



## **OFFICER HILLS SOUTH PROJECT**

**EL 27995**

### **Annual Technical Report**

**For the Period 18/11/2017 to 17/11/2018**

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## Contents

1. INTRODUCTION .....	2
1.1 Location and Access .....	2
1.2 Tenure and Land Status .....	2
2. GEOLOGICAL SETTING .....	4
2.1 Regional Geology and Mineralisation .....	4
3. PREVIOUS EXPLORATION .....	5
4. EXPLORATION COMPLETED 2017 - 2018 .....	5
5. EXPLORATION PROPOSAL .....	5
6. REFERENCES.....	6

## List of Figures

Figure 1: Locality plan showing tenement EL27995 .....	3
Figure 2: EL27995 NTGS Regional Geology .....	4
Figure 3: EL27995 aeromagnetic image showing regional-scale targets.....	6

## List of Tables

Table 1: Tenement details for EL27995 .....	2
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## **Summary**

This report discusses exploration activities on EL27995, located c. 540km north-west of Alice Springs, Northern Territory, for the third year of tenure, covering the period 18<sup>th</sup> November 2017 to 17<sup>th</sup> November 2018.

During 2014, Ramelius Resources Ltd entered into a Farm-in Agreement with Tychean Resources Limited, comprising the Tanami Joint Venture, which includes EL27995. Ramelius are operators of the project and have earned an 85% Joint Venture Interest in the tenement package.

Drill testing of target areas on EL27995 was planned for the 2018 field season. However, owing to a change in the company's exploration focus, a review of the Tanami projects was conducted during 2018, and the overall tenure rationalised. EL27995 was recognised as having significant untested exploration potential and was retained as the company's sole tenement in the region. The planned drilling will now be completed during 2019 field season.

## 1. INTRODUCTION

EL27995 is currently held by Tychean Resources Ltd, and operated under joint venture by Ramelius Resources Ltd. This report summarises the exploration activities carried out for the third year of tenure, covering the period 18<sup>th</sup> November 2017 to 17<sup>th</sup> November 2018.

### 1.1 Location and Access

Exploration License EL27995 is located approximately 540km north-west of Alice Springs, Northern Territory. The license covers 40 sub-blocks for a total area of 128 square kilometres. Vehicle access from Alice Springs is by way of the Tanami Highway to the Tanami Downs turn-off, thence southwards approximately 50km to Tanami Downs Station, thence by station tracks to the tenement. Figure 1 shows the location of EL 27995.

### 1.2 Tenure and Land Status

Exploration License EL27995 was granted to Tychean Resources Ltd (Tychean; formerly ERO Mining Ltd) on 17<sup>th</sup> November 2015 for a period of 6 years.

The license forms part of a Joint Venture Agreement with Ramelius Resources Limited, who will be responsible for the management of the exploration programs on this tenement.

EL27995 lies wholly within the Yiningarra Aboriginal Land Trust.

*Table 1: Tenement details for EL27995*

Tenement	Holder	Operator	Grant Date	Expiry Date	Sub-Blocks	Exp. Comm 2017-18
EL27995	Ramelius Resources Ltd (85%) Tychean Resources Ltd (15%)	Ramelius Resources Ltd	18/11/15	17/11/21	40	\$140,000

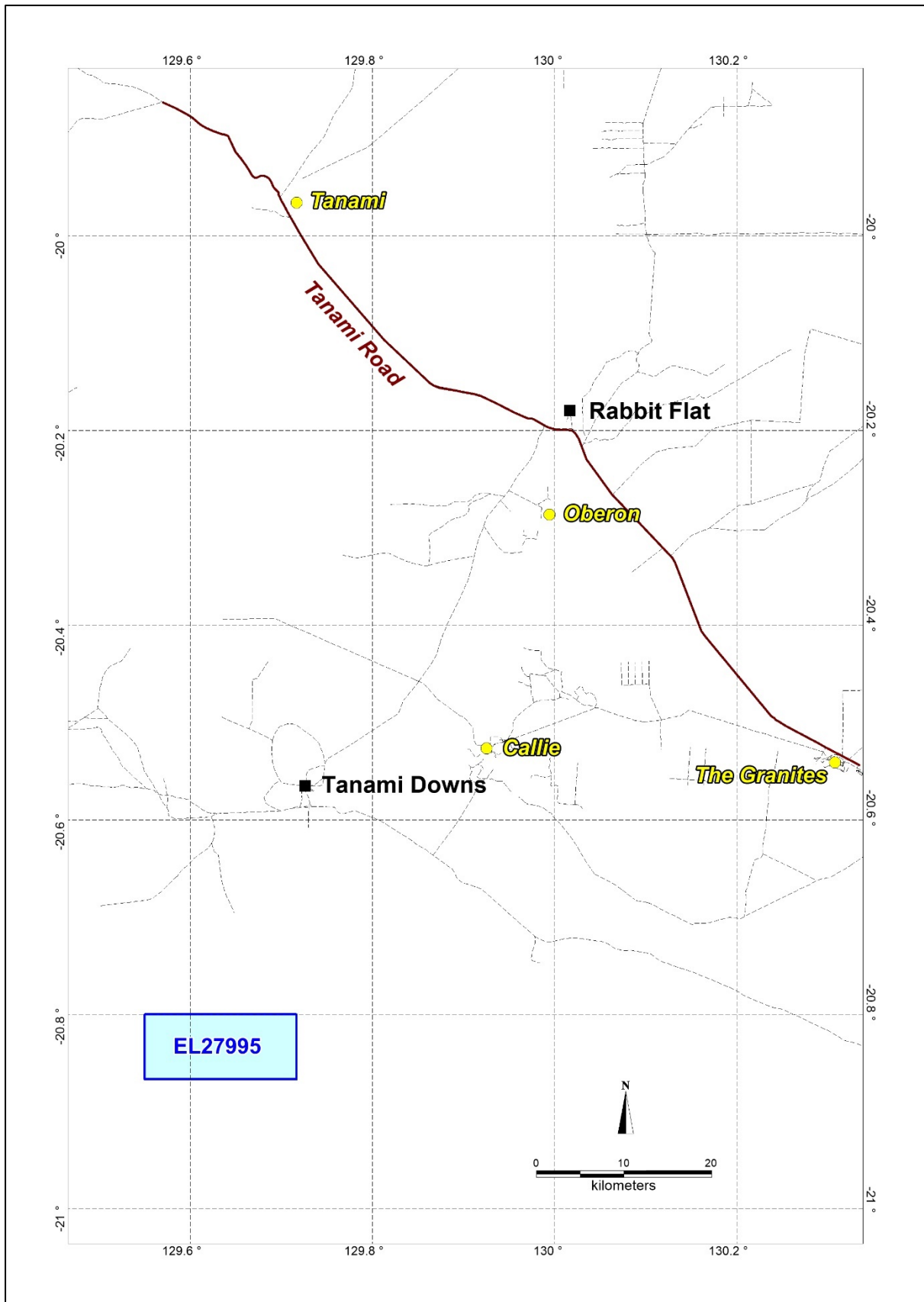


Figure 1: Locality plan showing tenement EL27995

## 2. GEOLOGICAL SETTING

### 2.1 Regional Geology and Mineralisation

The Palaeoproterozoic Tanami Region forms part of the North Australian Craton and comprises a succession of fine grained siliclastic sedimentary rocks, turbidite, BIF, mafic sills, basalt and minor Volcaniclastics. The region was subject to multi-phase deformation, regionally metamorphosed to greenschist to mid-amphibolite facies and subsequently intruded by 1825-1790Ma granites (Wygralak *et al.*, 2005)

Within the Officer Hills South EL 27995, the basement Proterozoic “Tanami Group” geology comprises Dead Bullock Formation (DBF) units as a NW-trending, moderately magnetic sequence in the eastern part of the tenement, comprising siltstone, metapelite, and chert, conformably overlain to the east by the Killi Killi Formation, which comprises turbiditic sandstones (Figure 2). The western part of the project area includes intrusive granodiorite of the Palaeoproterozoic Inningarra Suite.

Cambrian basalt flows unconformably overlie and conceal part of the Tanami Group and granitoid basement, and Tertiary colluvial sheetwash and aeolian sands overlie most of the project area.

Styles of gold mineralisation in the Tanami Region are predominantly orogenic lode gold deposits, predominantly within mafic volcanic and sedimentary lithologies of the Dead Bullock Formation (e.g. DBS and Granites Goldfields). Several orogenic gold deposits located north of EL27995 include The Granites, Callie, Oberon, and Groundrush.

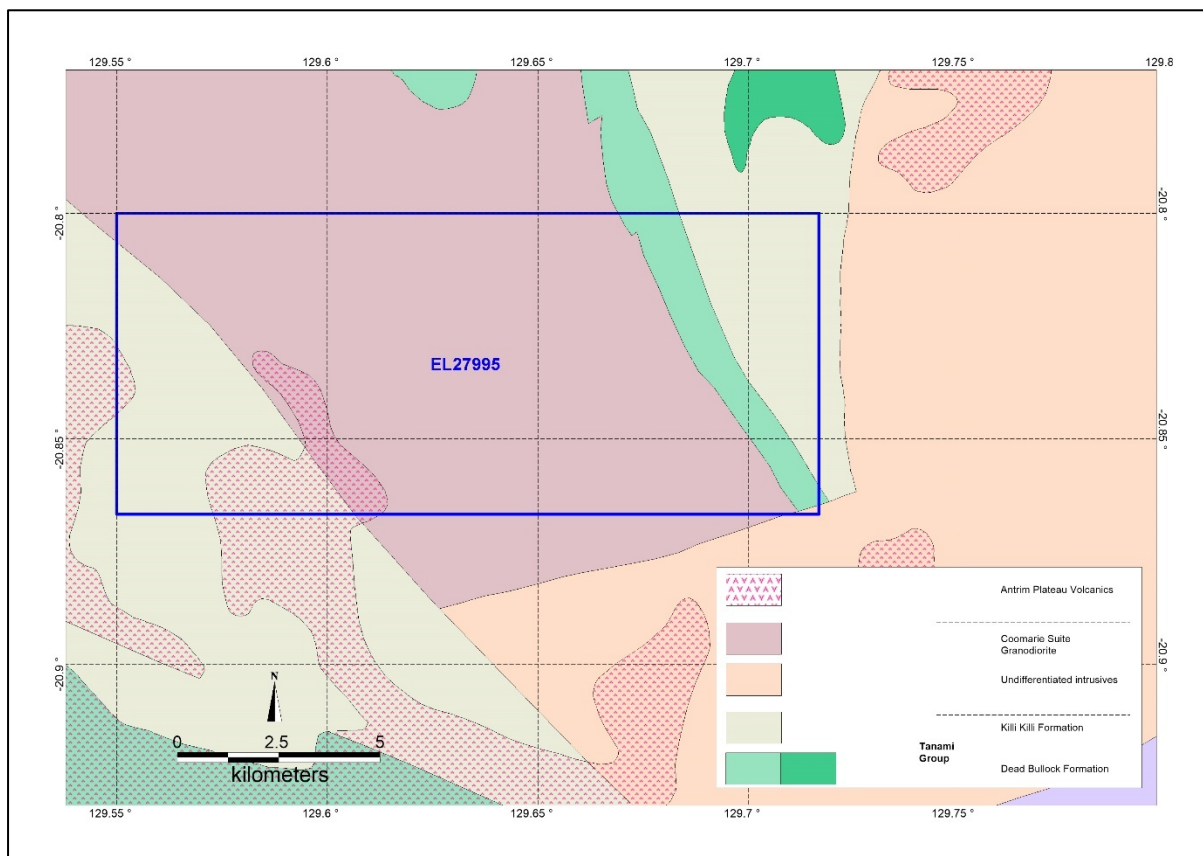


Figure 2: EL27995 NTGS Regional Geology

### **3. PREVIOUS EXPLORATION**

Only limited historic exploration has been carried out on EL27995.

During 1986, North Flinders Exploration completed limited soil and rock-chip sampling in the central-northern part of the tenement, as well as in an area of exposed poly-metallic veins immediately to the north of the license (Figure 3). Anomalous Cu, Pb, Zn and As were returned from sampling of polymetallic veins and associated outcrops immediately north of the current licence area, although no drilling was completed.

During 1992, Zappopan undertook limited gold exploration, and collected a number of lag samples over the linear magnetic feature in the eastern part of the current license area. No anomalous gold results were returned, although sampling was unlikely to have effectively tested the target, owing to broad areas of Tertiary cover in this area.

Ramelius Resources undertook desk top studies during the 2015 – 2017 period. This included compilation and assessment of all open-file data, target generation and drill planning. Regional scale aeromagnetic images show a major NW-SE trending structure extending across the tenement that parallels the trans-Tanami Fault which is an important control on gold mineralisation in the district (Figure 3). A NNW trending zone of magnetic stratigraphy in the eastern part of the licence is interpreted to be part of the prospective Dead Bullock Formation (Figure 3). Both the regional structural corridor and magnetic stratigraphy were identified as targets for follow-up work.

A program of broad spaced reconnaissance Air Core drilling was planned across both targets to assess the depth of cover sequences (including the possible presence of Muriel Range Sandstone & Antrim Plateau Basalt) and provide general geological information.

### **4. EXPLORATION COMPLETED 2017 - 2018**

Drill testing of target areas on EL27995 was planned for the 2018 field season. However, owing to a change in the company's exploration focus, a review of the Tanami projects was conducted during 2018, and the overall tenure rationalised. EL27995 was recognised as having significant untested exploration potential and was retained as the company's sole tenement in the region. The planned drilling will now be completed during 2019 field season.

### **5. EXPLORATION PROPOSAL**

Broad spaced reconnaissance Air Core drilling is planned across the prospective regional-scale NW-SE trending structural corridor and interpreted Dead Bullock Formation This program will enable an assessment of the depth of cover sequences and provide geological information. Dependent on the results, closer-spaced and / or deeper drilling may be conducted.



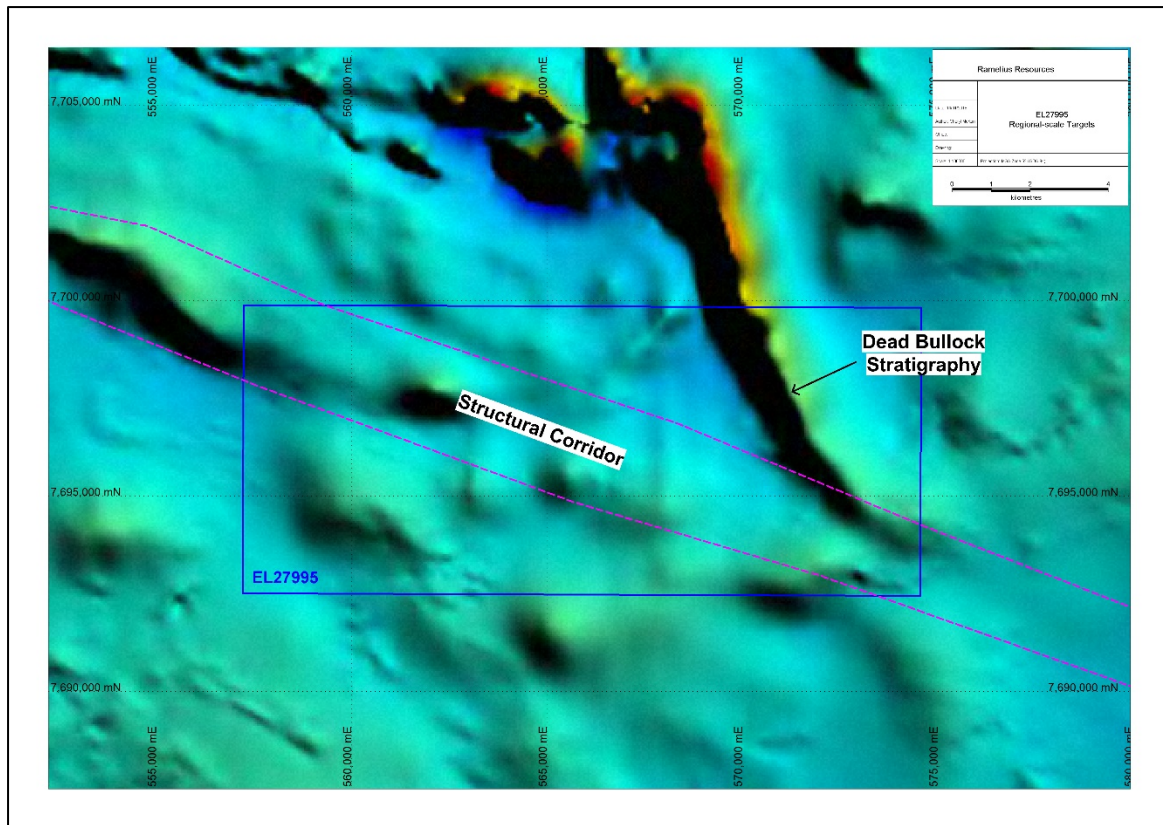


Figure 3: EL27995 aeromagnetic image showing regional-scale targets

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