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EL 8883

BLUEBUSH

RELINQUISMENT REPORT

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

20 March 2001 – 19 March 2006

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AUGUST 2006

DISTRIBUTION:		MAP SHEETS:	
Department of Primary Industry, Fisheries & Mining	☐	TENNANT CREEK	SE53-14
Central Land Council	☐		1:250 000
Emmerson Resources Pty Ltd	☐	KELLY	5658
	☐		1:100 000

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1. SUMMARY

This Relinquishment Report records exploration work done on the relinquished portion of EL 8883 between 20 March 2001 and 19 March 2006.

EL 8883 Bluebush was acquired by Giants Reef Exploration Pty Ltd (Giants Reef) to search for Tennant Creek style iron oxide copper-gold deposits.

Exploration on the relinquished portion of EL 8883 focused on the area of the major Bluebush Gravity Anomaly (Giants Reef's term). Most of Giants Reef's field work was undertaken over the Bluebush gravity anomaly. The work included assessment of geophysical interpretation, target and drill hole generation, ground water sampling and analysis, obtaining clearances from the local Native Title holders, analysis and modelling of aeromagnetic and detailed gravity data, committee liaison meetings with the CLC, BHP Billiton progress meeting, tenement review and area reduction were also conducted.

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, however Giants Reef considers the potential for the discovery of mineralisation in hematite dominant ironstones in the relinquished portion of EL 8883 is limited.

2. INTRODUCTION

Exploration Licence 8883 Bluebush is located in the Bluebush Project Area, one of a number of project areas flanking the Tennant Creek mineral field.

Targets are large scale deposits of copper, lead, zinc, gold, silver and other base metals.

This Relinquishment Report records exploration work done on the relinquished portion of EL 8883 between 20 March 2001 and 19 March 2006.

3. LOCATION

Exploration Licence 8883 is located approximately 33km west of Tennant Creek, on the Kelly (5658) 1:100 000 scale map sheets.

There are several access routes into the large area covered by this EL, but the principal one at present is the dirt road that leaves the Stuart Highway about 6km south of Tennant Creek Town and heads west, passing through EL 8883, to the Kunayungku community. From this road, a number of station tracks and the service routes for the Amadeus Basin to Darwin gas pipeline, can be followed to most parts of the area.

Figure 1 shows the location of EL 8883 Licence with respect to the Tennant Creek Township and the Warrego road.

4. TENURE

Exploration Licence 8883, initially covering 224 graticular blocks was granted to Giants Reef Exploration Pty Ltd on the 20th March 2001, for a period of 6 years.

The Licence is within NT Portion 494, Perpetual Pastoral Lease 1142, Tennant Creek Station, and 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 tenure was reduced from two hundred and twenty four graticular blocks to one hundred and twelve graticular blocks at the end of the third year of tenure, and a further reduction to fifty six graticular blocks occurred at the end of the fourth year of tenure.

Giants Reef submitted a 50% reduction of EL 10402 from 56 graticular blocks to 28 graticular block at the end of the fifth year of tenure.

Figure 1 shows the location of the Licence area and surrounding tenure.

Figure 2 shows the area relinquished.

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 8883 includes a number of lower Palaeoproterozoic inliers, which include both the Warramunga Formation (<2%) and the Junalki Formation (<5%)), however these comprise less than 7% of the total geology of the EL. There are also a number of younger Palaeoproterozoic inliers and these include volcano-sedimentary units of the Ooradidge Group. More than 70% of the EL includes granitic rocks of the Tennant Creek Granite, Cabbage Gum Granite or the Devil Suite granites. A number of prominent NW trending lineaments transgress all of these units.

Virtually all of the Exploration Licence is colluvium-covered, with a few minor areas of calcrete and some very isolated basement exposures. Using the regional magnetics it can be interpreted that rocks of the Palaeoproterozoic Warramunga Formation may underlie some of the northern portion of the EL.

In the central and southern areas, Cambrian and later sediments of the western fringe of the Wiso Basin form a concealed layer up to several tens of metres thick, lying on the older basement. Aquifers in this sequence are the source of the Tennant Creek town water supply.

The basement geology of the bulk of the area is barely known although the sparse drilling to date, including many Government test water bores and a number of previous company exploration holes, have revealed a variety of amphibolite-grade metamorphics, plus granites, intermediate and mafic intrusions and volcanics, throughout the area. In the northern part of EL 8883, dating of igneous and metamorphic drill cores has given early or lower Proterozoic ages. Many linear magnetic structures, which in some cases appear to be fault boundaries of identifiable lithological blocks, can be seen in the 1999 AGSO 200m line-spaced aeromagnetics over the region.

The west-central area of EL 8883 lies over a prominent and extensive regional gravity anomaly, which rises to a 19 milligal peak in this area. This is referred to as the "Bluebush gravity anomaly" and is the focus of Giants Reef's exploration in the area.

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 – 20 March 2001 to 19 March 2006

Year 1.

Groundwater geochemistry - Groundwater samples were taken from fourteen old exploration drillholes and Government test water bores in EL 8883. Other samples were taken at the same time (mid-2000) from adjoining EL's 8882 and 9309. This work was

carried out prior to the granting of the two Licences, but is included in this report to complete the record of the exploration work done. The sampling was aimed at finding indications of mineralisation in the and around the regional Bluebush gravity anomaly. The sampling and analytical techniques used have been developed over many years by the CSIRO, in particular by Senior Principal Research Scientist Angela Giblin, who visited Giants Reef's Tennant Creek offices to discuss the project. Giants Reef's field work was conducted under her guidance.

An initial step was to find out the locations of all old bores and drillholes in the Bluebush area. This was done by visits to the Water Resources Section of the NT Government Department of Lands, Planning and Environment in Alice Springs, where a database on disk was obtained, and photocopies made of a large number of geological logs of all the relevant drillholes and bores. Locating the old bores and drillholes in the field proved difficult, as many were overgrown and virtually invisible, while others were dry or had caved in and could not be sampled. However, in the end a reasonably even distribution of sample points over the Bluebush gravity anomaly was achieved.

Sampling involved making readings at each site for ambient and sample temperature, acidity, conductivity, water depth, sample depth, GPS location and remarks on the water quality. The sample bottles were sent to the CSIRO's laboratory at North Ryde, NSW for the sensitive analysis work. Results indicated that several of the sample sites, in the central part of the Bluebush gravity anomaly, were anomalous for one or other of the base metals or for gold, and the chemistry for some of them suggested the presence of magnetite-chlorite in the sources of their waters.

The fact that the ground waters of the gravity anomaly area carried anomalous metals contents gave (as hoped) added encouragement for the drilling in EL 8883, although geophysics and geological considerations were the prime factors in deciding where the drilling would be done.

Magnetics interpretation - Giants Reef's consultant geophysicist Frank Lindeman, of Lindeman Geophysics Pty Ltd, Melbourne, carried out an interpretation of the 1999 AGSO aeromagnetic data covering the regional Bluebush gravity anomaly. He produced models of a large number of magnetic sources in the area and defined many magnetic structures visible in the data. Later, this work contributed to the process of drill site selection after the gravity survey was completed.

Clearances from Native Title holders - Under the terms of Giants Reef's Indigenous Land Use Agreement with the Native Titleholders of the Tennant Creek region, it was necessary to obtain clearances from the Native Title holders before the field party for the planned gravity survey could enter the area. Assisted by the CLC, field visits were made to the survey area, and the necessary clearances were given. One proviso was that the survey field party would stay away from salt lakes, clay pans and other natural depressions, which have special significance for the local people. In the event, this condition did not present any real difficulties for the field operations. A later clearance was obtained in the same manner for the construction of tracks and drill sites, once the results of the gravity survey had been received and target spots chosen.

Gravity survey - A detailed helicopter-borne gravity survey was carried out in June 2001 over the Bluebush gravity anomaly. The whole survey, on a nominal grid spacing of 1km x 1km, totalled 648 stations. The survey commenced on 2nd June and finished on 6th June, 2001. The gravity survey was carried out by Daishsat Pty Ltd of Murray Bridge, South Australia, using a Bell 47 G5 helicopter (VH-TZW) hired from Heli-Muster Pty Ltd at Victoria River Downs, NT. Two Scintrex CG-3 gravity meters were used for the gravity data acquisition. Each loop started and ended at the Tennant Creek airport gravity base station. For horizontal and vertical GPS control, four GPS receivers (two Leica GPS and two Ashtech Z12's) were used.

One point (station 1) was set up on top of one of the Giants Reef transportable office buildings in Tennant Creek, and the other (station 2) was a short star picket in the paddock between Giants Reef's yard and the Tennant Creek airport. Navigation in the field between stations was done using Garmin GPS II+ instruments. Generally, the reading points were within 100m of their planned round-number co-ordinates, although inevitably some stations had to be read further away from the intended locations because of ground features such as mulga thickets preventing helicopter landings at the optimal positions.

Within EL 8883, there were 243 helicopter reading points, plus approximately 80 ground stations that were read later using a Toyota 4WD truck. The ground stations were read at 200m intervals along two 8km-long north-south profile traverses over two selected residual anomalies. Giants Reef's consultant geophysicist Frank Lindeman was on hand in Tennant Creek to supervise the survey on a day-by-day basis.

The detailed survey over the Bluebush gravity anomaly re-shaped the anomaly, and decisions on where to conduct the deep drilling were largely based on residual anomalies derived by Lindeman Geophysics Pty Ltd from the new information. Used in conjunction with the aeromagnetic data, an initial five sites were selected for drillholes in EL 8883.

All the information gained from the gravity survey over EL 8883 and adjacent EL's has been put into the public domain, as part of the NTGS/AGSO gravity database covering all of the Tennant Creek 1:250,000 sheet and parts of some the adjoining 1:250,000 sheets that was released in late 2001.

Year 2.

Clearances from Native Title holders - Under the terms of Giants Reef's Indigenous Land Use Agreement (ILUA) with the Native Titleholders of the Tennant Creek region, it was necessary to obtain clearances from the Native Title holders before the field party for the planned RC drilling could enter the area. A work program was submitted to the CLC which outlined the work Giants Reef proposed to undertake over EL 8883 at the end of the first tenure year. The Central Land Council representing the Traditional Aboriginal owners of the land approved the proposed drilling activities in May 2002. One proviso was that access tracks must be constructed so as to avoid exclusion zones. The approvals were given by the CLC on the basis of the results of site clearances carried out last year in response to work programs for EL 8883.

CLC Liason Committee Meeting - A liaison committee meeting was held at Alekerenge Community in October 2002. The purpose of the meeting was to inform the Traditional Owners of the status of exploration in the Bluebush Project area including EL 8883. This included the main areas of interest for Giants Reef, drilling results, and expected future exploration over the project area.

The CLC representatives, 17 Aboriginal Owners, and Giants Reef representatives were present. Giants Reef's Exploration Manager, Mr Peter Simpson gave a presentation about the exploration activities that had been carried out on the Land. The minor nickel shown in BBRC-033 (EL 8883) and the drinkable water that was found in many of the holes was reported. The Traditional Owners showed considerable interest in the prospect of drinkable water and expressed interest in the possibly of setting up a water bore near the Kunayungku Community.

Tenement Review - An internal review of the Giants Reef tenement portfolio and a classification of exploration opportunities in September 2002 assessed the future exploration potential of EL 8883 and the prospects within the Licences. Assessment of the EL's recognised that that the Licences contain magnetic anomalies which are indicative of Tennant Creek style gold-copper occurrences (but which are not BHP Billiton targets). The review recommended that Giants Reef substantially reduce the tenement holding of EL 8883 to retain only the areas covering the targets which may still hold potential for Tennant Creek style shallow or substantial gold mineralisation.

At the end of the second tenure year Giants Reef reduced EL 8883 from 224 to 112 graticular blocks. The northern portion of the tenement was retained, being the location of the traditional Tennant Creek style gold-copper anomalies that have been identified within the Licences.

Alliance Meeting - A technical meeting was held between Giants Reef and BHP Billiton in Melbourne on the 2nd December 2002. The meeting focussed on recent drilling results from the Bluebush Project Area. Information was presented to BHP Billiton representatives. The results from the Bluebush exploration program conducted over the last two years was assessed. It was concluded that no significant geochemical intersections were identified in the drilling and no substantial mineralisation had been found in the Bluebush project area. In summary the findings from the drilling were disappointing and not of sufficient interest to the Alliance to consider any follow up exploration. Recommendations were made by BHP Billiton and Mr Frank Lindeman that the Falcon airborne gradiometer may be a useful application in the Bluebush area by identifying structures not already identified. There was no suggestion however, that any airborne gravity survey would be conducted under the Alliance.

Year 3.

Termination of Strategic Alliance - In early 2003, BHP Billiton indicated to Giants Reef that they no longer wished to continue with the Strategic Alliance. Giants Reef prepared a summary report for BHP Billiton detailing all the exploration conducted over the joint venture tenements, including EL 8883 during the period of the Strategic Alliance between 1999 to 2003. Correspondence from BHP Billiton on the 25th July 2003, confirmed the

termination of the Bluebush Joint Venture and hence the closure of the Strategic Alliance. The relevant sections of the summary report for the Strategic Alliance are presented in Appendix 1. These sections outline the exploration conducted over the Bluebush tenements, including EL 8883 under the Alliance.

Strategic Planing - No on-ground exploration was conducted over the Licences during the year. Giants Reef reviewed the geological targets and models for both exploration Licences to assess the likelihood of an immediate discovery. The review recognised a number of magnetic anomalies within EL 8883 which are indicative of Tennant Creek style gold-copper occurrences. Giants Reef recognises that the Companies primary interest is currently within the traditional Tennant Creek goldfield, and currently do not have the personnel to explore the Licence areas. Giants Reef however, retain the view that the Licences are highly prospective for mineralisation and made the decision to package the Licences to be joint ventured out. Giants Reef had no success in pursuing a Partnership or Alliance for exploration over the Licence area and surrounding tenure

Year 4.

EL 8883 was included within a package of tenements which were subject to a combined quantitative/qualitative ranking, based on geological, geophysical & geophysical characteristics and other parameters covering work status, target type, land status and economics. The tenement was down graded to “Non-Core B” which includes areas comprising only limited Warramunga Formation, weak or no magnetic anomalies and no proven corridors of mineralisation.

Although the review identified a number of magnetic anomalies within the EL which are indicative of Tennant Creek style gold-copper occurrences, the prospectivity of the EL to host economic gold/copper mineralisation was downgraded for the following reasons;

a) Geological re-assessment of the EL demonstrates that less than 5 km^2 of the 325.2 km^2 contains the prospective Warramunga Formation, with the remainder including geology which has not been found to host significant mineralisation in the region. These include granites of the Tennant Creek Super suite, volcanic-sedimentary successions of the Ooradidge Group and volcanic-sedimentary sequences of the Junalki Formation. The area proposed for reduction is believed to contain no Warramunga Formation.

b) Drill testing of the Bluebush gravity anomalies in the first two tenure years of the Licence (BHP Billiton Alliance) downgraded the potential of the gravity anomaly. A review of the drilling and geophysical data suggests that the source to the gravity anomalies is either:

i) Intrusive complexes, considerably higher in density than the surrounding host rocks.

ii) Deeper source that has not been intersected by drilling to date, however likely to be at depths between 1000 to > 2000m (refer to attached memorandum M. Cooper, 2005).

Year 5

The detailed review conducted by Centralian minerals defined a significant geophysical anomaly in the southern part of the licence. Further refinement of previous geophysical assessments and reviews of all historical drilling conducted over the defined magnetic anomaly was conducted and continues, with the view to generating shallow RAB targets within the prospect area.

7. REHABILITATION

No significant on ground exploration work over EL 8883 was undertaken over the area relinquished during the term of the tenure, exploration consisted of geophysical surveys and reconnaissance work which was of minimal impact, requiring no rehabilitation measures. All other exploration was conducted as desk top evaluation with no environmental impact.

8. CONCLUSIONS

Ground waters sampled throughout the Bluebush gravity anomaly area were found to be carrying anomalous base metals and gold contents at different locations, which gave a measure of encouragement for the later drilling program.

Studies and modelling of the aeromagnetic data located and defined a large number of magnetic sources and structures in the Bluebush area. In conjunction with the new gravity survey data, the magnetics interpretation contributed to the process of drill site selection.

The detailed helicopter-borne gravity survey over the Bluebush gravity anomaly re-shaped the anomaly and decisions on where to conduct the deep drilling were largely based on selecting residual anomalies from this new gravity information.

Under the terms of the ILUA with the Native Title holders, clearances were obtained from the Native Title holders before the gravity survey, and later on for the drilling. One proviso was that field parties should stay away from salt lakes, clay pans and other natural depressions, which have special significance for the local people.

Most of Giants Reef's 2002 field season work was undertaken over the Bluebush gravity anomaly with a great deal of exploration focussed within EL 8883. The work included assessment of previous geophysical interpretation, target and drill hole generation, ground water sampling and analysis, obtaining clearances from the local Native Title holders, analysis and modelling of aeromagnetic and detailed gravity data, committee liaison meetings with the CLC, BHP Billiton progress meeting, tenement review and area reduction.

Under the terms of the ILUA with the Native Title holders, clearances were obtained from the Native Title holders before the clearance of tracks, drill pads and the reverse circulation drilling was undertaken.

Ground waters taken from RC drill samples were found to be carrying anomalous base metals and gold contents at different locations coinciding with the general zone of high residual gravity. The geochemistry supported the results from groundwater sampling taken from Government test water bores in the first year of tenure.

A liaison committee meeting was held at Alekerenge Community to inform the Traditional Owners of the status of exploration in the Bluebush Project area including EL 8883. This included the main areas of interest for Giants Reef, drilling results, and expected future exploration. The Traditional Owners showed considerable interest in the prospect of drinkable water identified in many of the drillholes.

A technical meeting was held between Giants Reef and BHP Billiton to discuss the drilling results from the Bluebush Project Area from the exploration program of the last two years. It was concluded that no significant geochemical intersections were identified in the drilling and no substantial mineralisation had been found in the Bluebush project area. In summary the findings from the drilling were not of sufficient interest to the Alliance to consider any follow up exploration.

Giants Reef reviewed the geological targets and models for the exploration Licence to assess the likelihood of an immediate discovery. The review recognised a number of magnetic anomalies within EL 8883 which are indicative of Tennant Creek style gold-copper occurrences. Because Giants Reef's primary interest is currently within the traditional Tennant Creek goldfield, and currently do not have the personnel to explore the Licence areas, a decision was made to joint venture the Licences. Giants Reef were not successful in pursuing a Partnership or Alliance for exploration over the Licence areas and surrounding tenure.

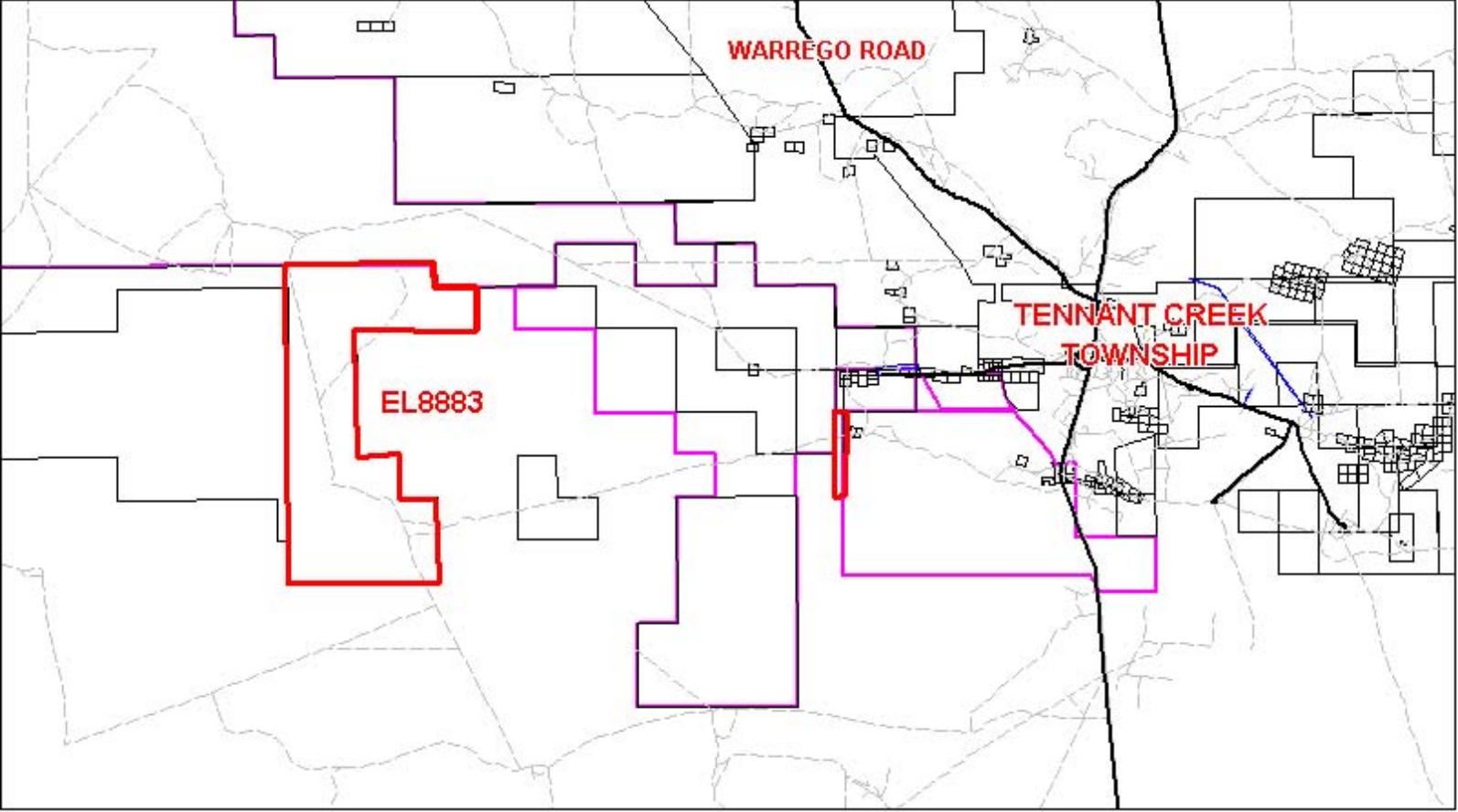
The quantitative/qualitative ranking, based on geological, geophysical & geophysical characteristics and other parameters covering work status, target type, land status and economics has down-graded EL 8883 as "Non-Core B". Whilst the EL has been down graded a number of areas comprising Warramunga Formation units and moderate magnetic anomalies have been tagged for further work next year and are likely to include geochemical sampling and, pending results, follow-up Vacuum, RAB, or RC drilling.

GIANTS REEF EXPLORATION PTY LTD

HARD COPY REPORT META DATA FORM

REPORT NAME: EL 8883 BLUEBUSH RELINQUISMENT REPORT 20 MARCH 2001 TO 19 MARCH 2006

PROSPECT NAMES(s):	BLUEBUSH
GROUP PROSPECT NAME:	BLUEBUSH PROJECT AREA
TENEMENT NUMBERS(s):	EL 8883
ANNIVERSARY DATE:	20 MARCH 2001
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:	KELLY 5658
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:	BLUEBUSH, BLUEBUSH PROJECT, EL 8883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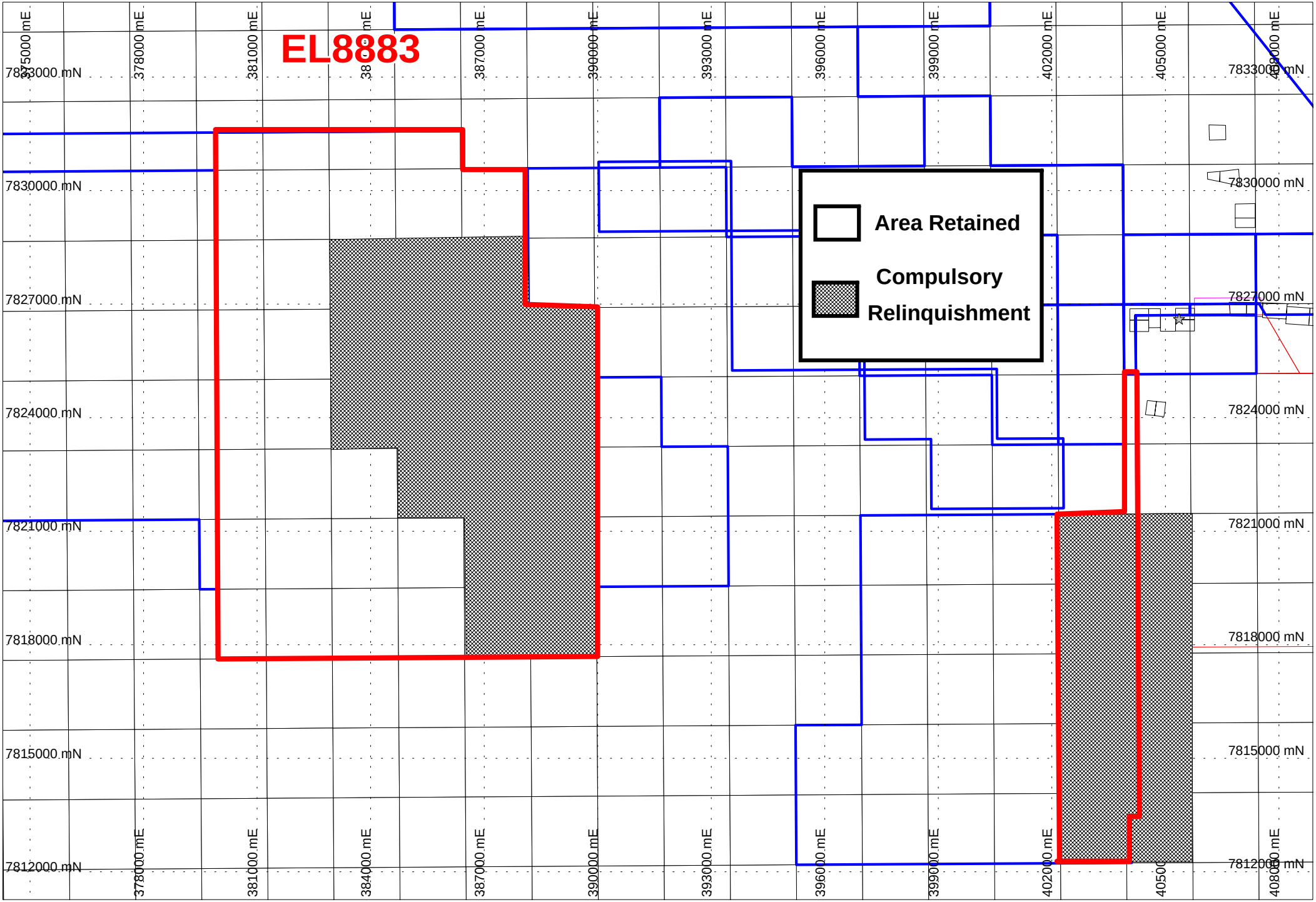
TOWNSHIP
EL8883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