# ACACIA MINERALS PTY LIMITED PARTIAL RELINQUISHMENT REPORT EXPLORATION LICENCE 27282

For the period ending 1 July 2016

**Titleholder** Acacia Minerals Pty Limited

**Project Operator** Acacia Minerals Pty Limited

Titles/Tenements EL27282

Tenement Manager/Agent AMETS

Mine/Project Name N/A

Personal author(s) Travis Schwertfeger

Company reference number N/A

Target Commodity or Commodities Au, U

**Date of report** 25 July 2016

**Datum/Zone** GDA94/Zone 52

250 000 K Mapsheet Darwin SD5204

**100 000 K Mapsheet** Noonamah 5172

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# 1. Abstract

EL27282, of the Acacia Project Area, consisted of the granted exploration licence covering approximately 34km² (15 Blocks) located about 50 kilometres south east of Darwin, NT. Acacia completed a partial Relinquishment of 6 Blocks in 2015, and this relinquishment report covers a further partial reduction from 9 blocks to 4 blocks with a size reduction made in order to excise an area that fell within RO30617.

The project area is 100% owned by Acacia Minerals Pty. Ltd. a wholly owned subsidiary company of Equator Resources Ltd.

# 2. Copyright

# © Acacia Minerals Pty Limited 2016

This document and its contents are the copyright of Acacia Minerals Pty Limited. The document is for submitting to the Department of Mines and Energy of the Northern Territory, as part of the tenement reporting requirements of the *Minerals Titles Act 2010*. Any information included in this report that originates from historical reports or other sources is listed in the 'References' section at the end of this document. Acacia Minerals Pty Limited authorises the Department of Mines and Energy to copy and distribute the report and associated data.

#### 3. Location and Access

The licence was located approximately 50km south-east of Darwin and can be accessed from the Stuart Highway, thence via existing tracks.

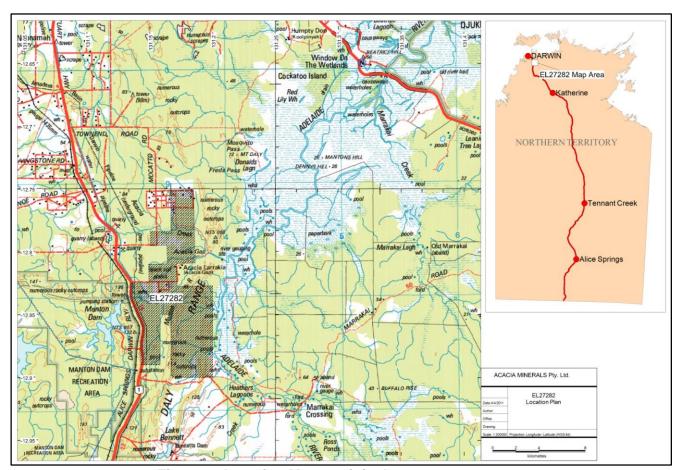


Figure 1- Location Map - original tenure at grant

# 4. Tenure and Land Use

Exploration Licence 27282 was granted on the 8th of March 2010 for a period of 6 years.

The application of 31 blocks (66.52 sq. km) covers fifty-four individual land sections, the majority of which are NT Freehold land. At the end of year 2 a waiver from reduction was submitted and granted.

Subequent partial reductions have reduced the licence to a total of 9 blocks, and an additional 5 blocks have been relinquished as part of this reduction report reducing the granted licence area from 66.52 km<sup>2</sup> to approximately 10.9 km<sup>2</sup> covered in the remaining 4 blocks, refer to Figure 2 for Reduced Area retained for continued exploration.

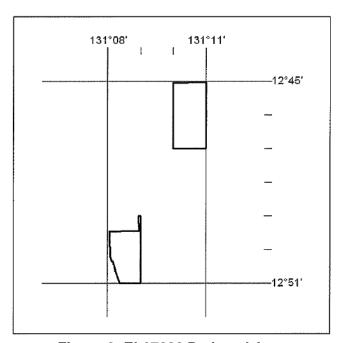


Figure 2: EL27282 Reduced Area

# 5. Topography & Hydrology

The topography within the area is dominantly low, with limited outcrops of granite, greywacke and shale. Small river systems flow through the licence during the wet season with the Acacia Creek intersecting the licence area.

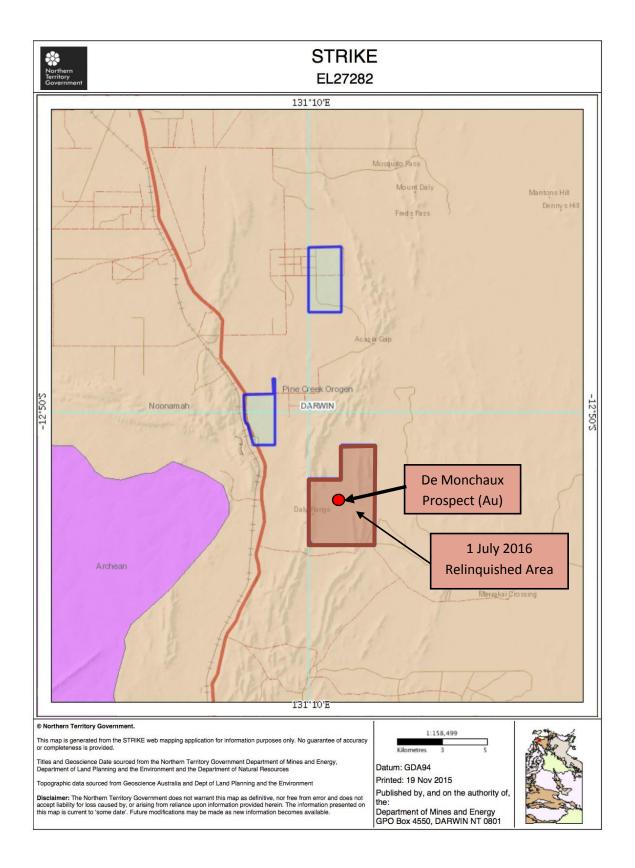


Figure 3 - EL27282 tenure over orogenic map, showing granted and relinquished areas

# 6. Geology

EL27282 lies on the north-eastern margin of the Archaean Rum Jungle and Waterhouse basement complexes. These are overlain by Lower Proterozoic clastic and dolomitic units of the Namoona Group, Crater Formation and Coomalie Dolomite; shales and calcareous shales of the Whites Formation and shales with interbedded quartzite of the Wildman Siltstone.

Uranium and base metal mineralisation at Rum Jungle and Woodcutters is concentrated in structural zones in the lower Whites Formation just above the Coomalie Dolomite. Gold mineralisation at Sundance, Batchelor, is within palaeokarst collapse breccias above the contact of the Coomalie Dolomite and Whites Formation. Base Metals are associated with mafic units intersecting the Coomalie and Whites Formations.

The structure of the area is dominated by an early phase of N-S trending open folds and strike slip faulting consisting with extensional basinal development. A major arcuate fault has been identified in the western portion of the region from interpretation of aeromagnetic and radiometric data. These structures have been subsequently offset by a later phase of NE-SW trending structures, dominated by the Giants Reef Fault.

The De Monchaux Creek mineralisation located within the relinquished area is bounded by Quartzite ridges of the Proterozoic Acacia Gap Quartzite Member and Whites Formation striking in a north-south direction in the central portion of EL 27282. The Acacia Gap Quartzite Member is mainly quartzite, commonly pyritic, with interbedded shales and phyllites. The Whites Formation consists of calcareous and carbonaceous pyritic argillite, dololutite and calcareous para-amphibolite.

The distinctive carbonaceous, pyritic shales of the Whites Formation were not observed as outcrop in the mapping area although remnant drill chips were observed close to historic drill hole collars and it is assumed that the Whites Formation would be intersected relatively close (within 50m – interpreted from drill hole logs) to the surface.

# 7. Exploration Rationale

The area is situated within the Pine Creek Orogen, which is well known for hosting gold, uranium and base metal mineralisation, Acacia Resources believed that the area had a potential to host an economic gold or uranium deposit.

The De Monchaux Creek mineralisation was a primary target that warrants follow-up exploration, but has been excised from the EL27282 Licence where it overlapped with the RO30617 "AROWS" on 01 July 2016 (refer to Figure 3 for outline of the relinquished area)

# 8. Previous Exploration

# Exploration conducted between March 2010 and 30 June 2016

Thomson Aviation, based in Griffith NSW, carried out a Fixed Wing Geophysical Survey of a total of 3,101 line km near Humpty Doo, NT. The survey covered all Acacia Minerals tenements in the area.

No other exploration was conducted on the relinquished blocks during the tenure life.

#### 9. Conclusions and Recommendations

The relinquished block that falls within EL27282 represents is a significant portion of the remaining total tenement area, Mapping and reconnaissance work conducted demonstrated potential for gold mineralisation within this area, but it is difficult to make conclusions and recommendations based on data to date over the relinquished area.

The Acacia Gap Quartzite formed distinctive high relief ranges on the margins of the project area. The presence of scree and rubble on the hill slopes became an impediment when defining *in-situ rocks* for chip sampling and every effort was made to collect non-transported rock samples for analysis.

The presence of gossanous quartz, throughout the project area, indicates that mineralisation is not restricted to the primary De Monchaux Creek quartz ridge and future exploration will be focussed on generating new targets within the project area on this mineralised horizon.