APPENDIX II

ELECTROLYTIC ZINC COMAPNY A'ASIA -

MONTEZUMA JOINT VENTURE

PART EL15/76 - PROGRESS REPORT, 1984

See accompanying report

SAINTY, R.A. 1984: Montezume J.V., Part E115/76
Report on Exploration Activity
30 May to 13 November, 1984
EZ Co A'Asia Ltd, Report No T197
(unpub.)

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Mines Dept

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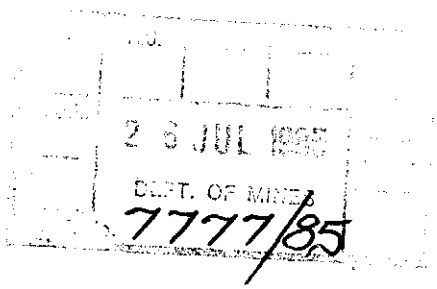

ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LIMITED

Mineral Resources Division

MONTEZUMA JOINT VENTURE

PART EXPLORATION LICENCE NO. 15/76

Report on Exploration Activity

30th May to 13th November, 1984.

Report No. T197

R.A. Sainty,

November, 1984

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1. INTRODUCTION

This report covers exploration from 30th May to 13th November, 1984 on the Montezuma Joint Venture part of E.L. 15/76 by the Electrolytic Zinc Company of Australasia Limited acting as Manager for a Joint Venture consisting of E.Z., Getty Oil Development Co. Ltd., and C.S.R. Limited. This Joint Venture was initiated in February, 1982.

2. PREVIOUS EXPLORATION

Previous exploration by the present Joint Venture has been reported in E.Z. Report No's 160 (1982), 166 (1983), 172 (1983) and T180 (1984).

3. EXPLORATION UNDERTAKEN 30TH MAY TO 13TH NOVEMBER, 1984

Exploration in this period consisted of the completion of a two-hole drilling programme, initiated last period, with attendant assaying and logging.

Drilling of a deep Renison-style target in the line 18 area was deferred.

The potential for Au was reviewed by reassaying previous chip sample and drill core pulps and selected mine dump sulphide samples.

3.1. DDH MZP 261 on Line 10 (Refer Figure 1 - DDH Targets sketch)

MZP 261 was advanced from 219.0m to its completion depth of 241.0m, and cased with PVC pipe.

MZP 261 was the second of two holes (with MZP 258) which were targetted beneath a broadened area of enhanced soil and bedrock Sn (±Ag, Zn, As) values on the Montezuma Fault to test for either carbonate-hosted or structurally-located Sn.

3.2. Core Geochemistry

All mineralised intervals within MZP 261 were split in geologically-controlled lengths. Thirty-eight samples were submitted to Analabs in Cooee and analysed for Cu, Pb, Zn, Ag and Fe by A.A.S. after nitric, perchloric, hydrochloric and hydrofluoric acid

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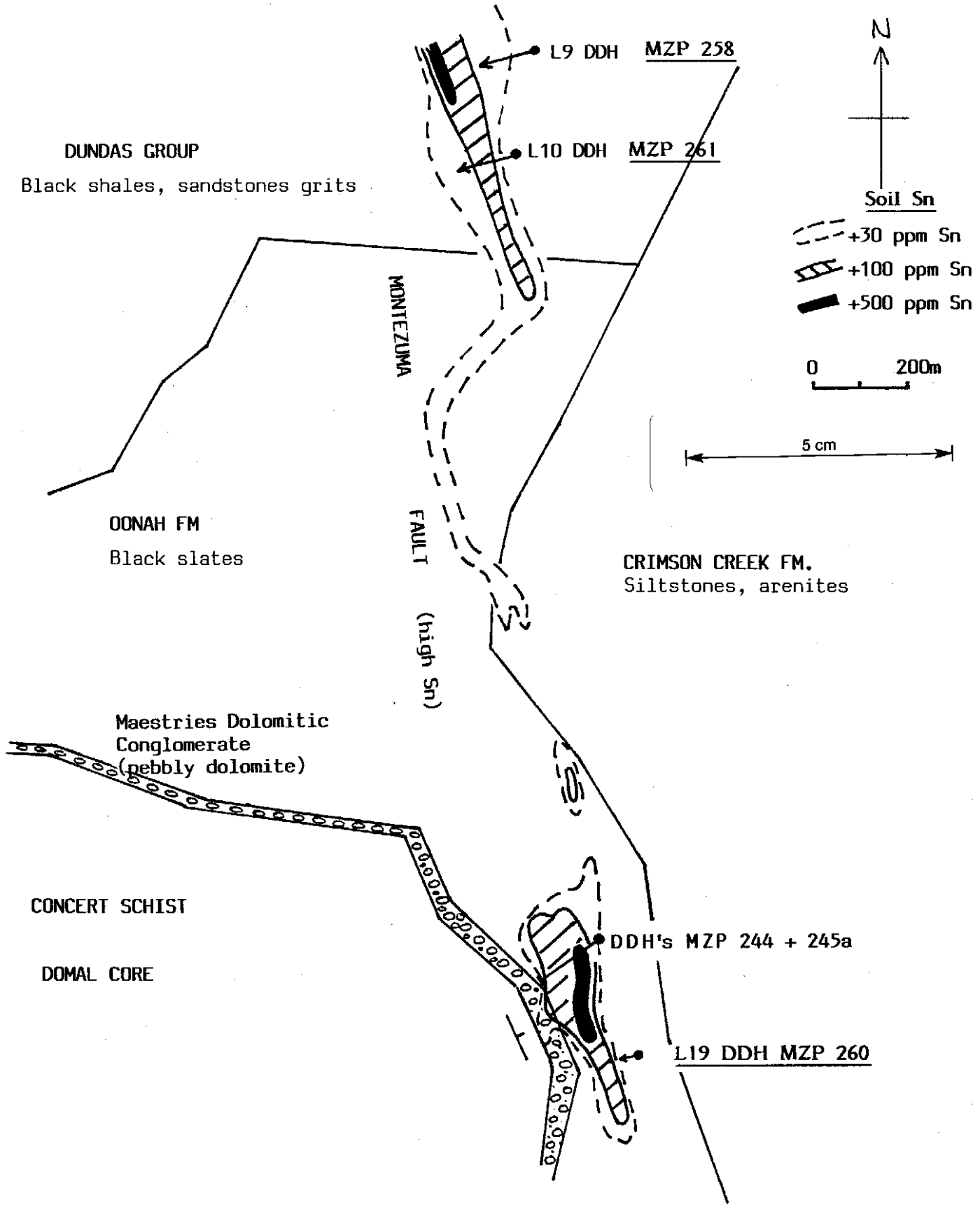

MONTEZUMA JOINT VENTURE - PART E.L. 15/76

DDH TARGETS

Fig. 1.

digestion (for total dissolution of the pyrite content), for As by vapour Hydride generation, for Sn and Sb by pressed powder XRF and for Au by A.A.S. after 30g fire assay fusion.

3.3. Drill Hole Documentation

MZP 258, 261 and the short targetting hole on line 19, MZP 260, were geologically logged in detail. Four samples from the mineralised intersection in MZP 258 were submitted for mineralogical description by C.M.S. Formal logs, assay data records and drill hole summary sheets (with 1:1,000 scale sections) were compiled, typed and draughted.

3.4. Down-Hole Geophysics

McSkimming Geophysics conducted down-hole SIROTEM II surveys on drill holes MZP 244 and 245a. Although the holes had been cased with PVC pipe at their completion in July, 1983, they were found to be blocked ten months later, at 135m in MZP 244 and 193m in MZP 245a.

3.5. Pitting and Geochemistry of Magnetic Anomaly

A magnetic anomaly on line 14 was hand-pitted and sampled in three locations between 5,280E and 5,330E. The three weathered rock chip samples were submitted to Analabs in Cooee and analysed for Cu, Pb, Zn, Ag, Fe, Mn, As and Sn by the same techniques used to assay the MZP 261 core (listed above).

3.6. Montezuma Au Review

Pulps from the chip sampling of tracks in the vicinity of drill holes MZP 244 and MZP 245a were submitted for Au assay (63 samples).

Sulphide samples from some of the Curtin-Davis group of mines in the central part of the J.V. area were submitted for assay for Au, Ag, Zn, Pb and As (13 samples).

All split core pulps from the intersections of Maestries Dolomitic Conglomerate MZP's 244 and 245a were submitted for Au assay (105 samples). Much of this dolomite unit is charged with fine disseminated pyrite.

Analytical methods were those used in assaying the MZP 261 core (listed above).

4. RESULTS RECEIVED

4.1. DDH MZP 261 on Line 10 (Refer Figure 2 - MZP 261 profile sketch; Appendix 2 - MZP 261 detailed log and assay record; A1-527-0049 - MZP 261 Summary Sheet).

There were four main zones of potential interest in this hole (refer Figure 2). Two upper zones, 55.0-69.6 and 100.6-110.3, contained sporadic veins of galena and sphalerite; and two lower zones, 161.9-184.0 and 209.7-241.0, were strongly veined by carbonate with minor pyrite within intensely sheared black siltstones.

The pit above the upper two zones had previously supplied high Zn-As-Ag-Sn assay results, and so indicated the position of the Montezuma Fault (refer E.Z. Report T180). The hole was continued westwards to both test the upslope end of the soil Sn response and to test for any carbonate units which could intersect the Montezuma Fault at a deeper level. None were found. The intense shearing intersected in the lower part of the hole was initially interpreted as part of the Montezuma Fault, but low assay results have disproved this.

The two upper intervals are characterised by elevated to high Zn-Pb-Ag and elevated Sn. The higher Sn assay intervals are:

61.3	- 61.8	0.5m	@ 1.33% Pb, 5.10% Zn, 51 ppm Ag, 3340 ppm Sn
68.35	- 69.6	1.25m	@ 0.43% Pb, 0.38% Zn, 34 ppm Ag, 1320 ppm Sn
105.9	-107.1	1.2m	@ 2.62% Zn, 1220 ppm Sn
109.1	-110.3m	1.2m	@ 4.17% Zn, 40 ppm Ag, 1,530 ppm Sn.

Au assays are low throughout, except for 0.1 ppm Au in 68.35-69.6 (1.25m).

Pit Assays included

Sn	Ag	Zn	As
1310	232	11.26%	5.95%
1170	158	10.37%	2.30%
738	430	18.80%	3.70%

MZP 261 Assays included

	Sn	Ag	Zn	Pb
0.5m @	3340	51	5.10%	1.33%
1.25m	1320	34	0.43%	0.38%
1.2m	1220	4.5	2.62%	0.035%
1.2m	1530	40	4.17%	0.423%

5 cm

MONTEZUMA JOINT VENTURE - PART E.L. 15/76

LINE 10 DDH MZP 261

Fig. 2

These intervals in MZP 261 on line 10 compare with the assay results of MZP 258 on line 9 which gave:

3.3m @ 1.17% Zn, 7.11% As, 26.9 ppm Ag, 1130 ppm Sn (in fault zone)

2.6m @ 4050 ppm Zn, 1840 ppm Sn (in the adjacent disseminated replacement mineralisation).

Although the style and base metal association has varied, the level of Sn achieved has not.

4.2. Detailed Drill Hole Data

The results of this work are presented as:

Appendix 1	MZP 258 detailed log and assay record.
Appendix 2	MZP 258 mineralogical report CMS 84/5/27.
A1-527-0047	MZP 258 summary sheet.
Appendix 3	MZP 260 detailed log.
A1-527-0048	MZP 260 summary sheet.
Appendix 4	MZP 261 detailed log and assay record.
A1-527-0049	MZP 261 summary sheet.

The mineralogical report CMS 84/5/27 deals with four samples from the strongly pyrite+arsenopyrite-veined Montezuma Fault intersection of MZP 258 (3.3m @ 7.11% As, 17.7% Fe, 1.17% Zn, 26.9 ppm Ag, 1130 ppm Sn) and the zone of flanking disseminated replacement mineralisation (2.6m @ 11.0% Fe, 0.41% Zn, 1840 ppm Sn).

The fault breccia assemblage (samples 53532-34) consists of tourmaline-quartz-sulphide in both matrix and clasts. The sulphide phases are (early stage) arsenopyrite±pyrite after pyrrhotite, py±sp±cassiterite and (late stage) sphalerite± jamesonite±silver sulphosalt. Cassiterite was noted in trace quantity in one sample only.

The fine-grained disseminated replacement py-sp mineralisation (53535) pervades the arenite matrix which is only weakly altered, with tourmaline absent. There is no detectable cassiterite present in this sample.

4.3. Down-Hole Geophysics (Refer Appendix 5 SIROTEM plots for MZP 244 & 245a)

The down hole SIROTEM survey plots for MZP 244 and 245a are presented in Appendix 5. However, in both cases the survey probe did not reach target depth before encountering the hole blockage.

4.4. Pitting and Geochemistry of Magnetic Anomaly

The weathered rock exposed and sampled by the three pits on line 14 between 5,280E and 5,330e was a weakly magnetic siltstone attributable to the Crimson Creek Formation.

Assay results were as follows:

Sample No.	Cu	Pb	Zn	Ag	Fe%	Mn	As	Sn
61328	70	45	195	X	10.5	235	7	X
61340	160	85	460	X	12.5	250	20	X
61341	85	30	210	X	9.20	220	2	X

The lack of Sn is in agreement with the grid soil sample results.

4.5. Montezuma Au Review Assays

All Au assays were received from the track chip sampling, old mine dump samples and Maestries Dolomitic Conglomerate intersections in MZP 244 and MZP 245a.

Results are as follows:

TRACKSIDE 3M-LENGTH CHIP SAMPLES:

Only seven samples of the 63 total assayed above 0.1 ppm Au, and only one of these assayed above 1 ppm Au. This single value, 1.37 ppm, previously assayed

7.23% Pb, 0.61% Cu, 2.60% As, 12.5% Fe, 2150 ppm Ag, 1130 ppm Sn and represents one end of the 1.3m-wide massive banded jamesonite-pyrite vein exposed in the track near the collar of MZP 244.

The other six +0.1 ppm values also occur within the elevated Sn Montezuma Fault.

Of the remainder, 60% assayed below the detection limit (0.008 ppm).

In addition to these analyses, C.S.R. Minerals resubmitted MZP 245 split core pulps from most of the Montezuma Fault intersection for Au assay. Twenty samples covering 33.0-41.0, 59.0-78.0 and 132.0-141.0m were submitted to Comlabs. All assayed below the limit of detection for Au (0.005 ppm).

DOLOMITIC CONGLOMERATE INTERSECTION IN MZP's 244, 245

Only five samples of the 105 total assayed above the limit of detection, and only one of these assayed above 0.1 ppm Au. All five samples are associated with the 4.25m-wide zone of py-sp-gn replacement mineralisation within the middle of the dolomite intersection in MZP 244 (167.45-171.7m).

OLD MINE SULPHIDE SAMPLES (Refer Appendix 6)

Thirteen samples from the Curtin-Davis Consols, No. 1 Curtin Davis and Evenden Mine dumps and of the jamesonite-pyrite vein near the collar of MZP 244 were assayed for Cu, Pb, Zn, Ag and As as well as Au. Despite high to very high base metal and Ag values, Au values are usually below 1 ppm Au. The highest values - 3.05 ppm and 2.61 ppm Au - are from two of four samples of the 1.3m-wide jamesonite-pyrite vein near the MZP 244 collar, and occur with high Pb-Ag-As values. This vein was tested for continuity at depth and along strike with three short drill holes collared at the MZP 245a collar site by Texins Development in 1973. No equivalent mineralisation was located.

5. INTERPRETATIONS AND CONCLUSIONS

5.1. MZP 261 and MZP 258

MZP 261 on line 10 drilled a wide zone of weak py-sp-gn veining which contains similar subeconomic peak Sn grades to those encountered previously. MZP 258 on line 9, MZP 245a near line 18 and surface bedrock sampling in these areas have all returned 0.1-0.3% Sn associated with pyritic veining on the Montezuma Fault.

In MZP 258, the mineralisation was well-defined by strong shearing and shattering of a competent siliceous host. The dispersed veining in MZP 261 reflects the dilution of a weaker shear stress through more ductile silt matrix-supported breccias and siltstones, some of which appear barely disturbed. This change in the strength of mineralisation is indicated by the grid soil sample results.

It follows, therefore, that **the three specific mineralised areas on the Montezuma Fault, i.e. lines 9-11, 17.5-19 and within ML 62M/75, are caused by localised stronger shearing and open space fracturing along the major structure.**

The replacement-style mineralisation in MZP 258 has a slightly enhanced Sn grade over that in the feeder fault, and yet has a lower sulphide content and occurs within an unlikely gritty arenite host. This demonstrates the real possibility of high-grade replacement mineralisation if a suitable carbonate unit was intersected. None has been found in MZP 258 or MZP 261, and so there can be **no further potential in the line 9-10 fracture area.**

However, the recent results underline the previously-recognised potential at 500m depth in the line 18 fracture area for semi-massive high-grade pyrite-pyrrhotite replacement of the Maestries Dolomitic Conglomerate unit.

5.2. Au Review

The only significant Au assays in the Montezuma J.V. area come from narrow massive sulphide veins of known limited extent. The four veins represented are an incomplete sampling of the total, but show that the Au content of these high Pb-Zn-Ag-As sulphides is not high enough to warrant further investigation given the small tonnage involved.

6. RECOMMENDATIONS

1. No further activity to be undertaken in the line 9-10 fracture area.

2. Review the **economic** potential for a deep Renison-style orebody in the line 18 fracture area if the outlook for Sn production changes.

APPENDIX 1.

MZP 258 Detailed Log and Assay Record.

ELECTROLYTIC ZINC COMPANY OF A'ASIA LTD.
MINERAL RESOURCES DIVISION — TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No. DDH MZP 258
SHEET No. 1.

PROJECT: MONTEZUMA J.V. - PART E.L. 15/76
LOCALITY: Godkin Ridge, 6km SSE of Renison Bell
OBJECTIVE: To test a soil and bedrock Sn anomaly on the Montezuma Fault for either carbonate-hosted or fault-controlled Sn mineralisation.
RESULT: Intersected strong py+asp veining within the Montezuma Fault (3.3m @ 0.113%Sn, 7.11% As) with flanking zone of dis replacement py (with 0.184% Sn).

GRID CO-ORDS: Line 9 at 5,408E
A.M.G. CO-ORDS: 372,918mE 5,365,836mN
COLLAR R.L.: 653
COLLAR DIP: 50°
AZIMUTH: 256° AMG
TOTAL DEPTH: 272.0m

HOLE SIZE: HQ - 1.0; NQ - 39; BQ - TD
CASING: PVC to TD
COMMENCED: 17.4.84
COMPLETED: 4.5.84
LOGGED BY: R.A. Sainty

Depth (m)	Azimuth (°a.m.g.)	Dip	Depth (m)	Azimuth (°a.m.g.)	Dip
80	256	50.5			
140	255.5	50			
185	256.5	49.5			
230	256	47.75			
269	255	45.5			

DEPTH From	DEPTH To	ROCK DESCRIPTION	MINERALISATION	CORE REC'D Run	CORE REC'D Short
0.	9.6	**Grey chert pebble conglomerate.** Densely packed framework-supported grey 'chert' pebble conglomerate. Angular to frequently rounded pebbles, mostly 0.5-1.0cm diam.			
9.6	33.3	**Thickly interbedded laminated black siltstone & grey medium grained volcanic arenite.** Erratic bedding angles - subparallel to 80° to core.			
33.3	49.5	Green to pale grey dolomitic **mass-flow mudflow deposit** (sericitic claystone?). Dolomite ovoid masses and lumps. Interrupted by intervals of pale grey medium-grained volcanic arenite: 35.8-36.1 and 36.6-37.2 (latter graded up hole). 39.5-45.0 Contains abundant milli- to centimetric fragments of pyritic grey quartz arenite.			
46.5	58.6		***Disseminated, stringer and massive vein sulphide: py+po, gn, sp, tet, ccp.*** Short intervals of massive vein sulphide 0.3-1.0m in length separated by weak stringer-style veining or barren rock. The longest massive sulphide length is 49.6-50.6m, this and the other short lengths comprise massive pyrite±pyrrhotite (po 53.2-53.5) with associated sphalerite, galena, tetrahedrite, and chalcopyrite.		
49.5	55.2	**Thinly interbedded laminated black siltstone & pyritic medium-grained volcanic arenite.** Black siltstone interbeds are slightly contorted ~50° to 90° to core axis, host mineralisation.			
55.2	85.0	***Volcanic Wacke**, as follows* 55.2-63.1 Pale brown, coarse-grained volcanic (quartz and feldspar crystal) wacke 63.1-85.0 Pale to dark grey to brown-grey volcanic wacke i.e. quartz and feldspar crystals and fragments in a dark siliceous silty matrix (matrix supported). Massive to crudely bedded (with dark silty intervals). From 70.0-85.0 rock contains abundant rip-up clasts of laminated black siltstone and occasional calsts of pyritic chert and coarse-grained feldspar wacke.	62.3-63.1 Semi-massive pyritic sulphide vein, as per 46.5-58.6, above.		
85.0	117.45	**Thickly interbedded volcanic wacke and black siltstone,** as follows: 85.0-91.5 Finely laminated black siltstone. Minor arenite intercalations. Bedding mainly 70° to core 91.5-97.0 *Grey-brown massive volcanic (quartz feldspar crystal) wacke.* Grey fine-grained matrix. 97.0-98.4 Laminated black siltstone. Bedding mainly 65° (to 85°) to core 98.4-101.9 Grey-brown massive volcanic arenite 101.9-111.05 Laminated black siltstone. Bedding (75°-) 80° to core. Minor arenite layers and thin pyrite stringers over last 80cm. 111.05-117.45 Grey-brown massive to crudely layered volcanic wacke. Siderite veins to 5cm-width in topmost 1.5m			

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ELECTROLYTIC ZINC COMPANY OF A'ASIA LTD.
MINERAL RESOURCES DIVISION — TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No. DDH MZP 258
SHEET No. 2

DEPTH From	DEPTH To	ROCK DESCRIPTION	MINERALISATION	CORE REC'D Run	CORE REC'D Short
117.45	148.2	**Laminated Black Siltstone** Up interval (above 131m), bedding varies greatly i.e. 25-70° to core with a reversal in bedding direction with respect to core. Down-interval (below 131m), there is much soft-sediment slumping contortion of bedding. Near base of unit bedding is uniform, at 65-70° to core.			
148.2	184.0	**Volcaniclastic debris-slide breccias, minor arenites,** as follows: 148.2-158.0 Mixed breccias, mudflows, arenites and ashes. Short intervals (0.2-0.7m) of coarse debris-slide breccias (=framework-supported white-cream centimetric (to 10cm), angular to rounded siliceous felsic lava clasts with dark silty matrix), with pale green-cream massive ash beds (eg 156.85-158.0), grey volcanic wackes, and a pale green-grey lithic mudflow breccia (153.7-154.8) 158.0-184.0 Mostly coarse volcaniclastic breccia: white-cream angular to rounded centimetric (mean 3-5cm to 10-40cm) siliceous felsic lava clasts framework-supported but matrix-supported down-interval with a dark silty matrix. 165.7-178.0 Pebbly coarse-grained quartz arenite. Clasts to 7cm (including black siltstone clasts) with intervals of coarser breccias included. Three successive intervals are reverse-graded, fining down-hole: 174.3-175.35, 175.35-175.85, 175.85-177.0; a fourther is graded fining up-hole - 177.0-178.55 (Reverse grading indicating fan or delta-front deposition?)			
162.45	165.75	**Montezuma Fault** zone of intense shattering and brecciation; rehealed and competent, within framework-supported felsic volcanic clast sedimentary breccia, as described above.	Strong (20-40%, average 30%) narrow stringer veins of pyrite-arsenopyrite with accessory pyrrhotite, sphalerite, jamesonite and cassiterite in a tourmaline-quartz breccia matrix. Refer to 53532 @ 162.8m, 53533 @ 163.45 and 53534 @ 164.45 in CMS 84/5/27		
165.75	171.1	Pebbly coarse-grained quartz-arenite, unaltered (described above: 165.7-178.0)	165.75-171.1 Pervasive disseminated py & lesser sphalerite within the arenite matrix. Most abundant 167.4-170.0 Refer 53535 in CMS 84/5/27		
184.0	190.4	**Laminated black siltstone** Bedding is interslumped at top, with remainder varying smoothly from 25° to core at 186.2 to 45° to core below 188m. Slatey cleavage developed in part, at 50° to core *in opposite sense to bedding.*			
190.4	223.25	**Volcaniclastic debris-slide breccias,** as above. Fragments to 20cm. Mostly matrix-supported, locally framework-supported. 201.6-204.4 Abundance of laminated black siltstone bands and clasts of sandy black siltstone in the breccia			
223.25	239.7	**Laminated black siltstone** Thin arenite laminae are commonly graded, fining up-hole. Bedding 35-40° throughout.			
239.7	272.0 TD	**Interbedded laminated black siltstone and volcanic arenite** Siltstone contains thin arenite laminae and interbeds with graded upwards fining intervals and contact relationships. Arenite beds contain centimetric rip-up clasts of laminated black siltstone, eg 242.0-245.9m			

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ELECTROLYTIC ZINC COMPANY OF A'ASIA LTD.
MINERAL RESOURCES DIVISION — TASMANIA

DIAMOND DRILL CORE GEOCHEMICAL ANALYSES RECORD

HOLE No. MZP 258
SHEET No. 1

GRID CO-ORDS: Line 9 at 5,408E
A.M.G. CO-ORDS: 372,918mE 5,365,837mN
COLLAR R.L.: 653m approx.
COLLAR DIP: 50°
AZIMUTH: 256°
TOTAL DEPTH: 272.0m

LABORATORY						ANALABS, Cooee				AAS at Cooee, others at Perth							
ANALYTICAL TECHNIQUE						AAS	AAS	AAS	AAS	AAS	AAS	XRF	XRF	Fire AAS			
						103	103	103	103	103	114	402	402	309			
DETECTION LIMIT						5	5	5	0.5	0.005	1	3	3	0.05			
Sample No.	Sample Type	From	To	Core Rec'd	Sample Length	METAL CONTENT (ppm unless specified) Cu	Pb	Zn	Ag	Fe%	As	Sb	Sn	Au			COMMENTS
47283		46.5	49.6		3.1	730	2.87%	1.12%	107	18.0	510	128	52	X			
284		49.6	50.6		1.0	1550	7.50%	1.95%	670	34.5	690	448	93	X			
285		50.6	53.2		2.6	165	1.15%	2950	36.5	12.5	260	209	52	X			
286		53.2	53.5		0.3	6250	6.45%	2100	510	43.5	740	1390	115	X			
287		53.5	55.5		2.0	190	1.10%	1400	38.5	13.5	400	1820	23	0.09			
288		55.5	58.6		3.1	305	1.30%	1.65%	35.0	16.5	2900	764	225	X			
289		62.3	63.1		0.8	790	720	1.30%	12.0	36.5	1.40%	140	62	0.08			
47290		162.45	163.0		0.55	2450	6950	6800	50.0	24.0	10.0%	3020*	2500*	0.11			
291		163.0	164.0		1.0	550	2550	6000	34.5	23.0	6.95%	1160	770	0.14			
292		164.0	165.0		1.0	455	4450	1.35%	13.5	17.0	7.00%	670	645	0.18			
293		165.0	165.75		0.75	885	6450	2.05%	17.5	6.90	5.35%	2140*	1250*	0.09			
294		165.75	167.4		1.65	35	235	550	2.5	2.45	200	40	87	X			
295		167.4	170.0		2.6	105	225	4050	4.0	11.0	140	56*	1840*	X			
296		170.0	171.5		1.5	35	1350	7950	3.5	8.40	20	11	108	X			

* Reassayed by method 404 (XRF with quartz dilution) due to heavy matrix.

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APPENDIX 2.

MZP 258 Mineralogical Report C.M.S. 84/5/27.

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Central Mineralogical Services

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Norwood, S.A. 5067
Telephone 42 5659

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

25th June, 1984

MZP 258

REPORT CMS 84/5/27

YOUR REFERENCE:	Order No. 900539
DATE RECEIVED:	18th May, 1984
SAMPLE NOS.:	53532 - 53535
SUBMITTED BY:	R. Sainty
WORK REQUESTED:	Petrology/Mineralogy

for

H.W. Fander, M. Sc.

REPORT CMS 84/5/27

Four samples of sulphide-mineralised split drill core were received for microscopic examination, with emphasis on possible disseminated cassiterite mineralisation. Representative polished sections were prepared and examined with a combination of reflected and oblique incident illumination techniques to examine the opaque mineralogy and to provide some information on associated silicates.

Summary

Individual samples are described in the attached mineragraphic descriptions.

This suite comprises a composite of mineralised breccias and a mildly altered gritty lithic sandstone with disseminated sulphides representing "country rock" to the shear zones. Breccias exhibit marked metasomatic fine-grained tourmalinisation with clasts of pelitic rock in a tourmaline-quartz-sulphide matrix. Clasts are variably but generally weakly altered and mineralised. The psammite appears relatively weakly altered, but exhibits semi-pervasive sulphide impregnations in the matrix.

Three semi-distinct sulphide assemblages are evident. Arsenopyrite-rich assemblages appear relatively early in terms of temporal relationships and may include accessory pyrrhotite, the bulk of which is replaced by secondary pyrite. Arsenopyritic assemblages are variably deformed in response to a semi-mylonitic brecciation phase and are associated with tourmaline-rich gangue assemblages.

Pyritic assemblages, associated with quartz-rich gangue, carry accessory sphalerite and locally sideritic carbonate. Apparently also related are traces of cassiterite. This assemblage grades into late vugs and films of a sphalerite-rich assemblage with associated traces of jamesonite. Rare microscopic blebs of quartz-intergranular silver sulphosalt appear to represent an accessory to this relatively base metal sulphide/sulphosalt-rich phase.

Overall, this suite reflects a multistage alteration/mineralisation pattern, with an overprinting of Zeehan-style assemblages on contact-pneumatolytic effects. Analogies may be drawn with, for example, the Federal and related fault ores at Renison (refer to Patterson et.al. in Econ. Geol. Vol. 76 No. 2) which in part represent feeders to metasomatic ore zones.

D. Cowan, B. Sc.

REPORT CMS 84/5/27

Mineragraphic Descriptions

53532 (P.S. 49946) MZP 258 @ 162.8m

Exhibits more or less pervasively disseminated arsenopyrite with thinly disseminated pyrite, rare intergranular blebs of galena and microscopic spongy clots of sphalerite.

Arsenopyrite exhibits marked and essentially pervasive granulation effects, but persists locally as fine- to medium-grained, sub- to euhedral relict grains. Disseminations and semi-massive aggregates are concentrated in the matrix of a semi-mylonitic breccia, but also pervade the clasts.

Extremely fine-grained pale green tourmaline is a major component of the silicate assemblage. General features are consistent with a tourmalinixed/arsenopyrite-mineralised breccia developing in a pelitic sediment, and subsequently semi-mylonitically rebrecciated.

There is no detectable cassiterite.

53533 (P.S. 49947) MZP 258 @ 163.45 m

This rock may be classified as a mineralised breccia on the basis of stereobinocular and mineragraphic examination. Major features comprise angular, millimetric-scale clasts of fine-grained, siliceous sediment (?quartzose siltstone) and a strongly sulphide-mineralised matrix of quartz with marginal selvedges and irregular semi-massive aggregates of fine-grained pale green tourmaline.

The sulphide assemblage comprises largely pyrite and arsenopyrite. Arsenopyrite is fine- to medium-grained, granular to euhedral, and is concentrated in marginal areas of the matrix with associated spongy impregnations in the clasts. Pyrite is concentrated in variably continuous semi- to near-massive films pervading cores zones in the matrix. Minor associated arsenopyrite disseminations are corroded where "included" in pyrite aggregates. Pyrite is fine-grained to micro-crystalline and appears secondary after pyrrhotite in part.

Thinly disseminated irregular patches of sphalerite occur intergranular to quartz crystals in the matrix. These vug-like aggregates are locally accompanied by fine-grained clots of jamesonite, with associated traces disseminated throughout the pyrite aggregates, along with minor traces of galena and rare corroded relics of pyrrhotite.

Sphalerite is clouded with ultrafine (<< 1 μ) chalcopyrite exsolution blebs. Traces of carbonaceous matter occur on sporadic late fractures and as microscopic films and clots on grain-boundaries throughout the rock. A single 20 μ particle of cassiterite was detected in a tourmaline aggregate. Two very fine particles of ?pyrargyrite were noted intergranular to quartz.

53534 (P.S. 49948) MZP 258 @ 164.45m

This is a thoroughly tourmalinised breccia with affinities to 53532 and 53533. Matrix and clasts both exhibit marked replacement by extremely fine-grained green tourmaline with associated sulphide disseminations.

Arsenopyrite is irregularly distributed throughout the clasts as spongy films and impregnations, generally fine-grained and with varying granulation effects. Poikilitic sub- to fine millimetric scale clots of ultrafinely chalcopyrite exsolution-stained sphalerite are disseminated throughout tourmaline aggregates, and late crosscutting films of sphalerite, with associated disseminated pyrite euhedra, transect the rock. Elsewhere, irregular films of pyrite are apparently retrograde after pyrrhotite.

Accessory traces of ultrafine acicular jamesonite occur variously associated with patches of quartz and as inclusions in the disseminated poikilitic sphalerite blebs, which are also locally weakly stained with microscopic blebs of galena. Rare arsenopyrite-hosted micro-inclusions of pyrrhotite complete the sulphide assemblage. There is no detectable cassiterite.

53535 (P.S. 49949) MZP 258 @ 169.0m

This rock represents an altered and mineralised gritty lithic sandstone. The framework comprises mainly clasts of variably carbonaceous pelite with an argillic matrix. The fine metasomatic tourmaline, which is conspicuous in previous specimens, appears absent.

Fine-grained clots of pyrite pervade the matrix and to a minor degree the framework clasts. Sporadic crudely equant patches of weakly chalcopyrite exsolution-stained sphalerite occur interspersed with the pyrite, as do occasional small patches and discontinuous films of a high R.I. carbonate (?siderite).

Rare microscopic blebs of galena occur marginal to sphalerite disseminations. In contrast to 53532, 53533 and 53534, arsenopyrite and jamesonite are absent. There is no detectable cassiterite.

D. Cowan, B. Sc.

APPENDIX 3.

MZP 260 Detailed Log.

ELECTROLYTIC ZINC COMPANY OF A'ASIA LTD.
MINERAL RESOURCES DIVISION — TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No. MZP 260
SHEET No. 1.

PROJECT: MONTEZUMA J.V. - PART E.L. 15/76
LOCALITY:
OBJECTIVE: *A short targeting hole to locate the down-dip positions of* the Montezuma Fault and top contact of the Maestries Dolomitic Conglomerate prior to deeper drilling of the Renison target at the fault-dolomite intersection.
RESULT: Discouraged further drilling. The Montezuma Fault is very weak & is also displaced 30-40m, indicating the intersection occurs at much greater depth.

GRID CO-ORDS: Line 19 at 4,938E
A.M.G. CO-ORDS: 373,120mE 5,363,732mN
COLLAR R.L.: 645m
COLLAR DIP: 70°
AZIMUTH: 256° AMG
TOTAL DEPTH: 149.4m

HOLE SIZE: HQ - 6.0; NQ - 27.0; BQ - TD
CASING: PVC to 140m
COMMENCED: 27th April, 1984
COMPLETED: 2nd May, 1984
LOGGED BY: R.A. Sainty

Depth (m)	Azimuth (°a.m.g.)	Dip	Depth (m)	Azimuth (°a.m.g.)	Dip
50	254	67			
80	255	65.5			
119	256	64			
149	256	64			

DEPTH From	DEPTH To	ROCK DESCRIPTION	MINERALISATION	CORE REC'D Run	CORE REC'D Short
0	140.8	**DONAH FORMATION** Laminated black siltstone, minor grey quartzite arenite as interbeds and laminae. Black siltstone has laminae 0.5-1.0 cm thick, is folded uphole, to increasingly shear-brecciated down-hole. Bedding angles to core vary from parallel to high angle over short intervals. Plastic deformation is readily visible in sections below 101m, with entirely granulated siltstone-arenite intervals: 109.8-111.05, 134.4-138.2	23.7-29.6 Weak py(-sp) veinlets and tension-gash infill, 1-3mm wide. Strongest interval is 23.7-25.9 within a shear zone within the siltstone. A vein of brecciated py-sp-gn at 24.25 is 1.5-2.5m wide, at 35° to core. From 25.9-29.6 there is relatively more sp present in un-sheared, un-brecciated siltstone host. 54.1-61.2 Lesser zone of weak py veinlets; these may be in part remobilised from the syngenetic pyrite present in this vicinity.		
140.8	149.9	**MAESTRIES DOLOMITIC CONGLOMERATE** Recrystallised dolomite-matrix supported pebble conglomerate, with intraformational convoluted quartzite arenite 145.5-149.9. Upper contact with black slip-sheared siltstone is sharp, but two interbeds of sheared Donah Fm siltstone occur within the top of the dolomite conglomerate: 141.05-141.10 and 144.95-145.5 The dolomite conglomerate is weakly mineralised with millimetric (replacement) blebs of py, pale sp and lesser gn. *There is a possible 1cm angular clast of massive py at 141.25m.*			

APPENDIX 4.

MZP 261 Detailed Log and Assay Record.

ELECTROLYTIC ZINC COMPANY OF A'ASIA LTD.
MINERAL RESOURCES DIVISION — TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No. MZP 261
SHEET No. 1.

PROJECT: MONTEZUMA J.V. - PART E.L. 15/76
LOCALITY: Godkin Ridge, 6km SSE of Renison Bell
OBJECTIVE: To test a soil and bedrock Sn anomaly on the Montezuma Fault for either carbonate-hosted or fault-controlled Sn mineralisation
RESULT: Intersected a broad zone of weak gn-sp-py veining containing intervals of 0.1-0.3% Sn. Montezuma Fault is ill-defined on this section.

GRID CO-ORDS: Line 10 at 5,300E
A.M.G. CO-ORDS: 373,890mE 5,365,630mN
COLLAR R.L.: 679m
COLLAR DIP: 50°
AZIMUTH: 256° AMG
TOTAL DEPTH: 241.0m

HOLE SIZE: HQ - 3.0; NQ 27.5; BQ - TD
CASING: PVC to TD
COMMENCED: 8.5.84
COMPLETED: 31.5.84
LOGGED BY: R.A. Sainty

Depth (m)	Azimuth (°a.m.g.)	Dip	Depth (m)	Azimuth (°a.m.g.)	Dip
Surveys unsuccessful due to camera timing fault. Hole path assumed straight. (Validity demonstrated by MZP 258 path)					

DEPTH From	DEPTH To	ROCK DESCRIPTION	MINERALISATION	CORE REC'D Run	CORE REC'D Short
0	2.50	No core (tricone bit used.)			
2.50	20.4	**Volcanic arenite:** Pale grey medium-grained volcanic(-lithic) arenite. Massive, thickly bedded to poorly thinly bedded. Bedding 45° to core at 12.7m 17.4-18.4 Sheared polymictic sedimentary breccia (including felsic volcanic clasts to 5cm)	Minor disseminated py throughout		
20.4	56.4	**Interbedded volcanic arenite and laminated black siltstone:** Finely laminated black siltstone as thin interbeds and as matrix within slump brecciated arenite. Arenite is pale grey, medium grained feldspar and quartz crystal-rich. Slump-brecciated, particularly 26.7-29.75, 41.0-44.35 and 48.8-49.65 Elsewhere, many thin interbeds of siltstone in arenite have been rolled or rucked-up, producing irregular contacts. Bedding 75° to core at 40.2	20.5-26.5 Thin, irregular webbing py veinlets 1-3mm, sporadic to 3cm in width. 33.4-34.0 Includes a 5cm massive fine-grained gn-py vein and irregular 2cm gn-sp within thin irregular py veinlets. 43.9-45.2 Abundant diss py and lesser py veinlets.		
56.4	63.25	**Laminated black siltstone:** Evenly, finely laminated black siltstone. Thicker arenite laminae in some intervals are graded upwards fining. Bedding (65°)-70° to core at 58.3m. Isolated bedding convolutions over short intervals. Some micro-faulting visible but absence of severe shattering identifiable as Montezuma Fault as is present in MZP 258.	Irregular webbing py (-sp+gn) veinlets to 3mm throughout		
63.25	69.8	Grey massive siliceous **volcanic wacke**, fine-grained (almost siltstone) to medium-grained	Irregular webbing py±sp veinlets, less abundant than in siltstone 56.4-63.25, above.		
69.8	75.1	Pale green to grey **dolomitic feldspathic wacke.** Diagenetic ovoid growths of dolomite within matrix, enclosing feldspar grains			
75.1	91.5	**Laminated black siltstone.** Uniformly finely laminated. Bedding 60° to core at 77.1 and 84.0, 55° to 91.2. Common 2-3mm wide carbonate veins throughout.	81.6-82.6 Thin 2-4mm straight-walled veinlets of carbonate-qtz-py±sp±gn at random orientations.		
91.5	123.15	**Volcaniclastic debris-flow breccia, minor arenites,** as follows 91.5-97.3 Framework-supported breccia: siliceous felsic volcanic calsts, sporadic black siltstone clasts, milli- to centimetric; minor arenite 97.3-105.85 Black siltstone matrix-supported breccia. Felsic volcanic and black siltstone clasts. Matrix is massive, contains abundant medium-grained quartz 'clasts' and appears to have been mylonitized by intense shearing. 105.85-114.65 Pale grey fine-grained quartz-arenite and siliceous feldspathic wacke with minor interbedd coarse-grained felsic volcanic sedimentary breccia. Breccia 108.15-109.4, 112.25-112.9, 113.85-114.15: black siltstone matrixed. At 114.2-114.3 convolutions are visible within the black siltstone matrix (= some evidence for shearing attributable to Montezuma Fault).	100.6-104.4 Abundant thin py(±sp-gn)-qtz-carbonate veining 109.1-110.3 Includes 15cm massive py-sp vein (py displaying crustiform texture) and sp-asp infilling shatter-gashes within siliceous fine-grained wacke.		

116025

A 18620

ELECTROLYTIC ZINC COMPANY OF A'ASIA LTD.
MINERAL RESOURCES DIVISION — TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No. MZP 261
SHEET No. 2

DEPTH From	DEPTH To	ROCK DESCRIPTION	MINERALISATION	CORE REC'D Run	CORE REC'D Short
		114.65-123.15 Coarse-grained debris-flow breccia. Centimetric angular to subrounded cream felsic volcanic clasts, framework-supported (to locally matrix-supported), black siltstone matrix.	Trace sp and py blebs, veinlets throughout		
123.15	140.3	**Laminated black siltstone:** Finely laminated to thinly bedded black siltstone with minor volcanic (quartz-feldspar crystal) arenite interbeds and common graded intervals - fining up hole. Good facings confirmed by occasional truncated bedding (eg at 132.25). Bedding 50° at 126.7 and 129.05 45° at 136.0, 60° at 139.6m			
140.3	145.2	**Volcaniclastic debris-flow breccias** Centimentric cream felsic volcanic clasts, framework-supported with sporadic interbeds of arenite and laminated black siltstone.			
145.2	161.85	**Interbedded grey-brown volcanic arenite and laminated grey siltstone** Grey siltstone dominant over interval 146.8-148.9, otherwise interval consists of fine-grained volcanic arenite with siltstone interbeds. Bedding 55° to core at 148.9.			
161.85	185.55	**Intensely sheared, carbonate- veined black siltstone** Massive to ruptured and brecciated black siltstone. Weakly mineralised in part.	Minor py veinlets and trace sp within carbonate veins.		
185.55	209.4	**Interbedded volcanic arenite and laminated grey siltstone** Siltstone increases in abundance down-interval. Above 192.9 massive to slump brecciated grey arenite contains minor silty interbeds; down-interval (192.9-199.3) there are abundant laminated brown-grey siltstone interbeds, whilst at base of unit (199.3-209.4) arenite is absent entirely. Bedding 35° at 193.8, 40° at 195.0, 35° at 198.0, 30° at 303.3, 20° at 206.1, 40° at 207.1			
209.4	241.0 TD	**Intensely sheared, carbonate-veined black siltstone** Similar to 161.85-185.55, above, except for relatively abundant syngenetic pyrite Intervals 221.25-223.2 and 230.4-232.4 appear to be little deformed and are free from carbonate veining.			

A 18622

ELECTROLYTIC ZINC COMPANY OF A'ASIA LTD.
MINERAL RESOURCES DIVISION — TASMANIA

DIAMOND DRILL CORE GEOCHEMICAL ANALYSES RECORD

HOLE No. MZP 261
SHEET No. 1

GRID CO-ORDS: Line 10 at 5,300E
A.M.G. CO-ORDS: 372,890mE 5,365,630mN
COLLAR R.L.: 680m
COLLAR DIP: -50°
AZIMUTH: 256°
TOTAL DEPTH: 241.0m

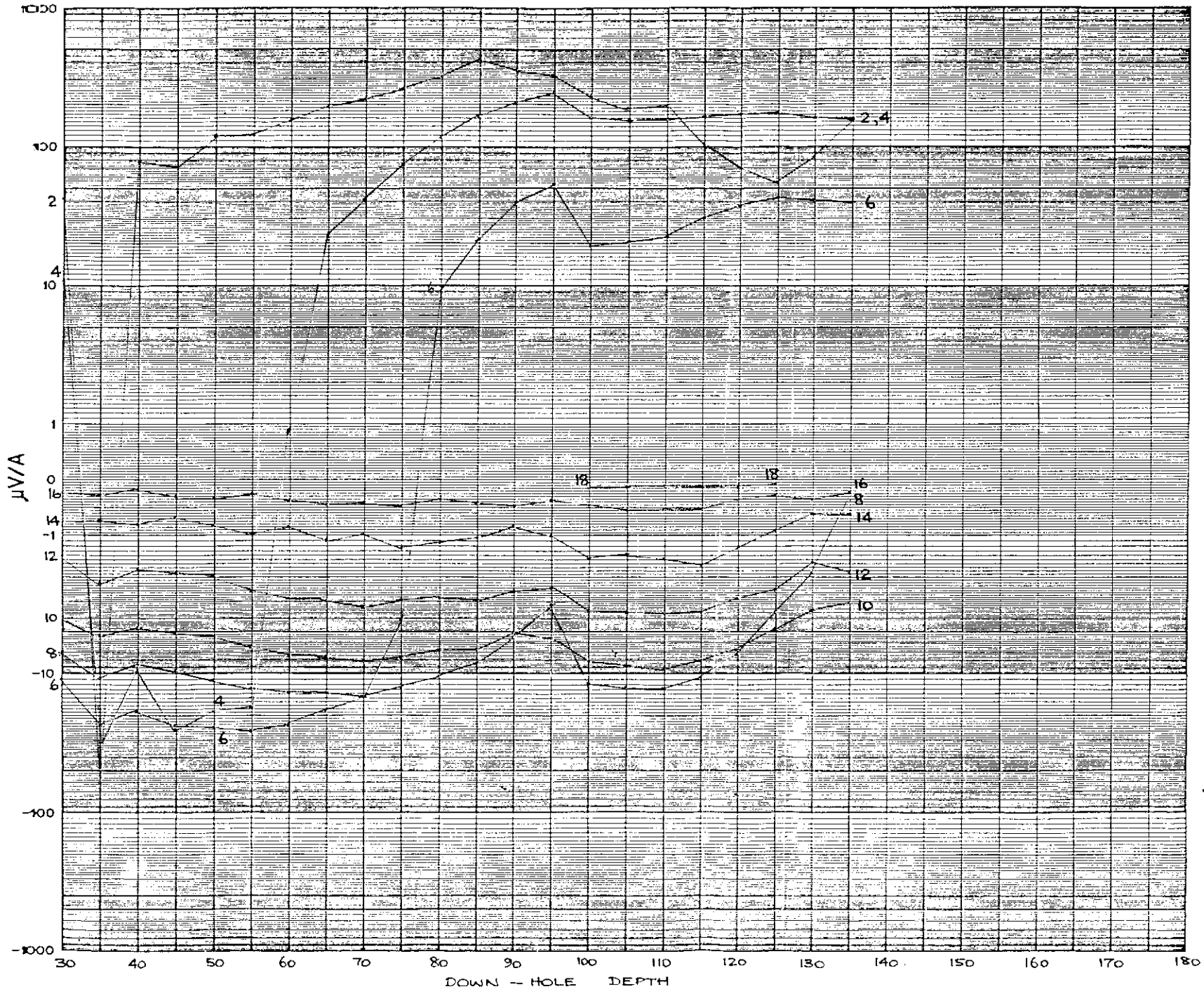
LABORATORY						ANALABS, Cooee				AAS at Cooee, other at Perth									
ANALYTICAL TECHNIQUE						AAS	AAS	AAS	AAS	AAS	AAS	Fire AAS	XRF	XRF					
						103	103	103	103	103	114	309	402	402					
DETECTION LIMIT						5	5	5	0.5	0.005	1	0.005	3	3					
Sample No.	Sample Type	From	To	Core Rec'd	Sample Length	METAL CONTENT (ppm unless specified) Cu	Pb	Zn	Ag	Fe%	As	Au	Sb	Sn					COMMENTS
63761	All	20.5	22.0		1.5	50	265	985	0.5	5.75	45	X	64	X					
762	Split	22.0	25.0		3.0	105	3200	1450	14.5	8.10	76	X	90	9					
763		25.0	26.5		1.5	360	3500	4950	15.0	9.70	80	X	40	34					
764		33.4	34.0		0.6	290	6.63%*	0.86%*	50*	14.0	7000	0.030	3.29%*	129					
765		43.9	45.2		1.3	35	270	260	0.5	5.10	80	X	66	10					
766		55.0	56.0		1.0	135	1.01%*	3.72%*	29*	9.75	49	X	109	171					
767		56.0	58.0		2.0	165	2800	9200	10.0	8.30	67	X	74	228					
768		58.0	61.3		3.3	120	4375*	1.93%*	13*	8.40	54	X	57	743					
769		61.3	61.8		0.5	470	1.33%*	5.10%*	51*	12.5	51	X	47	3340					
63770		61.8	63.8		2.0	295	2425*	2.01%*	14*	8.95	790	X	159	317					
771		64.8	65.8		1.0	250	2475*	2.83%*	17*	4.00	6600	X	50	340					
772		65.8	68.35		2.55	245	3850*	0.54%*	26*	6.95	3000	X	231	441					
773		68.35	69.6		1.25	465	4300*	0.38%*	34*	12.0	1.70%	0.10	445	1320					
774		70.0	73.6		3.0	160	1800	2650	5.0	9.10	180	X	87	21					
775		81.6	82.6		1.0	85	3500	7050	10.5	6.10	79	X	28	270					
776		100.6	101.6		1.0	140	975*	2.14%*	7.5	9.90	7000	0.040	57	363					
777		101.6	104.4		2.8	110	3225*	0.37%*	14*	6.40	76	X	21	192					
778		105.9	107.1		1.2	90	350*	2.62%*	4.5	9.35	77	X	16	1220					
779		109.1	110.3		1.2	740	4225*	4.17%*	40*	12.5	1500	X	53	1530					
63780		161.9	163.0		1.1	70	60	235	X	5.55	32	X	10	X					
781		163.0	166.0		3.0	65	40	90	X	4.45	41	X	16	X					
782		166.0	169.0		3.0	65	220	410	1.5	5.55	61	X	22	19					
783		169.0	172.0		3.0	70	1950	2700	6.0	8.30	130	X	15	34					
784		172.0	175.0		3.0	115	215	4150	0.5	6.95	79	X	11	253					
785		175.0	178.0		3.0	65	360	1050	0.5	6.35	70	X	11	51					
786		178.0	181.0		3.0	95	85	75	X	4.90	17	X	8	X					
787		181.0	184.0		3.0	165	60	95	X	5.95	39	X	9	X					
788		209.7	211.0		3.0	100	55	80	X	6.60	22	X	6	X					
789		211.0	214.0		3.0	90	45	150	X	6.45	16	X	X	3					
63790		214.0	217.0		3.0	100	35	100	X	5.45	5	X	X	X					
791		217.0	220.0		3.0	70	35	105	X	6.45	5	X	X	X					
792		220.0	223.0		3.0	70	35	80	X	6.10	2	X	X	X					
793		223.0	226.0		3.0	120	45	75	X	5.50	20	X	X	X					
794		226.0	229.0		3.0	75	50	75	X	4.85	18	X	X	X					
795		229.0	232.0		3.0	80	45	75	X	4.20	12	X	X	X					
796		232.0	235.0		3.0	95	60	70	X	4.10	19	X	X	X					
797		235.0	238.0		3.0	70	70	90	X	4.70	17	X	3	X					
798		238.0	241.0		3.0	60	65	65	X	5.25	21	X	7	X					

* Reassayed by method 404 (XRF with qtz dilution) due to heavy matrix.

A 18624

APPENDIX 5.

SIROTEM II Plots for MZP 244 and 245a.



McSKIMMING GEOPHYSICAL SERVICES

SIROTEM SURVEY

CLIENT E.Z.

AREA MONTEZUMA

LINE Nº MZP 244 loop 1

LOOP CONFIG. DOWNHOLE

LOOP DIMENSION 200 m

STATION INTERVAL 5 m

STACKS 512

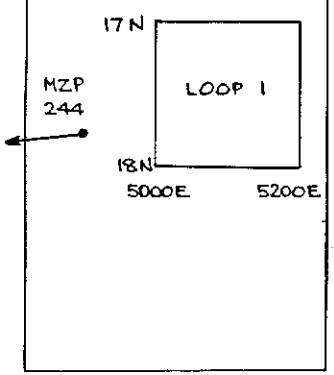
SFERICS OFF

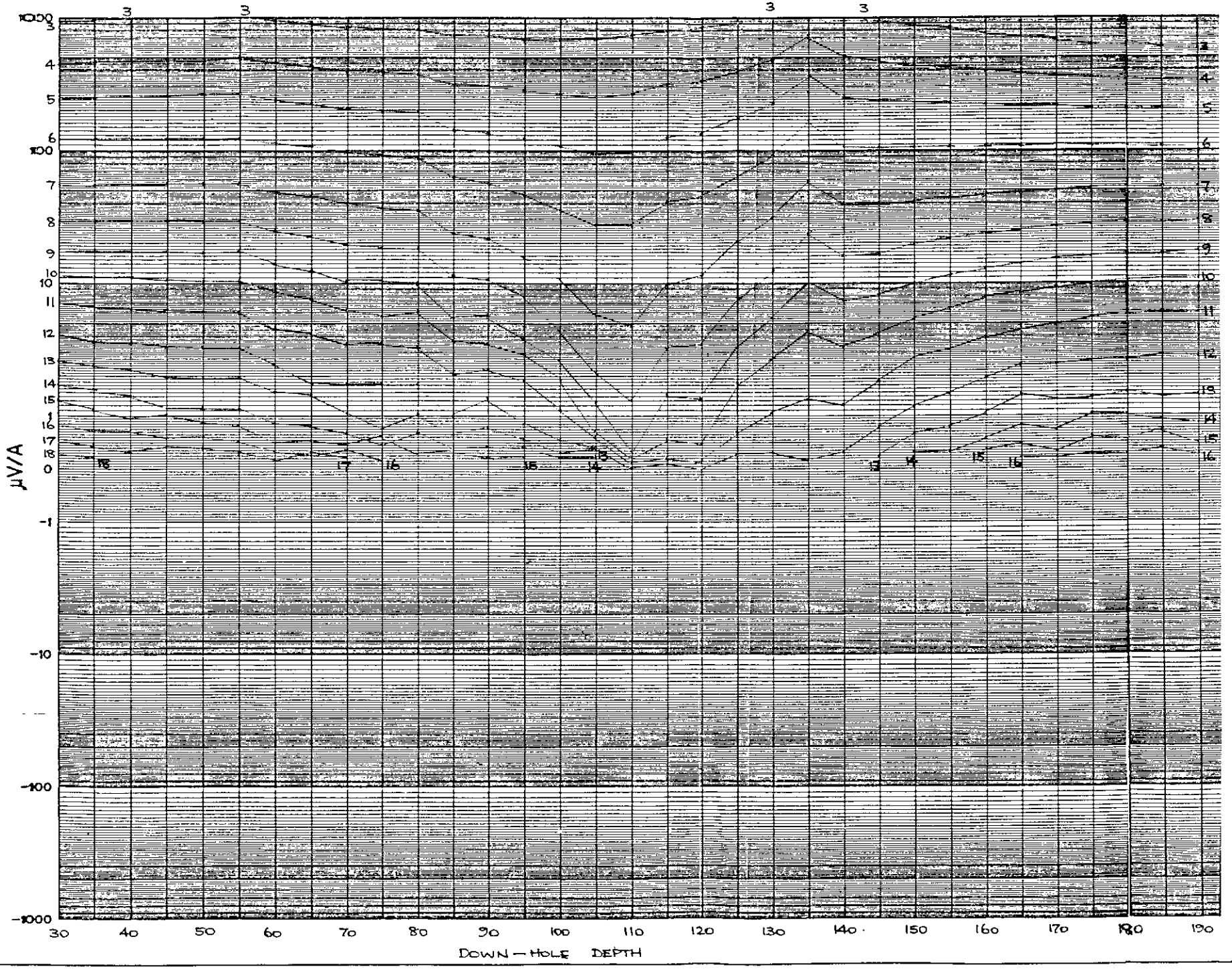
INST. SERIAL Nº 1236

OPERATOR P. McSKIMMING

DATE 31-5-84

LOOP DIAGRAMS ETC.





McSKIMMING GEOPHYSICAL SERVICES

SIROTEM SURVEY

CLIENT E.Z.

AREA MONTEZUMA

LINE Nº MZP 245a
Loo

LOOP CONFIG. DOWN HOLE

LOOP DIMENSION 200m

STATION INTERVAL 5m

STACKS 512

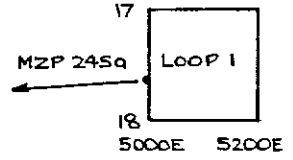
SFERICS OFF

INST. SERIAL Nº 1236

OPERATOR P. McSKIMMIN

DATE 31-5-84

LOOP DIAGRAMS ETC.



116030

APPENDIX 6.

Mine Dump Analytical Data.

MINE DUMP

ANALYTICAL DATA

Sample No.	Cu	Pb	Zn	Ag	As	Au	Area
47297	2800	850	19.0%	100	4.20%	0.66	Curtin Davis Consols
47298	1400	2050	1550	145	13.0%	0.89	
47299	2200	1350	3650	335	11.0%	0.67	
47300	4300	890	2100	425	2.05%	0.27	
48902	340	385	120	12.0	14.5%	0.05	No. 1 Curtin Davis
48903	100	440	2450	8.0	1700	0.09	
48904	1500	6.13%	125	394	21.5%	3.05	Jamesonite vein MZP 244 area
48905	1.68%	15.3%	225	271	12.5%	2.61	
48906	2375	9.93%	425	131	10.5%	0.63	
48907	2700	11.5%	350	170	6.20%	0.56	
48908	0.72%	42.3%	7.06%	1330	600	0.07	Evenden Adit dump
48909	1.46%	45.8%	6.60%	1360	500	0.04	
48910	365	4350	2450	320	1200	0.11	

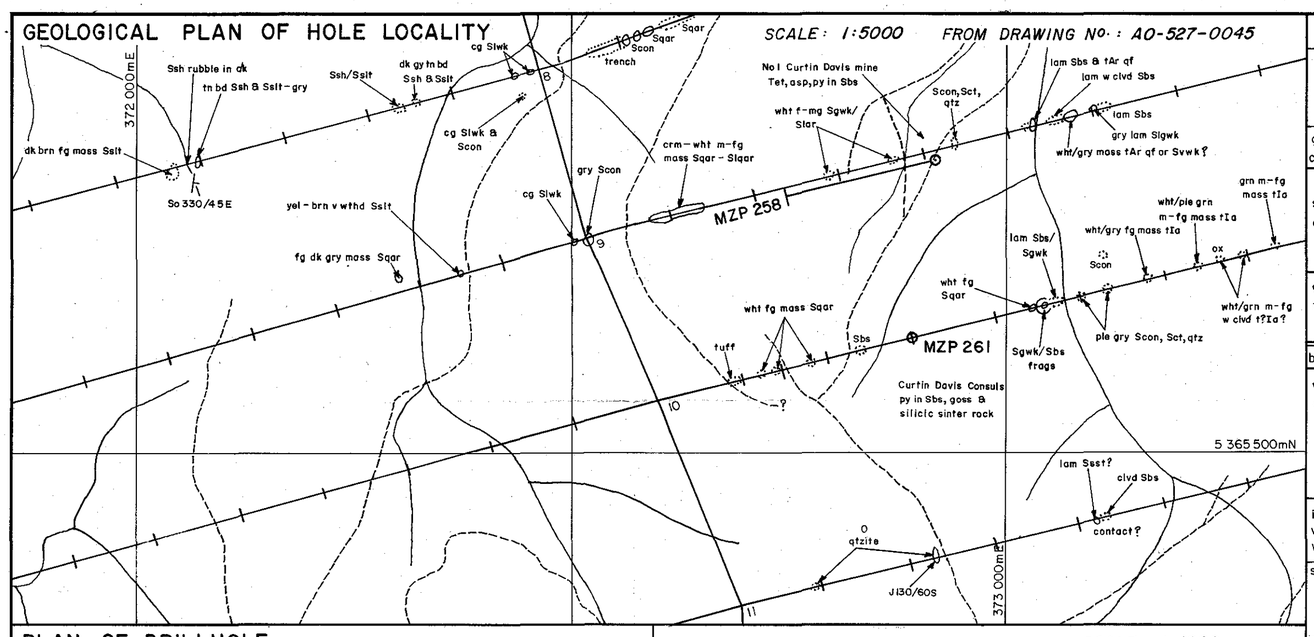
Results in ppm, unless indicated otherwise.

METHODS: Cu, Pb, Zn, Ag, As - A.A.S.
Au - Fire Assay Fusion/A.A.S.

032

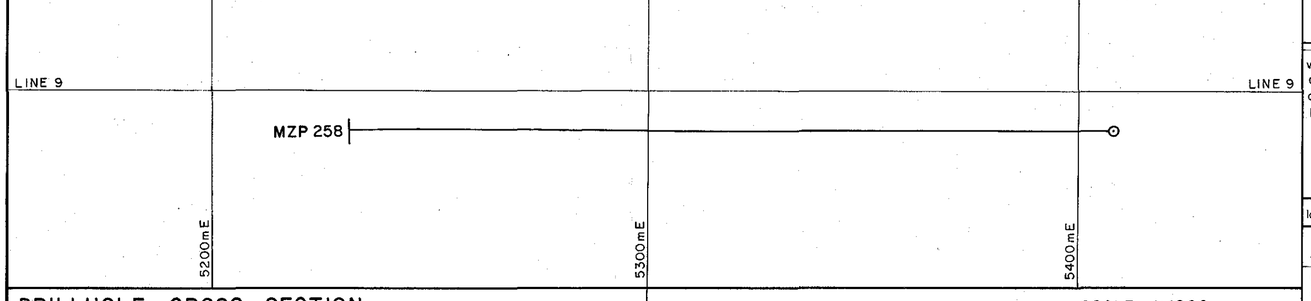
GEOLOGICAL PLAN OF HOLE LOCALITY

SCALE: 1:5000 FROM DRAWING NO.: AO-527-0045



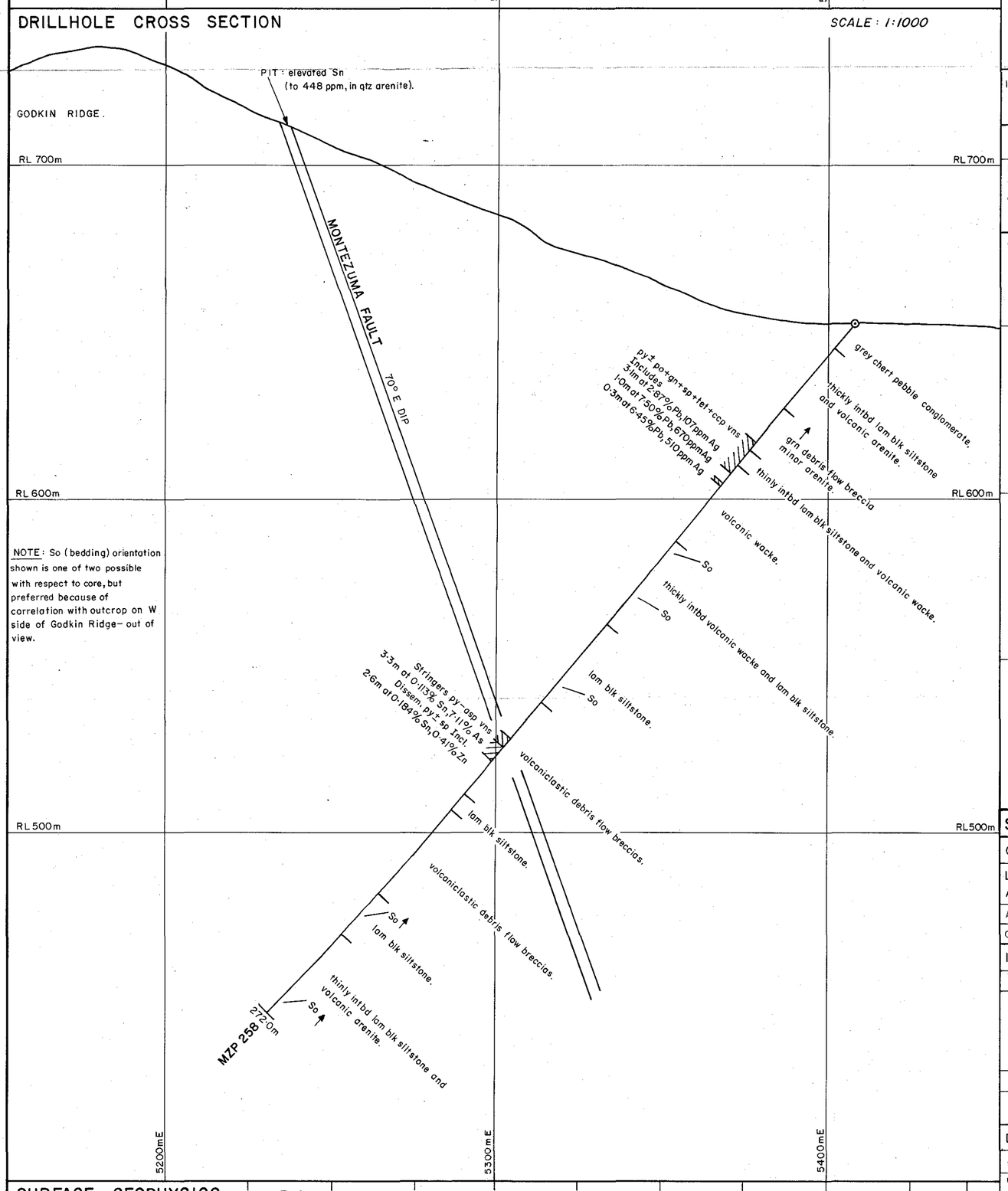
PLAN OF DRILLHOLE

SCALE: 1:1000



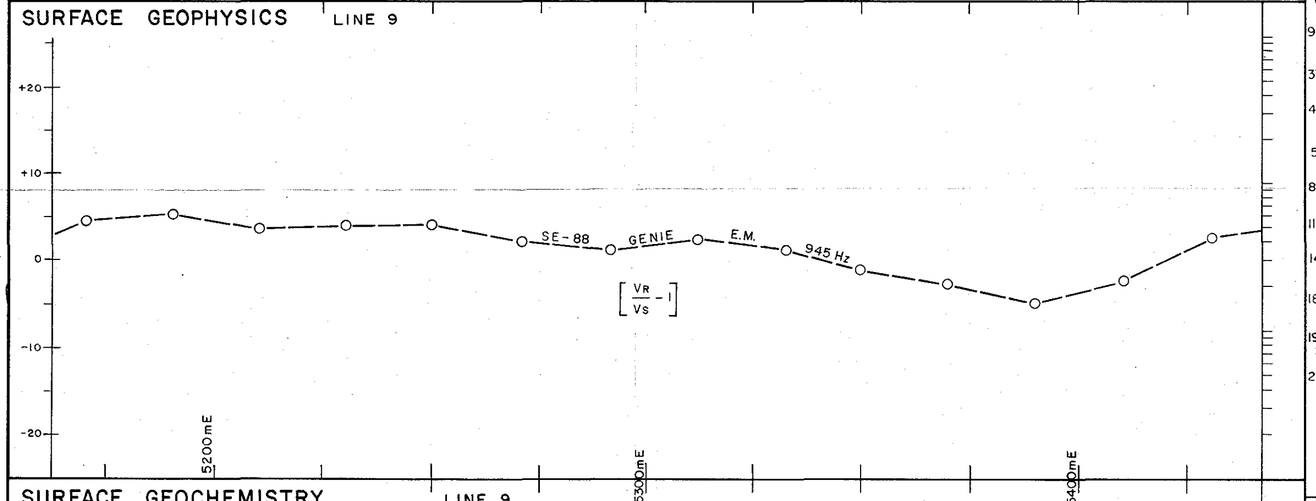
DRILLHOLE CROSS SECTION

SCALE: 1:1000

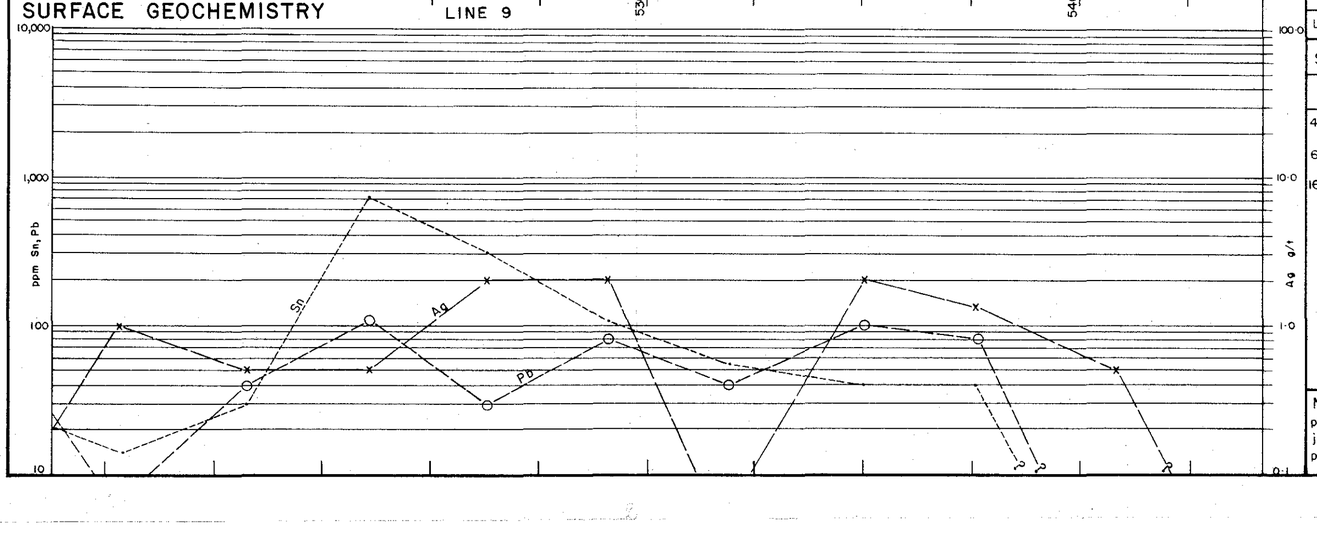


NOTE: So (bedding) orientation shown is one of two possible with respect to core, but preferred because of correlation with outcrop on W side of Godkin Ridge - out of view.

SURFACE GEOPHYSICS LINE 9



SURFACE GEOCHEMISTRY LINE 9



DOWN HOLE INFORMATION

Lithology	Mineral'n	Depth (m)
gry pebble conglomerate		0
intbd black siltstone & arenite.		
grn debris flow breccia	py± po+gn+sp +tet+ccp	50
blk sslt+wacke.		
volcanic arenite.		
intbd volcanic wacke + blk siltstone.		100
lam. blk. siltstone.		
volcani-clastic debris flow breccias.	FAULT: strong py+asp; weaker bleb py±sp	150
lam blk slt.		
volcani-clastic debris flow breccias.		200
lam blk sslt.		
intbd lam blk sslt and volcanic arenite.		250
272·0 T.D.		
		300
		350
		400

GEOCHEMISTRY

Only the mineralised intervals were assayed.

	Pb	Zn	Ag	Fe	Sn
46·5-49·6 = 3·1m at	2·87%	1·12%	107 ppm	18·0%	52 ppm
49·6-50·6 = 1·0m at	7·50%	1·95%	670 ppm	34·5%	93 ppm
50·6-53·2 = 2·6m at	1·15%	0·30%	36·5 ppm	12·0%	52 ppm
53·2-53·5 = 0·3m at	6·45%	0·21%	510 ppm	43·5%	115 ppm
53·5-55·5 = 2·0m at	1·10%	0·14%	38·5 ppm	13·5%	23 ppm
55·5-58·6 = 3·1m at	1·30%	1·65%	35·0 ppm	16·5%	225 ppm
62·3-63·1 = 0·8m at	720 ppm	1·30%	12·0 ppm	36·5%	62 ppm

	Sn	As	Ag	Zn	Fe
162·45-165·75 = 3·3m at	0·113%	7·11%	26·9 ppm	1·17%	17·7%
165·75-167·4 = 1·65m at	87 ppm	200 ppm	2·5 ppm	550 ppm	2·45%
167·4-170·0 = 2·6m at	0·184%	140 ppm	4·0 ppm	0·41%	11·0%
170·0-171·5 = 1·5m at	108 ppm	20 ppm	3·5 ppm	0·80%	8·4%

GEOPHYSICS

No downhole geophysics has been undertaken.

Pb ——— Zn - - - - - - - Cu —·—·—·— Mn —··—··— Fe

Resistivity ------
Chargeability ———
Magnetic Susceptibility ·····

SUMMARY OF COMPLETED HOLE

CO-ORDINATES	NORTHING	EASTING	R.L.
LOCAL GRID	1226 (L9)	5408	
A.M.G.	5 365 836	372 918	653 m

AZIMUTH: 256° A.M.G. DIP: 50° TOTAL DEPTH: 272·0 m

COMMENCEMENT DATE: 17-4-'84 COMPLETION DATE: 4-5-'84

INTERNAL SURVEY INFORMATION

DEPTH	AZIMUTH	DIP	DEPTH	AZIMUTH	DIP
0m	256°	50°	230 m	256°	47·75°
80m	256°	50·5°	269m	255°	45·5°
140m	255·5°	50°			
185m	256·5°	49·5			

HOLE SIZE	FROM	TO	HOLE SIZE	FROM	TO
HQ	0	1·0	BQ	39·0	272·0
NQ	1·0	39·0			

DRILLED GEOLOGY (SUMMARISED)

DEPTH	LITHOLOGY
0-9·6m	Grey chert pebble conglomerate.
9·6-33·3m	Thickly intbd lam blk siltstone and mg volcanic arenite.
33·3-49·5	Green debris flow sed. breccia, minor volcanic arenite.
49·5-55·2m	Thinly intbd lam blk siltstone and volcanic wacke.
55·2-85·0m	Volcanic wacke.
85·0-117·45m	Intbd volcanic wacke and blk siltstone.
117·45-148·2m	Laminated blk siltstone.
148·2-184·0m	Volcaniclastic debris flow breccias.
184·0-190·4m	Laminated blk siltstone.
190·4-223·25m	Volcaniclastic debris flow breccias.
223·25-272·0m	Intbd lam blk siltstone and volcanic arenite.

DEPTH	MINERALISATION AND SIGNIFICANT ASSAYS
46·5-58·6m and 62·3-63·1m	Py±po+gn+sp+tet+ccp veins 0·3-1·0m wide with weak stringer intervals Includes 3·1m at 2·87% Pb, 1·12% Zn, 107 ppm Ag 1·0m at 7·50% Pb, 1·95% Zn, 670 ppm Ag, 34·5% Fe 0·3m at 6·45% Pb, 510 ppm Ag.
162·45-165·75m	Montezuma Fault: strong py-asp stringer veining 3·3m at 1130 ppm Sn, 7·11% As 1·17% Zn, 17·7% Fe, 26·9 ppm Ag.
165·75-171·5m	Diss. replacement py±sp in flanking arenite. Includes 2·6m at 1840 ppm Sn, 0·41% Zn, 11·0% Fe.

LOGGED BY: Rod Sainty. DATE: May/October 1984

SAMPLE DATA

SAMPLED INTERVAL	SAMPLE NUMBERS	SAMPLE TYPE	ELEMENTS DETERMINED	LAB. METHOD
46·5-58·6	47283-288	split	Cu, Pb, Zn, Ag, Fe, As.	AAS
62·3-63·1	47289		Sn, Sb.	XRF
162·45-171·5	47290-296		Au.	fire ass./AAS
162·8 163·45 164·45 169·0	53532 53533 53534 53535	split	mineragraphic desciption CMS 84/5/27.	polished section.

NOTES: Fault breccia mineralisation consists of tourmaline-qtz-sulphide. Sulphide phases are arsenopyrite ± py after pyrrhotite, py-qtz ± cassiterite, and sp ± jamesonite. Disseminated 'replacement' sulphide is fine clots of py and sp (with Sn), pervading the arenite matrix.

SPECIFICATIONS OF PROPOSED HOLE

CO-ORDINATES	NORTHING	EASTING	R.L.
LOCAL GRID	1226 (L9)	5408	
A.M.G.			

AZIMUTH: 256° A.M.G. DIP: 50° DESIGNED DEPTH: 300m max.

ESTIMATED COMMENCEMENT: APRIL, 1984

ANTICIPATED GEOLOGY

DEPTH	LITHOLOGY	DEPTH	NATURE OF TARGET AND ANTICIPATED DEPTH
0-300m	Dundas Group Sediments: black shales, tuffaceous sandstones and wackes; carbonate units possible.	~160m	Semi-massive pyrite ∓ pyrrhotite within Montezuma Fault, (And carbonate replacement?). Depth estimate of 160m based on expected 70°E dip on Montezuma Fault, as indicated by MZP-245a, 1·9km to the South. The hole was designed to provide a wide, deep section in order to - 1. Test below the depth (?80m) tested by GENIE-E.M. 2. Test for carbonate units which could intersect the Fault at a deeper level.

DESIGNED BY: Rod Sainty. DATE: MARCH, 1984

AIM OF HOLE:
To test a soil and bedrock Sn anomaly on the Montezuma Fault for either carbonate-hosted or structurally-located Sn mineralisation.

NOTES: Hole collar was located so hole might also intersect the S.E. dipping fahlore lode of the No.1 Curtin Davis Mine, located 50m to the North.

RESULTS: Hole intersected a narrow zone of strong py-asp veining within the Montezuma Fault, on a 70°E dip from surface. Minor disseminated replacement py with equivalent grade Sn in adjacent arenite. Minor Pb-Ag rich sulphide higher in hole.

8E-2456

ELECTROLYTIC ZINC CO. OF A'ASIA LTD.

PROJECT: MONTEZUMA J.V. TAS.

SPECIFICATIONS AND SUMMARY OF RESULTS

116033

EXPLORATION DIAMOND DRILL HOLE No. MZP-258

5 cm

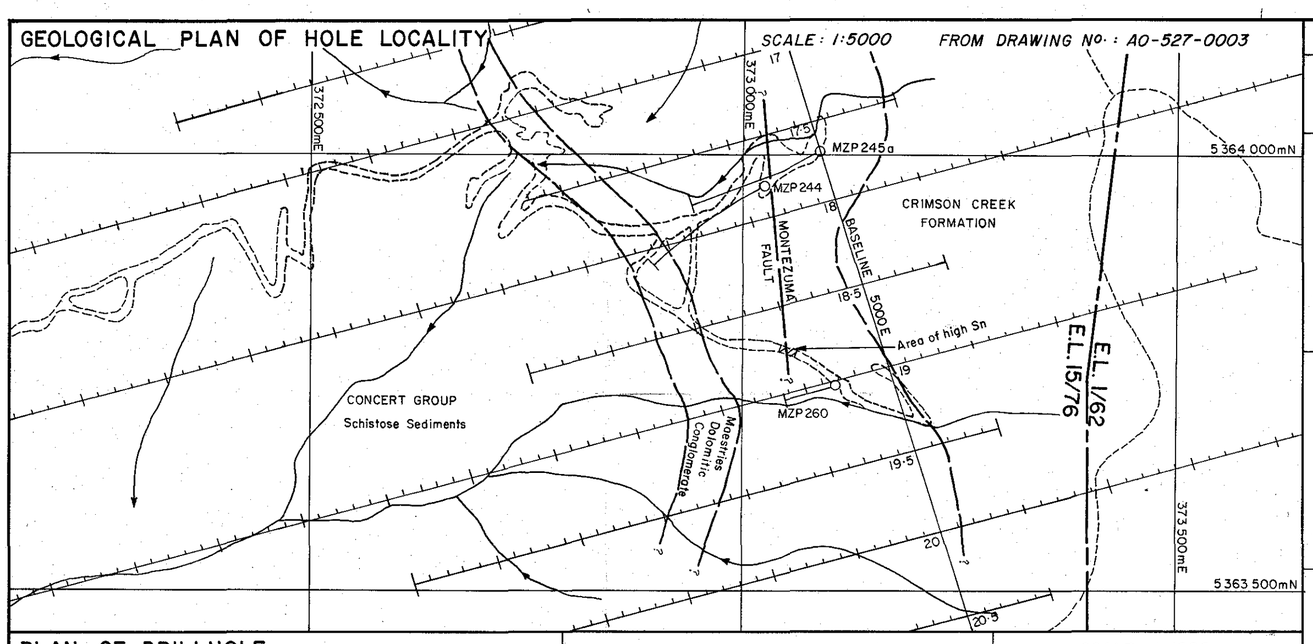
032

SCALE: As shown	Survey: R.A.S.	Revised:
Reference:	Date: 5-5-'84	REF. No. AI-527-0047
Drawn: R.J.R.	Checked:	

033

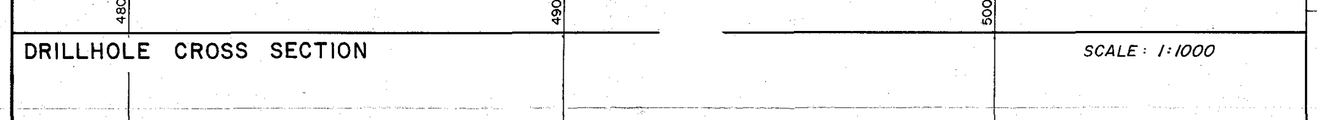
GEOLOGICAL PLAN OF HOLE LOCALITY

SCALE : 1:5000 FROM DRAWING No. : AO-527-0003



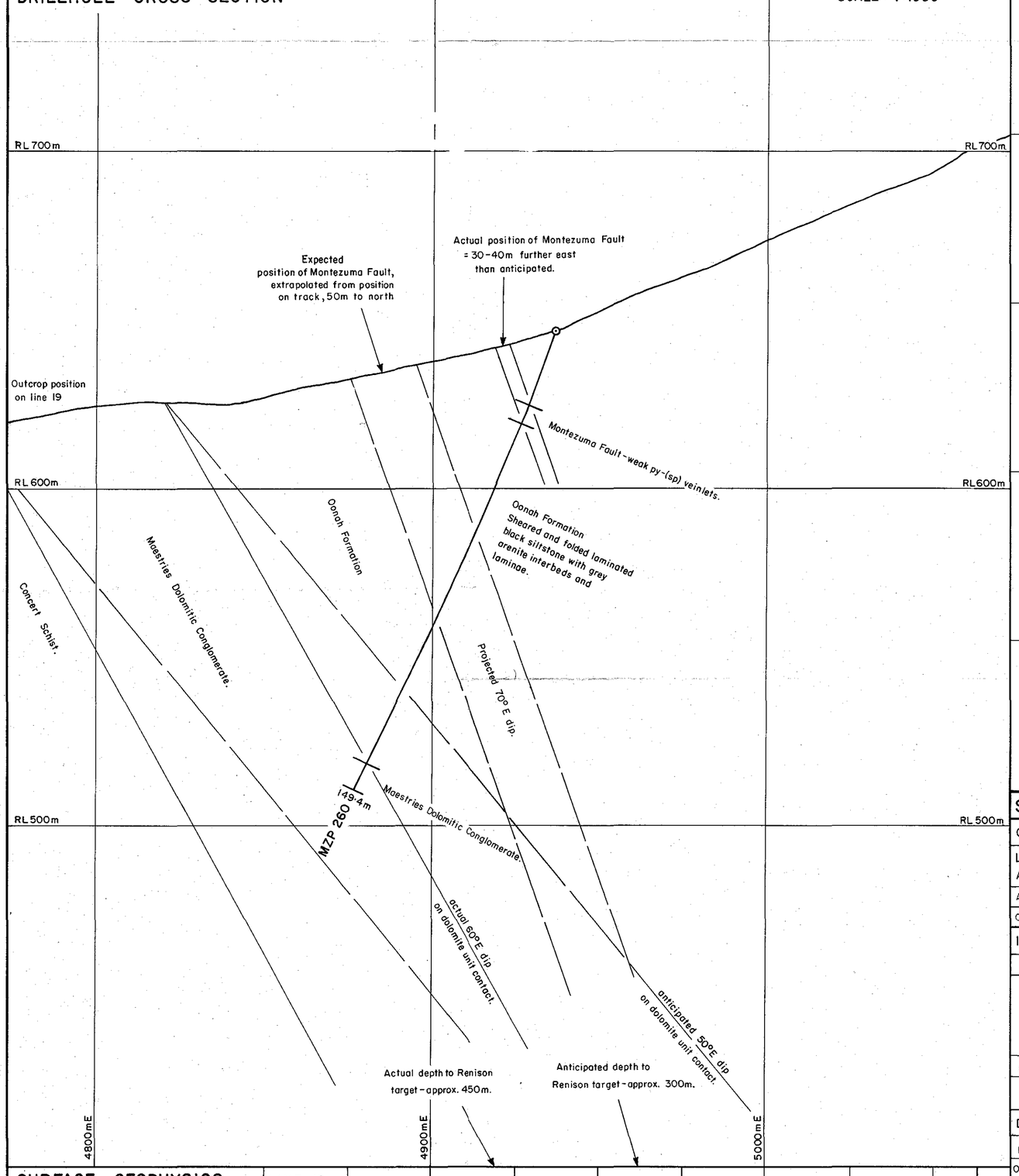
PLAN OF DRILLHOLE

SCALE : 1:1000

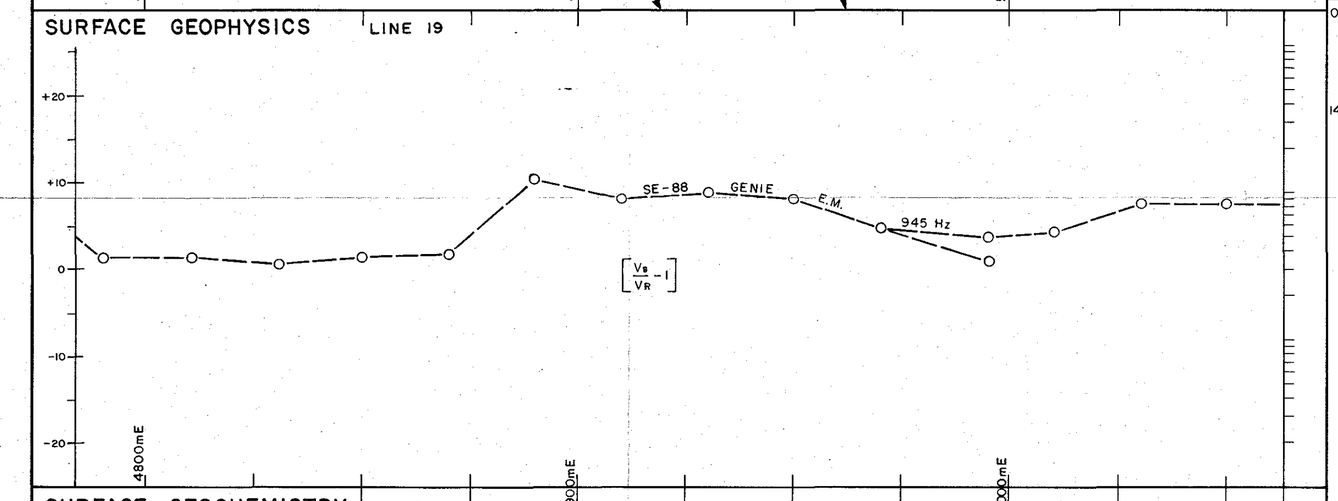


DRILLHOLE CROSS SECTION

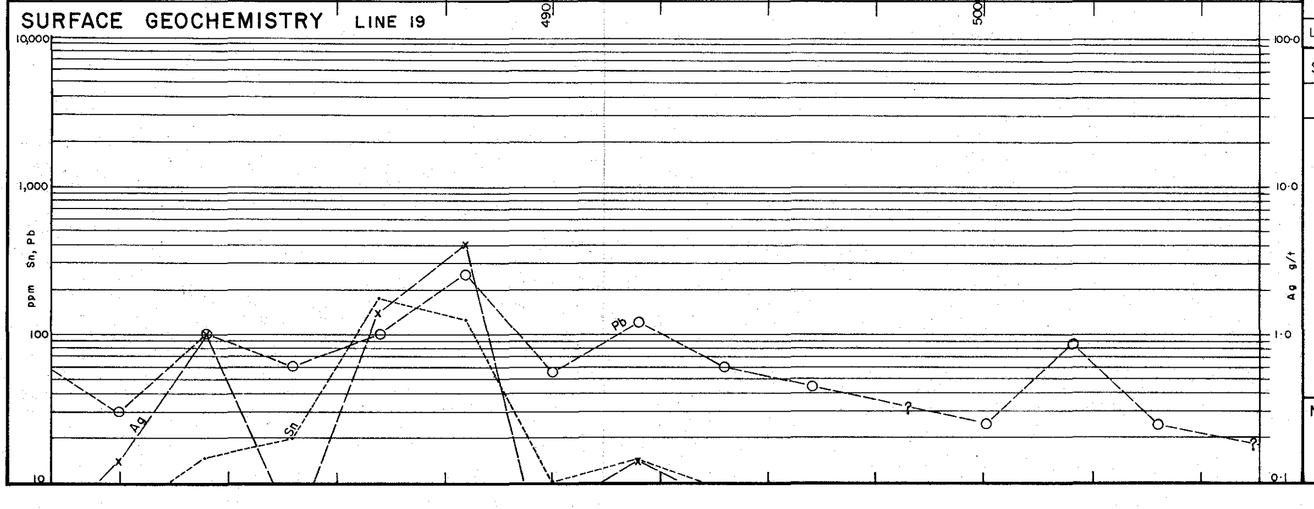
SCALE : 1:1000



SURFACE GEOPHYSICS LINE 19



SURFACE GEOCHEMISTRY LINE 19



DOWN HOLE INFORMATION

Lithology	Mineral'n	Depth (m)	GEOCHEMISTRY	GEOPHYSICS
		0	No downhole assays undertaken in this hole.	No downhole geophysics undertaken in this hole.
		50		
		100		
		150		
		200		
		250		
		300		
		350		
		400		

Pb — Zn — Cu
Mn — Fe
Resistivity
Chargeability
Magnetic Susceptibility

SUMMARY OF COMPLETED HOLE

CO-ORDINATES	NORTHING	EASTING	R.L.
LOCAL GRID	3228	4937	
A.M.G.	5 363 732	373 120	645 m

AZIMUTH: 256° A.M.G. DIP: 70° TOTAL DEPTH: 149·4m

COMMENCEMENT DATE: 27-4-'84 COMPLETION DATE: 2-5-'84

INTERNAL SURVEY INFORMATION

DEPTH	AZIMUTH	DIP	DEPTH	AZIMUTH	DIP
0m	256°	70°	149 m	256°	64°
50m	254°	67°			
80m	255°	65·5°			
119m	256°	64°			

HOLE SIZE	FROM	TO	HOLE SIZE	FROM	TO
HQ	0	6·0m	BQ	27·0	149·4m
NQ	6·0	27·0m			

DRILLED GEOLOGY (SUMMARISED)

DEPTH	LITHOLOGY	DEPTH	MINERALISATION AND SIGNIFICANT ASSAYS
0-140·8m	OONAH FORMATION - sheared and folded laminated black siltstone with grey arenite interbeds and laminae.	23·7-29·6m	Weak, thin py-(sp) veinlets and tension gash infill.
140·8-149·4m	MAESTRIES DOLOMITIC CONGLOMERATE: recrystallised dolomite matrix-supported pebble conglomerate with intraformational quartzitic arenite.		

LOGGED BY: R.A. Sainty. DATE: May, 1984.

SAMPLE DATA

SAMPLED INTERVAL	SAMPLE NUMBERS	SAMPLE TYPE	ELEMENTS DETERMINED	LAB. METHOD
Not sampled.				

NOTES:

SPECIFICATIONS OF PROPOSED HOLE

CO-ORDINATES	NORTHING	EASTING	R.L.
LOCAL GRID	3228	4937	
A.M.G.			

AZIMUTH: 256° A.M.G. DIP: 70° DESIGNED DEPTH: 140m max.

ESTIMATED COMMENCEMENT: April, 1984.

ANTICIPATED GEOLOGY

DEPTH	LITHOLOGY	DEPTH	NATURE OF TARGET AND ANTICIPATED DEPTH
0-	OONAH FORMATION.		
120-130m	Sheared and folded black siltstone and quartzite.	60-90m	Montezuma Fault - strong thin irregular py veinlets.
120-130m	Maestries Dolomitic Conglomerate: recrystollised dolomite matrix-supported pebble conglomerate.	120-130m	Upper contact of the Maestries Dolomitic Conglomerate.

DESIGNED BY: Rod Sainty. DATE: March, 1984.

AIM OF HOLE: A short targeting hole to locate the down-dip positions of the Montezuma Fault and top contact of the Maestries Dolomitic Conglomerate prior to the planned deep drilling of the fault-dolomite intersection. Anticipated Renison target depth is 300m at line 19, compared to 500m + on MZP 245a section.

NOTES: This hole discouraged the drilling of a deep hole on line 19 because the Montezuma Fault (the zone of pyrite veining) was

1. of greatly reduced intensity and width(=reduced fluid activity) compared to the MZP 245a section, 250m to the north,
2. intersected 30-40m further east than anticipated, and the dolomite unit has a 60°E, not 50°E dip. Therefore the down-dip intersection will be deeper (400-450m), comparable to the MZP 245a section.

85-2456

ELECTROLYTIC ZINC CO. OF A'ASIA LTD.

PROJECT: MONTEZUMA J.V. TAS.

SPECIFICATIONS AND SUMMARY OF RESULTS

116034

EXPLORATION DIAMOND DRILL HOLE No. MZP 260

5 cm

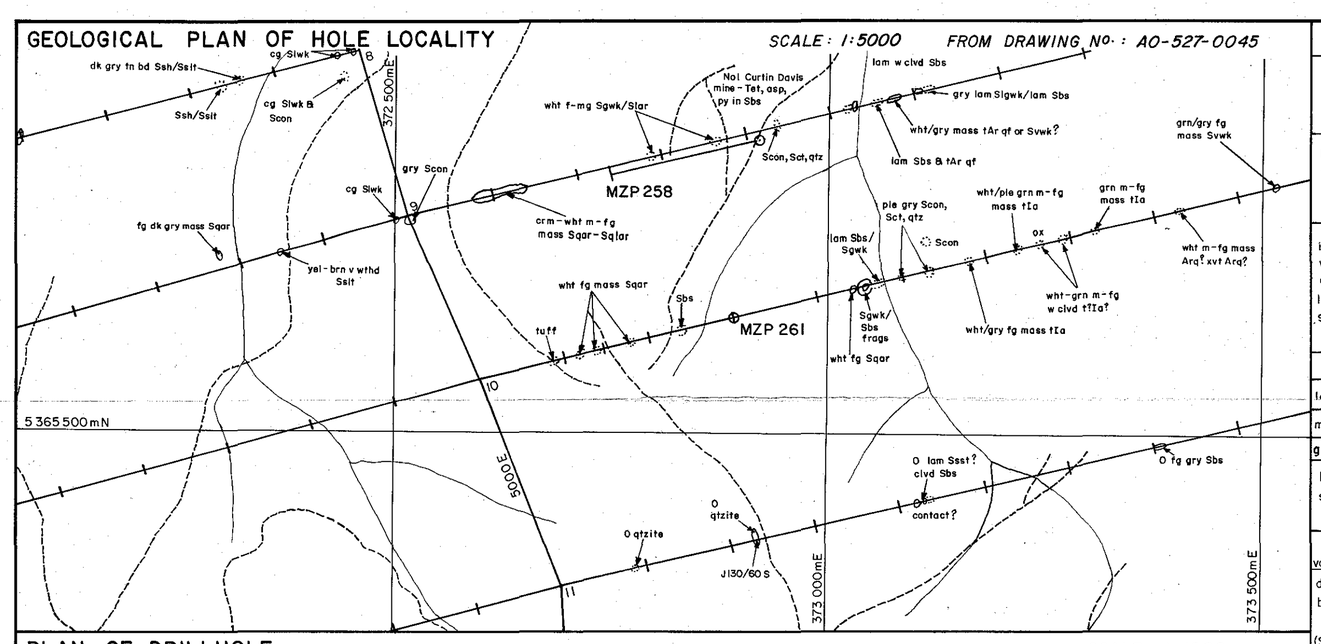
033

SCALE: As shown	Survey: R.A.S.	Revised:
Reference:	Date: 5-5-'84	REF. No.
Drawn: R.J.R.	Checked:	AI-527-0048

034

GEOLOGICAL PLAN OF HOLE LOCALITY

SCALE: 1:5000 FROM DRAWING NO.: AO-527-0045



PLAN OF DRILLHOLE

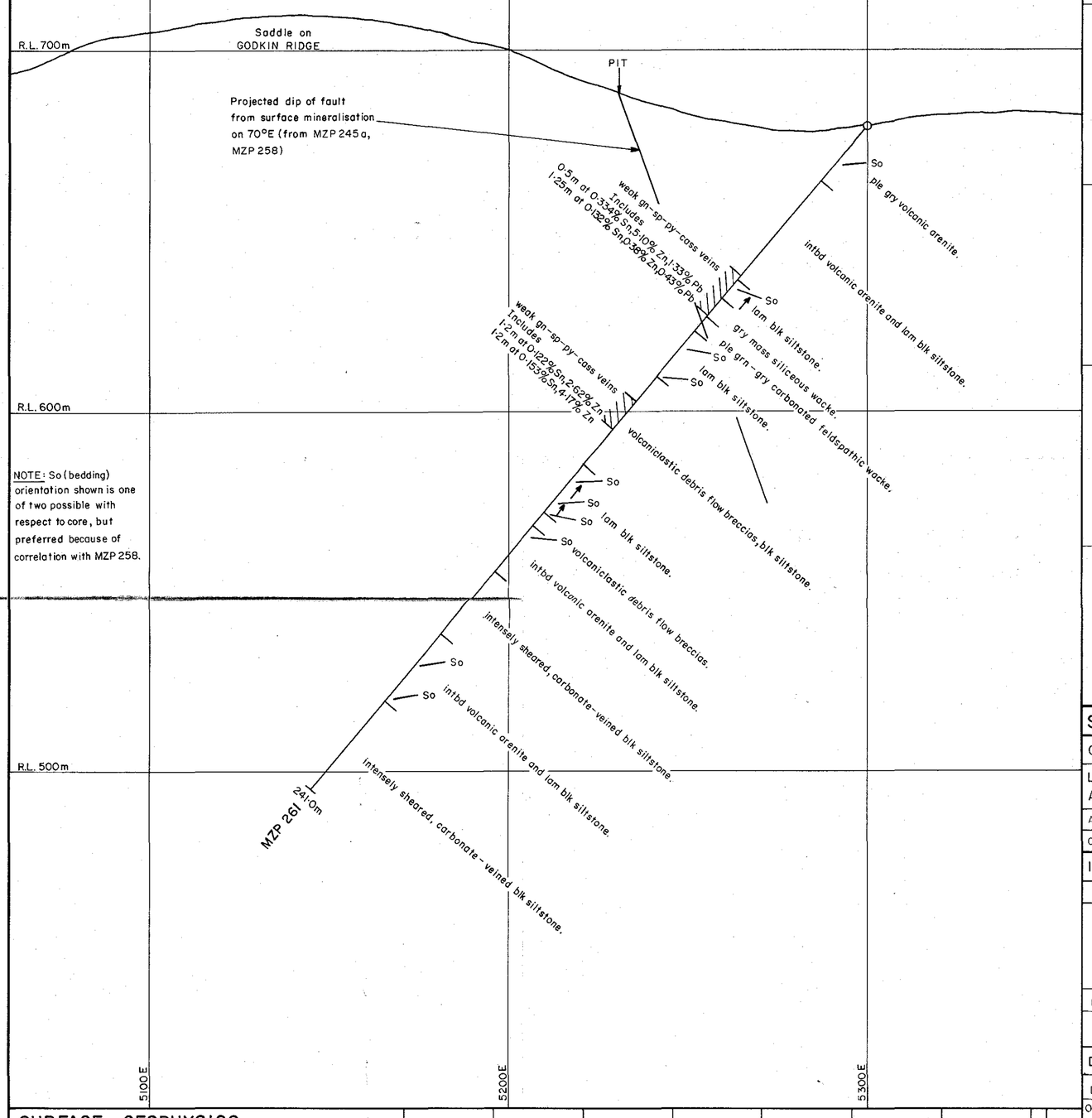
SCALE: 1:1000

DRILLHOLE CROSS SECTION LINE 10

SCALE: 1:1000

PIT ASSAYS included

Sn ppm	Ag ppm	Zn %	As %
1310	232	11·26	5·95
1170	158	10·37	2·30
738	430	18·80	3·70



SURFACE GEOPHYSICS

SURFACE GEOCHEMISTRY

DOWN HOLE INFORMATION

Lithology	Mineral'n	Depth (m)
ple gry volcanic arenite.		0
intbd volcanic arenite and lam blk siltstone.	weak py vns.	
		50
lam blk sslt.	weak veining gn-sp-py-cass.	
mass sil wacke.		
grn carb wacke		
lam blk siltstone.		
volcaniclastic		100
debris flow breccias.	weak veining gn-sp-py-cass	
(Silt-matrixed in part).		
lam blk siltstone.		
volc af breccias		150
intbd volcanic arenite and lam blk siltstone.		
intensely sheared, carbonate-veined blk siltstone.	carbonate-veined very minor py.	
intbd volcanic arenite and lam blk siltstone.		200
intensely sheared, carbonate-veined blk. siltstone.	carbonate-veined very minor py.	
T.D. 241·0 m		250
		300
		350
		400

GEOCHEMISTRY

Only visibly mineralised and carbonate-veined intervals were assayed.

GEOPHYSICS

No downhole geophysics has been undertaken.

Sn Zn As

Resistivity
Chargeability
Magnetic Susceptibility

SUMMARY OF COMPLETED HOLE

CO-ORDINATES	NORTHING	EASTING	R.L.
LOCAL GRID	LINE 10	5300 E	679m
A.M.G.	5,365,630	373,890	

AZIMUTH: 256° AMG DIP: 50° TOTAL DEPTH: 241·0m

COMMENCEMENT DATE: 8-5-'84 COMPLETION DATE: 31-5-'84

INTERNAL SURVEY INFORMATION

DEPTH	AZIMUTH	DIP	DEPTH	AZIMUTH	DIP
Surveys unsuccessful due to camera timing fault. Hole path assumed to be straight. (Validity of this assumption demonstrated by MZP 258 path).					

HOLE SIZE	FROM	TO	HOLE SIZE	FROM	TO
HQ	0	3·0	BQ	27·5	241·0
NQ	3·0	27·5			

DRILLED GEOLOGY (SUMMARISED)

DEPTH	LITHOLOGY	DEPTH	MINERALISATION AND SIGNIFICANT ASSAYS
0-2·5m	No core (tricone).		
2·5-20·4m	Ple gry volcanic arenite.		
20·4-56·4m	Intbd volcanic arenite and laminated black siltstone.	55·0-69·6m	Sporadic thin veinlets of gn-sp-(tour-cass). Includes: 0·5m at 0·334% Sn, 1·33% Pb, 5·10% Zn, 51ppm Ag. 1·25m at 0·132% Sn, 0·43% Pb, 0·38% Zn, 34 ppm Ag.
56·4-63·25m	Laminated black siltstone.		
63·25-69·8m	Grey, massive, siliceous volcanic wacke.		
69·8-75·1m	Pale green to grey dolomitic feldspathic wacke.		
75·1-91·5m	Laminated black siltstone.		
91·5-123·15m	Volcaniclastic debris flow breccia. Silt-matrixed in part.	100·6-110·3m	Sporadic thin veinlets-as above. Includes: 1·2m at 0·122% Sn, 2·62% Zn. 1·2m at 0·153% Sn, 4·17% Zn, 40 ppm Ag.
123·15-140·3m	Laminated black siltstone.		
140·3-145·2m	Volcaniclastic debris flow breccia.		
145·2-161·85m	Intbd volcanic arenite and laminated black siltstone.		
161·85-185·55m	Intensely sheared, carbonate-veined black siltstone.		
185·55-209·4m	Intbd volcanic arenite and laminated black siltstone.		
209·4-241·0m	Intensly sheared, carbonate-veined black siltstone.		

LOGGED BY: ROD SAINTY DATE: Sept.-Oct. 1984

SAMPLE DATA

SAMPLED INTERVAL	SAMPLE NUMBERS	SAMPLE TYPE	ELEMENTS DETERMINED	LAB. METHOD
20·5-26·5m	63761-	split	Cu, Pb, Zn, Ag, Fe, As.	AAS
33·4-34·0m	63779		Sn, Sb.	XRF
43·9-45·2m			Au.	fire assay/ AAS
55·0-63·8m				
64·8-69·6m				
70·0-73·6m				
81·6-82·6m				
100·6-104·4m				
105·9-107·1m				
109·1-110·3m				
161·9-184·0m	63780-63789	split	as above	as above
214·0-241·0m	63790-63798	split	as above	as above

NOTES:

116035

SPECIFICATIONS OF PROPOSED HOLE

CO-ORDINATES	NORTHING	EASTING	R.L.
LOCAL GRID	LINE 10	5300E	
A.M.G.			

AZIMUTH: 256° AMG DIP: 50° DESIGNED DEPTH: 250m max.

ESTIMATED COMMENCEMENT: May 1984

ANTICIPATED GEOLOGY

DEPTH	LITHOLOGY	DEPTH	NATURE OF TARGET AND ANTICIPATED DEPTH
0-250m	Dundas Group sediments: black shales, tuffaceous arenites and wackes, carbonate units possible.	~70-180m	Semi-massive pyrite ± pyrrhotite within Montezuma Fault (and carbonate replacement?). Depth estimates based on expected 70°E dip of Montezuma Fault, as indicated by MZP 245a, 1·9km to the south. 70m estimate from pit with high Zn-As-Ag-Sn, 180m estimate from upslope end of soil geochem. anomaly.

DESIGNED BY: ROD SAINTY DATE: MARCH 1984

AIM OF HOLE:

To test a soil and bedrock Sn anomaly on the Montezuma Fault for either carbonate-hosted or structurally-located Sn mineralisation.

NOTES: RESULTS:

This hole intersected a broad zone of weak gn-sp-py veining containing intervals of 0·1-0·3% Sn within black siltstone and silt-matrixed sedimentary breccia. Montezuma Fault is ill-defined on this section.

85-2456

ELECTROLYTIC ZINC CO. OF A'ASIA LTD.

PROJECT: MONTEZUMA J.V. TAS.

SPECIFICATIONS AND SUMMARY OF RESULTS

EXPLORATION DIAMOND DRILL HOLE No. MZP 261

5 cm

034

SCALE: As shown	Survey: R.A.S.	Revised:
Reference:	Date: 11-5-'84	REF. No. AI-527-0049
Drawn: R.J.R.	Checked:	