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DEPT. OF MINES				
REF. No. 4708/82				

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Kinnear

ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LIMITED

West Coast Mines

BULGOBAC EXPLORATION LICENCE E.L. 12/72

Progress Report on Activity

1st July, 1981 - 15th December, 1981

OPEN FILE

Geology Department

Report No. 145MD

I.R. McDonald

R.A. Sainty

January, 1982

82-1773

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A2-521-0064	1:50,000	Work Completed 1.7.'81 to 15.12.'81.
Figure 1	1:10,000	Boco Grid Metal Factors

1. INTRODUCTION

This report covers work on Exploration Licence No. 12/72 by Electrolytic Zinc Company of Australasia Limited between 1st July, and 15th December, 1981.

The work was carried out on behalf of a Joint Venture between E.Z. Co. and Getty Oil Development Co. Ltd., which was initiated in April, 1976. A description of the Licence can be found in E.Z. Report No. 128 "Exploration Undertaken in E.L. 12/72 during 1976-77".

2. PREVIOUS EXPLORATION

Details of all previous work on E.L. 12/72 have been reported in E.Z. Geology Department Reports No's 128 (1977), 129 (1978), 130 (1979), 132 (1980) and 137 (1981).

3.0 EXPLORATION UNDERTAKEN 1.7.'81 to 15.12.'81

During this reporting period all activity has been on the Boco Grid which lies in the southern section of the E.L. in the area around Boco Railway Siding.

3.1. Work Completed (Refer to Plan No. A2-521-0064)

3.1.1. Gridding

Cutting of extensions to the Boco Grid were completed with 35.85km being cut on 18 lines.

Pegging of the grid commenced. 19.06km were pegged on 8 lines at 20m slope corrected intervals.

3.1.2. Geophysics

Mitre Geophysics Pty. Ltd., produced an addendum to the review of the Boco Grid Geophysics (see E.Z. Report No. 137 "Progress Report on E.L. 12/72 July, 1980-June, 1981"). Metal factors were calculated for the Boco Grid from the 1976-77 gradient array E.I.P. surveys using the relationship:

$$\text{Metal Factor} = \frac{\text{chargeability}}{\text{resistivity}} \times 1,000$$

3.2. Results Received (Refer to Figure 1 Boco Grid Metal Factors)

The results of the metal factor calculations are presented as contours at a scale of 1:10,000 in Figure 1. The figure shows a number of discrete anomalous zones. The strong responses on the western (i.e. grid west) edge of the grid lines are assumed to be due to black shales. Other zones are clearly influenced by the railway line, if not solely due to it (despite the editing of some data points from several lines where they cross the railway line). The cause of the remaining zones is hopefully sulphide mineralisation, but it is equally valid that chargeable zones within the glacial till cover would also show up as metal factor anomalies.

The potentially interesting metal factor zones (mfz) have been labelled on Fig. 1 A to Z, AA to AC. The order is approximately geographical starting from the northern end of the grid.

Zones 'A', 'E', 'K', 'Q', 'R', 'S' and possibly 'F' and 'T' are thought to be due to black shales, but this must be verified before entirely discounting these zones. The northern end of mfz 'B' is also probably due to black shales, but the southern extension, west of the Murchison Highway is worth verifying. A line between mfz 'C' and mfz 'D' would nearly parallel mfz 'B' and this may be one continuous zone.

The high values at the northern end of mfz 'G' are almost certainly due to the influence of the E.B.R.: this may or may not include the responses on line 14,680N, more than 175m from the railway line. The rest of mfz 'G' is of interest, particularly the arm extending to BBP 209.

Mfz 'H' is almost certainly due to effects from the railway and need not be further investigated. Mfz 'I' is probably a 'spot' high and can be ignored.

Mfz 'J' is outside the lease boundary, however it appears to be on strike with zones mfz 'Y' and 'AC': this would define a zone beyond the coverage of most of the lines. However a steep slope, particularly in resistivity, is common on the edges of gradient array profiles and the three anomalies may be spurious.

Mfz 'L' appears to be due to a chargeable zone within the glacials. Some editing was also done on lines 13,240N and 13,400N near the railway line and a contribution from the E.B.R. to the north-eastern end of mfz 'L' is likely.

Mfz 'M' appears to be one of the most prospective zones on the grid, having maximum value of 12+ units and no other surveys over it. It is however, quite close to the E.B.R. (some editing of values was done on line 13,400N) and the contours defining mfz 'M' are 350m apart at the widest point. Further testing of mfz 'M' would require a method other than I.P., to be certain that the E.B.R. is not contributing any effect. A coincident loop or short loop spacing time domain E.M. system would probably be the best method.

Mfz 'N' is a small, one line anomaly which could be incorporated into a follow-up program for mfz 'M' or 'O'. It is not interesting in isolation.

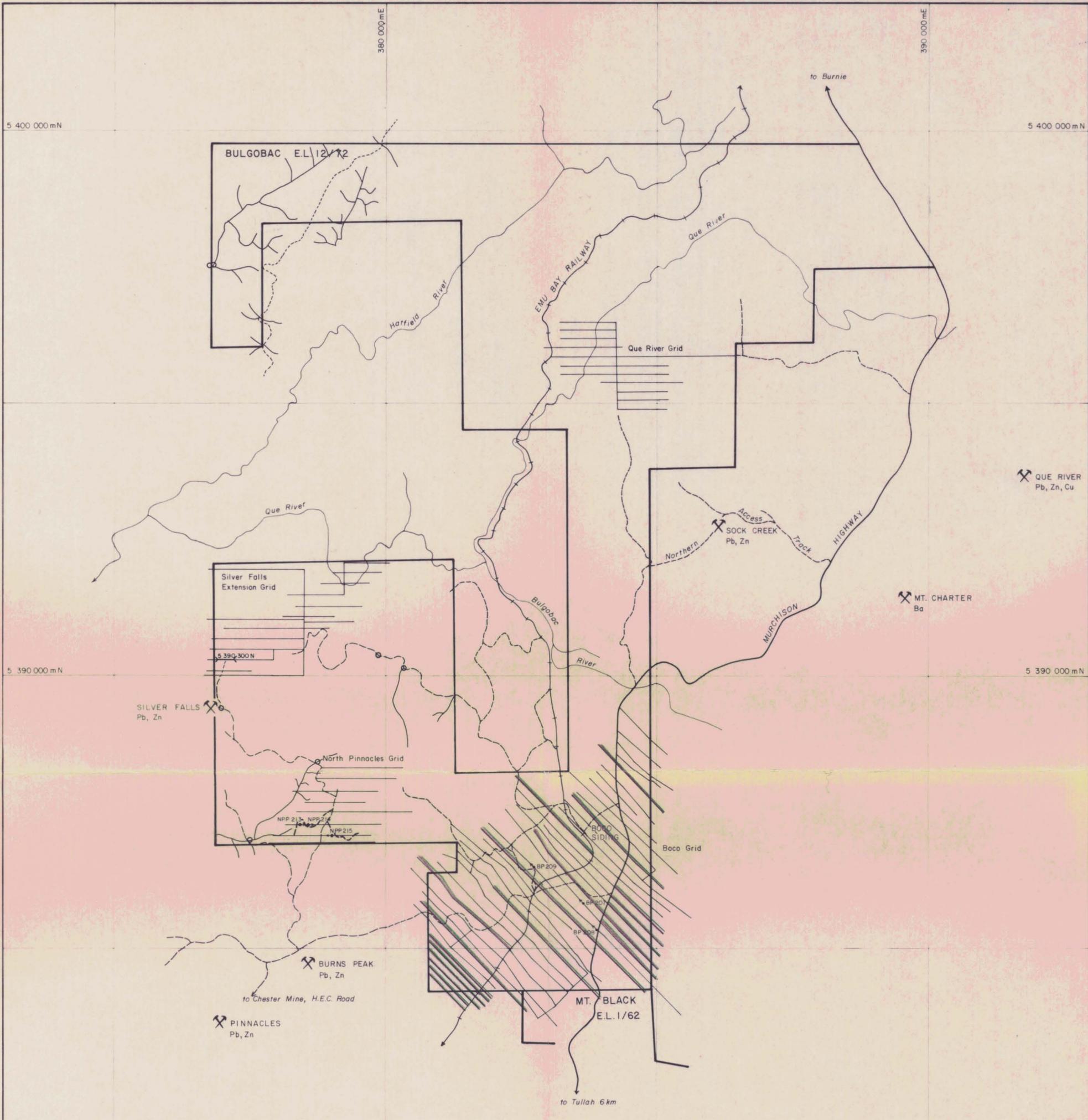
Mfz 'O' is shown as a broad, low to moderate (6+ units) zone, but like mfz 'M', it has been contoured across a gap of 300m. Also an alternative contouring, by breaking the anomaly into a series of small zones, is equally valid. Mfz 'P' would be checked as part of the program for mfz 'O', but its best values have already been tested by DDH B8P 208 which intersected only minor pyritic mineralisation (see E.Z. Report No. 128).

Mfz 'U' and mfz 'V' are high spots within a broad, long, weak zone and they are approximately along strike with mfz 'G', 2kms to the north. Highest value is one spot 10+ within mfz 'U', there is no other information about these zones.

Mfz 'W' strengthens to the south with values of 10+ on line 12,120N.

Mfz 'X' is a small one point survey with room to continue to the north. Of little interest by itself it would be investigated in conjunction with mfz 'Y' to the east. This latter anomaly is mentioned above with 'J' and 'AC' where it was suggested that the three anomalies might define a continuous zone.

Mfz 'Z' is an 8+ anomaly defined on the last (southern most) line of the grid. Mfz 'AA' is also an 8+ anomaly but it extends for 500m to the north and is a more substantial anomaly than 'Z': further work is recommended for this zone. Mfz 'AB' is a 12+ anomaly on the southwestern corner of the grid. Being on the end of a line it is possibly spurious (see comments made above). Mfz 'AC' is also an end of line anomaly, but as mentioned previously it may join up with mfz's 'J' and 'Y' to form a long narrow zone.



LEGEND

○	Heavy mineral panned concentrate
—	Access mapping completed
> <	Costean constructed, sampled & geologically mapped
—	Line I.P. gradient array
—	Line Cut
—	Line Pegged
—	Line Soil Sampled
—	Line Geology Mapped
—	Line I.P. Dipole - dipole
---	Vehicle track constructed
---	Streams geologically mapped and sampled
---	Existing Vehicle Track
—	Road
+	Railway
~	River
—	Existing Grid Line
⌘	Mine, Prospect

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82-1772

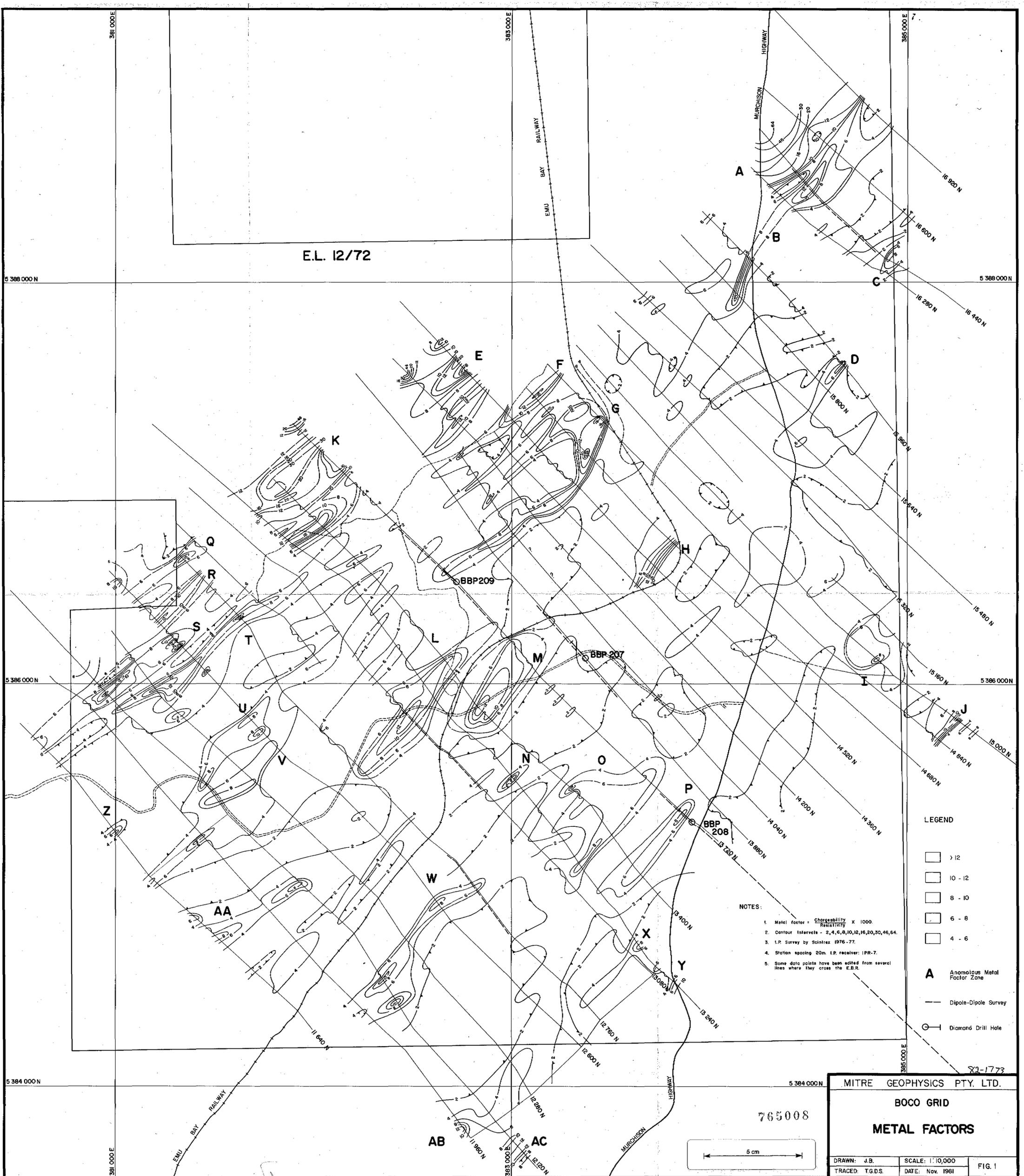
ELECTROLYTIC ZINC CO. OF A'ASIA LTD.

PROJECT: BULGOBAC E.L. 12/72 TAS.

WORK COMPLETED

1/7/1981 - 15/12/1981

SCALE: 1 : 50,000	Survey:	Revised:
Reference:	Date: 26.5.80	REF. No.
Drawn: R.P.T.	Checked:	A2 - 521 - 0064



E.L. 12/72

5 388 000 N

5 388 000 N

5 386 000 N

5 386 000 N

5 384 000 N

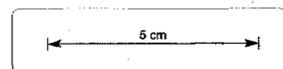
5 384 000 N

MITRE GEOPHYSICS PTY. LTD.

BOCO GRID

METAL FACTORS

765008



DRAWN: J.B. SCALE: 1:10,000
 TRACED: T.G.D.S. DATE: Nov. 1981 FIG. 1

LEGEND

- > 12
- 10 - 12
- 8 - 10
- 6 - 8
- 4 - 6

- A** Anomalous Metal Factor Zone
- Dipole-Dipole Survey
- Diamond Drill Hole

- NOTES:
1. Metal factor = $\frac{\text{Chargeability}}{\text{Resistivity}} \times 1000$.
 2. Contour Intervals - 2, 4, 6, 8, 10, 12, 16, 20, 30, 46, 64.
 3. I.P. Survey by Scintrex 1976-77.
 4. Station spacing 20m. I.P. receiver: IPR-7.
 5. Some data points have been edited from several lines where they cross the E.B.R.

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