

EXPLORATION LICENCE 4198, MARSHALL RIVER,

NORTHERN TERRITORY

ANNUAL REPORT 2.6.83 - 2.6.84

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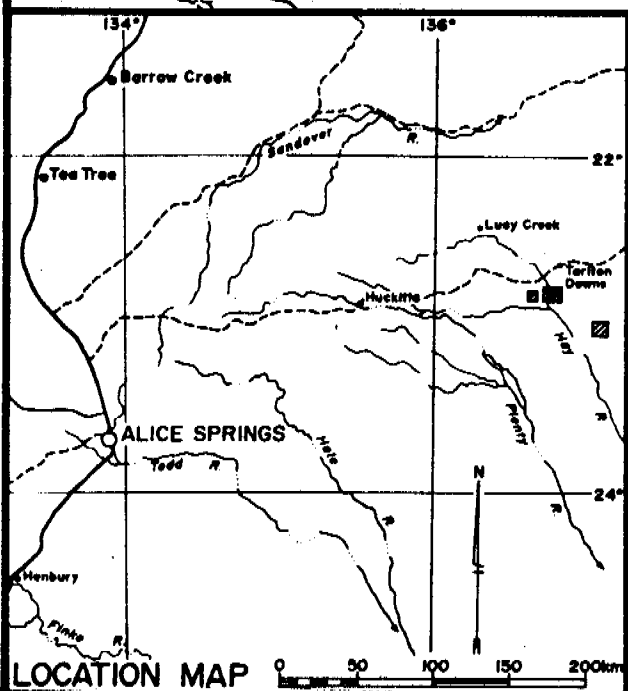
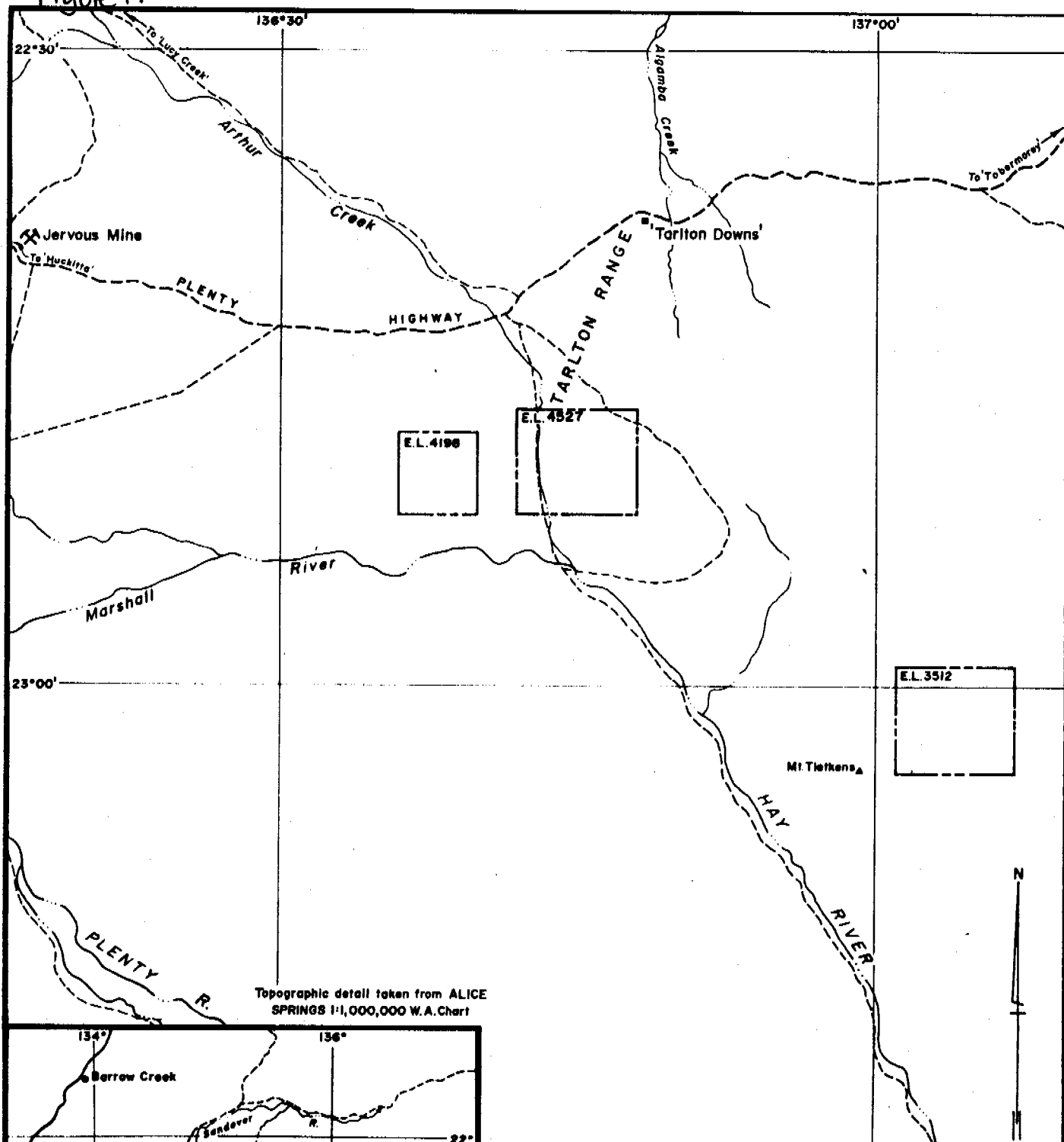
Drawing Number

- FIGURE 1 Location Map EL 3512, 4198, 4527
 Georgina Basin, N.T. 1:500,000
- FIGURE 2 Marshall River EL 4198
 Summary of Exploration

A4-46

A1-140

Figure 1.



SCALE 1:500,000
0 10 20 30 40km

Centre
Adelaide

Date
3-2-84

THE BROKEN HILL PROPRIETARY CO LTD.

E.L.3512,4198,4527, GEORGINA BASIN,N.T.
LOCATION MAP

Project No.
8-DB678F75-7

Drawing No.
A4-L6

EXPLORATION LICENCE 4198, MARSHALL RIVER,

NORTHERN TERRITORY

ANNUAL REPORT 2.6.83 - 2.6.84

1. GENERAL STATEMENT

Exploration Licence 4198 was taken up to test the kimberlite potential of the area. An aeromagnetic anomaly, T76b, was selected from the BMR published aeromagnetic data, as being a potential kimberlite. A low level aeromagnetic survey over a small area, three by four kilometres was flown. This was followed up by a ground magnetic survey to locate the anomaly on the ground. The anomaly remains to be drill tested in the next year.

2. TITLES

Exploration Licence 4198 over an area of 16 blocks was granted to BHP Minerals Limited for a period of six years from 2nd June, 1983. The location of the area is shown on Figure 1.

3. FIELD INVESTIGATIONS

3.1 Aeromagnetic Survey

This area was selected for kimberlite investigation after an examination of the Tobermory 1:250,000 BMR aeromagnetic map.

A low level aeromagnetic survey was flown for BHP Minerals Limited by Aerodata Services Pty. Ltd. over a small area, twelve square kilometres.

The survey was flown at a height of 70 metres with a 200 metres spacing between the north-south flight lines.

The total field magnetic contour map and stack profiles are shown on Figure 2.

3.2 Ground Magnetic Survey

The 200nT aeromagnetic anomaly was located on the ground. Five north-south lines, varying in length between 1-1.5km were done over the anomaly. Readings were taken every 10m using the Scintrex MP2 and an automatic base station was used for diurnal corrections. The diurnally corrected ground magnetic profiles are shown on Figure 2. The anomaly remains to be drill tested.

4. CONCLUSIONS

The anomaly has been more clearly defined using ground magnetics. It is considered to have potential as a kimberlite.

The proposed work programme includes -

Stage 1 - drill test the magnetic anomaly

Stage 2 - further drill testing if Stage 1 shows any promising results, Stage 2 being conditional on Stage 1.

5. EXPENDITURE

Expenditure debited to Exploration Licence 4198 during the year 2nd June, 1984 was:

Wages and Salaries	2,224
Field Support	478
Vehicles	784
Equipment	49
Air Charter	1,221
Geophysics	2,000
Geochemistry	91
Surveys	15
Tenement fees	80
Services	520
Sundries	64
Administration & Overheads	752
	<hr/>
	\$8,278

GROUND MAGNETIC PROFILES

Readings at 10m intervals, using Scintrex MP2 proton magnetometer

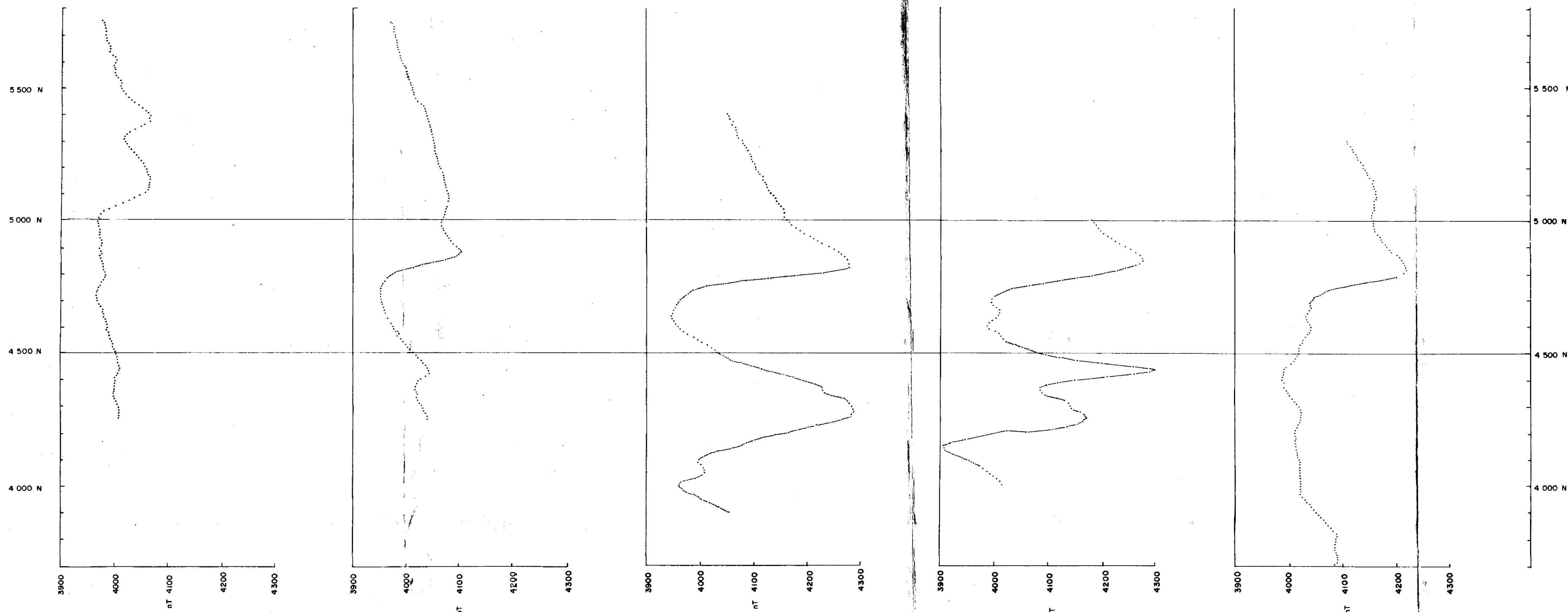
Line 4800 E

Line 5000 E

Line 5200 E

Line 5300 E

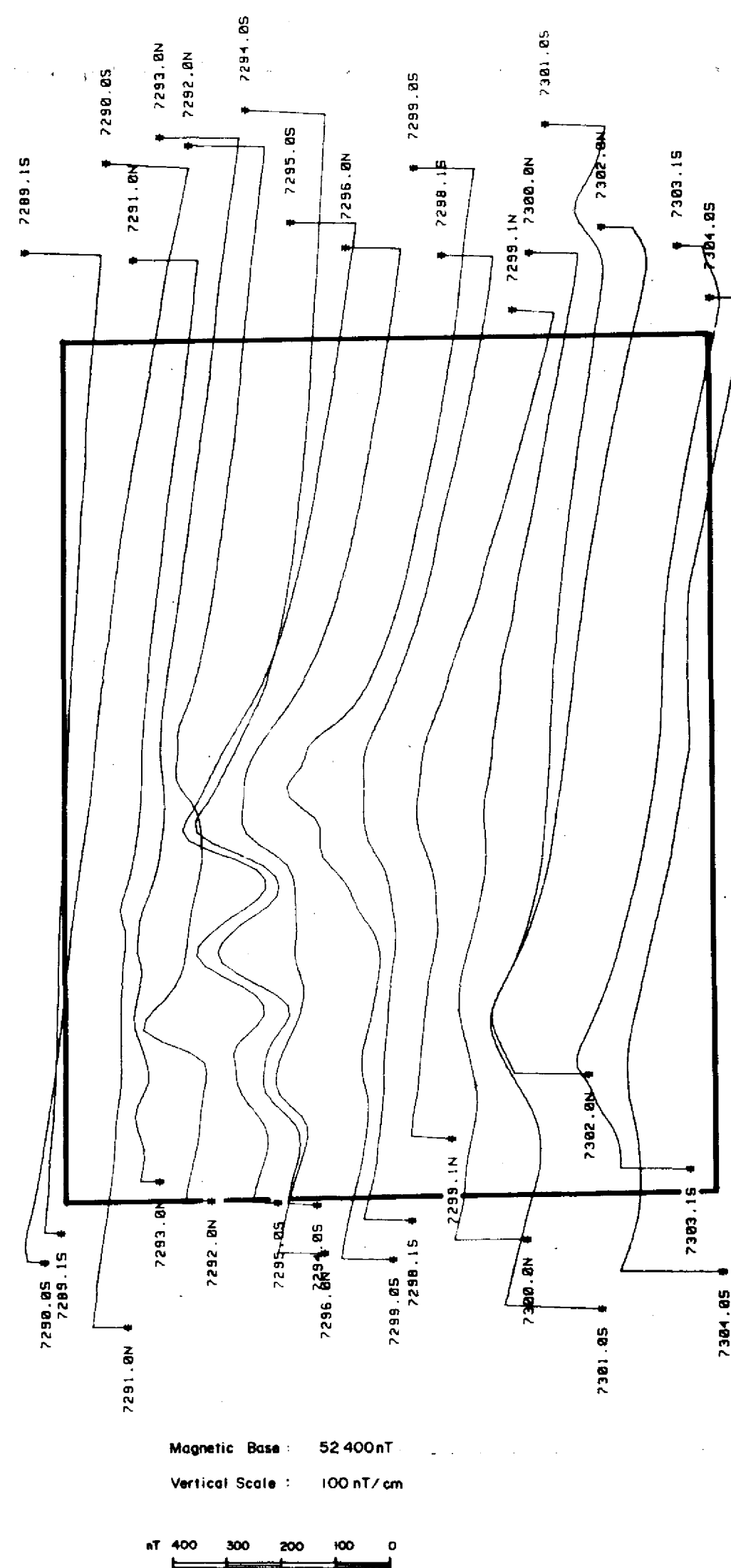
Line 5400 E



TOTAL FIELD MAGNETICS
STACKED PROFILES

TOTAL FIELD MAGNETICS
CONTOUR MAP

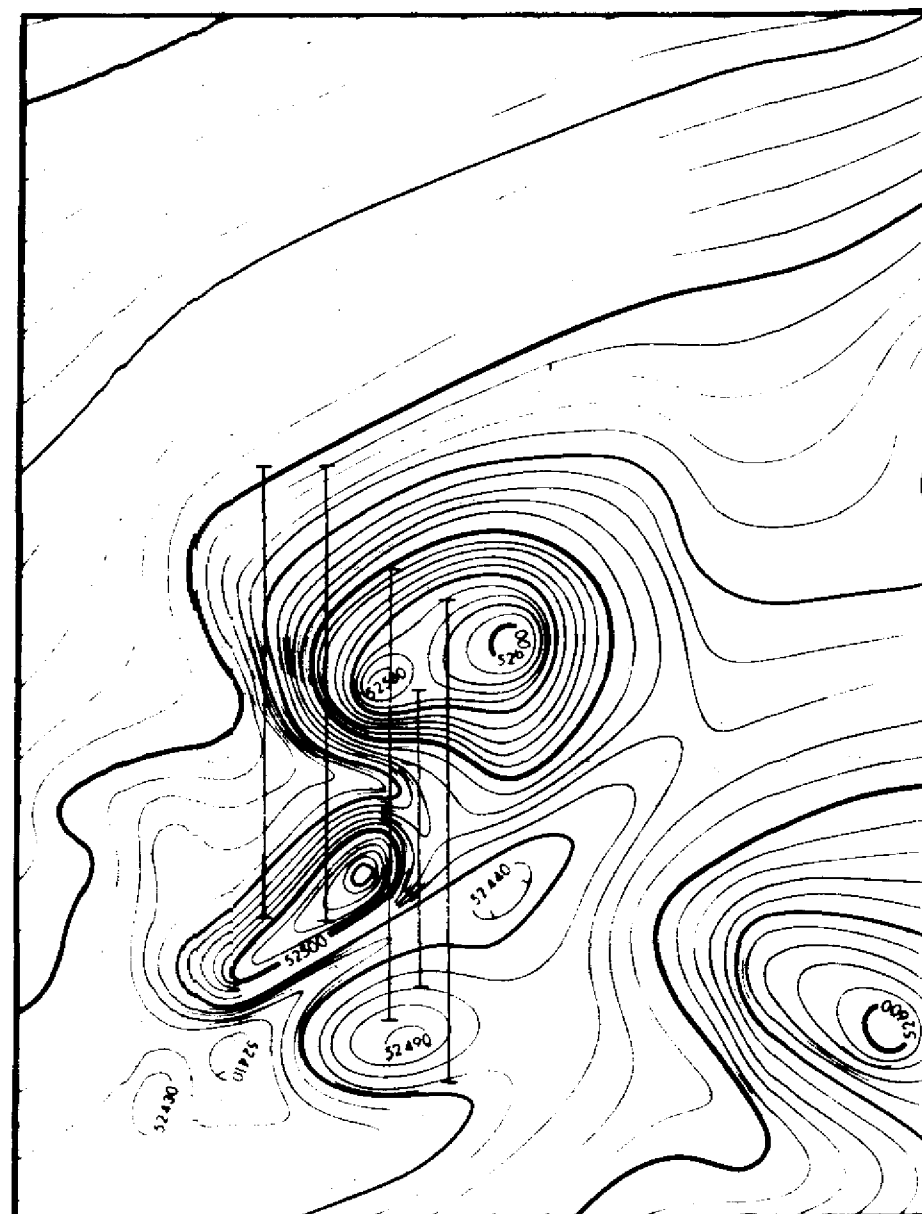
GROUND MAGNETIC CONTOURS



SURVEY SPECIFICATIONS

Flight Line Spacing: Traverse lines 200 metres
Flying Height (sensor height): 70 metres mean terrain clearance

Contour Interval: 5 nT

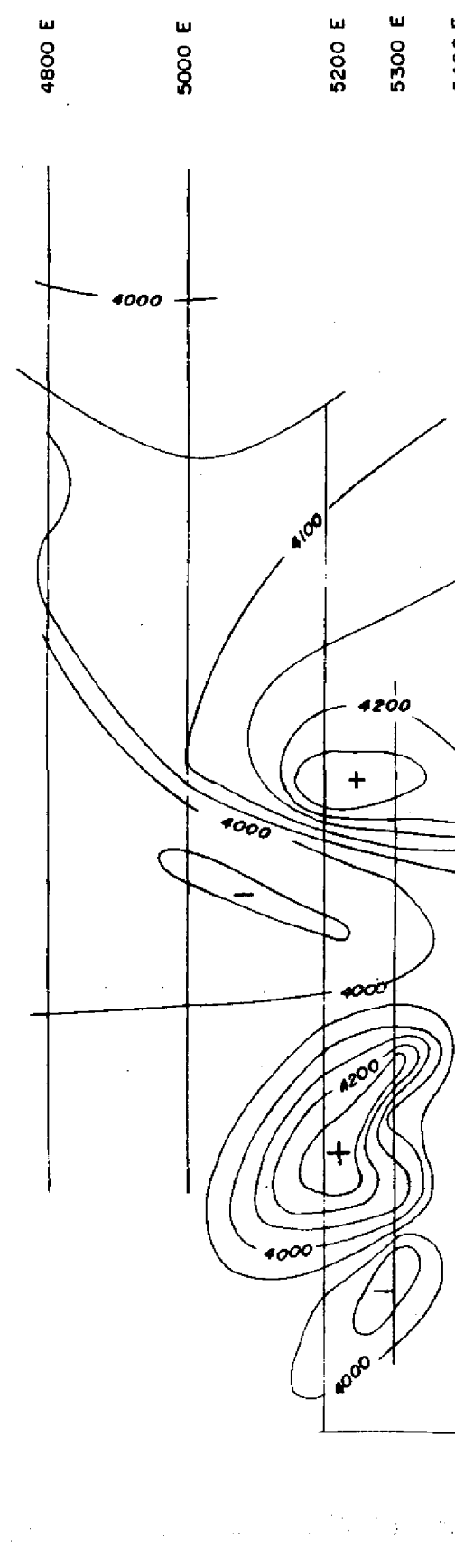


Surveyed and compiled by Aerodata Services Pty Ltd.

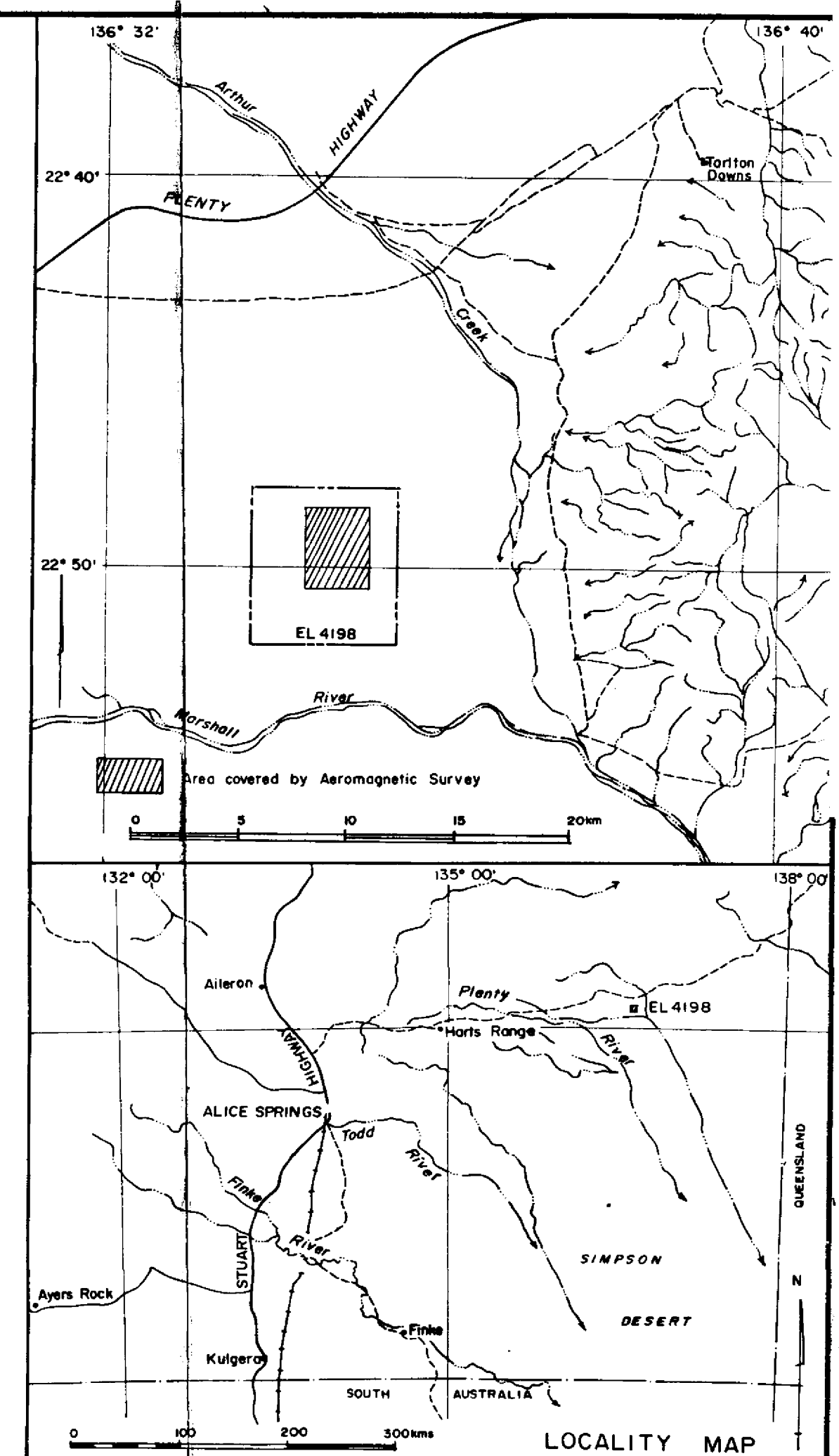
SCALE 1:25,000



5500 N
5000 N
4500 N
4000 N



SCALE 1:10,000



THE BROKEN HILL PROPRIETARY CO. LTD.
EXPLORATION DEPARTMENT

EL4198, MARSHALL RIVER N.T.

SUMMARY OF EXPLORATION

Drawn: L.H.	Date: 29.5.84	Centre: Darwin
Traced: Hilary	Project No:	Drawing No:
Checked:		A1-140