TASMANIA
DEVELOPMENT
AND RESOURCES

Mineral Resources Tasmania

REPORT 1994/09

Specification summary — Aeromagnetic surveys, Northeast Tasmania

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Abstract

The Australian Geological Survey Organisation has acquired aeromagnetic data with a 1.5 km line spacing over northeast Tasmania. By integrating the higher resolution surveys with this data it is possible to view the areas of more restricted coverage in context. This report summarises the status and quality of each data set.

INTRODUCTION

Within the NETGOLD area of northeast Tasmania there are nine detailed or semi-detailed aeromagnetic surveys of limited areal extent with a flight line spacing of 500 metres or less (fig. 1). Eight of these surveys also have associated radiometric data. The data from these surveys are available from Mineral Resources Tasmania.

The Australian Geological Survey Organisation (AGSO) flew much of Tasmania, including the northeast, with a flight line spacing of 1.5 km and this represents the only regional data set within which the high resolution data may be viewed in context. The located data tape is available from AGSO.

THE SURVEYS

(i) Fingal

Flown in 1993 by GeoInstruments using a helicopter system.

- East–west flight lines 200 m apart
- North–south tie lines 400 m apart
- Survey length 9142 km
- Nominal terrain clearance 60 m
- Mean terrain clearance 74.2 m
- Minimum terrain clearance 23.8 m
- Maximum terrain clearance 318.9 m
- Radiometric data fully corrected

(ii) Mt Horror

Flown in 1993 by GeoInstruments using a helicopter system.

- East–west flight lines 200 m apart
- North–south tie lines 400 m apart
- Survey length 1688 km
- Nominal terrain clearance 60 m
- Mean terrain clearance 78 m
- Minimum terrain clearance 19.2 m
- Maximum terrain clearance 198.2 m
- Radiometric data fully corrected

Lines 21172 to 21202 were flown by Geoterrex using the fixed wing system described in (iv). Correction of the radiometrics should use Geoterrex parameters for these lines.

(iii) Pipers River

Flown in 1993 by Geo Instruments using a helicopter system.

- East–west flight lines 200 m apart
- North–south tie lines 400 m apart
- Survey length 5782 km
- Nominal terrain clearance 60 m
- Mean terrain clearance 74.3 m
- Minimum terrain clearance 34.1 m
- Maximum terrain clearance 214.6 m
- Radiometric data fully corrected

(iv) Weymouth – Cape Portland

Flown in 1993 by Geoterrex using a fixed wing system.

- Flown east–west and north–south on a 400 m square mesh
- Survey length 4349 km
- Nominal terrain clearance 80 m
- Mean terrain clearance 77.9 m
- Minimum terrain clearance 42.3 m
- Maximum terrain clearance 140.5 m
- Radiometric data fully corrected

(v) Mathinna

Flown in 1990 by Geo Instruments for Pegasus using a helicopter system.

- North–south flight lines 150 m apart
- East–west tie lines 400 m apart
- Survey length 1679 km
- Nominal terrain clearance 80 m
- Mean terrain clearance 94.8 m
- Minimum terrain clearance 55.0 m
- Maximum terrain clearance 207.0 m
- Radiometric data not corrected

(vi) Gladstone

Flown in 1987 by Austirex for Placeco using a fixed wing system.

- East–west flight lines 125 m apart
- North–south tie lines 1000 m apart
- Survey length 1775 km
- Nominal terrain clearance 60 m
- Mean terrain clearance 62.3 m
- Minimum terrain clearance 28.0 m
- Maximum terrain clearance 156.0 m
- Radiometric data fully corrected

Both the radiometric and magnetic data show minor levelling problems.

(vii) Lyndhurst

Flown in 1987 by Austirex for Placeco using a fixed wing system.

- East–west flight lines 125 m apart
- North–south tie lines 1000 m apart
- Survey length 1545 km
- Nominal terrain clearance 60 m
- Mean terrain clearance 65.0 m
- Minimum terrain clearance 38.0 m
- Maximum terrain clearance 203.0 m
- Radiometric data fully corrected.

Both the radiometric and magnetic data show minor levelling problems.

(viii) Lisle

Flown in 1983 by GeoInstruments for Seltrust using a helicopter system.

- North–south flight lines 200 m apart
- East–west tie lines 3000 m apart
- Survey length 1066 km
- Nominal terrain clearance 70 m
- Mean terrain clearance 121.2 m
- Minimum terrain clearance 63.9 m
- Maximum terrain clearance 301.8 m
- No radiometric data

Minor levelling problems.

(ix) Alberton – Mangana

Flown in 1989 by Austirex for the Department of Mines using a fixed wing system.

- East–west flight lines 500 m apart
- North–south tie lines 5000 m apart
- Survey length 2753 km
- Nominal terrain clearance 150 m
- Mean terrain clearance 243.5 m
- Minimum terrain clearance 38.0 m
- Maximum terrain clearance 858.0 m
- Radiometric data fully corrected

Minor levelling problems with the magnetic data.

The high terrain clearances have lead to some problems with amplitude instability in the corrected radiometrics. The header file contains sufficient coefficient data to allow re-correction.

(x) AGSO

Flown in 1985 by AGSO using a fixed wing system.

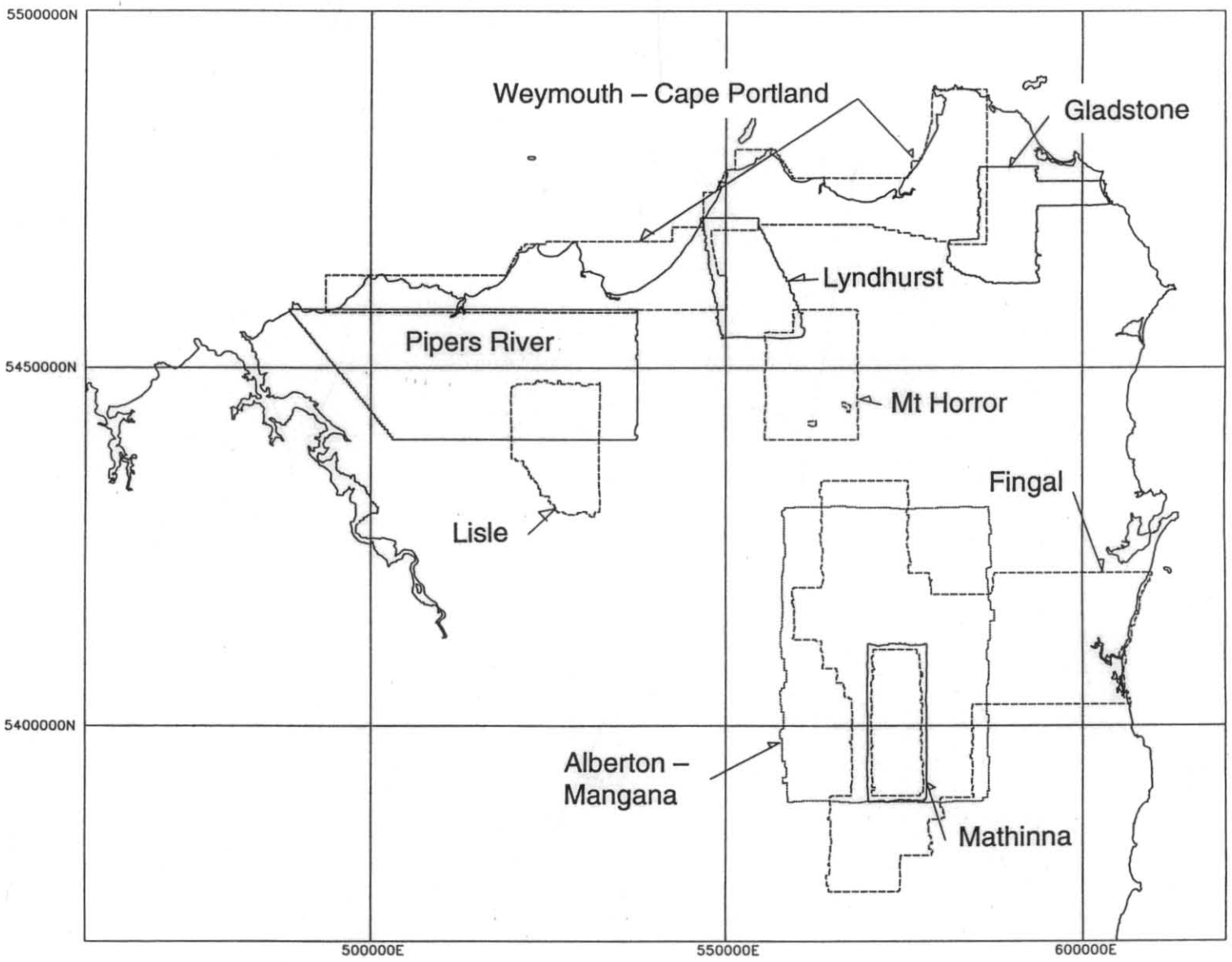
- East–west flight lines 1500 m apart
- North–south tie lines approximately 50 km apart
- Nominal terrain clearance 150 m
- Mean terrain clearance 224.8 m
- Minimum terrain clearance 1 m*
- Maximum terrain clearance 788.0 m
- No radiometric data.

Minor levelling problems.

There are a number of data points without radar altimeter values.

* As recorded on the located data tape.

[8 April 1994]


5500000N
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Weymouth – Cape Portland
Gladstone
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Mt Horror
Fingal
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Mathinna

Figure 1

5 cm