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# COMBINED ANNUAL REPORT FOR THE BURNT SHIRT GROUP MCC 211 and MLC's 182 – 184 & 520

### 01 JANUARY 2016 - 31 DECEMBER 2016

LICENSEE:

SANTEXCO PTY LTD A.B.N.002 910 296 GIANTS REEF EXPLORATION PTY LTD A.B.N.009 200 346 (Both are wholly owned subsidiaries of Emmerson Resources Ltd)

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February 2017

DISTRIBUTION:	MAP SHEETS:	
Department of Mines & Energy	□ TENNANT CREEK	SE53-14
Central Land Council		1:250 000
Emmerson Resources Ltd	□ TENNANT CREEK	5758
		1:100 000

#### Table of Contents

3
4
5
6
7
7
p 8
DD 22
24
24
25

#### FIGURES

- FIGURE 1. BURNT SHIRT GROUP LOCATON & TENURE MAP
- FIGURE 2. AAPA & CLC REGISTERED SACRED SITES
- FIGURE 3. BURNT SHIRT GROUP KENEX PREDICITVE MODELLING GENERATED TARGETS

# 1.0 SUMMARY

The titles of the Burnt Shirt Group were acquired by Giants Reef Exploration Pty Ltd (Giants Reef) and Santexco Pty Ltd (Santexco) to search for Tennant Creek style iron oxide copper-gold deposits (IOCG). Giants Reef and Santexco are wholly owned subsidiaries of Emmerson Resources Ltd (Emmerson).

This combined report records the exploration work completed on these titles during the period from 01 January 2016 to the 31 December 2016.

Exploration activity was limited due to exploration focus elsewhere. Future exploration with focus on desktop and field visits to geologically assess a number of Kenex generated targets within the Burnt Shirt Group area.

These targets exhibited geological prospective rocks and structures but their 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 2017 for future exploration.

Emmerson with JV partners Evolution and co funded by the NT department of Mines and Energy conducted a regional seismic survey through the Burnt Shirt Group area, but not directly through the titles. The survey was conducted over 60km, 30km north of the Tennant Creek Township and 30km south of the township. The results are continuing to be assessed and interpreted with the aim of generating new areas for target generation and testing with implications for nearby titles, hence the Burnt Shirt Group titles.

The Burnt Shirt Group covers the southern limb of a large syncline with numerous small historical workings. These historical workings coincide with a magnetically subdued area but strong gravity anomalism. The Burnt Shirt Group remains highly prospective especially with the knowledge learnt from exploration in the Gecko area over the past 4 years and the discovery of significant high grade gold and copper in magnetically subdued and structurally prospective environments, the Burnt Shirt Group warrants greater detailed analysis and possibly future HeliTEM and IP surveys to refine the target workspace and assess the prospectivity for the identification of economic mineralisation/deposits.

### 2.0 INTRODUCTION

The titles of the Burnt Shirt Group were acquired by Giants Reef and Santexco to search for Tennant Creek style iron oxide copper-gold deposits (IOCG). Giants Reef and Santexco are wholly owned subsidiaries of Emmerson.

This combined report records the exploration work completed on these titles during the period from 01 January 2016 to the 31 December 2016.

Figure 1 shows the location of the Burnt Shirt Group with respect to the Tennant Creek Township and also details the tenure of the Burnt Shirt Group.

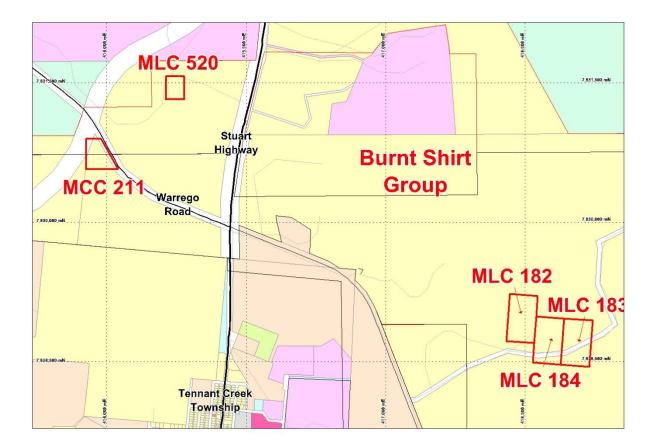


Figure 1: Location of Burnt Shirt Group with respect to the Tennant Creek Township

# 3.0 LOCATION

The Burnt Shirt Group is located approximately between 3.8km and 4.5km north and north east of the Tennant Creek Township. The Licence falls on the Tennant Creek (5758) 1:100,000 scale map sheet.

Access to the group is either of two routes; to access the titles in the north area it is north via the Stuart Highway then west via the Warrego Road to MCC 211 which is bounded by Warrego Road on its northern edge (approximately 1.3km form the turn off) or to reach MLC 520 travel north along the Stuart Highway for approximately 3km then west via unsealed and fence line 4WD tracks. Access to MLC's 182 – 184 is east via Peko Road, then north along Kaczinsky Road until you reach the Lone Star Mine road which runs north east of Kaczinsky Road. The Lone Star Mine road runs through all three titles approximately 1.5km from the turn off.

Further access within each of the titles is via a series of unsealed, 4x4 and fence line tracks, which during and immediately after rain the area is generally inaccessible.

### 4.0 TENURE

Tenement ID	Tenement Name	Holder	Interest	Grant Date	Effective Date	Expiry Date	Area (Ha)
MCC211	Shamrock	GRE	100	25/11/1987	25/11/1987	24/11/2025	11.2
MLC182	Riesling	San	100	25/06/1974	25/06/1974	31/12/2026	15
MLC183	Riesling	San	100	25/06/1974	25/06/1974	31/12/2026	15
MLC184	Riesling	San	100	25/06/1974	25/06/1974	31/12/2026	15
MLC520	Great Northern	GRE	100	31/12/2000	1/01/2015	31/12/2019	5

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

Table 1: Burnt Shirt Group Tenure Details

The Burnt Shirt Group comprises 1 granted Mineral Claim and 4 granted Mineral Leases, refer to figure 1 and table 1, covering an area of 61.2 hectares.

The leases are located on -

• NT Parcel's 04114 & 03735, Aboriginal Freehold Land held by the Warumungu Aboriginal Land Trust

The Burnt Shirt Group has no AAPA or CLC registered sacred sites within the area as displayed in figure 2, with one restricted area (green hashed box) located just east of MLC 183 (and detailed below);

# 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 Flynn 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 Burnt Shirt Group

The rocks of the Burnt Shirt 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 Palaeoproterozoic Warramunga Formation, with some minor felsic porphyry confined to near MCC 211.

### 6.0 WORK DONE DURING THE REPORT PERIOD

Exploration activity was limited due to exploration focus elsewhere, future work will be around the continuing assessment, both desktop and field visits to geologically assess a number of Kenex generated targets within the Burnt Shirt 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."

These targets exhibited geological prospective rocks and structures but their 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 2017 for future exploration.

Emmerson with JV partners Evolution and co funded by the NT department of Mines and Energy conducted a regional seismic survey through the Burnt Shirt Group area, but not directly through the titles. The survey was conducted over 60km, 30km north of the Tennant Creek Township and 30km south of the township. The results are continuing to be assessed and interpreted with the aim of generating new areas for target generation and testing with implications for nearby titles, hence the Burnt Shirt Group titles.

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warrants greater detailed analysis and possibly future HeliTEM and IP surveys to refine the target workspace and assess the prospectivity for the identification of economic mineralisation/deposits.

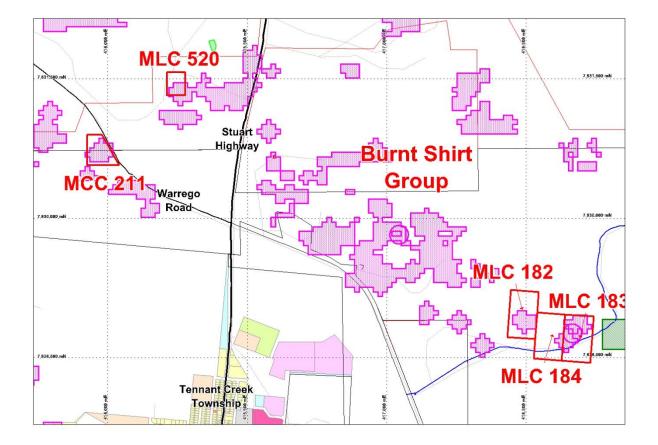


Figure 3: Burnt Shirt Group vs. Kenex generated targets (magenta polygons)

### 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 EPA Mining Management Plan – Authorisation 0463-04 which includes the titles of the Burnt Shirt Group.

#### 8.0 CONCLUSIONS

Exploration activity conducted was limited due to exploration focus elsewhere as described above. Future exploration work will focus on both desktop and field visits to geologically assess a number of Kenex generated targets within the Burnt Shirt Group area, these targets exhibited geological prospective rocks and structures but their 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 2017 for future exploration.

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