

FORM NO. 10
DATE 10/08/81

ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LIMITED
West Coast Mines

EXPLORATION LICENCE 56/80 (SANDY CAPE)

REPORT FOR SIX MONTHS ENDED

8TH NOVEMBER, 1981.

MICROFILM

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GEOLOGIST.

REPORT NO. 141

81-1652.
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DISTRIBUTION	E.Z., Rosebery	(2)
	E.Z., Sydney	(1)
	E.Z., Melbourne	(1)
	Mines Dept.	(1)

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1. INTRODUCTION

As part of Electrolytic Zinc Companies desire to lessen its¹ dependance on base metal production, exploration philosophy over the last few years has aimed at diversification into alternative commodities, particularly tin. It is for this reason, that is, to explore for tin mineralisation, that E.Z. applied for an exploration licence in the vicinity of Sandy Cape on the West Coast of Tasmania.

The existance of tin mineralisation in the West Coast has long been established with a number of tin mines successfully operating. Although the style of this mineralisation is somewhat varied, much of it is thought to be genetically associated with Devonian/Carboniferous granitoids. Previous exploration in the Sandy Cape area (see Appendix A) indicates the presence of stanniferous(?) Devonian granites and poorly explained geochemical and geophysical anomalies. Thus, the Sandy Cape area is considered to be highly prospective for tin mineralisation.

Insufficient data does not permit the specification of likely mineralisation types though exploration will be aimed, initially, at locating targets with magnetic signatures e.g. pyrrhotite hosted mineralisation. Granite/sediment contacts will also be investigated for skarn tin deposits.

The work programmed for the area commenced on the granting of the licence and involves:-

- i) Literature study reviewing exploration work carried out by other companies, research of Mines Department records and compilation of all relevant data.
- ii) A photo geological interpretation of the area and preliminary mapping.

- iii) A landsat linear study of the area.
- iv) An aerial magnetic survey.
- v) A geological mapping and stream sediment sampling programme.
- vi) Detailed gridding to follow up magnetic and stream geo-chemistry anomalies.
- vii) Diamond drilling, if warranted.

Limitations of winter weather and isolation of the E.L. has limited work to non-field activities.

2. LAND TENURE

Exploration Licence 56/80 covers 197.5 sq.km. was granted to Electrolytic Zinc Company of Australasia Limited on the 8th May, 1981.

The location of the Licence and co-ordinates of the corners of the Licence can be found in Figure 2.1. and Table 2.2.

3.0 ACCESS

There is no vehicular access to the exploration licence, though there is a small network of tracks in the immediate vicinity of Sandy Cape. Field work necessitates helicopter access and this has been a major factor in limiting field work till summer months when helicopters are available for charter.

4. TOPOGRAPHIC BASE PLANS

4.1. Standard Plans

A set of six 1:10,000 A0 size, standard E.Z. plans cover the exploration licence and a surrounding corridor. The area covered and layout of the sheets is shown in Figure 4.1. These plans were prepared from enlargements of the machine plots at 1:15,840 & 1:20,000 scale from the Lands Dept.. In addition, these plans have been modified for use as stream sediment plans and limited topographic plans (scale 1:10,000).

4.2. Special Plans

To conveniently cover the licence in one sheet, a 1:50,000 topographical map was prepared from an enlargement of the 1:100,000 Lands Department map.

5. GEOLOGY

The area is essentially flat with deeply incised streams. Basically, the geology consists of essentially, north-trending Pre-Cambrian pelitic and psammitic sediments of the Rocky Cape group (Bell, 1972). These sediments have been intruded by Devonian/Carboniferous granites (and differentiates?) in the immediate vicinity of Sandy Cape and in the south-west of the licence near the Lagoon river, with a well developed hornfelsed zone having been mapped on the western margin of the later. Apart from this hornfelsing, the sediments appear to be relatively unmetamorphosed (op cit). There is no recorded mineralisation from the area itself.

No mapping has been carried out by E.Z. personnel to date.

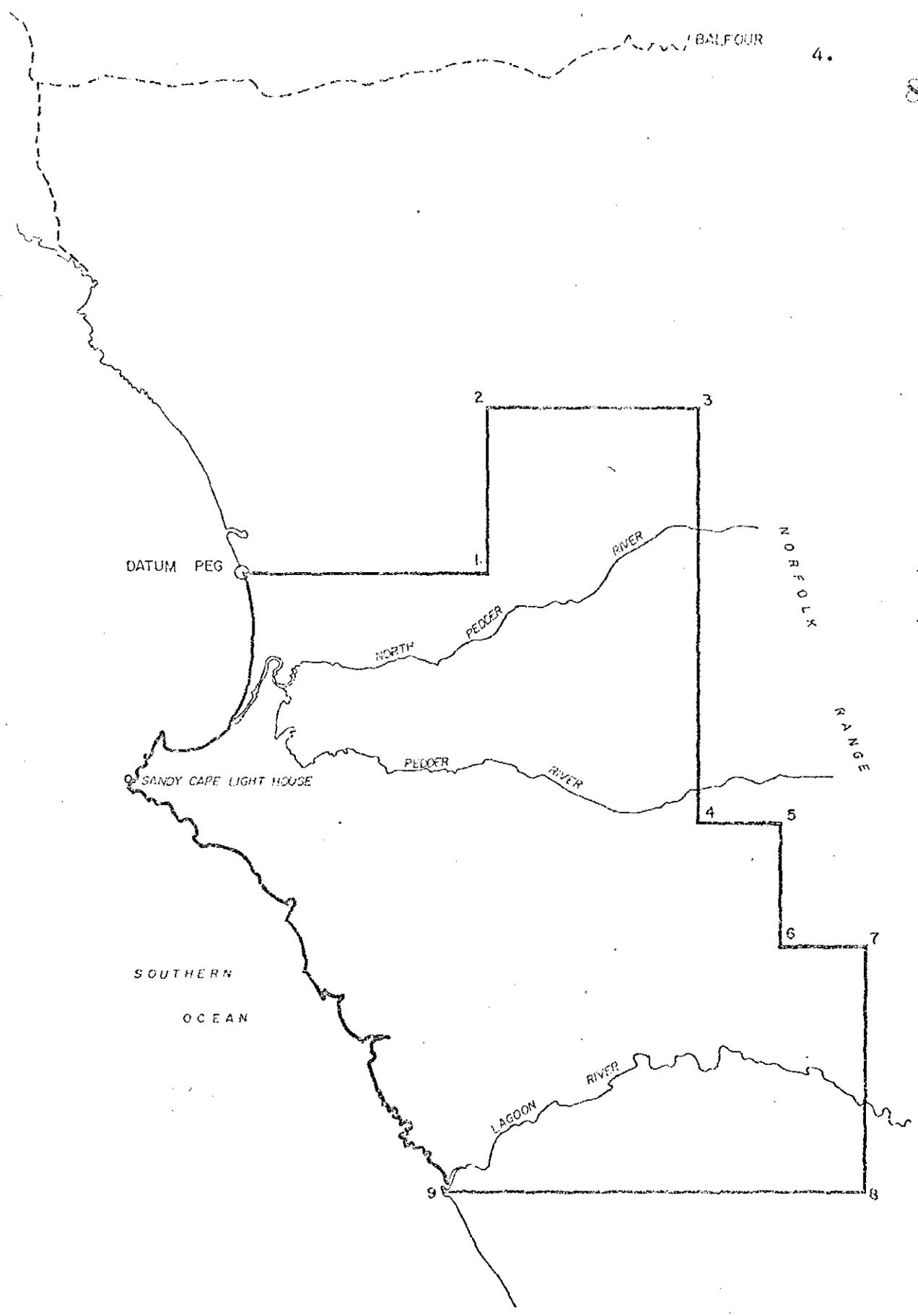


FIGURE 2.1
Scale 1:150 000

PLAN SHOWING THE BOUNDARIES OF
EXPLORATION LICENCE 56/80
SANDY CAPE

- TABLE 2D -

LICENCE BOUNDARY CO-ORDINATES

(Refer to Figure 1.1. for the location of the numbered corners.)

<u>Corner No.</u>	<u>Northing A.M.G.</u>	<u>Easting A.M.G.</u>
Datum Peg	5,417,000	314,200
1	5,417,000	320,000
2	5,421,000	320,000
3	5,421,000	325,000
4	5,410,000	325,000
5	5,410,000	327,000
6	5,408,000	327,000
7	5,408,000	329,000
8	5,402,000	329,000
9	5,402,000	318,500

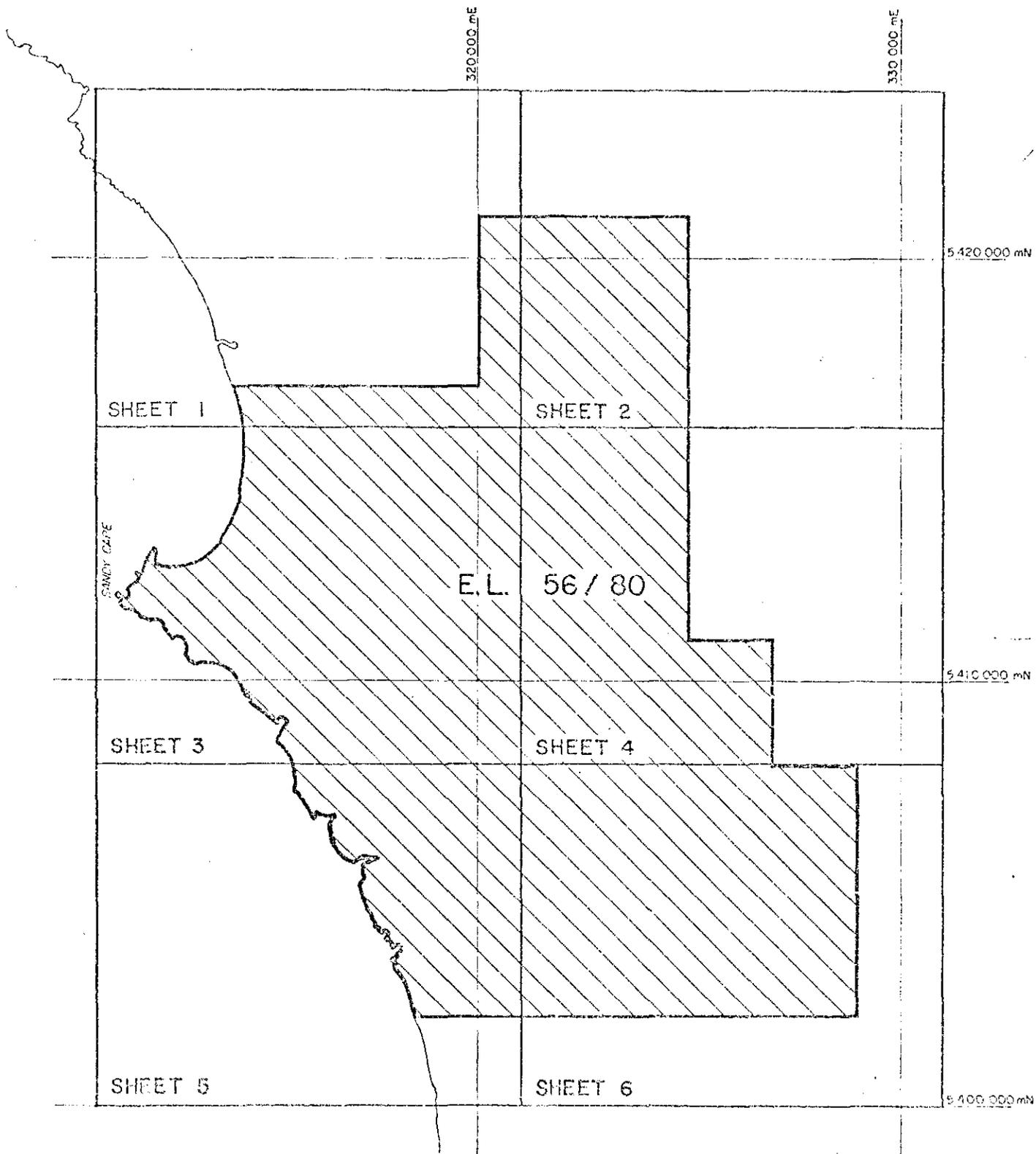


FIGURE 4.1
Scale 1:150 000

LAYOUT OF STANDARD 1:10 000 SCALE
TOPOGRAPHIC PLANS
OF THE SANDY CAPE AREA

6. GEOCHEMISTRY

No geochemical sampling has been performed during the reporting period. Review of Pickands Mather stream sediment sampling indicates anomalous tin values of upto 320 ppm (minus 85 mesh fraction) in the Native Hut Creek. Areas of high values (100-295 ppm) have been located on the majority of the west flowing creeks near the coast though D. Bell (1972) mentions that these tin values may have resulted from the erosion of stanniferous Tertiary gravels.

7. GEOPHYSICS

An airborne magnetics and radiometrics survey of E.L. 56/80 was contracted by Geonex Pty. Ltd. this year, 1225 line kilometers were flown. Survey specifications include a detector height of 100m, flight line spacing of 200m and tie line spacing of 2.5 km. The survey data is currently being assessed so that anomalous features are defined for the coming field season. The data has been plotted at 5m intervals at 1:10,000 scale. Stacked profiles and flight line diagrams are also available at this scale. The contour plans have been reduced to 1:50,000 for convenience see Figure 7.1..

Review of previous geophysical work contracted for ESSO, Renison and Pickands Mather indicates that although these companies gave the Sandy Cape anomalies low priority, their surveys were more of a regional nature, having wide flight line spacings and often poor flight line recovery. Further, many of the anomalies which were located were not satisfactorily explained and tin mineralisation was not always the exploration target.

8. FUTURE EXPLORATION

Future exploration on this licence will be aimed at completing the work programme outlined in the Introduction. This will involve locating and evaluating the aeromagnetic anomalies revealed by the 1981 Georex Pty. Ltd. survey, gridding, limited stream sediment sampling and some regional geological mapping. Geochemical and some geophysical anomalies discovered by previous exploration in the area will be tested and evaluated.

LIST OF REFERENCES

BELL, D.G., 1972. 1971-72 Annual Report, E.L. 48/70 & 49/70,
N. W. Tasmania.

APPENDIX ASUMMARY OF PREVIOUS EXPLORATION

It is thought appropriate to summarise all known previous work in the area. Three groups have conducted exploration in the licence area, namely: ESSO; Pickand Mather; Renison Limited.

The work undertaken is summarised as follows:--

1. GEOPHYSICAL SURVEYS1.1. Air Mag Surveys - Ground Mag Surveys*

- 337 Neale, R.C., 1974 - E.L. 2/73 Pieman Fiver -
File: 27/2.
- 43 Rio Tinto - North West Tasmania Aeromagnetic
Survey - File: Map Store.
- 306 Airborne Magnetometer Survey - Offshore Tasmania,
1967 - E.L.'s 1/60, 17/65, 18/65, 19/65 ESSO -
File: ?.
- 24 Sedmick, E.C.E., 1961 - Savage River Magnetic
Survey, 1960 - Rec. Bur. Mineral Resources Geol.
Geophys. Aust. 1961/138.

304* Bell, D.H., 1971 - Annual Report - North West
Tasmanian Joint Venture Exploration E.L's 48/70,
49/70 - File: 42/1.

297* Dikoff, C., 1971 - Interpretation Report for the
Consolidated Syndicate of the Queenstown Aero-
magnetic survey - file: 42/2.

2. ELECTROMAGNETIC SURVEYS (AIRBORNE) *

337 Neale, R.C., 1974 - E.L. 2/73 Pieman River - File: 27/2.

3. GEOCHEMICAL SURVEYS

Bell, D.H., 1972 - E.L's 49/70, 48/70 Project Pieman. -
1:50,000 Regional Stream Sediment Geochemistry (Sn, W) - E.Z.
File: 34/2 (g).

Balfour Area Stream Sediment Geochemistry, 1967 - E.Z. File: 34/2 (g).

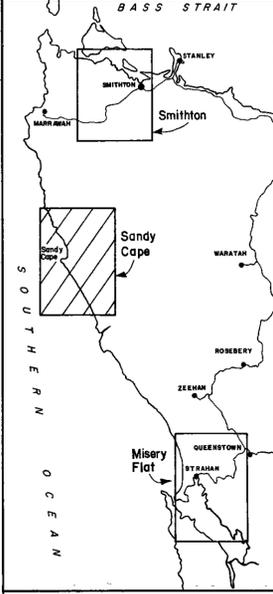
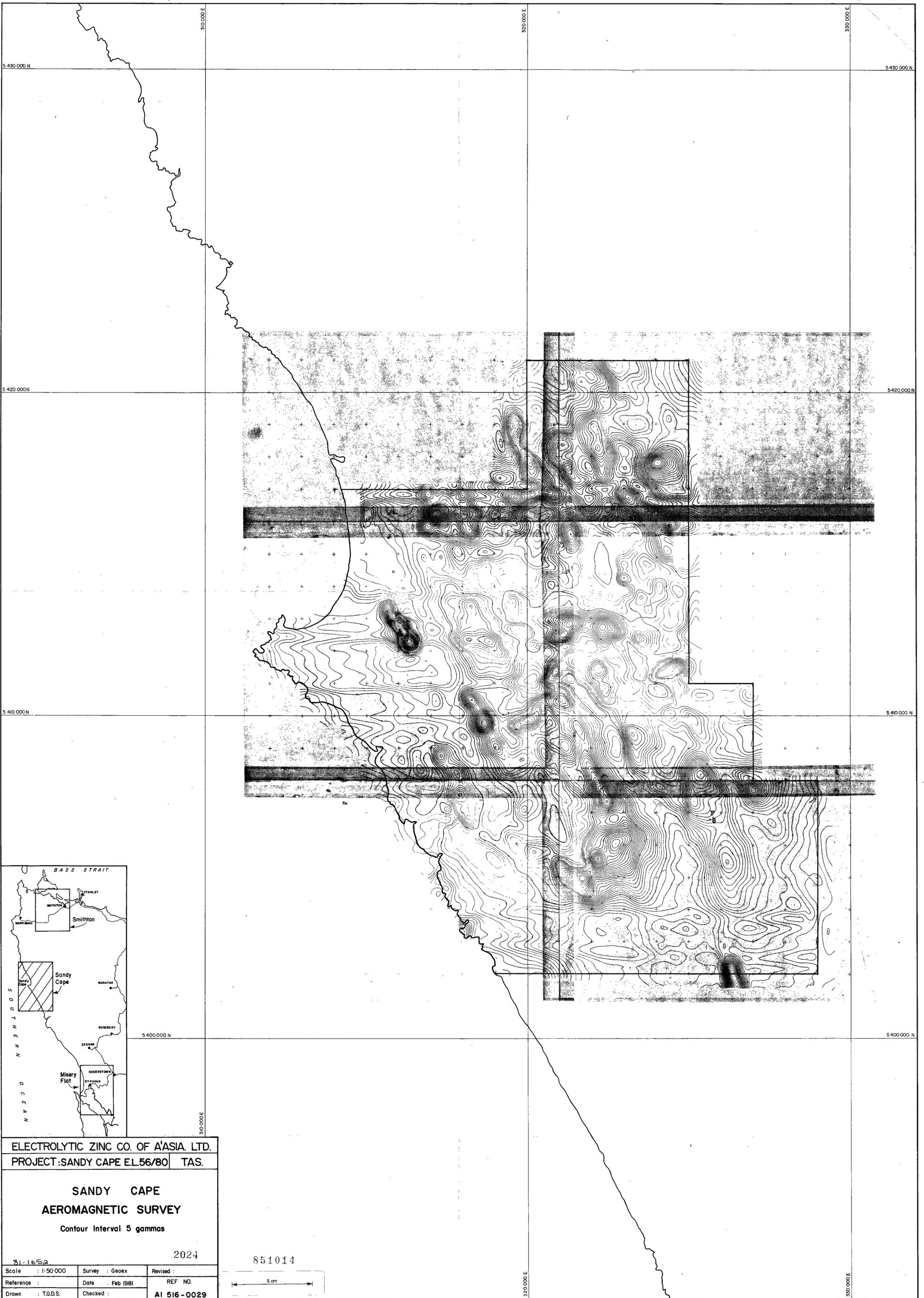
4. GEOLOGY

Bell, D.H., 1972 - E.L's 48/70, 49/70 1:50,000 Regional Geo-
logical Compilation - E.Z. File: 34/2 (j).

Tasmania Interpretation Map (1:48,000), 1971 - Consolidated
Syndicate Zeehan - E.Z. File 34/2 (j)

Neale, R.C. & Wan, G.W. - Interpretative Geology of E.L. 2/73,
1974, ESSD - E.Z. File: 34/2 (j).

* Prefix number refers to "Applied Geophysics in Tasmania - Summary
of Surveys". Leaman ^{DE} f., Tasmanian Department of Mines, 1980.



ELECTROLYTIC ZINC CO. OF ASIA LTD.		
PROJECT: SANDY CAPE E.L.56/80		TAS.
SANDY CAPE AEROMAGNETIC SURVEY		
Contour Interval 5 gammas		
31-1652		2024
Scale : 1:50 000	Survey : Geox	Revised :
Reference :	Date : Feb 1981	REF NO.
Drawn : T.G.D.S.	Checked :	AI 516-0029

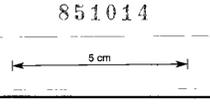


Fig 7.0