EL 22590
Stuart Highway

FINAL REPORT

LICENSEE:
GIANTS REEF EXPLORATION PTY LTD
A.B.N.58 009 200 346
(A wholly owned subsidiary of Emmerson Resources Ltd)


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OCTOBER 2008

DISTRIBUTION:
Department of Regional Development, Primary Industry, Fisheries & Resources
Central Land Council
Emmerson Resources Ltd

MAP SHEETS:
TENNANT CREEK SE53-14
FLYNN 5759
SHORT RANGE 5659
1:100 000
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Figure 1. Location Map
1. SUMMARY

This Final Report records exploration work done on EL 22590 between 25 September 2001 and 07 July 2008.

The discovery of the haematite-magnetite Chariot deposit in 1998 has shown the potential for variations on the classic magnetite ironstone hosted gold +/- copper deposits, where lower order magnetic anomalies, plus gravity methods can define new targets. Discoveries by Giants Reef of mineralisation such as at Malbec West, Marathon and Billy Boy further support this.

Emmerson’s review of the exploration work conducted over EL 22590, revealed that further exploration work and reassessments of previous exploration needed to be conducted in order to fully assess the potential for economic discoveries.

Emmerson commenced its aggressive exploration programs in April 2008 which includes, a detailed ground gravity survey of the Tennant Creek Mineral field, including EL 22590, airborne geophysical surveys, and drill testing of targets. With newly captured geophysical data providing greater detail of the exploration potential of Emmerson’s tenure which includes EL 22590, Emmerson consolidated EL 22590 into SEL 26594 to allow for the analysis and interpretation of this data, and provided with good results drill testing of targets identified.

Therefore with reassessments of previous exploration work and the analysis and interpretation of newly captured data to be conducted during the remainder of 2008 and into 2009 all Emmerson Tenure, including EL 22590 remain ‘prospective’.

Automatic cancellation of EL 22590 occurred on 07 July 2008 upon the grant of Substitute Exploration Licence 26594.
2. INTRODUCTION

Exploration Licence 22590 was acquired by Giants Reef Exploration Pty Ltd (Giants Reef) to search for Tennant Creek style iron oxide copper-gold deposits (“IOCG”).

Giants Reef Exploration is a wholly owned subsidiary of Emmerson Resources Ltd.

This Final Report records exploration work done on EL 22590 between 25 September 2001 and 07 July 2008.

3. LOCATION

EL 22590 STUART HIGHWAY is located approximately 39km north of Tennant Creek Township, on the Flynn (5759) 1:100 000 scale map sheet.

The principal access to the general license area from Tennant Creek is north via the Stuart Highway which bisects the licence, and then east or west by various dirt roads and fence line tracks. However, much of the license areas are rocky, without tracks and difficult to reach, even in a 4x4 vehicle. The unsealed tracks become impassable during the wet season.

Figure 1 shows the location of EL 22590 Licence with respect to the Tennant Creek Township.

4. TENURE

Exploration Licence 22590 was granted to Giants Reef Exploration Pty Ltd on the 25th September 2001, for a period of 6 years, and renewed for a term of 2 years on 25 September 2007.

The Exploration Licence area lies within NT Portion 408, Perpetual Pastoral Lease 946, Phillip Creek Station. Exploration Licence 22590 is subject to an Indigenous Land Use Agreement (ILUA) signed in September 2000 between the Native Title holders of the Tennant Creek region, represented by the Central Land Council (CLC), and Giants Reef.

At the end of the fourth tenure year a statutory relinquishment was applied to EL 22590, the licence area was reduced from 4 graticular blocks to 2 graticular blocks.
5. GEOLOGY

5.1 Regional Geology

The reader is referred to AusIMM Monograph 14 (Geology of the Mineral Deposits of Australia and Papua New Guinea), Volume 1, pp. 829-861, to gain a good introduction to the regional geology and styles of gold-copper mineralisation of the area.

In 1995 the Northern Territory Geological Survey released a geological map and explanatory notes for the Flynn 1:100,000 sheet, which covers the area of the licenses.

The rocks of the Warramunga Formation host most of the orebodies in the region and underlie most of the Exploration Licenses.

5.2 Local Geology

EL 22590 is largely covered by Tennant Creek drainage system and comprises Cainozoic alluvium and colluvium. The cover sediments include alluvial deposits in active channels and on floodplains, and sheet/dune sand and sandy soil on high floodplain terraces.

In 1995 the Northern Territory Geological Survey released geological maps and explanatory notes for the Tennant Creek 1:250,000 sheet, and the Flynn (5759) 1:100 000 sheet, which covers the area of the license.

6. EXPLORATION

6.1 Targets and Concepts

Exploration for large base metal deposits possibly associated with a regional gravity anomaly centred in the southern part of the area covered by the adjoining Licences, with additional targets including Tennant Creek-type ironstone hosted Au-Cu-Bi ore bodies.

Proterozoic Inliers world-wide, and particularly in Australia, are renowned for their iron-rich mineralisation and world class metal deposits. For many years prominent geologists and researchers in the industry have pointed out the geological similarities that the broader Proterozoic Tennant Creek Inlier shares with the Gawler Craton, host to the Olympic dam deposit, and to the Eastern Succession of the Mt Isa Inlier that hosts the Ernest Henry and Selwyn deposits. These similarities, though recognised, had not been widely acted upon by the industry.
Exploration was aimed at discovering large deposits of base metals along with substantial gold and/or silver, probably accompanied or hosted by large volumes of iron oxide minerals.

Giants Reef’s target model iron oxide-rich lithologies and are therefore likely to be associated with regional or district-scale gravity anomalies, and potentially coincident with a magnetic anomaly.

The discovery of the haematite-magnetite Chariot deposit in 1998 has shown the potential for variations on the classic magnetite ironstone hosted gold +/- copper deposits, where lower order magnetic anomalies, plus gravity methods can define new targets. Discoveries by Giants Reef of mineralisation such as at Malbec West, Marathon and Billy Boy further support this. Giants Reef considers the potential for the discovery of mineralisation in hematite dominant ironstones in the relinquished group is limited.

6.2 Exploration Undertaken – 25 September 2001 to 07 July 2008

Very little work was completed over EL 22590 during the tenure term. Lindeman Geophysics completed a brief geophysical appraisal, however this resulted in no identification of gravity or magnetic anomalies worthy of follow up ground exploration. Giants Reef planned to complete a literature review with the view of surrendering this tenement during the second tenure year.

Further assessment of the EL and target generation was briefly undertaken in the second and third tenure years due to Giants Reef’s commitments being elsewhere in the Tennant Creek goldfield. No action was taken following the review.

Giants Reef commissioned a Gold-Copper Expansion Study which commenced in earnest during the fourth tenure year. The strategy for the study was to compile and review an inventory of potential copper bearing gold deposits as well as copper rich (gold poor) deposits. This was to form the basis of selecting process routes and completing a first pass conceptual study. The Marathon prospect formed part of this review due to its high-copper properties.

Further during the fourth tenure year a compilation of all available exploration data was undertaken. This was followed up by a detailed ground gravity survey of the area stretching from the Northern Star to Carraman/Klondyke deposits. The survey was undertaken by Daishsat Geodetic Surveyors over some 7 km2 of Warramunga Formation. This survey covered only a small area (4.6 km2) in the south east corner of EL 22590, directly east of the Marathon prospect and north of the Troy prospect. Results from the gravity survey did not highlight any anomalies of significance outside of these known prospects.

During the tenure term Giants Reef completed a scoping study to evaluate all known copper-gold resources and prospects on its tenements. Work comprised:

- Compilation of an inventory of all copper-gold resources and drilled prospects;
• Assessment and ranking of resources and prospects;

The Marathon group of deposits, which are located in MCC 1065 within the License area, were assessed as part of this study. This group comprises 3 large ironstones oriented along a broad northwest trending shear zone over a strike length of 2km. Patchy oxide gold mineralisation occurs in the east side of the main shear, with supergene copper mineralisation appearing at 40-60m below surface. There are also a number of significant copper and patchy gold intersections at depths of 100-200m below surface. Resources available at the time were insufficient to warrant development studies. The location of the Stuart Highway renders any development of potential oxide gold resources problematic. Further work including extension drilling at depth is required to further explore this large system.

No in-ground exploration was conducted over the licence during the remainder of its tenement life.

7. REHABILITATION

Exploration within EL 22590 during the term of tenure was limited to non-invasive reassessment and revaluation of previous exploration work and geophysical surveys, data integration of all previous data into Emmerson Resources Database, and as such, no rehabilitation was required.

8. CONCLUSIONS

Emmerson’s review of the exploration work conducted over EL 22590, revealed that further exploration work and reassessments of previous exploration needed to be conducted in order to fully assess the potential for economic discoveries.

The discovery of the haematite-magnetite Chariot deposit in 1998 has shown the potential for variations on the classic magnetite ironstone hosted gold +/- copper deposits, where lower order magnetic anomalies, plus gravity methods can define new targets. Discoveries by Giants Reef of mineralisation such as at Malbec West, Marathon and Billy Boy further support this.

Emmerson commenced its aggressive exploration programs in April 2008 which includes, a detailed ground gravity survey of the Tennant Creek Mineral field, including EL 22590, airborne geophysical surveys, and drill testing of targets. With newly captured geophysical data providing greater detail of the exploration potential of Emmerson’s tenure which includes EL 22590, Emmerson consolidated EL 22590 into SEL 26594 to allow for the
analysis and interpretation of this data, and provided with good results drill testing of targets identified.

Therefore with reassessments of previous exploration work and the analysis and interpretation of newly captured data to be conducted during the remainder of 2008 and into 2009 all Emmerson Tenure, including EL 22590 remain ‘prospective’.
9. EXPENDITURE

Expenditure for the term of the tenure for EL 22590 is as follows:

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EMMERSON RESOURCES LTD

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