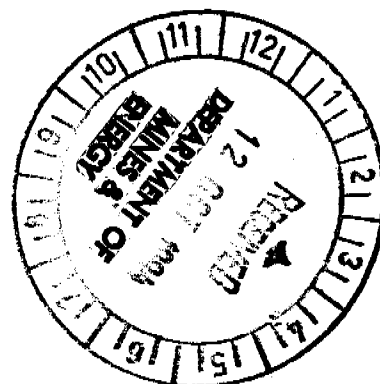




**EXPLORATION LICENCE 7465**  
**GREAT WESTERN 1**

**THIRD ANNUAL REPORT**

**2 AUGUST 1993 - 1 AUGUST 1994**



**LICENSEE:**

**GIANTS REEF EXPLORATION PTY LTD**  
**A.C.N. 009 200 346**

TENNANT CREEK 1:250 000  
SE53-14  
SHORT RANGE 1:100 000  
5659  
FLYNN 1:100 000  
5759

P. G. SIMPSON  
DARWIN, N.T.  
SEPTEMBER, 1994

CR94/746

## SUMMARY

Exploration Licence 7465 is located 28 kilometres northwest from Tennant Creek. The Licence was granted to Giants Reef Exploration Pty Ltd (Giants Reef) on 2 August 1991 for a period of four years, and was reduced from 5 blocks to 3 blocks at the end of the second year, and to 2 blocks at the end of the third year.

Exploration for gold and copper orebodies in the third year of tenure consisted of line clearing and gridding over all of the Licence, followed by a gravity survey over a selected area.

Assessment of the gravity data in conjunction with the aeromagnetic data obtained from an airborne survey in 1993 is continuing. Drill targets will be decided after an extensive vacuum drill bedrock geochemistry programme planned for the fourth year of the Licence.

Expenditure on exploration during the third year of tenure totalled \$34,300.

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## 1. INTRODUCTION

EL 7465, *Great Western 1*, is part of the *Great Western Project* area which consists of a group of Exploration Licences and Mineral Claims held by Giants Reef and associated companies in the Orlando-Warrego-White Devil area of the Tennant Creek goldfield. This report records the exploration work done during the third year of tenure from 2 August 1993 to 1 August 1994.

## 2. LOCATION AND ACCESS

EL 7465 is situated about 28 kilometres north-west from Tennant Creek, south of the Tennant Creek-Warrego road and between the Orlando and White Devil mines.

Access is via the Tennant Creek-Warrego road, with the turn-off to the Orlando mine being approximately 300 metres west of the northeast corner of the Licence.

The area is mostly flattish to undulating, with spinifex grass and patches of light scrub. Apart from some low hills in the central part of the Licence, the area is generally accessible to 4WD vehicles.

Figure 1 shows the location of the EL and the surrounding tenements, including ELs 7688, 7807 and 7901, and various Mineral Claims and claim applications held by Giants Reef or its subsidiary companies.

## 3. TENURE

EL 7465 was granted on 2 August 1991 to Giants Reef Exploration Pty Ltd, a wholly-owned subsidiary of Giants Reef Mining N.L., for a term of 4 years. The licence area originally covered 5 blocks, which was reduced to 3 blocks at the end of the second year, and to 2 blocks at the end of the third year (Figure 2).

The EL lies within Perpetual Pastoral Lease 946, Phillip Creek Station.

## 4. GEOLOGY

EL 7465 is underlain by metasediments of the Early Proterozoic Warramunga Group, including the Black Eye Member of the Carraman Formation. This includes greywackes, siltstones and shales containing several percent magnetite and/or haematite, as well as a widespread semi-conformable feldspar porphyry unit. The Great Western Syncline runs through the eastern end of the Licence, plunging to the northwest, and a major anticlinal structure runs through the western (now relinquished) area.

## 5. EXPLORATION DURING THE YEAR

### 5.1 Line clearing and gridding

Line clearing with a front-end loader was carried out over the three blocks of the EL. Lines were oriented north-south (AMG) and spaced 200 metres apart except in the western most block where lines were 100 metres apart, with some sections closed down to 50 metres. The work was conducted by contractor, P W Youngs.

The technique used was to lightly scrape the surface, removing spinifex and small bushes to provide vehicle access, while not disturbing the rootstock of the vegetation. It has been noted on some of the Company's other exploration areas in the Tennant Creek field that this method of line clearing allows quick recovery of the vegetation after the first substantial rains.

The grid lines were laid out with a theodolite. Short wooden white-topped dumpy pegs were put in at every 100 metres, with their co-ordinates engraved on stapled aluminium tags. The 25 metre intervals along the lines were marked with wire pin markers.

This line clearing and gridding was done as the first step in carrying out a gravity survey and vacuum drill bedrock geochemical sampling over the whole Licence.

### 5.2 Gravity survey

A section of the gridded area was the subject of a detailed gravity survey. This was concentrated in the area south of the Great Western mine, where the aeromagnetic data show an area of interest. The work was carried out by contractor P W Youngs, using a LaCoste Romberg Model G7 instrument. The object was to detect dense bodies which might be ironstone masses of the kind associated with Tennant Creek style gold-copper orebodies.

Within the area surveyed, no obvious targets were noted. This survey was the initial stage of a larger survey to cover the whole EL. A comprehensive analysis of the gravity information will be made once the rest of the gravity survey has been completed.

The survey readings are plotted on Map 1.

### 5.3 Geophysical appraisal

The aeromagnetic and radiometric data obtained in the May 1993 airborne geophysical survey was assessed by geophysical consultant, Geophysical Prospecting Analysis Pty Ltd of Sydney. Although a number of magnetic features of interest were noted within EL 7465, such as those south of the Great Western

mine and the northwest-trending features in the eastern two blocks of the EL, no anomalies that could be regarded as drill targets were noted. It was decided that the aeromagnetics would be re-assessed in conjunction with the gravity information over all the EL, once the gravity survey has been completed.

## 6. CONCLUSIONS

From the airborne geophysical survey and the gravity survey work done to date, no clear target areas have yet emerged, but the geophysical information will be reappraised after the gravity survey has been extended to cover the remainder of the Licence area.

Line clearing and gridding has been completed over all the EL in preparation for finishing the gravity survey and to provide access for the vacuum drilling programme in the fourth year of the Licence.

## 7. EXPENDITURE

The minimum expenditure covenant for the third year of EL 7465 was \$33,000.

Total expenditure during the third year was as follows:

	\$
• Geological reconnaissance	300
• Computer processing of aeromagnetic data	3,200
• Geophysical interpretation	8,400
• Gridding and line clearing	13,400
• Levelling and gravity survey	4,500
• Overheads	3,000
• Administration	1,500
TOTAL	<u>\$34,300</u>

## 8. PROGRAMME FOR FOURTH YEAR

During the fourth year of tenure it is proposed to carry out the following exploration:

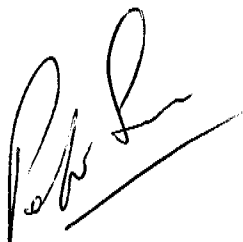
- (i) Completion of the detailed gravity survey
- (ii) Vacuum drill bedrock geochemical sampling
- (iii) Assessment of the vacuum drill geochemistry results in conjunction with the aeromagnetic and gravity survey information to select drill targets.

## 9. PROPOSED EXPENDITURE

The estimated minimum proposed exploration expenditure for the fourth year of tenure is as follows:

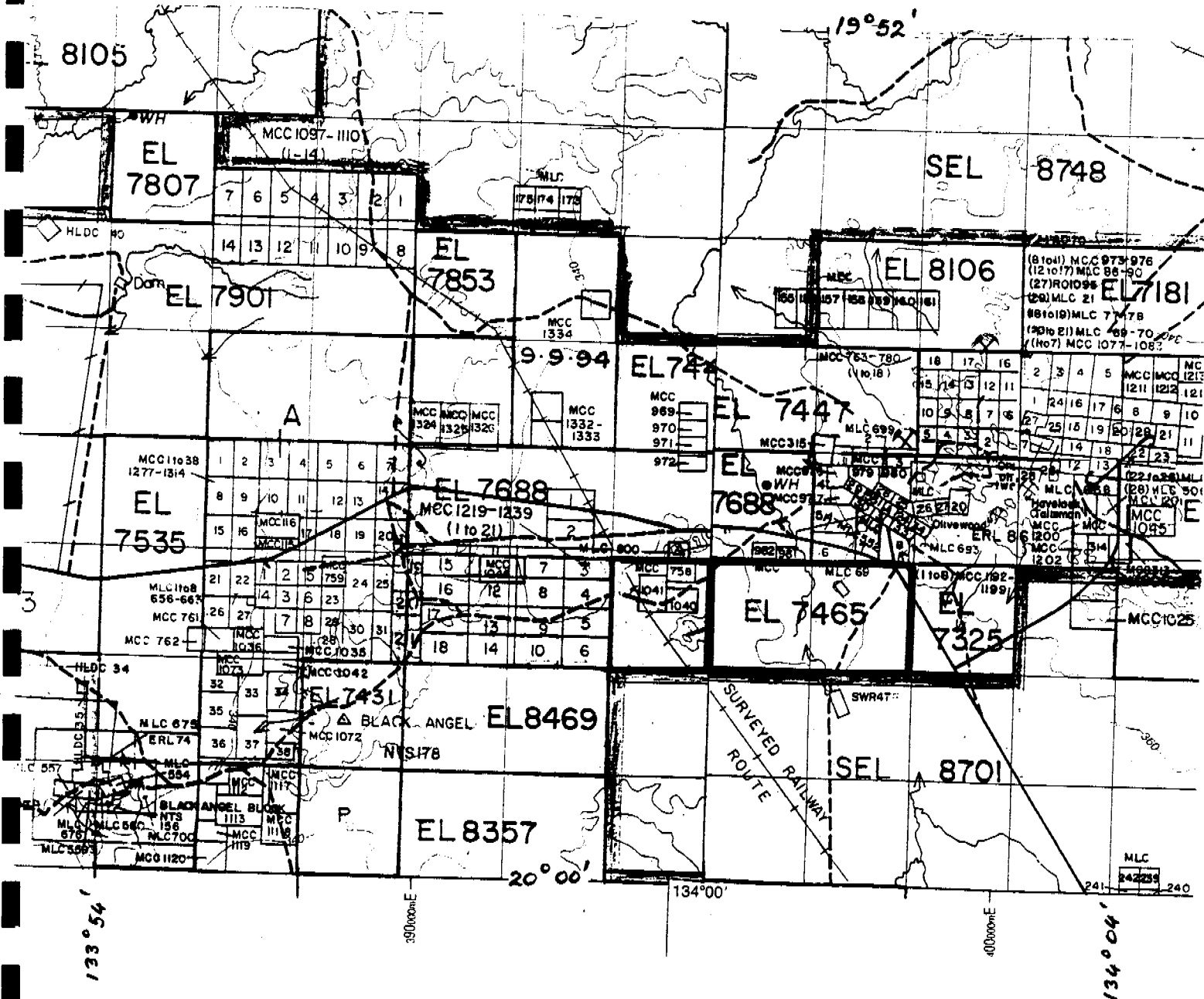
	\$
• Completion of gravity survey	4,500
• Vacuum drilling, including assays	12,000
• Assessment and target selection	1,500
TOTAL	<u>\$18,000</u>

Exploration programmes can be affected by results, and while \$18,000 is the proposed minimum expenditure, specific activities may vary according to the results achieved.

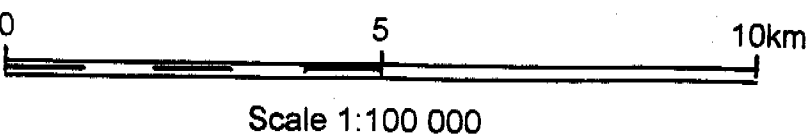


P.G. SIMPSON  
EXPLORATION MANAGER

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EL7465 AND SURROUNDING TENEMENTS

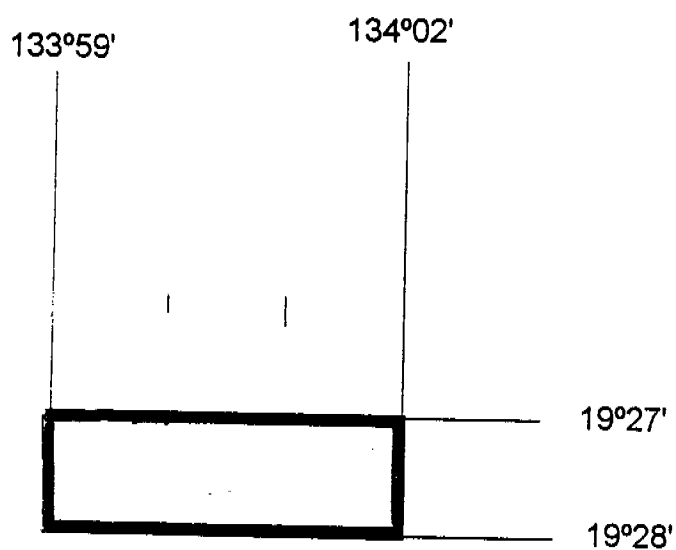


From NTDME tenement maps 52/1 and 52/2, September 1994

Figure 1



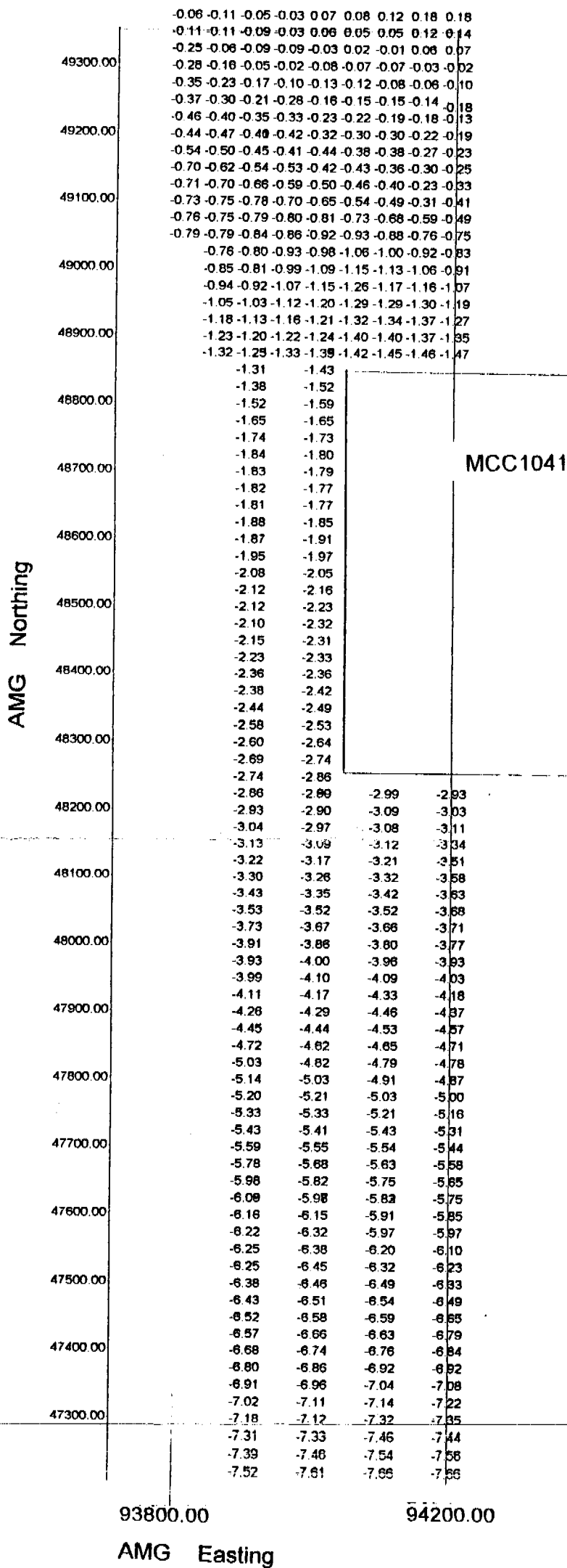
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**EL7465 BOUNDARIES DURING THIRD YEAR**

From NTDME Licence document

**Figure 2**



Reading Interval 25 metres  
Line Spacing 50 metres  
Gravity Meter LaCoste Romberg  
Density 2.5 gm/cc  
Gravity Base 94100E / 49000N 0.00milligals  
Latitude Base 94100E / 49000N  
Elevation Base 340 metres

GIANTS REEF EXPLORATION PTY LTD

EL7465  
GREAT WESTERN 1

Block 40/68