

# EL 28167 MOLLIE BLUFF

# FINAL REPORT

FOR THE PERIOD

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# EXECUTIVE SUMMARY

EL 28167 is located about 200km north of Alice Springs and forms part of the Adnera Uranium Project.

The tenement was granted to Uramet Minerals Limited (Uramet) on the 18 February 2011. Work within the surrendered tenement from time of grant until surrender includes a literature search of open file reports and other available data including regional geophysics.

A review of available data, failed to define any high priority exploration targets within the tenement; hence this tenement is being surrendered.

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# **1 INTRODUCTION**

EL 28167 (Mollie Bluff) is located about 200km north of Alice Springs (Figure 1). This report details work undertaken by Intercept within the tenement since granted in February 2011.

# 2 SITE ATTRIBUTES

#### 2.1 Location

The tenement is located on the Mt Skinner pastoral station, approximately 200km north of Alice Springs in the Northern Territory (Figure 1). The tenement which is referred to by Intercept as "Mollie Bluff" falls within the Alcoota (SF5310) 1:250,000 map sheet and formed part of the Adnera Uranium Project.



Figure 1 EL28167 Location

### 2.2 Climate

The project area is situated in the Central Australian Desert climatic zone with a variable wet season from November to March. The area is classified as semi-arid with between 250 mm and 500 mm of rainfall per year, however, rainfall can be highly variable within a season and from season to season. The climate of the project area can be loosely divided into a dry season generally from April to October, and a wet season from November to March. Unseasonal rain can however occur at any time. Maximum daily temperatures generally exceed 35°C between October and April. The normal exploration field season runs from April to October.

### 2.3 Environment

The project area occurs within the Mt Skinner pastoral lease, the primary land use being cattle grazing.

### 2.4 Infrastructure

Access to the tenement from Alice Springs is normally by travelling north via the sealed Stuart Highway (Figure 1), then via station tracks to Mt Skinner homestead then northeast to the tenement (Figure 2). Most of the station tracks are generally in good condition.

# **3 TENURE**

EL 28167 was granted to Uramet on 18 February 2011, originally comprising 31 blocks, covering an area of 99km<sup>2</sup>. A 50% reduction in area was made in 2013. A further reduction of 5 blocks was required in 2014, with Figure 2 showing the original and subsequent tenement boundary.



Figure 2 Map showing original and subsequent tenement boundaries

# 4 GEOLOGY

# 4.1 Regional Geology

The Project area lies at the boundary between Proterozoic-aged basement of the Arunta domain and the younger southern Georgina Basin. Kruse et al. (2002) have described the Georgina Basin as a 330,000km<sup>2</sup> erosional remnant of a series of originally interconnected central Australian intracratonic basins that range in age from Neoproterozoic to Palaeozoic. In excess of 1.5km of Neoproterozoic sedimentary rocks are preserved in downfaulted blocks and half-grabens on the southern margin of the Georgina Basin in the NT. Depocentres and synclines contain up to 2.2km of Cambrian to Devonian section.

The Arunta basement is dominated by folded and faulted Palaeoproterozoic-age felsic gneiss and metasedimentery rocks (biotite schist, quartzite and calcsilicate), intruded by syn- to post tectonic granitoids.

In early Palaeozoic times the area was a stable platform on which carbonate, clastic and evaporitic units were deposited. The intracontinental, compressional Alice Springs Orogeny (370-310 Ma) affected the Georgina Basin and other central Australian Basin but resulted in little metamorphism (Dunster et al. 2007).

## 4.2 Local Geology

The geology of the project area (Figure 3) is dominated by Neoproterozoic and Cambrian clastic sedimentary rocks of the Central Mount Stuart and Octy Formations, and Paleoproterozoic Barrow Creek Granite Complex, with localised occurrences of early to mid Proterozoic Bullion Schist, and Ledan Schist. The latter three units are part of the Arunta Domain, and generally outcrop poorly in comparison with the Central Mt Stuart Formation.

Strike directions mainly trend NW-SE, sub-parallel to regional faults and shears such as the northwest trending Stirling Fault Zone. A secondary set of faults cross-cut the stratigraphy with a northeast strike.



Figure 3 Simplified Geology of Project Area (compilation of various published maps)

### 4.3 Geomorphology

The Landsat image of Figure 4 highlights the variable geomorphology of the area. The topography is generally dominated by flat-topped hills of the outcropping Central Mount Stuart and Octy Formations (largely sandstone) represented as dark blue in the Landsat image.

Sand-plains usually show as light green to light brown, to light purple in the image. The sand-plain shown in the very southern part of the image (light purple) converges into the calcretised Wilora Paleochannel to the west.

Sand dunes can be seen in the north-eastern part of Figure 4.

Part of the alluvial plain, channels and clay pans of the Hanson River (white colour), being the largest drainage system in the area, can be seen in the north-western part of Figure 4.

The vegetation ranges from savanna woodland near the creeks, to gidgee and acacia scrub to annual grasslands. The vegetation is consistent with a semi-arid regime.



Figure 4 Landsat image (742) of the report area showing Tenement in white

#### 4.4 Geological Model

The style of mineralisation being targeted is alaskite hosted uranium.

## 5 PREVIOUS WORK

The rationale for the acquisition of the Mollie bluff tenement was based on knowledge about the potential for uranium mineralization to be present within adjacent tenements held by Intercept in the Mt Skinner Project group of tenements. Aeromagnetic, radiometric and gravity geophysical data support the potential for the extension of favourable host rocks and possible uranium mineralization further to the south-east into the Mollie Bluff tenement.

# 6 URAMET ACTIVIES

Work undertaken by Uramet within the surrendered portion of the tenement includes a data review no field work was completed over the relinquished area..

### 6.1 Data Review

Available data-sets including satellite imagery (Figure 4), and NT government gravity (4km spaced stations), aeromagnetic (400m line spaced), and radiometric data were utilised.

The gravity data (Figure 5) is useful for regional interpretation, but being too coarse to be of use for detailed interpretation.

The regional magnetics show the rocks of the Arunta Domain as generally having a much stronger magnetic signal than the sediments of the Georgina Basin (Figure 6).

The radiometric data corresponds well with the uranium anomalies located on the ground by CRA (Figure 7).



Figure 5 Regional (4km spaced stations) bouguer gravity image



Figure 6 Regional (400m line spaced) aeromagnetic TMI image



Figure 7 Regional (400m line spaced) Uranium radiometric image

# 7 CONCLUSIONS AND RECOMMENDATIONS

A review of available data failed to define any high priority exploration targets within the tenement, hence the area being surrendered.

# 8 REFERENCES

Dunster JN, Kruse PD, Duffett ML and Ambrose GJ. 2007. Geology And Resource Potential Of The Southern Georgina Basin, Northern Territory, NTGS.

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