

**ANNUAL REPORT**  
**EXPLORATION LICENCE 8708**  
***"Tyurrarrani Springs"***

9th January, 1996 to 8th January, 1997

***Licensee:*** Ashton Mining Limited

***Operator:*** Ashton Mining Limited

***Sheet Reference:*** 1:250,000 Mount Young (SD53-15)

***Submitted to:*** Department of Mines and Energy, Darwin

***Copies to:*** Ashton Mining Limited - Perth Office  
Ashton Mining Library

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Report Number: 52046

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## **SUMMARY**

*During the period 9th January, 1996 to 8th January, 1997, Ashton Mining Limited, on behalf of the Australian Diamond Exploration Joint Venture (ADE JV), carried out an exploration programme over Exploration Licence 8708. This report provides details of work undertaken on the licence during the reporting period.*

*Sample results from the last reporting period became available and all nine samples returned negative results. A helimag survey was flown and interpreted inhouse but no anomalies were identified within EL 8708. Details of colour aerial photography flown in the previous reporting period and omitted from the relevant report are also included.*

*Exploration expenditure for the reporting period amounted to \$23,549 against a covenant of \$20,000.*

## **KEYWORDS:**

*Diamond exploration; Geophysical surveys; Aerial magnetic surveys; Magnetic interpretation; Colour aerial photography; Gravel sampling*

## **LOCATION:**

*Mount Young (SD53-15); Mantungula (5966)*

## **1.0 INTRODUCTION**

This report details exploration activities carried out by Ashton Mining Limited over Exploration Licence 8708 for the period 9th January, 1996 to 8th January, 1997. Ashton Mining Limited is manager of the licence on behalf of the Australian Diamond Exploration Joint Venture (ADE JV). Participants of the ADE Joint Venture also include Aberfoyle Resources Limited and Australian Diamond Exploration NL (ADEX).

Exploration Licence 8708 was granted to Ashton Mining Limited on 9th January, 1995, for a period of six years. The licence covers an area of 93 blocks and is located on the Mount Young (SD53-15) 1:250,000 map sheet. A tenement location map is shown in Figure 1. The target for exploration within this licence is diamond bearing kimberlitic intrusives.

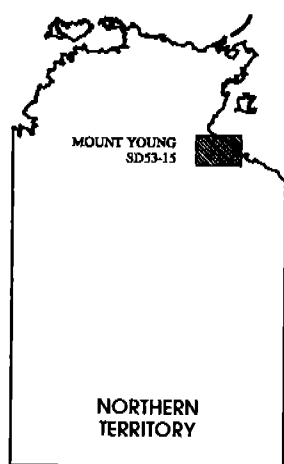
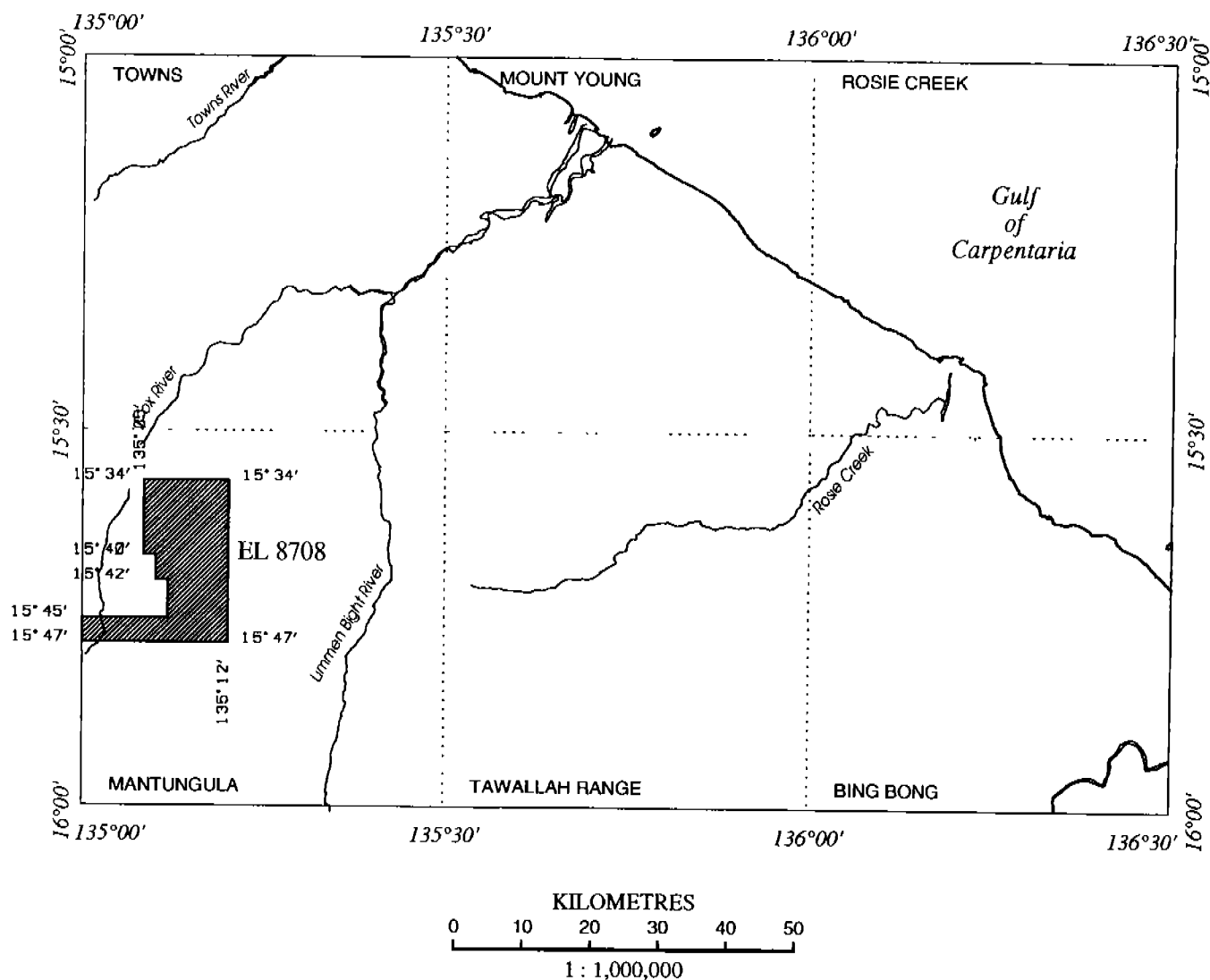
A statement of expenditure is included in this report.

## **2.0 EXPLORATION PROGRAMME**

### **2.1 Gravel Sampling**

Outstanding results from the previous reporting period became available. All nine samples are negative.

A sample listing appears in Appendix 1. Sample locations are shown in Plan 1 of the previous annual report (Ashton Mining Ltd. Report No.51217).



**ASHTON MINING LIMITED  
A.D.E. JOINT VENTURE**

**EXPLORATION LICENCE 8708  
ANNUAL REPORT  
FIGURE 1  
LOCATION MAP**

JANUARY, 1997

## **2.2 Laboratory Procedure**

The samples are processed by the Ashton Mining Limited Laboratory in Perth, where they are concentrated by Wilfley Table and heavy liquid separation techniques.

The heavy liquid used is tetrabromethane with a specific gravity of 2.96. The concentrates are then screened into various size fractions, further concentrated by magnetic and electrostatic separation techniques and a comprehensive grain by grain examination carried out on the minus 1.0mm plus 0.425mm fractions.

## **2.3 Geophysics**

An aerial magnetic survey, using a helicopter, was flown over a small area in the western part of the licence, as part of a larger survey covering several adjacent licences. Survey specifications appear in Appendix 2, survey location, flight lines, total field magnetic contours and a vertical derivative image are presented in Figures 2, 3, 4 and 5 respectively.

Data processing for interpretation of the helimag survey involved the use of total field and vertical derivative images which had been reduced to the pole. No anomalies were identified within EL 8708.

## **2.4 Aerial Photography**

Colour aerial photography at 1:10,000 scale was flown by Qasco Surveys Pty Ltd over an area covering parts of EL's 7263, 7264 and 8708. The survey boundary and flight

FIGURE 2

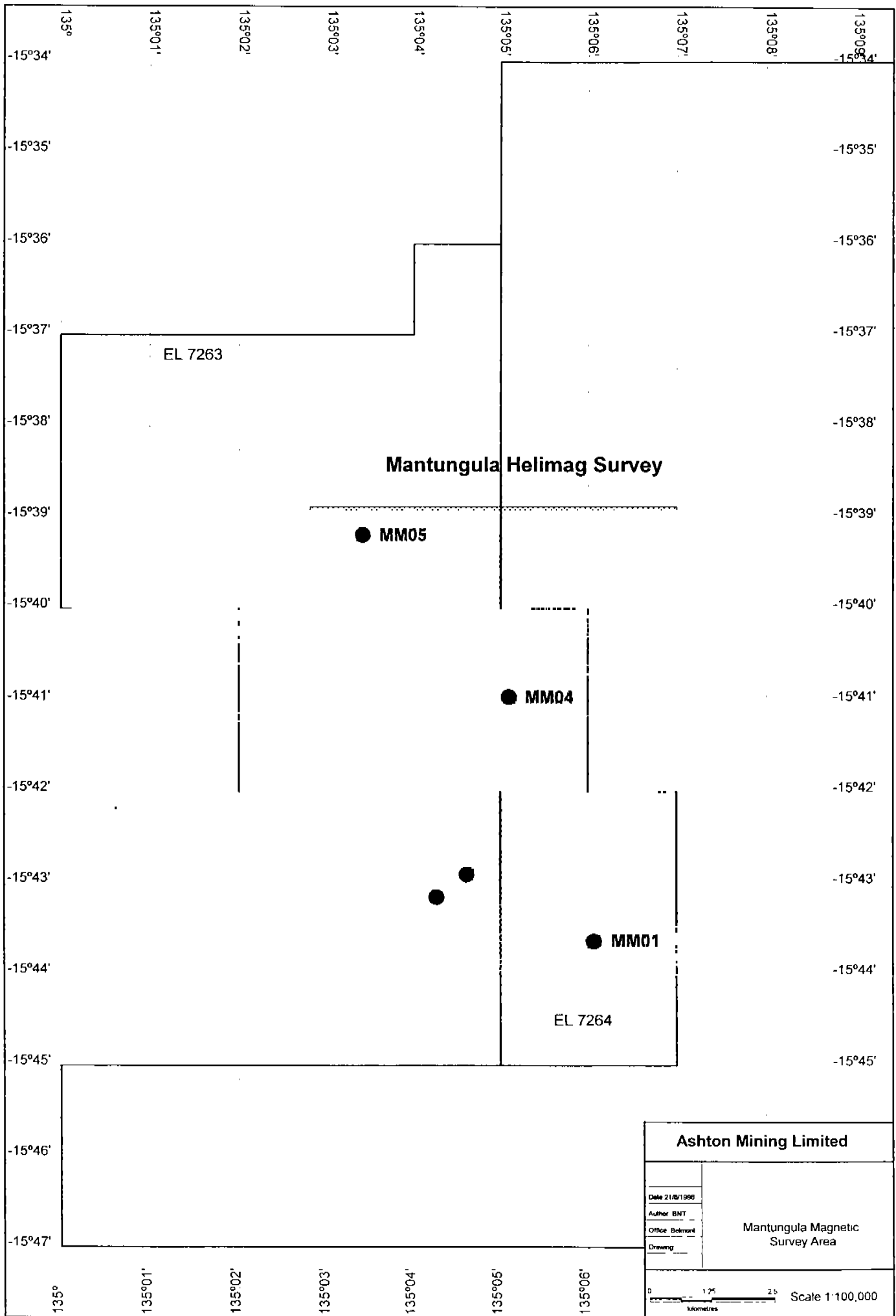


FIGURE 3

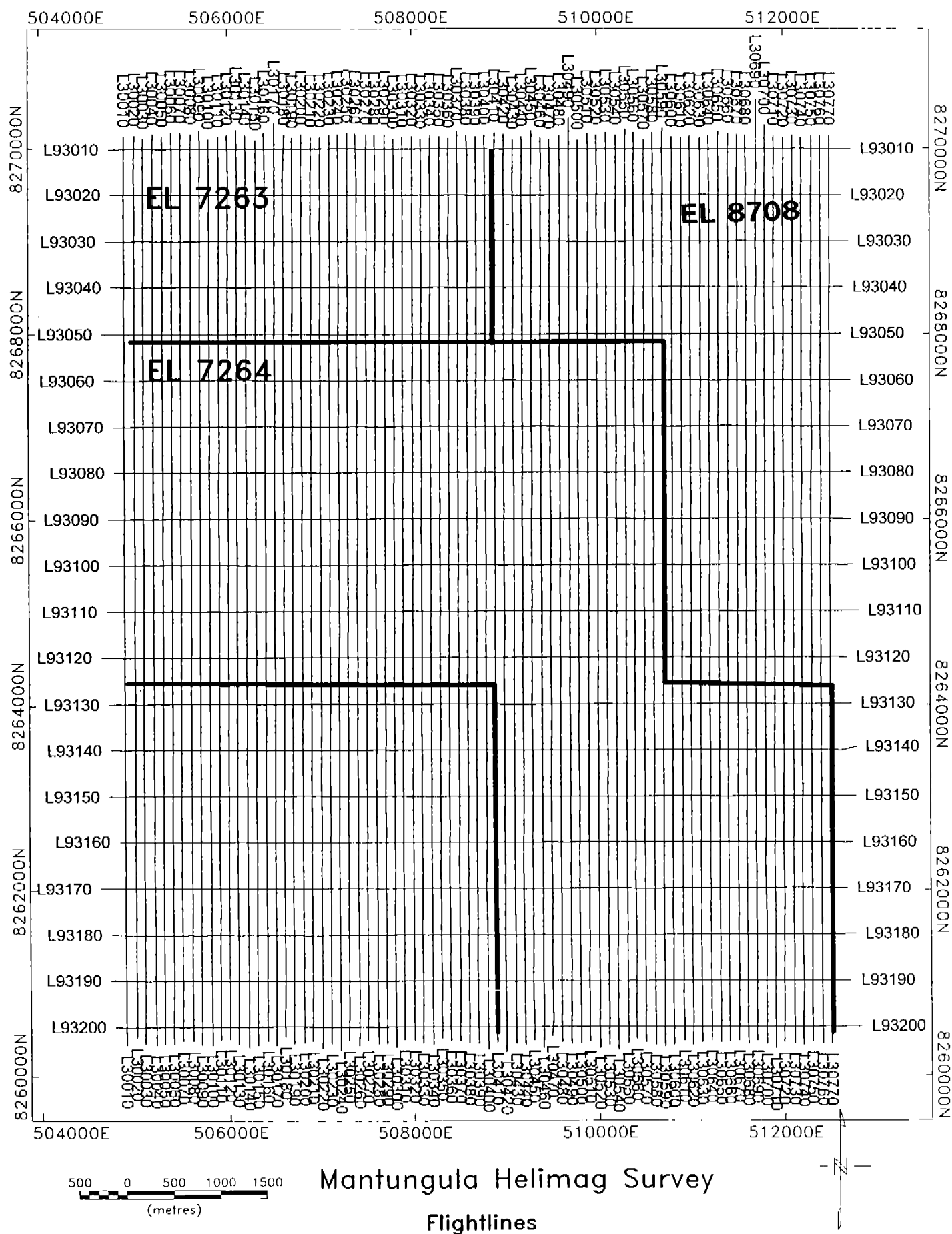




FIGURE 4

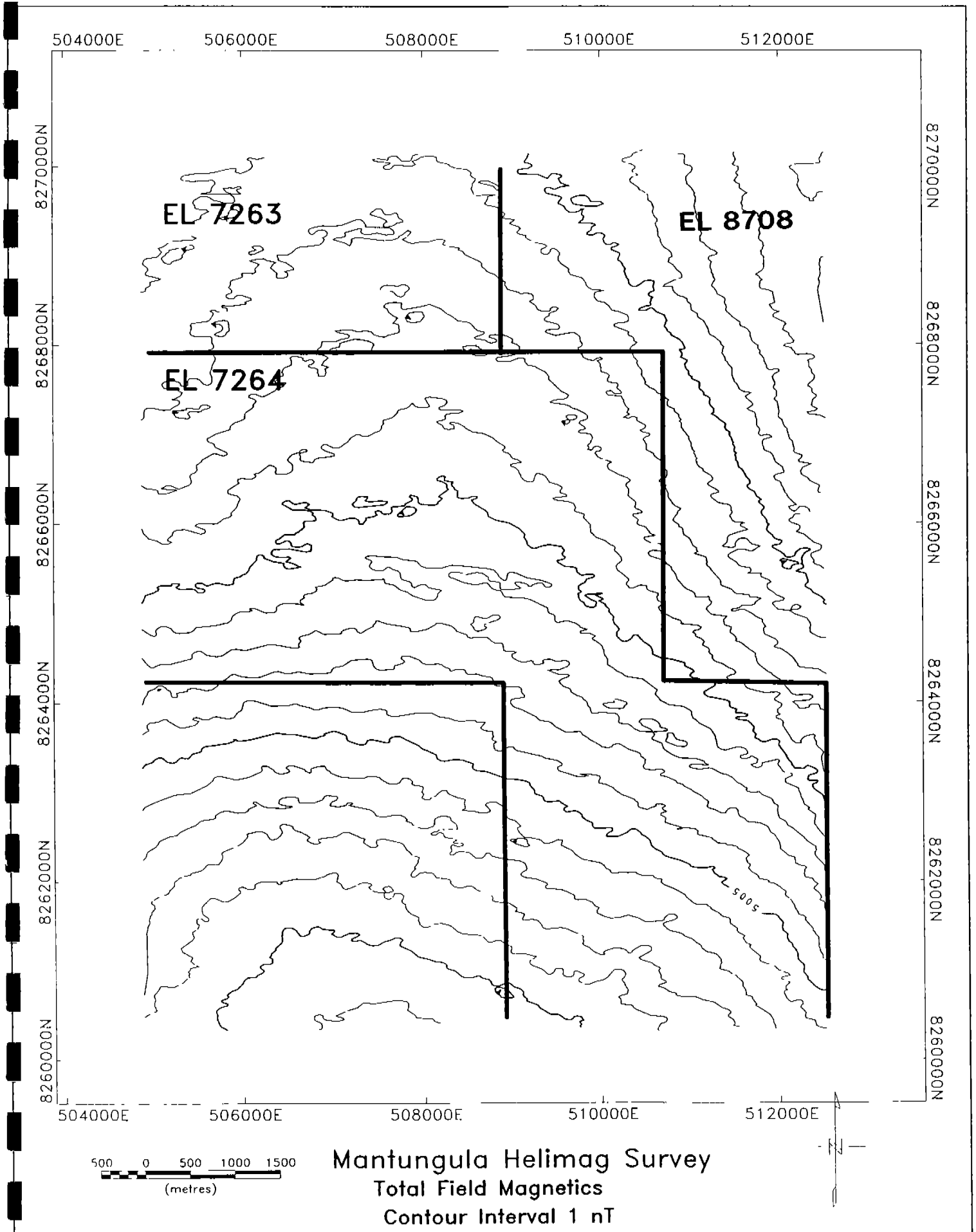
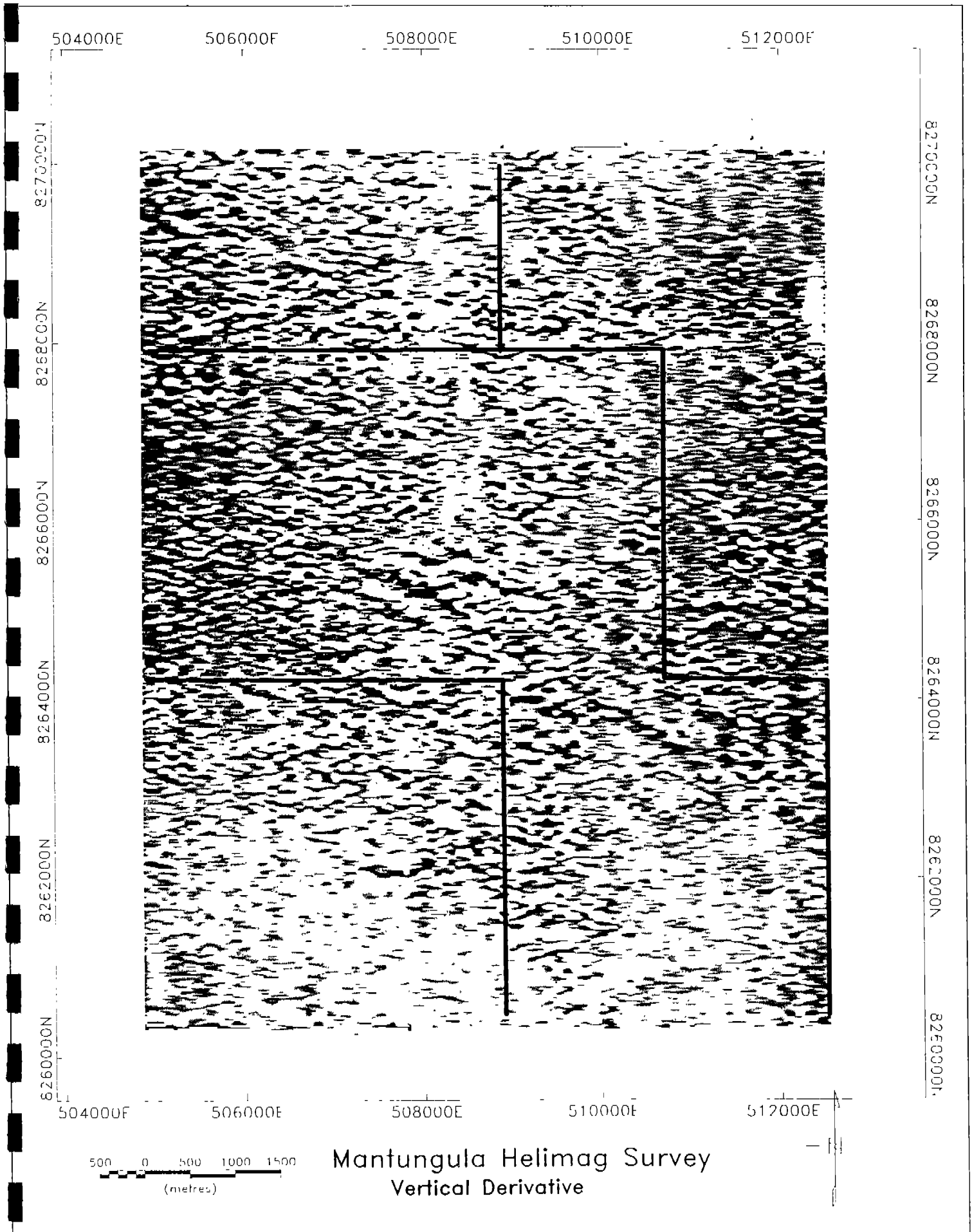


FIGURE 5



lines are shown on Figure 6. Details of the runs and photograph numbers from south to north are listed below:

Run 1: 297 - 311

Run 2: 296 - 283

Run 3: 269 - 282

Run 4: 268 - 255

Run 5: 240 - 254

Run 6: 239 - 225

Run 7: 210 - 224.

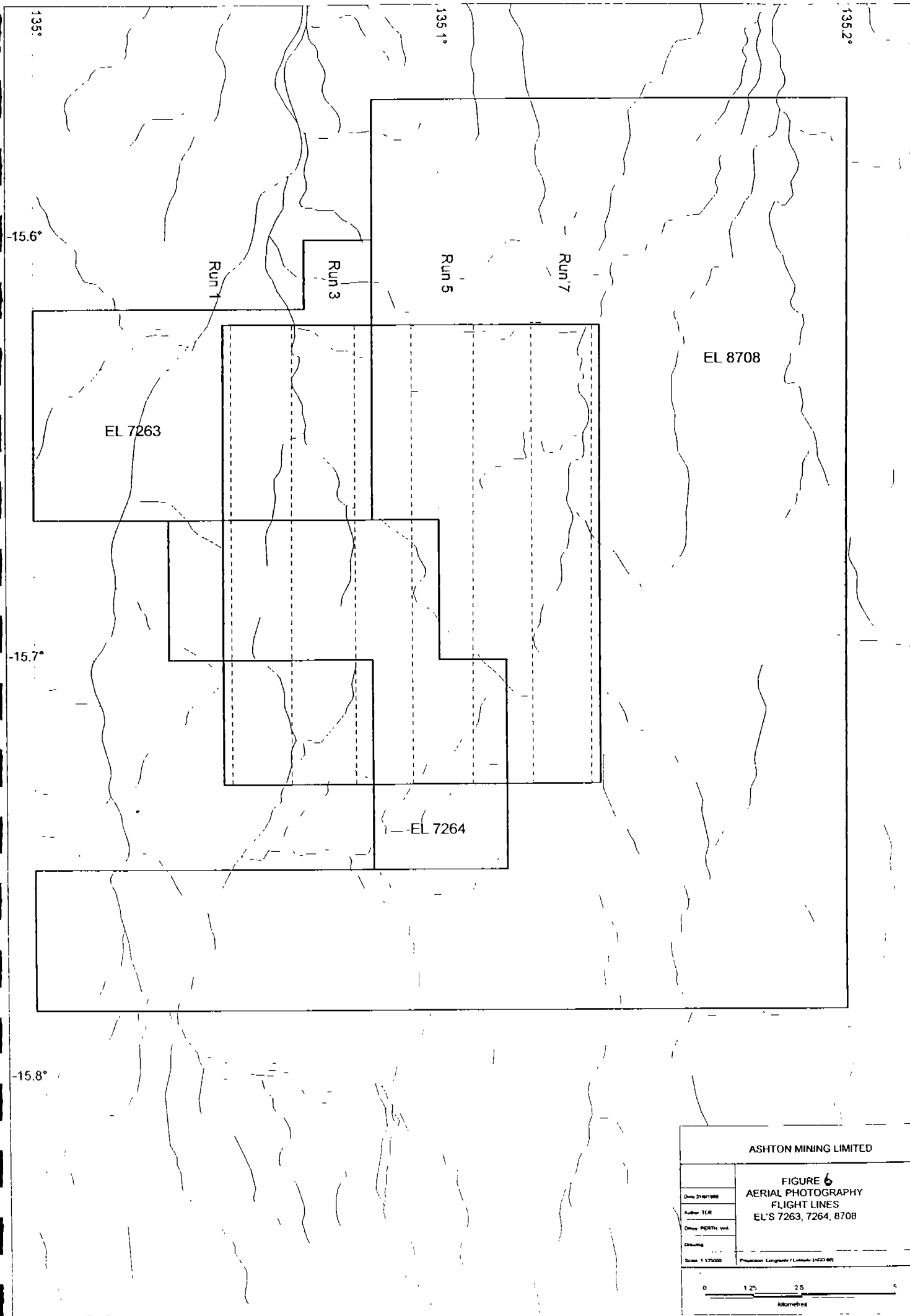
The survey was flown in the previous reporting period but was omitted from the previous annual report due to an office and accounting error. The expenditure has therefore been included in the current reporting period.

### **3.0 EXPLORATION EXPENDITURE**

Exploration expenditure for the period 9th January, 1996 to 8th January, 1997 amounted to \$23,549. A detailed breakdown of expenditure is given in Appendix 2.

### **4.0 CONCLUSIONS AND RECOMMENDATIONS**

Although the results of the sampling and geophysics are disappointing, the proximity to several positive results in areas adjacent to EL 8708 (Ashton Mining Limited. Report No.51411) warrants further work.



ASHTON MINING LIMITED	
<b>FIGURE 6</b> AERIAL PHOTOGRAPHY FLIGHT LINES EL'S 7263, 7264, 8708	
Date 21/11/1998	
Author TCR	
Drawn PERTH WA	
Scale 1:125000	Projection Longitude / Latitude (AGD 84)
<div>0 12.5 25 50</div> <div>kilometres</div>	

## 5.0 PROPOSED PROGRAMME AND BUDGET

The proposed programme and budget for the period 9th January, 1997 to 8th January, 1998 is as follows:

### 1. Further sampling, both loam and gravel

Geoscientist/Professional Staff	3,000
Field Support/Office Staff	2,000
Travel/Accommodation/Meals	1,000
Field Supplies	500
Vehicles	500
Freight/Storage	500
Helicopter Charter	4,000
Laboratory	3,000
Drafting/Computing	500
	<hr/>
	\$15,000
	<hr/>

## 6.0 REFERENCES

Ong, N (Dec-1995) Annual report, Exploration Licence 8708, 9th January, 1995 to 8th January, 1996. Ashton Mining Limited. Report No.51217

Rogers, T (Aug-1996) Final report, Exploration Licence 7263 "Nathan River", 24th May, 1991 to 23rd May, 1996

## **APPENDIX 1**

### **Sample Results**

Sample	Type	Result	Diamond		Chromite	Other
			Macro	Micro		
MYO00778	G	neg	-	-	-	-
MYO00779	G	neg	-	-	-	-
MYO00780	G	neg	-	-	-	-
MYO00781	G	neg	-	-	-	-
MYO00782	G	neg	-	-	-	-
MYO00784	G	neg	-	-	-	-
MYO00785	G	neg	-	-	-	-
MYO00786	G	neg	-	-	-	-
MYO00788	G	neg	-	-	-	-

NOTE: G = Gravel sample

## **APPENDIX 2**

### **Mantungula Helimag Survey Specifications**



## MANTUNGULA HELIMAG SURVEY SPECIFICATIONS

Area : Mantugula Area N.T.

Company Flown by: Geo Instruments Pty. Ltd.

Company Flown for: Ashton Mining Ltd.

Company Processed: Kevron Geophysics Pty. Ltd.

### AIRBORNE SURVEY EQUIPMENT:

Aircraft	: Bell 206 B3
Magnetometer	: Geometrics G833 Helium Vapour
Magnetometer Resolution	: 0.01 nT
Magnetometer Sample Interval	: 0.10 seconds
Data Acquisition	: Geo Instruments Model 2000
Data Recording	: 1.2 Mb floppy disks
Spectrometer	: Exploranium GR820
Crystal Size	: 16.8lt downward array
Spectrometer Sample Interval	: 1.0 Seconds (approx 35 metres)
Flight Path Record	: VHS Colour Video System
GPS Navigation System	: Novatel 951R GPS Receiver

### AIRBORNE SURVEY SPECIFICATIONS

Flight Line Direction	: 000 - 180 degrees
Flight Line Separation	: 100 metres
Tie Line Direction	: 090 - 270 degrees
Tie Line Separation	: 1000 metres
Terrain Clearance	: 40 metres (MTC)

Flight path calculated from differentially corrected GPS Data using a Novatel 951R GPS Receiver.

### **APPENDIX 3**

#### **Statement of Expenditure**

# STATEMENT OF EXPENDITURE

## EXPLORATION LICENCE 8708

Annual Report

For the period  
9th January, 1996 to 8th January, 1997

Geoscientist/Professional Staff	734
Field Support/Office Staff	859
Other Contractors	113
Travel/Accommodation/Meals	385
Field Supplies	155
Geophysics	13,438
Laboratory	2,884
Drafting/Computing	291
Aerial Photography	2,550
Sub-Total	<hr/> 21,409
Overheads	2,140
<b>Total:</b>	<hr/> <b>\$ 23,549</b> <hr/>