINC CO. of A'ASIA. LTD.  
ROSEBERRY, TASMANIA.

COSTEAN SAMPLE DATA  
LINE: 44000 N

PROJECT: EL 4/78  
SAMPLED BY: G.K.G.B.  
AZIMUTH:

LOCALITY: ROSE VALLEY  
SAMPLE INTERVAL: 2m  
DATE: 21.3.84 - 23.3.84

SAMPLE NUMBER	EASTINGS	GEOLOGICAL DESCRIPTION	ROCK TYPE	METAL CONTENT (ppm unless specified)						
				Cu	Pb	Zn	Ag	Mn	Fe%	Ba
62348	61070-68	Mottled gn + bn clay	CLAY	25	150	2000	X	X	1.65	289
62349	61068-66	DK gy clay	"	25	125	1925	X	X	2.26	281
62350	61066-64	As above on rock	CLAY ON LIMESTONE	25	75	1325	X	X	1.81	335
62351	61064-62	Lt gy stylolitic limestone	LIMESTONE	25	250	1350	X	25	2.23	268
62352	61062-60	Lt gy calc clay + bk clay on rock	CLAY ON LIMESTONE	25	425	1450	X	100	2.71	267
62353	61060-58	Bk + gy viscous clay	CLAY	25	125	1250	X	X	2.42	308
62354	61058-56	Bk viscous clay + yellow clay	"	25	125	1500	X	X	2.68	319
62355	61056-54	DK gy clay + bn wh + bk frags + roots	"	25	150	1150	X	X	3.43	276
62356	61054-52	Bk clay - blocky	"	25	50	450	X	X	1.47	348
62357	61052-50	As above	"	25	125	425	X	X	1.76	316
62358	61050-48	DK gy clay + bn frags - mnr py	"	25	200	2725	X	X	4.34	226
62359	61048-46	Gy calc clay + siliceous frags	"	X	275	2000	X	50	1.89	77
62360	61046-44	Mottled clay - gn + bn + gy + cm	"	25	250	4550	X	X	2.27	181
62361	61044-42	Gy calc clay + limestone frags	CLAY + LIMESTONE	X	100	1000	X	75	0.84	50
62362	61042-40	As above	CLAY + LIMESTONE	X	75	925	X	50	0.55	42
62363	61040-38	As above	CLAY + LIMESTONE	25	75	1025	X	50	1.78	198
62364	61038-36	DK gy clay + lt gy calc clay + cm limestone <sup>chips</sup>	CLAY + LIMESTONE	X	75	450	X	75	0.55	81
62365	61036-34	Gy sandy limestone + lt gy lst lumps py.	LIMESTONE	X	75	725	X	425	4.22	53
62366	61034-32	As above	LIMESTONE	X	100	850	X	300	1.35	68
62367	61032-30	DK gy clay	CLAY	X	250	1525	X	X	1.74	270
62368	61030-28	Gy sandy limestone + lt gy limestone	LIMESTONE	X	400	650	X	375	2.00	98
62369	61028-26	Lt gy stylolitic limestone	LIMESTONE	X	50	225	X	275	1.33	42
62370	61026-24	Bn-gy clay + pyrite columns	CLAY ON LST	25	475	1925	X	X	23.42	147
62371	61024-22	As above	CLAY	25	400	2525	X	X	16.88	183
62372	61022-20	Grey f. gr limestone	LIMESTONE	X	225	400	X	200	2.41	55
62373	61020-18	Grey f. gr limestone + cm calc clay	LIMESTONE + CLAY	25	325	1175	X	50	1.74	210
62374	61018-16	Cu sandy limestone + lt gy lst + lumps py.	LIMESTONE	X	50	225	X	200	2.38	71

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APPENDIX B.

Drill Logs.



FOOTAGE		ROCK DESCRIPTION	MINERALISATION	SAMPLE No.	13-14 FROM TO	CORE REC'D	ASSAY DATA								CORE REC'D	
FROM	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%	Ba g/t	RUN	SHORT
69.9	75.9	Quartzite - light grey, fine grained minor black shale fragments with trace of Py. Minor quartz-siderite veins. Bedding at 40° to c.a.														
75.9	80.4	Quartzite - grey, banded with olive green siltstone slightly brecciated. Minor quartz veining. Bedding at 35° to c.a.														
80.4	83.5	Siltstone - band grey and green, finely bedded. Minor quartz veining. Bedding at 50-70° to c.a.														
83.5	84	Quartzite - grey, fine grained.														
84	86.6	Breccia - sedimentary, grey quartz sandstone fragments in a dark grey silty matrix														
86.6	94.3	Laminated Quartzite/Siltstone - grey quartzite, dark grey siltstone. Highly contorted (slumped) bedding minor breccia. 88.9-89.4 Quartz-Dolomite vein														
94.3	96.6	Siltstone - grey/green, well bedded, abundant coral fossils														
96.6	99.2	Sandstone - mottled light and dark green, fine grained 1% Py														
99.9	104.6	Siltstone - Banded grey and dark grey, fine grained slumped. Bedding at 10-50° to c.a.														
100	100.7	CORAL LIMESTONE EQUIVALENT														
101.6	107	Siltstone - grey, fine grained, abundant 10mm x 2mm 'cigar' shaped trace fossils														
107	107.7	Quartzite - grey fine grained, minor quartz-carbonate veins.														
107.7	108.5	Carbonate Vein - Creamy white, non reactive to warm or cold dilute HCL. Does not tarnish after exposure to air. Very dense 10% Gn/Si	107.7-108.5 -10% Gn/Si in carbonate vein. Si is a chocolate brown to amber brown colour. Gn/Si occur as smaller stringers within vein	59034	107.7	108.7	1m	1.67	2.58	.0095	20		19.77	76		

352112

ELECTROLYTIC ZINC CO OF A'ASIA LTD HOSEBERRY - TASMANIA		DIAMOND DRILL CORE RECORD						HOLE No. ZMG 249 Sheet 3								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	20-25 Pb%	26-31 Zn%	32-37 Cu%	38-43 Ag -g/t	44-49 Au -g/t	50-55 Fe%	Ba g/t	RUN	SHORT
108.5	112.3	Siltstone - mottled grey, moderately bedded, very siliceous. Minor GN/SL in small cross-cutting quartz carbonate veins. Bedding at 45° to c.a.	108.5-110.8 Minor GN/SL as selvages in small (<3mm) quartz-carbonate veins.	59035 59036	108.7 109.7	109.7 110.8		1m 1.1m	.097 .046	.29 .165	.001 .001	5 5		4.11 4.13	178 167		
112.3	129.4	Banded sandstone-siltstone - light grey fine grained quartz rich sandstone and dark grey fine grained siltstone. Moderately to intensely slumped. Minor black shale fragments in sandstone beds. Moderate carbonate veins in sandstone beds. Minor Py throughout. Bedding at 5-45° to c.a.															
129.4	131.3	Grit - light grey to pink. Mainly quartz, moderate black shale fragments. Minor carbonate veining. Bedding at 45° to c.a.															
131.3	134.6	Banded Sandstone - Siltstone - as 112.3-129.4m Moderate quartz-carbonate veining. Trace GN	131.3-134.6 Trace GN is quartz-carbonate veins														
134.6	137.4	Carbonate Vein - creamy white, non reactive to HCL, minor quartz, moderately banded. 1% GN/SL. Banding at 20° to c.a.	134.6-137.4 - 1% GN/SL as fine bands in carbonate veins	59037 59038 59039	134.6 135.6 136.6	135.6 136.6 137.6		1m 1m 1m	.07 .0275 .017	.54 .185 .95	.001 .001 .0025	42 42 5		24.21 18.37 23.12	50 17 410		
137.4	143.2	Quartzite - grey fine grained minor black shale fragments. Minor carbonate veining. Trace SL	137.4-143.2 Trace SL in carbonate veins														
143.2	145.9	Siltstone - light grey, moderately banded very siliceous, slightly brecciated - light grey siliceous fragments in a dark grey matrix. Trace Py															
145.9	153.5	Banded Sandstone-Siltstone - light grey, fine grained siliceous sandstone and dark grey siltstone. Variably slumped. Bedding at 10-50° to c.a.															
153.5	154.9	Carbonate Vein - creamy white, non reactive to HCL. Moderate quartz content, minor quartz crystal lined vugs. Minor SL	153.5-154.9 Minor known SL at stringers in carbonate veins														
154.9	158.9	Brecciated Sandstone-Siltstone - as 145.9-153m, moderately brecciated. Minor carbonate veining.															

352113

ELECTROLYTIC ZINC CO OF A'ASIA LTD ROSEBERRY - TASMANIA		DIAMOND DRILL CORE RECORD						HOLE No. ZMG 249 Sheet 4									
FOOTAGE		ROCK DESCRIPTION	MINERALISATION	SAMPLE No.	8-13 FROM	14-19 TO	CORE REC'D	ASSAY DATA								CORE REC'D	
FROM	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%	Ba g/t	RUN	SHORT
158.9	160.3	Fault Zone Brecciated grey siltstone cut by large quartz carbonate veins at 5-10° to c.a.															
160.3	214.3	CRINSON CREEK FORMATION															
160.3	163.9	Siltstone - grey, fine grained, well bedded 160.6-161.8 Quartz-carbonate vein at 5-10° to c.a. trace SL. Bedding at 50° to c.a.	160.6-161.8 trace SL in quartz-carbonate vein														
163.9	163.3	Banded Siltstone-Wacke - grey fine wacke and dark grey well laminated siltstone. Minor siltstone ripped up into wacke beds. Minor slumping. Minor quartz and calcite veining. Bedding at 45° to c.a.	167.4-167.7 green lattice of Py and calcite veins 169.7-169.8 1% SL, pink to brown fine bands at 60° to c.a.	59040 59041	167.4 169.6	167.7 169.8		0.3m 0.2m	.017 .2	.1 .53	.99 .001	5 5		9.06 21.31	282 122		
169.8	173.5	Banded Mudstone-Wacke - cream, fine grained, well laminated mudstone and green wacke. Minor quartz carbonate veining. Minor slumping. Bedding at 55° to c.a.															
173.5	179.5	Banded Siltstone-Wacke - greeny grey siltstone and green wacke. Moderate slumping. Minor quartz veining. Bedding at 45° to c.a.															
179.5	199.5	Banded Siltstone-Wacke - dark grey, finely laminated siltstone and grey lithic wacke. Minor slumping. Bedding at 50° to c.a.	179.5-195 1% Py in siltstone beds														
199.5	199.0	Silicified Bed - mottled dark grey, very fine grained, very siliceous.		59042	199.35	199.55		0.2m	1.76	0.62	.0065	22		18.62	150		
199.0	202.9	Banded Siltstone-Shale - dark grey siltstone and black shale. Intensely slumped, moderately brecciated. Minor carbonate veining. Minor green wacke beds.	199.4-199.5 2% GN, minor SL in carbonate vein														
202.9	210.0	Wacke - green, minor green well laminated siltstone beds.															
210.0	212.1	Banded Siltstone-Shale - greeny grey siltstone and black sheared graphitic shale. Minor quartz carbonate veining.															

352114

120

ELECTROLYTIC ZINC CO OF ASIA LTD  
ROSEBERY - TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No. ZMG 249 Sheet 5

A 11241

FOOTAGE		ROCK DESCRIPTION	MINERALISATION	SAMPLE No.	1-13 FROM	14-19 TO	CORE REC'D	ASSAY DATA							CORE REC'D	
FROM	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
212.1	214.3	Wacke - green, minor green well laminated, slumped siltstone beds.  <u>END OF HOLE</u>  NQ rods broken off in hole, hole cemented upto 74m. Redrilling in attempt to run off and start new hole.														

352113

ELECTROLYTIC ZINC CO. OF ASIA LTD.  
 ROSEBERY - TASMANIA  
**DIAMOND DRILL CORE RECORD**  
 01 HOLE No. (3-7) ZMG 249A Sheet 1

LOCATION E.L. 4/78 ZEEHAN North Austral Grid L2,800N/1,720E  
 OBJECTIVE To test E.M. anomaly at 1,590E. ZMG 249A is a wedge from 97m of abandoned hole ZMG 249.  
 RESULT Source of E.M. anomaly appears to be graphitic shales.

TOTAL DEPTH 289m  
 HOLE SIZE NQ 97-105m; BQ 105-289m  
 COMMENCED 29.11.83  
 COMPLETED 9.12.83  
 LOGGED BY G. Kopy

03  
 8-12 Footage 105m  
 13-16 Direction Azimuth affected by broken NQ rods  
 17-18-21 Dip. -60°  
 8-12 Footage 225m  
 13-16 Direction 191°Mag  
 17-18-21 Dip. -56.5°  
 8-12 Footage 287m  
 13-16 Direction 191° "  
 17-18-21 Dip. -56°

02  
 ORE DIP. (8-11) -60°  
 COLLAR DIP. (12-15) 192° Mag  
 DIRECTION (16-19) 213m  
 R.L. (20-23) L2,800N/1,720E  
 CO-ORDS. LOCATION E.L. 4/78 Zeehan - Nth Aust

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%	Ba g/t	RUN
0	97.0	SEE LOG OF ZMG 249														
97.0	104.3	CROTTY QUARTZITE														
97.0	97.4	Siltstone - grey/green, well bedded abundant coral/bryozoa fossils														
97.4	100.2	Sandstone - grey-green, mottled, tarnishes to a brown green colour, poorly bedded. Minor Py														
100.2	104.3	Siltstone - Band light and dark grey, moderately siliceous. Intensely slumped. Bedding at 0-45° to c.a.														
104.3	106.8	CORDON LIMESTONE EQUIVALENT														
104.3	107.3	Siltstone - grey, abundant small (5-10mm x 2mm) cigar shaped trace fossils														
107.3	108.5	Carbonate Vein - creamy white non reactive to warm or cold dilute HCL. Does not tarnish on exposure to air 5-10% SL, minor CN	107.3-108.2 2% SL in carbonate vein 108.2-108.5 10% SL minor CN in carbonate vein	59043	107.3	108.0	0.7m	.0975	2.18	.0065	15		16.44	151		
				59044	108.0	108.5	0.5m	1.02	2.32	.0065	15		23.06	73		
108.5	112.5	Siltstone - grey fine grained well bedded. Minor quartz carbonate veining. Bedding at 40° to c.a.														
112.5	129.2	Banded Sandstone-Siltstone - light grey siliceous sandstone and grey siltstone. Variably slumped. Moderate black shale fragments. Upto 2% Py with black shale fragments. Minor quartz-carbonate veining.	123.0-126.9 2% Py fragments associated with black shale fragments													
129.2	139.7	Sandstone - white to pink, fine to coarse grained Minor grit beds. Essentially quartz, minor black shale fragments.														

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ELECTROLYTIC ZINC CO OF ASIA LTD ROSEBERRY - TASMANIA		DIAMOND DRILL CORE RECORD										HOLE No. ZMG 249A Sheet 2				
FOOTAGE		ROCK DESCRIPTION	MINERALISATION	SAMPLE No.	13-14 FROM	14-19 TO	CORE REC'D	ASSAY DATA							CORE REC'D	
FROM	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%	Bg/g	RUN
130.7	135.3	Banded Sandstone-Siltstone - as in 112.5-129.2. Minor black shale fragments. Trace Py														
135.3	137.3	Dolomite Vein - creamy white as other veins, weak reaction to warm HCL. 1% SL	135.3-137.3 1% SL in dolomite vein	59045	135.3	136.3		1m	.062	.345	.001	3		21.62	89	
				59046	136.3	137.3		1m	.024	.655	.001	5		16.87	17	
137.3	142.8	Sandstone - light grey to white. Quartzite to quartz sandstone. Variably dolomitised i.e. cement and matrix is dolomite. Minor SL associated with dolomitisation.	141.3-142.8 Minor SL occurring with dolomitised zones	59047	141.8	142.8		1m	.066	.215	.001	4		13.6	<10	
142.8	144.0	Siltstone - dark grey, well bedded minor carbonate veins (dolomite). Bedding at 25-40° to c.a.														
144.0	150.5	Sandstone - light grey, mainly quartzite, minor thin grey siltstone beds. Minor slumping.														
150.5	153.7	Dolomite Vein - creamy white, mild reaction to HCL after core scored by penknife, 2% SL. Minor quartz veins	150.5-152.5 1% SL, rare GN in dolomite vein. SL is brown and forms in radiating clusters.	59048	150.5	151.5		1m	.02	3.6	.0175	10		26.18	410	
				59049	151.5	152.5		1m	.018	1.85	.0105	7		25.63	410	
				59050	152.5	153.0		0.5m	.315	13.4	.0345	24		26.46	410	
				59051	153.0	153.7		0.7m	.1075	2.6	.008	9		26.38	59	
156.8	289	<u>CRIMSON CREEK FORMATION</u>														
156.8	164.8	Sandstone - grey, fine grained, moderately bedded. Bedding at 40-60° to c.a.														
164.8	169.3	Siltstone-Mudstone - light and dark grey fine to coarse siltstone with moderate pale creamy green beds. Heavily slumped and brecciated.														
169.3	192.5	Siltstone-Wacke - grey well laminated siltstone, fine grained and fine green wacke. Finely interbedded. Minor slumping. Bedding at 40-55° to c.a.														
192.5	196.5	Silicified Unit - mottled dark grey to greeny grey. Moderately veined by quartz. Moderately brecciated. Completely silicified.														
196.5	199.3	Banded Siltstone-Shale - grey siltstone and dark grey to black shale. Intensely slumped and brecciated. Minor green fine wacke beds at 199.0-199.3m														

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ELECTROLYTIC ZINC CO OF ASIA LTD ROSEBERY -- TACMANIA		DIAMOND DRILL CORE RECORD						HOLE No. ZMG 249A Sheet 3									
FOOTAGE		ROCK DESCRIPTION	MINERALISATION	SAMPLE No.	8-13 FROM	14-19 TO	CORE REC'D	ASSAY DATA							CORE REC'D		
FROM	TO							Sample Length	20-23 Pb%	26-31 Zn%	32-37 Cu%	38-43 Ag - g/t	44-49 Au - g/t	50-55 Fe%	RUN	SHORT	
197.3	227.7	Wacke-Siltstone-Shale - green to greeny grey fine grained wacke, grey siltstone and minor black carbonaceous shales. Minor slumping 217.2-217.3 shales very graphitic, intensely sheared. Minor quartz carbonate veining. Bedding at 20-40° to c.a.															
227.7	229.5	Shale - dark grey to black, variably carbonaceous. Minor quartz-carb veins															
229.5	231.0	Wacke - pale grey, minor pale green mudstone fragments. Sharp upper and lower contacts. Contacts at 50° to c.a.															
231.0	232.2	Shale - dark grey to black, carbonaceous. Minor fragments of quartz.															
232.2	249.8	Mudstone-Siltstone - pale creamy green mudstone and green grey moderately bedded siltstones to fine wacke. Minor black shale lenses. Minor quartz veining. Bedding at 25° to c.a.															
249.8	262.3	Graphitic Shales - dark grey to black. Moderately to intensely sheared. Moderately fractured. Minor CN/SL, minor quartz carbonate veins.	249.8-262.3 trace CN/SL in quartz carbonate veins														
262.3	289	Siltstone - very finely laminated to tuffaceous, grey to light grey. Minor quartz carbonate veining. Minor soft sediment deformation. Minor thin black carbonaceous beds. Bedding at 40-60° to c.a. 262m 40° 287m 60°  END OF HOLE															

352118

ELECTROLYTIC ZINC CO. OF ASIA LTD.  
ROSEBERY - TASMANIA

**DIAMOND DRILL CORE RECORD**

01  
HOLE No. (3-7) ZMG 252 Sheet 1

LOCATION OBJECTIVE RESULT	U.S. 47E - ZEBIAN J.V. L, 270N/1, 700E North Austral Grid To test Pb/Zn mineralisation in limestone reported in old Montague Mine. 3-5% disseminated SL over 6m in Dolomitised/Silicified limestone.	TOTAL DEPTH 157m HOLE SIZE 52.1-63 HQ; 63-114.8 NQ COMMENCED 13.12.83 COMPLETED 23.12.83 LOGGED BY G. Kary	02 8-12 Footage 13-16 Direction 17-18-21 Dip. 8-12 Footage 13-16 Direction 17-18-21 Dip.	02 ORE DIP. (8-11) COLLAR DIP. (12-15) -55° DIRECTION (16-19) 193° Mag R.L. (20-23) 210m CO-ORDS. L2, 700N/1, 700E LOCATION North Austral Grid
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FOOTAGE		ROCK DESCRIPTION	MINERALISATION	ASSAY DATA											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%	Ba g/t	RUN
52.1	52.1	TO CORE - HW casing advancer used														
52.1	53.7	CRISTY QUARTZITE														
53.7	55.9	Breccia - quartzite and quartz carbonate fragments in a grey highly sheared matrix.														
55.9	58.0	Sandstone - pale green, coarse grained, mainly quartz, minor black chert fragments. Dolomite cement/matrix. Moderate quartz-dolerite veining. Bedding at 40° to c.a.														
58.0	58.6	Quartzite - greeny grey, fine grained minor quartz veins.														
58.6	65.0	Grit - pink to pale green rounded to subangular coarse quartz, shale, siltstone fragments. Dolomitic cement. Bedding at 40° to c.a.														
65.0	71.0	Quartzite - white to pale green, fine grained minor coarse grained grit beds. Moderate quartz veining. Minor CN/SL is quartz veins. Minor carbonate veins. Bedding at 30° to c.a.	66.8-67.0 2-3% CN/SL in fine quartz veins 69.75-70.05 1% CN in fine quartz veins minor SL	59052 59053	66.7 69.6	67.2 70.1	0.5m 0.5m	1.05 .45	.29 .11	.002 .001	8 7	2.26 3.0	25 21			
71.0	79.5	Siltstone - grey, well bedded, slightly calcareous tarnishes rapidly to a brown green colour. Minor fine dolomite veins. Bedding at 30° to c.a. /8.7-79.5 30% coral fragments														
79.5	81.0	Sandstone - grey, essentially quartz, high percentage dolomitic matrix, very porous where dolomite is weathered out. Tarnishes to a brown/green colour. Minor dolomite veins.														
81.0	83.9	Siltstone - light grey to grey, slightly calcareous well bedded. Tarnishes to a greeny/grey colour. Rare CN 81.9-83.9 - brecciated by intense calcite veining bedding at 25° to c.a.														

352119

ELECTROLYTIC ZINC CO OF A'ASIA LTD		DIAMOND DRILL CORE RECORD										HOLE No. ZMG 252 Sheet 2				
ROSEBERY - TASMANIA												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	20-25 Pb%	26-31 Zn%	32-37 Cu%	38-43 Ag -g/t	44-49 Au -g/t	50-55 Fe%	Ba g/t	RUN
83.9	85.2	Quartzite - light grey, very fine grained, minor micaceous carbonaceous laminae.														
85.2	93.7	Siltstone - grey fine grained slightly calcareous Tarnishes to a greeny/grey colour. Moderate dolomite/ quartz veining. Bedding at 20° to c.a. N.B. - cavities between 90.0 and 94.0m, core recovery 25%. Exact nature of Crotty/Gordon contact is not evident.														
93.7	157.0	GORDON LIMESTONE														
93.7	98.3	Limestone - grey to creamy tan slightly arenaceous to very fine grained. Moderate thin carbonaceous beds. Minor dark grey to black pisoliths. Trace Py. Moderate calcite veining. Bedding at 45° to c.a.														
98.3	101.2	Silty Limestone - grey, fine grained, poorly bedded Minor calcite veining. Bedding at 25° to c.a.														
101.2	102.3	Bioclasted Limestone - light grey to cream, fine to med grained, abundant small oolitic? calcite shapes. Minor calcite veining.														
102.3	107.3	Limestone - grey, fine grained, moderate thin dark grey carbonaceous beds with minor SL. Moderate calcite veining 104.9-105.0 grey oolitic limestone, sharp upper and lower contacts. 105.3-107.3 core badly broken and ground by bit. Poor recovery	102.3-105.3 Minor pink disseminated SL in thin black/dark grey carbonaceous beds.	59054	102.3	103.3	1m	.0195	.076	.0005	4		0.86	4	10	
				59055	103.3	104.3	1m	.0545	.250	.0005	4		3.02		10	
				59056	104.3	105.3	1m	.0185	.170	.0005	4		1.61		11	
107.3	113.3	Limestone Breccia - grey finely crystalline slightly carbonaceous limestone, minor coral fragments cut by intense siderite/gothicite/quartz veining. Very dense 5-15% finely disseminated SL. Completely dolomitised/silicified, abundant quartz and calcite line vugs. 107.3-108.9 moderate coral and shell fragments 112.9-113.3 gradational transition to non-altered limestone	107.3-113.3 5-15% finely disseminated SL, rare GN. s.l is pink to brown to pale yellow/cream -5% SL is obvious but density of core indicates a possible higher percentage.	59057	107.3	108.3	1m	.0005	.130	.0005	4		23.48		12	
				59058	108.3	109.3	1m	.0195	2.03	.0035	4		28.08		4	
				59059	109.3	110.3	1m	.0255	1.16	.0025	4		27.35		4	
				59060	110.3	111.3	1m	.034	0.78	.0005	4		28.77		4	
				59061	111.3	112.3	1m	.0705	.535	.001	4		23.76		4	
				59062	112.3	113.3	1m	.16	.225	.001	4		17.32		16	

352120

ELECTROLYTIC ZINC CO OF A'ASIA LTD ROSEBERY - TASMANIA		DIAMOND DRILL CORE RECORD						HOLE No. ZMG 252 Sheet 3									
FOOTAGE		ROCK DESCRIPTION	MINERALISATION	SAMPLE No.	8-13 FROM	14-19 TO	CORE REC'D	ASSAY DATA								CORE REC'D	
FROM	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%	Ba g/t	RUN	SHORT
113.3	120.6	Limestone - finely bedded pale brown micrite and grey finely crystalline limestone. Abundant fine black carbonaceous laminae, minor stylolites, minor slumping, trace Py, rare GN/SL. Minor calcite vein Bedding at 0-25° to c.a. 116.2-119.0 40% core recovery.	113.3-120.6 Rare GN/SL in small calcite veins														
120.6	126.0	Quartzite - grey, fine grained minor black carbonaceous lamina. Finely fractured by quartz veins.															
126.0	143.5	Limestone - poorly bedded dark grey micrite and grey finely crystalline limestone. Abundant black carbonaceous laminae, minor stylolites. Moderate to intense calcite veining. Trace Py Bedding at 30-40° to c.a. 133.5-137.5 intense coarsely crystalline calcite veining.															
143.5	150.7	Sandstone/Siltstone - grey, finely bedded quartz sandstone, minor dark grey very finely bedded slightly calcareous siltstone, rare shale fragments Minor micro-faulting and soft sediment deformation. Minor quartz veining. Bedding at 35-40° to c.a. Upper contact gradational with overlying limestone and lower contact gradational with underlying wacke															
150.7	155.8	Wacke - pale greeny/brown, poorly bedded, fine grained tuffaceous, minor grey siltstone beds 150.7-152.1. Sharp basal contact, minor load casting at basal contact.															
155.8	157.0	Shale - dark grey to black very finely bedded, variably carbonaceous to graphitic. Minor soft sediment slumping and micro-faulting. Minor Gn/Sl in quartz carbonate veins. Bedding at 30° to c.a.  END OF HOLE	156.2-156.6 1% GN/SL in siderite vein	59063	156.0	157.0		1m	.305	.345	.0025	2		13.29	104		

352121

352122

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ELECTROLYTIC ZINC CO. OF ASIA LTD. ROSEBERY - TASMANIA										DIAMOND DRILL CORE RECORD										01 HOLE No. (3-7) ZG 1001							
LOCATION			TOTAL DEPTH			01			02			03			04			05									
OBJECTIVE			HOLE SIZE: MW-3, NR-36.50, NR-39.70, 80			Footage			Direction			Dip			Footage			Dip									
RESULT			COMMENCED			COMPLETED			LOGGED BY			ORE DIP (8-11)			COLLAR DIP (12-15)		DIRECTION (16-19)		R.L. (20-23)		CO-ORDS.		LOCATION				
E.L. 4/78 Zeehan - Grievess Grid.			142.70			50.0 m			163°AMG			-52						-50		144° A.M.G.		149.5 m		47066.0N 61066.2E		Grievess Grid.	
To test down dip extension of mineralized dolomitic breccia sampled in costean on L 47100 N. 20m averaged 7.04% Zn and 1.09% Pb.			11.4.84			16.4.84			I.J. Mathison																		
No mineralization intersected. Intense faulting suggests fault displacement of breccia unit.																											
FOOTAGE		ROCK DESCRIPTION	MINERALISATION	ASSAY DATA ppm unless spec.										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	3.0	Rock roller												3.0	N.R.												
3.0	10.4	LIMESTONE - graded bioclastic limestone - dark grey grading uphole to black muddy limestone. Clasts range from brachiopod valves and gastropods through oolites and coated shell fragments to in situ brachiopods.		58514	3.0	3.7		15	30	45		1.80%	325	3.7	0.4												
				5	5.5			15	35	45		7150	210	5.5	-												
				6	8.5			10	35	45		6700	150	8.5	-												
				7	11.5			10	35	55		5450	170	11.5	0.2												
				8	14.5			10	35	50		5750	230	12.2	0.2												
				9	17.5			10	30	70		3200	90	14.5	-												
				20	20.5			10	25	50		4750	160	17.5	-												
10.4	12.4	PROBABLE FAULT - limestone core is very broken, oxidized and leached in places and playey in others.	Extensive calcite veining	21	24.5			10	30	40		3800	110	20.5	-												
				22	27.6			10	30	60		6400	155	21.4	-												
				23	30.7			10	25	70		4550	110	23.5	0.1												
				4	33.8			10	35	40		7350	160	24.5	-												
12.4	14.5	LIMESTONE - thin bioclastic limestone - muddy limestone and burrowed limestone - dark grey.	Minor calcite veining near 12.4m.	5	36.7			10	35	135		4100	100	27.6	-												
				6	29.8			10	30	45		5300	120	30.7	-												
				7	42.9			10	30	50		3650	100	33.8	-												
				8	46.0			10	25	45		5000	105	36.7	-												
				9	50.5			10	25	35		4200	110	39.8	-												
				30	53.5			10	25	45		6000	165	42.9	-												
				1	56.5			10	25	50		4450	105	46.0	-												
				2	59.5			10	30	45		3700	95	47.5	-												
				3	62.5			10	30	40		4400	125	50.5	-												
				4	65.5			10	25	75		3650	100	53.5	0.2												
				5	68.5			10	30	55		7000	150	56.5	-												
14.0	21.4	LIMESTONE - dark grey muddy limestone with oncolites - algal balls around small gastropods - and	Irregular calcite veins - often cut by stylolites	6	71.5			10	30	65		6100	140														
				7	73.5			10	30	90		4450	125														

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ELECTROLYTIC ZINC CO. OF ASIA LTD.  
ROBBERY - TASMANIA

## DIAMOND DRILL CORE RECORD

HOLE No. ZG 1001

A1121

FOOTAGE		ROCK DESCRIPTION	MINERALISATION	SAMPLE No.	8-13 FROM	14-19 TO	CORE REC'D	ASSAY DATA ppm unless spec.						CORE REC'D	
FROM	TO							Sample Length	Cu	Pb	Zn	Ag	Fe	Mn	RUN
16.0	21.4	rounded corals Occasional thin beds of bioclastic limestone		58538	73.5	77.5		10	25	75		4000	125	59.5	-
				9		79.4		5	30	100		1300	70	59.9	0.1
				40		81.4		10	45	160		1600	125	62.5	0.4
21.4	27.5	LIMESTONE - predominantly dark grey muddy limestone with occasional bioclastic and pisolitic beds. Also thin carbonaceous muddy limestone units which have disrupted boundaries with adjacent beds.	Calcite vein sub-parallel to core 25.5 - 26.3	1		83.8		10	25	90		3200	125	65.5	-
				2		85.7		15	50	305		155%	205	68.5	-
				3		88.8		10	30	95		3800	125	71.5	-
				4		91.0		10	45	75		4750	150	73.5	-
				5		93.5		10	45	115		3700	120	74.6	-
				6		95.5		10	60	125		4050	145	77.5	1.6
27.5	33.8	LIMESTONE - dark grey muddy limestone and minor carbonaceous muddy limestone with disrupted boundaries. c.b.a 75°	Occasional fossil replaced by pyrite. Minor calcite veining	7		97.5		10	30	65		2450	155	78.1	0.1
				8		99.7		10	40	80		2550	150	79.4	0.3
				9		103.9		10	40	125		3350	140	79.9	0.2
				50		105.1		10	30	75		4000	160	81.4	0.9
33.8	36.2	LIMESTONE - dark grey muddy limestone, carbonaceous limestone and bioclastic limestone with numerous coated shell fragments. Several large masses of colonial corals in muddy limestone.	Occasional pyrite blebs and rims, especially at contacts between muddy limestone and bioclastic beds or corals. Calcite veining increasing	1		107.3		10	25	45		5900	150	82.8	-
				2		110.5		10	25	50		5300	135	87	-
				3		113.5		10	50	70		7750	220	88.8	-
				4		116.5		10	80	50		6700	190	90.2	0.1
				5		119.5		10	35	60		4750	155	90.3	-
				6		122.5		10	30	40		6600	175	90.5	0.1
36.2	40.5	LIMESTONE - dark grey burrowed muddy micrite and carbonaceous micrite with occasional thin bioclastic beds - minor shearing	Several calcite and dolomite veins and very minor dolomitization near veins. 1-2mm pyrite rim on contact at 38.5	7		123.9		15	25	50		8550	195	91.0	0.3
				8		127.0		10	25	50		9550	220	92.5	0.2
				9		130.4		10	30	90		4300	145	95.5	-
				60		133.5		10	30	40		5750	165	96.5	0.4
				1		137.6		10	25	50		6700	180	97.5	0.7
40.5	41.7	LIMESTONE - pale grey to grey with large masses of colonial corals. Minor muddy limestone and coarse bioclastic limestone.	Occasional calcite veins	2		142.6		10	25	80		4850	180	99.1	0.9
				3		145.1		10	25	60		2600	25	99.6	0.4
				4		146.9		10	25	50		6950	250	99.7	0.9
				5		149.4		15	25	50		6800	200	102.0	2.0
														103.9	0.2
														104.1	-









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ELECTROLYTIC ZINC CO. OF ASIA LTD. ROSEBERY - TASMANIA		DIAMOND DRILL CORE RECORD										01 HOLE No. (3-7) ZG 1002				
LOCATION EL 4/78 Zeehan - Grievess Grid		TOTAL DEPTH 150.0m		03			02			04						
OBJECTIVE To test lead-zinc mineralization occurring at the Grievess mine and in nearby costeans. In a costean on L47900N, 10m averaged 3.67%Zn and 0.53%Pb, 8m similar.		HOLE SIZE NW-9.0, NQ-89.8; NQ-17.4; BR-12.8; Reamed. NQ-126.4 NQ-80.4.		8-12 Footage	13-16 Direction	17-18-21 Dip.	8-12 Footage	13-16 Direction	17-18-21 Dip.	ORE DIP. (8-11)		CORE REC'D				
RESULT Intersected low grade zinc mineralization in sideritized dolitic limestone and clastic limestone; 8.2m average 2.02% Zn		COMPLETED 2.5.84		44.0m	146°AmG	-52	86.8m	147°AmG	-52	COLLAR DIP. (12-15) -50°		CORE REC'D				
		LOGGED BY I. J. Mathison							DIRECTION (16-19) 142 AmG		CORE REC'D					
									R.L. (20-23) 153.3m		CORE REC'D					
									CO-ORDS. 47991.4N 61196.4E		CORE REC'D					
									LOCATION Grievess Grid		CORE REC'D					
FOOTAGE		ROCK DESCRIPTION		MINERALISATION		ASSAY DATA ppm unless spec.		CORE REC'D		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 collar		61198	0	3.0	Sludge		<25	<25	<25	<2	<50	<25	9.0	N.R
				99	3.0	6.0	Sludge		<25	<25	200	<2	1.63%	<25	12.0	0.6
9.0	11.0	LIMESTONE, pale grey, fine grained, laminated to thin bedded, dark grey along stylolites dip 70°		61200	6.0	9.0	Sludge		<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	-	0.73%	175	15.6	0.2
															17.4	-
11.0	13.1	LIMESTONE, grey, medium grained clastic with limestone clasts 1-10mm and bedded valves.		85	12.0	13.5			<25	<25	25	-	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 rubblely with tectonic brecciation.		86	13.5	15.6	Calcite veining associated with breccia. Minor 2° pyrite veins along fractures.		<25	<25	50	-	0.50%	125	22.6	0.3
				87	15.6	17.4			<25	<25	425	-	1.15%	125	24.0	-
															24.8	0.3
															25.5	0.1
17.5	18.5	LIMESTONE, fine grained, grey, stylolitic limestone with fragments of dark grey limestone and clastic limestone.		88	17.4	19.1			<25	<25	75	-	0.23%	100	28.7	-
															30.6	-
															33.3	N.R
															36.0	1.2
18.5	29.9	LIMESTONE, pale grey to grey, fine to coarse grained bioclastic limestone - clasts - shell fragments occasionally replaced by white sparry calcite. Carbonaceous stylolites.		89	19.1	21.0	Minor to moderate calcite veining. Trace pyrite in some stylolites.		<25	<25	150	-	0.17%	100	39.0	-
				90	21.0	24.0			<25	<25	50	-	0.46%	150	40.2	-
				91	24.0	25.5			<25	<25	25	-	0.62%	100	40.4	-
				92	25.5	28.7			<25	<25	25	-	0.59%	125	42.6	-
				93	28.7	30.6			<25	<25	25	-	0.71%	125	43.9	0.1
															44.5	-
															46.2	-
															48.6	-

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ELECTROLYTIC ZINC CO. OF ASIA LTD.  
ROSEBERY - TASMANIA

## DIAMOND DRILL CORE RECORD

HOLE No. IG 100R

A 11241

FOOTAGE		ROCK DESCRIPTION	MINERALISATION	SAMPLE No.	13-14 FROM	14-19 TO	CORE REC'D	ASSAY DATA ppm unless spec.							CORE REC'D	
FROM	TO							Sample Length	Cu	Pb	Zn	Ag	Fe	Mn	RUN	SHORT
29.8	30.6	LIMESTONE - dark grey to black muddy micrite with colonial coral masses at base.												49.9	-	
														51.4	0.3	
														52.9	-	
														54.5	0.2	
30.6	33.8	CAVITY												55.4	-	
														57.0	-	
33.8	34.3	LIMESTONE, grey, sandy, medium grained clastic limestone with thin disrupted bands of dark grey muddy limestone. Carbonaceous stylolites		58594	33.8	36.0		<25	<25	25	<2	0.51%	125	57.9	-	
														59.3	-	
														60.9	0.4	
														62.1	0.6	
														64.9	-	
34.3	35.5	CAVITY												68.0	-	
														71.1	0.1	
35.5	40.2	LIMESTONE, pale grey, medium grained clastic limestone with numerous thin disrupted muddy bands. Sclasts = oolites and coated shell fragments	Minor very fine pyrite in stylolites and fractures in carbonaceous limestone.	95	36.0	39.0		<25	<25	50	<2	0.56%	125	74.2	-	
				96	39.0	42.0		<25	<25	150	<2	0.51%	125	76.8	-	
														79.2	-	
														81.5	-	
														82.3	-	
														82.8	-	
40.2	42.2	LIMESTONE as above but grey and coarser grained	Common calcite veins.											84.8	0.2	
														87.1	-	
														89.8	-	
42.2	45.2	LIMESTONE, interbedded dark grey muddy and grey medium grained clastic limestone with carbonaceous limestone on fractures and stylolites. In situ brachiopod valves in muddy limestone	5cm dolomite vein at 45.0 Trace fine pyrite on some fractures	97	42.0	44.5		<25	<25	325	<2	0.76%	150	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	0.8	
														110.0	0.3	

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ELECTROLYTIC ZINC CO. OF ASIA LTD. ROSEBERY - TASMANIA		DIAMOND DRILL CORE RECORD				HOLE No. <u>ZG 1002</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
45.0	50.3	LIMESTONE, grey fine to coarse clastic with irregular, disrupted bands and patches of dark grey, carbonaceous muddy limestone? slumped. Clasts = intraclasts + shell fragments.		58588	44.5	46.2		<25	<25	200	<2	0.30%	75	110.2	-
				99	46.2	48.6		<25	<25	390	<2	0.55%	125	113.2	N.R.
				58600	48.6	51.4		<25	<25	300	<2	0.62%	150	117.8	3.8
														118.0	0.7
														118.8	0.6
														119.0	0.1
50.3	51.5	LIMESTONE, pale grey laminated limestone and clastic limestone with soft sediment brecciation.	Common calcite veins											119.4	0.3
														119.7	0.2
														120.7	0.9
														120.9	-
51.8	57.9	SANDY AND SILTY LIMESTONE, pale grey sandy, silty clastic limestone - extremely fractured.	2° pyrite along fractures as thin veins with associated leaching and bleaching.	58880	51.4	54.5		<25	25	400	<2	0.24%	100	122.0	1.0
				81	54.5	57.0		<25	25	450	<2	0.50%	100	Redrilling	
														119.0	Start.
														120.0	0.1
57.9	59.0	LIMESTONE, grey clastic and dark grey muddy limestone. Some shaly limestone and brown mud.	Minor syngenetic and 2° pyrite in shaly limestone.	82	57.0	59.7		<25	<25	1000	<2	1.00%	250	121.4	0.4
														122.8	0.9
														123.8	0.1
														124.0	0.3
				83	59.7	62.1		<25	<25	700	<2	0.60%	150	125.0	0.2
59.5	60.0	BROWN MUD - ? cave deposit.												125.2	-
														126.4	0.2
60.0	61.0	LIMESTONE, pale grey laminated - extremely fractured towards end.	Calcite veining increasing.											129.0	0.7
														132.0	2.4
														134.0	0.6
61.0	63.5	SANDSTONE, SILTSTONE, SHALE, SILTY LIMESTONE AND SANDY LIMESTONE.		84	62.1	64.9		<25	<25	575	<2	0.51%	200	137.0	1.7
														140.0	-
														143.1	-
														143.5	-
														144.5	-
														145.4	-

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ELECTROLYTIC ZINC CO. OF ASIA LTD.  
ROSEBERY - TASMANIA

## DIAMOND DRILL CORE RECORD

HOLE No. ZG 1002

A11241

FOOTAGE		ROCK DESCRIPTION	MINERALISATION	SAMPLE No.	8-13 FROM	14-19 TO	CORE REC'D	ASSAY DATA ppm unless spec.						CORE REC'D	
FROM	TO							Sample Length	Cu	Pb	Zn	Ag	Fe	Mn	RUN
63.5	70.0	LIMESTONE, inter mixed grey fine clastic limestone and dark grey muddy limestone, slump brecciation, bioturbation and disrupted bedding etc common	Calcrete veining increasing Traces bitumen on some fractures.	58885	64.9	68.0		<25	<25	150	<2	0.67%	200	147.9	-
				86	68.0	71.1		<25	<25	75	<2	0.56%	200	150.0	1.1
70.0	72.8	LIMESTONE + SILTY LIMESTONE as above plus black marl.		87	71.1	74.2		<25	<25	100	<2	0.97%	225		
72.8	76.8	LIMESTONE, similar to 63.5-70.0 but more muddy limestone. Tectonic brecciation reheated by calcrete 76.0-76.8.		88	74.2	76.8		<25	<25	50	<2	0.69%	225		
76.8	82.8	LIMESTONE, dark grey, very carbonaceous, muddy limestone - sheared and fractured.	Occasional thin sheared out pyritic beds.	89	76.8	79.9		<25	<25	50	<2	1.53%	425		
				90	79.9	82.8		<25	<25	100	<2	0.83%	225		
				91	82.8	84.8		<25	<25	250	<2	0.98%	300		
82.8	89.8	LIMESTONE, disrupted and slump brecciated grey and dark grey limestone. Fossil fragments and reworked coated fragments.	Muddy limestone is pyritic Some white calcite veins	58892	84.8	87.1		<25	<25	325	<2	3.99%	1700		
				58893	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 rubble core.	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		

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ELECTROLYTIC ZINC CO. OF ASIA LTD.  
ROSEBERY - TASMANIA

## DIAMOND DRILL CORE RECORD

HOLE No. ZG 1002

A 1121

FOOTAGE		ROCK DESCRIPTION	MINERALISATION	SAMPLE No.	8-13 FROM	14-19 TO	CORE REC'D	ASSAY DATA ppm unless spec.						CORE REC'D	
FROM	TO							Sample Length	Cu	Pb	Zn	Ag	Fe	Mn	RUN
102.0	106.4	SIDERITIC LIMESTONE, brown leached sideritized limestone breccia and minor dark grey silty limestone and pug. Very poor recovery of rubbly core and silty pug		58570	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 sideritized and partially silicified coarse clastic limestone - clasts = oolites, broken oolites, and coated shell fragments		58572	106.4	107.4		<25	25	2.32%	<2	20.40%	0.95%		
				73		108.4		<25	25	3.87%	<2	30.52%	1.50%		
				74		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		58575	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	LIMESTONE, pale brown grey sideritized oolitic limestone - very poor recovery of rubbly core		58577	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		
				80		119.4		<25	75	650	<2	0.84	560		
117.2	125.4	LIMESTONE, pale brown recrystallized oolitic limestone - extremely poor recovery of rubbly core		81		120.7		<25	50	500	<2	0.63	450		
				82		122.0		<25	50	600	<2	0.60	425		
				58894	119.0	122.0	Sludge	<25	150	3550	<2	2.23%	525		
				95	119.0	122.0		<25	<25	675	<2	0.76%	475		
125.4	129.0	SANDSTONE + SILTSTONE - decomposed to dark grey to black sandy pug with fragments of pale brown sandstone and black siltstone	Minor pyrite	96		124.0		<25	25	1325	<2	1.13%	675		
				97		125.4		<25	75	0.65%	<2	2.75%	1600		
				99		126.4		25	725	0.61%	<2	3.06%	1000		
				99		127.6		25	150	1700	<2	1.00%	25		



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ELECTROLYTIC ZINC CO. OF A'ASIA LTD. ROSEBERY - TASMANIA				DIAMOND DRILL CORE RECORD										01 HOLE No. (3-7) ZM 1003; ZM 1003A			
LOCATION E.L. 4/178 Zeehan - Myrtle Grid			TOTAL DEPTH 303.0m			03					02					04	
OBJECTIVE To test lead-zinc mineralization occurring in pyritic clays in the costean on L 50600N. 54m of costean averaging 2.76% Zn and 1.07% Pb was overlain by coarse barite. Minor zinc mineralization intersected. Very small irregular patch of white sphalerite at 202.0m			HOLE SIZE HW-6, HQ-107-50; Lost at 6250 NQ 62-50-204, 30-303 COMMENCED 3.5.84 COMPLETED 16.5.84 LOGGED BY I. J. Mathison			8-12 Footage (A) 80m 140m 180m	13-16 Direction 118AMG 115" ?132-	17-18-21 Dip. -59 1/2 -57 1/2 -57	8-12 Footage 238m 290m	13-16 Direction 121AMG 123AMG	17-18-21 Dip. -58 -57	ORE DIP. (8-11) COLLAR DIP. (12-15) -55° DIRECTION (16-19) 120°AMG R.L. (20-23) 139.7m CO-ORDS. 50524.5N E 320.4E LOCATION Myrtle Grid		CORE REC'D			
FOOTAGE		ROCK DESCRIPTION	MINERALISATION	SAMPLE No.	8-13 FROM	14-19 TO	CORE REC'D	ASSAY DATA ppm unless spec.							HUN	SHORT	
FROM	TO							Sample Length	Cu	Pb	Zn	Ag	Fe %	Mn			Ba
0	6.0	NO RECOVERY - ROCK RUNNER		61305	6.0	9.0	Sludge	3.0								6.0	N.R.
6.0	18.0	NO RECOVERY - CLAY		6	9	12	"	3.0								18.0	N.R.
				7	12	15	"	3.0								19.0	0.1
				8	15	18	"	3.0								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								25.0	1.7
				10	21	24	"	3.0								36.0	N.R.
				11	24	27	"	3.0								37.0	-
				12	27	30	"	3.0								40.0	2.6
22.0	57.0	CLAY AND SILTSTONE, poor recovery of black silty clay and rubbly black to dark grey siltstone		13	30	33	"	3.0								54.0	N.R.
				14	33	36	"	3.0								57.0	1.8
				15	36	39	"	3.0								60.0	1.8
				16	39	42	"	3.0								63.0	0.3
57.0	60.0	SILTSTONE, black, rubbly and clayey	1% very fine galena.	17	42	45	"	3.0								68.0	N.R.
				18	45	48	"	3.0								70.8	-
				19	48	51	"	3.0								73.9	-
60.0	62.0	CLAY, black, pyritic	5-10% coarse pyrite	20	51	54	"	3.0								77.0	-
																80.1	-
62.0	63.0	CLAY AND LIMESTONE, grey clay and rubbly dark grey silty limestone and grey stylolitic fossiliferous limestone. oba 45°		61321	18.0	22.0	1.3	4.0	25	75	910	x	3.35	35	502	83.2	-
				22	22.0	25.0	1.3	3.0	30	45	910	x	0.98	40	570	86.3	-
																89.4	-
				24	6.0	37.0	1.0	1.0	25	55	5500	x	1.50	30	425	90.0	-
63.0	65.0	CAVITY		23	37.0	40.0	0.4	3.0	20	45	580	x	0.78	30	536	93.0	-
				25	54.0	57.0	1.2	3.0	35	40	1600	x	1.55	25	621	96.0	-
68.0	77.0	DOLOMITIC LIMESTONE, grey, fine to coarse recrystallized and partially dolomitized bioclastic limestone with	Moderate dolomite veining 20cm calcite veining and tectonic breccia at 71.0m	26	57.0	60.0	1.2	3.0	20	45	575	x	0.75	35	1570	99.0	-
				27	60.0	63.0	2.1	3.0	30	105	1500	x	2.55	80	1470	102.0	-
																105.0	-



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ELECTROLYTIC ZINC CO. OF ASIA LTD.  
ROSEBERY - TASMANIA

## DIAMOND DRILL CORE RECORD

HOLE No. ZM 1003 A

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	20-25 Pb%	26-31 Zn%	32-37 Cu%	38-43 Ag - g/t	44-49 Au - g/t	50-55 Fe%	RUN
62.5	66.8	LIMESTONE, grey medium bioclastic with patches, bands and stringers of dark grey muddy limestone. One large colonial coral.	Moderate white calcite veining towards end											62.5	NEW
														63.0	-
														66.0	-
														66.8	-
														72.0	NR
66.8	72.0	CAVITY												74.2	-
														77.3	-
72.0	81.0	LIMESTONE, grey medium bioclastic with patches, bands and stringers of dark grey muddy limestone. Stylolites, sub parallel to core. cba 40°	Common white calcite veins - 1cm, and veinlets. Veins often 50-60° to core axis. 20cm vein at 78.5											78.0	-
														81.0	-
														84.0	-
														87.0	-
														90.0	-
														93.0	-
81.0	99.0	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 97.0-97.7											96.0	-
														99.0	-
														102.0	-
														105.0	-
														108.0	-
														111.0	-
99.0	110.0	LIMESTONE, blotchy grey and dark grey bioclastic limestone and muddy limestone in bands, stringers and patches. Recrystallized fossils common	Irregular stylolites common and banding disrupted. "Stromatolites" like structures 102.5 & 103.5											114.0	-
														116.0	-
														119.1	-
														122.2	-
														125.3	-
														127.8	-
110.0	113.0	LIMESTONE, pale grey, laminated, fine grained. Laminae disrupted towards end. cba 50°	Trace pyrite in some stylolites											129.0	-
														130.4	-
														132.0	-
														133.5	-
														136.6	-

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ELECTROLYTIC ZINC CO. OF ASIA LTD.  
ROSEBERY - TASMANIA

## DIAMOND DRILL CORE RECORD

HOLE No. ZM 1003A

A 11261

FOOTAGE		ROCK DESCRIPTION	MINERALISATION	SAMPLE No.	8-13 FROM	14-19 TO	CORE REC'D	ASSAY DATA							CORE REC'D	
FROM	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
113.0	122.2	LIMESTONE, pale grey, originally very thin bedded, 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 1-20um calcite veins after 119.5m											138.8	-	
														141.0	-	
														144.0	-	
														147.0	-	
														150.0	-	
														153.0	-	
122.2	125.8	LIMESTONE, grey and dark grey originally bedded limestone (c. 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.											158.0	-	
														159.0	-	
														162.0	-	
														165.0	-	
														167.4	-	
125.8	129.0	LIMESTONE, 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.												170.5	-	
														173.6	-	
														176.7	-	
														179.8	-	
														182.9	-	
														186.0	-	
129.0	132.2	LIMESTONE, grey bioclastic and minor muddy limestone. "Birdseye" calcite common after 131.2m. Some from oncolites, occasionally built on gastropods. Fractures, stylolites and some veins and veinlets sub parallel to core.	Trace pyrite in some stylolites and fractures. Calcite veins and veinlets.											187.9	-	
														189.0	-	
														191.8	-	
														192.6	0.4	
														193.9	0.3	
														195.0	0.1	
														195.9	-	
132.2	138.7	LIMESTONE, pale grey laminated fine grained limestone, laminar disturbed by stylolites and low angle micro shears. Stylolites at 5° to core axis and sub parallel to laminations.	5cm calcite at 138.4.											197.3	0.7	
														197.7	-	
														198.7	-	
														201.1	-	
														204.0	-	
														205.4	0.1	

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ELECTROLYTIC ZINC CO. OF ASIA LTD.  
ROSEBERY - TASMANIA

## DIAMOND DRILL CORE RECORD

HOLE No. ZM 1003 A

A 11261

FOOTAGE		ROCK DESCRIPTION	MINERALISATION	SAMPLE No.	8-13 FROM	14-19 TO	CORE REC'D	ASSAY DATA							CORE REC'D	
FROM	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
138.7	139.4	CALCITE VEIN, white												208.4	-	
														209.4	NR	
139.4	144.0	LIMESTONE, patchy grey and dark grey fine grained limestone. Stylolitic	Common calcite veins and patches 0.5-20cm and veinlets ORDER, Veinlets 2 stylolites 3 larger veins											211.4	0.1	
														212.9	0.8	
														214.0	-	
														214.7	-	
														216.0	-	
144.0	150.0	LIMESTONE, 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.											216.8	0.3	
														217.4	0.8	
														218.2	-	
														219.3	-	
														222.0	-	
														223.2	-	
150.0	155.0	LIMESTONE, patchy grey and dark grey predominantly fine grained limestone with branching corals and occasional recrystallised shell fragments. Low angle carbonaceous shears.	Minor calcite veining											225.0	-	
														226.8	-	
														229.9	-	
														231.6	-	
														232.6	-	
														235.5	-	
155.0	159.0	LIMESTONE, disrupted grey and dark grey generally fine grained, with occasional shell fragments and <i>Tetradium</i> last 10cm. Primary features obscured by early calcite veinlets, micro shears and low angle stylolites	Minor calcite veining											238.6	-	
														241.7	-	
														244.4	-	
														245.8	-	
														248.9	0.7	
														250.8	0.9	
														252.8	-	
159.0	164.0	LIMESTONE, roughly banded grey and dark grey fine grained, early calcite veins cut by stylolites sub parallel to core. Occasional fossil ghosts	Minor calcite veining											253.7	-	
														256.0	-	
														259.0	2.9	
														262.0	NR	

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ELECTROLYTIC ZINC CO. OF ASIA LTD.  
ROSEBERY - TASMANIA

## DIAMOND DRILL CORE RECORD

HOLE No. ZM 1003 A

A 1121

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	Ba	RUN
166.0	167.4	LIMESTONE, dark grey carbonaceous, sheared at 0-30° to core axis. Occasional fossil ghost	Calcite veins, patches and solution breccia first 50 cm.												265.0	2.9
															268.0	2.9
															268.9	0.2
															269.6	0.1
167.4	181.0	LIMESTONE, mottled grey and dark grey mixture of medium bioclastic limestone and carbonaceous muddy limestone. Recrystallized shell fragments in muddy limestone. Carbonaceous shears 10-30° to core. Occasional coral colony	Tectonic breccia rehealed by calcite 179.5-180 - rehealing veins subparallel to core with slickensides.												270.6	0.4
															271.0	-
															274.0	1.3
															275.3	0.3
															277.9	-
															280.7	2.3
															281.2	-
															282.8	1.0
181.0	185.2	LIMESTONE AND SILTY LIMESTONE, thin bedded grey and dark grey, bedding cba 50° but often disrupted. Fractures and stylolites subparallel to core.	Minor pyrite in early calcite veins at 184.9.												285.0	1.0
															286.2	-
															289.9	1.8
															291.3	-
															294.0	2.6
															294.4	0.1
185.2	188.0	LIMESTONE, cleaved grey and dark grey bioclastic and muddy limestone. Cleavage at 30° to core axis	Extensive dolomite-quartz veins. 1-5% pyrite in veins and replacing fossils in muddy limestone.	62509	186.0	188.0									295.2	-
															295.8	0.2
															296.9	0.6
															297.3	0.1
															297.4	0.1
188.0	190.0	LIMESTONE, dark grey muddy fine grained limestone with shelly bands. Irregular cleavage 0-30° to core axis.	1% pyrite replacing fossils and in carbonaceous patches and stylolites	62510	188.0	190.0									298.5	0.2
															299.5	0.3
															300.0	0.2
															303.0	-











APPENDIX C.

Wacker Sampling - Data Sheets

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

**GEOCHEMICAL SAMPLE DATA SHEET**

PROJECT: ..... *Ek. A-78...* MATERIAL: ..... *BEDROCK* ..... SIZE FRACTION ANALYSED: ..... *WHOLE* .....  
 LOCALITY: ..... *ZEEHAN* ..... SAMPLE METHOD: ..... *WACKER* ..... ANALYSED BY: ..... *ANALABS* .....  
 GRID NAME: ..... *BAURA* ..... SAMPLED BY: ..... *POYLOK* ..... METHOD: ..... *A.A.S.* .....  
 NOMINAL GRID AZIMUTH: ..... DATE: ..... *4.87* .....

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
	45200N	NORTHING	EASTING															
60428	10050E			10	DBK	✓					X	1425	4500	X		1.98%	25	
29	850			12	B						25	1925	4575	X		3.39%	125	
30	875			9	GBK	✓					25	1575	3900	X		2.06%	50	
31	900			6	2	✓			WE		X	50	50	X		0.23%	50	
32	925			7	8GYWH	✓			WE		X	50	50	X		0.44%	125	
33	950			9	4GYWH	✓			WE		X	50	150	X		0.32%	75	
34	975			7	8GYWH	✓			WE		75	50	75	X		0.27	50	
35	61000			5	6GYCRWH	✓			WE		X	225	150	X		0.67	150	
36	025			7	2GYWH	✓			WE		X	50	50	X		0.61	125	
37	050			7	2LT6YWH	✓			WE		X	50	100	X		0.20	50	
38	075			2	5						X	25	75	X		1.87	175	
39	61100			2	5						X	50	75	X		0.99	125	
60440	125			3	0GYWH	✓			WE		X	50	25	X		0.67	150	
41	150			4	0DK6YWH	✓			WE		X	25	25	X		1.01	300	
42	175			4	3DK6YWH	✓			WE		X	25	25	X		0.12	25	
60443	81200			6	0LT6Y	✓			WE		X	25	25	X		0.36	75	

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

**GEOCHEMICAL SAMPLE DATA SHEET**

PROJECT: ..... E.L.A.-78 ..... MATERIAL: ..... BEDROCK ..... SIZE FRACTION ANALYSED: ..... WHOLE .....  
 LOCALITY: ..... ZEEHAN ..... SAMPLE METHOD: ..... WASHER ..... ANALYSED BY: ..... ANALABS .....  
 GRID NAME: ..... GRIEVES ..... SAMPLED BY: ..... P.P.T.OCKS ..... METHOD: ..... A.A.S. .....  
 NOMINAL GRID AZIMUTH: ..... DATE: ..... 5-84 .....

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	Cu	Pb	Zn	Ag	Au	Fe %	Mn	Ba
	610500N	NORTHING	EASTING	GRID EASTING															
6265A	609000E				5.6	GY	✓	✓	✓	WE	10	35	130	X		0.35	60	X	
55	925				1.3	GY	✓	✓	✓	WE	15	135	420	X		0.40	75	33	
56	950				1.8	GN		✓	✓	WE	15	30	75	X		1.35	270	140	
57	975				3.0	GY		✓	✓	WE	20	35	95	X		0.70	155	41	
58	61000				3.0	LTGY		✓	✓	WE	10	340	85	X		0.19	150	X	
59	025				3.0	BRGY	✓	✓	✓	WE	15	55	75	X		0.60	45	193	
62660	050				5.6	GY		✓	✓	WE	15	150	190	X		1.20	70	224	
61	075				4.8	DKGY		✓	✓	WE	25	40	70	X		2.10	180	372	
62	61100				12.0	DKGY	✓	✓	✓	WE	20	170	780	X		1.90	50	333	
63	125				19.0	DKGY		✓	✓	WE	35	105	280	3.0		1.25	25	427	
64	150				7.6	GY	✓	✓	✓	WE	10	55	230	X		0.42	115	20	
65	175				2.2	GY	✓	✓	✓	WE	15	35	190	X		0.27	75	X	
66	61200				1.2	GY		✓	✓	WE	15	45	220	X		0.42	85	X	
67	225				1.8	DKGY		✓	✓	WE	15	50	710	X		0.37	65	X	
68	250				2.0	DKGY		✓	✓	WE	15	30	90	X		0.73	195	84	
69	275				1.6	GY		✓	✓	WE	20	35	40	X		1.65	405	52	
62670	61300				1.6	DKGY		✓	✓	WE	20	50	140	X		0.51	150	65	
71	325				3.2	DKGY		✓	✓	WE	15	60	255	X		0.41	225	22	
72	350				2.5	GY	✓	✓	✓	WE	10	55	85	X		0.18	110	29	
73	375				2.8	GY		✓	✓	WE	10	80	70	X		0.17	100	X	
74	61400				2.8	DKGY	✓	✓	✓	WE	15	45	165	X		0.52	195	88	
75	425				3.4	DKGY	✓	✓	✓	WE	25	45	45	X		1.25	155	132	
76	450				3.8	DKGY	✓	✓	✓	WE	20	35	325	X		0.97	70	80	
77	475				4.8	DKGY	✓	✓	✓	WE	15	130	225	X		0.33	65	X	
78	61500				5.3	GY		✓	✓	WE	15	40	110	X		0.55	85	42	
79	525				6.0	LTGY WH		✓	✓	WE	15	80	260	X		0.30	150	43	
62680	550				7.9	GY	✓	✓	✓	WE	20	50	145	X		0.46	225	130	
81	575				13.0	BRGY	✓	✓	✓	WE	25	560	485	X		4.70	150	110	
82	61600				7.0	BR	✓	✓	✓	WE	15	10	15	X		0.15	10	85	
62683	61625E				10.5	BAR	✓	✓	✓	WE	15	60	20	X		0.22	10	155	

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

**GEOCHEMICAL SAMPLE DATA SHEET**

PROJECT: ..... E.L. A-70 ..... MATERIAL: ..... BEDROCK ..... SIZE FRACTION ANALYSED: ..... WHOLE .....  
 LOCALITY: ..... ZEEHAN ..... SAMPLE METHOD: ..... WACKER ..... ANALYSED BY: ..... ANALABS .....  
 GRID NAME: ..... GRIEVES ..... SAMPLED BY: ..... POLTOCKS ..... METHOD: ..... A.A.S. .....  
 NOMINAL GRID AZIMUTH: .....  
 DATE: ..... 5-04 .....

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	B <sub>2</sub>
	GRID EASTING	NORTHING	EASTING															
62684	61650E			0.5	BR		✓	✓		WE	15	5	10	X		0.15	5	155
85	675			4.0	BR		✓	✓		WE	15	10	15	X		0.18	10	28
62686	61700E			1.8	GN		✓	✓		WE	15	5	15	X		0.18	10	X

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

**GEOCHEMICAL SAMPLE DATA SHEET**

PROJECT: ...*E.A. 4-7B*... MATERIAL: ...*BEDROCK*... SIZE FRACTION ANALYSED: ...*WHOLE*...  
 LOCALITY: ...*ZEEHAN*... SAMPLE METHOD: ...*WACKER*... ANALYSED BY: ...*ANALABS*...  
 GRID NAME: ...*GRIEVES*... SAMPLED BY: ...*POA TOCKS*... METHOD: ...*A.A.S.*...  
 NOMINAL GRID AZIMUTH: ..... DATE: ...*5.84*.....

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
	46700N	NORTHING	EASTING																
62687	61700E			3.8	DKBR			✓	WE			25	85	20	X		0.40	10	217
88	675			4.8	DKBR			✓	WE			25	440	60	X		0.43	10	228
89	650			10.6	LTBR CRV			✓	WE			15	65	105	X		0.55	95	77
62690	625			12.6	DKGYWH			✓	WE			10	35	30	X		0.81	250	20
91	61600			5.2	BLGY			✓	WE			20	50	95	X		1.00	180	45
92	575			10.6	GYLTBR	✓		✓	WE			15	50	65	X		0.21	120	43
93	550			4.8	DKGYWH			✓	WE			15	40	125	X		0.32	120	X
94	525			10.1	WHLTBR			✓	WE			10	175	140	X		0.23	160	X
95	61500			5.8	LTGY	✓		✓	WE			10	35	40	X		0.21	60	X
96	475			3.1	LTGYWH			✓	WE			15	45	75	X		0.33	300	34
97	450			2.6	DKGY	✓		✓	WE			10	20	25	X		0.49	100	30
98	425			3.7	DKGY	✓		✓	WE			15	60	35	X		0.35	105	25
99	61400			1.6	DKGY	✓		✓	WE			15	25	25	X		0.59	135	47
62700	375			1.2	DKGY			✓	WE			15	40	30	X		0.79	135	49
62701	350			1.8	DKGY	✓		✓	WE			10	30	30	X		1.55	370	56
02	325			2.0	GY			✓	WE			20	75	65	X		0.69	110	72
03	61300			1.2	GY			✓	WE			5	25	55	X		0.15	90	14
04	275			1.6	GYWH			✓	WE			5	75	105	X		0.22	190	14
05	250			1.8	LTGY			✓	WE			5	110	135	X		0.13	170	28
06	225			2.6	LTBRWH			✓	WE			10	35	70	X		0.20	130	28
07	61200			0.8	DKGY			✓	WE			10	25	30	X		1.35	225	115
08	175			0.8	GY			✓	WE			10	40	85	X		0.94	180	50
09	150			4.0	GYBR	✓		✓	WE			5	55	330	X		0.67	110	X
62710	125			9.6	GY			✓	WE			10	70	410	0.5		4.10	1250	60
11	61100			11.7	DKGY			✓	WE			15	255	3800	0.5		7.35	755	43
12	075			19.0	OGYLTBR	✓				NO		25	975	270	1.0		1.45	40	437
13	050			19.0	DKGY	✓				NO		15	630	333	11.0		11.30	20	487
14	025			5.6	GYWH			✓	WE			10	285	1000	0.5		0.93	15	261
15	61000			2.9	DKGY			✓	WE			10	30	55	0.5		11.75	75	334
16	60975			1.4	DKGY			✓	WE			10	35	60	X		0.76	100	118
62717	60350E			1.8	DKGY			✓	WE			10	30	25	X		0.60	110	70

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E.Z. Co. of Asia Ltd., ROSEBERY, Tasmania		GEOCHEMICAL SAMPLE DATA SHEET																			
PROJECT:	A-78			MATERIAL:	BEDROCK			SIZE FRACTION ANALYSED:	WHOLE												
LOCALITY:	ZEEHAN			SAMPLE METHOD:	WACKER			ANALYSED BY:	ANALABS												
GRID NAME:	GRIEVES			SAMPLED BY:	POLYCKS			METHOD:	A-A-5												
NOMINAL GRID AZIMUTH:				DATE:	5-84																
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	Cu	Pb	Zn	Ag	Au	Fe	Mn	Ba		
	GRID EASTING	NORTHING	EASTING	DEPTH																	
62718	60925E			1.6	GY			✓		W		10	30	25	X		0.69	100	62		
62719	60950E			1.5	GY			✓		W		10	35	115	X		0.39	60	27		

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

**GEOCHEMICAL SAMPLE DATA SHEET**

PROJECT: E.L.A.-78..... MATERIAL: ...BED ROCK..... SIZE FRACTION ANALYSED: ...WHOLE.....  
 LOCALITY: ...ZEEHAN..... SAMPLE METHOD: ...WALKER..... ANALYSED BY: ...ANALABS.....  
 GRID NAME: ...GRIEVES..... SAMPLED BY: ...POL TOOKS..... METHOD: ...P.A.S.....  
 NOMINAL GRID AZIMUTH: ..... DATE: ...5-84.....

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
	649000N	NORTHING	EASTING	GRID EASTING																
62720	60900E			1.3	DKGYWH			✓		WE		10	35	460	X		0.54	155	65	
21	925			2.3	DKGY			✓		WE		5	30	2250	X		0.67	120	63	
22	950			16.4	LTGY			✓		WE		15	15	55	X		1.60	120	301	
23	975			19.0	GY		✓			WE	ND	45	35	65	0.5		0.96	75	219	
24	61000			15.5	GYBR		✓	✓		WE		15	35	420	0.5		2.40	170	226	
25	025			9.6	GY			✓	✓	WE		5	45	65	0.5		2.80	920	38	
26	050			3.4	GYLTBR			✓		WE		5	50	250	X		0.42	280	22	
27	075			1.8	DKGY			✓		WE		5	50	80	0.5		0.52	100	14	
28	61700			1.0	DKGY			✓		WE		10	35	35	X		2.55	410	118	
29	125			0.8	DKGY			✓		WE		10	30	30	X		1.75	255	56	
62730	150			1.8	DKGY			✓		WE		10	35	135	X		2.15	170	80	
31	175			3.6	GY			✓		WE		5	105	160	X		0.35	100	27	
32	61200			2.2	GY			✓		WE		5	30	55	X		0.78	60	22	
33	225			1.8	GY			✓		WE		10	35	45	X		0.26	60	30	
34	250			2.4	GY			✓		WE		10	30	90	X		0.74	95	47	
35	275			2.5	GY			✓		WE		10	25	50	X		0.30	105	35	
36	300			1.6	GY			✓		WE		15	30	55	X		1.40	175	120	
37	61325			3.0	GY			✓		WE		15	30	35	0.5		1.30	270	55	
38	350			1.8	GY			✓		WE		20	30	30	1.0		0.70	110	68	
39	375			4.5	GY			✓		WE		10	35	30	0.5		1.28	210	81	
62740	61400			5.6	BR			✓	✓	WE		5	15	15	X		0.20	10	331	
41	425			14.5	BRKBR			✓	✓	WE		15	50	130	X		1.95	350	181	
42	450			2.0	BR			✓	✓	WE		10	15	15	X		0.14	5	98	
43	475			9.6	DKGYBR		✓	✓		WE		40	215	335	0.5		0.55	10	342	
44	61500			6.7	BR/LTBR		✓	✓		WE		20	45	30	0.5		0.27	5	287	
62745	61525			5.4	BRGY		✓	✓		WE		5	5	10	X		0.11	5	11	

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

**GEOCHEMICAL SAMPLE DATA SHEET**

PROJECT: ...*EL. A. 78*... MATERIAL: ...*BEDROCK*... SIZE FRACTION ANALYSED: ...*Y.H. 0.6E*...  
 LOCALITY: ...*ZEEHAN*... SAMPLE METHOD: ...*WACKER*... ANALYSED BY: ...*ANALABS*...  
 GRID NAME: ...*GRIEVES*... SAMPLED BY: ...*POLTOCKS*... METHOD: ...*A.A.S.*...  
 NOMINAL GRID AZIMUTH: ..... DATE: ...*5.84*...

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	Cu	Pb	Zn	Ag	Au	Fe %	Mn	Ba
	GRID EASTING	NORTHING	EASTING	GRID EASTING															
62746	61275E				2.6	GY			✓		WE	5	40	85	X		0.34	75	22
	47	300			7.0	GY			✓		WE	10	40	60	X		0.38	50	13
	48	325			12.8	LTGY	✓		✓		WE	10	50	60	X		0.29	65	46
	49	350			10.6	BR	✓	✓	✓		WE	10	25	25	X		0.25	10	195
	50	375			11.4	GY			✓		WE	15	30	100	X		0.55	145	94
62751	61400E				6.2	GY	✓	✓	✓		WE	10	10	10	X		0.12	5	26
62777	60900A				6.8	DKGY	✓		✓		WE	10	30	65	X		0.65	70	78
	778	60900B			5.4	DKGY	✓		✓		WE	20	35	50	X		1.45	30	479
	79	925			3.8	GYBR		✓	✓		WE	15	30	40	X		0.26	5	207
62780	950				17.8	ELTBRGY	✓		✓		WE	15	95	35	0.5		0.67	15	484
	81	975			8.7	LTGY	✓		✓		WE	10	30	30	X		0.61	20	507
	82	61000			1.8	GY		✓	✓		WE	10	40	300	0.5		0.71	435	44
62783	025				1.6	GY			✓		WE	15	40	55	X		1.95	535	31

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

**GEOCHEMICAL SAMPLE DATA SHEET**

PROJECT: ..*E.L. 4/78*..... MATERIAL: ....*BED ROCK*..... SIZE FRACTION ANALYSED: ..*WHOLE*.....  
 LOCALITY: ....*ZEEHAN*..... SAMPLE METHOD: ....*WACKER*..... ANALYSED BY: ....*AMALABS.*.....  
 GRID NAME: ....*GRIEVES*..... SAMPLED BY: ....*POLLOCK*..... METHOD: ....*AAS*.....  
 NOMINAL GRID AZIMUTH: ..... DATE: ....*4-89*.....

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
	GRID EASTING	NORTHING	EASTING														
60453	61250E			2.60	DKGYCR			✓		WE	X	25	50	X		0.54%	50
54	225			2.80	DKGY	✓		✓		WE	X	25	150	X		0.90%	X
55	61200			3.60	DKGY	✓		✓		WE	X	125	225	X		1.43%	50
56	175			4.50	CRGY			✓		WE	X	125	200	X		0.50%	50
57	150			2.80	DKGY			✓		WE	X	25	X	X		0.76%	50
58	125			2.50	DKGYCR	✓		✓		WE	X	25	25	X		1.05%	225
59	61100			1.50	DKGY			✓		WE	X	25	X	X		0.60%	125
60	075			1.50	GY	✓		✓		WE	X	25	X	X		0.65%	75
60461	61050				DRGY			✓		WE	X	25	X	X		0.90%	150

E.Z. Co. of A'Asia Ltd., ROSEBERY, Tasmania		GEOCHEMICAL SAMPLE DATA SHEET																		
PROJECT:	E.L.A.-78.....			MATERIAL:	...BEDROCK.....			SIZE FRACTION ANALYSED:	...WHOLE.....											
LOCALITY:	.....ZEEHAN.....			SAMPLE METHOD:	...WACKER.....			ANALYSED BY:	...ANALABS.....											
GRID NAME:	.....GRIEVES.....			SAMPLED BY:	...POL-TOKS.....			METHOD:	...A.A.S.....											
NOMINAL GRID AZIMUTH:	.....			DATE:	.....5-94.....															
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 Frag.	Organic	Weathered	Cu	Pb	Zn	Ag	Au	Fe%	Mn	Ba		
	47100N	NORTHING	EASTING																	
GRID EASTING																				
62752	61300E			3.11	BR		✓	✓		WE	10	15	110	X		0.13	5		X	
53	325			2.6	GY	✓		✓		WE	10	30	65	X		0.74	110		52	
54	350			7.8	DKBR	✓		✓		WE	20	45	115	X		0.69	10		253	
55	375			14.0	BR/LTBR			✓		WE	60	100	145	0.5		1.60	15		305	
56	61400			7.8	GY	✓		✓		WE	5	25	70	X		0.36	100		17	
57	425			4.6	GY			✓		WE	15	25	45	0.5		0.32	60		11	
58	450			6.8	BR/LTBR	✓		✓		WE	10	15	30	X		0.28	5		160	
59	475			5.6	LTBR			✓		WE	10	10	10	X		0.15	5		X	
62760	61500			9.8	GYBR	✓		✓		WE	25	120	180	0.5		5.45	560		137	
62761	61275			2.6	GYBR			✓		WE	5	10	10	X		0.11	5		X	
62	250			6.3	GY			✓		WE	5	30	28.5	X		0.28	55		14	
63	225			12.8	2GY	✓		✓		WE	10	30	130	0.5		0.55	115		27	
64	61200			2.3	GY			✓		WE	5	45	220	0.5		0.77	155		33	
65	175			5.4	GY			✓		WE	102	45%	19.5%	6.0		17.50	5750		23	
66	150			4.2	GY			✓		WE	10	50	205	X		0.73	150		32	
67	125			2.0	GY			✓		WE	10	205	1250	X		1.30	270		42	
68	61100			2.6	GY			✓		WE	10	35	45	X		0.47	85		36	
69	075				GY	✓		✓		WE	15	45	35	X		1.50	115		39	
62770	050			1.8	GY			✓		WE	10	35	75	0.5		1.45	230		78	
71	025			1.8	LTGYWH			✓		WE	5	50	85	X		0.17	60		17	
72	61000			2.4	GYWH			✓		WE	5	50	165	X		0.34	170		38	
73	60975			7.6	GY			✓		WE	10	45	165	X		1.50	450		54	
74	050			8.8	LTBR	✓		✓		WE	25	30	75	0.5		2.40	120		513	
75	925			14.5	LTGY	✓		✓		WE	10	45	41	X		0.60	15		518	
62776	60900E			6.6	LTBR	✓		✓		WE	20	50	580	0.5		5.30	10		405	
62784	60900			7.6	DKGY			✓		WE	20	40	130	0.5		2.35	30		435	

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

**GEOCHEMICAL SAMPLE DATA SHEET**

PROJECT: .. F.L.A-78 .. MATERIAL: .. BEDROCK .. SIZE FRACTION ANALYSED: .. WHOLE ..  
 LOCALITY: .. ZEEHAN .. SAMPLE METHOD: .. WACKER .. ANALYSED BY: .. ANALABS ..  
 GRID NAME: .. GRIEVES .. SAMPLED BY: .. POLYCKS .. METHOD: .. A.A.S ..  
 NOMINAL GRID AZIMUTH: .. .. DATE: .. 5-84 ..

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	Cu	Pb	Zn	Ag	Au	Fe%	Mn	Be
	GRID EASTING	NORTHING	EASTING															
62786	60925			14	8GYDKGY	✓	✓	✓	✓	W	5	30	35	X		0.40	95	29
87	950			8.2	6Y	✓	✓	✓	✓	W	10	30	40	X		0.51	100	37
88	975			3.4	6Y			✓	✓	W	10	25	60	0.5		0.38	230	111
89	61000			7.8	6Y	✓	✓	✓	✓	W	5	30	55	0.5		0.45	195	38
62790	61025			2.6	6Y	✓	✓	✓	✓	W	10	30	25	X		1.30	255	111

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

**GEOCHEMICAL SAMPLE DATA SHEET**

PROJECT: ...*E.A. 4.1.78*... MATERIAL: ...*BEDROCK*... SIZE FRACTION ANALYSED: ...*WHOLE*...  
 LOCALITY: ...*ZEEHAN*... SAMPLE METHOD: ...*WACKER*... ANALYSED BY: ...*ANALABS*...  
 GRID NAME: ...*GRIEVES*... SAMPLED BY: ...*POLLOCK*... METHOD: ...*AAS*...  
 NOMINAL GRID AZIMUTH: ..... DATE: ...*7.7.84*.....

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	Wear Metal	Cu	Pb	Zn	Ag	Au	Fe	Mn
	GRID EASTING	NORTHING	EASTING														
60444	E1	250E		4.5	GY			✓	WE	X		50	125	X		1.93%	325
45		225		5.2	GY			✓	WE	X		25	425	X		0.68%	25
46	G1	200		3.2	GYWH			✓	WE	X		25	25	X		0.44%	100
47		175		3.2	LTGYWH			✓	WE	X		50	125	X		0.29%	100
48		150		2.5	LTGYWH			✓	WE	X		25	50	X		0.20%	225
49		125		1.8	DRGY			✓	WE	X		25	25	X		0.57%	25
60450	G1	100		1.5	LTGY			✓	WE	X		25	25	X		0.23%	25
51		075		4.5	DRGY CR			✓	WE	X		25	75	X		0.62%	225
60452	G1	050E		1.5	GY			✓	WE	X		650	575	X		0.20%	125

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

**GEOCHEMICAL SAMPLE DATA SHEET**

PROJECT: ...E.L.A.-78... MATERIAL: ...BEDROCK... SIZE FRACTION ANALYSED: ...WHOLE...  
 LOCALITY: ...ZEEHAN... SAMPLE METHOD: ...WACKER... ANALYSED BY: ...ANALABS...  
 GRID NAME: ...GRIEVES... SAMPLED BY: ...POLTOKS... METHOD: ...A.A.S...  
 NOMINAL GRID AZIMUTH: ..... DATE: ...5-84.....

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	Cu	Pb	Zn	Ag	Au	Fe %	Mn	Ba	
	GRID EASTING	NORTHING	EASTING																
62721	60900			7.4	DKGY			✓				10	160	1100	X		0.60	1180	27
92	225			1.5	DKGY			✓		WE		5	30	35	0.5		0.48	190	25
93	950			3.0	LTGY			✓		WE		15	30	1180	X		0.55	120	25
94	975			11.0	LTGY			✓		WE		15	35	125	0.5		0.39	170	23
95	61000			12.0	OGY	✓		✓		WE		10	25	50	X		1.40	200	32
96	025			8.4	GY	✓		✓		WE		10	20	35	X		0.74	175	42
97	650			8.8	GY	✓		✓		WE		10	15	25	X		0.42	85	37
98	075			3.8	LTGY	✓		✓		WE		10	20	50	X		0.25	80	30
99	61100			1.5	WHLTKR			✓		WE		5	20	70	X		0.20	155	X
62800	125			1.5	GYLTGN	✓		✓		WE		10	20	60	X		4.20	80	30
60313	61150			2.4	GYWH			✓		WE		10	10	25	X		0.29	105	32
14	175			2.0	GY			✓		WE		10	15	25	X		0.52	105	31
15	61200			2.0	DKGY	✓		✓		WE		10	15	30	X		0.67	135	39
16	225			3.5	GY			✓		WE		10	25	180	X		0.75	105	48
17	250			6.0	GY	✓		✓		WE		10	30	565	X		0.50	90	35
18	275			8.5	GY	✓		✓		WE		10	20	1000	X		0.40	95	56
19	61300			8.0	GYRD	✓		✓		WE		30	1650	4900	2.0		2.20	495	220
60320	325			11.8	GGY	✓		✓		WE		10	45	725	0.5		0.33	60	X
21	350			2.8	GY			✓		WE		15	50	165	X		0.53	105	10
22	375			6.8	DKGYWH	✓		✓		WE		10	50	185	1.0		1.40	210	40
23	61400			3.5	RDEYBR	✓		✓		WE		10	5	15	X		0.17	5	23
60324	61425			3.6	DKBR	✓		✓		WE		30	665	1750	1.5		2.35	100	233

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

PROJECT: ... EL. 4-7B ... MATERIAL: ... BEDROCK ... SIZE FRACTION ANALYSED: ... WHOLE ...  
 LOCALITY: ... ZEEHAN ... SAMPLE METHOD: ... WACKER ... ANALYSED BY: ... ANALABS ...  
 GRID NAME: ... GRIEVES ... SAMPLED BY: ... POLTOCKS ... METHOD: ... A.A.S. ...  
 NOMINAL GRID AZIMUTH: ... DATE: ... 5-84 ...

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	Cu	Pb	Zn	Ag	Au	Fe %	Mn	Ba
	4730CAN	GRID EASTING	NORTHING	EASTING															
60325	61050E				5.8	GY	✓		✓		WE	15	20	150	X		0.24	100	30
326	075				6.7	GY	✓		✓		WE	10	15	55	X		1.20	115	19
60327	61100				4.8	DKGY	✓		✓		WE	10	20	40	X		0.54	75	23
328	125				7.9	DKGY	✓		✓		WE	10	20	30	X		0.74	125	58
329	150				8.0	DKGY	✓		✓		WE	15	30	225	X		1.95	470	66
330	175				4.0	DKGY	✓		✓		WE	10	RC	75	X		0.54	155	X
331	61200				3.6	DKGY	✓		✓		WE	10	1.5	600	X		0.63	155	X
332	225				2.2	DKGY	✓		✓		WE	15	20	40	X		1.85	410	75
333	250				3.1	GYGNWH	✓		✓		WE	10	60	190	X		0.49	255	X
334	275				11.0	ONGY	✓		✓		WE	10	135	290	X		0.70	150	X
335	61300				6.5	DKGYBR	✓		✓		WE	25	45	325	X		1.30	10	264

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

**GEOCHEMICAL SAMPLE DATA SHEET**

PROJECT: ...E/L 4-78... MATERIAL: ...BED. ROCK... SIZE FRACTION ANALYSED: ...WHOLE...  
 LOCALITY: ...ZEEHAN... SAMPLE METHOD: ...WACKER... ANALYSED BY: ...ANALABS...  
 GRID NAME: ...GRIEVES... SAMPLED BY: ...P. OATOCKS... METHOD: ...A.A.S...  
 NOMINAL GRID AZIMUTH: ... DATE: ...4-184...

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	
	48400N	GRID EASTING	NORTHING	EASTING																
60462	60600E				3.2	GY							X		50	150	X		0.94%	325
63	625				4.7	BR				WE			X		25	X	X		0.35%	X
64	650				5.2	DRGYWH	✓			WE			X		25	50	X		0.64%	25
65	675				3.3	GY	✓			WE			X		25	25	X		0.99%	100
66	60700				6.0	LTBR	✓			WE			X		25	25	X		0.50%	125
67	725				6.2	DRGY	✓			WE			X		25	25	X		0.42%	100
68	750				12.5	DRGY	✓			WE			X		175	325	X		0.58%	50
69	775				9.0	LTGY				WE			X		50	125	X		0.44%	50
60470	60300				4.8	DRGY	✓				NO		X		25	75	X		1.28%	X
71	825				11.2	DRGY	✓						X		3700	700	X		6.84%	25
72	850				14.6	DRGYBR	✓			WE			X		75	50	X		1.05%	1150
73	875				4.8	GY	✓			WE			X		25	25	X		0.92%	100
74	60900				2.5	GRGY	✓			WE			X		50	25	X		0.92%	125
75	925				1.8	DRGY	✓			WE			X		25	25	X		0.66%	125
76	950				4.8	DRGY	✓			WE			X		25	25	X		1.07%	150
77	975				9.4	DRGY	✓			WE			X		100	125	X		1.79%	100
78	61000				6.4	GY				WE			X	25	25	225	X		1.73%	100
79	025				15.2	DRGY	✓			WE			X		50	25	X		0.12%	100
60480	050				10.6	LTGY				WE			X		25	50	X		0.19%	100
81	275				10.6	LTGYBR				WE			X		25	675	X		2.73%	1275
82	61100				11.8	LTGYBR	✓			WE			X		50	650	X		0.66%	300
83	125				9.0	LTBR				WE			X		75	550	X		0.46%	250
60484	61150				7.5	GY				WE			X		50	700	X		0.66%	25

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

**GEOCHEMICAL SAMPLE DATA SHEET**

PROJECT: ...E.L. 4-78... MATERIAL: ...BEDROCK... SIZE FRACTION ANALYSED: ...WHOLE...  
 LOCALITY: ...ZEEHAN... SAMPLE METHOD: ...YACKER... ANALYSED BY: ...A.A.S...  
 GRID NAME: ...MYRTLE... SAMPLED BY: ...P.O. TOOKS... METHOD: ...A.A.S...  
 NOMINAL GRID AZIMUTH: ..... DATE: ..... 4-84.....

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
	GRID EASTING	NORTHING	EASTING																	
60435	60500E				1.4	DKEY			✓		WE									
86	475				2.6	DKEY	✓		✓		WE									
87	450				7.3	DKEY	✓		✓		WE									
88	425				15.3	DKEY	✓		✓		WE									
89	60400				7.0	LTGY	✓		✓		WE									
60490	375				4.2	CRBR	✓		✓		WE									
91	350				10.6	BK	✓				NO									
92	325				7.5	GY			✓		WE									
93	60300				9.6	DKEY	✓		✓		WE									
94	275				1.2	GNBNY			✓		WE									
95	250				3.6	DKEY			✓		WE									
96	225				7.5	GY			✓		WE									
60497	200				8.6	LTGY	✓		✓		WE									

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

**GEOCHEMICAL SAMPLE DATA SHEET**

PROJECT: ...E.L.A. 78. MATERIAL: ...BEDROCK... SIZE FRACTION ANALYSED: ...WHOLE.....  
 LOCALITY: ...ZEEHAN... SAMPLE METHOD: ...WACKER... ANALYSED BY: ...ANAGABS..  
 GRID NAME: ...MYRTLE... SAMPLED BY: ...P.C. TOOKS... METHOD: ...A.A.S.....  
 NOMINAL GRID AZIMUTH: ..... DATE: .....A.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
	50700N	NORTHING	EASTING	GRID EASTING																
60498	60300E				1.6	GY		✓	✓				5	5	10	X		0.17	5	66
499	325				1.7	GYGNCR	✓	✓	✓	WE		15	40	225	0.5			3.45	10	293
60500	60350				14.5	SLTGY	✓	✓	✓	WE		15	90	70	X			0.34	25	1080
62601	60375				17.0	LTBRGY	✓	✓			NO	15	80	30	X			0.48	10	260
02	400				1.5	DKGY	✓	✓	✓	WE		5	30	40	X			0.46	75	74
03	425				2.0	GY		✓	✓	WE		5	15	40	X			0.25	50	84
04	450				1.2	GY		✓	✓	WE		5	5	25	X			0.35	80	64
05	475				2.2	GY	✓	✓	✓	WE		15	15	35	X			1.40	45	231
06	60500				4.3	GY	✓	✓	✓	WE		X	25	140	X			0.70	220	45
07	525				12.8	GY	✓	✓	✓	WE		5	35	45	0.5			1.35	180	75
08	550				0.8	GY	✓	✓	✓	CREEK		5	65	40	X			0.32	60	26
09	575				1.0	GY	✓	✓	✓			X	60	25	X			0.44	30	104
62610	60600				1.0	GY		✓	✓	WE		X	60	70	0.5			0.25	50	44
11	625				0.8	GY		✓	✓	WE		5	32	55	X			0.25	55	29
12	650				3.0	GY	✓	✓	✓	WE		102	1108	450	15.0			0.72	85	48
13	675				3.3	DKGY	✓	✓	✓	WE		5	35	40	X			0.35	50	27
14	60700				19.0	DKGY	✓	✓	✓		NO	80	560	2400	1.0			3.60	30	450
15	725				1.4	LTBR		✓	✓	WE		5	5	15	X			0.20	5	168
62616	60750				6.5	LTBRGM	✓	✓	✓	WE		10	20	20	0.5			0.24	5	503

352162

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

**GEOCHEMICAL SAMPLE DATA SHEET**

PROJECT: ...E.L.A.78... MATERIAL: ...BEDROCK... SIZE FRACTION ANALYSED: ...WHOLE...  
 LOCALITY: ...ZEEHAN... SAMPLE METHOD: ...WASKEY... ANALYSED BY: ...ANALABS...  
 GRID NAME: ...MYRTLE... SAMPLED BY: ...P.O.L.T.O.C.K.S... METHOD: ...A.A.S...  
 NOMINAL GRID AZIMUTH: ..... DATE: ...5-84.....

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	Cu	Pb	Zn	Ag	Au	Fe%	Mn	Ba
	508900N	GRID EASTING	NORTHING	EASTING															
62617	60500E				6.5	GY		✓	✓		WE	25	30	25	X		0.29	5	108
18	475				7.0	DKGY		✓	✓		WE	10	115	65	X		2.80	15	345
19	450				6.3	BRGY	✓		✓		WE	15	80	40	X		0.65	15	506
62620	425				9.0	DKGY	✓					25	40	45	X		3.00	20	460
21	60400				19.0	DKGY			✓		WE	5	15	25	X		1.70	230	167
22	375				2.0	GY			✓		WE	15	5	20	X		0.67	10	460
23	350				9.0	GNBRGY	✓		✓		WE	25	105	30	0.5		2.15	15	454
24	325				5.6	DKGY	✓		✓		WE	15	65	480	X		2.80	25	407
25	60300				6.2	LTBR		✓	✓		WE	20	5	20	X		0.20	10	234
* 26	60525	*			9.5	DKGY	✓		✓		WE	35	145	105	X		0.82	20	570
27	550				3.5	DKGY	✓		✓		WE	15	55	70	X		0.57	140	36
28	575				1.0	GY			✓			20	45	75	X		0.83	125	93
29	60600				2.3	GY			✓		WE	15	115	95	X		0.75	200	26
62630	625				3.8	GY			✓		WE	15	45	65	X		0.60	95	39
31	650				12.2	DKGY			✓		WE	15	20	35	X		2.20	250	147
32	675				15.6	DKGY			✓		WE	15	35	35	X		1.45	145	143
33	60700				7.4	GNBR			✓		WE	50	150	150	X		0.46	10	385
34	725				16.5	DKGY			✓		WE	15	15	30	X		1.45	140	332
35	750				1.5	DKGY			✓		WE	15	40	45	X		0.85	95	104
36	775				2.6	GYBR	✓	✓	✓		WE	10	X	10	X		0.15	10	64
62637	60900				4.6	GYBR	✓	✓	✓		WE	15	5	10	X		0.13	10	53

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

**GEOCHEMICAL SAMPLE DATA SHEET**

PROJECT: ... E.L. 4.78 ... MATERIAL: ... BEDROCK ... SIZE FRACTION ANALYSED: ... WHOLE ...  
 LOCALITY: ... ZEEHAN ... SAMPLE METHOD: ... WACKER ... ANALYSED BY: ... ANALABS ...  
 GRID NAME: ... MYRTLE ... SAMPLED BY: ... POLTOCKS ... METHOD: ... A-A-S ...  
 NOMINAL GRID AZIMUTH: ..... DATE: ... 5-84 .....

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	Cu	Pb	Zn	Ag	Au	Fe %	Mn	Ba
	50900N	NORTHING	EASTING	GRID EASTING															
62638	60700E				3.0	GYBM		✓	✓	✓	WE	15	25	15	X		0.13	10	152
39	675				3.0	GYBM		✓	✓	✓	WE	10	X	10	X		0.12	10	63
62640	650				6.4	BLGY	✓	✓	✓	✓	WE	15	365	350	1.5		1.70	115	82
41	625				6.8	BLGY		✓	✓	✓	WE	15	225	135	X		0.47	115	40
42	60600				4.0	BLGY		✓	✓	✓	WE	10	330	105	X		0.46	90	X
43	575				7.2	BLGY		✓	✓	✓	WE	15	241	165	X		0.98	125	41
44	550				1.8	LTGY		✓	✓	✓	WE	20	35	45	X		1.35	125	239
45	525				7.6	LTGY	✓	✓	✓	✓	WE	20	35	30	X		1.80	210	172
46	60500				10.7	LTGY		✓	✓	✓	WE	15	30	30	X		0.42	145	57
47	475				17.8	DKGY	✓	✓	✓	✓	WE	25	40	35	X		1.70	70	533
48	450				7.2	GY	✓	✓	✓	✓	WE	15	35	30	X		0.67	100	85
49	425				11.0	GY	✓	✓	✓	✓	WE	20	30	35	X		1.65	230	183
62650	60400				3.4	GY		✓	✓	✓	WE	10	25	35	X		0.38	90	27
51	375				16.0	GY		✓	✓	✓	WE	10	30	35	X		0.44	95	25
52	350				3.8	BR		✓	✓	✓	WE	20	25	295	X		2.15	15	176
62653	60325				7.8	DKGY	✓	✓	✓	✓	WE	25	225	830	X		4.10	95	462

APPENDIX D.

SIROTEM Results.



165

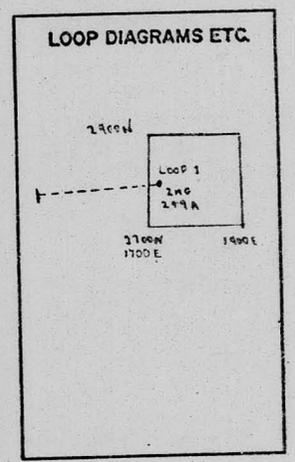
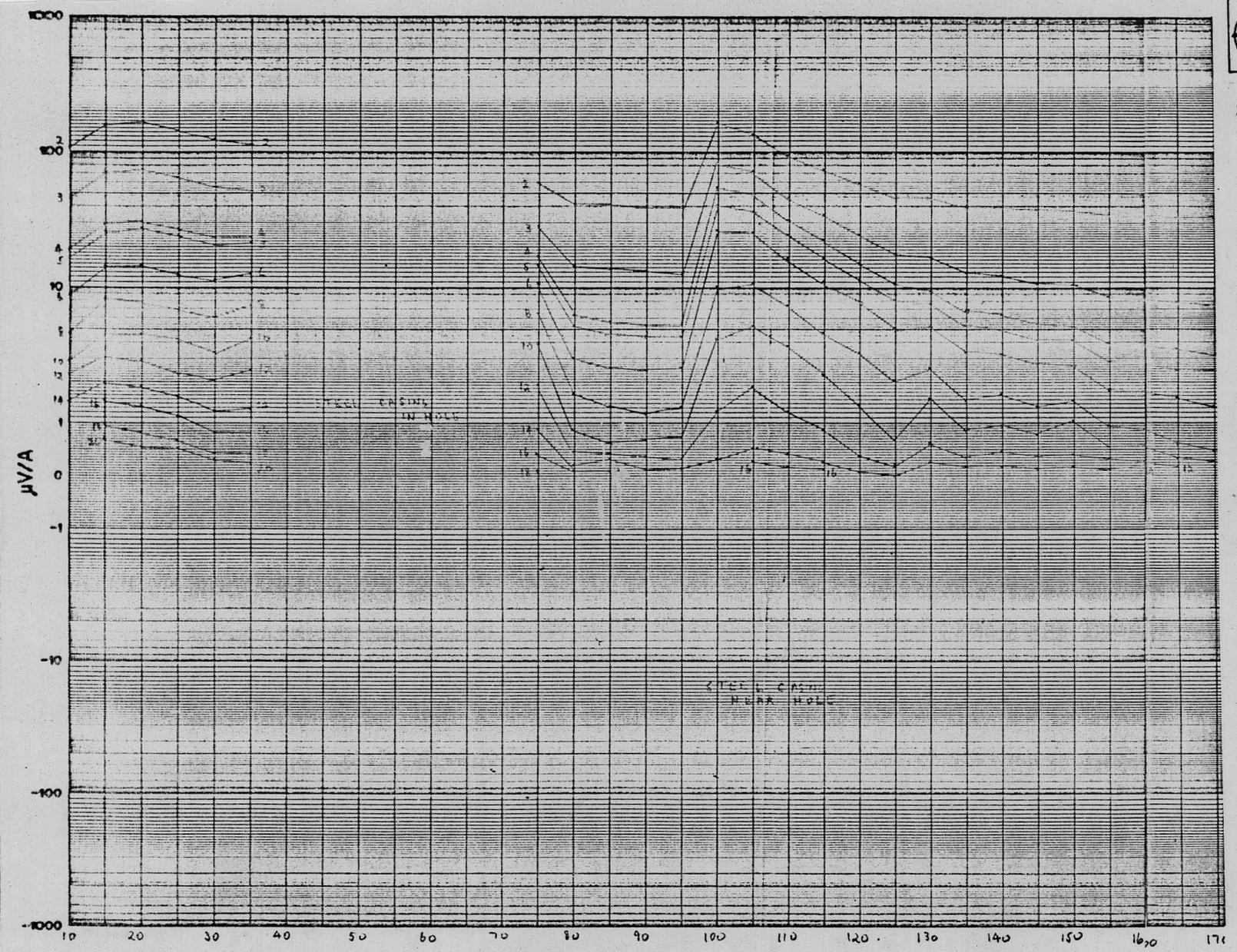
### SIROTEM SURVEY

CLIENT E.P. EXPLORATION  
 AREA ZEEHAN  
 LINE NO ZMG 299A LOOP 1

LOOP CONFIG DOWNHOLE  
 LOOP DIMENSION 200m

STATION INTERVAL 5m  
 STACKS 512  
 SFERICS D.F.F.  
 INST. SERIAL NO 1236

OPERATOR P. MCKIMMING  
 DATE 4-6-84



352166



166

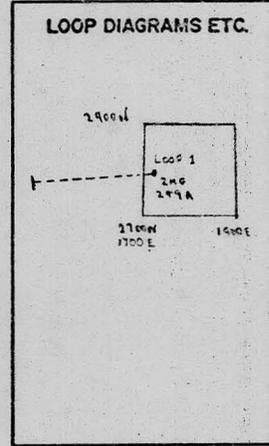
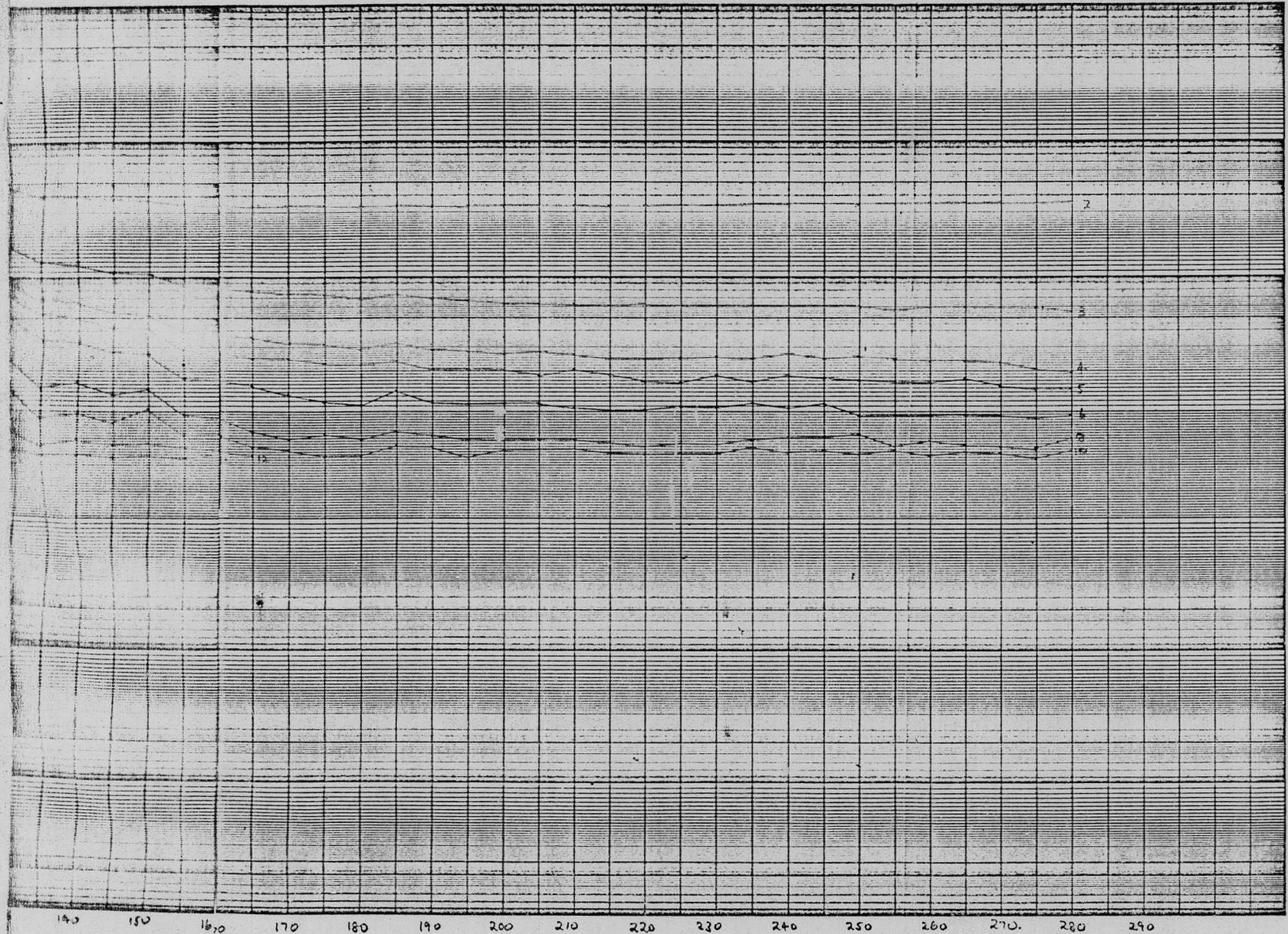
### SIROTEM SURVEY

CLIENT E.Z. EXPLORATION  
 AREA ZEEHAN  
 LINE NO ZMG 249A LOOP 1

LOOP CONFIG DOWNHOLE  
 LOOP DIMENSION 200m

STATION INTERVAL 5m  
 STACKS 512  
 SPHERICS OFF  
 INST. SERIAL NO 1236

OPERATOR P. MISKIMMING  
 DATE 4-6-84



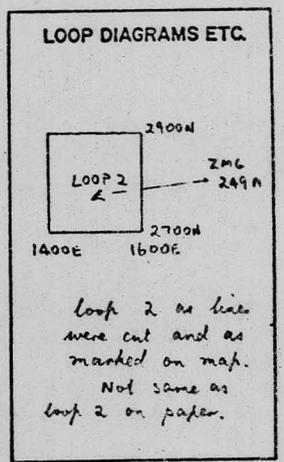
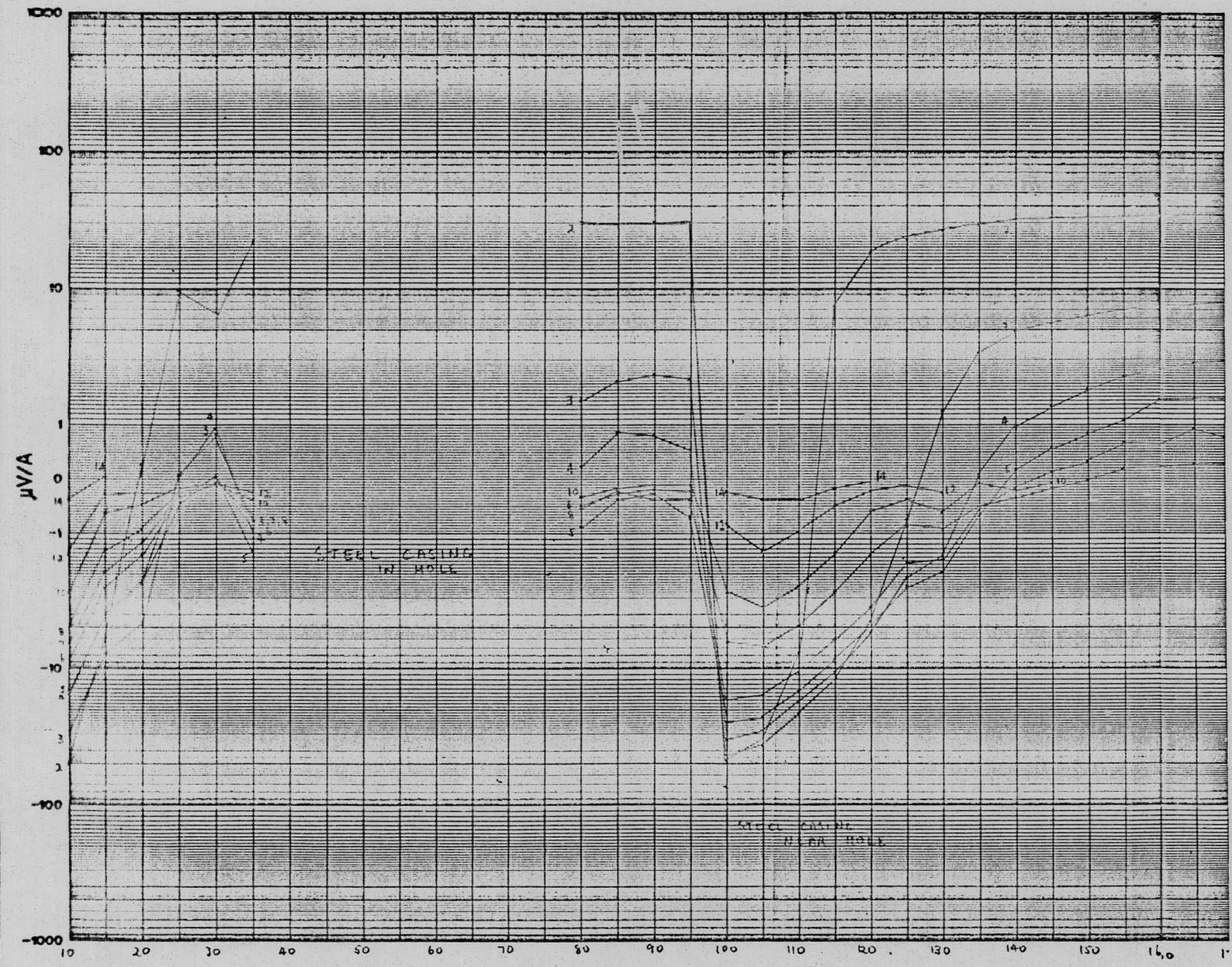
352167



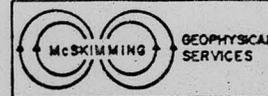
167

### SIROTEM SURVEY

CLIENT E. Z. EXPLORATION  
 AREA ZEEHAN  
 LINE NO ZMG 249 A  
 LOOP CONFIG DOWNHOLE  
 LOOP DIMENSION 200m  
 STATION INTERVAL 5m  
 STACKS 512  
 SFERICS OFF  
 INST. SERIAL NO 1235  
 OPERATOR P. MCKIMMING  
 DATE 4-6-94



32268



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# SIROTEM SURVEY

CLIENT E. Z. EXPLORATION

AREA ZEEHAN

LINE NO ZMG 249 A

LOOP CONFIG DOWNHOLE

LOOP DIMENSION 200m

STATION INTERVAL 5m

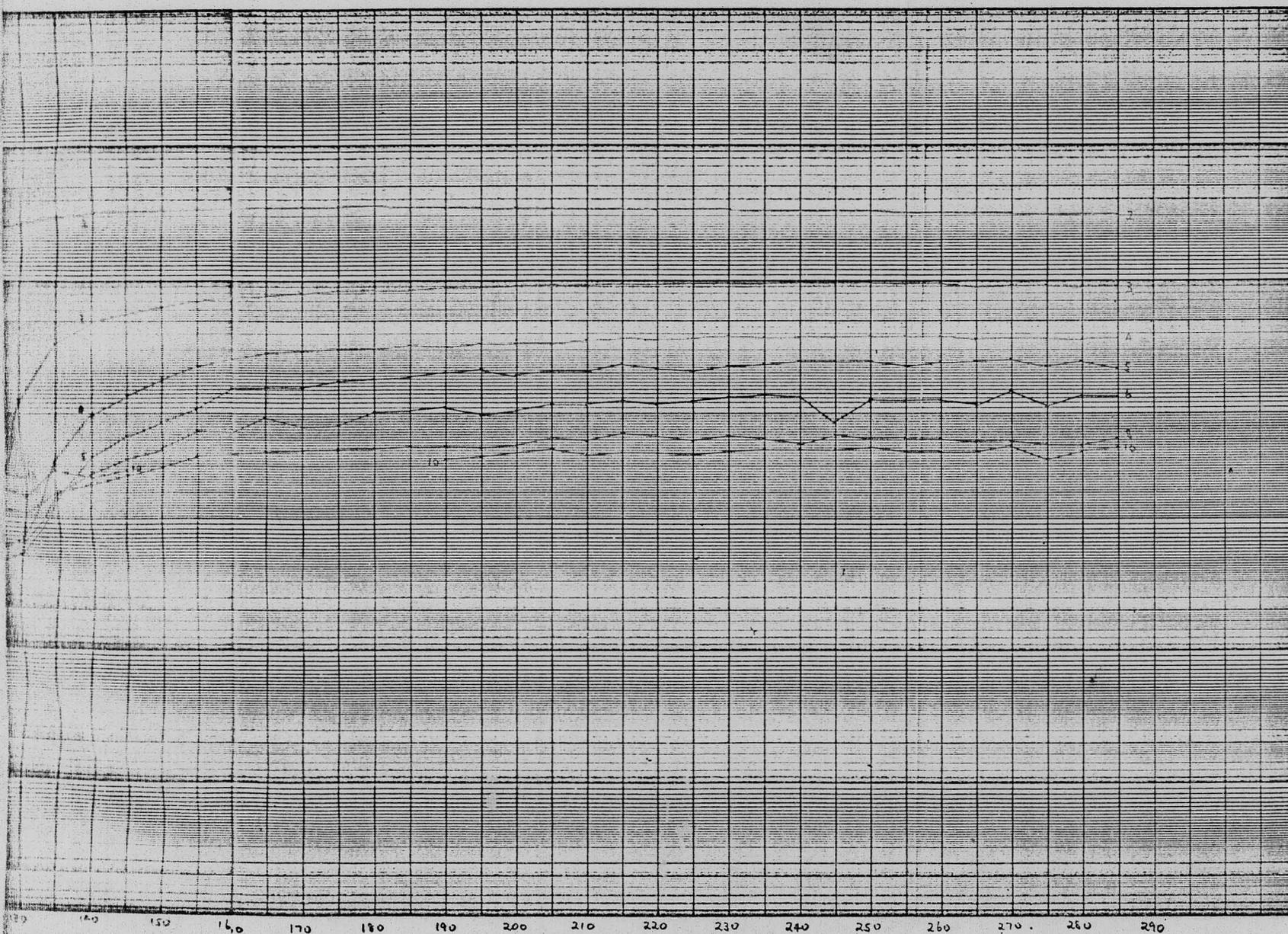
STACKS 512

SFERICS OFF

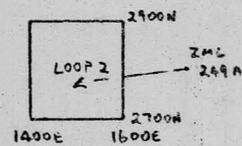
INST. SERIAL NO 1326

OPERATOR P. McSKIMMING

DATE 4-6-80



### LOOP DIAGRAMS ETC.



loop 2 as lines  
were cut and as  
marked on map.  
Not same as  
loop 2 on paper.

352169



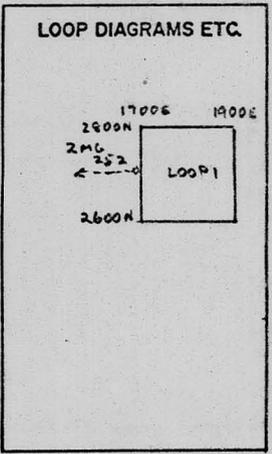
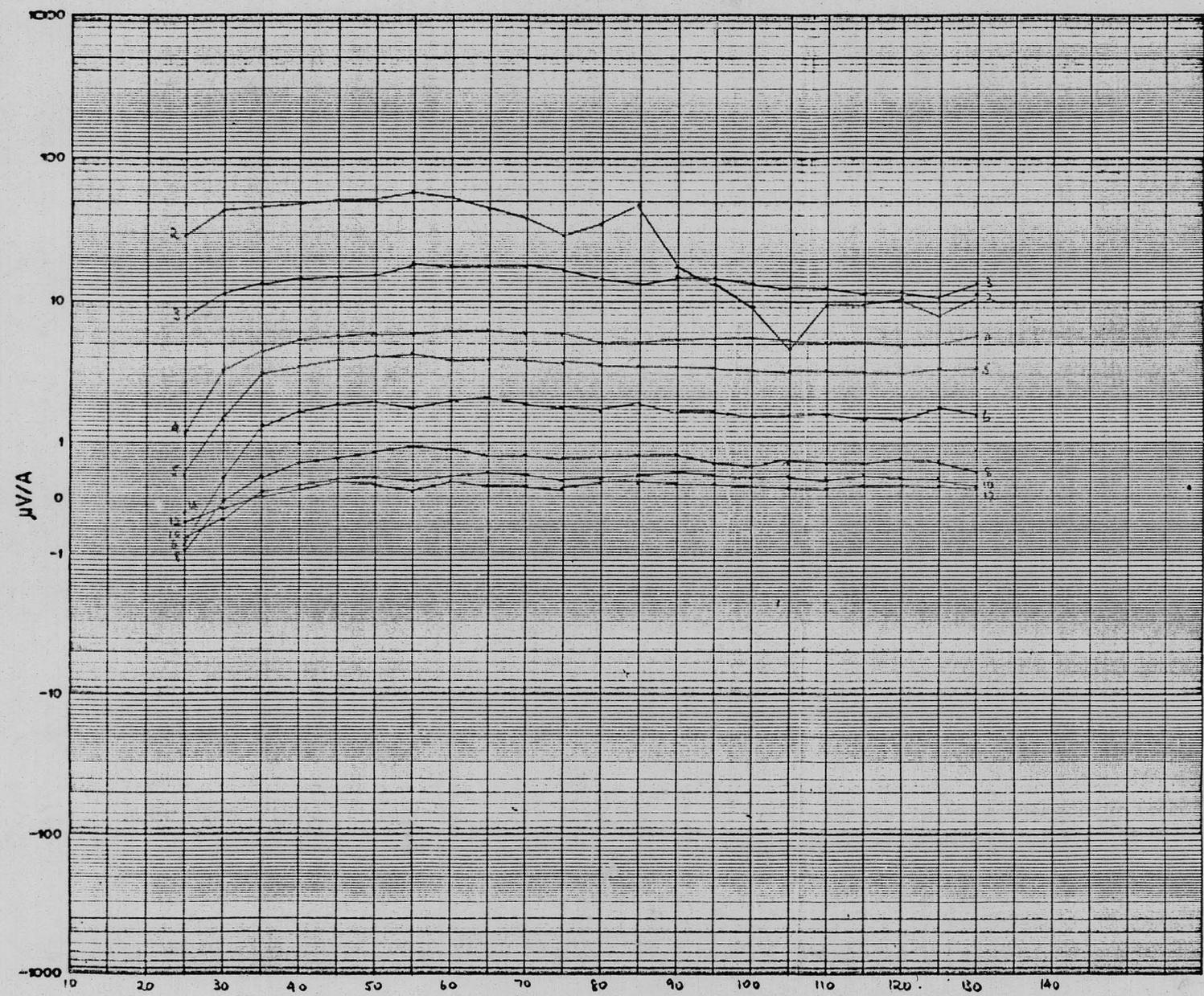
### SIROTEM SURVEY

CLIENT E. Z. EXPLORATION  
AREA ZEEHAN  
LINE NO 2MG-252-6991

LOOP CONFIG DOWNHOLE  
LOOP DIMENSION 200m

STATION INTERVAL 5m  
STACKS 5.12  
SPHERICS OFF  
INST. SERIAL NO 1236

OPERATOR P. McSKIMMING  
DATE 3-6-84





170

### SIROTEM SURVEY

CLIENT E. Z. EXPLORATION

AREA ZEEHAN

LINE NO. ZMG 252 loop 2

LOOP CONFIG. DOWNHOLE

LOOP DIMENSION 200m

STATION INTERVAL 5m

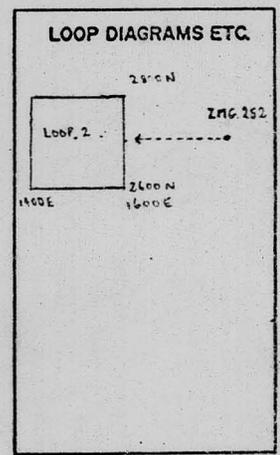
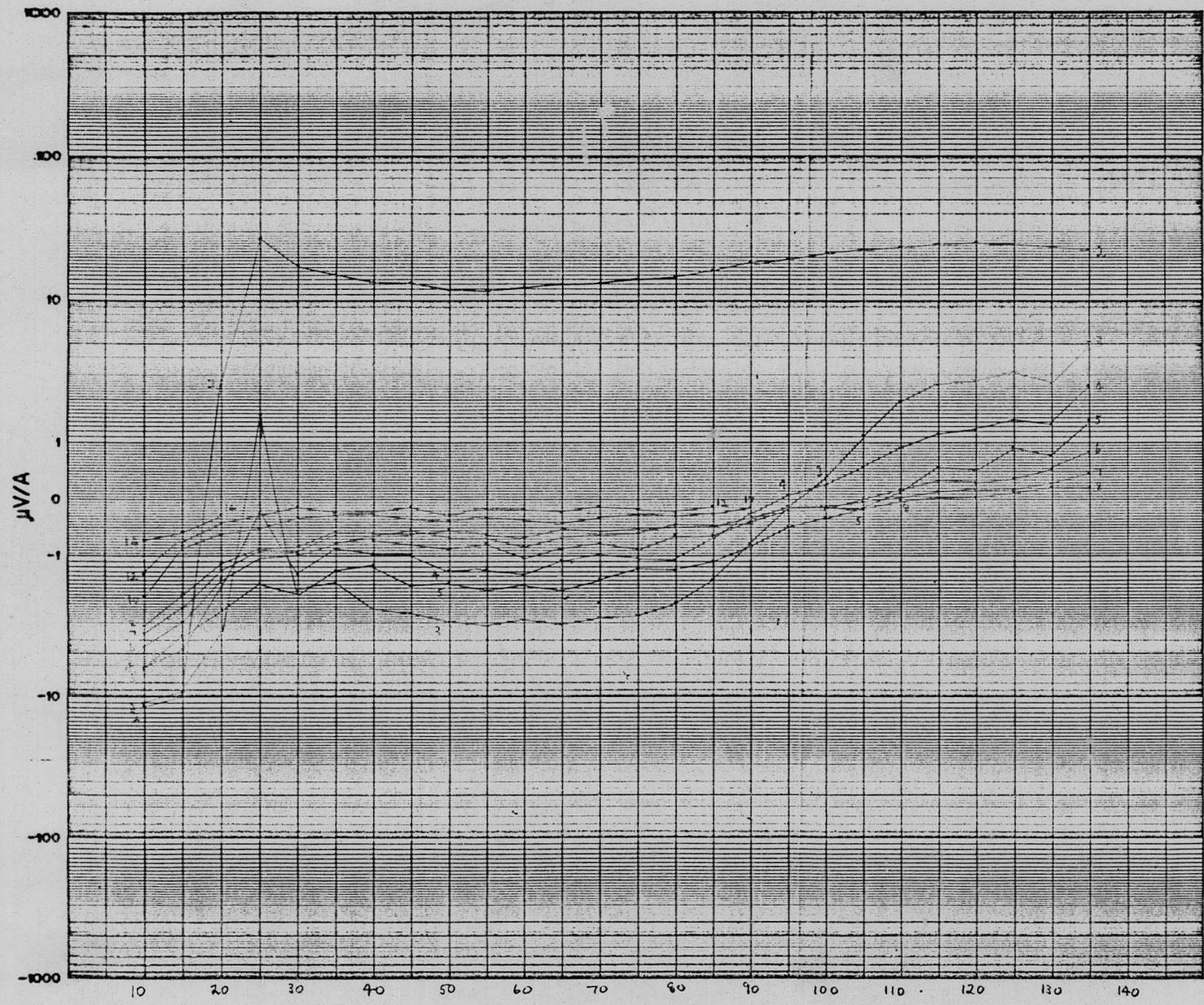
STACKS 512

SFERICS OFF

INST. SERIAL NO. 1236

OPERATOR P. McSKIMMING

DATE 4-6-84



352171



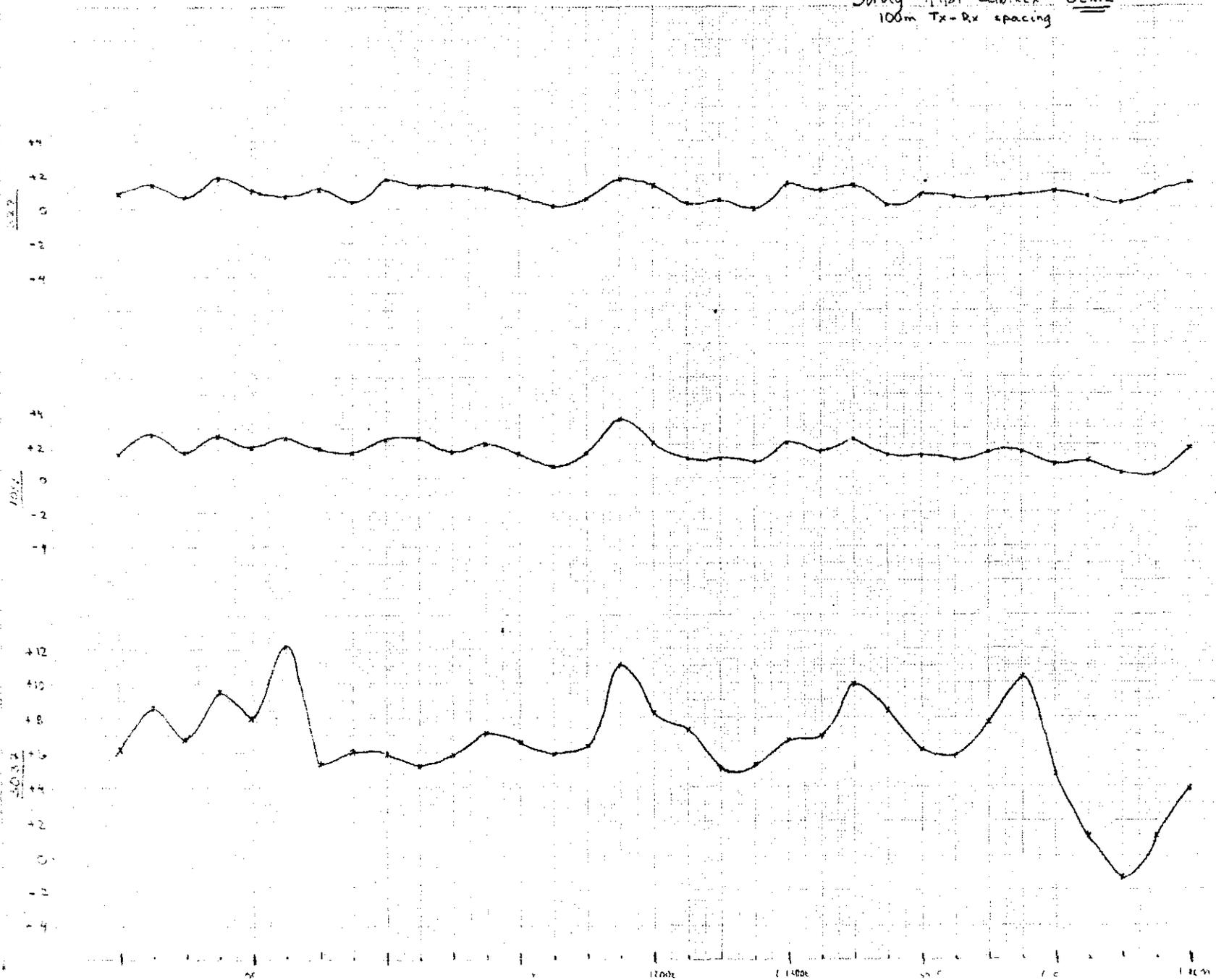


APPENDIX E.

GENIE - Profiles.

Survey 1/4/84 SCINTREX GENIE  
100m Tx-Rx spacing

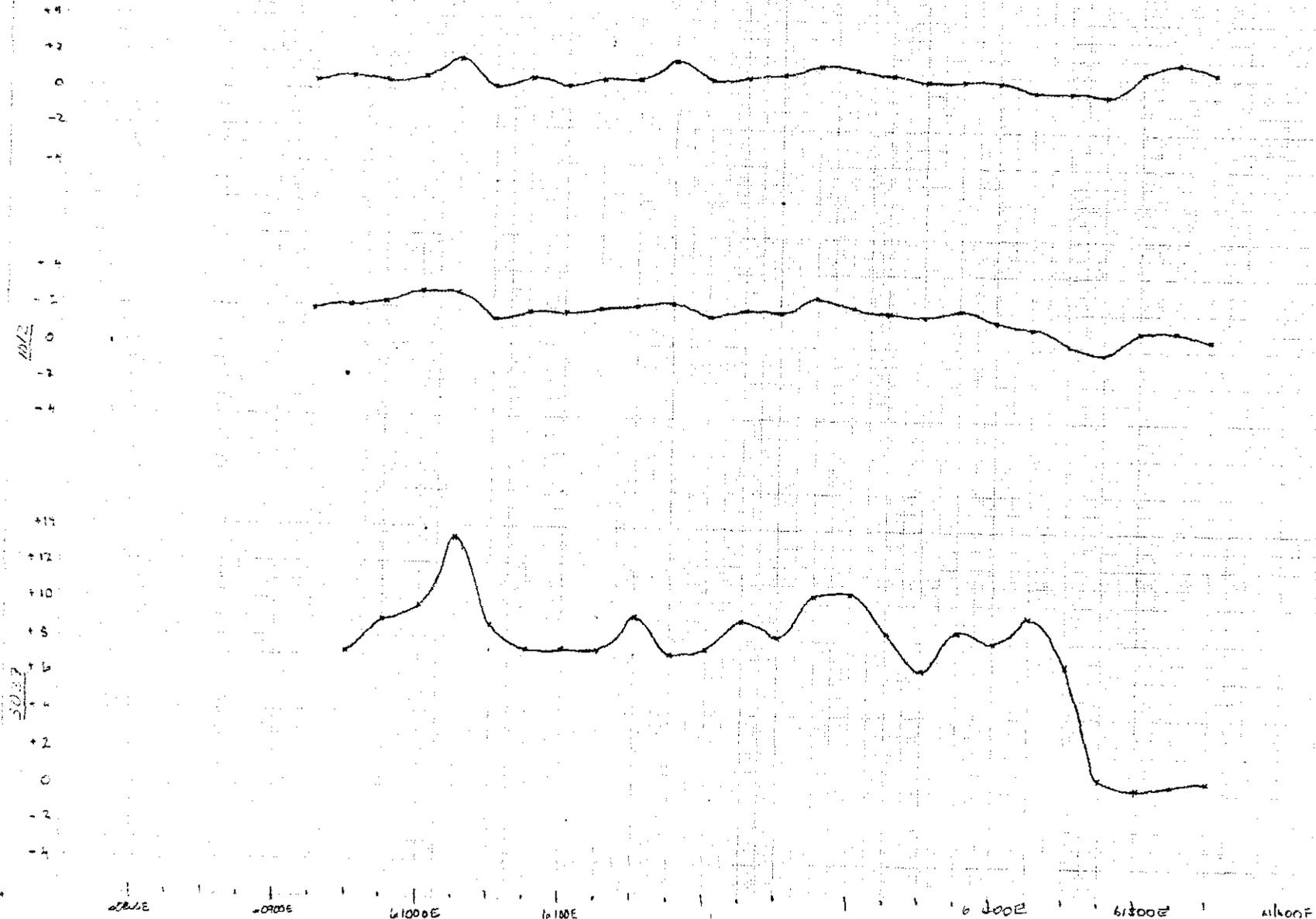
1.46902A



Survey 1/4/84 SCINTREX  
100 m Tx-Rx spacing

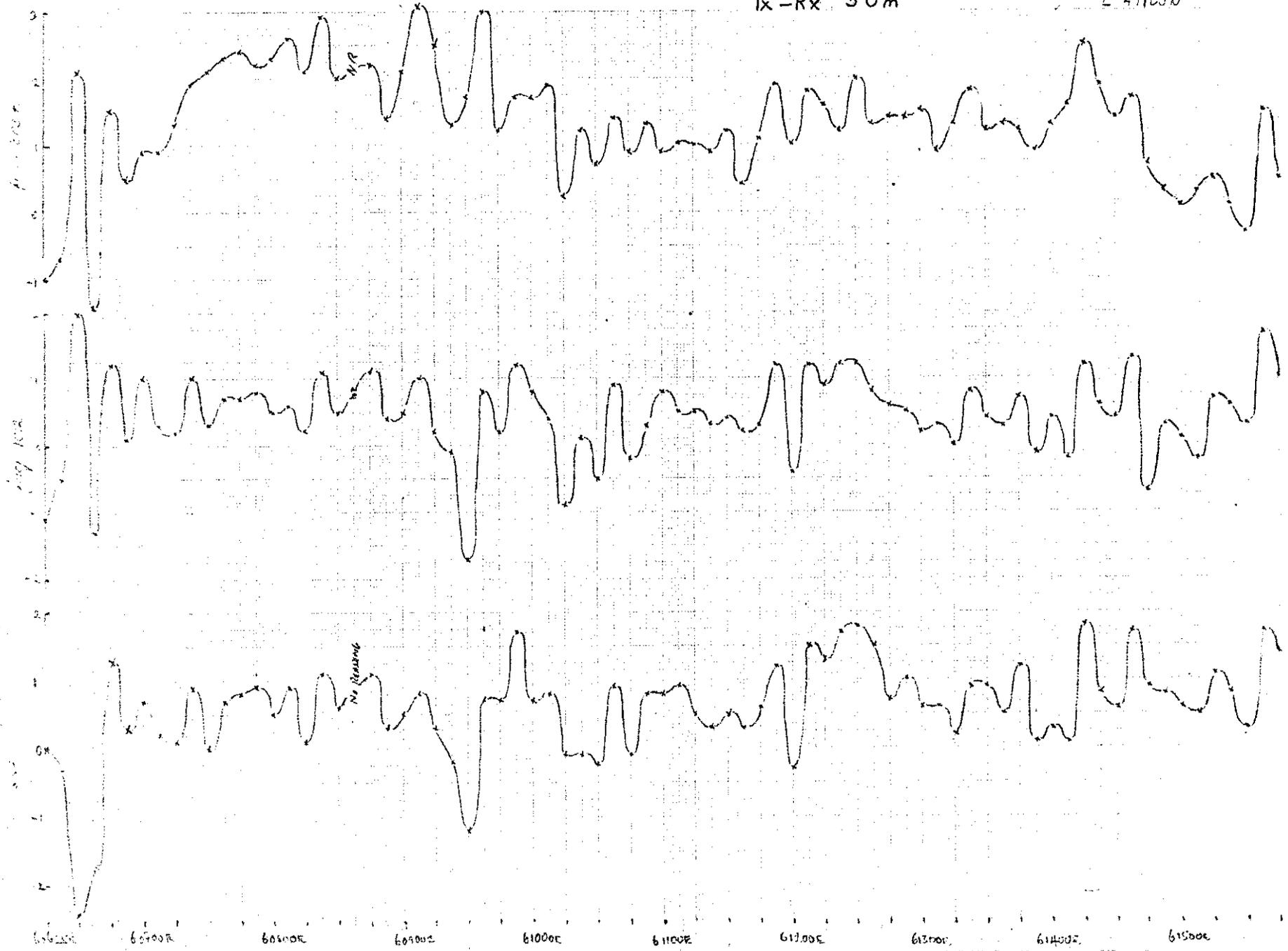
GENIE

L 47100N

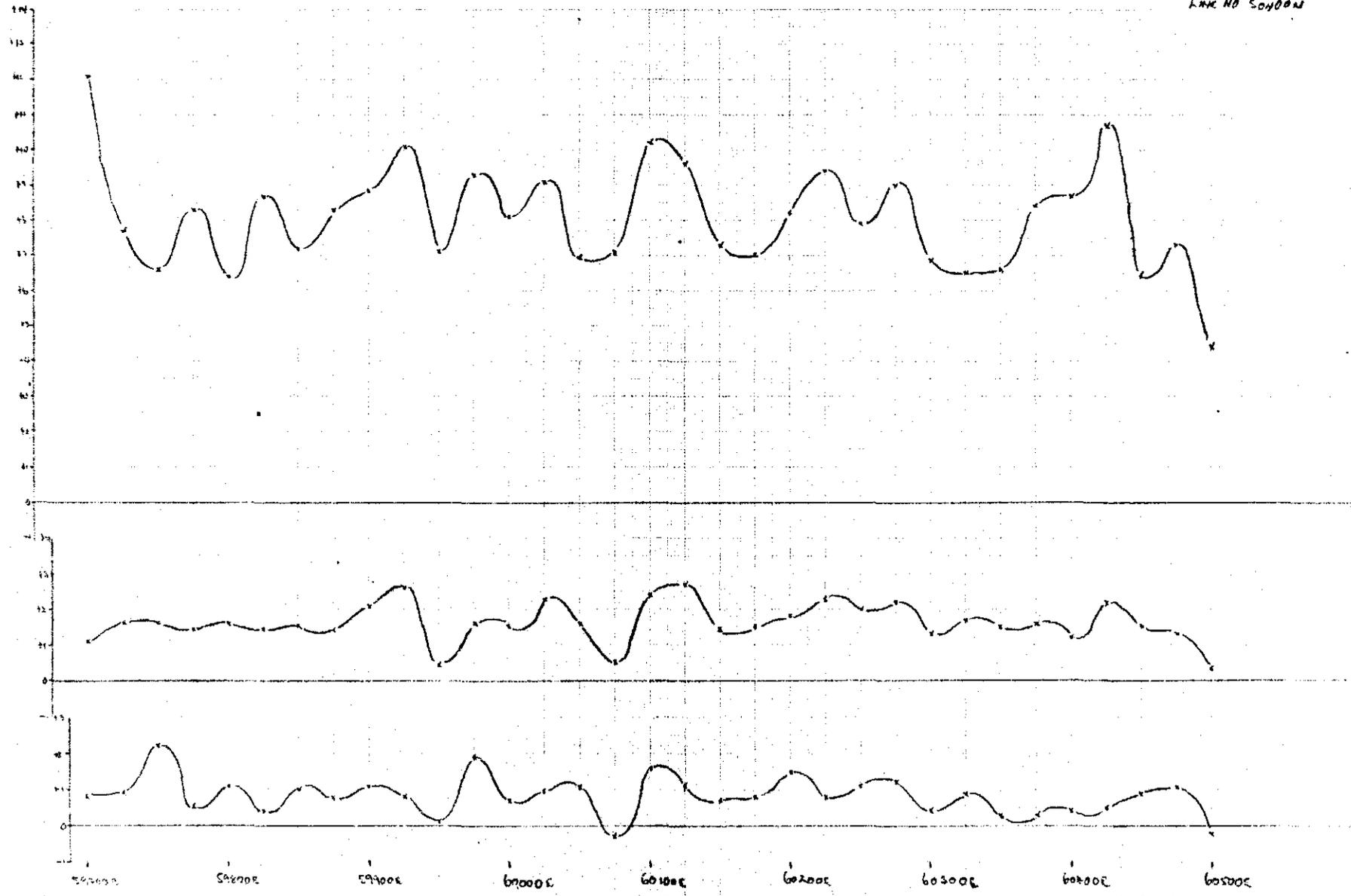


Tx - Rx 50m

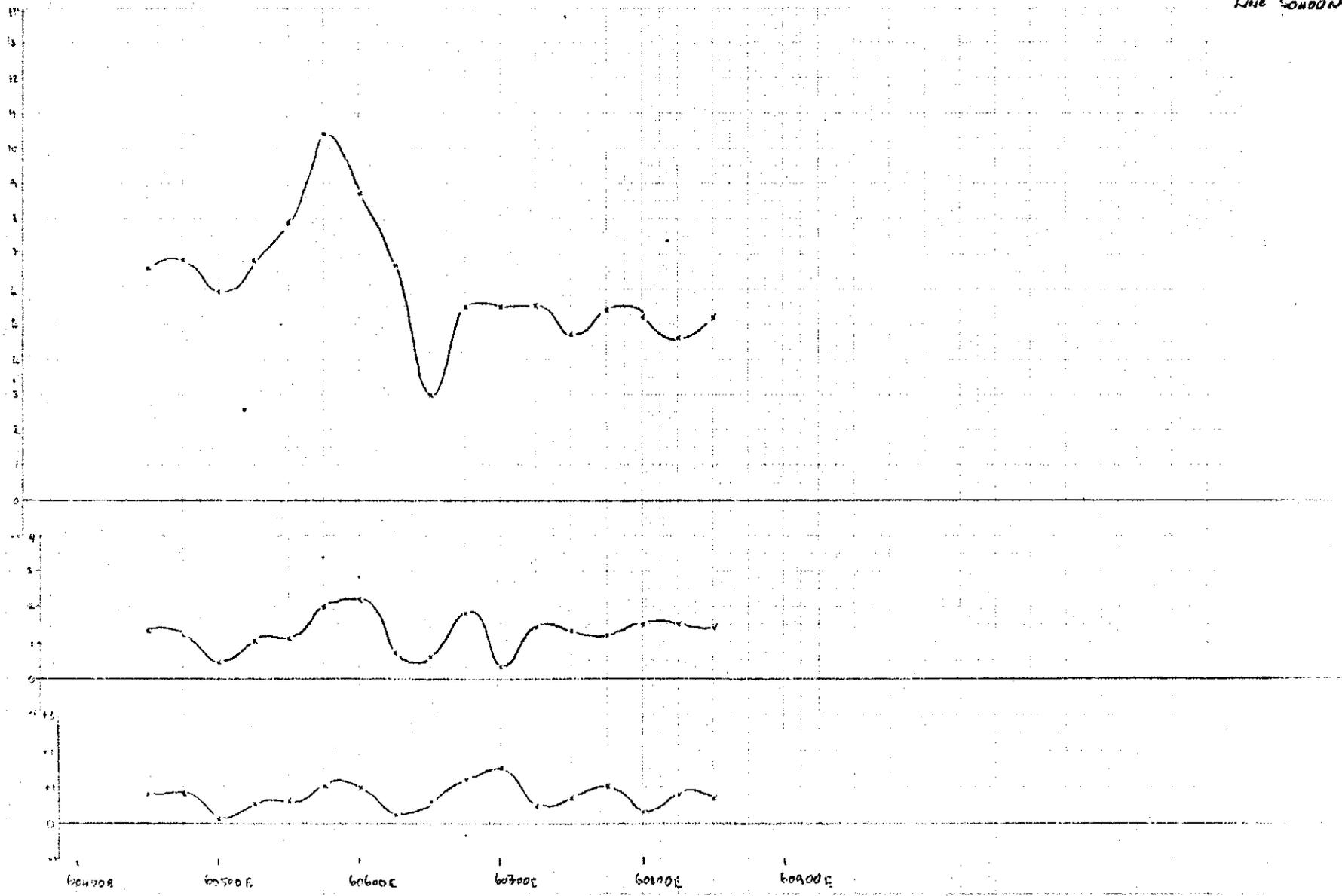
L 47100N

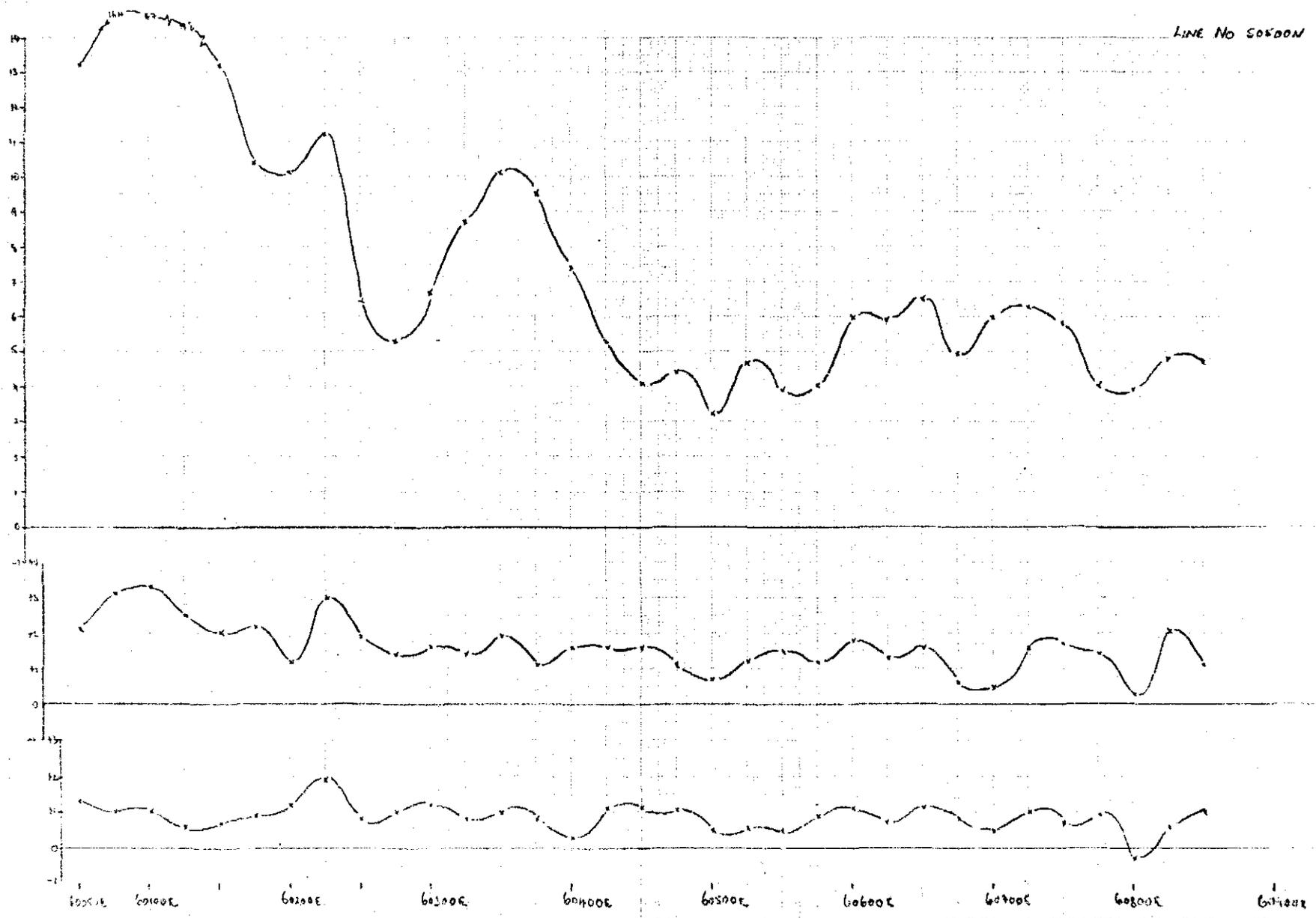


LINK NO 50400W

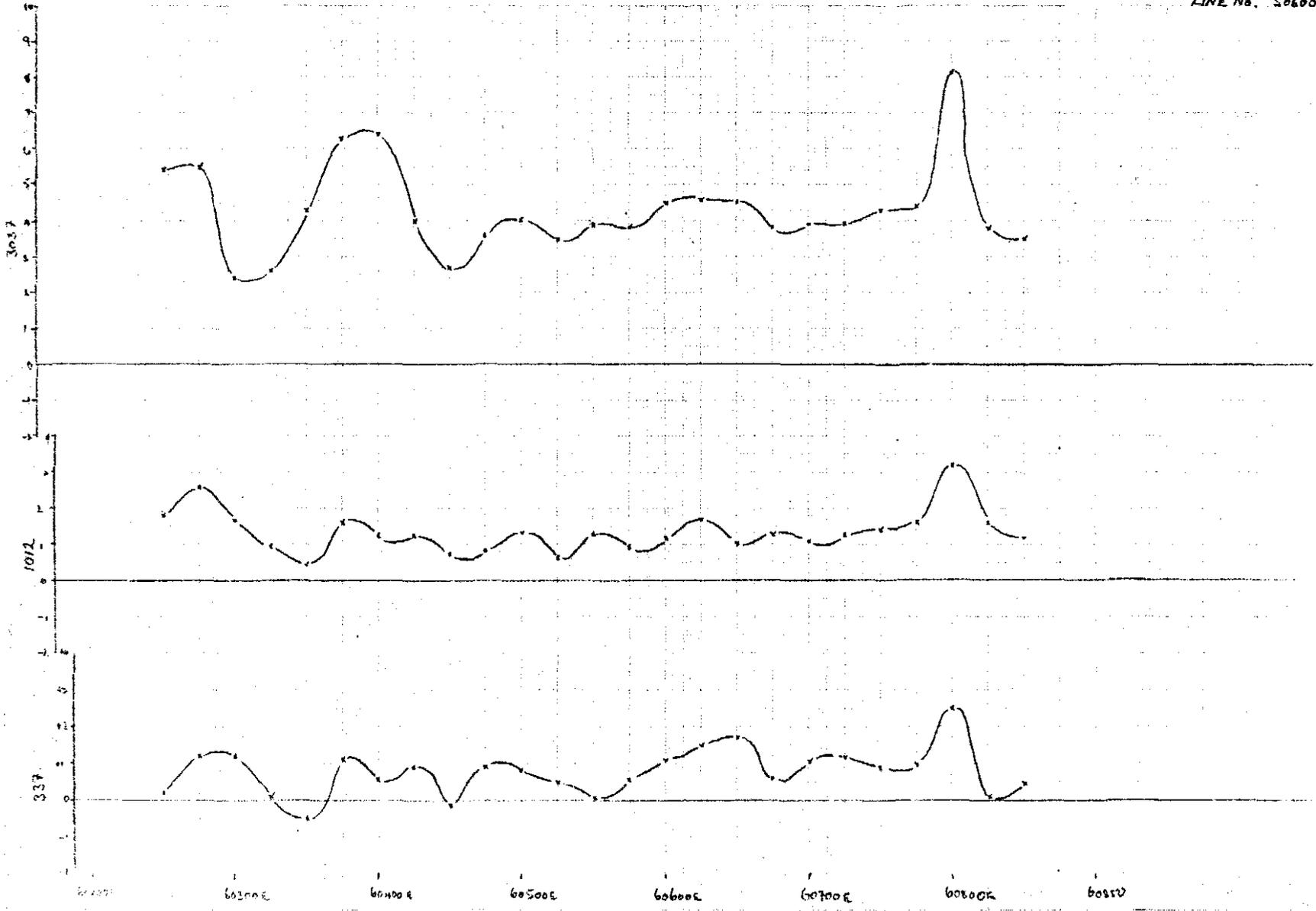


LINE 5000N

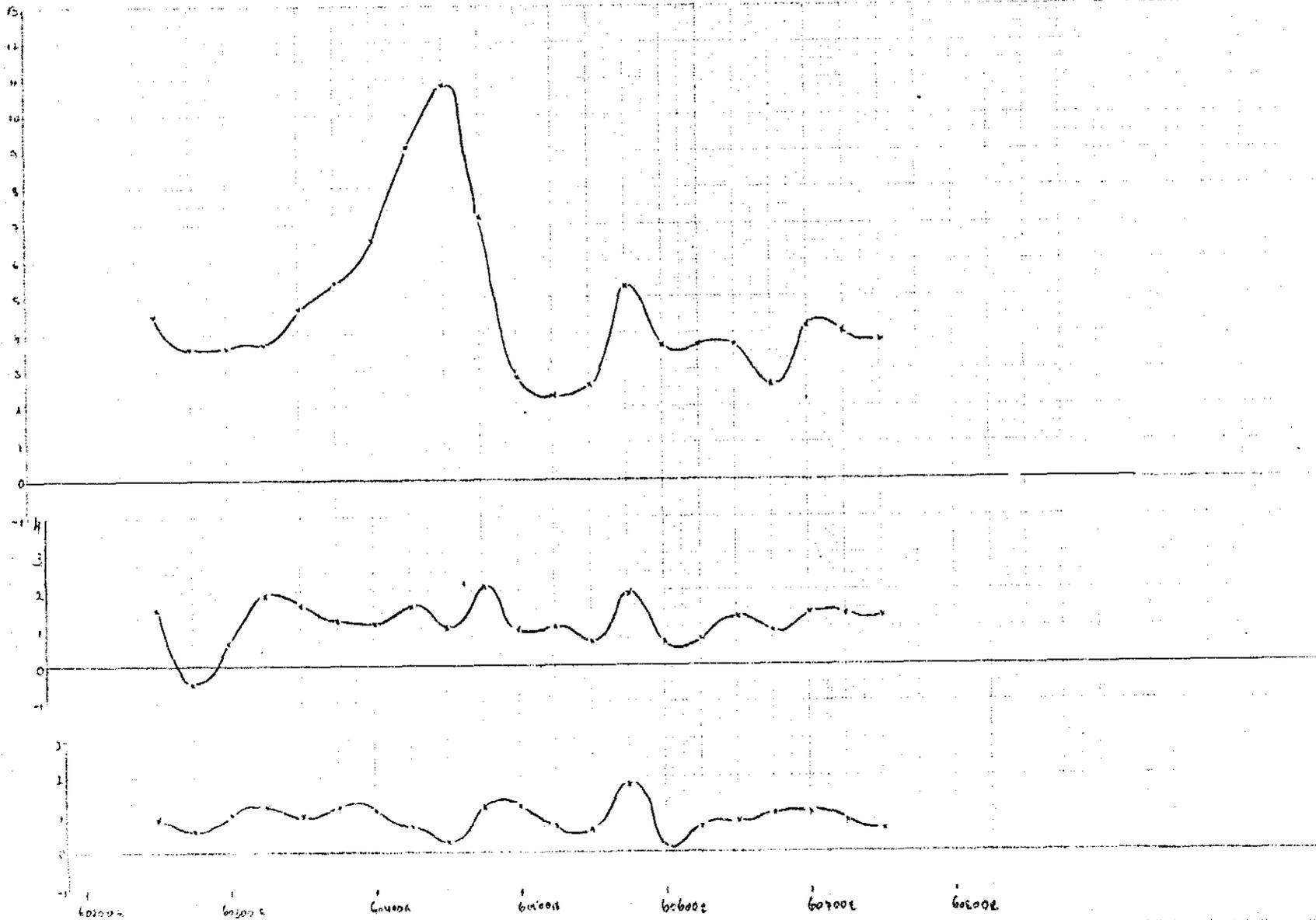


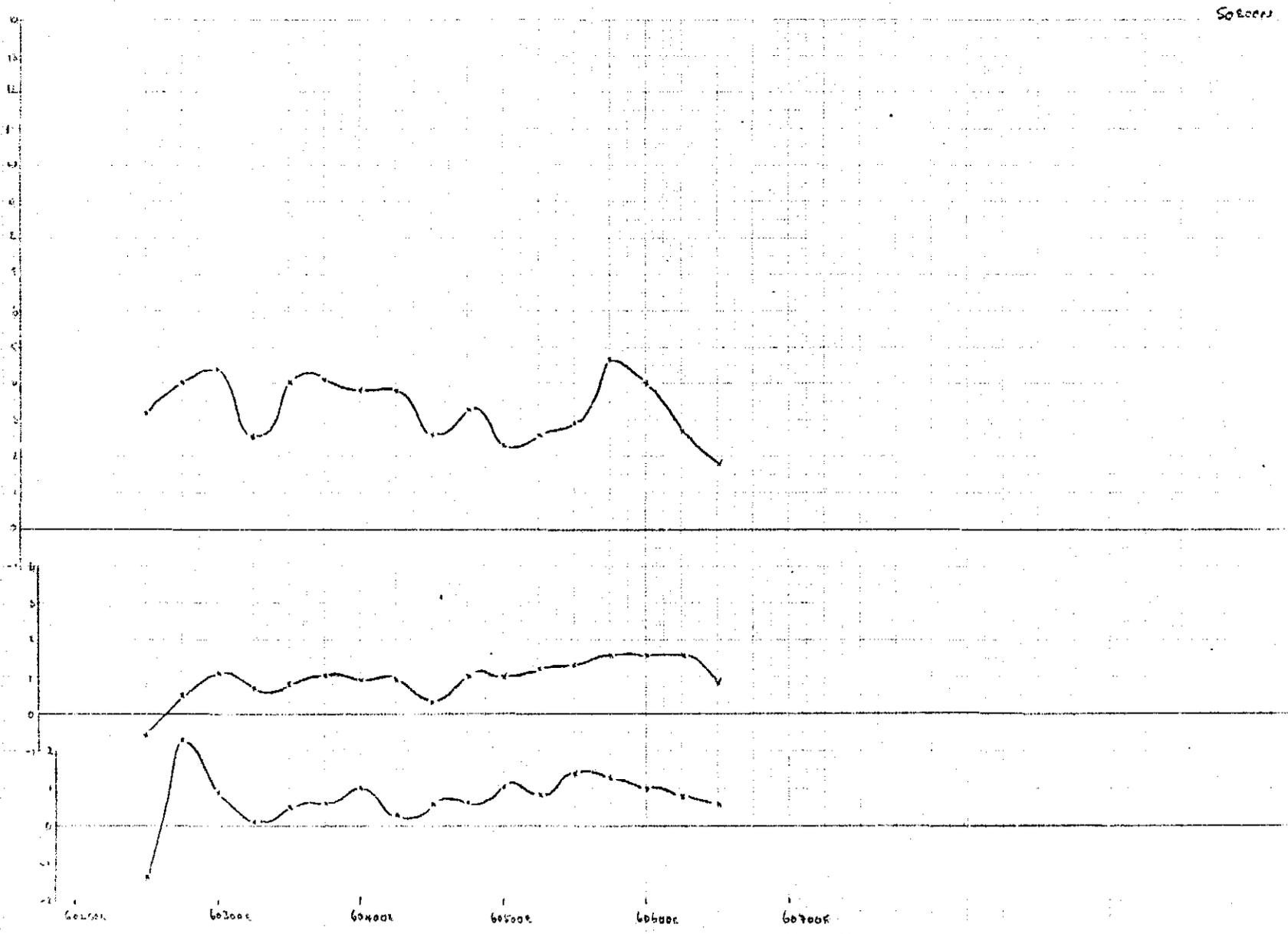


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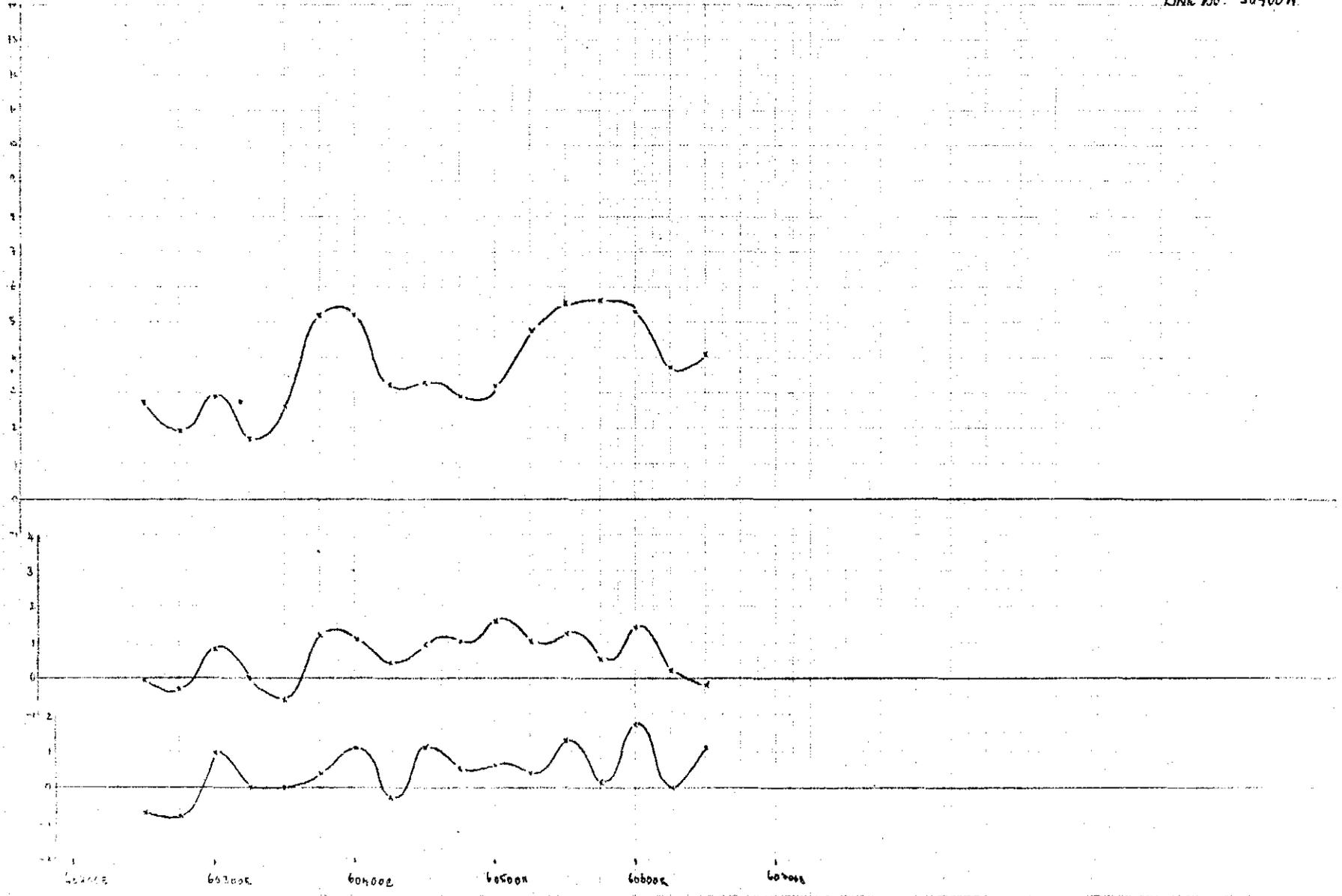


50700W.



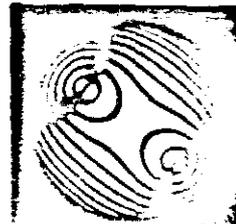


LINE NO. 50900 H.



APPENDIX F.

Petrology.



# Central Mineralogical Services

DOC	PROV	PLANT SUPP.	CMS
DATE	17 FEB 1984		
MCT	ENG	GEOL.	INDUSTRY

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

15th February, 1984

## REPORT CMS 84/1/15

YOUR REFERENCE:           Order No. 900480  
                                   Order No. 900479

DATE RECEIVED:            16th January, 1984

SAMPLE NOS.:               13 Samples

SUBMITTED BY:             I.J. Mathison

WORK REQUESTED:         Petrology

*H.W. Fander*

H.W. Fander, M. Sc.

REPORT CMS 84/1/15

186

Thirteen rock samples of Gordon Limestone, in two groups (Bubb's Hill and Zeehan), were received for petrological examination. Representative thin-sections were prepared, examined in transmitted light and, together with respective offcuts, in oblique incident light. Attached brief tabulated petrological descriptions incorporate microscopic data, results of carbonate staining tests, and include interpretative comments.

Summary

With minor exceptions, this suite comprises variably dolomitised limestones with relict characteristics typical of the Gordon Limestone.

The Bubb's Hill suite comprises weakly laminated non- or incipiently fossiliferous limestones, typically impure (weakly argillaceous, pyritic, carbonaceous) and variously massive (59403, 59417) to ?annelid-burrowed (59418) or slumped (59419). This group includes a single dolomitised limestone breccia or clastic limestone (59413) and, overall, reflects a relatively distal quiet water facies and an inferred intermediate depth sedimentary environment. Fossils are represented only by minor fragmented bryozoan and bivalve components in 59418.

In contrast, the Zeehan suite is characterised by a variety of clastic limestones with laminated impure types, analogous to those at Bubb's Hill represented only by samples 59006 and 59022. The breccias include strongly (tabulate coralline, bryozoan, bivalve) fossiliferous (59009), oolitic (59031), and coarser, lithic, calciruditic types (59020, 59030, 59032 and 59033 in part). These rocks reflect a relatively shallow marginal biohermal to bank-type, medium to high energy depositional environment.

Sample 59033 is an altered (silicified) polymict conglomerate, notably quartzose and with an uncertain limestone clast component due to alteration effects. This rock is of uncertain affinities stratigraphically, but may correlate with calcirudites (coralline in part) developed in some of the North West Coast Gordon Limestone sequence.

Both suites exhibit analogous alteration patterns characterised by dolomitisation. This is marked, initially by varying degrees of replacement of the primary microcrystalline (micritic) calcite by fine-grained sparry dolomite (strictly dolomite-ankerite). Several rocks exhibit subsequent development of coarser-grained dolomite, or elsewhere similarly textured, weakly ferroan calcite, as vug-fillings, veins and marginally corrosive to replacive aggregates, and this phase is locally accompanied by pale sphalerite. Isolated examples of temporally late calcite veins are related, at least in part, to a weak and non-penetrative stress event locally reflected in incipient slaty cleavage development in impure (argillaceous) limestones. Some rocks, notably fault-proximal types, exhibit marked and pervasive silicification with minor associated clays (kaolin) and traces of colourless tourmaline.

The following sequence of alteration phenomena may be defined by consideration of the total suite of rocks:

1. Initial partial to complete replacement of micritic calcite by fine sparry ferroan dolomite. Where replacive (the norm), this phase is grey in hand specimen due to "inherited" carbonaceous stainings.
2. Development of medium-grained ferroan dolomite in veins, vugs, replacements. This phase is similarly grey where replacive, but is clear (white in hand specimen) in vugs, veins, etc.

Individual rocks exhibit calcite vein development as a variant of, and apparently contemporaneous with, the second generation of dolomite. Minor quartz may be associated; similarly, disseminations of pale sphalerite.

3. Stylolite development.
4. Weak stress effects with minor associated calcite veins (crosscutting stylolites).
5. Fault-related silicification.

Phase 2 dolomite (or calcite-quartz) assemblages appear dependant on Phase 1 dolomitisation in that Phase 2 assemblages tend to occur as cavity- or fracture-fillings, suggesting the potential volume reduction accompanying dolomitisation as a probable spatial control. The pre-stylolite nature of Phases 1 and 2 defines these as diagenetic in terms of temporal relationships. General features may be compared with alteration patterns for example in broadly Mississippi Valley-type Pb-Zn occurrences on the Lennard Shelf (W.A.) and in the Gippsland area (Victoria) and contrasted with the Zeehan-type Pb-Ag(-Zn) vein mineralisation.

D. Cowan, B. Sc.

Location	Sample No.	Classification - Composition	Fabric	Accessories	CENTRAL MINERALOGICAL SERVICES Comments
Bugs Hill	59403 (T.S. 48760)	"Dolomite". Sparry dolomite-ankerite with minor intergranular and included clay. Sporadic veinlets, small vugs of coarser-grained carbonate with minor associated quartz, late films of calcite.	Faintly laminated (relict bedding), with concordant veins, vugs. Even-grained (mean 100 $\mu$ ).	Traces of ultrafine carbonaceous matter, minor clots, bedding-related disseminations partly oxidised very fine.	Dolomitised impure (weakly carbonaceous, argillaceous, pyritic) limestone. Whitish veins, vugs are infilled solution cavities. Non-fossiliferous.
	59413	Mineralised Breccia. Clasts of weakly (oxidised) pyritic carbonaceous dolomite (similar to 59403), cemented with medium-grained dolomite-ankerite and coarse sparry carbonate with associated coarse semi-massive	Clasts analogous to 59403, similarly carbonate-veined/vugged. Coarsely crystalline matrix.	Minor patches, films of cloudy secondary sphalerite-replacive smithsonite.	Relatively medium-grained, dolomite-veined carbonate (dolomitised impure limestone) rock, brecciated, carbonate-sphalerite-healed.
"	59417	"Dolomite". Sparry pale sphalerite. dolomite-ankerite with minor intergrown quartz, thinly disseminated fine to ultrafine pyrite, minor carbonaceous matter, sparse dolomite-quartz veinlets.	Even-grained (mean 60 $\mu$ to 70 $\mu$ ) with mildly deformed relict bedding laminations, weakly stylolitic.	Traces clay, intergranular and included in dolomite. Minor fine-scale carbonate vugs. Rare detrital zircon.	Close affinities with 59403. Slightly relatively carbonaceous and pyritic. Quartz is partly corroded and of authigenic character.
"	59418	Dolomitic Limestone. Semi-porcellanous, slightly argillaceous limestone with irregular to ovoid zones of sparry dolomite. Sporadic dolomite veinlets, disseminated carbonaceous, argillaceous stylolites.	Weakly laminated, weakly bivalve-bryozoan-fossiliferous limestone with dolomitised argillaceous zones.	Traces fine pyrite in dolomitised zones, ultrafine pyrite in host limestone. Minor late (post-stylolite) calcite veinlets.	Dolomitised zones relatively argillaceous, apparently represent annelid burrows, partly segmented by stylolitisation and weak subsequent shearing.
"	59419	Dolomitic Limestone. Semi-porcellanous, massive to weakly quartzose-silty limestone with irregular zones of slightly coarser-grained limestone, extensively replaced by sparry dolomite; marginally disseminated	Mildly sheared. Slump breccia-like (?bioturbated) with rafts of silty limestone in massive limestone matrix.	Pervasive traces carbonaceous matter, minor traces fine to ultrafine pyrite, minor dolomite veinlets.	Affinities with 59418. In contrast, selective dolomitisation appears related to (rafted) relatively slightly coarser-grained interbeds rather than burrows. Non-fossiliferous.
GRIEVES 48500N 61100E	59006	Siderite Rock. Microcrystalline to semi-porcellanous sideritic carbonate with minor vugs, veinlets of coarser-grained carbonate; minor carbonaceous matter.	Essentially massive, homogeneous. Relict contorted to brecciated bedding laminations defined by carbonaceous matter.	Rare carbonaceous stylolites.	Interpreted as sideritised impure limestone or limestone breccia; "secondary" characteristics. Siderite (confirmed by XRD) may include a smithsonite component.
Rose Valley 43200N 60950E	59009	Dolomitic Limestone. Microcrystalline to semi-porcellanous calcite with sporadic irregular zones, films of fine sparry dolomite. Frequent vugs, minor crosscutting veinlets of medium-grained calcite.	Strongly fossiliferous, massive to breccia-like with cavity-filling to replacive dolomite, marginally corroded by calcite.	Sporadic carbonaceous stylolites, minor silt-sized clastic quartz. Minor secondary quartz traces pyrite.	Tabulate coralline limestone/limestone breccia with interclast and replacive dolomite predating calcite (+ quartz) segregations; stylolites and late crosscutting calcite veins.
Myrtle 49530N 60275E	59020	Silicified Breccia. Fine to microcrystalline quartz with minor included and intergrown kaolin. Sporadic small vugs, late veinlets of coarser quartz with recrystallized chalcedonic selvages.	Relict breccia textures with silicified millimetric clasts, vuggy matrix. Rare zones of pseudomorphed fine sparry carbonate.	Minor traces colourless tourmaline, partly bleached carbonaceous matter, carbonaceous stylolites.	Thoroughly silicified impure limestone breccia. Relict features consistent with partial dolomitisation, stylolite development postdating brecciation.

Location	Sample No.	Classification - Composition	Fabric	Accessories	CENTRAL MINERALOGICAL SERVICES Comments
Myrtle 49770 N 60240 E	59022	Impure Limestone. Microcrystalline calcite with minor closely intergrown sericite. Frequent boudinaged diagenetic calcite veinlets. Minor clots of fine sparry dolomite. Sparse bivalve shell fragments. Pervasive carbonaceous matter.	Schistose on a micro-scale with minor boudinaged bedding in relatively calcite-veined areas.	Minor traces of fine to ultrafine pyrite.	Argillaceous, carbonaceous, weakly pyritic impure limestone. Incipiently fossiliferous. Diagenetic calcite veining predates incipient dolomitisation. Relatively sheared.
Grieves 4 920 N 61320 E	59030	Dolomitic Breccia. Clasts of sparry dolomite-ankerite rock (dolomitised limestone) with a partly dolomitised microcrystalline impure limestone matrix. Disseminated small-scale vugs of clear sparry dolomite.	Random angular breccia with semi-selectively dolomitised clasts. Weakly (sericitic) stylolitic.	Traces corroded detrital quartz and muscovite flakes in clasts and matrix. Rare microscopic blebs of pale sphalerite.	Intraformational limestone breccia with relatively dolomitised clasts. Sphalerite associated with late vugs of relatively clear dolomite and with sericitic stylolites.
Grieves 47920 N 61340 E	59031	Dolomitised Calcarenite. Relict framework of lithic clasts, oolites, oolite fragments pseudomorphed by fine sparry dolomite-ankerite. Corrosive matrix of medium-grained, granular to sparry ankeritic dolomite.	Loose, weakly bedded, medium-coarse sandy framework, homogeneous matrix.	Traces carbonaceous matter; minor traces oxidised fine-grained pyrite.	Pervasively dolomitised, moderately to well-sorted oolitic calcarenite with marginal bank "clastic limestone" characteristics.
Rose Valley 44600 N 60400 E	59032	Silicified Limestone Breccia. Fine to microcrystalline quartz with varying proportions closely intergrown kaolin; variously pseudomorphous after silt- to pebble-sized, angular to rounded lithic clasts and featureless matrix.	Variable, from coarse, poorly sorted clastic to laminated; pseudomorphed by slightly vuggy quartz.	Disseminated cavities after carbonate rhombs. Traces relict detrital schorl, apatite, secondary colourless tourmaline.	Close affinities with 59020. Relict features consistent with a weakly dolomitised semi-bedded limestone breccia/clastic limestone with accessory detrital components.
Rose Valley 44000 N 60775 E	59033 (T.S. 48772)	Silicified "Breccia". Fine to microcrystalline quartz with minor closely intergrown kaolin. Relict framework of sand- to pebble-sized quartz grains, composites, silicified pelite and psammopelitic clasts. Minor discontinuous quartz veins, vugs.	Relict sand-supported, coarsely bedded, conglomeratic.	Minor traces detrital schorl, zircon, rutile, minor cavities after carbonate rhombs.	Thoroughly silicified polymict conglomerate with an ill-defined (silicified) limestone clast component. Conspicuous relict detrital quartz, psammopelitic clasts in contrast to 59032.

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# Central Mineralogical Services



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30th March, 1984

## REPORT CMS 84/2/9

YOUR REFERENCE:      Order No. 900493  
 DATE RECEIVED:      20th February, 1984  
 SAMPLE NOS.:        16 Samples  
 SUBMITTED BY:      I.J. Mathison  
 WORK REQUESTED:    Petrology

*Handwritten signature: H.W. Fander for*

H.W. Fander, M. Sc.

REPORT CMS 84/2/9

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A suite of sixteen rock and drill core samples was received for petrological examination and comments. Representative thin-sections were prepared, examined in transmitted light and, together with their respective carbonate-stained offcuts, in oblique incident light. Attached tabulated descriptions summarise the microscopic data and include interpretative comments.

Summary

This suite of rocks may be subdivided into groups on the basis of lithology:

Group 1 comprises variably altered impure (carbonaceous, incipiently argillaceous) limestones with typical Gordon Limestone-type characteristics, and includes samples 59363, 59430, 59071, 59072, 59073, 59074 and 59075.

These rocks exhibit relict sedimentary features analogous to those previously noted at Bubbs Hill, but include a higher proportion of fossiliferous, oolitic, oolithic (algal pelletal) and brecciated limestones, consistent with a shallow intermediate depth depositional environment transitional between the "clastic" and "laminated" limestone suites.

Group 2 comprises psammopelitic rocks, variously assigned to basal Silurian, upper Ordovician and "older" sequences in Mathison's notes accompanying the submission. On this basis, two subgroups are recognisable:

Samples 59064 and 59065, identified by Mathison as representing the Crotty Quartzite, are quartzose, micaceous, weakly carbonaceous silty pelites. These two rocks are reasonably grouped with 59066 and 59067 which are similarly quartzose, but include subordinate sand-sized clastic components. This group lacks specific diagnostic features, although isolated occurrences of detrital chromite define these sediments as post-Cambrian.

In contrast, samples 59069, 59070 and 59076, interpreted by Mathison as possible Crimson Creek Formation, exhibit characteristics of the upper Success Creek Group sequence and may be broadly correlated with the Renison Mine sequence on petrological grounds.

Possibly also to be included here is sample 59068, a carbonaceous dolomitic semi-nodular chert of silicified limestone-type character and comparable with some of the silicified dolomites within Success Creek Group. Similarly, sample 59077, a thoroughly altered and thus poorly diagnostic microgabbro, may represent the Cambrian dolerites.

Alteration features are analogous to those previously noted in the Bubbs Hill and Zeehan suites (refer CMS 84/1/15) of Gordon Limestone.

Limestones and, to a relatively minor degree, the associated psammopelites, exhibit partial dolomitisation with patchy associated carbonate (dolomite-ankerite and/or calcite). In comparison with previously examined rocks some of this suite of samples reflect a subsequent phase of sideritic carbonation. This is particularly marked in carbonate rocks where there appears to be a certain selective (sideritic) alteration of dolomitised, as against relict calcitic, zo

Carbonate rocks (and similarly the pelitic sediments) carry more or less ubiquitous traces of fine to ultrafine pyrite of syngenetic character. Pyrite is locally supplemented, in algal pelletal limestone (sample 59072), by traces of pale sphalerite which are similarly of primary (syngenetic/early diagenetic) character.

Sideritic carbonated rocks tend to be characterised by a disseminated sulphide assemblage of galena and relatively dark (colour-variable, but generally reddish or brown) sphalerite. This assemblage is evident in both the Gordon Limestone and in rocks correlated with the basal sections of overlying Crotty Quartzite and, on this basis, appears strictly epigenetic, with affinities to the Zeehan-style siderite-Pb-Zn-Ag association.

Relatively sideritised carbonate rocks tend to exhibit breccia textures with a sideritic matrix, suggesting partial fault- or fracture-control. Interpretation will, however, be dependant on field evidence as breccia-like textures are semi-ubiquitous in altered limestones, where they often reflect volume changes resulting from molecular replacement of one carbonate phase by another (dolomite replacement of calcite may produce circa 13 % space or voids and siderite replacement of dolomite an additional 8 %).

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Location	Sample No.	Classification - Composition	Fabric	Accessories	CENTRAL MINERALOGICAL SERVICES Comments
Bugs Hill 5600 E 8780 N	59363 (T.S. 48900)	"Dolomite". Fine granular to sparry dolomite-ankerite with included and interstitial ultrafine carbonaceous matter, minor ill-defined intergranular clays, thinly disseminated fine to ultrafine pyrite. Crosscutting vein of	Weakly laminated on millimetric scale. Minor "ptygmatic" carbonate films, isolated discontinuous carbonaceous	Minor traces of corroded fine silt-sized detrital and coarser authigenic quartz.	Dolomitised millimetric-laminated impure limestone with close affinities to 59403, 59417 (refer CMS 84/1/15). The discordant carbonate vein is medium-grained, mildly stressed.
Bugs Hill 5700 E 8740 N	59430	Dolomitised Limestone dolomite-ankerite. Breccia. Irregular clasts of carbonaceous dolomite (similar to 59363) with a matrix of coarser-grained sparry dolomite-ankerite with relatively abundant interstitial carbonaceous matter, clays.	Angular to irregular millimetric clasts, coarser-grained, but texturally similar matrix. Weakly micro-	Traces ultrafine pyrite (concentrated in clasts). Pervasive corroded relics of calcite in dolomite. Frequent dolomite veinlets.	On basis of corroded relics dolomite pseudomorphs calcite. That is dolomitised limestone breccia. Reflects early diagenetic recrystallization of impure limestone matrix.
Nth Austral ZMG 249 81.6 m	59064	Altered Siltstone. Framework of coarse silt-sized subangular quartz, minor muscovite flakes. Sericitic matrix; silty shale partings. More or less pervasive impregnations, sporadic veinlets of sideritic carbonate.	fractured. Millimetric to microlaminated (shale-parted) silty clastic. Minor late sericitic fractures displace siderite veinlets.	Disseminated sphalerite in, marginal to, siderite veinlets, impregnations. Minor traces carbonaceous matter.	Sideritic carbonated sericitic quartzose siltstone, well-sorted? deltaic. Alteration is of Zeehan-type character.
" 89.8 m	59065	Altered Pelite. Clasts, zones of weakly siderite-stained quartzose siltstone (sim. 59064) interspersed with/matrixed by sericitic, weakly carbonaceous shale/quartzose silty shale.	Breccia-like with lenticles boudinaged siltstone, in variously micro-crenulated to micro-folded slaty shale matrix.	Rare microscopic particles of galena, sphalerite associated with siderite clots, ill-defined siderite	Soft-pebble conglomerate-like fabric reflects late (post sideritic carbonation) tectonic deformation of relatively competent siltstone and in-quartz veinlets. competent slate.
" 106.3 m	59066	Altered Pelite. Zones, interbeds of slightly fine to medium sandy quartzose siltstone (sim. 59064, 59065) interspersed with shale-parted siltstone and contorted interbeds of silty sericitic shale. Minor impregnations, frequent veinlets of sideritic carbonate.	Semi-brecciated with siderite films healing displacive microfractures, locally displaced by sericitic fractures.	Traces of recrystallized "syngenetic" pyrite, carbonaceous matter (host rock), galena and sphalerite (veinlets).	Boudinaged quartzose sandy siltstone/siltstone/shale intercalation similar to 59065. Siderite veinlets appear contemporaneous with deformation, but predate late mild phase of shearing.
" 117.8 m	59067	"Dolomitic" Pelite. Intercalations of quartzose slightly fine sandy siltstone (sim. 59064) and slightly quartzose silty, weakly carbonaceous sericitic shale with minor lenses quartzose sandstone. Minor veinlets, impregnations	Submillimetric to centimetric planar intercalation of shale and "quartzite". Weak microcrenulated slaty cleavage.	Detrital chromite, zircon, schorl in quartzitic siltstone. Traces ultrafine pyrite (shale) are chalcopyrite (dolomite veinlets).	Affinities with 59064, 59065, 59066, but cleaved/microcrenulated rather than brecciated. Dolomite veinlets are discontinuous diagenetic types restricted to quartzite beds.
" 196.0 m	59068	Dolomitic Carbonaceous dolomite-ankerite. Chert. Cherty microcrystalline quartz with more or less pervasive stainings, clots, films of carbonaceous matter. Disseminated rhombs, spongy aggregates, crosscutting veinlets of ankeritic carbonate.	Vaguely nodular. Closely microfractured/healed with carbonaceous films, aggregates predating carbonate veinlets.	Minor traces of pyrite.	Problematical rock interpreted as a diagenetically silicified impure (carbonaceous, weakly pyritic) limestone. Conceivably one of the upper Success Creek Group carbonate beds.
" 185.6 m	59069	"Tuffaceous Greywacke". Intercalation of weakly carbonaceous, strongly basic-intermediate volcanomict chloritic silty fine sandstone and relatively carbonaceous argillaceous siltstone/silty shale.	Micro- to millimetric laminated, weakly graded, "urbiditic". Weakly concordantly sheared.	Disseminations, minor discontinuous veinlets dolomite. Abundant clastic leucoxenic semi-opaques. Minor syngenetic pyrite.	Crimson Creek-type clastic components, but abnormally carbonaceous. Reasonably correlated with the basal Red Rock Member on petrological grounds.

Location	Sample No.	Classification - Composition	Fabric	Accessories	CENTRAL MINERALOGICAL SERVICES Comments
Nth Austral ZMG 249A 263.6m	59070	Carbonaceous Pelite. Sericitic illite, pervasively stained with carbonaceous matter. Sporadic disseminations, semi-massive lenses of "syngenetic" pyrite. Sporadic bedding plane veinlets dolomite, crosscutting dolomite-quartz	Micro laminated, with a crenulated to semi-brecciated weak concordant slaty cleavage veinlets.	Sporadic late cross-cutting films of sideritic carbonate. Minor traces of fine silt-sized detrital	Typical upper Success Group pyritic carbonaceous pelite-type characteristics. Reflects weak "diagenetic" ankeritic carbonate/carbonate-quartz veining, subsequent siderite films.
Nth Austral ZMG 252 96.7m	59071	Dolomitic Limestone. Microcrystalline to semi-porcellanous, carbonaceous, weakly argillaceous limestone with minor carbonaceous, pyritic partings, zones of fine sparry dolomite-ankerite. Frequent calcite veinlets.	Strongly microfossiliferous. Massive, weakly laminated to poorly sorted, calcarnitic. Locally oolitic.	Rare late quartz. crosscutting veinlets of siderite (postdate calcite veinlets).	Intercalation of microfossiliferous impure laminated limestone and fossiliferous to oolitic calcarenite. Reflects selective dolomitisation of relatively argillaceous interbeds.
" 102.4m	59072	Dolomitic Limestone. Zones, clasts of microcrystalline "oolithic" limestone interspersed with sparry dolomite-ankerite. Crosscutting composite (calcite, ankeritic dolomite) veins, veinlets, late calcite films.	Breccia-like with irregular clasts of oolitic limestone, marginally corrosive dolomitised matrix.	Carbonaceous matter, traces pyrite, sphalerite (pale, concentrated in undolomitised limestone clasts).	"Oolites" are algal pellets in part. ?Slump-brecciated clastic limestone characteristics, with selectively dolomitised matrix. Sphalerite variously disseminated in, and interstitial to, algal pellets.
" 108.7m	59073	Sideritised Dolomite. Zones, clasts of fine-grained carbonaceous siderite rock, veined/matrixed by medium-grained siderite with sporadic patches of microcrystalline quartz (crystallized chalcedony).	Relict fine sparry dolomite-derived textures in clasts, corrosive siderite veinlets, matrix.	Disseminations of fine-grained, colour-variable (mainly red to minor pale) sphalerite in clasts, veins.	Relict features consistent with a dolomitised massive impure limestone. Reflects brecciation, marked (vein and metasomatic) siderite alteration.
" 110.5m	59074	Sideritised Dolomite. Fine-grained siderite rock with intraclasts of sideritised carbonaceous dolomite (sim. 59073). Sporadic veins of medium-grained siderite. Late vugs, veins of ankeritic carbonate with associated vugs of quartz.	Siderite-healed breccia. Essentially an ankerite-quartz-healed breccia with clasts of siderite vein, sideritised dolomite.	Disseminated sphalerite; clots, crystals throughout clasts, veins, matrix. Traces pyrite in altered dolomite clasts.	Similar paragenesis to 59073, but with a late ankerite-quartz assemblage, partly corroding the metasomatic and vein-siderite. Sphalerite randomly disseminated.
" 143.4m	59075	Veined Dolomite. Fine sparry dolomite-ankerite with pervasive carbonaceous matter, minor optically ill-defined intergranular clays. Frequent dolomite veinlets, carbonaceous films. Sporadic late dolomite veins.	Massive to incipiently laminated. Partly stylolitic carbonaceous films transect early carbonate veinlets.	Rare coarse blebs of pale sphalerite in late (post-stylolite) veins.	Dolomitised impure limestone; relatively massive, featureless. Exhibits pre-stylolite barren; post-stylolite mineralised ankeritic dolomite veins.
" 151.0m	59076	Veined Psammopelite. Carbonaceous, siderite-stained sericitic intermediate-acid volcanomict lithic sandstone with intercalated carbonaceous shale. Concordant vein of ankeritic carbonate. Sporadic discontinuous siderite veinlets.	Poorly sorted (silty fine to medium sandy) turbidite-like sandstone. Incipiently cleaved shale. Minor late dispersive fractures.	Conspicuous detrital leucoxenic semi-opaques. Minor discontinuous quartz veinlets (pre-dolomite vein).	Affinities with 59069 and similarly correlated, but relatively acid-volcanic. Vein sequence is quartz/ankeritic carbonate/late siderite.
" 167.8m	59077 (T.S. 48915)	Altered Microgabbro. Semi- to sericitic white mica (incipiently green, hydromuscovite) with semi-pervasive impregnations, veinlets of ankeritic carbonate; conspicuous fine-grained pyrite, minor quartz.	Vague relict "doleritic", with sericite largely pseudomorphous after feldspar laths.	More or less evenly disseminated leucoxenic semi-opaques. Minor traces chalcopyrite.	Thoroughly argillised, subsequently carbonated basic minor intrusive or core zone of flow. Reasonably correlated with the Cambrian dolerites.

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30th March, 1984

## REPORT CMS 84/3/15

YOUR REFERENCE:      Order No. 900511  
 DATE RECEIVED:      8th March, 1984  
 SAMPLE NOS.:        14 Samples  
 SUBMITTED BY:      I.J. Mathison  
 WORK REQUESTED:    Petrology

*H.W. Fander*

H.W. Fander, M. Sc.

REPORT CMS 84/3/15

Fourteen drill core samples, comprising numbers 60801 and 60802 from the Montague No. 1 mine and 60803 - 60814 (incl.) from a single drill hole at the Oceana Mine, were received for petrological examination. Representative thin-sections were prepared and examined microscopically, together with their respective carbonate-stained offcuts. Polished sections were prepared from the relatively mineralised Oceana drill core samples (numbers 60808 - 60814 incl.) and examined in reflected light. Attached tabulated petrological descriptions and mineragraphic notes summarise the microscopic data.

Summary

This suite, including rocks both from Montague No. 1 and Oceana, comprises entirely altered carbonate rocks. Overall, the suite is a composite of relatively "massive" (microcrystalline, typically laminated, non- or weakly fossiliferous, algal-pelletal (oolithic) in part) limestones and coarse, relatively fossiliferous clastic types or "limestone breccias". These two groups are represented by sample numbers 60801, 60802 (Montague No. 1), 60803, 60804, 60805, 60807 (Oceana); and 60808, 60809, 60810, 60811, 60812, 60813, 60814 respectively.

In common with recently described suites of Gordon Limestone, the carbonate rocks in general are carbonaceous and weakly pyritic. A few relatively unaltered types include traces of pale sphalerite, concentrated in calcitic zones and of syngenetic-diagenetic character.

Alteration features comprise development of metasomatic (i.e. replacive) and vein or vug-carbonates. A consistent trend of variation in carbonate composition is evident, with primary calcite replaced initially by dolomite-ankerite and subsequently by sideritic carbonate. Vein assemblages, however, are relatively complex, with calcite and ankeritic dolomite occurring as both temporally intermediate and late veins (i.e. pre- and post-siderite), either discrete ("monomineralic") or as composite (i.e. calcite-dolomite) types.

This multiple generation-type repetition of carbonate vein phases has been noted previously in respect of the Bubbs Hill and Zeehan suites, and is a common phenomenon in altered carbonate rocks of this type. Problematically, subtle variations in carbonate phases are poorly resolved in petrological (i.e. thin-section) examinations and electron-probe microanalyses may be necessary in order to establish the finer compositional detail.

Discounting vein assemblages, the essential calcite/dolomite/siderite alteration trend confirms that noted in CMS 84/2/9. Similarly, this suite confirms the previous observation that sideritic alteration is at least semi-selective and preferentially developed in dolomitised, in contrast to unaltered (calcitic), limestones.

A compositional link, consistent with selective Fe-metasomatism, between dolomite and siderite, is evident in the ankeritic nature of the typical fine sparry calcite-replacive dolomite. Further, qualitative chemical tests for Mn confirm that all replacive and vein carbonates are manganiferous.

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Sideritic alteration also appears to be selectively developed in breccia-type facies. As previously noted, however, secondary breccias, either strictly tectonic, or resulting from dissolution or molecular replacement phenomena, represent a probable complication of this relationship and full interpretation will be dependant on a critical analysis of field and mesoscale relationships.

Microscopically, siderite exhibits more or less ubiquitously curved cleavages and is thus a poor indicator of late stress effects.

The Oceana Pb-Zn-mineralised drill core samples exhibit a close correlation between sideritisation (both metasomatic and vein types) and galena-sphalerite-bearing sulphide assemblages. Galena-hosted tetrahedrite inclusions, representing the probable locus of Ag values and locally developed dissemination of Pb-Sb sulphosalts (bournonite, boulangerite) provide a strong analogy with the Zeehan-type mineralisation as described, for example, by Both & Williams (Journ. Geol. Soc. Aust. Vol. 15).

Non-sideritic rocks (i.e. dolomitic and/or calcitic) are at best weakly mineralised, typically with minor traces of sphalerite, supplementing the fine syngenetic pyrite. Calcite-related sphalerite is ubiquitously very fine-grained and pale (essentially colourless with a low inferred Fe-content). Dolomite and particularly siderite-associated sphalerite is relatively dark. Siderite-associated sphalerite further tends to be colour-zoned.

Given that essentially unaltered limestones include a certain primary base metal component, albeit it be very minor, these altered and mineralised Gordon Limestone facies exhibit composite characteristics in terms of total sulphide content. There thus appears to be considerable room for a reconsideration of "Zeehan-style" mineralisation in carbonate host rocks, particularly a critical review of the contrasts between stanniferous and non-stanniferous types. The Zeehan-Dundas-Renison district is characterised by a variety of variously stanniferous and/or argentiferous "epigenetic" ore types. The majority carry sideritic, manganiferous carbonate as a prominent gangue component, but this does not necessarily imply a common origin.

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					CENTRAL MINERALOGICAL SERVICES
Sample No.	Classification - Composition	Fabric	Accessories	Comments	
Nth Austral ZMG 252 102 m	60801 (T.S. 49117) Dolomitic Limestone Breccia. Clasts of microcrystalline to semi-porcellaneous, oolitic to featureless, limestone-matrixed, marginally corroded, locally veined with fine-grained sparry dolomite. Interstitial relics of	Semi-bedded with dimensionally orientated, randomly sorted angular clasts. Even-grained matrix dolomite.	Semi-pervasive carbonaceous matter. Traces of "syngenetic" pyrite and pale sphalerite.	Algal pelletal clastic limestone breccia with selectively dolomitised matrix. Fine pale sphalerite (and pyrite) concentrated in zones of relict (i.e. calcitic) limestone.	
North Austral ZMG 252 110 m	60802 Sideritised Lime- microcrystalline calcite. stone. Fine-grained sideritic carbonate with disseminated clusters of marginally corroded fine sand-sized quartz, semi-massive lenses of pyrite. Sporadic siderite veinlets and vugs with fine crystal quartz and sphalerite.	Relict millimetric-scale banding and vague fine sparry dolomite-derived microtextures.	Traces carbonaceous matter, minor traces of extremely fine-grained galena. Minor late quartz veinlets.	Relict features consistent with a banded impure (carbonaceous, pyritic, quartzose sandy) limestone; dolomitised and subsequently sideritised. Sphalerite concentrated in sideritic veinlets, vugs.	
Oceana ZT-80-4 14.9 m.	60803 Dolomitic Limestone. Microcrystalline to semi-porcellaneous limestone with disseminated rhombs, sparry replacive lenses of dolomite. Pervasive calcite veinlets grading into coarse sparry to comb-structured veins, replacements.	Relict sub- to fine millimetric scale planar bedding laminations. Discordant veinlets; intraclastic	Carbonaceous matter, traces pale sphalerite, minor traces pyrite. Sporadic carbonaceous vein. stylolites.	"Massive" limestone in contrast to 60801. Alteration sequence is partial dolomitisation/calcite veining/late stylolitisation. "Primary" sphalerite partly re-concentrated in stylolites.	
" 65.5 m	60804 Dolomitic Limestone. Fine sparry dolomite and relict microcrystalline to semi-porcellaneous calcite in varying proportions with pervasive carbonaceous matter; minor disseminations fine silt-sized detrital quartz.	Variously massive to millimetric-scale, laminated; locally microfossiliferous and slumped. Weakly sheared.	Pervasive ultrafine pyrite (concentrated in thin carbonaceous partings). Rare sphalerite in dolomitised zones. Sparse calcite veinlets.	Extensively dolomitised, featureless to microfossiliferous impure limestone. Calcite veinlets postdate dolomitisation; predate the weak slaty cleavage.	
" 69.9 m	60805 Dolomitic Limestone. Fine sparry dolomite and relict microcrystalline calcite in varying proportions with relatively conspicuous fine silt-sized clastic white mica flakes, minor quartz. Pervasive carbonaceous matter. Sporadic calcite veinlets.	Laminated on millimetric scale with discordant calcite veinlets. Incipiently sheared.	Traces sphalerite. Rare blebs of sphalerite at veinlet intersections and in sparse carbonaceous stylolites.	Close affinities with 60804, similarly altered, veined, weakly sheared. In contrast, this limestone is relatively argillaceous, non-fossiliferous, and unslumped.	
" 79.0 m	60806 Dolomitic Limestone Breccia. Framework of angular fossil fragments pseudo-morphed by microcrystalline to lustre-mottled calcite, subordinate oolitic limestone clasts. Matrix of microcrystalline limestone and moderately dolomitised impure limestone.	Slump breccia-like with contorted interlaminations of impure (carbonaceous/argillaceous) limestone.	Traces pale sphalerite as fine-grained disseminations in matrix, clasts, fossil fragments. Traces ultrafine	Clastic fossiliferous limestone with textural detail confused by slumping. Includes bryozoan, brachiopod, tabulate coral, crinoid components. Sphalerite analogous to 60803.	
" 102.6 m	60807 Impure Limestone. Weakly silty clastic (in quartz, calcite) microcrystalline limestone with minor calcitic fossil fragments. Frequent irregular veins, vugs of sparry calcite. Sporadic microscale carbonaceous shaly partings.	Weakly microlaminated; "bioturbated". Very incipiently stressed.	Traces ultrafine pyrite.	Undolomitised limestone. Reflects ?worm-burrowing/bioturbation with detail obscured by calcite infillings, veinlets.	
" 247.5 m	60808 Sideritic Limestone. Relict zones of calcitic limestone and dolomitised limestone interspersed with corrosive aggregates of fine-grained sideritic carbonate. Sporadic vugs, veinlets of calcite, selvaged with medium-grained siderite.	Relict fossiliferous limestone breccia-like fabric (sim. 60806), obscured by sideritic alteration.	Carbonaceous matter. Disseminations of fine-grained galena, sphalerite in, and marginal to, siderite aggregates.	Alteration pattern is partial dolomitisation followed by sideritic carbonate replacement of relict calcite and particularly dolomite; late calcite veinlets, vugs,	

	Sample No.	Classification - Composition	Fabric	Accessories	CENTRAL MINERALOGICAL SERVICES Comments
Oceana ZT-80-4 249.0 m	60809	Mineralised Siderite Rock. Medium-grained sideritic carbonate with disseminated to semi-massive intergrown and intergranular galena; thinly disseminated fine single to clustered sphalerite crystals, vugs of calcite.	Medium-grained, vaguely metasomatised breccia-like to locally crustiform. Sparse relict dolomite-derived	Traces secondary quartz, minor traces of relict carbonaceous matter.	Strongly Pb(-Zn)-mineralised sideritic carbonate rock with minor crustiform siderite-calcite vugs. Dolomitised/subsequently sideritised breccia, at least in part.
" 251.0 m	60810	Mineralised Siderite Rock. Siderite aggregates with intergranular to intergrown, disseminated to locally semi-massive galena, disseminated sphalerite. Disseminated intraclasts of carbonaceous pelite, dolomitised limestone and dolomite vein.	Analogous to 60809, but coarser-grained; relatively intraclastic with zones of coarse sparry siderite.	Traces secondary quartz, minor traces calcite in late vugs, veinlets.	Close affinities with 60809. Sideritised breccia characteristics with a relatively coarse sparry carbonate matrix. Sphalerite largely as fine crystals enclosed in galena.
" 253.9 m	60811	Mineralised Siderite Rock. Sideritic carbonate with disseminated intergranular to semi-massive galena, locally conspicuous sphalerite. Zones of sideritised carbonaceous dolomite. Minor late vugs of calcite.	Coarse-scale breccia-like with sideritised dolomite clasts, mineralised siderite matrix.	Minor patches of illite in calcite vugs. Traces corroded relict dolomite as inclusions in replacive siderite.	Close affinities with 60809, 60810. Sideritic carbonate and veined dolomite (i.e. dolomitised limestone) paragenesis.
" 259.5 m	60812	Mineralised Breccia. Zones, clasts of sparry (calcite) rock and carbonaceous, dolomitised impure limestone, marginally sideritised and galena-mineralised. Matrix, veins of sideritic carbonate. Semi-pervasive late replacements, veinlets of dolomite-ankerite.	Essentially a siderite-healed breccia; re-fractured and dolomite-veined/partly replaced	Traces sphalerite, secondary quartz.	Affinities with 60809 etc., but reflecting second phase of brecciation. The calcite rock appearing as clasts exhibits vein-type characteristics.
" 291.3 m	60813	Sideritised Breccia. Clasts of sideritised carbonaceous dolomite, sideritised, mildly silicified carbonaceous pelite in a matrix of fine-to medium-grained sideritic carbonate. Disseminated fine-grained galena.	Siderite-healed breccia with random angular, millimetric to centimetric clasts.	Thinly disseminated sphalerite blebs and crystals in altered clasts, matrix. Rare vugs of calcite.	Close affinities with e.g. 60809 and particularly 60810. Galena concentrated in matrix, but also impregnates sideritised clasts.
" 306.5 m	60814 (T.S. 49130)	Mineralised Siderite Rock. Fine-grained metasomatic (dolomite-replacive) and medium-grained vein sideritic carbonate with disseminated intergranular to semi-massive galena, locally conspicuous sphalerite.	Vaguely breccia-like. Semi- to crustiform, semi-massive sulphide films interspersed with vein-siderite.	Relics of carbonaceous matter in sideritised dolomite.	Similar paragenesis to 60813, but with relatively conspicuous siderite vein-related crustiform films of galena and colour-variable/colour-zoned sphalerite.

REPORT CMS 84/3/15

Mineragraphic Notes

60808

(P.S. 49124)

This section confirms a simple galena, (subordinate) sphalerite assemblage as thinly disseminated to locally conspicuous irregular blebs and films variously intergranular to, or associated with, cleavage and ill-defined microfractures in sideritic carbonate. Sporadic, relatively coarse (to 750  $\mu$ ) irregular blebs of galena and isolated composites of anhedral galena and euhedral sphalerite are associated with the late calcite vugs and range to 2 mm diameter.

Accessory traces of fine to ultrafine sub- to euhedral pyrite occur more or less randomly disseminated throughout the carbonaceous lithic clasts and are interpreted as a weakly recrystallized "syngenetic" sulphide component. Rare microscopic blebs of pale sphalerite occur in relatively unaltered (i.e. calcitic, or dolomitic) clasts and may similarly represent a primary component. A single microscopic (10  $\mu$ ) bleb of chalcopyrite was observed intergrown with siderite-intergranular galena.

60809

(P.S. 49125)

This section exhibits irregularly shaped millimetric zones of coarse-grained semi-massive galena, interspersed with medium-grained sparry siderite.

Galena aggregates are relatively massive in "core" zones and grade into marginal spongy galena-siderite intergrowths and into siderite-intergranular films. Disseminated euhedral siderite rhombs within galena aggregates enhance the "mutual-intergrowth" nature of sulphide carbonate composites.

An- to subhedral patches of sphalerite, with a mean diameter about 50  $\mu$  are thinly disseminated to locally conspicuous within the galena aggregates, grade into microscopic cusped galena-intergranular blebs and include sparse but ubiquitous microscopic (mean < 1  $\mu$ ) exsolution blebs of chalcopyrite.

Traces of tetrahedrite(-tennantite) are present as rare to locally conspicuous < 20  $\mu$  equant bleb-like inclusions in galena and represent a possible locus of Ag values. Siderite and galena exhibit thinly disseminated micro-inclusions of sphalerite.

60810

(P.S. 49126)

General features here are closely analogous to those in 60809. In contrast, this section exhibits isolated coarse single subhedral grains (to 2 mm) and clusters of sphalerite interspersed with the millimetric scale patches of near-massive galena.

Tetrahedrite micro-inclusions in galena are locally abundant, but appear erratically distributed with an ill-defined tendency to concentration in sphalerite-free zones of relatively massive galena. Rare coarser blebs of tetrahedrite (to 60  $\mu$ ) and chalcopryite (to 40  $\mu$ ) are associated with galena aggregates exhibiting tetrahedrite micro-inclusions.

Sphalerite, in common with 60809, exhibits chalcopryite exsolution blebs. These features are extremely fine ("submicron-sized") and are only detectable at high magnification.

Fine-grained pyrite is thinly disseminated throughout the sulphide and carbonate aggregates. Relict framboidal and atoll-microtextures indicate pyrite is, at least in part, syngenetic and "inherited" from the primary altered limestone component.

60811

(P.S. 49127)

This section exhibits spongy to semi-massive galena with relatively abundant intergrown granular to subhedral, medium-grained, weakly colour-zoned sphalerite. Textural relationships are closely analogous to 60809 and 60810; sulphides exhibiting mutual relationships with sideritic carbonate gangue.

Accessory components comprise rare microscopic pyrite, variously included in siderite or galena and traces of tetrahedrite and chalcopryite. Tetrahedrite is of localised distribution as  $< 20 \mu$  inclusions in galena, and chalcopryite is observed only as submicron-sized exsolution particles in sphalerite.

60812

(P.S. 49128)

This section exhibits a spongy, semi-massive zone of galena impregnating a clast of partly sideritised carbonaceous dolomite. In detail, the galena occurs as near-massive, medium-grained aggregates to a few millimetres diameter with fine-grained spongy marginal areas grading into fine-grained carbonate-intergranular dissemination. Traces of fine-grained sphalerite are associated as galena- and carbonate-intergranular blebs, and galena includes rare  $< 20 \mu$  particles of tetrahedrite.

Traces of pyrite and minor traces of chalcopryite occur as microscopic (typically  $< 10 \mu$ ) particles thinly disseminated throughout the (altered carbonaceous dolomite clast) host rock.

60813

(P.S. 49129)

Exhibits disseminations of galena as carbonate(-siderite)-hosted inclusions, discontinuous microfilms and relatively coarse (to 1 mm) carbonate-intergranular blebs. Minor traces of siderite-intergranular sphalerite are associated, and galena exhibits rare micro-inclusions of tetrahedrite. Metasomatic (dolomite-replacive) siderite carries thinly disseminated microscopic pyrite of relict syngenetic character.

202

352203

60814

(P.S. 49130)

Exhibits zones of vein-siderite interstitially to sideritised dolomite zones with concentrations of spongy semi-massive galena and sphalerite in marginal (i.e. contact) areas.

Galena and particularly sphalerite tend to be even-grained (mean about 100  $\mu$ ) with simple mutual granular intergrowths. Sphalerite is weakly twinned and exhibits pervasive ultrafine chalcopyrite exsolution blebs.

Galena encloses thinly disseminated blebs of tetrahedrite ranging up to 150  $\mu$  diameter, with a mode of 30-45  $\mu$ . The rare, relatively coarse patches of tetrahedrite enclose fine (< 25  $\mu$ ) blebs of boulangerite. Rare patches of bournonite occur interspersed with galena, exhibiting a distribution and sizing range closely analogous to that of tetrahedrite and tetrahedrite-boulangerite composites.

Fine-grained pyrite, analogous to that noted in the associated section occurs thinly and randomly disseminated throughout the sulphide and replacive siderite aggregates.

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## Central Mineralogical Services

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

4th May, 1984

### REPORT CMS 84/3/31

YOUR REFERENCE:	Order No. 900518
DATE RECEIVED:	20th March, 1984
SAMPLE NOS.:	6 Samples
SUBMITTED BY:	I.J. Mathison
WORK REQUESTED:	Petrology

*Dover for*  
H.W. Fander, M. Sc.

REPORT CMS 84/3/31

Six samples of variably mineralised dolomitic sediments from a costean in the Gordon Limestone sequence were received for petrological and mineragraphic examination. Representative thin- and polished sections were prepared and examined together with their respective carbonate-stained offcuts. Attached brief petrological descriptions summarise the petrological data, include mineragraphic notes and interpretative comments.

Limited XRD analyses ("powder photography") were made in order to verify sideritic carbonate types. Preliminary results of this petrological investigation have been related to I.J. Mathison, following a telephoned verbal request.

Summary

The inferred stratigraphic sequence, as sampled and following Mathison's notes, comprises a basal breccia unit (samples 59438, 59539), an overlying gritty clastic unit (59542), and an upper disharmonically micro- to mesofolded quartzose and variably micaceous silty pelite (59543, 59546). Sample 59541 is extensively altered, with resultant obliteration of primary textural detail, but, on the basis of relict features, is best correlated with the "middling" clastic unit (i.e. with 59542).

The basal breccia exhibits typical intraformational slump- or debris flow-type characteristics with random millimetric clasts of (dolomitised) impure (carbonaceous, weakly argillaceous/shale-parted) limestone, interspersed with a relatively altered and generally poorly resolved matrix.

In contrast, the clastic unit exhibits relatively orthodox "detrital" sedimentary textures, and is relatively distinctly bedded despite poor sorting. This unit carries a high proportion of pelitic clasts, supplementing dolomitised limestone, and also clasts of cherty quartz, which are crystallized chalcedonic in part. The clastic component (framework) includes clasts of semi- to near-massive sulphide aggregates, and minor clasts of cherty-silicified pelite with disseminated sulphides. The framework is angular and general features are consistent with a diagenetically altered/mineralised rather proximal intercalated impure limestone/calc-pelitic source.

The upper pelitic unit may be compared with pelitic clasts in the middle (clastic unit, suggesting a composite, partly lateral equivalent/partly transgressive stratigraphic relationship. Again, as sampled, the relatively basal zone of this pelitic unit (sample 59543) exhibits a slightly cherty matrix, and is relatively mineralised.

Alteration/mineralisation features are complex. Dolomitisation is a ubiquitously evident phenomenon and, on the basis of microtextural features, is considered as partly pre- and partly post-depositional in the breccia and clastic units. Analogies between similarly partly dolomitised and mineralised pelitic lithology and the presence of sulphide clasts in the clastic unit, imply sulphide mineralisation is partly pre-depositional and partly post-depositional with respect to the "middle" and "basal" units. This is enhanced by the total distribution of mineralisation within these units, where clast-associated disseminations are supplemented by matrix-hosted disseminations.

There is further some evidence of zoning within this sequence as a whole. Whilst these aspects are subject to sampling and will require consideration of field relationships for interpretation, general features may be summarised:

1. The basal (breccia) unit is virtually devoid of pyrite and notably chalcopyrite. Clasts exhibit a disseminated Pb-Zn sulphide assemblage. The matrix exhibits evidence of at least partial dolomitisation, but consists largely of calcite and (subordinate) smithsonite, with both phases including corroded relics of sparry ankeritic dolomite.

Accessory fine galena and traces of sphalerite are present in the matrix, but smithsonitic carbonate is the main apparent zinc mineral in this zone.

2. The middle (clastic) unit exhibits a pyritic sulphide assemblage, particularly as clasts and includes accessory chalcopyrite. There is evidence of a transition between this and the basal unit in the style of alteration and mineralisation, with matrix-related mineralisation comprising a composite of carbonate and disseminated sphalerite (59541, the carbonate here is zoned in part and apparently a "zincian siderite"), grading into an ankeritic dolomite-intergranular sphalerite-rich sulphide assemblage (59542).
3. Pelite unit-hosted sulphide disseminations reflect a pyritic Zn-Pb assemblage of diagenetic character which appears to have developed contemporaneously with dolomitisation. In contrast to the otherwise similarly mineralised pelite component appearing as clasts in the underlying unit, chalcopyrite appears essentially absent, and the mineralised chert component is not represented.

There is some evidence of partial intraformational reworking of mineralised dolomitic pelite into the relatively barren 59546, where dolomite exhibits partly detrital grain shapes. This suite as a whole exhibits a complex composite style of mineralisation which, in the absence of strictly hydrothermal/metasomatic features, may be categorised as syngenetic to diagenetic, with probable analogies to the "limestone Pb-Zn-Ag" association as demonstrated for example at Silvermines.

D. Cowan, B. Sc.

352207

Location	Sample No.	Classification - Composition	Fabric	Accessories	CENTRAL MINERALOGICAL SERVICES Comments
Grievas Coast L 47100N	59538 (T.S. 49234)	Breccia. Clasts of dolomitised impure (carbonaceous, variably argillaceous/quartzose silty) subordinate relatively pure limestone. Fine sparry dolomite matrix, variably corroded/replaced by granular to sparry calcite.	Crudely banded, with semi-moulded to loose/dolomite-cemented millimetric framework.	More or less pervasive rhombs of smithsonite in matrix. More or less pervasive fine galena in clasts.	"Soft-pebble conglomeratic" intraformational breccia with conspicuous fine primary galena in dolomitised limestone clasts. Calcite-smithsonite matrix is partly dolomite-replacive.
"	59538 OPAQUE	Exhibits more or less pervasive fine-grained (grown pale sphalerite as subequant blebs throughout the dolomitised limestone clasts, with relatively impure (carbonaceous) type. Accessory quite minor traces of sphalerite, as-micro-inclusions (to 75 μ).	typically < 25 μ, max. 60 μ) galena with subordinate to minor trace amounts of intergranular blebs throughout the dolomitised limestone clasts, with marked relative concentrations in the matrix, along with relatively isolated composite carbonate-intergranular		
"	59539	Breccia. Clasts of carbonaceous fine sparry dolomite rock, marginally corroded/replaced by sparry smithsonite matrix. Irregular veinlets of calcite, smithsonite, with smithsonitic replacement selvages.	Irregular millimetric clasts with extensively smithsonitised fine sparry dolomite matrix.	Disseminated fine to ultrafine galena, traces silt-sized clastic quartz in clasts. Rare ultrafine sphalerite in vein-calcite.	Breccia fabric partly obscured by marginally clast-corroding smithsonite alteration of matrix. Alteration closely analogous to 59538.
"	59539 OPAQUE	Exhibits more or less pervasive disseminations of galena, with subordinate to minor trace proportions of sphalerite. Distribution is closely analogous to that noted in 59538, with relative concentrations in relatively carbonaceous clast zones, where sphalerite locally occurs as thin films in incipient carbonaceous shaly partings. Matrix-related galena (and sphalerite) disseminations, typically included in smithsonite rhombs, are microtexturally closely analogous to clast-hosted disseminations and are interpreted as "inherited" inclusions.			
"	59541	Altered Breccia. Fine- to medium-grained, granular to sparry sideritic carbonate with sporadic films, clots of quartz (crystallized chalcedony in part) as matrix to extensively sideritised clasts of variably carbonaceous dolomite, chert.	Loose, crudely banded framework of sub- to fine millimetric clasts. Massive to vuggy corrosive matrix.	Disseminated galena (concentrated in carbonaceous clast), pale sphalerite. Rare clasts of "massive" pyrite.	Analogous to 59538, 59539, but includes clasts of sphalerite-mineralised chert, massive microcrystalline pyrite. Sideritised rather than smithsonitised, with traces of secondary sphalerite.
"	59541 OPAQUE	Exhibits thinly disseminated to locally conspicuous sideritised clasts. These disseminations are subordinate to carbonate- intergranular blebs (mean 50 μ to 250 μ) of pale sphalerite, with minor intergrown galena within the matrix. The isolated clasts of "massive" pyrite are microcrystalline, with vague recrystallized nodular characteristics, are quartz-ganged and "include" rare blebs of galena and sphalerite.			
"	59542	Mineralised Dolomite. Framework of dolomitised impure limestone, variably dolomitic carbonaceous pelite, subordinate chert clasts, quartz grains, clasts of "massive" sulphide. Sparry dolomite/minor quartz matrix.	Angular, weakly bedded, poorly sorted (fine-sand-to pebble-size) framework; weakly quartzose silty/fine sandy matrix.	Disseminated fine galena, sphalerite in carbonaceous dolomite, pelite, aggregates, supplemented by clastic chert clasts. Fine pelite, dolomite, chert-hosted and intergranular sphalerite matrix-related disseminations.	
"	59542 OPAQUE	Exhibits "massive" sulphide clasts, comprising sphalerite, subordinate to minor galena and traces of chalcopryrite, ?greigite, and marcasite. These features are supplemented by carbonaceous pelite-hosted microscopic blebs of galena (+ sphalerite) and by more or less pervasive matrix dolomite-intergranular blebs of sphalerite with rare associated galena.			

352208

Location	Sample No.	Classification - Composition	Fabric	Accessories	CENTRAL MINERALOGICAL SERVICES Comments
Grievess Costean L 47100N	59543	Dolomitic Pelite. Silt-sized detrital quartz, fine sparry ankeritic dolomite, semi-sericitic white mica and carbonaceous matter in varying proportions with thinly disseminated to conspicuous very fine cloudy sphalerite.	Laminated, incipiently graded silty clastic with contorted to segmented shaly interbeds.	Minor cherty quartz cement in siltstone. Disseminated to locally spongy semi-massive syngenetic	Contorted siltstone with "boudinaged" shaly interbeds. Dolomitised (primarily calc-pelitic). Fine-grained sulphide component is of bedded "syngenetic" character.
"	59543 OPAQUE	Exhibits more or less pervasive disseminations pelitic components and generally intergranular galena-pyrite) sulphide blebs are microcrystal bedded in its distribution and, in terms of t	of pale sphalerite with subordinate galena and to, but to a minor degree included in, the sparry line, with affinities to the clasts in 59542. The temporal relationships, appears to be contemporane	pyrite (bedded).	minor pyrite impregnating the relict dolomite. Composite (sphalerite-sulphide) component is essentially contemporaneous with dolomitisation.
"	59546 (T.S. 49239)	Dolomitic Pelite. Silt-sized clastic quartz, semi-sericitic white mica and fine sparry to granular ankeritic dolomite with conspicuous silt-sized detrital white mica flakes. Minor late sideritic carbonate films.	Disharmonically micro-folded silty shale-parted, silty clastic, with late siderite-healed microfaults.	Pervasive carbonaceous matter.	Close affinities with 59543, but relatively weakly carbonaceous, non-pyritic. Similarly deformed. Dolomite is clastic in part, but large diagenetic.
"	59546 OPAQUE	Exhibits very thinly disseminated microscopic traces of galena and rare chalcopyrite. Microtextural relationships are throughout the pelitic components intergranular	particles and isolated microtextural relationships are analogous to 59543, with the sulphide distributed to (relatively anhedral) dolomite.	microscopic composite clots of pyrite and sphalerite with	

208 /

352209

# CSIRO

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Telex AA25817

6th June, 1984.

Dr. R.R. Large,  
Geology Department,  
University of Tasmania  
P.O. Box 2520  
HOBART 7001

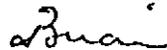
Dear Ros,,

Enclosed is a  $7/4 - 6/4$  plot for the six analyses from the Oceana area compared with the average isotopic signature for Rosebery and Devonian vein-style mineralization. As you can see from the plot, the data are very homogeneous (as little variation as Rosebery) and as far as approximate ages are concerned, have closer affinities with the Cambrian or Ordovician - it is not possible to distinguish between these periods using lead isotopes in galenas.

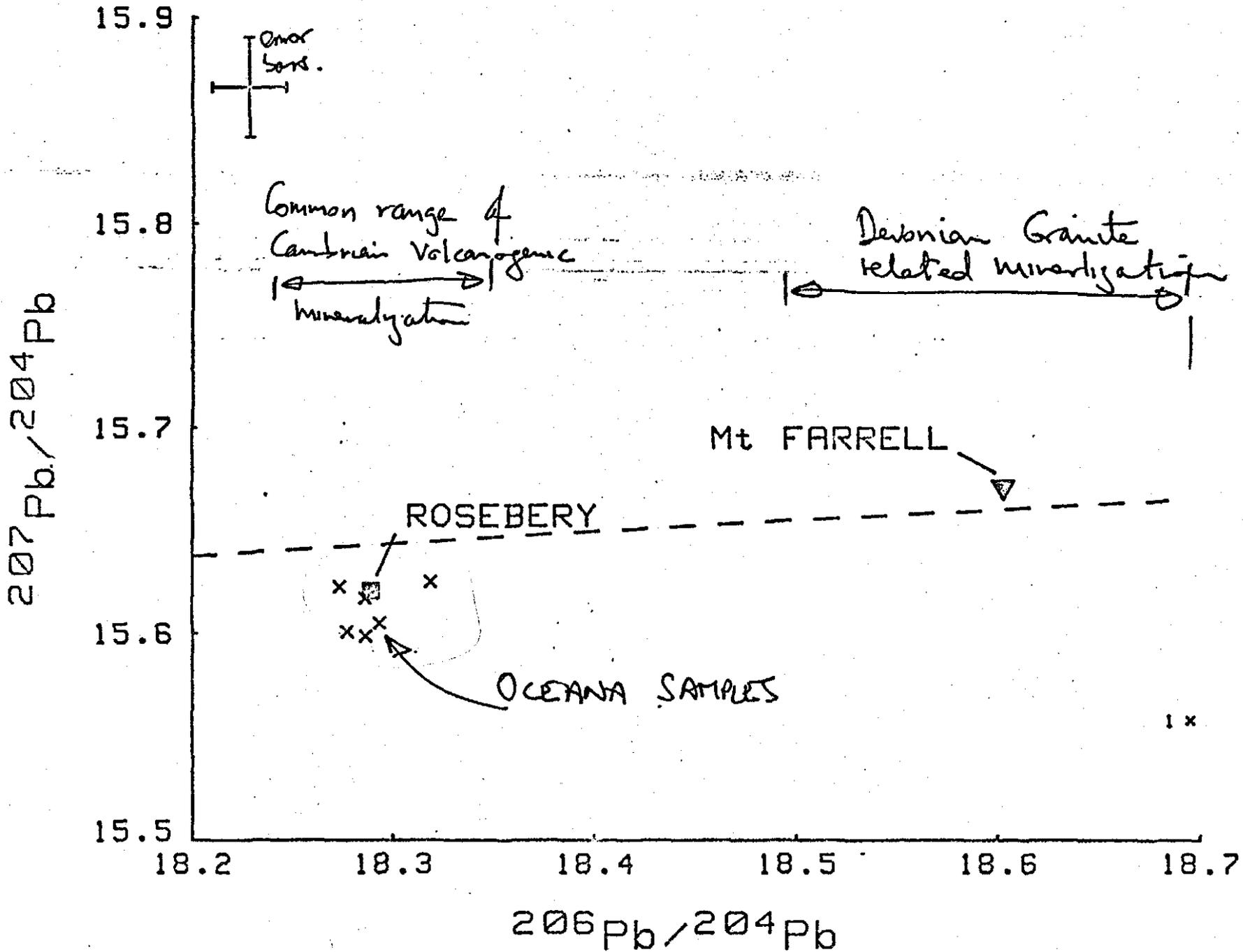
An alternative interpretation would be that the metals were derived from the Mount Read Volcanics and emplaced into the Ordovician carbonates. This type of signature for Oceana is consistent with the Irish deposits and the model Matti Vaasjoki and I have for a continuum of lead isotopic compositions from true Mississippi Valley through Irish type to shale-hosted deposits (one of the papers in process). Oceana reminds me a little of the Midway deposit, Yukon - B.C. border.

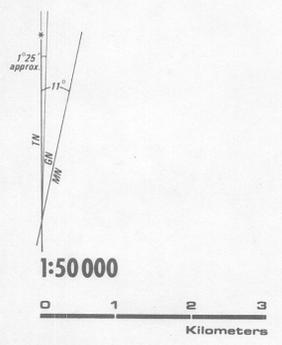
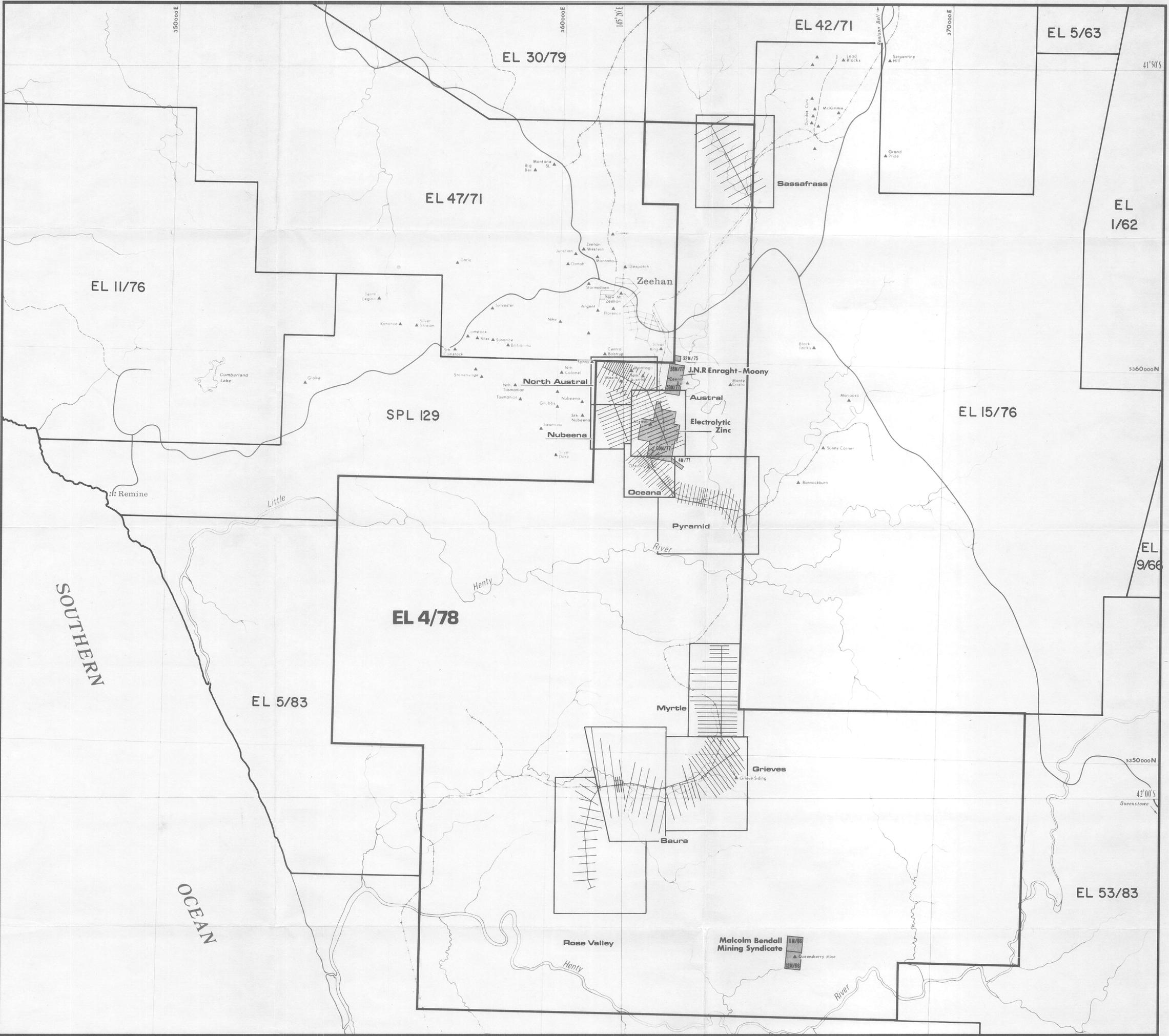
Do you wish me to speak with the companies concerned? I think they are rather exciting results. All the best

Kind regards,



Brian Gulson  
Division of Mineralogy





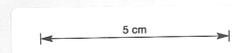
Compiled from enlargement of Zeehan 1:63360 scale and Strahan 1:50000 scale geologic maps. Transverse Mercator Projection



Amoco Minerals Australia Company

352211

Project	ZEEHAN	Nº A-78-60
Project Partner	Zeehan EL 4/78 84-2208 vol 2/2	
<b>PROSPECT LOCATION 001</b>		
Map Ref. ANG	K-55-5	Latitude 42°00'S Longitude 145°20'E
Surveyed	Date	Scale 1:50000
Drawn S.F., R. Smyth-King	Date August 1981	Drawing Nº M80-1476
Report 353	PLATE I	



AX-532-0034

Enclosure 1

MYRTLE

E.L. 4/78

E.L. 15/76

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  
GRIT - grit  
PUG - pug

SLT - siltstone  
DLST - dolomite  
CGL - conglomerate  
BSH - black shale  
LIM - ironstone  
CLY - clay  
GRA - gravel

MINERALOGY or ALTERATION

qt - quartz  
gn - galena  
lim - limonite  
cbd - carbonated  
c - calcite

py - pyrite  
sp - sphalerite  
cp - chalcopyrite  
sid - silicified

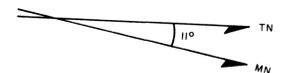
ORDER

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

TOPOGRAPHICAL

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

5 cm



ELECTROLYTIC ZINC CO. OF ASIA LTD.

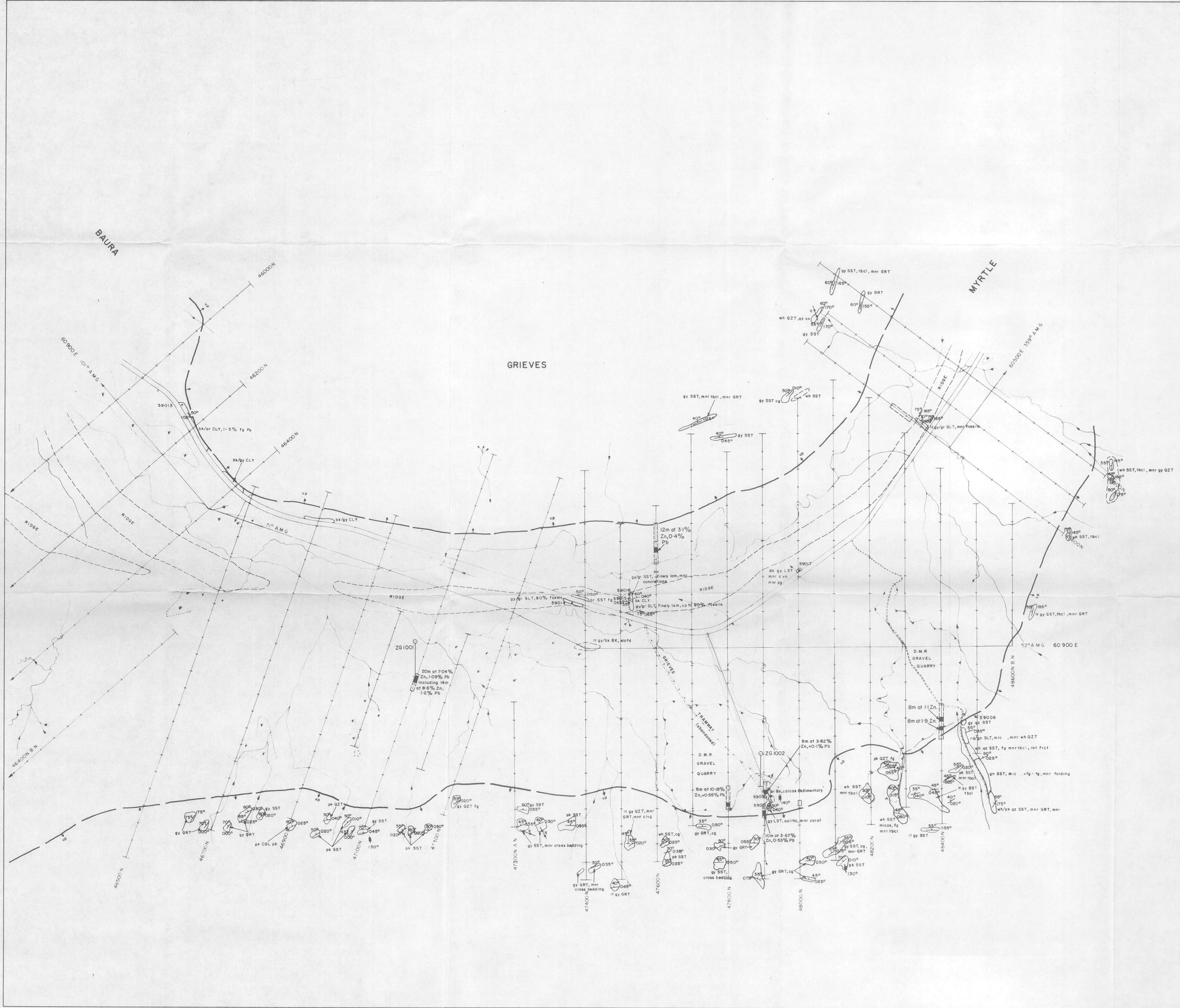
PROJECT: EL 4/78 ZEEHAN TAS.

352212  
MYRTLE GRID

COSTEAN SUMMARY 002

84-2208 vol 2/2 PLATE 2

Scale 1 5000	Survey I.MAT	Revised:
Reference: A-78-60B	Date 28-3-84	REF No.
Drawn: R.J.R.	Checked:	A1-532-0061



**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	

**TEXTURE**

fg - fine grained	foss - fossiliferous
mg - medium grained	sil - siliceous
cg - coarse grained	mic - micaceous
bkd - 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	tbcl - 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
lm - limonite	cp - chalcopyrite
cbd - carbonated	sid - silicified
c - calcite	

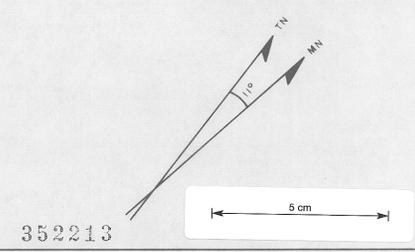
**ORDER**

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
framways	bedding
power lines	bedding - vertical
rivers, creeks	quarries
swampy area	



352213

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

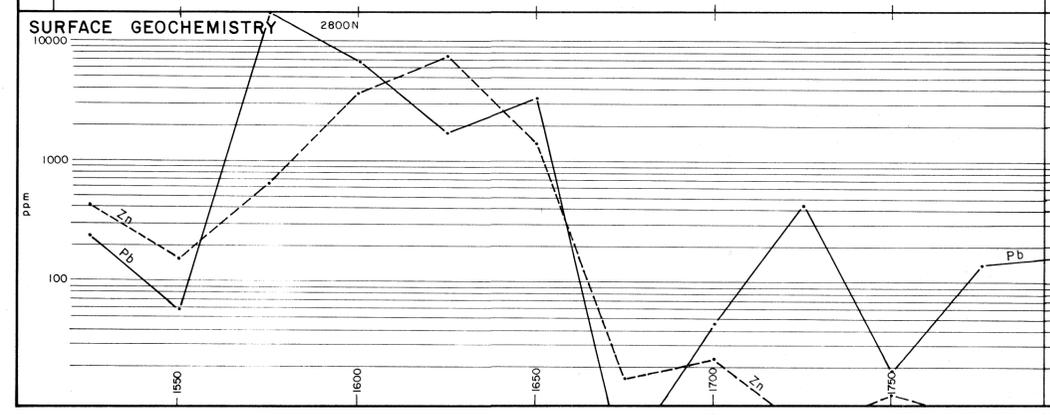
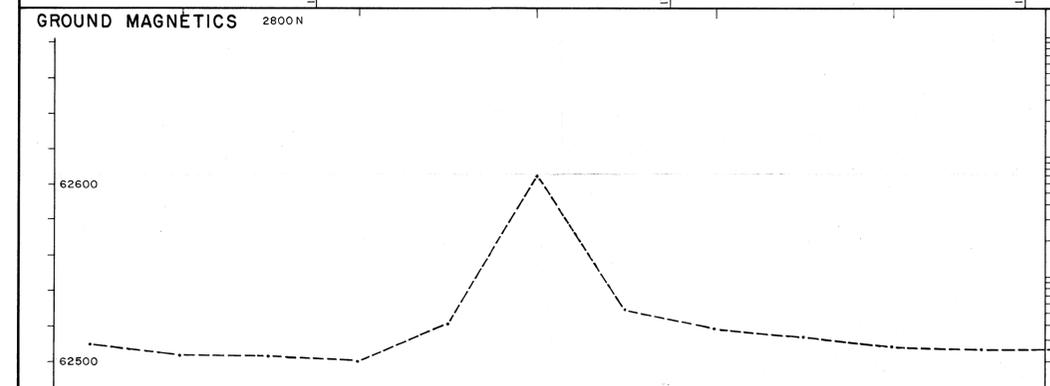
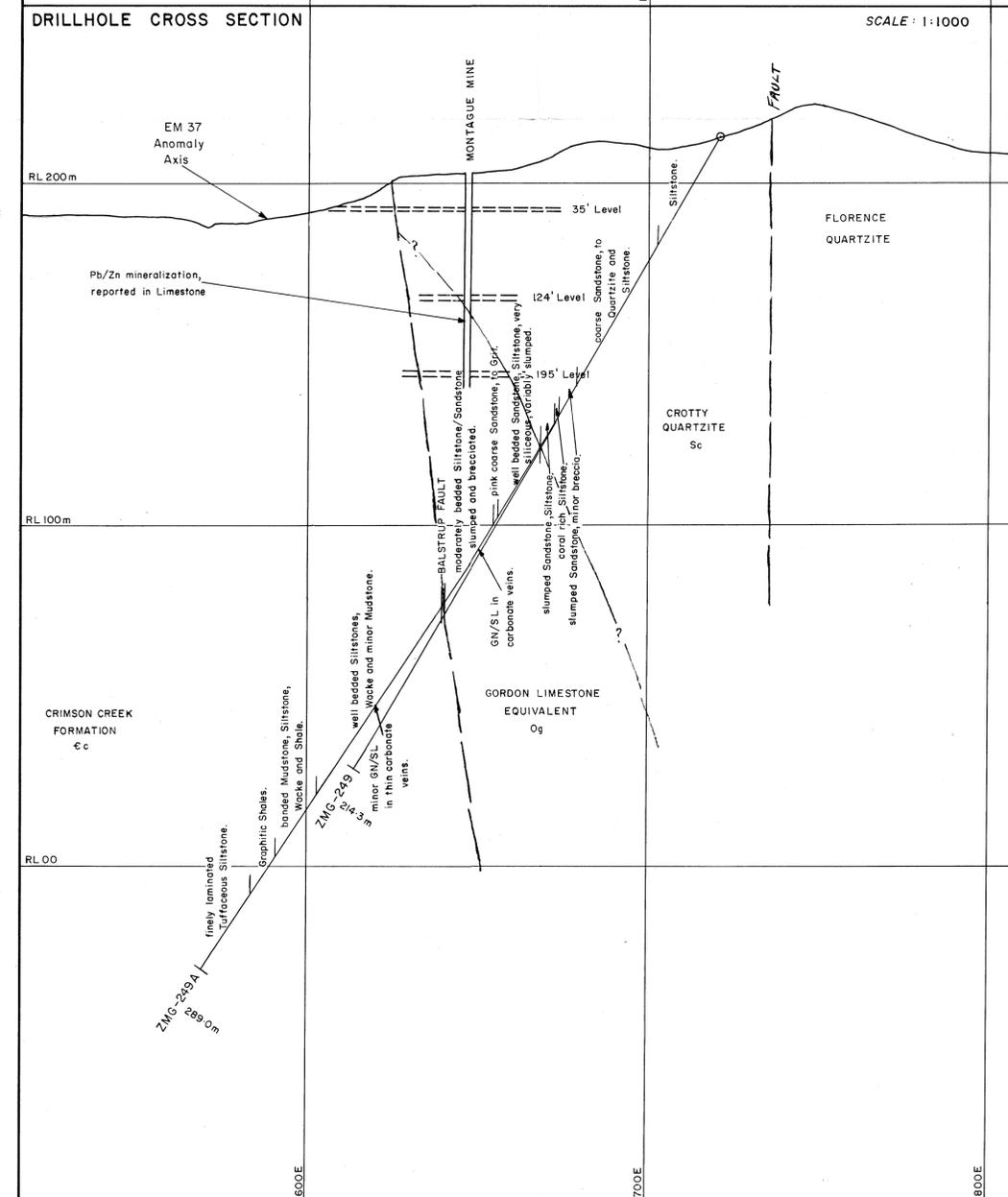
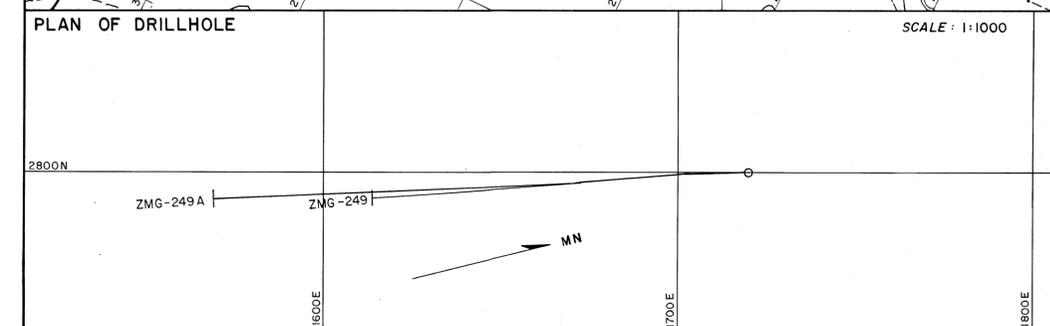
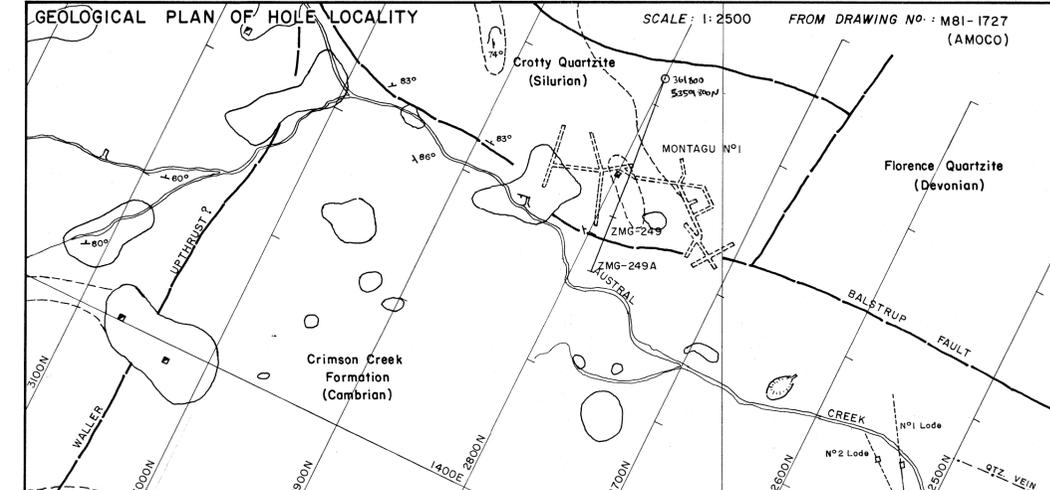
PROJECT: EL 4/78 ZEEHAN TAS.

**GRIEVES GRID**

**COSTEAN SUMMARY 003**

84-2208 vol 2/2 PLATE 3

Scale 1:5000	Survey 1: MAT	Revised:
Reference A-78-60B	Date 28-3-84	REF No
Drawn R. J. R.	Checked:	AI-532-0060



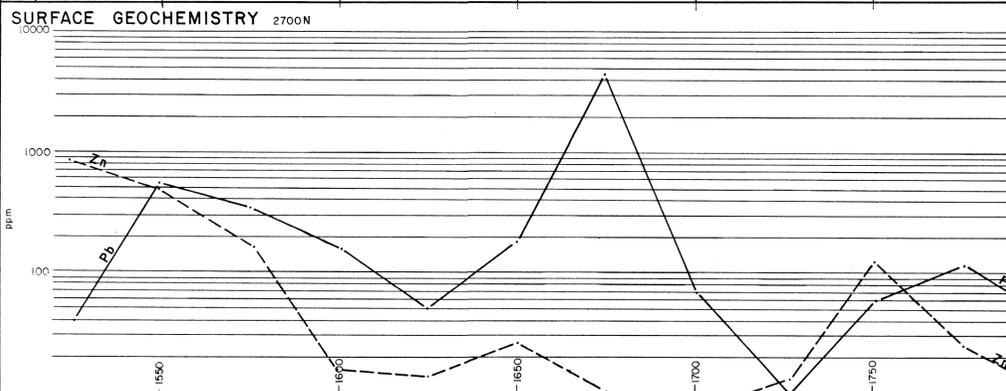
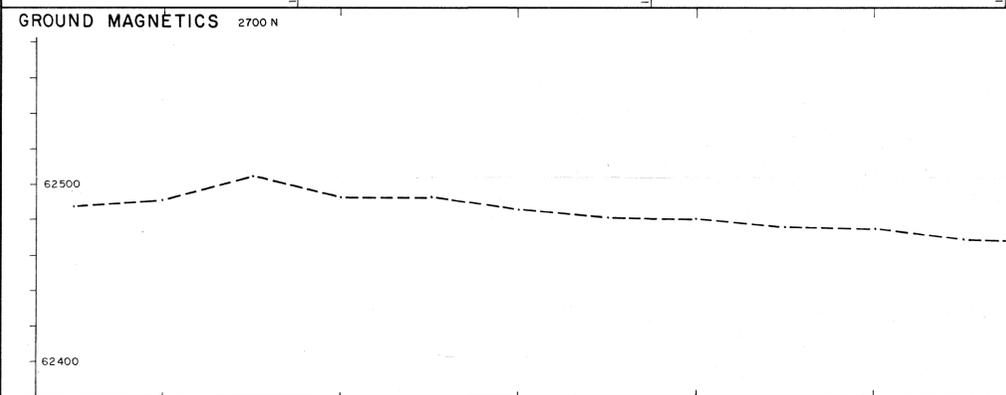
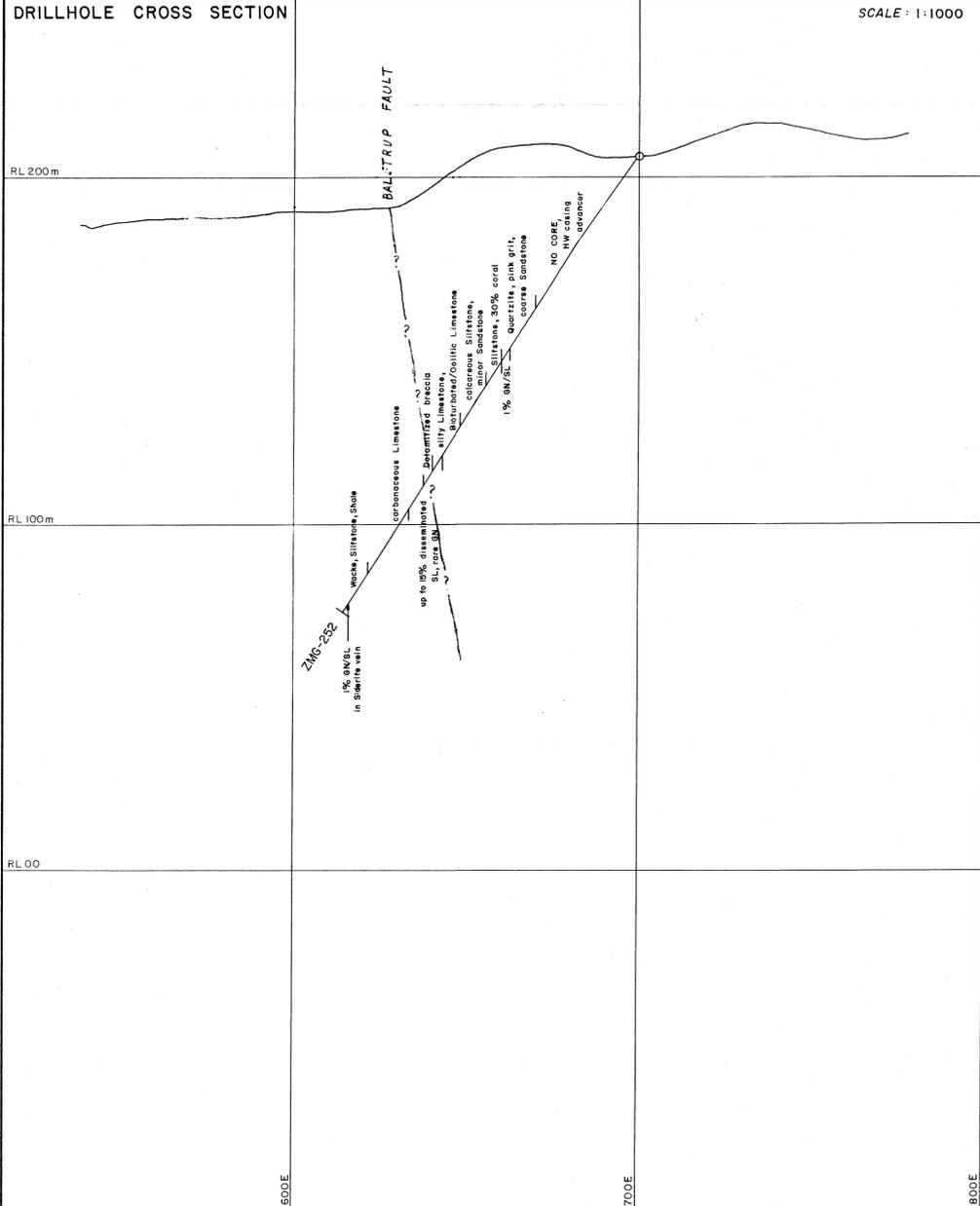
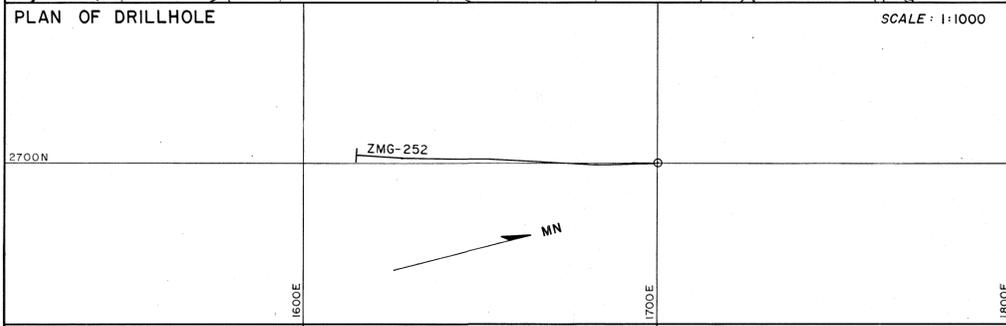
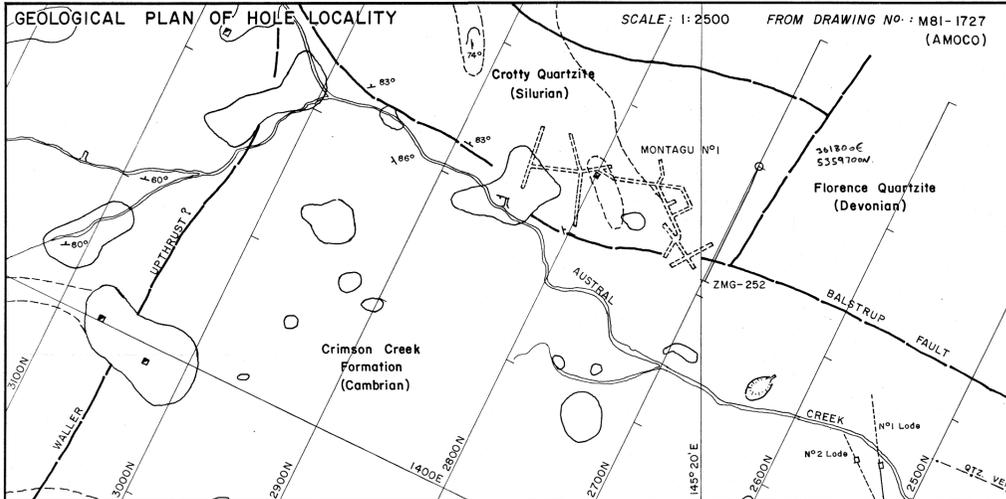
DOWN HOLE INFORMATION			GEOCHEMISTRY (249 A)					GEOCHEMISTRY (249)						
Lithology	Mineral'n	Depth (m)	25	50	75	100	25	50	75	100	125	150	175	200
No Core, remaining		0												
weathered Siltstone		0-24.7												
cleaved Siltstone		24.7-34.4												
porous Sandstone, Quartzite and Siltstone minor grit		34.4-84.0												
slumped Sandstone, minor breccia		84.0-94.3												
coral rich Siltstone		94.3-96.6												
slumped Sandstone, Siltstone		96.6-104.6												
well bedded Sandstone, Siltstone		104.6-129.4												
well bedded Sandstone, Siltstone		129.4-131.3												
well bedded Sandstone, Siltstone		131.3-158.9												
slumped Sandstone, Siltstone		158.9-160.3												
well bedded Sandstone, Siltstone		160.3-227.7												
well bedded Sandstone, Siltstone		227.7-249.8												
well bedded Sandstone, Siltstone		249.8-262.3												
well bedded Sandstone, Siltstone		262.3-289.0												

SUMMARY OF COMPLETED HOLE				SPECIFICATIONS OF PROPOSED HOLE			
CO-ORDINATES	NORTHING	EASTING	R. L.	CO-ORDINATES	NORTHING	EASTING	R. L.
LOCAL GRID A.M.G.	2800	1720	213	LOCAL GRID (Nth. Austral) A.M.G.	2800	1720	213 m
AZIMUTH: 192° MAG	DIP: -60°	TOTAL DEPTH: 289 m		AZIMUTH: 206° AMG	DIP: 60°	DESIGNED DEPTH: 140m	
COMMENCEMENT DATE: 29/10/83	COMPLETION DATE: 28/11/83	ESTIMATED COMMENCEMENT: October 1983					

INTERNAL SURVEY INFORMATION						ANTICIPATED GEOLOGY			
DEPTH	AZIMUTH	DIP	DEPTH	AZIMUTH	DIP	DEPTH	LITHOLOGY	DEPTH	NATURE OF TARGET AND ANTICIPATED DEPTH
70m	189° MAG	-60.5°	10.5m	affected by broken	-60°	0-80m	Sandstone, siltstone and grit.	0-80m	Scattered thin galena veins.
118m	188° MAG	-60°	142m	NQ Rods	-58°	80-140m	Limestone.	80-140m	Lead-zinc mineralization in limestone.
151m	191° MAG	-60°	169m		-56°				
190m	189.5° MAG	-59.5°	225m	191° MAG	-56.5°				
			289m	191° MAG	-56°				

DRILLED GEOLOGY (SUMMARISED)		MINERALISATION AND SIGNIFICANT ASSAYS	
0-104.6	CROTTY QUARTZITE		
0-24.7	Weathered Siltstone, orange and green Clay.		
24.7-34.4	Siltstone.		
34.4-84.0	Quartzite, Siltstone, coarse Sandstone.		
84.0-94.3	Slumped Sandstone and breccia.		
94.3-96.6	Coral rich Siltstone.		
96.6-104.6	Slumped Sandstone, Siltstone.		
104.6-158.9	GORDON LIMESTONE EQUIVALENT		
104.6-129.4	Well bedded Siltstone, Sandstone, very siliceous, variably slumped.		
129.4-131.3	Pink coarse Sandstone, to Grit.		
131.3-158.9	Well to moderately bedded Siltstone, Sandstone, variably slumped, minor brecciation.	131.3-143.2 Trace to minor GN/SL, in Siderite/Dolomite veins.	
150.5-153.7		150.5-153.7 1-10% SL, in Dolomite veins.	
158.9-160.3	BALSTRUP FAULT ZONE		
160.3-289.0	CRIMSON CREEK FORMATION		
160.3-227.7	Well bedded Siltstones and Wacke.	160.3-200.0 Trace GN/SL, in fine carbonate veins.	
227.7-249.8	Banded Mudstone, Siltstone, Wacke and Shale.		
249.8-262.3	Graphitic Shales.		
262.3-289.0	Finely laminated Siltstones.		

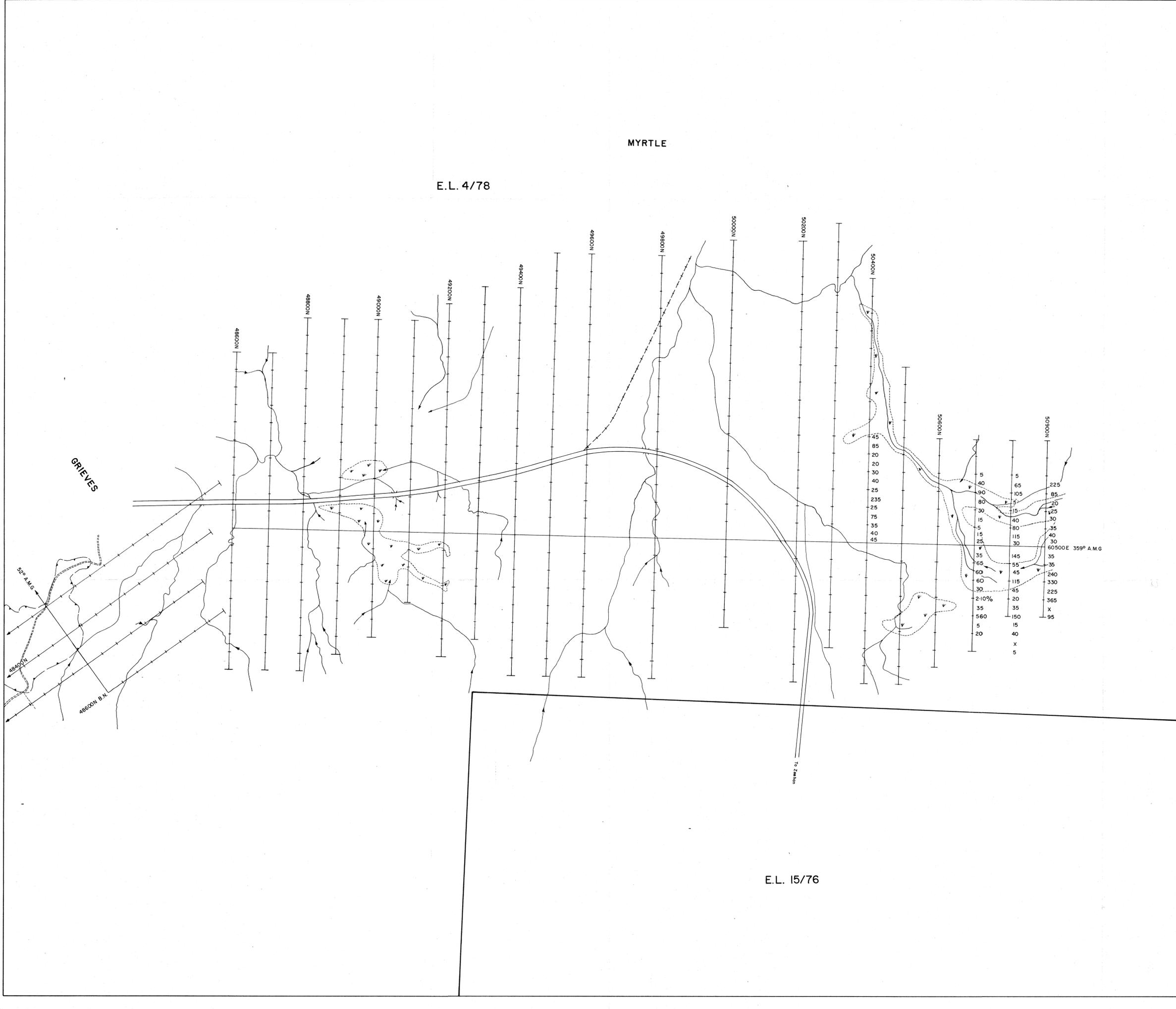
SAMPLE DATA					ELECTROLYTIC ZINC CO. OF ASIA LTD.	
SAMPLED INTERVAL	SAMPLE NUMBERS	SAMPLE TYPE	ELEMENTS DETERMINED	LAB. METHOD	PROJECT: E.L. 4/78 ZEEHAN	TAS.
107.3-108.5m	59043 & 4	split	Pb, Zn, Cu, Ag, Fe, Ba (249 A)	N.B.	SPECIFICATIONS AND SUMMARY OF RESULTS	
135.3-137.3m	59045 & 6			All elements except Ba, by AAS, Ba by XRF.		
141.8-142.8m	59047				EXPLORATION DIAMOND DRILL HOLE No. ZMG-249 & 249A	
150.5-153.7m	59048-051					
107.7-110.8m	59034-036	split	Pb, Zn, Cu, Ag, Fe, Ba (249)	as above.	94-2208 vol 2/2	
134.6-137.6m	59037-039					
167.4-167.7m	59040				PLATE 4	
169.6-169.8m	59041					
199.4-199.6m	59042				SCALE: As shown Survey: I. MAT. Revised: Reference: Date: 16-8-'83 REF. No. Drawn: R. J. R. Checked: AI-532-0040	



DOWN HOLE INFORMATION			GEOCHEMISTRY										GEOPHYSICS	
Lithology	Mineral'n	Depth (m)												
No core, HW casing advanced		0												
Sheared QTZITE		50	.29 Zn, 1.05 Pb.											
Sandstone, pink grit, Quartzite	1% GN/SL in fine Quartz vein													
Siltstone up to 30% coral														
Calcareous SLT, SST, minor Quartzite														
Silty LST, carbonaceous														
Bioturbated Limestone	Dis. SL	100	.08 Zn, .02 Pb, .25 Zn, .05 Pb, .17 Zn, .02 Pb, .13 Zn, .00 Pb.											
Dolomitized Breccia	5-15% Dis. SL		.78 Zn, .03 Pb, 1.16 Zn, .03 Pb, 2.03 Zn, .02 Pb.											
Variously carbonaceous Limestone	Rare GN/SL in calcite veins		.23 Zn, .16 Pb.											
Sandstone Siltstone		150												
Tuffaceous Wacke, Shale	156.2-156.6 E.O.H. 157 m		.35 Zn, .31 Pb.											
		200												
		250												
		300												
		350												
		400												

SUMMARY OF COMPLETED HOLE				SPECIFICATIONS OF PROPOSED HOLE					
CO-ORDINATES	NORTHING	EASTING	R.L.	CO-ORDINATES	NORTHING	EASTING	R.L.		
LOCAL GRID A.M.G.	2700	1700	206	LOCAL GRID (Nth Austral) A.M.G.	2810	1670	206		
AZIMUTH: 193° MAG. DIP: -55° TOTAL DEPTH: 157 m				AZIMUTH: 206° AMG. DIP: 60° DESIGNED DEPTH: 160 m					
COMMENCEMENT DATE: 13/12/83 COMPLETION DATE: 23/12/83				ESTIMATED COMMENCEMENT: October 1983					
INTERNAL SURVEY INFORMATION			ANTICIPATED GEOLOGY						
DEPTH	AZIMUTH	DIP	DEPTH	AZIMUTH	DIP	DEPTH	LITHOLOGY	DEPTH	NATURE OF TARGET AND ANTICIPATED DEPTH
60m	196° MAG.	-57°				0-50m	Sandstone, siltstone, grit.	0-50m	Scattered galena veins.
110m	194° MAG.	-58.5°				50-120m	Limestone.	50-120m	Lead-zinc mineralization in limestone.
157m	197° MAG.	-56.5°				120-150m	Fault zone.	20-150m	Fissure veins and stringer sphalerite and galena.
						150-160m	Tuffs and volcanogenic sediments.		
HOLE SIZE			HOLE SIZE						
HW	0	52.1	NQ	63.0	114.8				
HQ	52.1	63.0	BQ	114.8	157.0				
DRILLED GEOLOGY (SUMMARISED)									
DEPTH	LITHOLOGY	DEPTH	MINERALISATION AND SIGNIFICANT ASSAYS						
0-52.1	No core, HW casing advanced.								
52.1-93.7	CROTTY QUARTZITE								
52.1-55.9	Sheared Quartzite	66.8-70.1	1% GN/SL, in fine Quartz veins.						
55.9-71.0	Sandstone, pink grit to Quartzite.								
71.0-79.5	Siltstone, up to 30% coral.								
79.5-93.7	Calcareous Siltstone and Sandstone, minor Quartzite.								
93.7-157.0	GORDON LIMESTONE								
93.7-101.2	Silty Limestone, slightly carbonaceous.	102.3-	Minor disseminated SL in carbonaceous beds.						
101.2-107.3	Bioturbated and Oolitic Limestone.	105.3							
107.3-113.3	Breccia-Limestone fragments in Dolomite-Siderite-Quartz veins, very dense.	107.3-113.3	5-15% disseminated SL.						
113.3-143.5	Limestone, variably carbonaceous.	113.3-	Rare GN/SL in calcite veins.						
143.5-150.7	Sandstone, Siltstone	120.6							
150.7-157.0	Tuffaceous Wacke, Shale.	156.2-156.6	1% GN/SL in Siderite vein						

LOGGED BY: G. KARY	DATE: JANUARY, 1984			
SAMPLE DATA				
SAMPLE INTERVAL	SAMPLE NUMBERS	SAMPLE TYPE	ELEMENTS DETERMINED	LAB. METHOD
66.7-67.2m	59052	split	Pb, Zn, Cu, Ag, Fe, Ba	N.B.
69.6-70.1m	59053			All elements except Ba, by AAS, Ba by XRF.
102.3-103.3m	59054			
103.3-104.3m	59055			
104.3-105.3m	59056			
107.3-108.3m	59057			
108.3-109.3m	59058			
109.3-110.3m	59059			
110.3-111.3m	59060			
111.3-112.3m	59061			
112.3-113.3m	59062			
156.0-157.0m	59063			
NOTES:				
DESIGNED BY: I. J. MATHISON DATE: August 1983				
AIM OF HOLE: (I) To test mineralized limestone near the old Montagu workings.				
(II) To test an EM 37 anomaly just south of the Balstrup Fault.				
NOTES: Precise location of this hole depends on the results of proposed hole N°1.				
352215				
5 cm				
LOGGED BY: G. KARY DATE: JANUARY, 1984				
ELECTROLYTIC ZINC CO. OF ASIA LTD.				
PROJECT: E.L. 4/78 ZEEHAN			TAS.	
SPECIFICATIONS AND SUMMARY OF RESULTS				
EXPLORATION DIAMOND DRILL HOLE No. ZMG-252				
005				
84-2208 vol 2/2 PLATE 5				
SCALE: As shown	Survey: I. MAT.	Revised:		
Reference:	Date: 16-8-83	REF. No.		
Drawn: R. J. R.	Checked:	AI-532-0041		



**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	
bx - brecciated		ferr - ferruginous	
cl - cleaved		int - intense	
sh - 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		fbal - 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 - limestone	
GR - grit		CLY - clay	
PUG - pug		GRA - gravel	

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

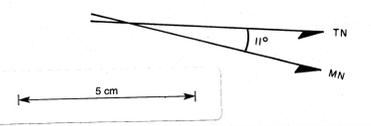
**ORDER**

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

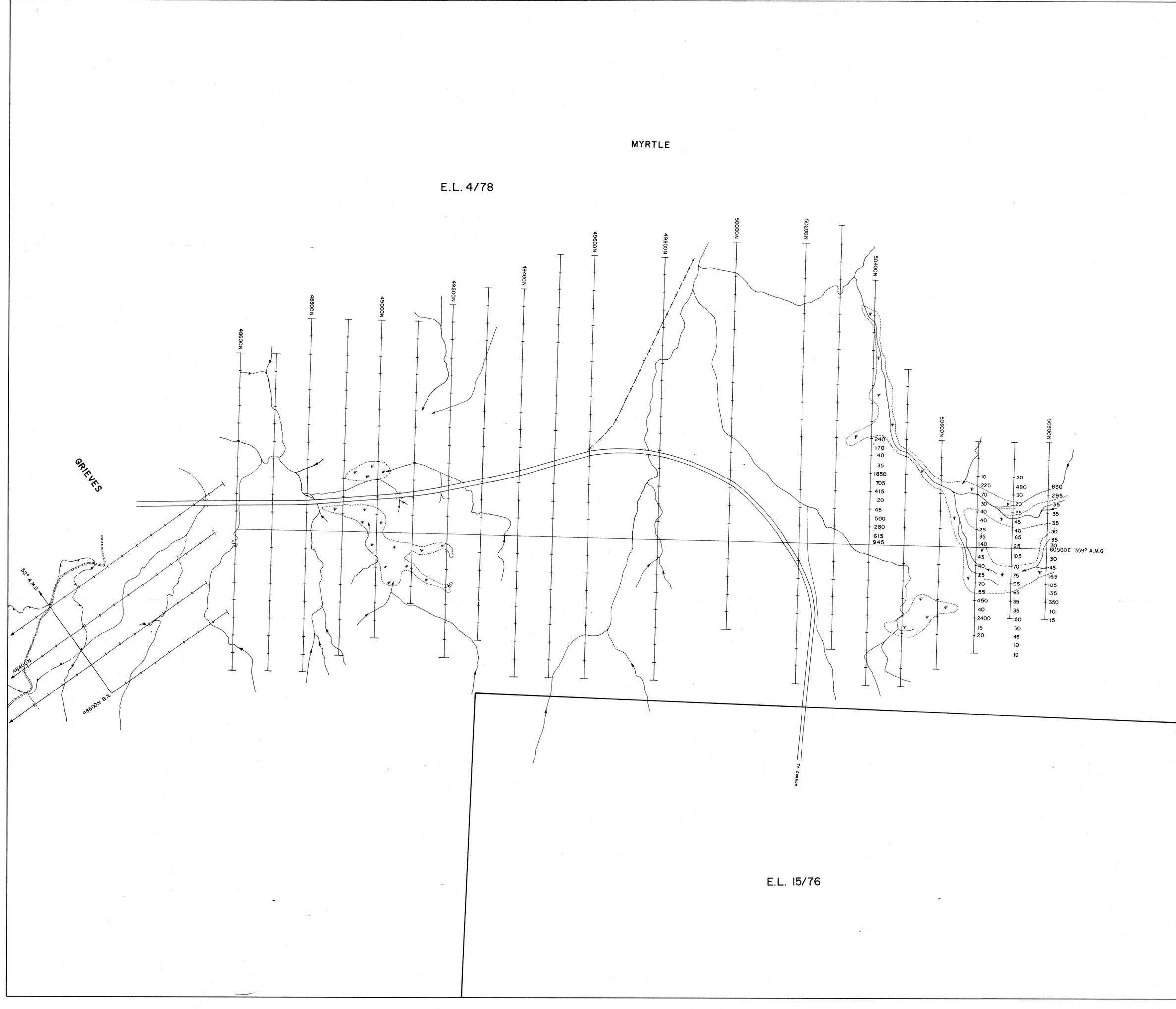
e.g.

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

<b>TOPOGRAPHICAL</b>			
cut grid lines	090° joint		
roads	090° joint - vertical		
tracks	090° overturned		
or	60° bedding		
tramways	090° bedding - vertical		
power lines	quarries		
or	rivers, creeks		
or	swampy area		



<b>ELECTROLYTIC ZINC CO. OF ASIA LTD.</b>		
PROJECT: EL 4/78 ZEEHAN		TAS.
352216 MYRTLE GRID		
BEDROCK GEOCHEMISTRY		
Pb		006
(WACKER)		PLATE 6
84-2208 vol 2/2		
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



**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 | tbcl - tubular       |
| vn - veins, veining | frct - fractured     |

**ROCK TYPE**

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

**MINERALOGY or ALTERATION**

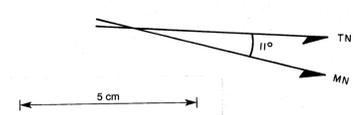
- |                  |                   |
|------------------|-------------------|
| qz - quartz      | py - pyrite       |
| gn - galena      | sp - sphalerite   |
| lim - limonite   | cp - chalcopyrite |
| cbd - carbonated | sid - silicified  |
| c - calcite      |                   |

**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

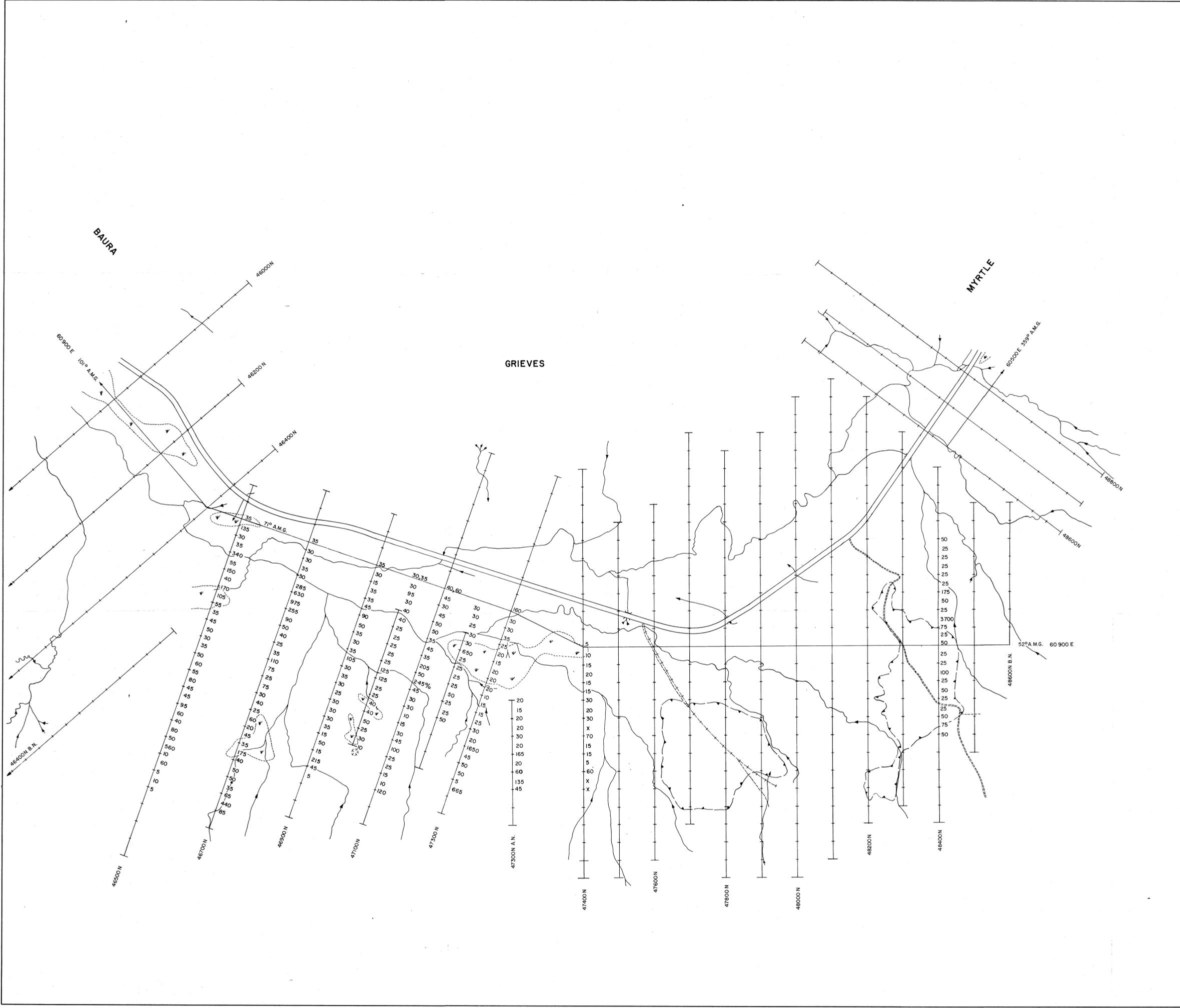
**TOPOGRAPHICAL**

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



ELECTROLYTIC ZINC CO. OF A'ASIA LTD.  
 PROJECT: EL 4/78 ZEEHAN TAS.  
 352217  
 MYRTLE GRID  
 BEDROCK GEOCHEMISTRY  
 Zn  
 (WACKER) 007  
 84-2208 vol 2/2 PLATE 7

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



**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

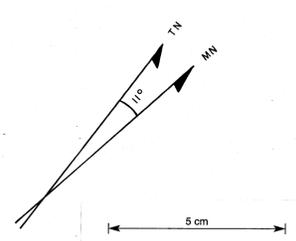
<b>TEXTURE</b>	
fg - fine grained	foss - fossiliferous
mg - medium grained	sil - siliceous
cg - coarse grained	mic - micaceous
bx - brecciated	ferr - ferruginous
clvd - cleaved	int - intense
shrd - sheared	wk - weak
calc - calcareous	v - very
carb - carbonaceous	pb - pebble
lam - laminated	cb - cobble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

<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	sid - silicified
c - calcite	

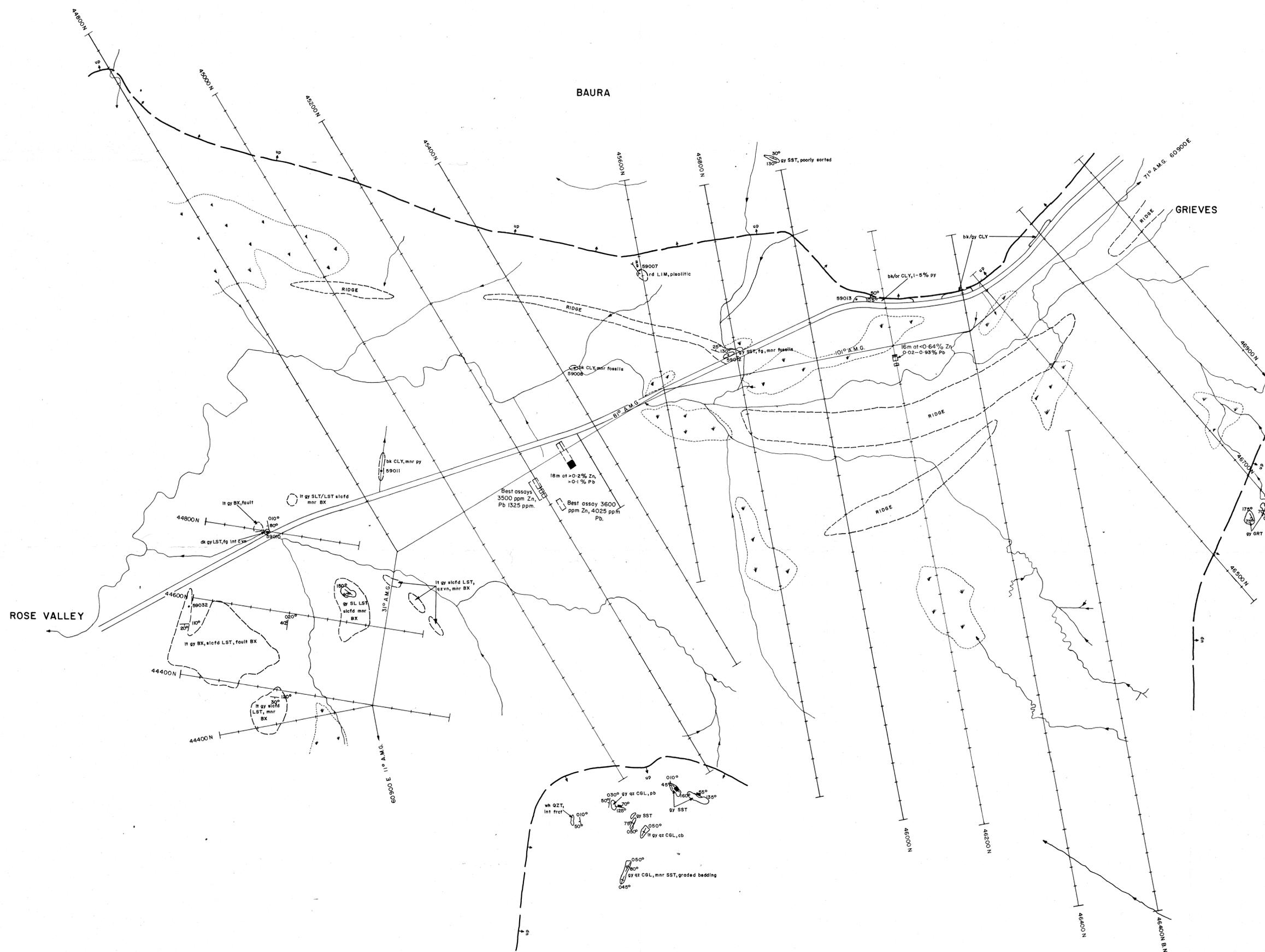
**ORDER**  
 Colour, Texture, Rock Type, Mineralogy or Alteration, Fossils  
 e.g.  
 dk gy mg foss SST or gy calc SH py or ply LST sid

<b>TOPOGRAPHICAL</b>	
— — —	cut grid lines
— — —	roads
— — —	tracks
— — —	or
— — —	tramways
— — —	power lines
— — —	or
— — —	rivers, creeks
— — —	or
— — —	swampy area
— — —	090° joint
— — —	090° joint - vertical
— — —	090° overturned
— — —	60° bedding
— — —	090° bedding - vertical
— — —	quarries



ELECTROLYTIC ZINC CO. OF ASIA LTD.		
PROJECT: EL 4/78 ZEEHAN	TAS.	
352218		
GRIEVES GRID		
BEDROCK GEOCHEMISTRY		
Pb		
(WACKER)		
84-2208 vol 2/2		PLATE 8
Scale : 1:5000	Survey : I.MAT.	Revised :
Reference : A-78-60B	Date : 11-7-84	REF No.
Drawn : R.J.R.	Checked :	AI-532-0092





**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
bsd - 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	tblc - tubular
vn - veins, veining	frct - fractured

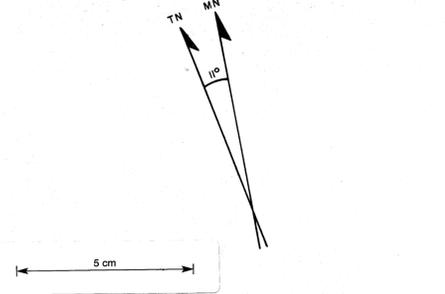
<b>ROCK TYPE</b>	
SST - sandstone	SLT - siltstone
LST - limestone	DLST - dolomite
BX - breccia	CGL - conglomerate
SH - shale	BSH - black shale
QZT - quartzite	LIM - ironstone
GRIT - grit	CLY - clay
PUG - pug	GRA - gravel

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

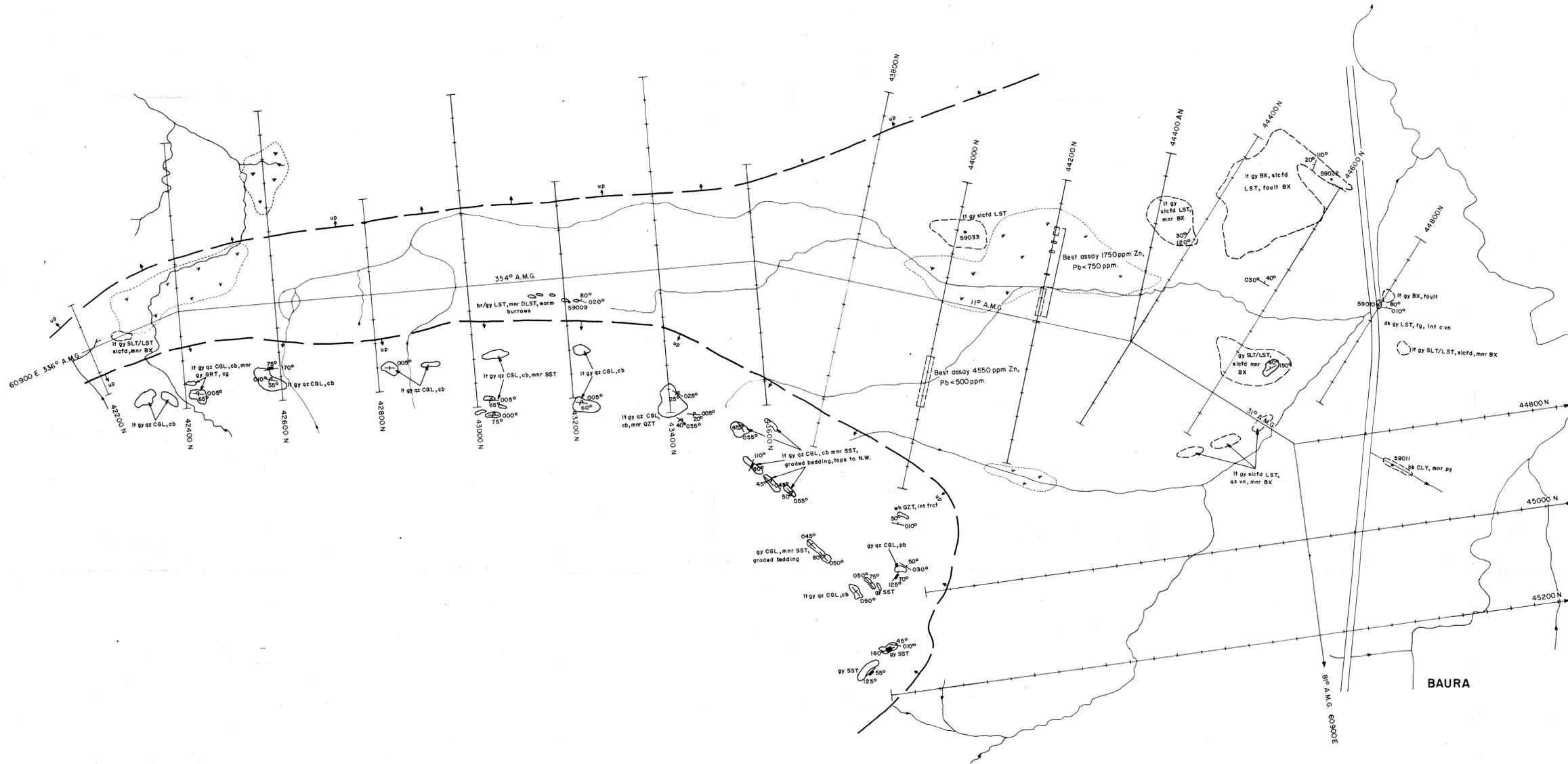
**TOPOGRAPHICAL**

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



ELECTROLYTIC ZINC CO. OF ASIA LTD.  
 PROJECT: EL 4/78 ZEEHAN TAS.  
 352220  
 BAURA GRID  
 COSTEAN SUMMARY 010  
 84-2208 VOL 2/7 PLATE 10  
 Scale: 1:5000 Survey: I.MAT. Revised:  
 Reference: A-78-60B Date: 28-3-'84 REF. No.  
 Drawn: R. J. R. Checked: AI-532-0059

ROSE VALLEY



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

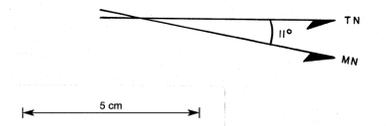
TEXTURE	
fg - fine grained	foss - fossiliferous
mg - medium grained	sil - siliceous
cg - coarse grained	mic - micaceous
bx - brecciated	ferr - ferruginous
clvd - cleaved	int - intense
shrd - sheared	wk - weak
calc - calcareous	v - very
carb - carbonaceous	pb - pebble
lam - laminated	cb - cobble
xbd -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

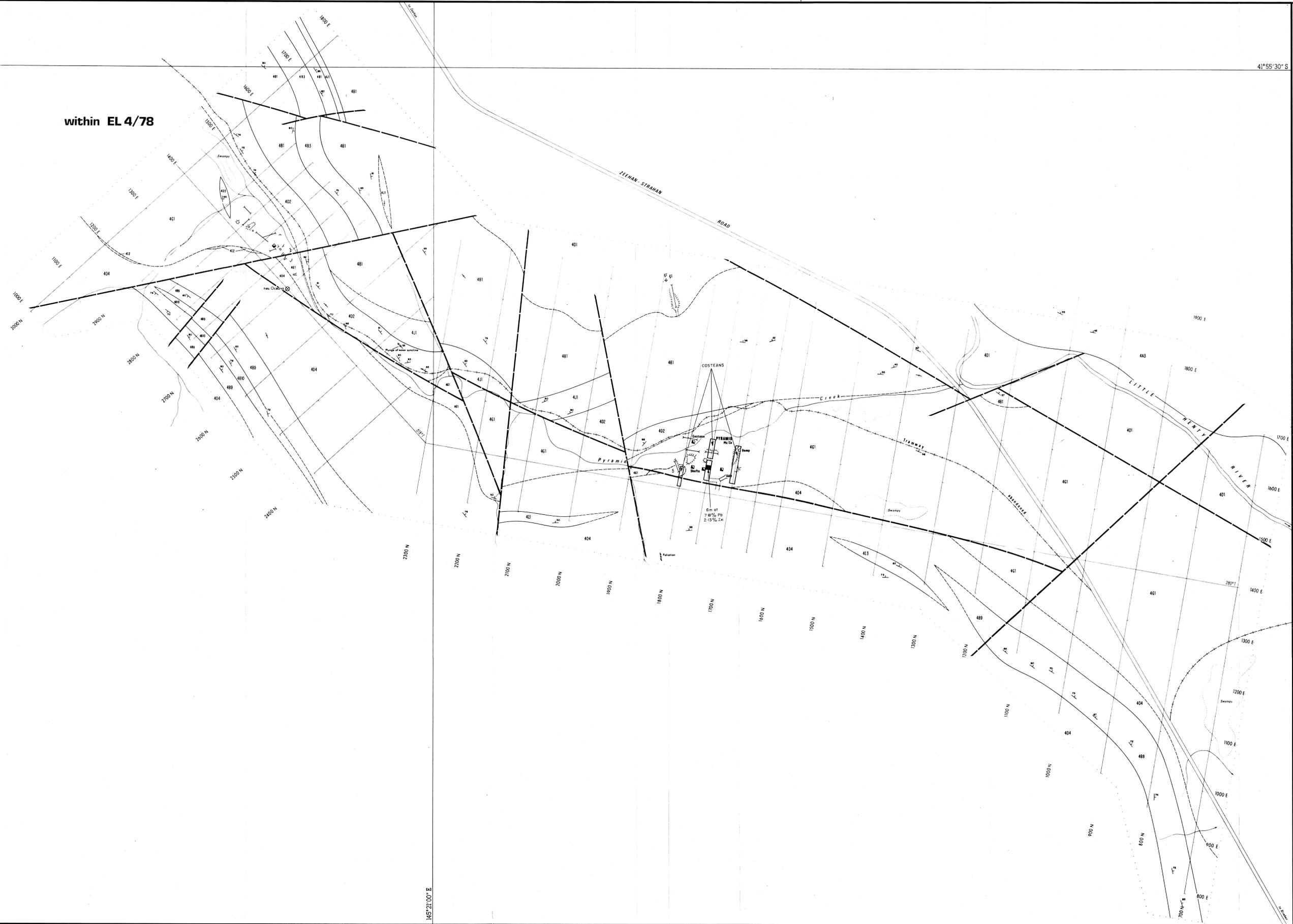
TOPOGRAPHICAL	
—+—+—+—	cut grid lines
—+—+—+—	roads
—+—+—+—	tracks
—+—+—+—	tramways
—+—+—+—	power lines
—+—+—+—	rivers, creeks
—+—+—+—	swampy area
—+—+—+—	joint
—+—+—+—	joint - vertical
—+—+—+—	overturned
—+—+—+—	bedding
—+—+—+—	bedding - vertical
—+—+—+—	quarries



ELECTROLYTIC ZINC CO. OF ASIA LTD.		
PROJECT: EL 4/78 ZEEHAN	TAS.	
352221		
ROSE VALLEY GRID		
COSTEAN SUMMARY		011
EL-2208 vol 2/2		
Scale : 1:5000	Survey: I.MAT.	Revised:
Reference: A-78-60 B	Date: 28-3-84	REF. No.
Drawn: R. J. R.	Checked:	AI-532-0058

**Legend**

QUATERNARY		
Alluvium etc	08	
TERTIARY		
Basalt	20	2
DEVONIAN		
<u>Florence Quartzite</u>	44	25
Undifferentiated quartzites, sandstones, siltstones		
SILURIAN		
<u>Keel Quartzite</u>	043	11
Undifferentiated quartzite, sandstone		
<u>Amber Slate</u>	401	30
Siltstone interbedded with shales		
<u>Crotty Quartzite</u>		
Undiff. sandstones, siltstones and grits	401	1
Sandstone, massive	402	1
Sandstone, cross bedded	403	1
Sandstone, tubular	404	1
Sandstone, white, friable	405	1
Siltstone	402	17
Conglomerate	411	1
Grits	411	1
ORDOVICIAN		
<u>Gordon Limestone</u>		
Sandstone	406	13
Sandstone, fossiliferous	407	13
Sandstone breccia	408	13
Siltstone	403	13
Shale	401	13
Claystone	41	13
Limestone	401	13
Limestone, fossil breccia	402	13
Limestone, slumped	403	13
Dolomite, black	401	13
Dolomite breccia	402	13
Dolomite, silicified	403	13
Conglomerate	412	13
Ironstone	5	14
Mineralization	51	14
<u>Moina Formation</u>		
Sandstone, tubular	409	14
Sandstone	410	14
Undifferentiated	404	14
Siltstone, tubular	405	14
Dolomite	404	14
Conglomerate	413	14
Grit	412	14
Ironstone	5	14
<u>Mt. Zeehan Conglomerate</u>		
Conglomerate	414	14
CAMBRIAN		
<u>Crisson Creek Formation</u>		
Undifferentiated	1E 1	15
Tuff, volcano litharenite	1E 2	15
Sandstone-tuff	4B 11	15
Shale	4E 2	15
Ironstone	5	14
Siltstone	406	15
PRECAMBRIAN		
<u>Donah Quartzite</u>		
Undifferentiated	441	16
Micaceous quartzite	442	16
Sandstone, brown	4812	16
Siltstone	407	16



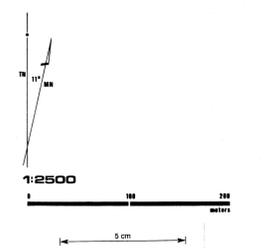
within EL 4/78

41°55'30" S

**Location**



Zeehan Project



352222

Amoco Minerals Australia Company

Project	ZEEHAN	Nº A-78-60A
Project Partner		
Pyramid	SL-2208 v012	
<b>FACTUAL GEOLOGY</b>	<b>COSTEAN SUMMARY 012</b>	
Map Ref. ANG	K-55-5	Latitude 41°55'S Longitude 145°20'E
Surveyed	G. Kay	Date 3-4-84 Scale 1:2500
Drawn	R.S.K. & R.J.R.	Date 3-4-84 Drawing Nº M83-2052
Report 353	PLATE	12

AX-532-0062

Enclosure