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	DEPT. OF MINES		
REF. No.	8112/84		
			Register E & IL

ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LIMITED
MINERAL RESOURCES DIVISION.

PART OF EXPLORATION LICENCE NO. 30/83 "GOVERNOR"

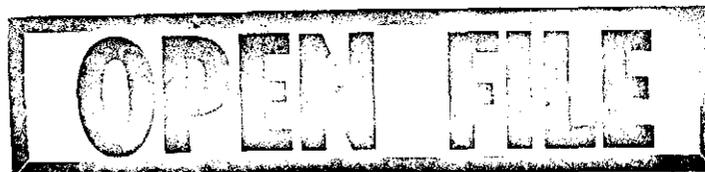
GOVERNOR RIVER AREA

PROGRESS REPORT ON EXPLORATION ACTIVITY
1ST OCTOBER, 1983 TO 30TH MARCH, 1984.

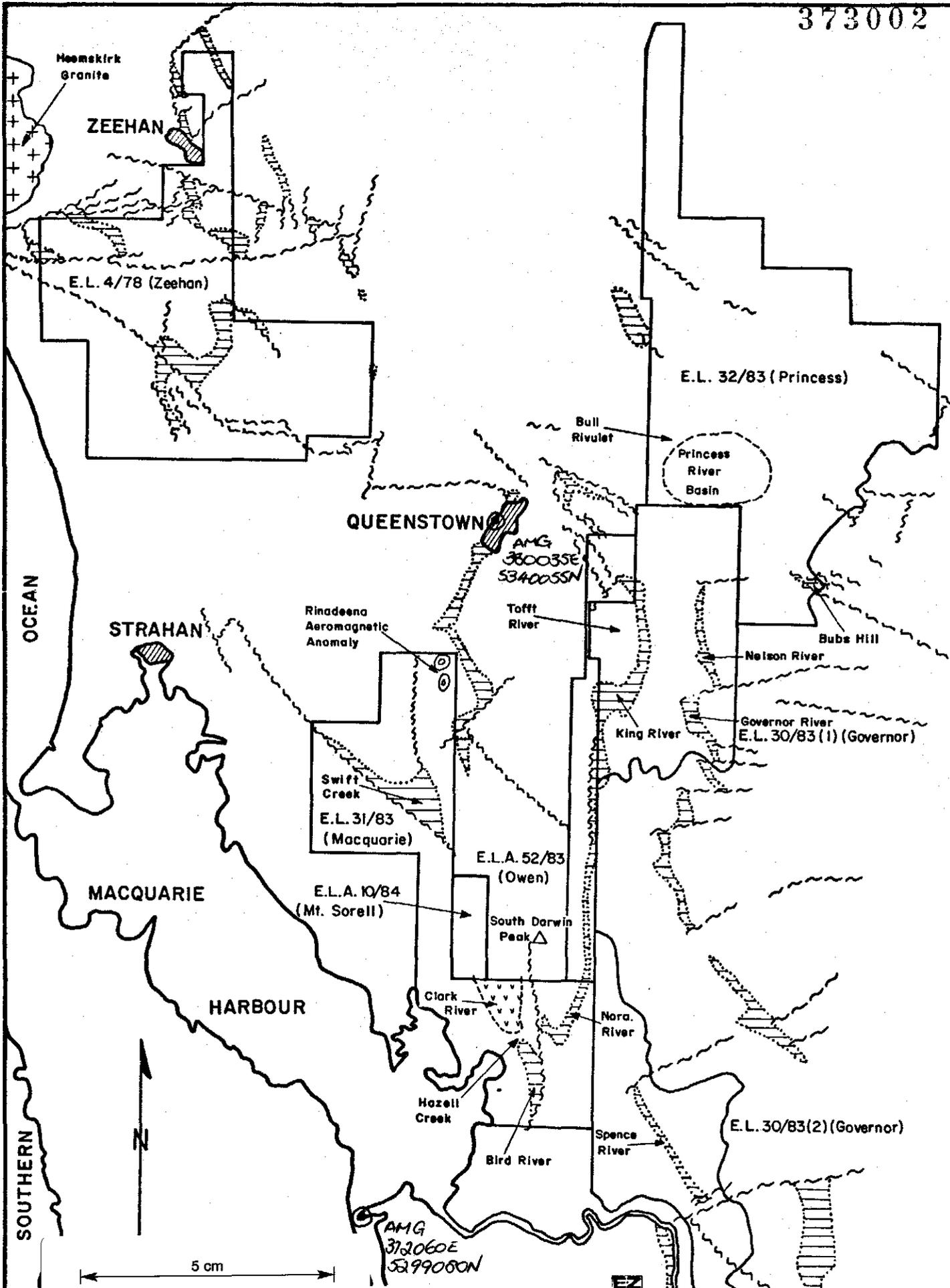


E.Z. REPORT No. T190

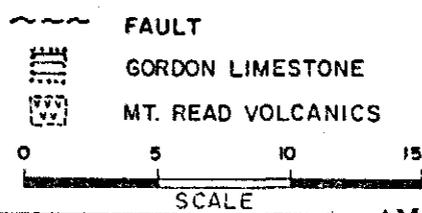
I.J. MATHISON,
JULY, 1984.



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SOUTHERN OCEAN



PROJECT: GORDON LIMESTONE J.V.		
LOCATIONS		
Compiled: S.T.	Date:	PLAN NO
Drawn: R.J.R.	Scale:	Fig.

AMG REFERENCE POINTS ADDED

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	GR3.	" Geochemistry - Zn	-0011 ✓
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APPENDIX

- Rock Samples - Data Sheet
- Petrological Description
- Stream Sediment Samples - Data Sheets
- Panned Concentrates - Mineralogy
- Soil Samples - Data Sheets

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1. INTRODUCTION

1.1. Location and Access

The Governor River Area covers a mapped outcrop of Gordon Limestone extending from the Governor River for 4km to the southeast. The area is 17km southeast of Queenstown Airport and 4km east of the Kelly Basin Road. Access is by helicopter. A walking track along the Governor River provides emergency access to the area.

1.2. Published Geology

On the Queenstown 1:250,000 geological sheet a wedge of Gordon Limestone has been mapped crossing the Governor River. This wedge is 1km wide at the Governor River and tapers for 4km to the southeast along a tributary valley. The limestone is offset in the north and south by dextral strike-slip faults and a minor fault is mapped within the wedge. The Governor River Limestone wedge has apparently been offset 2km to the west from the Nelson River limestone and appears much thicker than the Nelson River limestone.

As in the Nelson River area, the limestone in the Governor River area is underlain by a thin sequence of siliceous conglomerate and quartz sandstone of the Owen Conglomerate which flanks and unconformably overlies mica schists and micaceous metaquartzites of the Franklin River Metamorphics. The limestones are overlain by quartz sandstone, siltstone and shale of the Eldon Group.

1.3. Previous Exploration

There are no reports of earlier exploration and no old workings or mineral occurrences are known.

1.4. Topography and Vegetation

Gordon Limestone outcrop has been interpreted in the floor of a deep, flat bottomed valley. Thick ti-tree and bauera scrub covers the valley floor

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and mixed ti-tree and regrowth forest covers the slopes. Most of the valley floor lies below the 240m contour and will be partially flooded by the King River Dam.

1.5. Proposed Exploration 1983-84

Because of the thick vegetation and the poor exposure anticipated, a grid based exploration programme was attempted. The apparently thickened limestone sequence beside a prominent fault suggested that a more detailed programme was justified.

2. E.Z. EXPLORATION - OCTOBER, 1983 - MARCH, 1984

2.1. Work Completed

2.1.1. GRIDDING

A grid consisting of a 3.6km base line and 7.4km of cross lines was cut and pegged at 20m slope corrected intervals. The 10 cross lines were 400m apart.

2.1.2. SOIL SAMPLING

All cross lines were soil sampled at 20m spacings. Nominal C horizon soil samples were collected at rock/soil interface using a hand auger. Whole samples were analysed by Analabs in Burnie for Cu, Pb, Zn, Ag, Fe and Ba by A.A.S. techniques. All elements except Ba were determined following nitric/perchloric digestion.

2.1.3. STREAM SEDIMENT SAMPLING

Stream sediment samples were collected from all well defined stream channels crossing the grid lines. 24 stream sediment samples and 4 panned concentrates were collected. The -80# fraction of stream sediment samples were analysed for Cu, Pb, Zn, Ag, Mn and Ba by A.A.S. techniques.

Panned concentrates were submitted for heavy mineral separation and microscopic identification.

2.1.4. GEOLOGICAL MAPPING AND ROCK SAMPLING

The entire grid and the Governor River were mapped. Rock samples were collected from most exposures. 11 rock samples were collected. All rocks were analysed for Cu, Pb, Zn, Ag, Fe, Mn and Ba by A.A.S. techniques. One rock was microscopically described in thin section.

2.1.5. GEOPHYSICS - GROUND MAGNETICS

The entire grid was covered with a ground magnetic survey. Readings were collected at station intervals of 10m using Scintrex MP-2 magnetometers. A local base station was set up to monitor diurnal variation. Base station readings were taken every 5 minutes.

2.2. Results Received

2.2.1. GEOLOGY (See Fig. GR1)

Quartz sandstone and conglomerate outcrop along the ridge east of the valley and sandstone and siltstone outcrop along ridges west and north of the valley. Similar rocks outcrop along strike in the bed of the Governor River. Exposure of the limestone sequence is very poor. Only three small outcrops were mapped in the valley. Two of these were of soft, well cleaved siltstone and the other, in the bed of the Governor River, was of dark grey argillaceous dolomite. In thin section this rock was described as "Dolomitised impure limestone with contorted to slump rafted siltstone/silty shale partings." Post dolomite sideritic alteration and conspicuous syngenetic pyrite were also noted.

Most of the valley floor and the lower slopes of the ridges were covered with thick alluvial and eluvial deposits. Streams entering the valley from the east have built up thick, coalescing alluvial fans. Distinct stream channels with

active streams reach the tops of the fans and degenerate into dry shallow gullies across the fan. The streams percolate through the coarse quartzite debris of the fan and emerge as a series of seeps. These seeps trickle across the central swampy area to join the main stream draining the valley.

Similar, but much smaller fans and talus also cover the western part of the valley.

Further alluvial cover of the valley has developed along the main tributary and the Governor River. Thick deposits of sand silt and gravel were observed in the banks of streams and deeply buried tree trunks were often encountered by the soil samples.

2.2.2. ROCK CHIP GEOCHEMISTRY (See Appendix & Fig's GR2, 3, 4, 5 & 6)

n = 11 (1 dolomite; 4 siltstone; 6 quartz sandstone)

Element	Range	?Anomalous
Cu	5 - 15	-
Pb	<5 - 35	-
Zn	5 - 75	-
Ag	<0.5	-
Fe	0.13-2.65%	-
Mn	10 - 500	-
Ba	<10 - 580	-

No rock chip sample reported any anomalous value.

2.2.3. STREAM SEDIMENT GEOCHEMISTRY (See Appendix & Fig's GR 2, 3, 4, 5 & 6)

n = 24

Element	Range	Mean	?Anomalous'
Cu	5 - 25	10	-
Pb	<5 - 75	15	75 (2 samples)
Zn	10 - 120	40	-
Ag	<0.5 - 0.5	<0.5	-
Mn	5 - 700	120	-
Ba	15 - 90	40	-

Two weakly anomalous lead values were reported. One sample was collected from a small creek flowing into the basin from the north. This creek drains an area of Eldon Group rocks. The other was collected from the main tributary.

Manganese values from the main tributary are much higher than those from other creeks. These high values appear to correlate with the main swampy area. There is no indication of manganese scavenging of lead or zinc.

2.2.4. SOIL GEOCHEMISTRY (See Appendix & Fig's GR 7, 8, 9 & 10)

The results of analyses of soil samples are listed on data sheets in the Appendix and plotted on 1:5,000 scale base maps. Most values are very low. Only three samples reported significantly anomalous geochemistry. These are listed below.

Sample No.	Cu	Pb	Zn	Fe	Ba
57607	55	130	120	17.5%	3060
57666	105	420	60	0.33%	20
57670	40	150	30	0.25%	35

Samples 57666 and 57670 were collected from talus slopes along the eastern side of the valley. Sample 57607 was collected from the valley floor and this sample is thought to represent weathered bedrock. Samples along strike from 57607 are also weakly anomalous in Pb and Zn.

Very few of the soil samples represent genuine C horizon or weathered bedrock. The vast majority were collected from talus slopes, alluvial fans and thick stream deposits. The dark grey to black puggy clays expected from weathered limestone were noted in only two or three samples.

2.2.5. PANNED CONCENTRATES (See Appendix and Fig. GR2)

Descriptions of four panned concentrates from the Governor River area are attached. No minerals indicative of sulphide mineralisation were detected. Many of the minerals described are obviously derived from high grade metamorphic rocks. Others including rutile, cassiterite, ilmenite, zircon and some tourmaline, indicate an Owen Conglomerate provenance.

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2.2.6. GEOPHYSICS - GROUND MAGNETICS (See Fig. GR11)

After correction for diurnal variation the ground magnetometer readings were plotted on a base plan. Data are very smooth and could be contoured at 5nT intervals. Possible limestone areas show little contrast and no distinctly magnetic units can be outlined. However, a break near line 5,200N suggests a major fault dislocation.

3. DISCUSSION AND CONCLUSIONS

Because of thick talus and alluvial deposits, 1983-84 exploration of the Governor River cannot be considered to be decisive. Many areas could not have been tested. Nevertheless, no clear indications of carbonate hosted exhalative lead-zinc deposits were detected. Follow-up of the two weak soil anomalies appears warranted but does not merit a high priority.

4. RECOMMENDATIONS

Anomalous soil geochemistry detected by the 1983-84 exploration programme should be tested by a series of shallow pits. If further follow-up is warranted use of a deep sampling, portable percussion drill is suggested.

ROCK SAMPLE LEDGER

Sample Number	A.M.G. Co-ordinates Local		Sample Type	Geological Description	Rock-type (Macroscopic)	Thin or Polished Section			Metal Content (p.p.m. unless specified)								
	N	E				T or P	By	Reference	Rock-type (Microscopic)	Cu	Pb	Zn	Ag	Fe	Mn	Ba	
60169	7200	1685	Rock	Dark grey SILTSTONE - ? calcareous	SLST						10	20	20	X	3650	15	376
60170	6800	2480		White QUARTZITE assoc. with pebble CONGLOMERATE	QZT						5	X	5	X	1300	10	X
60171	6800	1765		Grey SILTSTONE - well cleaved.	SLST						5	X	20	X	6550	15	430
60172	6005	2235		White medium grained quartz SANDSTONE	SST						5	X	10	X	1400	20	21
60173	5200	2380		Red & white thin bedded fine grained micaceous QUARTZITE	QZT						5	X	10	X	6500	15	285
60174	5200	2240		Oxidized cream fine-med grained micaceous QUARTZITE	QZT						10	35	15	X	2.35%	15	247
60175	1400	2035		White medium grained QUARTZITE on above bedding	QZT						5	X	10	X	3850	10	11
60176	7960	2290		Dark grey argillaceous DOLOMITE minor Fe-carbonate vng & solution bx	DLST	T cover	EMS	DLST			10	10	25	X	1.45%	500	173
60177	7950	2650		Oxidized orange thin bedded & assoc. with below	QZT						15	X	75	X	1.95%	150	361
60178	7950	2654		Oxidized khaki SILTSTONE, thin bedded & assoc. with above.	SLST						10	5	60	X	1.95%	45	551
60179	8000	1540		Green-grey SILTSTONE with slaty cleavage	SLST						10	10	50	X	2.65%	35	580
60176	"Dolomite". Fine sparry dolomite with pervasive intergranular relics of semi-porcellaneous calcite. Sporadic contorted lenses, rafts of dolomitic quartzose/micaceous silty shale/argillaceous siltstone. Pervasive carbonaceous matter.			"Soft-pebble conglomeratic" (slump-brecciated). Incipiently sheared.		Relatively conspicuous syngenetic pyrite (concentrated in pelitic zones). Traces sideritic carbonate.			Dolomitised impure limestone with contorted to slump-raftered siltstone/silty shale partings. Reflects incipient post-dolomite sideritic alteration.								

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

GEOCHEMICAL SAMPLE DATA SHEET

PROJECT: ..GORGON LIMESTONE.
LOCALITY: ..E.L. 30/83.....
GRID NAME: ..GDFE90R.....
NOMINAL GRID AZIMUTH: ..325 A.M.G.....

MATERIAL:SP14.....
SAMPLE METHOD: ..HANG. RYGER.....
SAMPLED BY: ..B.M.G.B.P.R.....
DATE:Feb. 1984.....

SIZE FRACTION ANALYSED:WHOLE.....
ANALYSED BY:ONALM95.....
METHOD:A.O.S.....

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA							METAL CONTENT (ppm unless specified)							
	GRID LINE NO.	A.M.G. CO-ORDINATES		DEPTH	COLOUR	Clay	Sand	Rock Frags	Organic	CONTAM.	Geology	Cu	Pb	Zn	Ag	Au	Fe	Mn	Ba
	GRID EASTING	NORTHING	EASTING																
57401		2640		0.25		BN	10	35	50	S		15	65	80	X		1750		55
2		2620		0.46	LT	BN	5	45	50			5	X	70	X		1800		75
3		2600		0.38	WH	LT	BN	5	55	60		10	40	65	X		1650		55
4		2580		0.40		DK	BN		5	5	S	10	95	105	X		2300		15
5		2560		0.25		WH	BN	15	5	65	S	5	X	15	X		1850		10
6		2540		0.20		WH	BN	30	35	30	S	10	10	25	X		2500		60
7		2520		1.45		BN	35	60		5		5	5	15	X		2150		75
8		2500		0.60		DK	BN	25	70		5	5	10	15	X		2850		115
9		2480		0.60	WH	LT	BN	15	45	40		10	5	20	X		2500		55
10		2460		0.80		BN	45	30	20		S	10	X	20	X		1650		25
11		2440		1.30		LT	BN	20	65			10	X	20	X		2650		75
12		2420		1.38		WH		100				5	5	15	X		2950		85
13		24001		1.30		WH	70	30				5	10	25	X		3750		125
14		2380		0.46		DK	BN	40	5	5	S	5	X	10	X		1850		45
15		2360		1.40		DK	BN	30	65		5	10	5	30	X		2750		70
16		2340		0.70		WH	25	55	20			5	X	15	X		2450		80
17		2320		0.70		DK	BN	50	20	30		10	5	20	X		3250		70
18		2300		1.20		LT	BN	25	70		5	5	10	15	X		3050		90
19		2280		0.30	BL	DK	BN	30	65		5	5	5	10	X		2950		55
20		2260		0.35		LT	BN	20	65	15		10	5	15	X		2000		25
21		2240		0.67				10	85		5	5	10	10	X		2750		20
22		2220		0.48		BN	BL	15	20		5	20	20	25	X		3600		125
23		2200		0.45		GN	BN	45	50		5	20	30	45	X		3200		110
24		2180		0.73		BN	60	25		5	10	10	40	20	X		3950		50
25		2160		0.50		BL	GY	35	60		5	5	5	15	X		3250		55
26		2140		1.45		BL	80	10		5	S	15	65	40	X		1800		80
27		2120		0.90		GY	10	85		5		5	5	20	X		3900		55
28		2100		1.45		GN		5	90		5	5	5	15	X		3950		55
29		2080		1.30		GN		10	85		5	5	15	20	X		5050		55
30		2060		0.15		DK	BN	70	15	10		10	20	15	X		2000		15

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

GEOCHEMICAL SAMPLE DATA SHEET

PROJECT: ..GOBPPN. LIMESTONE.
LOCALITY: ...E.L. 39183.....
GRID NAME: ..GOVERNOR.....
NOMINAL GRID AZIMUTH: ..325. A.M.F.....

MATERIAL:SOIL.....
SAMPLE METHOD: ...HAMP. RYPER....
SAMPLED BY: ..B.M. P. B. R.B.....
DATE: ..Feb. 1984.....

SIZE FRACTION ANALYSED:WHOLE.....
ANALYSED BY:ANALAB.....
METHOD:A.B.F.....

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA						Geology	METAL CONTENT (ppm unless specified)								
	GRID LINE NO.		A.M.G. CO-ORDINATES		DEPTH	COLOUR	Clay	Sand	Rock Frag.	Organic		CONTAM.	Cu	Pb	Zn	Ag	Au	Fe	Mn	Ba
	GRID EASTING	NORTHING	EASTING	DEPTH																
57	43		2040		0.25		40	20	30	10		10	10	15	X		1700		15	
	32		2020		0.15	DK BW	70	15	10	5		20	35	25	X		1600		35	
	33		2000		0.45	DK BW	65	30		5		5	5	10	X		1650		10	
	34		1980		1.40	WH		100				5	X	10	X		1300		15	
	35		1960		0.58	WH		100				5	X	10	X		2150		15	
	36		1940		0.15	DK BW	70	20		10		20	30	35	X		2150		40	
	37		1920		0.15	DK BW	65	5		50		50	90	60	X		1800		35	
	38		1900		0.20	DK BW	75	5	15	5		35	15	20	X		1600		25	
	39		1880		0.30	DK BW	75	10	15			15	10	15	X		2450		15	
	40		1860		0.45	BN	85	10		5		10	X	20	X		1800		10	
	41		1840		0.20	DK BN	60	20	10	10		10	X	10	X		1700		10	
	42		1820		0.20	BN	50	50		10		25	20	65	X		2250		15	
	43		1800		0.45	RD BN MH	50	40		5	5	10	X	10	X		2450		10	
	44		1780		0.20	BN	40	50		5	5	5	X	5	X		1400		20	
	45		1760		0.20	CY BN	75	15		5	5	15	20	15	X		2000		40	
	46		1740		0.80	BN	58	5	10			10	X	10	X		1800		35	
	47		1720		0.45	WH	10	70	20			10	X	10	X		3050		115	
	48		1700		0.60	WH BN	10	75	10	5		5	X	10	X		2600		65	
	49		1580			BN	58	5	10			10	X	10	X		1400		10	
	50		1560		1.35	CR OR	70	20	10			10	20	65	X		2.652		200	
	51		1540		0.30	BN GN	65	10	25			20	25	50	X		3.452		160	
	52		1525		0.25	DR BN	65	6	20	10		25	50	40	X		2.802		140	
	53		1450		1.40	GN	20	80				5	5	15	X		8350		50	

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

GEOCHEMICAL SAMPLE DATA SHEET

PROJECT: BORON LIMESTONE...
LOCALITY: EL. 30153.....
GRID NAME: GOVERNOR.....
NOMINAL GRID AZIMUTH: 325 A.D.S.....

MATERIAL: SOIL.....
SAMPLE METHOD: HOOR. O.C.E.R.....
SAMPLED BY: G.M. G.R. P.A.....
DATE: Feb. 1974.....

SIZE FRACTION ANALYSED:V.H.O.L.L.E.....
ANALYSED BY:R.V.A.L.A.S.....
METHOD:A.P.S.....

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA						Geology	METAL CONTENT (ppm unless specified)								
	GRID LINE NO.	A.M.G. CO-ORDINATES			DEPTH	COLOUR	Clay	Sand	Rock Frags.	Organic		CONTAM.	Cu	Pb	Zn	Ag	Au	Fe	Mn	Ba
	7600N	GRID EASTING	NORTHING	EASTING																
57484		2020			1.48	GY BK 85 10	S					25	20	35	X		7400		125	
85		2000			1.45	DK GN 75 20	S					35	25	115	X		7400		135	
86		1980			1.25	GN 20 70 10						30	20	60	0.5		9650		100	
87		1960			1.30	GN 15 80	S					25	10	60	X		9300		95	
88		1940				GN 20 76 10						15	10	30	X		4250		65	
89		1920			1.25	GN BN 10 80 10						25	20	50	X		9100		110	
90		1900			1.35	GN 60 30	S	S				30	20	90	X		7050		130	
91		1880			0.82	GN 85 15						25	25	40	0.5		6350		95	
92		1860			0.80	DK GN 80 15						30	20	35	X		4750		90	
93		1840			1.44	GN 50 50						30	10	70	0.5		4900		65	
94		1820			1.10	BN 35 60						20	X	20	X		3150		15	
95		1800			1.45	LT BN 70 30						20	X	20	X		2000		75	
96		1784			1.40	BN LT BN 15 70 15						20	X	15	X		2200		40	
97		1760			0.40	OR 90 5 5						30	30	155	X		5650		170	
98		1740			0.35	OR 70 10 15	S					20	20	20	X		2450		115	
99		1720			0.25	DK BN 70 20	S	S				25	10	20	X		1650		30	
57500		1700			0.20	BN 55 30 15						15	10	10	X		2000		20	
01		1680			0.40	BN 15 65 20						15	X	15	X		1950		60	
02		1660			0.20	DK BN 75 20	S					15	X	15	X		1850		20	
03		1640			0.45	BN 40 15 40	S					10	X	10	X		1500		35	
04		1620			0.15	DK BN 75 10 5 10						30	X	20	X		2050		20	
05		1600			0.15	DK BN 65 20 10	S					20	10	15	X		1600		20	
06		1580			0.47	BN 20 50 30						15	X	15	X		1400		30	
07		1560			0.72	LT BN 10 40 50						10	X	10	X		1050		35	
08		1540			0.35	WH 15 25 30 30						10	X	15	X		1500		70	
09		1520			0.60	WH 70 30						10	X	10	X		1100		50	
10		1500			0.50	WH BN 20 55 20	S					10	X	15	X		1250		55	
11		1480			0.25	DK BN 65 25	S	S				15	X	15	X		1800		65	
12		1460			0.30	DK BN 55 20 15 10						10	X	15	X		1600		35	
13		1440			0.30	DK BN 75 15	S	S				15	S	20	X		2250		60	

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

GEOCHEMICAL SAMPLE DATA SHEET

373015

015

PROJECT: .GRRPN LIMESTONE...
LOCALITY: ..FL. 39183.....
GRID NAME: ...GOVERNOR.....
NOMINAL GRID AZIMUTH: ...325.1MP.....

MATERIAL:SQH.....
SAMPLE METHOD: ...HAND. ANALY.....
SAMPLED BY: ...R.M.S.P.A.....
DATE: ...Feb. 1984.....

SIZE FRACTION ANALYSED: ...WHOLE.....
ANALYSED BY: ...ANALYST.....
METHOD: ...AAS.....

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA						METAL CONTENT (ppm unless specified)									
	GRID LINE NO.		A.M.G. CO-ORDINATES		COLOUR	Clay	Sand	Rock Frag.	Organic	CONTAM.	Geology	Cu	Pb	Zn	Ag	Au	Fe	Mn	Ba	
	7600N		NORTHING	EASTING																DEPTH
	GRID EASTING																			
574	57	2620		0.16	DKBN75	15	5	5			10	X	30	X		2150		15		
	55	2600		0.25	DKBN70	20	5	5			5	X	20	X		2050		15		
	56	2580		0.25	DKBN75	15	5	5			10	X	15	X		1250		10		
	57	2560		0.30	DKBN70	20	10				5	X	10	X		1950		15		
	58	2540		0.15	DKBN		10	5	10		20	5	20	X		2300		10		
	59	2520		0.65	DKBN75	55	25	5			5	X	5	X		800		10		
	60	2500		0.15	DKBN75	15	5	5			10	X	10	X		1850		10		
	61	2480		0.37	BN	10	45	40	5		5	X	10	X		1300		15		
	62	2460		0.20	DKBN75	15	5	5			10	X	10	X		2800		15		
	63	2440		0.60	BN	80	15	5			10	10	20	X		2300		30		
	64	2420		0.15	BN	30	70	5	5		5	X	5	X		1700		50		
	65	2400		0.25	BNOR75	10	10	5			10	X	10	X		1100		10		
	66	2380		0.25	BN	55	15	130			15	X	10	X		800		10		
	67	2360		0.52	BN	45	15	40			5	X	10	X		1850		10		
	68	2340		0.25	BN	70	15	10	5		10	X	10	X		1700		10		
	69	2320		0.20	LTBN	25	20	50	5		20	X	10	X		1950		10		
	70	2300		0.52	BN	30	50	20			5	X	5	X		1050		10		
	71	2280		0.53	BN	50	40	10			10	X	10	X		1250		10		
	72	2260		0.44	DKBN70	15	10	5			10	5	10	X		2200		15		
	73	2240		0.25	BN	55	30	15			15	X	15	X		2100		10		
	74	2220		0.25		50	15	30	5		10	X	10	X		1350		5		
	75	2200		1.48	BN	85	10	5			25	25	30	X		2200		45		
	76	2180		1.45	BN	85	10	5			20	35	25	X		1950		70		
	77	2160		1.48	DKBN	80	10	5	5		20	10	30	X		3950		90		
	78	2140		0.15		55	20	20	5		15	20	15	X		1950		30		
	79	2120		1.48	BN	10	80				15	X	20	X		2200		45		
	80	2100		1.48	DKBN	15	80	5			15	10	30	X		9350		75		
	81	2080		1.48	DKBN	70	25	5			20	15	35	X		5600		110		
	82	2060		1.40	DKBN	75	20	5			25	10	45	X		4950		145		
	83	2040		1.49	ORGY	10	30	50			30	15	50	X		2000		130		

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

GEOCHEMICAL SAMPLE DATA SHEET

PROJECT: ..GORDON LIMESTONE...
LOCALITY: ..FL. 30183...
GRID NAME: ..GUYERNDR...
NOMINAL GRID AZIMUTH: ..325.0mg...

MATERIAL:SOIL.....
SAMPLE METHOD: ...HAND SUFFER.....
SAMPLED BY: ...D.M.F.P.O.R.....
DATE: ...Feb. 1984.....

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

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA					Geology	METAL CONTENT (ppm unless specified)									
	GRID LINE NO.	A.M.G. CO-ORDINATES			DEPTH	COLOUR	Clay	Sand	Rock Frags		Organic	CONTAM.	Cu	Pb	Zn	Ag	Au	Fe	Mn	Ca
	7200N	NORTHING	EASTING	GRID EASTING																
57515		2480			0.30	DKGY7025	5	5				15	X	20	X		1550		20	
16		2460			0.35		2075		5			15	X	20	X		1450		15	
17		2440			0.15	ORBN6020	15	5				20	15	25	X		2100		25	
18		2420			0.20	DKBN8510		5				25	35	30	X		1750		20	
19		2400			0.15	BN6010	20	10				20	10	15	X		1550		20	
20		2380			0.40	DRBN5520	5	20				20	30	25	X		2000		30	
21		2360			0.28	DKBN7020		10				10	X	15	X		1350		15	
22		2340			0.25	DKBN6015	20	5				10	X	10	X		1650		15	
23		2320			0.15	BN6515	10	10				10	X	10	X		1850		15	
24		2300			0.12	BN7015		15				20	5	15	0.5		1650		15	
25		2280			0.50	BN1565	20					10	X	10	X		2000		20	
26		2260			0.60	DKBN5510	30	5				10	X	5	0.5		1700		15	
27		2240			0.45	LTBN1040	50					10	X	10	X		2250		15	
28		2220			0.20	DKBN6520	10	5				15	X	15	X		2350		25	
29		2200			0.60	DKBN6015	20	5				15	X	10	X		1900		30	
30		2180			0.25	DKBN5025	20	5				15	X	15	X		1900		20	
31		2160			0.15	BN1035	50	5				10	X	10	X		1250		40	
32		2140			0.25	BN1525	60					10	X	10	0.5		1350		35	
33		2120			0.35	BN535	60					10	X	10	X		1800		15	
34		2100			0.35	BN7010	15	5				15	X	10	0.5		1500		15	
35		2080			0.44	DKBN8510		5				15	X	10	0.5		1300		15	
36		2060			0.40	DKBN8510		5				20	X	15	X		1750		15	
37		2040			0.30	DKBN2020	60					20	X	15	X		1550		20	
38		2020			0.15	DKBN5025	5	10				20	X	20	0.5		1550		20	
39		2000			0.38	GY7020	5	5				10	X	15	X		2350		80	
40		1980			0.62	DKBN8015	5					15	X	15	X		1950		70	
41		1960			1.00	GY7520	5					10	X	20	X		3650		100	
42		1940			0.95	BN3065	5					15	X	15	X		2150		30	
43		1920			1.00	BN1070	20					10	X	10	X		2000		40	
44		1900			1.20	BN1080	10					10	X	10	X		2250		45	

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

GEOCHEMICAL SAMPLE DATA SHEET

PROJECT: ..GROON LIMESTONE..
LOCALITY: ..E.A. 30183..
GRID NAME: ..G948N9R..
NOMINAL GRID AZIMUTH: ..325.079.....

MATERIAL:S914.....
SAMPLE METHOD:HAND AVER.....
SAMPLED BY:B.M. & B. D.B....
DATE:Feb. 1984.....

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

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA						Geology	METAL CONTENT (ppm unless specified)								
	GRID LINE NO.	A.M.G. CO-ORDINATES			DEPTH	COLOUR	Clay	Sand	Rock Frags	Organic		CONTAM.	Cu	Pb	Zn	Ag	Au	Fe	Mn	Ba
	7200N	NORTHING	EASTING	GRID EASTING																
57	545	1880				BW	55	40				10	X	10	0.5		1850		45	
46		1860			1.35	BW	10	90				15	X	15	X		1800		65	
47		1840			0.95	BW	10	80		10		10	X	10	X		1650		30	
48		1820			0.35	BW	20	30	50			15	X	10	X		1350		20	
49		1800			0.30	DK BW	65	5	5	5		15	X	15	X		1450		30	
50		1780			0.25		75	10	5	10		30	20	20	X		1550		35	
51		1760			0.18		70	10	10	10		15	X	15	X		1500		25	
52		1740			0.40	DK BW	75	15	5	5		15	X	10	0.5		900		15	
53		1720			0.38	BW	75	15	5	5		10	X	10	X		1350		25	
54		1700			0.20		70	10	15	5		15	X	15	X		1400		35	
55		1680			0.35	DK BW	65	15	15	5		20	10	20	X		1450		55	
56		1660			0.45	DK BW	75	10	5	10		20	X	15	X		1550		10	
57		1640			1.40	BK	45	5				30	30	140	X		7350		95	
58		1620			0.30	BW	55	30	15			10	X	10	X		1950		70	
59		1600			0.45	BW	10	85	5			10	X	10	X		1800		75	
60		1580			0.45	DK BW	40	85	5			15	30	15	X		1450		75	
61		1560			0.45	BW	10	85	5			10	5	10	0.5		1650		55	
62		1540			0.30	DK BW	85	10	5			10	X	10	0.5		2000		10	
63		1520			0.40	LT BW	25	70	5	5		15	X	15	0.5		1500		110	

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

373018

PROJECT: .. GORGON LIMESTONE.
LOCALITY: .. EL. 3912A.....
GRID NAME: .. GOVERNOR.....
NOMINAL GRID AZIMUTH: .. 325. AMR.....

MATERIAL:SPIT.....
SAMPLE METHOD: .. HAND. AUGER.....
SAMPLED BY: .. B.V. G.B. P.S.....
DATE:Feb. 1984.....

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

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA						Geology	METAL CONTENT (ppm unless specified)							
	GRID LINE NO.	A.M.G. CO-ORDINATES		DEPTH	COLOUR	Clay	Sand	Rock Frags.	Organic	CONTAM.		Cu	Pb	Zn	Ag	Au	Fe	Mn	Ba
	6800N	NORTHING	EASTING																
57	64	2460		0.15	BR 20 60	10	10				25	25	25	0.5		3800		15	
65		2440		0.10	DK BR 70	25	5				25	20	25	0.5		1900		10	
66		2420		0.15	DK BR 75	10	10	5			10	15	20	0.5		1350		15	
67		2400		0.20	DK BR 70	20		10			10	X	10	0.5		2500		15	
68		2380		0.15	BN 55	40		5			20	10	15	0.5		2450		15	
69		2360		0.28	BN 40	45	10	5			20	15	20	0.5		1400		15	
70		2340		0.40	LT BR 35	60	5				10	X	10	X		2000		15	
71		2320		0.35	BR 75	20		5			20	X	20	0.5		1450		15	
72		2300		0.35	DK BR 75	20		5			10	X	15	0.5		1250		10	
73		2280		0.30	BN 70	20	5	5			15	X	10	0.5		1150		15	
74		2260		0.35	DK BR 70	25	5	5			10	X	10	X		3750		15	
75		2240		0.25	BN 75	20		5			10	X	10	0.5		1900		10	
76		2220		0.30	BN 67	20	25	5	5		10	X	15	X		1850		15	
77		2200		0.30	DK BR 60	10	20	10			30	50	20	X		1950		40	
78		2180		0.25	BN 70	20	5	5			20	10	15	0.5		2500		70	
79		2160		0.35	BY 25	65	5	5			15	5	15	0.5		2000		15	
80		2140		1.45	BL GY OR	90	5	5			65	25	20	X		9600		80	
81		2120		0.10	DK BR 50	35	5	20			45	80	60	0.5		7250		25	
82		2100		0.15	DK BR 55	20	5	20			25	15	20	0.5		4150		50	
83		2080		0.50	DK BR 75	15		10			15	10	20	0.5		3000		30	
84		2060		0.62	BN 45	50	5				10	X	5	X		1900		30	
85		2040		0.80	BN 60	35		5			15	X	10	0.5		2250		60	
86		2020		0.35	DK BR 75	20	5	10			20	20	15	X		1900		40	
87		2000		0.10	DK BR 80	15	5				35	80	20	0.5		2600		75	
88		1980		0.15	DK BR 60	20	10	10			25	30	30	X		3550		40	
89		1960		0.25	DK BR 70	10	15	5			10	10	15	0.5		1700		35	
90		1940		0.60	DK BR 15	50	30	5			10	X	10	0.5		1300		60	
91		1920		0.60	DK BR 30	35	30	5			10	X	15	X		2400		30	
92		1900		0.60	BN 15	70	10	5			10	X	15	0.5		1850		30	
93		1880		0.50	BR 70	25	5				10	X	5	0.5		2050		25	

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GEOCHEMICAL SAMPLE DATA SHEET

373019

PROJECT: ...GORDON LIMESTONE
LOCALITY: ...EL. 30183
GRID NAME: ...GOVERNOR
NOMINAL GRID AZIMUTH: ...335...AMF

MATERIAL:SPIT.....
SAMPLE METHOD:HAND QUARR.....
SAMPLED BY:A.M.S.B.P.B.....
DATE:Feb. 1984.....

SIZE FRACTION ANALYSED:WHOLE.....
ANALYSED BY:ANGLABS.....
METHOD:A.B.S.....

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA						METAL CONTENT (ppm unless specified)									
	GRID LINE NO.		A.M.G. CO-ORDINATES		DEPTH	COLOUR	Clay	Sand	Rock Frags	Organic	CONTAM.	Geology	Cu	Pb	Zn	Ag	Au	Fe	Mn	Ba
	GRID EASTING	NORTHING	EASTING	DEPTH																
57594	1860				1.45	GNBN7530							10	10	15	0.5		2500		75
95	1840				1.30	GN8515							10	20	20	X		5250		130
96	1820				1.40	LTGN3070							10	10	20	X		4300		80
97	1800				1.15	BNCW3060	5	5					20	10	25	0.5		6650		90
98	1780				1.10		2060	20					10	10	15	0.5		2350		45
99	1760				0.70	LTBN1040	50						10	X	10	0.5		2400		75
57600	1740				0.20	DRBN1540	40	40	5				30	25	20	0.5		2500		20
01	1720				0.60	BN65	25	5	5				10	X	10	X		1500		35
02	1700				0.70	BN20	75	5					5	X	5	X		1450		20
03	1680				0.10		2060	10	10				15	15	20	X		2350		25
04	1660				0.20	DKBN60	20	5	15				10	10	15	X		1850		40
05	1640				0.78	DKBN80	10	5	5				20	10	20	X		2350		15
06	1620				0.10	LTBN20	70	10					10	5	10	X		2050		25
07	1600				0.60	DRBL90	5	5					55	130	120	X		17.5%	3060	
08	1580				0.15	BN20	65	10	5				15	30	15	X		2300		30
09	1560				0.25	WHLTBL50	15	30	5				15	10	20	X		2350		65
10	1540				0.45	DKBRBN60	20	15	5				10	5	15	X		2100		40
11	1520				0.25	BN35	20	40	5				15	35	15	X		1750		15
12	1500				0.30	DKBN60	15	20	5				15	15	15	0.5		1250		20
13	1480				0.63	BN15	75	10					5	X	15	0.5		3150		20
14	1460				0.90	BN15	65	20					5	X	15	0.5		1950		15
15	1440				1.03	BN65	20	15					5	5	15	X		3550		35
16	1420					LTBNOR60	15	25					10	10	30	X		1.65%	155	
17	1400				0.80	DLGY40	45	15					15	15	20	X		1.15%	50	

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

GEOCHEMICAL SAMPLE DATA SHEET

373021

PROJECT: ...FRIDON LIMESTONE
LOCALITY: ...E.A. 30183.....
GRID NAME: ...GAYERNAB.....
NOMINAL GRID AZIMUTH: ...325.AMG.....

MATERIAL:SP11.....
SAMPLE METHOD:HAND AUGER.....
SAMPLED BY:A.M.G.B.P.A.....
DATE:Feb. 1984.....

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

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA						Geology	METAL CONTENT (ppm unless specified)								
	GRID LINE NO.		A.M.G. CO-ORDINATES		DEPTH	COLOUR	Clay	Sand	Rock Frags	Organic		CONTAM.	Cu	Pb	Zn	Ag	Au	Fe	Mn	Ga
	GRID EASTING	NORTHING	EASTING	DEPTH																
51648	6600N	1700			0.35		530	60	S			10		5	10	X		1500		25
49		1680			0.30	DKBN	40	20	40			10		X	10	0.5		2000		15
50		1660			0.30		BN	65	15	15	S	5		X	10	K		1600		35
51		1640			1.40		BN	15	70	10	S	5		X	10	0.5		1600		50
52		1620			0.25		BN	75	15	S	S	10		65	20	X		2150		100
53		1600			0.30	DKBN	70	10	15	S		5		X	10	0.5		1200		15
54		1580			0.30	DKBN	75	5	5	15	S	10		10	20	X		950		20
55		1560			1.00	WHLTBN	70	25	S			5		X	5	0.5		1550		60
56		1540			0.70	DKBN	80	15	S			5		X	10	X		1900		35
57		1520			0.30		BN	65	15	15	S	10		X	10	X		1450		45
58		1500			0.30	DKBN	80	10	S	S		15		35	20	0.5		2950		75
59		1480			0.30	DKBN	70	10	20			15		45	35	X		950		15
60		1460			0.25	DKBN	80	10	10			10		15	25	X		1450		50
61		1440			1.48	DKGN	85	5	5	S		10		20	15	0.5		2500		110
62		1420			0.65	DKBN	80	5	5	S		5		X	5	0.5		1450		20
63		1400			0.40	DKBN	75	15	10			10		X	10	X		1550		25

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ROSEBERY, Tasmania

GEOCHEMICAL SAMPLE DATA SHEET

PROJECT: EQ90PN. LIMESTONE.
LOCALITY: E.L. 30183.....
GRID NAME: GOVERNOR.....
NOMINAL GRID AZIMUTH: 325. AMG.....

MATERIAL:SOIL.....
SAMPLE METHOD:HAND. RUBBER.....
SAMPLED BY:B.M. G.B. D.B.....
DATE: Feb. 1984.....

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

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA						Geology	METAL CONTENT (ppm unless specified)							
	GRID LINE NO.	A.M.G. CO-ORDINATES		DEPTH	COLOUR	Clay	Sand	Rock Frag.	Organic	CONTAM.		Cu	Pb	Zn	Ag	Au	Fe	Mn	Ba
	6000N	NORTHING	EASTING																
57	664	2260		0.35	DK BW	60	35		S		15	15	15	0.5		2100		15	
	65	2240		0.10		RN	30	65	S		10	X	15	X		2050		15	
	66	2220		0.15	WH DK	RN	15	75	10		105	420	60	X		3300		20	
	67	2200		0.25	DK	RN	25	70	S		10	X	20	X		1300		20	
	68	2180		0.39		BN	25	70	S		20	55	25	X		1900		15	
	69	2160		0.25	OK	BN	75	15	S	S	25	65	40	0.5		2600		20	
	70	2140		0.25	OK	BN	85	5	S	S	40	150	30	0.5		2550		35	
	71	2120		0.20	OK	BN	55	10	30	S	10	10	20	X		1700		25	
	72	2100		0.20	OK	BN	75	10	10	S	40	70	40	X		1800		35	
	73	2080		0.10	DK	BN	70	15	15		30	70	25	X		2900		45	
	74	2060		0.40	DK	BN	25	20	50	S	10	X	25	X		2350		20	
	75	2040		0.45		BN	15	20	60	S	5	X	25	X		1650		15	
	76	2020		0.35		BN	40	40	20		15	10	20	X		2100		20	
	77	2000		0.63		BN	30	60	10		10	X	25	X		2100		30	
	78	1980		0.80		BN	10	80	10		10	X	15	X		3000		35	
	79	1960		0.70		BN	20	70	10		10	X	10	0.5		4000		90	
	80	1940		0.82	DK	60	25	5	10		15	10	15	X		3600		45	
	81	1920		1.40	DK	15	25	60			10	X	10	X		2200		40	
	82	1900		0.70		BN	15	30	50	S	10	X	10	X		3850		45	
	83	1880		0.60	LT	BN	30	65	5	S	5	X	10	X		7450		65	
	84	1860		1.48	BN	LT	BN	20	75	5	10	X	25	X		5.508		70	
	85	1840		1.02	DK	BN	BK	35	55	S	5	X	10	X		3.858		60	
	86	1820		0.70	GY	LT	BN	25	65	10	10	10	15	X		3400		65	
	87	1800		0.65	LT	BN	GY	5	30	10	5	X	10	X		2600		45	
	88	1780		0.20	OK	BN	65	15	10	10	10	S	15	X		2600		15	
	89	1760		0.60	OK	BN	20	80			10	X	10	X		1900		10	
	90	1740		0.30	OK	BN	80	10	10		10	X	25	X		2300		15	
	91	1720		0.40	WH		100				10	X	10	X		1200		10	
	92	1700		.		BN		100			10	X	10	X		1900		15	
	93	1680		0.87	DK	BN	50	20	30		5	X	10	X		1150		30	

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

GEOCHEMICAL SAMPLE DATA SHEET

373023 023

PROJECT: GORRAV. LIMESTONE.
LOCALITY: .. EL. 30183.....
GRID NAME: ... GORRAV.....
NOMINAL GRID AZIMUTH: ... 325.009.....

MATERIAL:SOIL.....
SAMPLE METHOD: .. HANQ. ANFER.....
SAMPLED BY: .. A.M.S.P. 9.9.....
DATE: .. Feb. 1984.....

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

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA						METAL CONTENT (ppm unless specified)									
	GRID LINE NO.		A.N.G. CO-ORDINATES		DEPTH	COLOUR	Clay	Sand	Rock Frags	Organic	CONTAM.	Geology	Cu	Pb	Zn	Ag	Au	Fe	Mn	Ba
	GRID EASTING	NORTHING	EASTING	NORTHING																
57694	1660			1.10		BM 2575						5	X	10	X		2000		25	
95	1640			0.40	DK BW	6530				S		10	X	15	X		1850		110	

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

GEOCHEMICAL SAMPLE DATA SHEET

373024

024

PROJECT: GORROON LIMESTONE
LOCALITY: EL. 30183
GRID NAME: GOVERNOR
NOMINAL GRID AZIMUTH: 325. A.M.C.

MATERIAL: SOIL
SAMPLE METHOD: HANCOCKER
SAMPLED BY: B.M. S.G. D.G.
DATE: Feb. 1964

SIZE FRACTION ANALYSED: WHOLE
ANALYSED BY: ANLABS
METHOD: A.O.S.

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA						Geology	METAL CONTENT (ppm unless specified)							
	GRID LINE NO.	A.M.G. CO-ORDINATES		DEPTH	COLOUR	Clay	Sand	Rock Frag.	Organic	CONTAN.		Cu	Pb	Zn	Ag	Au	Fe	Mn	Ga
	5600N	NORTHING	EASTING																
57696		2180		0.80	WH		100				5	X	15	X		1400		10	
97		2160		0.35	OKBN	80	15	S			10	10	20	X		1750		15	
98		2140		0.58	WH		100				10	X	20	X		1800		10	
99		2120		0.20	BN	25	50	20	S		5	X	10	X		3600		100	
67700		2100		0.45	DKBN	BN	30	65	S	S	10	X	10	X		2400		50	
01		2080		0.10	BN	55	25	5	15		25	70	35	X		3200		70	
02		2060		0.30	DKBN	OR	60	20	20		50	30	45	X		1100		30	
03		2040		0.20	DKBN	55	25		20		15	X	25	X		2000		30	
04		2020		0.07	OKBN	GY	75	15	10		20	15	25	X		4650		75	
05		2000		0.15			45	65	10		15	20	15	X		2350		95	
06		1980		0.70	BN	20	55	20	S		5	X	10	X		3000		40	
07		1960		0.50	BN	60	25	5	10		5	5	15	X		2150		35	
08		1940		1.20	GY	20	65	10	S		5	10	10	X		2350		95	
09		1920		0.70	DKBN	WH	20	65	15		10	25	10	X		2150		50	
10		1900		0.88	BN	15	70	15			10	X	10	X		2000		45	
11		1880		1.40	WH		100				5	10	10	X		1350		105	
12		1860		0.95	LTBN	20	75	5			5	5	10	X		1550		90	
13		1840		0.55	DKBN	25	60	10	S		5	X	10	X		1250		25	
14		1820		0.40	DKBN	15	45	40			5	X	10	X		1300		35	
15		1800		0.65	OR	10	80	10			10	X	10	X		1550		20	

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ROSEBURY, Tasmania

GEOCHEMICAL SAMPLE DATA SHEET

373025 025

PROJECT: GORRON LIMESTONE.
LOCALITY: E.L. 30183.
GRID NAME: GORRONA.
NOMINAL GRID AZIMUTH: 325 AME.

MATERIAL: SOIL.
SAMPLE METHOD: HANF. RAPER.
SAMPLED BY: B.M. G.B. D.B.
DATE: Feb. 1984.

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

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA						METAL CONTENT (ppm unless specified)									
	GRID LINE NO.	A.M.G. CO-ORDINATES			DEPTH	COLOUR	Clay	Sand	Rock Frags	Organic	CONTAM.	Geology	Cu	Pb	Zn	Ag	Au	Fe	Mn	Ca
	5200N	GRID EASTING	NORTHING	EASTING																
28	2380			0.20	OKBN	35	20	40	5			10	15	10	X		1150			80
29	2360			0.40	GYBN	20	15	60	5			5	5	5	0	5		1250		55
30	2340			0.25	OKBNBW	30	15	40	15			10	10	10	X		1200		35	
31	2320			0.35	BN	30	20	40	10			5	X	5	0	5		850		30
32	2300			0.40	GYBN	45	15	30	10			10	X	10	X		1000		35	
33	2280			0.20	OKBN	40	5	50	5			10	10	10	X		1750		25	
34	2260			0.30	GYBN	35	35	20	10			5	5	5	X		1350		10	
35	2240			0.25	BN	35	30	25	10			10	20	10	X		1050		35	
36	2220			0.25	GYBN	30	30	30	10			5	5	10	X		850		40	
37	2200			0.35	GYBN	25	20	50	5			5	X	5	X		950		15	
38	2180			0.30	BN	30	30	30	10			5	5	10	X		1250		25	
39	2160			0.25	GYBN	30	20	40	10			10	20	10	X		1700		20	
40	2140			0.30	GYBN	30	20	40	10			5	X	10	X		1650		20	
41	2120																			
42	2100			0.60	BN	40	40		20			10	5	10	X		1400		10	
43	2080			0.70	GYBN	30	20	40	10			5	X	5	X		550		10	

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

GEOCHEMICAL SAMPLE DATA SHEET

373026 026

PROJECT: GORPPM LIMESTONE...
LOCALITY: ... E.L. 30183...
GRID NAME: GOVERNOR...
NOMINAL GRID AZIMUTH: .325... AME...

MATERIAL: SPILL.....
SAMPLE METHOD: HAND RYPER...
SAMPLED BY: G.M. G.B. D.B...
DATE: Feb. 1984.....

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

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA					Geology	METAL CONTENT (ppm unless specified)									
	GRID LINE NO.		A.M.G. CO-ORDINATES		DEPTH	COLOUR	Clay	Sand	Rock Frags.		Organic	CONTAM.	Cu	Pb	Zn	Ag	Au	Fe	Mn	Ba
	5200N		NORTHING	EASTING																
ST 7/16		1800			0.30	DK BN	15	75	S	S		10	30	15	X		2200		20	
17		1820			0.30	DK BN	35	25	30	10		15	10	15	X		1550		20	
18		1840			0.35	DK BN	75	S		20		60	115	40	X		1650		15	
19		1860			0.40	DK BN	60	30		10		10	S	10	X		1950		10	
20		1880			0.30		15	20	60	S		S	10	10	X		1400		10	
21		1900			0.20	DK BN	80	10	40	S		35	80	35	X		1500		25	
22		1920			0.45		50	35	10	S		10	10	10	0.5		2450		25	
23		1940			1.23	BN	20	75	S			S	X	S	X		1950		65	
24		1960			0.62	LT BN	S	90	S			S	X	S	X		1950		60	
25		1980			1.30	BN	80	10	50	S		S	S	S	X		1600		60	
26		2000			0.72	BN	25	70	S			S	X	10	X		2050		35	
27		2020			1.48	BN	10	40	50			10	15	10	X		2300		60	
28		2040			0.90	BN	15	80	S			S	X	10	X		1550		55	
29		2060			0.60	BN	10	90				S	10	10	X		4950		55	

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ROSEBERY, Tasmania

GEOCHEMICAL SAMPLE DATA SHEET

373027 027

PROJECT: .GORDON, LIMESTONE..
LOCALITY: .FL. 30183.....
GRID NAME: .GOVERNOR.....
NOMINAL GRID AZIMUTH: .325 AMG.....

MATERIAL:SOIL.....
SAMPLE METHOD: ..HAND. AVER.
SAMPLED BY: ..A.M.G.P.P.S.....
DATE: ..Feb. 1974.....

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

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA						METAL CONTENT (ppm unless specified)									
	GRID LINE NO.		A.M.G. CO-ORDINATES		DEPTH	COLOUR	Clay	Sand	Rock Frags.	Organic	CONTAM.	Geology	Cu	Pb	Zn	Ag	Au	Fe	Mn	Ba
	4800N		NORTHING	EASTING																
S8212	1800				0.20	LTBW	15	20	60	5			20	X	20	X		1800		25
13	1820				0.55	BN	45	40		15			10	S	10	0.5		1450		35
14	1840				1.25	GYBN	40	40		5			10	X	10	0.5		3650		25
15	1860				1.40	BN DK BN	60	30		20			10	10	30	0.5		1450		60
16	1880				1.30	DK BN	70	10		20			20	10	25	0.5		2000		55
17	1900				0.80	BLEY	45	50		5			5	X	5	0.5		2100		65
18	1920				0.70	GYBN	25	30	40	5			5	S	10	0.5		2150		70
19	1940				0.40	BN	30	20	40	10			10	X	5	0.5		1500		40
20	1960				0.45	BN	30	25	5	20			10	10	10	X		1300		40
21	1980				0.20	BN	15	15	50	20			5	X	5	0.5		1600		20
22	2000												10	S	10	0.5		1450		20
23	2020				0.50	BN	40	40		5	15		10	X	10	X		2300		25
24	2040				0.20	BN	40	35	15	10			10	X	15	0.5		1500		20
25	2060				0.25	OK BN	30	20	40	10			5	X	10	0.5		1250		15
26	2080				0.25	DK BN	60	10	25	5			5	X	10	0.5		1500		15
27	2100				0.30	DK BN	65	10	10	15			10	X	10	X		1100		10

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GEOCHEMICAL SAMPLE DATA SHEET

373028 028

PROJECT: GORGON LIMESTONE...
LOCALITY: F.A. 30183...
GRID NAME: GOVERNOR...
NOMINAL GRID AZIMUTH: 325 AMS...

MATERIAL: SPIT...
SAMPLE METHOD: HAND AUGER...
SAMPLED BY: B.M.F.A.P.B...
DATE: Feb. 1984...

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

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA						Geology	METAL CONTENT (ppm unless specified)								
	GRID LINE NO.		A.M.G. CO-ORDINATES		DEPTH	COLOUR	Clay	Sand	Rock Frag.	Organic		CONTAM.	Cu	Pb	Zn	Ag	Au	Fe	Mn	Ba
	4400N		NORTHING	EASTING																
58201		1840			0.60		BN	65	10	10	15						2650	50		
02		1860			0.30	DKGN	WH	45	10	40	5						1700	60		
03		1880			0.55	CRBN	BK	30	20	35	15						1600	30		
04		1900			0.25		BN	60	10	40	10						1300	35		
05		1920			0.20	DKBN	WH	25	10	60	5						1450	25		
06		1940			0.35	DKBN	65	20	5	10							1300	25		
07		1960			0.35	GYBN	SS	30	20	5							1500	25		
08		1980			0.60	CRGY	45	50		5							950	15		
09		2000			0.60	GYBN	45	45		10							1900	15		
10		2020			0.55	CRBN	45	40	5	10							1150	15		
11		2040			0.50	GYBN	60	40	5	15							1400	20		

373030

029
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PETROLOGY IN ASSOCIATION WITH Dr. B.J. BARRON

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Project Governor

MINERALOGICAL EXAMINATION OF FOUR SAMPLES OF
HEAVY MINERAL CONCENTRATES.

Report No: E3/81/254

13th April, 1984.

For: Electrolytic Zinc Company of Australasia Ltd.

J. Barron
Dr. B.J. Barron,
Petrologist.

373031

030

Sample No. 60148

Description of Concentrate A very fine grained meagre sample of dominantly dark grey, with fewer red-brown and white to colourless grains, virtually none of which are magnetic.

Thin Section This sample represented in the thin section exhibits a rather variable grain size ranging from very fine up to about 2.5 mm long for several stout prismatic crystals. Grain shapes tend to be quite angular to irregular, as well as subhedral, indicating a fairly local provenance for most of the crystals in the section.

The silicate fraction greatly predominates, comprising about 70% of the grains in thin section. These include very abundant bladed ?kyanite cleavage fragments, almost equally abundant yellow-brown to blue green subhedral prismatic tourmaline crystals, subordinate but nevertheless common garnet with irregular to subhedral crystal shapes and generally enclosing very abundant small inclusions of other phases (mainly quartz). Lithic aggregates of granular quartz, a secondary fairly low birefringent layer silicate, and sericite are accessory.

Oxides account for the remaining 30% of the sample and these include very abundant large angular crystals of well cleaved rutile, many grains of which show partial alteration to an opaque oxide phase ?ilmenite, or else are partly intergrown with quartz. The rutile accounts for about 15% to 20% of the total number of grains in the thin section. The remainder of the oxide fraction includes massive and colloform (or banded) red-brown limonitic oxides, as well as rare grains of partly oxidised ?magnetite. Several quite large grains of poorly cleaved relatively unaltered yellow-brown cassiterite are also present.

Sample No. 60153

Description of Concentrate A dark grey coloured concentrate mainly of very fine grain size with rare grains reaching 2 mm to 3 mm across. The sample is not magnetic.

Thin Section

This sample is quite similar to the previous sample 60148. It contains relatively coarse grained crystals ranging up to a maximum size of nearly 3 mm (the length of several prismatic grains), and grain shapes are generally angular and irregular to subhedral, again indicating a fairly proximal provenance.

Silicates account for approximately 60% of the grains in thin section, and these include abundant coarse prismatic cleavage fragments of ?kyanite, almost equally abundant irregular shaped to subhedral crystals of garnet, scattered crystals of andalusite and subordinate subhedral crystals of variegated and zoned blue-green to pale yellow-brown tourmaline. Lithic fragments include almost equigranular granoblastic fine grained quartz-rich types in which the quartz is closely intergrown with limonitic oxides staining a foliated argillically altered matrix.

The oxide fraction comprises about 40% of the grains represented, and these include mostly rutile (about 20% of the total grains in thin section), as coarse well twinned subhedral well cleaved crystals and rather irregular shaped grains of patchy yellow-brown to dark brown colour. These are variously altered to opaque oxides (?ilmenite) mainly along cleavage surfaces, as well as marginally. Several small lithic fragments comprise anhedral crystals of rutile closely intergrown with granular quartz and traces of coarse "sericite", while other aggregates comprise dense fine grained tourmaline. Red-brown translucent to almost opaque oxidised (weathered) grains include hematite and more rarely, almost opaque ?magnetite.

Sparse rounded grains of ?monazite which are crammed with small angular quartz inclusions are a minor accessory phase, as are several large yellow unaltered grains of poorly cleaved cassiterite.

Sample No.

60163

Description of Concentrate

A dark grey fine grained sample containing sparse grains of coarser material up to 1.5 mm across. The sample is not magnetic.

Thin Section

This sample is somewhat finer grained than the previous two samples 60148 and 60153, but mineralogically it is fairly similar.

032

The silicate fraction accounts for about 50% of the total grains represented, and these have a variable grain size, mainly within the range 0.1 mm to 1 mm with sparse grains up to more than 2 mm. The silicates include abundant elongate cleavage fragments of kyanite, and almost equally abundant garnet. The latter is generally subhedral but poikiloblastic, and several grains exhibit an S-shaped distribution of inclusions that suggests substantial deformation and rotation during metamorphic growth. Tourmaline, which is present as subhedral prismatic crystals, is also very common. Accessory silicate grains include small rounded zircon crystals.

The opaque oxide fraction includes mainly subrounded non-magnetic ?titaniferous magnetite and ilmenite grains, with abundant titaniferous grains which are largely converted to white leucoxene. Translucent red-brown limonitic oxides and quite large angular to subrounded grains of well cleaved rutile are subordinate. The latter account for approximately 10% to 12% of the total grains in the present thin section.

Lithic fragments include several large subrounded clasts of fine grained but equigranular garnet-quartz rock ("garnet sandstone") as well as aggregates of intergrown kyanite, granular quartz and rare small crystals of tourmaline, ± traces of rutile.

Sample No. 60165

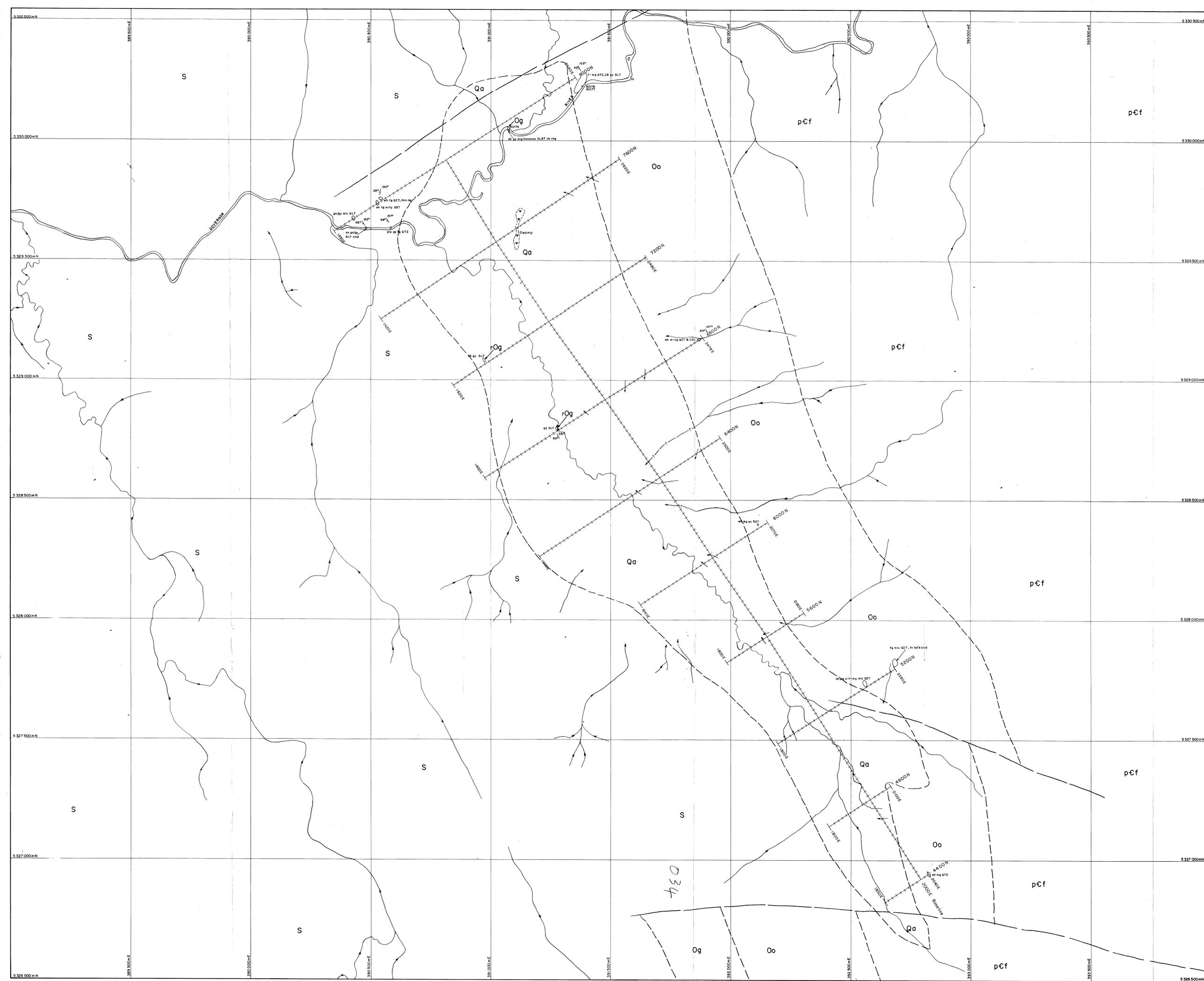
Description of Concentrate Only trace proportions of a dark grey, very fine grained non-magnetic concentrate remains.

Thin Section This is a much finer grained concentrate than the previous three samples, with an average grain size of only about 0.13 mm (or very fine sand size). Most of the grains are subrounded to quite well rounded, and opaque oxides comprise approximately 60% to 70% of the sample represented in thin section.

The oxide fraction includes very abundant grains of non-magnetic titaniferous magnetite and/or ilmenite which is relatively unaltered. Sparse grains which are strongly altered to white leucoxene are accessory. Relatively few grains of red-brown limonitic

033
oxides or partly altered translucent oxides are accessory. Small irregular shaped grains of red-brown rutile are accessory, together with rare grains of very fine grained cassiterite.

The silicate fraction comprising approximately 30% of the total grains includes very abundant zircon, scattered stumpy prismatic subhedral crystals of tourmaline, rare aggregates of exceptionally fine grained partly clouded sphene, as well as epidote. Angular quartz grains are present as a rare light fraction contaminant.



LEGEND

COLOUR

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

TEXTURE

fg - fine grained	fos - fossiliferous
mg - medium grained	sit - siliceous
cg - coarse grained	mic - micaceous
brd - brecciated	ferr - ferruginous
clvd - cleaved	int - intense
shrd - sheared	wk - weak
calc - calcareous	v - very
carb - carbonaceous	pb - pebble
lam - laminated	cb - cobble
abd - cross bedded	tr - trace
th sd - thin bedded	int bed - inter bedded
th bd - thick bedded	tblr - tabular
vn - veins, veining	frct - fractured

ROCK TYPE

SST - sandstone	SLT - siltstone
LST - limestone	DLS - 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 - galeua	sp - sphalerite
lim - limonite	cp - chloropyrite
cbd - carbonated	sld - 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 sld

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	

INTERPRETED GEOLOGY
Geology adapted from Queenstown 1:250,000 geological map (Corbett & Brown 1975)

QUATERNARY	Qa Talus, gravel, sand and silt. Alluvial fan and stream deposits.
SILURIAN	S ELDON GROUP. Quartz sandstone, siltstone and shale.
ORDOVICIAN	Og GORDON LIMESTONE. Limestone and minor siltstone.
	Oo OWEN CONGLOMERATES. Siliceous conglomerate and quartz sandstone.
PRE-CAMBRIAN	pCf FRANKLIN METAMORPHICS. Metapelite and metaquartzite.

FAULT _____
GEOLOGICAL BOUNDARY - - - - -

373035

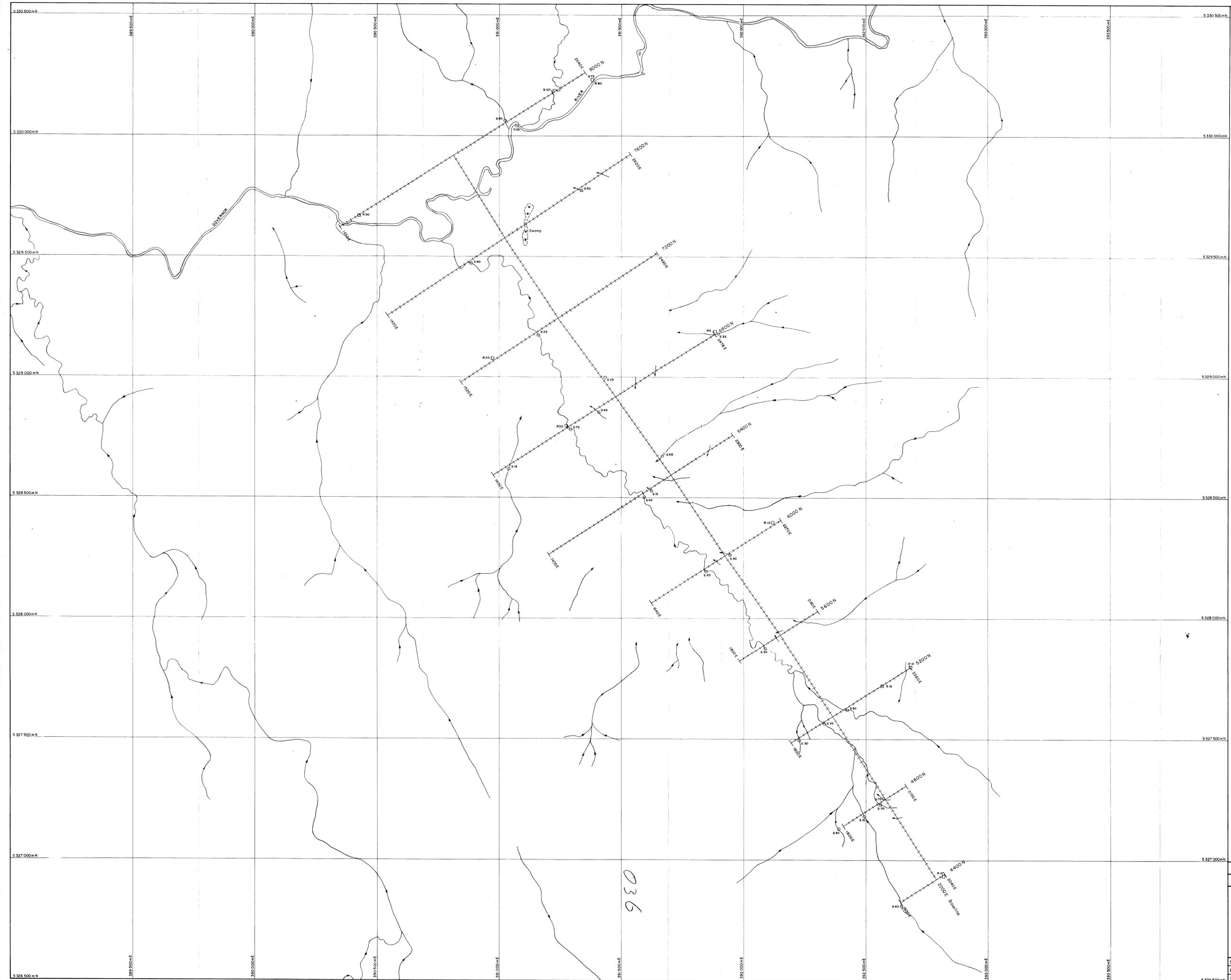


Fig. GR 1

ELECTOLYTIC ZINC CO. OF A'ASIA LTD.
PROJECT: GOVERNOR RIVER E.L. 30/83, T.A.S.

GEOLOGY 034
(INTERP)

Scale: 1:5000	Survey: I. MAT.	Revised:
Reference: H.E.C.	Date: 25-7-'84	Ref. No.
Drawn: R. J. R.	Checked:	AO-529-0015



○ STREAM SEDIMENT SAMPLE.
 S 30
 □ ROCK CHIP SAMPLE.
 R 15
 X = below 5 ppm.
 Note: All results are ppm.

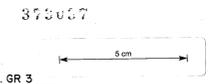
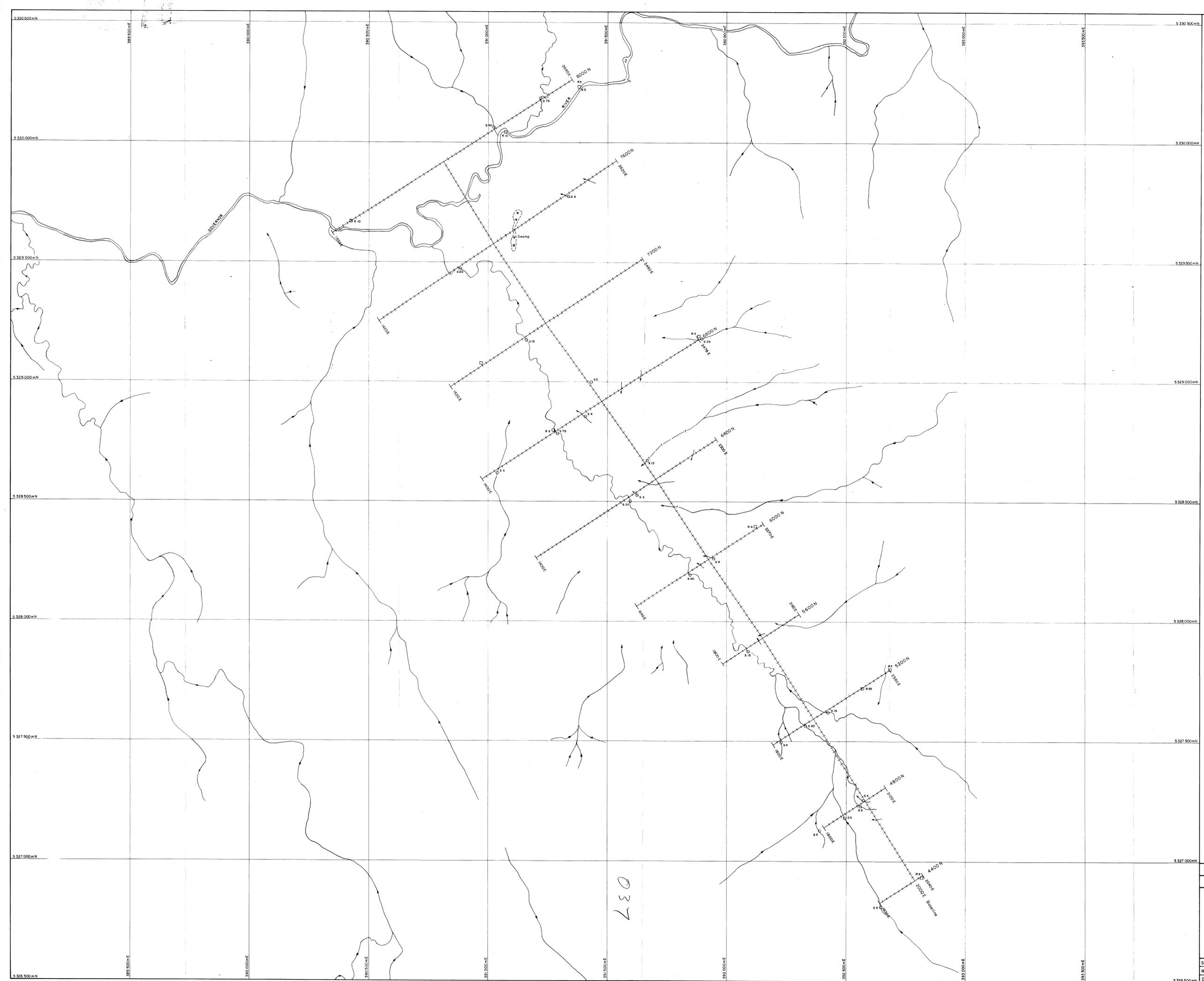


Fig. GR 3
 ELECTROLYTIC ZINC CO. OF ASIA LTD.
 PROJECT: GOVERNOR RIVER E.L. 30/83, TAS.

GEOCHEMISTRY 036
 Zn

Scale: 1:5000	Survey: I.M.A.T.	Revised:
Reference: H.E.C.	Date: 25-3-'84	Ref. No.
Drawn: R.J.R.	Checked: L.W.	AO-529-0011



○ STREAM SEDIMENT SAMPLE.
S 15

□ ROCK CHIP SAMPLE.
R 35

x = below 5 ppm.

Note: All results are ppm.

37303S



Fig. GR 4

ELECTROLYTIC ZINC CO. OF ASIA LTD.
PROJECT: GOVERNOR RIVER E.L. 30/83.TAS.

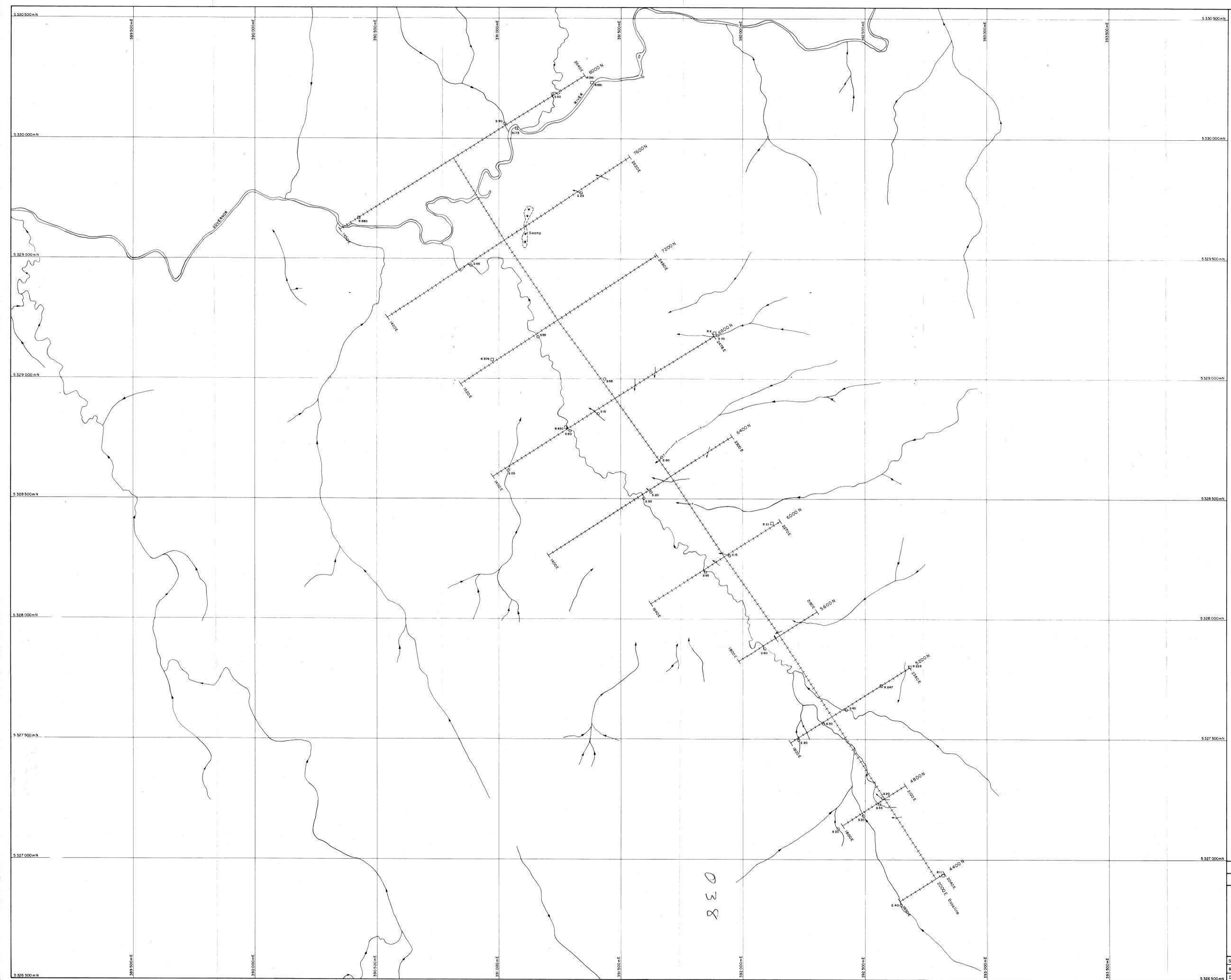
GEOCHEMISTRY

Pb

037

FL-2186

Scale: 1:5000	Survey: I.MAT.	Revised:
Reference: H.E.C.	Date: 25-3-84	Ref No.
Drawn: R.J.R.	Checked: L.W.	AO-529-0012



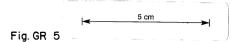
○ STREAM SEDIMENT SAMPLE.
S 60

□ ROCK CHIP SAMPLE.
R 225

X = below 10 ppm.

Note: All results are ppm.

373039

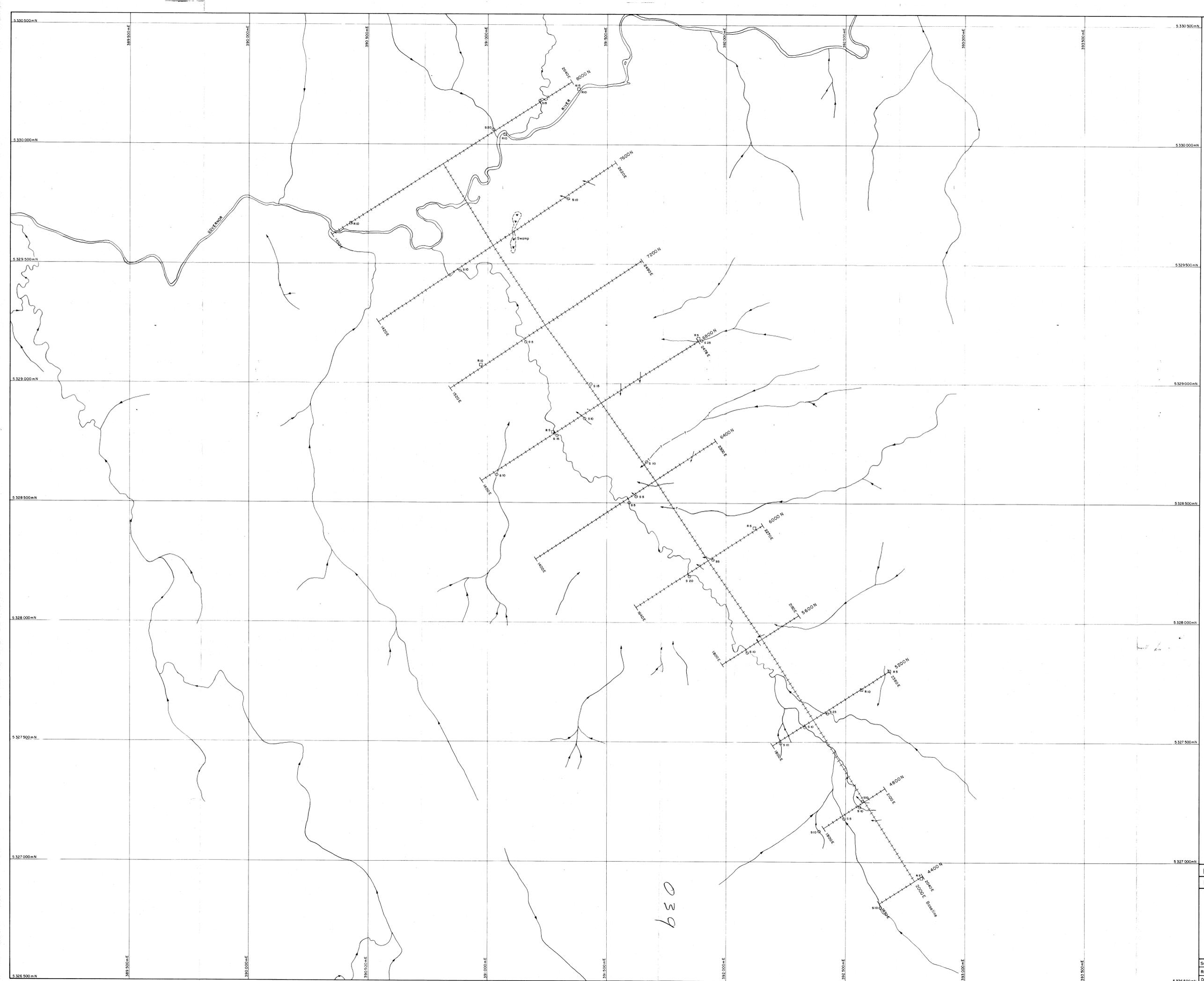


ELECTROLYTIC ZINC CO. OF ASIA LTD.
PROJECT: GOVERNOR RIVER E.L. 30/83.TAS.

GEOCHEMISTRY 038

Ba
SL-2186

Scale: 1:5000	Survey: I.MAT	Revised:
Reference: H.E.C.	Date: 25-3-'84	Ref No.
Drawn: R.J.R.	Checked: L.W.	AO-529-0013



O STREAM SEDIMENT SAMPLE.
 S IS
 □ ROCK CHIP SAMPLE.
 R IS
 X = below 5 ppm.
 Note: All results are ppm.

373040



Fig. GR 6

ELECTROLYTIC ZINC CO. OF ASIA LTD.
 PROJECT: GOVERNOR RIVER EL. 30/83, TAS.

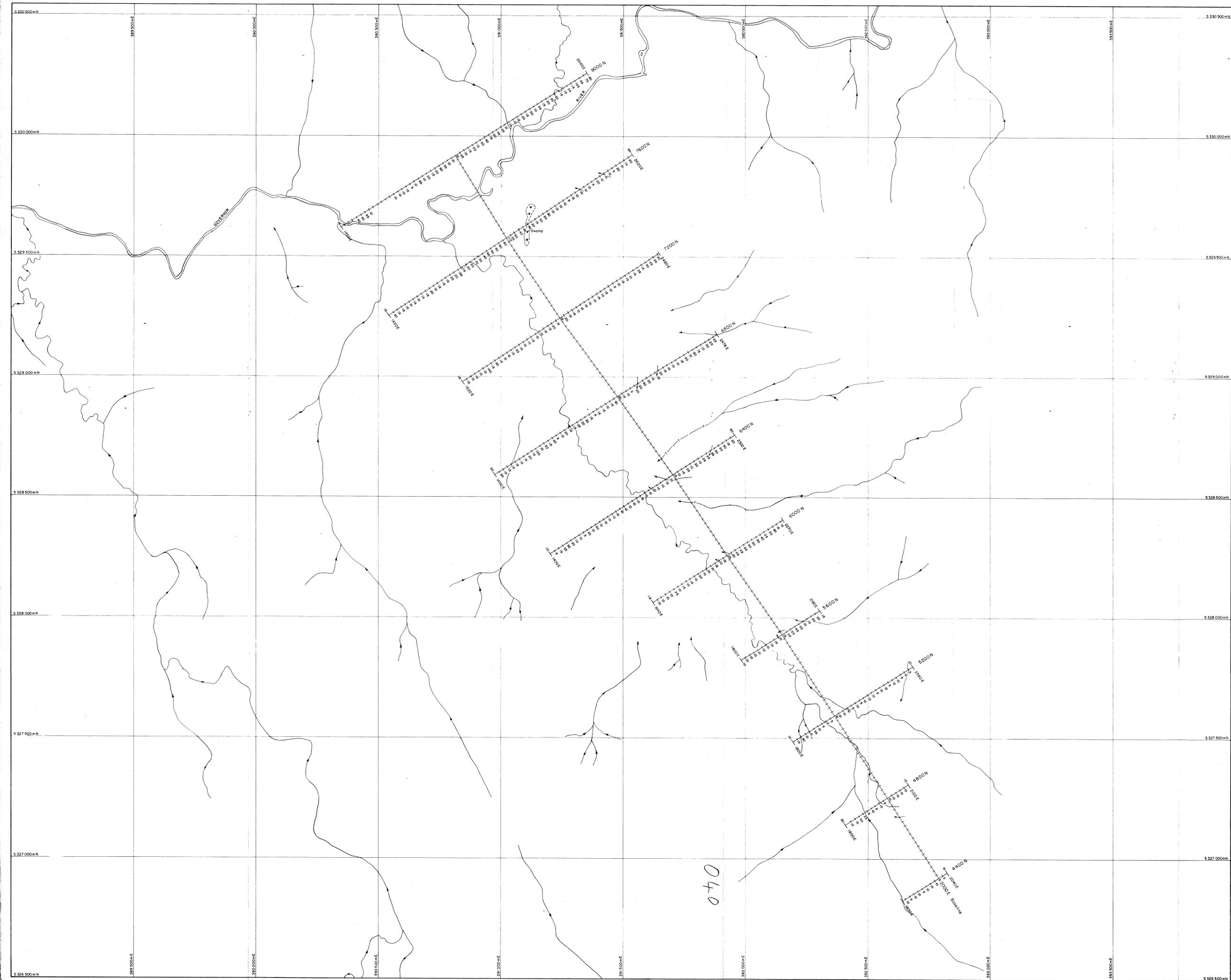
GEOCHEMISTRY

039

Cu

Scale: 1:5000	Survey: L.MAT	Revised:
Reference: H.E.C.	Date: 26-3-84	Ref No.
Drawn: R.J.R.	Checked: L.W.	AO-529-0014

SL-2185



x - Denotes below 5 p.p.m.
 Note: All readings are p.p.m.

373041

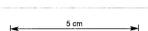
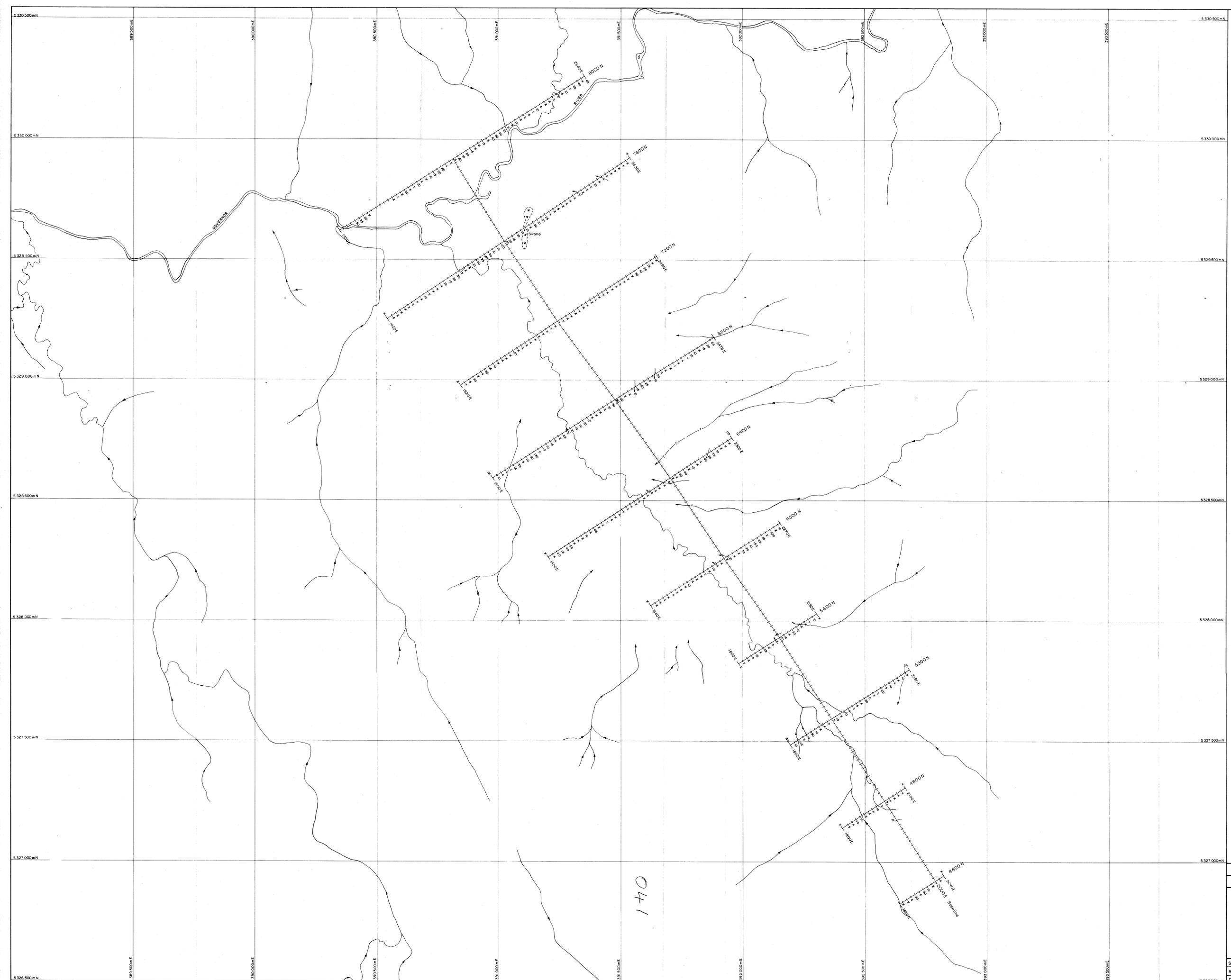


Fig. GR 7

ELECTROLYTIC ZINC CO. OF ASIA LTD.
 PROJECT: GOVERNOR RIVER E.L. 30/83TAS.

GEOCHEMISTRY
 SOIL SAMPLES 040
 Zn

Scale: 1:5000	Survey: I.MAT	Revised:
Reference: H.E.C.	Date: 15-3-84	Ref. No.
Drawn: R.J.R.	Checked: L.W.	AO-529-0006



X - Denotes below 5 p.p.m.
 Note: All readings are p.p.m.

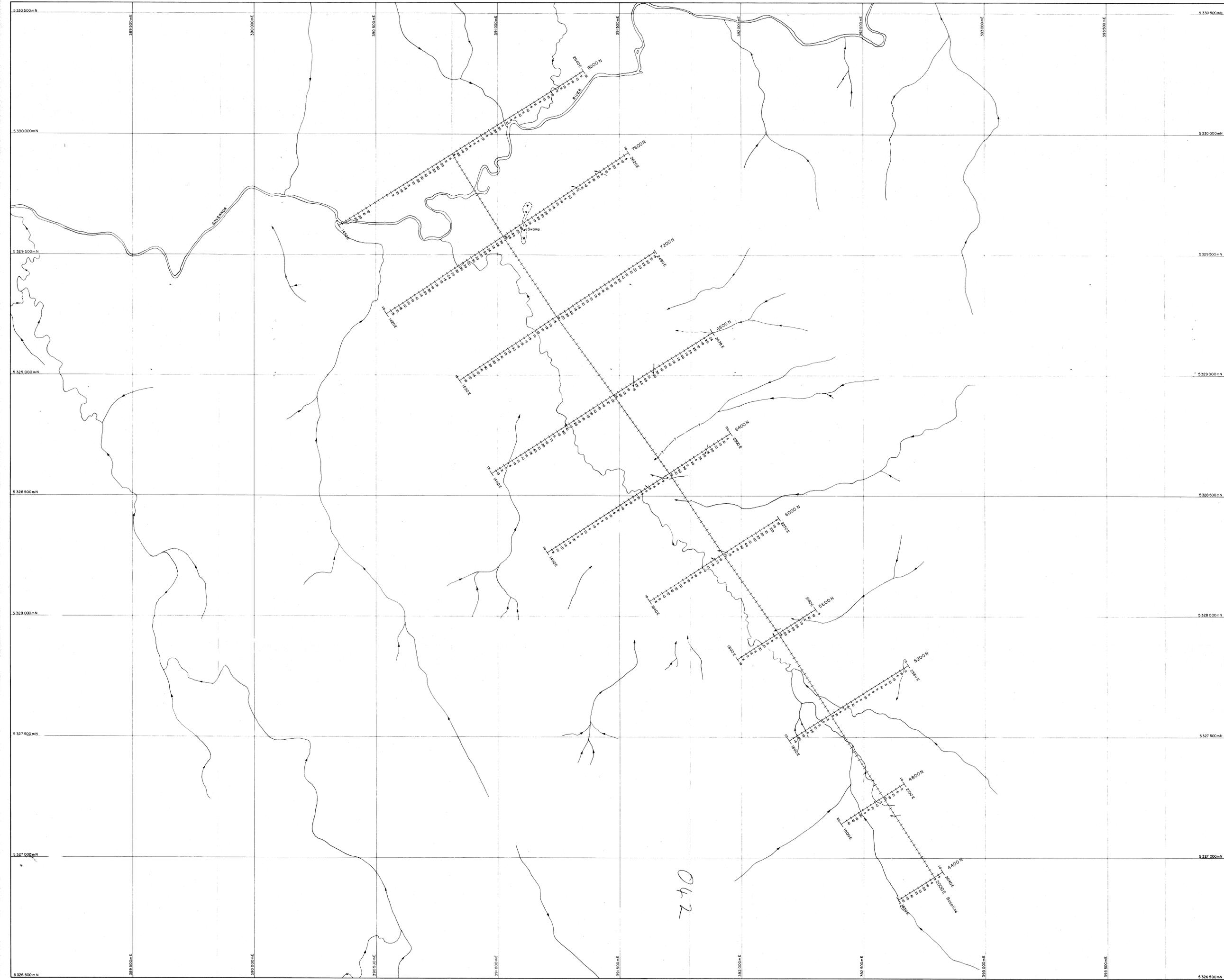
373042



Fig. GR B
 ELECTROLYTIC ZINC CO. OF ASIA LTD.
 PROJECT: GOVERNOR RIVER E.L. 30/83.TAS.

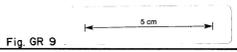
GEOCHEMISTRY
 SOIL SAMPLES 041
 Pb 84-2185

Scale: 1:5000	Survey: I, MAT	Revised:
Reference: H.E.C.	Date: 15-3-'84	Ref No.
Drawn: R.J.R.	Checked: L.W.	AO-529-0007



X - Denotes below 5 p.p.m.
 Note: All readings are p.p.m.

373043

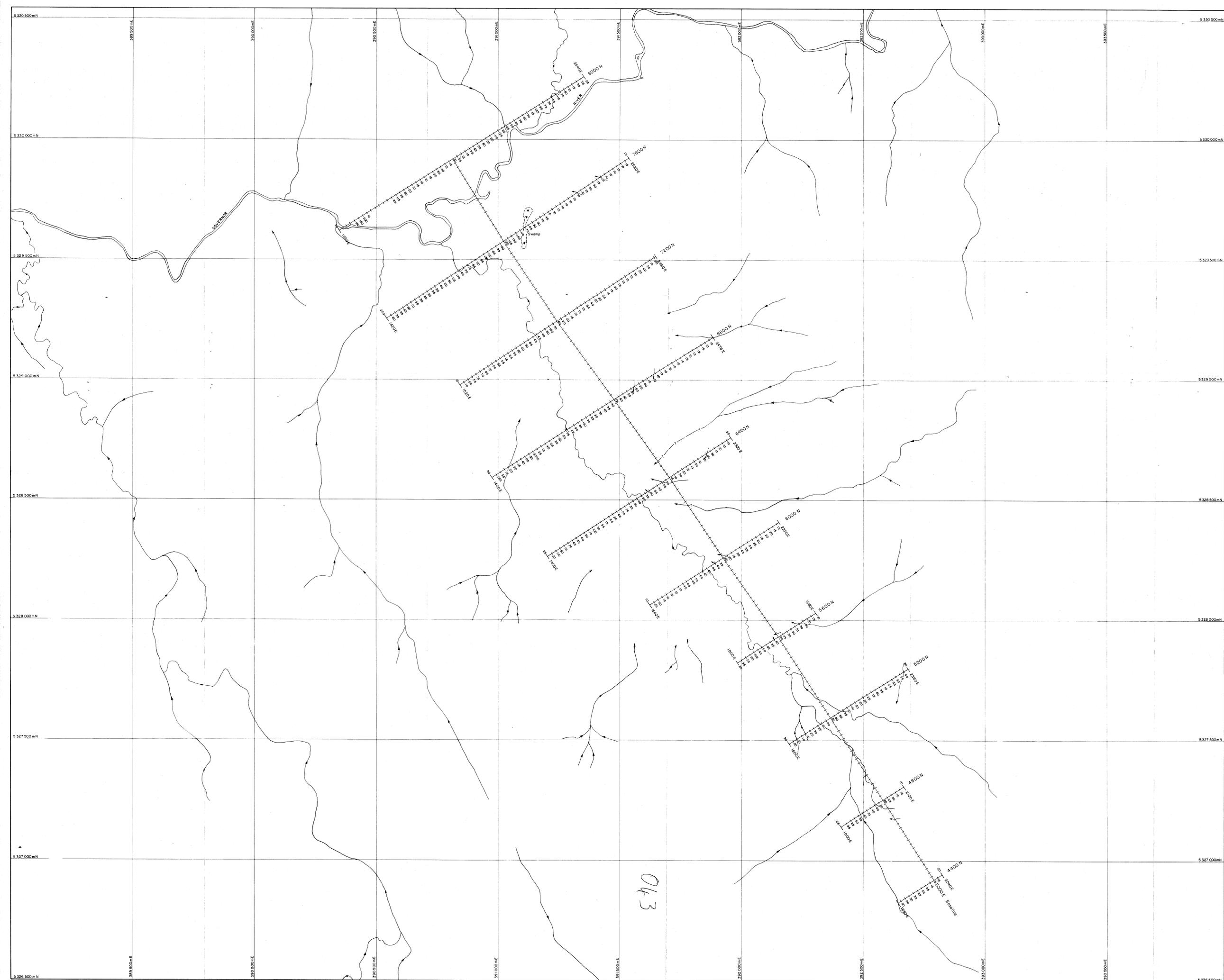


ELECTROLYTIC ZINC CO. OF ASIA LTD.
 PROJECT: GOVERNOR RIVER E.L. 30/83.TAS.

GEOCHEMISTRY
 SOIL SAMPLES 042

Cu 24-2176

Scale: 1:5000	Survey: I.MAT	Revised:
Reference: H.E.C.	Date: 15-3-84	Ref. No.
Drawn: R.J.R.	Checked: L.W.	AO-529-0008



X - Denotes below 5 p.p.m.
 Note: All readings are p.p.m.

373044

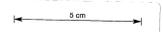


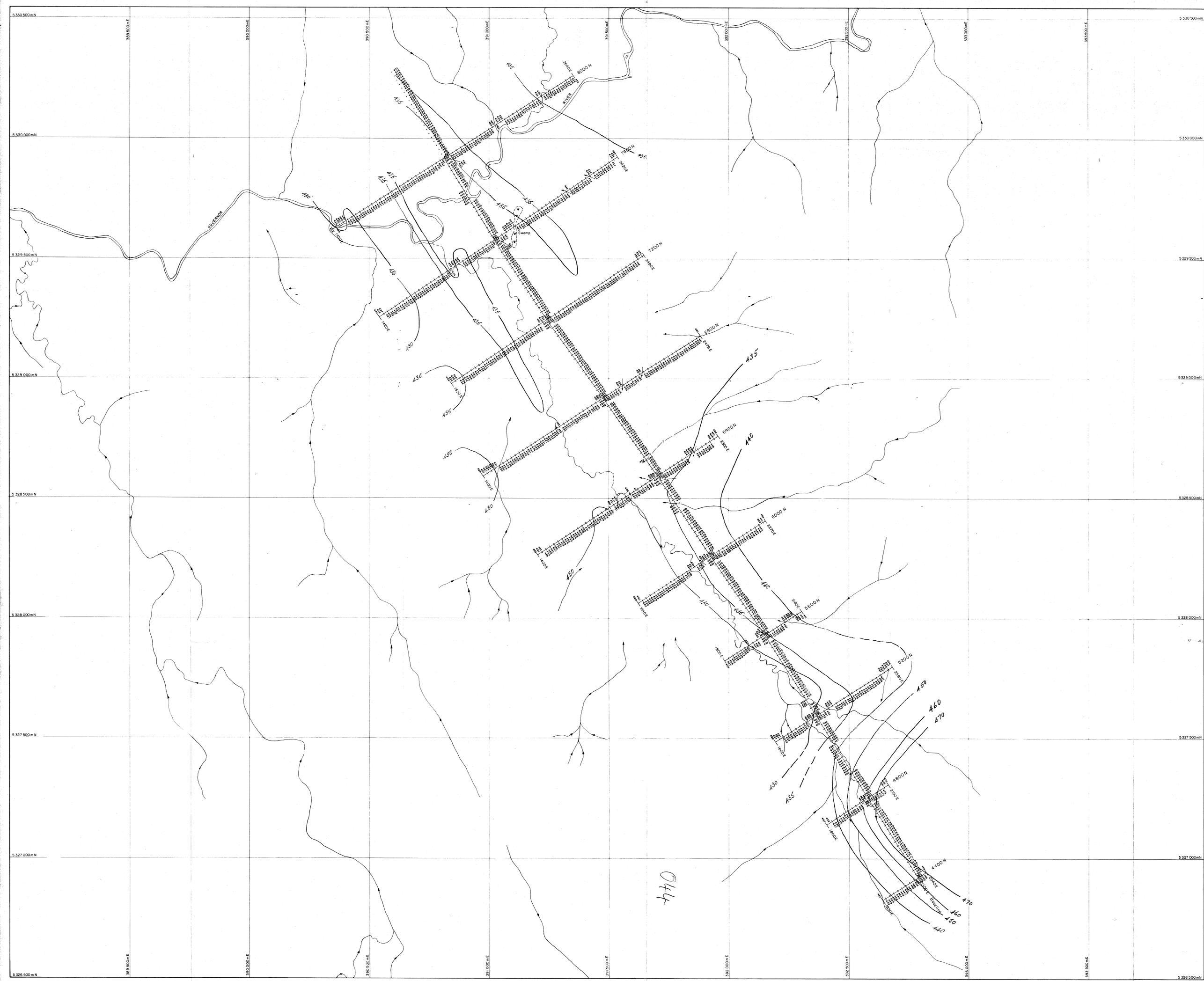
Fig. GR 10

ELECTROLYTIC ZINC CO. OF ASIA LTD.
PROJECT: GOVERNOR RIVER E.L. 30/83,TAS.

GEOCHEMISTRY
SOIL SAMPLES 043

Ba *Ru-7-84*

Scale: 1:5000	Survey: I.M.A.T.	Revised
Reference: H.E.C.	Date: 15-3-'84	Ref. No.
Drawn: R. J. R.	Checked: L. W.	AO-529-0009



MAGNETIC BASE = 62,000 nT.
 eg 434 = 62,434 nT.

373045

Fig. GR 11

ELECTROLYTIC ZINC CO. OF ASIA LTD.
 PROJECT: GOVERNOR RIVER E.L. 30/83TAS.

GEOPHYSICS 044
 GROUND MAGNETICS

Scale: 1:5000	Survey: I.MAT.	Revised:
Reference: H.E.C.	Date: 2-3-84	Ref. No:
Drawn: R.J.R.	Checked:	AO-529-0004