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**COMBINED ANNUAL REPORT FOR THE  
WARREGO GROUP  
GR403  
ML's 30888 & C692**

**01 FEBRUARY 2017 – 31 JANUARY 2018**

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

**AUTHOR:**  
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**DISTRIBUTION:**

Department of Primary Industry & Resources  
Central Land Council  
Emmerson Resources Ltd

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**MAP SHEETS:**

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

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## **1.0 SUMMARY**

The titles of the Warrego Group were acquired by Giants Reef Exploration Pty Ltd (Giants Reef) to initially search for Tennant Creek style iron oxide copper-gold deposits (IOCG) and later to support the infrastructure of the Warrego Processing Plant. Giants Reef is a wholly owned subsidiary of Emmerson Resources Ltd (Emmerson).

This combined report records the exploration work completed on these titles during the period from 01 February 2017 to the 31 January 2018.

Exploration activity was limited due to exploration focus elsewhere. Future exploration will be limited due to the titles being used for the Warrego Processing Plant and associated infrastructure.

As displayed in figure 4 the infrastructure dominates the titles and further exploration will be dependent on success of new technologies elsewhere in the Tennant Creek Mineral Field (TCMF), but nothing has been planned to date.

## 2.0 INTRODUCTION

The titles of the Warrego Group were acquired by Giants Reef to initially search for Tennant Creek style iron oxide copper-gold deposits (IOCG) and then subsequently support the infrastructure of the Warrego Processing Plant. Giants Reef is a wholly owned subsidiary of Emmerson.

This combined report records the exploration work completed on these titles during the period from 01 February 2017 to the 31 January 2018.

Figure 1 shows the location of the Warrego Group with respect to the Tennant Creek Township and figure 2 details the tenure of the Warrego Group.

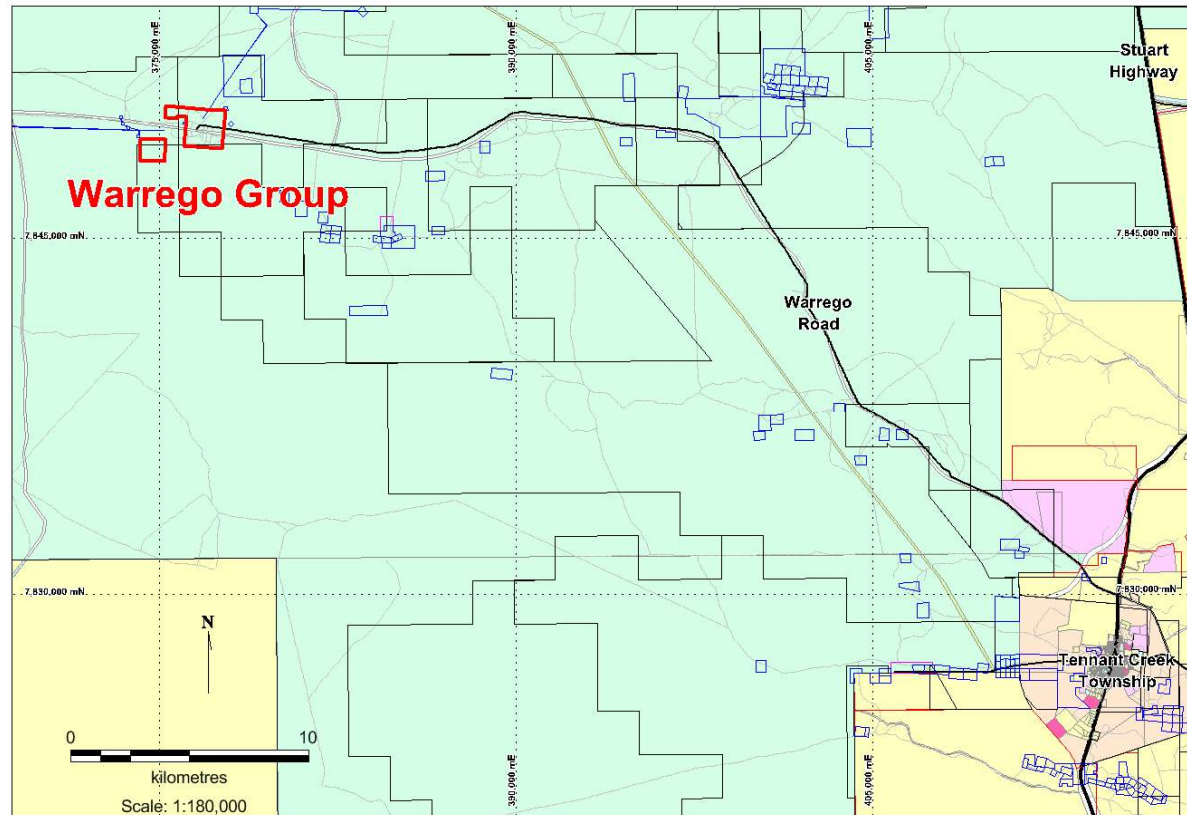


Figure 1: Location of Warrego Group with respect to the Tennant Creek Township

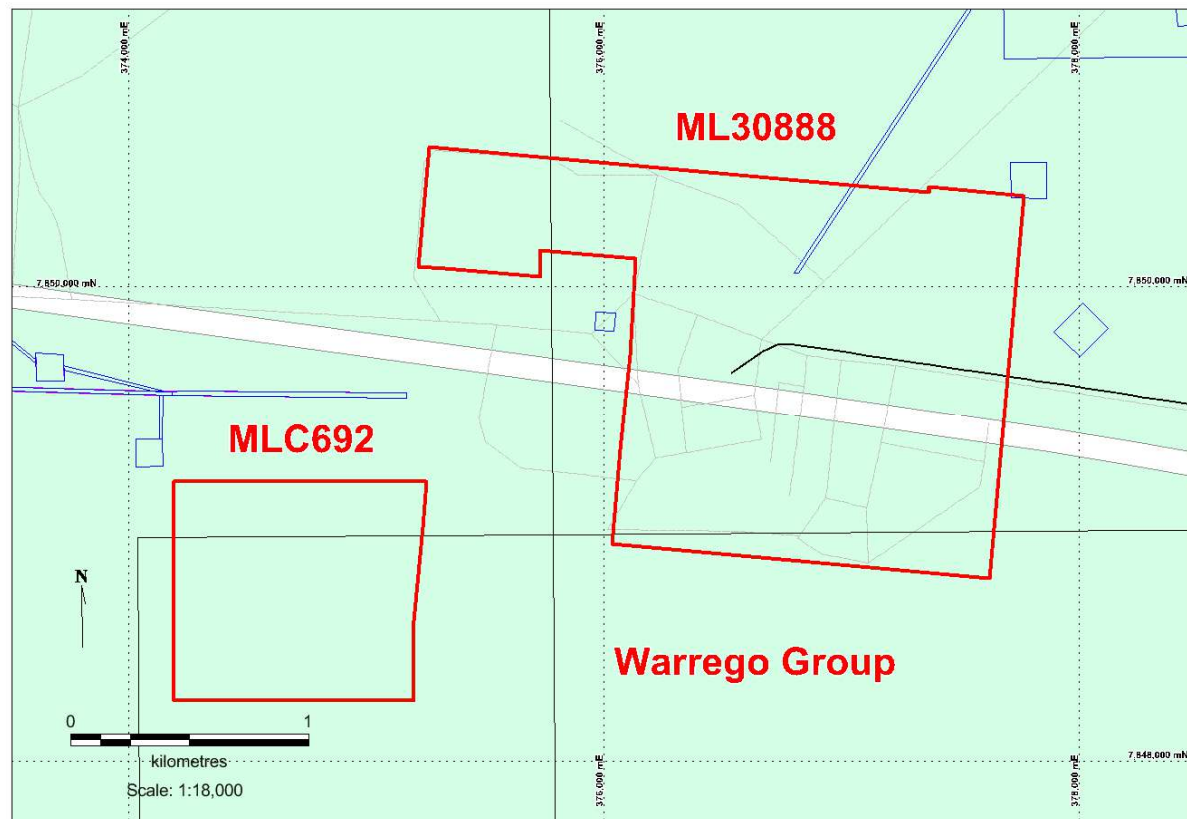


Figure 2: Warrego Group Tenure

### 3.0 LOCATION

The Warrego Group is located approximately between 43km and 46.5km North West of the Tennant Creek Township. The Licence falls on the Short Range (5659) 1:100,000 scale map sheet.

Access to the group is north west via the Warrego Road to the Warrego Processing Plant site and the Historical Warrego Town Site, this sealed road leads directly to ML 30888 and access to MLC692 is west via a series of unsealed 4x4 tracks.

## 4.0 TENURE

The tenure details of the Warrego Group are detailed in the following table;

Tenement ID	Tenement Name	Holder	Interest	Grant Date	Effective Date	Expiry Date	Area (Ha)
ML30888	Warrego	GRE	100	10/07/2015	10/07/2015	09/07/2025	306
MLC692	Warrego Mine	GRE	100	15/11/1996	31/01/2015	31/12/2025	95

Table 1: Warrego Group Tenure Details

The Warrego Group comprises 2 granted Mineral Leases, refer to figures 1 & 2 and table 1, covering an area of 401 hectares.

The leases are located on –

- NT Parcel's 00408, Perpetual Pastoral Lease, Phillip Creek Station, PPL946

The Warrego Group has no AAPA or CLC registered sacred sites within the area.

## 5.0 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 Tennant Creek 1:100,000 sheet, which covers the area of the Licences.

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

### 5.2 Geology of the Warrego Group

The rocks of the Warrego Group consist of major outcrops of weathered siltstone and greywacke of the Palaeoproterozoic Warramunga Formation forming a series of ridges that dominate above the Cainozoic colluvium, scree and alluvial deposits in active channels and on flood plains with less extensive minor outcropping of weathered siltstone and greywacke of the Paleoproterozoic Warramunga Formation.

## 6.0 WORK DONE DURING THE REPORT PERIOD

Exploration activity was limited due to exploration focus elsewhere, Future exploration will be limited due to the titles being used for the Warrego Processing Plant and associated infrastructure, but future works will be around the continuing assessment, both desktop and field visits to geologically assess the Kenex generated target within the Warrego Group area, refer to figure 3.

*“Kenex targets are generated from the Kenex Pty Ltd (Kenex) predictive modelling of the Tennant Creek Mineral Field, this product is a statistical predictive tool for predicting the possible prospective sites for Tennant Creek style mineralisation. The model produced many target areas which contain all or some of the essential criteria for possible economic mineralisation in the Tennant Creek Mineral Field. Emmerson has assessed the generated targets and ranked them in order of potential prospectivity. The highly ranked targets were selected for field visits and desktop data compilation and validation. All this data was compiled and some rock chipping took place during site visits to compile a geological and geophysical assessment of the target which was then ranked for future exploration.”*

The target exhibited geological prospective rocks and structures but the overall ranking wasn't high enough for exploration to commence immediately. Following the recent exploration success at Mauretania in EL 28761 and Edna Beryl in MLC705 these targets will be reassessed and re ranked in 2018 for future exploration.



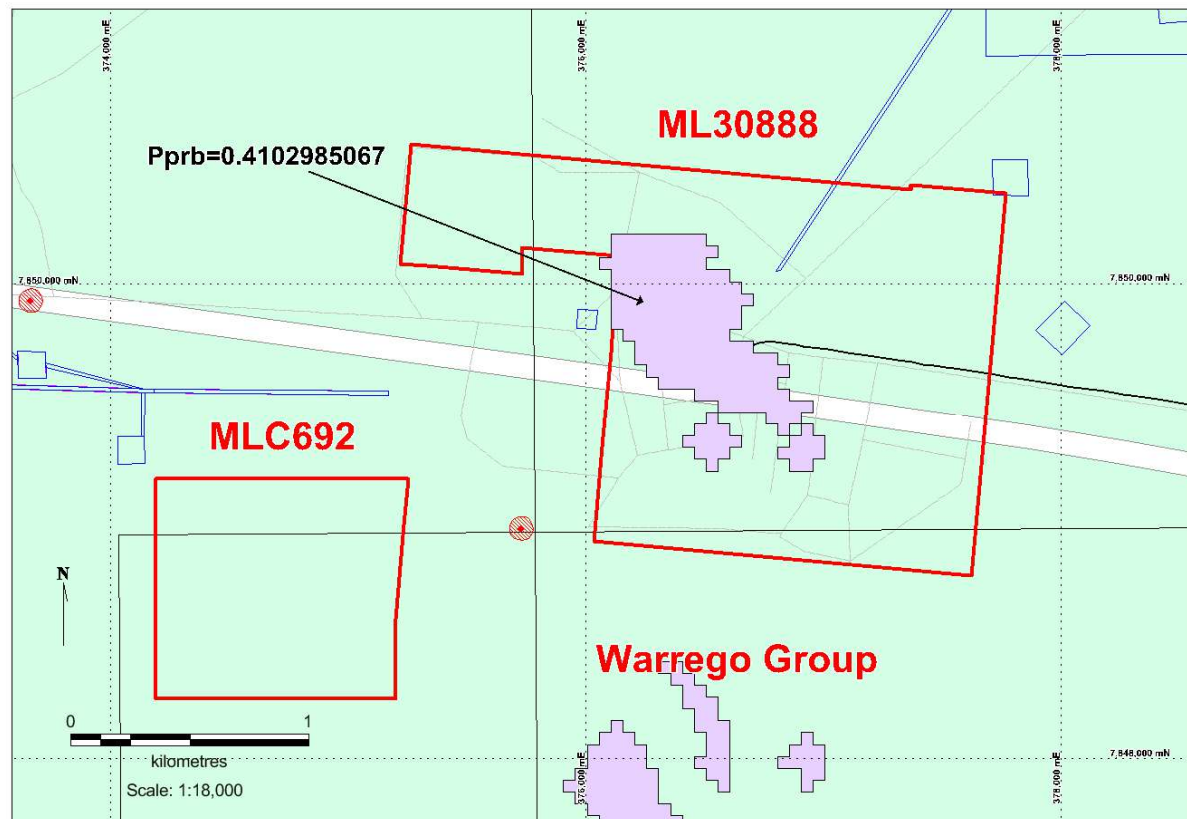


Figure 3: Warrego Group vs. Kenex generated targets (magenta polygons)

As displayed in figure 4 the infrastructure dominates the titles and further exploration will be dependent on success of new technologies elsewhere in the Tennant Creek Mineral Field (TCMF), but nothing has been planned to date.

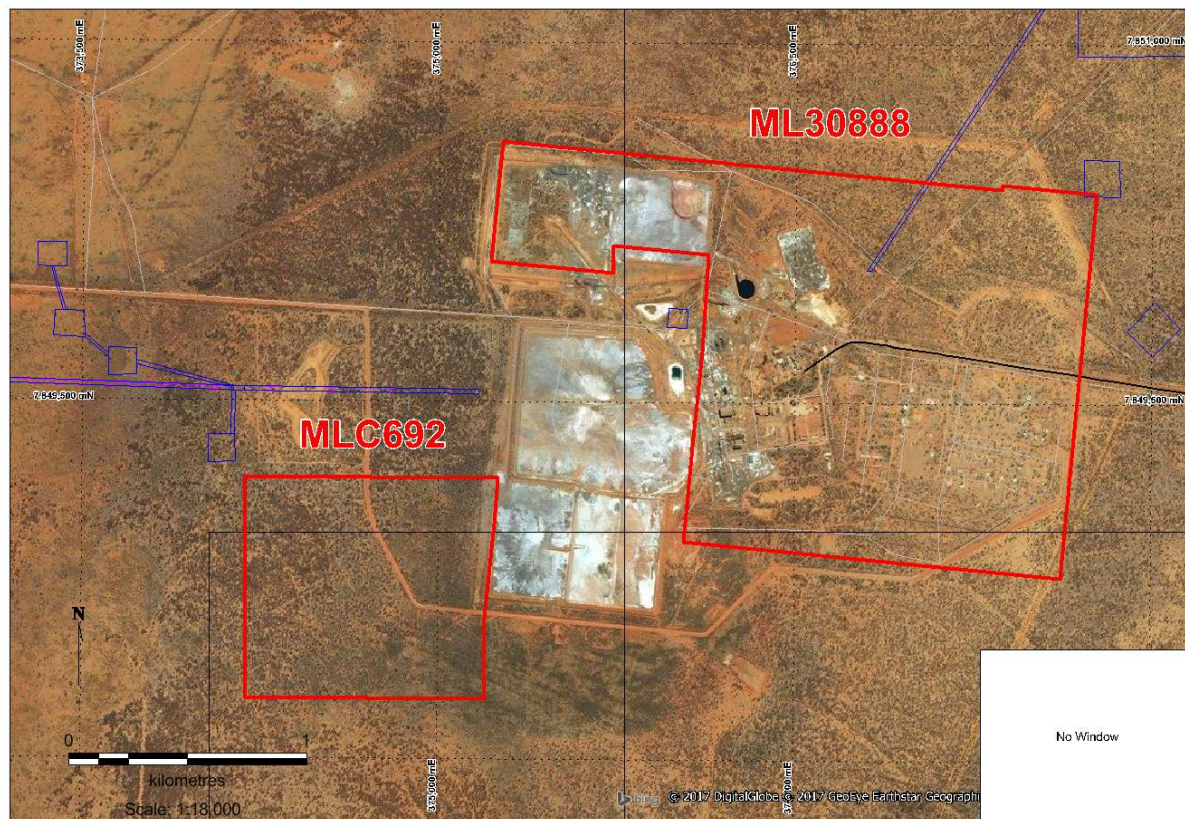


Figure 4: Warrego Group Infrastructure

## 7.0 REHABILITATION

Rehabilitation was not required as no ground disturbing activities were conducted. All future rehabilitation will be completed and performed as detailed in the WPA Mining Management Plan – Authorisation 0461-02 which includes the titles of the Warrego Group.

## 8.0 CONCLUSIONS

Exploration activity was limited due to exploration focus elsewhere, Future exploration will limited due to the titles being used for the Warrego Processing Plant and associated infrastructure, but future works will be around the continuing assessment, both desktop and field visits to geologically assess the Kenex generated target within the Warrego Group area, refer to figure 3.

The target exhibited geological prospective rocks and structures but the overall ranking wasn't high enough for exploration to commence immediately. Following the recent exploration success at Mauretania in EL 28761 and Edna Beryl in MLC705 these targets will be reassessed and re ranked in 2018 for future exploration.

As displayed in figure 4 the infrastructure dominates the titles and further exploration will be dependent on success of new technologies elsewhere in the Tennant Creek Mineral Field (TCMF), but nothing has been planned to date.

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