

Redbank Copper Limited

Annual Exploration Report

GR237

EL 27737, EL28003, EL 28487, EL28535

Calvert Project

For the period 1st April 2016 to 31st March 2017

Distribution:

Department of Mines and Energy NT

Redbank Copper Limited

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Tenement Operator:	Redbank Copper Limited	
Tenement Holder:	Redbank Mine Operations Pty Ltd	
Report Type:	Annual	
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Tenement	EL EL 27737, EL 28003, EL 28487 & EL 28535	
Report Period:	1/04/2016 to 31/03/2017	
Author:	Bruce Armstrong	
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1:250 000 map sheet:	Calvert Hills SE 5308	
1:100 000 map sheet:	Seigal, Wollogorang, Calvert Hills, and Surprise Creek	
Target Commodity:	Copper	
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Prospects drilled:	NA	
List of Assays:	NA	
List of Elements:	NA	

SUMMARY

The Calvert Group tenements form part of Redbank Copper Limited's, Redbank Copper Project the project is located 300km south east of the township of Borroloola near the northern Territory/Queensland border. The tenements cover a sequence of sediments and volcanics of the Tawallah Formation. The tenements are prospective for strata bound copper mineralisation, structurally controlled Cu mineralisation related to second order faulting along the Calvert Trend, and manganese mineralisation.

During the current reporting period work no field work was completed within the combined reporting group tenements. A number of copper prospects had been identified by previous studies, however due to tenement rationalisation across the group a number of tenements and associated prospects were surrendered.

Two exploration licences were surrendered, and partial surrenders were completed on the remaining two titles.

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1. INTRODUCTION

This report details exploration activities on tenements within the GR238 Combined Report (EL27240, EL27241, EL 27737, EL 28003, EL 28487, and EL 28535) between 1 April 2016 and 31st March 2017. The tenements are owned by Redbank Operation Pty Ltd a wholly owned subsidiary of Redbank Copper Limited, a company listed on the Australia Stock Exchange. The tenements form part of the company's Redbank Copper Project which comprises 19 mineral titles covering an area of approximately 4,300 sq. kilometres. The project is centered on the mining operation at Redbank (figure 1) where the company has infrastructure including mine camp, offices, and airstrip that support the company's activities in the district. The mine site has been on care and maintenance for a number of years, and is currently staffed by full time caretakers.

Redbank Copper Limited was suspended from the ASX between the period 24th November 2011 and 10th May 2013, whilst the company was restructured and raised funds. Since relisting the company has commenced regional compilation work, but has not undertaken any on ground field exploration.

1.1 Location and Access

The tenement is located approximately 300 km south-east of the township of Boorooloola, and immediately west of the Northern Territory – Queensland border. Wollogorang Station in the center of the project area is the closest habitation.

Vehicle access is restricted to the main Borroloola – Wollogorang road and local station tracks. There is a 1200m airstrip at Redbank which can be used to access the project.

Topography is dominated by escarpment country with a maximum elevation of 226m. The well-developed dendritic drainage network is dominated by Settlement Creek, which drains to the north-east into the Gulf of Carpentaria. Vegetation consists mostly of open woodland and native grasses that support cattle grazing.

The tenements is on the Wollogorang, and Calvert Hills Pastoral Station's

The area has a tropical climate with a wet season between November - March during which time access to and around the project can be blocked by flooding creeks and a dry season between March and October during which time the majority of field operations occur.



Figure 1 GR237 Calvert Group tenement location

1.2 Tenure

The tenements within the combined report are held by Redbank Operations Pty Ltd a wholly owned subsidiary of Redbank Copper Limited.

During the reporting period the company surrendered EL's 28003, 28535 and partially surrendered EL27737, EL28487.

Details of the tenement are provided below.

Exploration License Number	Total Area Sq. km	Expire Date	Holder
EL27737	13.1	5/08/2018	Redbank Operations Pty Ltd
EL28003			Surrendered 10/01/2017
EL28487	74.0	1/08/2017	Redbank Operations Pty Ltd
EL28535			Surrendered 19/09/2016

Table 1. Tenement details for Combined Report GR237

2.0 GEOLOGY AND MINERALISATION

2.1 Regional Geology

The tenements are situated in the south-eastern portion of the Proterozoic McArthur Basin in the Northern Territory (Figure 2). The tenements are located on the Wearyan Shelf tectonic unit within basin. The geological sequence comprises a mix of shallow water and continental sedimentary units intercalated with volcanics of the Tawallah Group which is the lower most sequence within the Macarthur Basin sequence. The sequence has been intruded by various granitic bodies.

The McArthur Basin sequence contains the world class McArthur River lead-zinc deposit (227 Mt grading 9.2% zinc, 4% lead, 0.2% copper, and 41g/t silver) approximately 200 km north of the tenement. Within the region copper mineralisation associated with trachyte breccia pipes is mined at Sandy Flat and Redbank, and copper uranium mineralisation is recognized within the Westmorland Conglomerate Formation to the south of the tenement. The Merlin Diamond field is approximately 250 km to the west of the tenements.



Figure 1.Regional Geological Setting.

2.2 Tenement Geology

The project area overlies Tawallah Group stratigraphy. The southern parts of the project area overly lower member of the group including the McDermott and Aquarium Formation's. The northern parts of the project cover Wollogorang, Masterton, and Gold Creek Volcanic Formations intruded by the Packsaddle granite to the east.

Structural geology of the area is not well known, however the Calvert Hills Shear zone is a regional structure that can be trace over a distance of 200km and has a 100m wide zone of alteration associate with it strikes NNW through the central part of the main tenement group The fault has horizontal displacements in the order of several kilometres and vertical displacement in the 100's of metres (Ahmad and Wygralak 1989).

The project area is considered prospective for strataform and breccia pipe hosted copper mineralisation within the Wollogorang, Gold Creek Volcanics and Masterton Formation of the Tawallah Group. Regional work by MIM in the vicinity of EL 28487 intersected stratigraphy associated with the McArthur Lead Zinc Deposit at depths of between 300 -500m below surface. The Upper Proterozoic Karns Dolomite hosts a number of small manganese occurrences in the Calvert Hills area.

The area has been subject to extensive exploration for Uranium and diamond but the current project area is outside areas considered prospective for these commodities.



Figure 3 Calvert Hills Project Geology (Source NTGS)

3.0 PREVIOUS EXPLORATION

The tenements have had several phases of exploration for base metals as well as gold, uranium and diamonds since the 1940's. Programs have included regional stream sediment surveying, field mapping aeromagnetic surveying, drilling and interpretation. No significant anomalism was identified by this work.

4.0 EXPLORATION DURING THE REPORTING PERIOD

The company relisted on the Australian Stock Exchange in March 2013 and exploration work has focused on advanced copper target within the immediate Redbank area.

No field work was completed during the reporting period. The results of the previous year's regional targeting exercise were reviewed. Although a number of copper prospects were identified the related tenements were surrendered due to a group wide tenement rationalisation.

The Calvert license holdings were reviewed against the company's exploration expenditure capacities, and objective of identifying additional copper mineralization proximal to the Redbank mining center in order to justify recommencement of profitable mining operations. The Calvert trend exploration licenses were deemed too early exploration stage, marginally too distal, and outside of the expenditure priorities to justify continued exploration at this time.

5. REFERENCES

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