TNG^{limited}

ENIGMA MINING LTD

MOUNT PEAKE PROJECT

ANNUAL REPORT

13/03/19 to 12/03/20

EL 30483

Tenement/s	EL 30483	1:250 000 Sheet Name	Barrow Creek (SE5306)		
Holder	Enigma Mining Ltd	1:100 000 Sheet Name	Home of Bullion		
Manager	N/A	Datum	GD494-52		
Operator	Enigma Mining Ltd	Datam			
Commodity	Base metals, Au				
Elements Analysed	N/A				
Keywords	Mining Management Plan, Great Bilby, Biodiversity Management Plan, Rail Facility, image reprocessing, DTM, contours				
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Executive Summary

Exploration Licence 30483 was granted to Enigma Mining Limited (Enigma) on the 13/03/2015. Enigma is a wholly owned subsidiary of TNG Ltd. The licence forms part of TNG's Mount Peake Project together with EL 27069, EL 27070, EL 27941, EL 29578, EL 31389, EL 31850 and Mining Leases 28341, ML 29855, ML 29856 and ML 30686. It is not part of the group reporting or expenditure project area due to its distance from the other licences.

The licence is located at the termination of the planned haul road and the rail siding facility for the proposed Mount Peake mine site.

The main focus of the Mount Peake project in recent times has been evaluation of the potentially world class Fe-V-Ti deposit. The Definitive Feasibility Study was completed in mid-2015 with an update produced in November 2017. A Front-End Engineering Design study is currently being completed on the project.

The Mount Peake Mining Operations MMP was submitted in October 2019. A Biodiversity Management Plan (which includes Monitoring and Management of the Greater Bilby within EL 30483) and draft Mine Closure Plan (including details of decommissioning of the Rail Facility) were both appended to this document.

Reprocessing of aerial imagery across the rail siding area was completed subsequent to acquisition of additional data along the proposed haul road adjacent to EL30483.

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1. INTRODUCTION

Exploration Licence 30483 was granted to Enigma Mining Limited (Enigma) on 13/03/2015. Enigma is a wholly owned subsidiary of TNG Ltd. The licence forms part of TNG's Mount Peake Project together with EL 27069, EL 27070, EL 27941, EL 29578, EL 31389 and EL 31850 along with Mining Leases 28341, 29855, 29856 and 30686 and two Access Authorities (AA31105 and AA32037), which were granted in November 2018 (Figure 1). It is not part of the group reporting or expenditure project area.

The licence is located at the termination of the planned haul road and the rail siding facility for the future Mount Peake mine site.

The Mount Peake Mining Operations MMP was submitted in October 2019. A Biodiversity Management Plan (which deals with Monitoring and Management of the Greater Bilby) and draft Mine Closure Plan (which includes details of decommissioning of the Rail Facility) were both included as part of this document.

Reprocessing of aerial imagery across the rail siding area was completed subsequent to acquisition of additional data along the proposed access/haul road adjacent to EL30483.

2. LOCATION AND ACCESS

EL 30483, part of the Mount Peake project, is located approximately 200km north of Alice Springs. It covers the south-western portion of the Barrow Creek (SF53-06), 1:250,000 map sheet and lies within the Stirling Perpetual Pastoral Lease. The licence is accessed from the Stuart Highway and then well-maintained station tracks from the turnoff at Camel Soak Bore and past Tinfish Well. The Darwin to Adelaide railway runs through the licence area.

3. TENURE

Exploration Licence 30483 is part of the Mount Peake Project. It was granted to Enigma Mining Limited (Enigma), a wholly owned subsidiary of TNG Ltd on 13/03/2015. Licence details are shown in Table 1.

TITLE	PROJECT	AREA (blocks)	GRANT DATE	EXPIRY DATE
EL 30483	Mount Peake	7	13/03/2015	12/03/2021

Table 1: EL 30483 tenement details.



Figure 1: Location of Mount Peake project area and EL 30483.

4. **REGIONAL GEOLOGY**

The Mount Peake project area lies within the Aileron Province (1860-1700Ma), which is defined as the Palaeoproterozoic crust in the Arunta Region that formed as part of the North Australian Craton (Scrimgeour, 2013). Neoproterozoic to Paleozoic rocks of the western edge of the Georgina Basin also occur in the area. The licence lies in the southern central portion of the BARROW CREEK (SF53-06) map sheet (Figure 2 and 3).

The Aileron Province includes at least five depositional packages that were deposited in the interval 1860-1740Ma (Scrimgeour, 2003), and has been affected by multiple tectonic events (Scrimgeour, 2006). The outcropping Paleoproterozoic geology in the area includes a succession of metapsammitic and metapelitic rocks of the Lander Rock Formation (PIr), which have been variably metamorphosed from greenschist to granulite facies (Donnellan, 2008). Stratiform amphibolites and retrogressed amphibolites outcrop locally. The Lander Rock Formation is intruded by a series of early (ca 1820-1770Ma) and late (post-1770Ma) granites. The dominant tectonic and thermal event affecting the regions was the Stafford Event at 1805-1790Ma.

The Georgina Basin is a widespread Neoproterozoic to Paleozoic intracratonic basin that was initiated as part of the Centralian Superbasin (Donnellan, 2008). The dominant lithologies are dolostone, limestone, shales, sandstone and siltstone. These rocks unconformably overlie rocks of the Aileron Province in south eastern of the project area.

The licence area is almost fully covered by Quaternary alluvium, red earth soils and colluvium, with minimal outcrops of calcrete and probable Ledan Schist. Major faults associated with the Stirling and Ooralingie faults trend west-northwest through the licence.



Figure 2: EL30483 on 250K BARROW CREEK (SF5306) Geology.



Figure 3: Regional geological setting of the Mount Peake project area. Location of EL 30483 indicated by the red square (Figure from Scrimgeour, 2013)

5. **PREVIOUS EXPLORATION**

Various companies have explored the area covered by EL 30483 back to the mid-1960's. Exploration has been conducted for base metals, uranium, tungsten, tin and diamonds (Figure 4). The majority of work has taken place to the northwest and southeast of the licence area. A detailed outline of exploration in the region is given in Menzies, 1994.

CRA Exploration undertook work across the area during the early 1980's (EL 1878 Millionaires Well; Fraser, 1980). An extensive helicopter assisted geochemical drainage programme was undertaken across the region. 83 samples were collected and each was analysed for Pb, Zn, Cu, Co, Cr, A, Au, U, Sn and W. Several isolated tungsten anomalies were reported but from the three samples within EL 30483 (Figure 4) no anomalous results were returned (Fraser, 1980).

CRA also conducted additional exploration across two large licence areas (EL 8016 Mount Gwynne and EL 8017 Mollie Bluff) from Mount Gwynne near the Stuart highway in the north through to Kunoth Knob, just near the Sandover Highway to the south (Menzies, 1994).

Additional analysis was undertaken on fractions of the gravel samples collected during the 1980 drainage sampling programme. Sample 212265 recorded a single chromite, but the two upstream samples 212262 and 212263 were negative and no further work was undertaken in the area (Menzies and Louwrens, 1995).

In the late 1990's Normandy/North Flinders Mines conducted exploration over an area (EL 9219) extending NW-SE covering EL 30483. An extensive vacuum drilling programme of 341 holes for 1908m was completed in Year Two of tenure (West, 1997). Composite samples from the bottom three metres of each hole were sampled for Au. Eighteen holes fall within the EL 30483 boundaries however all results returned 0ppb Au.

A 36-hole RAB/Aircore drilling programme was completed in 1998 in order to develop an understanding of the regolith, bedrock geology and baseline geochemistry in the area (Smith and Adrichem, 1998). The programme was conducted over three regions in the northern, central and southern parts of the licence. Holes WPRB0016-0026 fall within EL 9219 (Figure 4). No significant results were returned (Smith, 1999).

A comprehensive rock chip sampling programme (76 samples) was completed in conjunction with the above mentioned RAB drilling. Sampling was generally confined to the Ledan Schist, orthogneiss, amphibolite and associated veins (Smith and Adrichem, 1998). Of the six samples taken within EL 30483 one returned a result of 16ppb. There was no follow up of this result.

After comprehensive surface sampling and shallow drilling programmes returned little in the way of significant results Normandy NFM surrendered the licence in October 2000 (Harrison and Walter, 2000).



Figure 4: Previous exploration within EL 30483

6. EXPLORATION UNDERTAKEN 2019-2020

The Mount Peake Mining Operations MMP was submitted in October 2019. A number of surveys affecting the area surrounding EL30483 have previously been discussed, specifically monitoring for the Greater Bilby. The Biodiversity Management Plan which deals with Threatened Species Monitoring and Management is included as Appendix 1.

A draft Mine Closure Plan which includes closure costing estimates for the Rail Facility is included in Appendix 2.

Additional aerial imagery was obtained along areas of the proposed Mount Peake access and haul road. This resulted in the reprocessing of original data surrounding EL30483 to ensure continuity across the datasets. The reprocessed data is included in Appendix 3.

7. WORK PROGRAMME 2020-2021

Exploration work across the Mount Peake project is currently on hold due to the Covid-19 outbreak across the country. Prior to the end of the year reconnaissance mapping and pXRF sampling will take place across the licence area in order to identify any areas of further exploration interest. Initial pXRF sampling will take place over any area likely to be affected by the construction of mine site associated infrastructure at the planned rail siding.

A full review of Mount Peake exploration licences will be undertaken to determine whether ground should be relinquished.

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