

**ANNUAL REPORT**

**Mineral Lease**

**ML22624**

**HARTS RANGE REGION, N.T.**

**FOR PERIOD**

**6 August 2012 to 5 August 2013**

**LICENCE HOLDER:**

**CLARENCE RIVER FINANCE GROUP PTY LTD**

## TABLE OF CONTENTS

1	SUMMARY	page 3
2	LOCATION AND ACCESS	page 4
3	TENURE	page 5
4	EXPLORATION HISTORY	page 5
5	REGIONAL GEOLOGY OF ELs NOW ML's	page 6
6	ACTIVITY	page 7
7	REGULATION 126 Statement	page 8

## **SUMMARY**

The Oonagalabi prospect lies within the high-grade metamorphic rocks of the early Proterozoic Strangways Metamorphic Complex (SMC). The Oonagalabi prospect is one of at least six occurrences of the same mineralisation type occurring within the Harts and Strangway ranges. In all cases the host lithologies include marble, Mg-Al-rich schist/gneiss, and quartz magnetite or quartz-garnet rock. All are considered to lie at a comparable stratigraphic level within the SMC.

Lithologies in the tenement can be divided into two principal groups, the Harts Range Group in the north and the older Bungitina Metamorphics to the south. The latter is divided into the Upper and Lower units with the mineralised Oonagalabi Formation lying near the base of the latter.

The Harts Range Group is uniformly bedded and comprises from oldest to youngest, a thin basal marble, metasandstone, quartzofeldspathic gneiss and amphibolite. These rocks have been thrust over quartzofeldspathic gneiss of the underlying Bungitina Metamorphics.

The Lower unit of the Bungitina Metamorphics is a garnet-biotite-K-feldspar porphyroclastic gneiss containing about 20% mafic granulite. It shows a distinct gradational change into the Upper unit with a decrease in the amount of garnet and K-feldspar porphyroclasts as the contact is approached. The structurally overlying Upper unit comprises biotite-quartzofeldspathic gneiss. There are localised high-strain zones separating the two units.

Younger mafic granulite occurs as both concordant and discordant bodies in both the Upper and Lower units of the host succession, variably retrogressed to amphibolite which is locally garnet-bearing. These bodies are most extensive in the Upper unit.

Cu-Zn-(Pb-Ag-Au) zones at the Oonagalabi prospect are hosted by marble, and by calcsilicate and amphibole-rich rocks closely associated with it. No significant mineralised zones occur outside of these rock types and at surface all three are commonly malachite stained. Sulphides include chalcopyrite, sphalerite, galena and pyrrhotite.

The mineralised Oonagalabi Formation sequence appears to represent a stratabound carbonate replacement style of mineralisation, hosted within a largely quartzofeldspathic-rich sedimentary sequence, and modified by metamorphic processes.

Rocks of the SMC are structurally complex and have been affected by multiple episodes of folding and faulting. Well developed northeast striking foliation and lineation occurs in the main prospect area. Northeast plunging inclined folds with overturned limbs to the north have been recognised. A combination of two fold generations appears to control the distribution of the mineralised horizons which may occur as a series of lenses or shoots of high-grade base metal deposits down plunge.

The main feature resulting from recent exploration work is the recognition of the significance of the Transition zone with respect to the location of the mineralisation. This is a 'hybrid' zone comprising rocks located at the top of the Lower unit and which grade up into those at the base of the Upper unit. It is largely characterised by a diminishment of K-feldspar porphyroblasts and garnets going up the succession and exhibits localised high-strain zones.

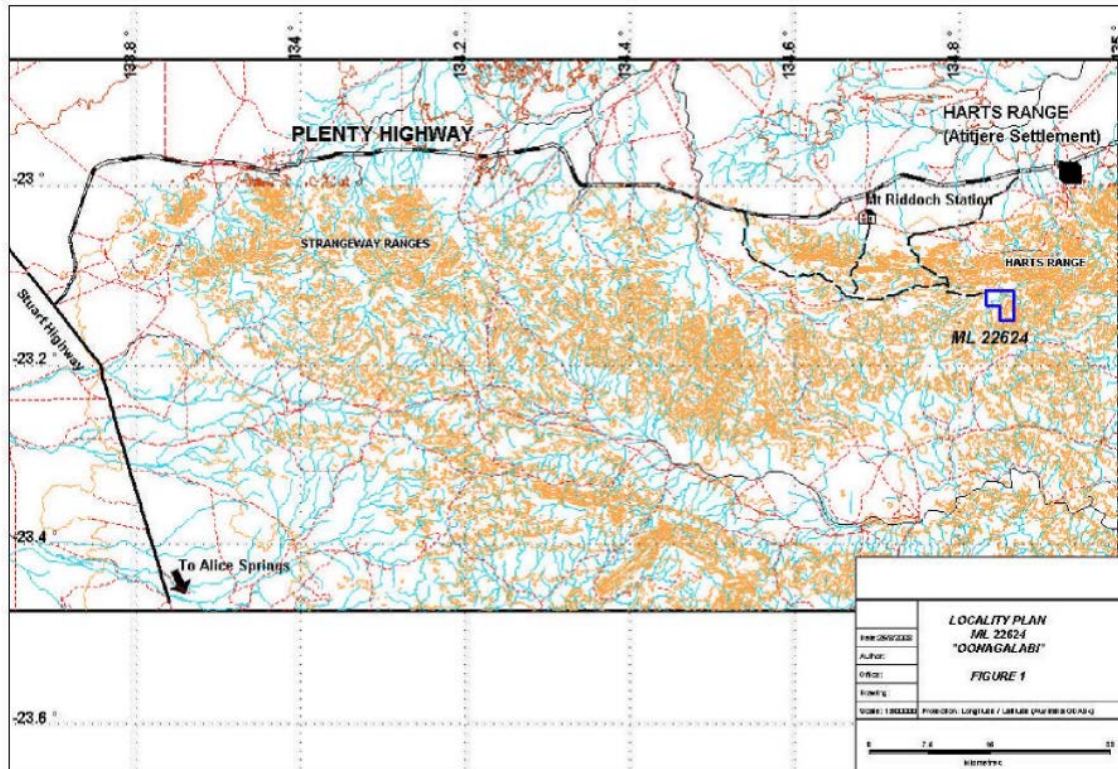
The work attempted to define the boundaries of the Transition zone, particularly in the south of the tenement where only limited information is available. This was achieved by interpreting the contact from the satellite imagery by comparing colour changes and variations in schistosity orientations. The zone lies at a similar stratigraphic level to the mineralised Oonagalabi Formation. This has implications in the search for other mineralised alteration zones similar to those at the Oonagalabi prospect. The Transition zone is a significant mappable horizon which may hold potential for the location of (blind) mineralisation elsewhere in the region where the altered Oonagalabi succession is poorly exposed.

It was then recommended that this horizon should be mapped and traversed in the south of the tenement in an effort to locate any indications of further mineralisation. Stream sediment data from this area should be reassessed and low-order anomalies followed up. A reconnaissance soil programme may also be warranted over any areas of interest.

# INTRODUCTION

## Location and Access

The Oonagalabi prospect is located about 135km northeast of Alice Springs in rugged hill country on the southern side of the Harts Range. It is accessed via the Stuart and Plenty highways and by about 40km of rough undeveloped farm and exploration tracks.



## Tenure

The prospect is located in granted Mining Lease 22624, granted on 6 August 2007 to Clarence River Finance Group Pty Ltd. It comprises 945.5 hectares and is valid for 25 years.

## EXPLORATION HISTORY

Copper mineralisation was first reported from the Oonagalabi region in the 1930s. However, the first recorded work on the prospect commenced in 1970 when Russgar Minerals NL (Russgar) undertook extensive exploration of this region. They located mineralisation at several localities but subsequent work focused on the Oonagalabi prospect area.

Russgar gridded and mapped the distribution of several informally named rock units at Oonagalabi, excavated several costeans and drilled 14 vertical open percussion holes to test mineralised zones. The best drill hole intersection was approximately 45m at 0.96% Cu, 1.61% Zn and 1g/tAu in hole PDH-L.

In 1979-81 Amoco Minerals Australia Company (Amoco) undertook an extensive exploration program in the area. This included geological mapping, rock sampling, grid soil sampling and the drilling of six RC holes. A ground magnetic survey and a dipole-dipole IP survey were also completed. Their soil program identified a number of anomalous base metal zones over the main prospect area but subsequent drilling failed to locate any significant mineralised zones and the ground was relinquished.

Various stream sediment surveys have been completed over the area and indicate that the prospect displays a distinctive Au, Bi, Cd, Pb, Zn, Sn and W signature.

In 2001-2003 a collaborative study of variably retrogressed, granulite-facies metamorphosed base metal mineral systems in the Strangways Metamorphic Complex (SMC), Arunta Region, was undertaken by the Northern Territory Geological Survey (NTGS) and Geoscience Australia (GA). This included detailed work at Oonagalabi which involved mapping and sampling for petrological, geochemical and isotopic analysis.

## **REGIONAL GEOLOGY**

Regionally the SMC consists of mafic, felsic and pelitic granulites and gneisses, marble, calc-silicate rocks and charnokite. These rocks generally attain granulite facies metamorphic grades, locally grading into amphibolite facies. The Harts Range Group consists of pelitic, semi-pelitic, calcareous and felsic gneisses, quartzite and amphibolite (Figure 1).

The prospect lies within the high-grade metamorphic rocks of the early Proterozoic Strangways Metamorphic Complex near its contact with the younger Proterozoic Harts Range Group. Transport directions indicate that the Harts Range Group has been thrust over the Oonagalabi domain.

The Oonagalabi prospect is one of at least six occurrences of the same mineralisation type occurring within the Harts and Strangway ranges. In all cases the host lithologies include

marble, Mg-Al-rich schist/gneiss, and quartz magnetite or quartz-garnet rock. All are considered to lie at a comparable level within the SMC.

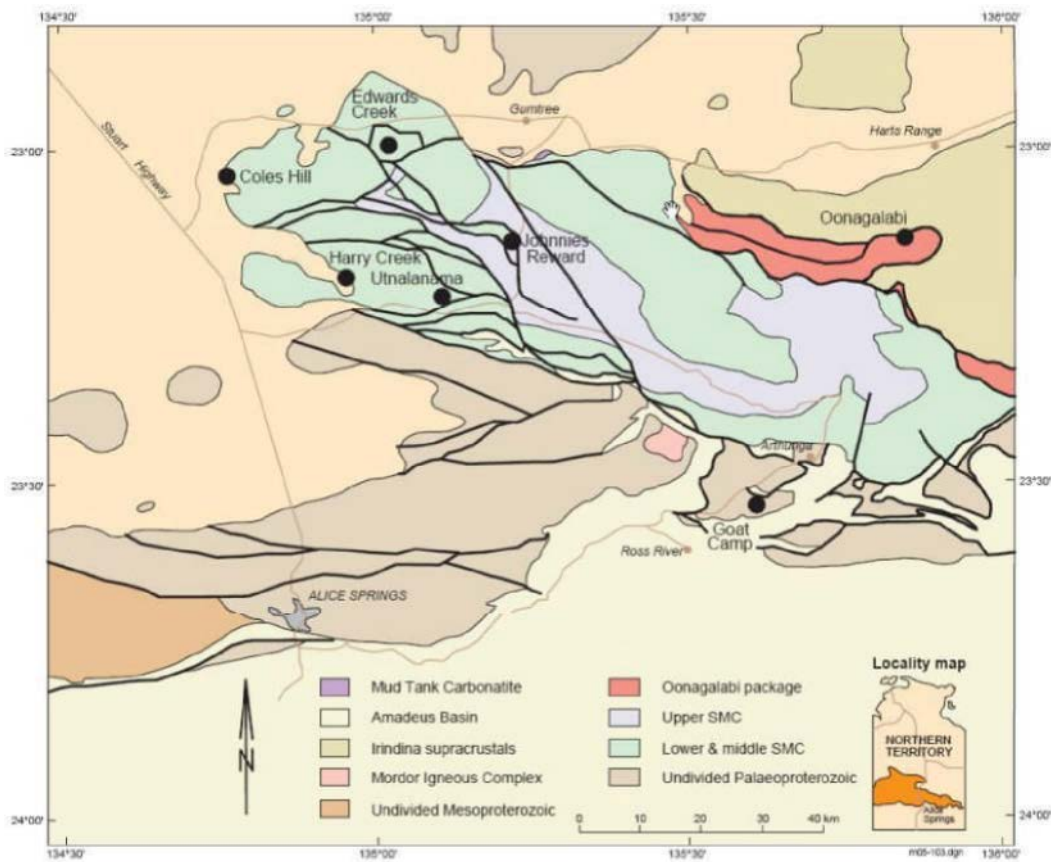


Figure 2. Simplified geological map of the Strangways Metamorphic Complex, showing distribution of main prospects.

## ACTIVITY

During this reporting period it was proposed that the owners of ML22624 perhaps could be considered including the ML in a prospectus for the listing of a new public company, citing an enthusiasm for a better understanding of this prospect and towards a larger regional play, plus looking harder for the potential of other minerals in this and other regional prospects beyond base metals.

A broader regional view and openness towards all other minerals is a concept we would feel comfortable with and this proposal is under robust consideration.

## REGULATION 126 Statement

This document and its content are the copyright of the Clarence River Finance Group Pty Ltd. The document has been written for submission to the Northern Territory Department of Mines and Energy as part of the tenement reporting requirements as per the Mineral Titles Act (NT). ML22624 is a mineral lease awaiting development therefore any information included in the report originates from historical reports and is listed in the “References” section at the end of the document. If any technical consultants in the exploration phase of the tenement included information from other Open File sources, it is unknown to the document writer, the ‘relevant person’. The Clarence River Finance Group Pty Ltd authorises the department to copy and distribute the report and associated data at tenement expiry.

## REFERENCES

EL6940	Clarence River Finance Group Pty Ltd	1992
	Clarence River Finance Group Pty Ltd	1993
	Clarence River Finance Group Pty Ltd	1994
	Clarence River Finance Group Pty Ltd	1995
	Clarence River Finance Group Pty Ltd	1996
EL9240	Clarence River Finance Group Pty Ltd	1997
	Clarence River Finance Group Pty Ltd	1998
	Clarence River Finance Group Pty Ltd	1999
	Clarence River Finance Group Pty Ltd	2000
ML22624	Clarence River Finance Group Pty Ltd	2011
	Clarence River Finance Group Pty Ltd	2012