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EL 23073

Pump Station

FINAL REPORT

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

17 August 2001 – 07 July 2008

AUTHOR: ADAM WALTERS
OCTOBER 2008

DISTRIBUTION:		MAP SHEETS:	
Department of Regional Development, Primary Industry, Fisheries & Resources	☐	TENNANT CREEK	SE53-14
Central Land Council	☐		
Emmerson Resources Ltd	☐	FLYNN	5759
		SHORT RANGE	5659
	☐		1:100 000

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1. SUMMARY

This Final Report records exploration work done on EL 23073 between 17 August 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 23073, 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 23073, 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 23073, Emmerson consolidated EL 23073 into SEL 26595 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 23073 remain 'prospective'.

Automatic cancellation of EL 23073 occurred on 07 July 2008 upon the grant of Substitute Exploration Licence 26595.

2. INTRODUCTION

Exploration Licence 23073 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 23073 between 17 August 2001 and 07 July 2008.

3. LOCATION

Exploration Licence 23073 PUMPING STATION, is located approximately 29km north west of the township of Tennant Creek on the 1:100 000 scale Flynn (5759) and Short Range (5659) map sheets.

The principal access to EL 23073 from Tennant Creek is north west via the Warrego road and then by the roads that lead to the historical Gecko and Orlando Mine workings, then from here via various dirt roads and tracks along fence lines. However, much of the area is rocky, without tracks and difficult to reach, even in a 4WD vehicle. The unsealed tracks become impassable during the wet season.

Figure 1 shows the location of EL 23073 Licence with respect to the Tennant Creek Township.

4. TENURE

Exploration Licence 23073 was granted to Giants Reef Exploration Pty Ltd on the 17th August 2001, for a period of 6 years, and renewed for a term of 2 years on 17 August 2007.

The Exploration Licence area lies within NT Portion 408, Perpetual Pastoral Lease 946, Phillip Creek Station. Exploration Licence 23073 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.

The Alice Springs to Darwin railway runs in a north-westerly direction through EL 23073 and the 40m-wide corridor or easement containing the railway is not part of these Licences.

At the end of the second tenure year a statuary relinquishment was applied to EL 23073, the licence area was reduced from 28 graticular blocks to 14 graticular blocks.

At the end of the fourth tenure year a statuary relinquishment was applied to EL 23073, the licence area was reduced from 14 graticular blocks to 7 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

The majority of the licence area is underlain by turbidite sediments of the Palaeoproterozoic Warramunga Formation (1865-1855 Ma), predominately greywacke and siltstones. This formation is host to virtually all the magnetite-haematite (ironstone–hosted) gold-copper-bismuth mineralisation and ore bodies in the Tennant Creek goldfield.

The northern extension of EL 23073 covers areas of Flynn Sub-group (also Palaeoproterozoic but overlying the Warramunga Formation); including Warrego Volcanics, and most of its northern end contains (relatively) younger sediments of the Tomkinson Creek Group (Flynn Sub-group).

In 1995 the Northern Territory Geological Survey released geological maps and explanatory notes for the Tennant Creek 1:250,000 sheet, and the Short Range (5659) & Flynn (5759) 1:100 000 sheets, 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 base 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 – 17 August 2001 to 07 July 2008

During the first year of tenure under Giants Reef exploration work involved a geological assessment of the licence, results from this assessment concluded that several of the southern and eastern blocks of this Licence cover areas of the Warramunga Formation but as with neighbouring EL's, the areas of magnetic interest are held under claims and are therefore excluded from the EL. Further examination of the regional magnetics and regional geology indicates that areas of magnetic relief outside the Warramunga Formation are almost certainly due to dolerite sills or dykes in the overlying Flynn sub-group sediments, which appear to cover the northern eighty percent of the EL, and is generally regarded as un-prospective. From these assessments and reviews it was concluded that Giants Reef will need to make a final assessment of this EL in the near future, to decide whether to surrender most of the EL and retain only the southern blocks covering areas of Warramunga Formation, or to surrender all of the EL.

At the end of the second tenure year the geology, geophysics and geochemistry of EL 23073 was assessed to identify target areas within the Licence area.

Several of the southern and eastern blocks of this Licence cover areas of the Warramunga Formation. Examination of the regional magnetics and regional geology indicates that areas of magnetic relief outside the Warramunga Formation are almost certainly due to dolerite sills or dykes in the overlying Flynn sub-group sediments, which appear to cover the northern eighty percent of the EL, and is generally regarded as un-prospective. During the last year of tenure a number of Mineral Leases and Claims within the Warramunga

Formation of the EL were surrendered or allowed to expire (MC C156-161 & 1097-1110). Review of the Claims ranked the Mineral Claims as areas of limited exploration potential based on the criteria that the Mineral Claims have had a history of exploration with no real encouragement.

The review and assessment made during the first year of tenure concluded that areas of the EL would need to looked at for relinquishment due to its lack of prospectivity, therefore at the end of the second year of tenure a statutory relinquishment of 50% of the EL was made, being 14 blocks. The northern portion of the EL, which overlies the Flynn sub-group sediments and partially consumed by the railway corridor was relinquished. This leaves only the southern blocks covering areas of Warramunga Formation for exploration over the EL.

During the third year of tenure no on-ground exploration was completed over the Licence. Giants Reef's commitments in establishing mining operations at Chariot, Edna Beryl, Cats Whiskers and Malbec West prevented further exploration over the licence.

No on-ground exploration was conducted over the licence during the forth tenure year, however the geology and geophysics were reviewed and the north western half of the tenement was proposed for reduction. The only in-ground work associated with the Exploration Licence was at the Pigale prospect (MCC315) where seven angled RAB holes were drilled for a total of 417 meters. These holes were drilled on the projected up dip component of a shear zone along strike (1.2 km) from Orlando. Whilst some anomalous base metal zones have were intersected, no significant gold mineralisation was encountered.

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

7. REHABILITATION

Exploration within EL 23073 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 23073, 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 23073, 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 23073, Emmerson consolidated EL 23073 into SEL 26595 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 23073 remain 'prospective'.

9. EXPENDITURE

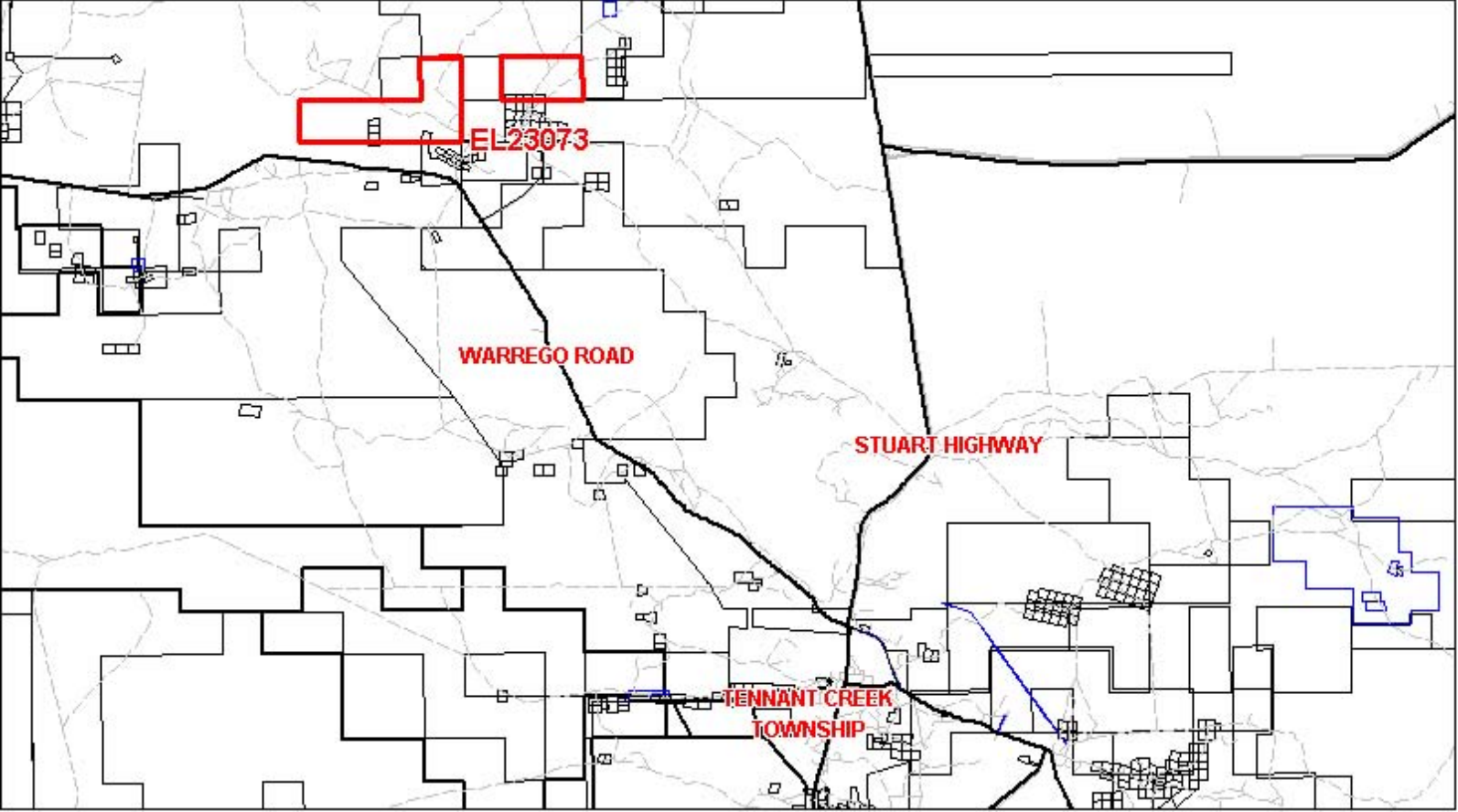
Expenditure for the term of the tenure for EL 23073 is as follows:

ITEM	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	TOTAL
Geology	585	280	200	2,591	1,230.30	480	2,097	
Geophysics	0	0	0	425	345.67	0	1,472	
Geochemistry	0	0	0	0	0	0	0	
Surveying	0	0	0	1,153	0	0	0	
Data Integration	0	0	0	0	400.32	0	600	
Drafting	0	0	0	164	125.45		0	
Analytical	0	0	0	0	0	0	0	
Drilling	0	0	0	0	0	0	0	
Tenure Administration	789	310	795	704	750.40	480	600	
Administration and Overheads	0	0	644	1,344	186.20	0	480	
Rehabilitation	0	0	0	0	0	0	0	
TOTAL	**1,383**	**590**	**1,639**	**6,381**	**3,083.34**	**960**	**5,249**	**19,285.34**

EMMERSON RESOURCES LTD

HARD COPY REPORT META DATA FORM

REPORT NAME:	EL 23073 PUMP STATION FINAL REPORT 17 AUGUST 2001 TO 07 JULY 2008
PROSPECT NAMES(s):	PUMP STATION
GROUP PROSPECT NAME:	
TENEMENT NUMBERS(s):	EL 23073
ANNIVERSARY DATE:	17 AUGUST
OWNER/JV PARTNERS:	GIANTS REEF EXPLORATION PTY LTD
AUTHOR(s):	ADAM WALTERS
COMMODITIES:	GOLD, COPPER, LEAD, ZINC, SILVER, BISMUTH
MAPS 1:250 000:	TENNANT CREEK SE53-14
MAPS 1:100 000:	FLYNN 5759, SHORT RANGE 5659
MAPS 1:50 000	
TECTONIC UNIT(s):	TENNANT CREEK INLIER,
STRATIGRAPHIC NAME(s)	WARRAMUNGA FORMATION, CAMBRIAN WISO BASIN
AMF GENERAL TERMS:	
AMF TARGET MINERALS:	GOLD, COPPER, LEAD, ZINC.
AMF GEOPHYSICAL:	.
AMF GEOCHEMICAL:	
AMF DRILL SAMPLING:	
HISTORIC MINES:	
DEPOSITS:	
PROSPECTS:	
KEYWORDS:	PUMP STATION, EL 23073


EL 23073
WARREGO ROAD
STUART HIGHWAY
TENNANT CREEK
TOWNSHIP