ANNUAL REPORT

Djambinismba Project
EL28701

NORTHERN TERRITORY

FOR THE PERIOD
1 November 2011 to 31 October 2012

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AUTHOR: I. Faris
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PROJECT NAME: Djambdimba Project
TENEMENT NO: EL28701
TENEMENT OWNER: Royal Resources Limited
TENEMENT OPERATOR: Royal Resources Limited
REPORT TYPE: Annual Report
REPORT TITLE: Annual Report Djambdimba Project, EL28701, Northern Territory for the period 1 November 2011 to 31 October 2012
REPORT PERIOD: 1 November 2011 to 31 October 2012
AUTHOR: Ian Faris
DATE OF SUBMISSION: December 2012
DATUM: GDA94_Zone 52
1:250,000 SHEET AREA: Mount Doreen (SF52-12)
1:100,000 SHEET AREA: Vaughan (5053)
GEOLOGICAL PROVINCE: Ngalia Basin
COMMODITY: Uranium, Vanadium, Copper, Lead, Zinc, Gold
ABSTRACT

LOCATION: The Djambinismba Project is located approximately 350 kilometres west-northwest of Alice Springs in the Ngalia Basin, Northern Territory. The project is defined by Exploration Licence, EL28701, which covers an area of 16 km² (5 sub-blocks) and is located on the Mount Doreen (SF52-12) 1:250,000 sheet and the Vaughan (5053) 1:100,000 sheet.

GEOLOGY: The Djambinismba Project is situated in the Ngalia Basin, a basin containing sediments up to 6000m thick ranging in age from Neoproterozoic to Palaeozoic and preserved in an elongate structure. The project area is covered by Quaternary sands and Cainozoic gravels and laterite and gravel over the Carboniferous Mount Eclipse Sandstone.

WORK DONE: During the reporting period, Royal Resources Limited undertook literature searches and the initial compilation of public data sets within the region of EL28701.

No field work could be undertaken as Royal is awaiting finalisation of Exploration Agreements by the CLC on behalf of the Traditional Owners and as the area is remote, Royal’s tenements within the Ngalia Basin are operated as a single project to minimise logistics costs.

CONCLUSIONS: This work identified that the Mt Eclipse Sandstone overlies an irregular basement, which in turn is overlain by incised Tertiary channels, probably controlled by structure and the incompletely buried topography. It is assumed at this stage that the structures extend through the Mt Eclipse Sandstone but this has to be confirmed, and will be the focus of the initial field work. The topography is dominated by a mesa whose development may be related to a NW-SE trending structure.
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1. INTRODUCTION AND TENURE

This report details exploration completed on the Djambinismba Project for the period 1 November 2011 to 31 October 2012. The project area consists of one granted Exploration Licence EL28701 situated approximately 350 kilometres west-northwest of Alice Springs in the centre of the Ngalia Basin (Figure 1). The tenement covers 5 blocks (~16 km²) and is 100% owned by Royal Resources Limited (“Royal”). Tenement details are listed below in Table 1.

The exploration focus is uranium mineralisation hosted by structures in the Mt Eclipse Sandstone or by Tertiary palaeo-channels buried beneath the Quaternary sands. During the year, Royal undertook literature searches and the initial compilation of public data sets within the region of EL28701.

All coordinates in this report are in MGA Zone 52.

Table 1: Djambinismba Project tenement details

<table>
<thead>
<tr>
<th>Tenement</th>
<th>EL28701</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>Djambinismba</td>
</tr>
<tr>
<td>Ownership</td>
<td>100% Royal Resources Limited</td>
</tr>
<tr>
<td>Grant date</td>
<td>1 November 2011</td>
</tr>
<tr>
<td>Expiry date</td>
<td>31 October 2012</td>
</tr>
<tr>
<td>Area</td>
<td>5 Blocks (~16 km²)</td>
</tr>
<tr>
<td>Expenditure commitment</td>
<td>$12,750</td>
</tr>
</tbody>
</table>

2. LOCATION AND ACCESS

EL28701 is located 350 kilometres west-northwest of Alice Springs in the Northern Territory, (Figure 1) on the Mt Doreen (SF52-12) 1:250,000 mapsheet and the Vaughan (5053) 1:100,000 mapsheet, although the 1:100,000 sheet has not been compiled or published. The tenement is bounded by latitudes 22°20’- 22°22’S and longitudes 130°52’-130°55’E.

Access to the area is by the sealed Stuart Highway for approximately 20 kilometres northwest of Alice Springs, then by travelling 295 kilometres northwest along the Tanami Highway via Yuendumu to the Vaughan Springs homestead. Station tracks are used within the project area.

3. REGIONAL GEOLOGY

The Djambinismba Project is within the Ngalia Basin. The Basin contains sediments up to 6000m thick ranging in age from Neoproterozoic to Palaeozoic and preserved in an elongate structure that is remnant of a much more extensive, polyphase intracratonic basin.

The Neoproterozoic Vaughan Springs Quartzite is the oldest unit in the Ngalia Basin, mostly forming ridges along the northern and southern margins. It unconformably overlies the Arunta Inlier basement and is overlain conformably by carbonate units of the Albinia Formation, which in turn is conformably overlain by the Naburula Formation, the Mount Stuart Formation and Rinkabeena Shale and unconformably overlain by glacial deposits of the Mount Doreen Formation. The Yuendumu Sandstone, Walbiri Dolomite, Bloodwood Formation, D jagamara Formation and Kerridy Sandstone were deposited within the Ngalia Basin through to Ordovician times. Unconformably overlying all earlier units is the Carboniferous Mount Eclipse Sandstone. It crops out widely throughout the Basin and has a thickness in excess of 3000 metres. The Mt Eclipse Sandstone hosts the majority of the sandstone type uranium mineralisation. It is a medium to coarse-grained feldspathic sandstone, commonly with carbonate cement. Conglomerate, arkose, dolomitic sandstone and shale units are present as lenses. The rocks are dominantly red or yellow-brown (oxidised facies) with restricted zones of light to dark grey (reduced facies).
The Arunta Block, located on the north and west of the Ngalia Basin contains the Southwark Granite, an undivided megacrystic biotite and muscovite-biotite granite with minor microgranite and leucogranite, pegmatite and aplite dykes (Young et al., 1995). The Southwark Granite is considered a source for uranium in the project area.

Seismic data indicates that the basin is an asymmetrical synclinal structure, which preserves a much thicker succession on the northern margin marked by northerly dipping thrusts and high angle reverse faults. The current basin configuration results predominantly from affects of the 300-400Ma Alice Springs Orogeny. This involved exhumation of the basement, which became the provenance for the Mt Eclipse Sandstone (Edgoose, 2006).

4. LOCAL GEOLOGY AND MINERALISATION

The project is in the western Ngalia Basin, (Figure 2). The area is dominated by the Djambinismba Mesa (Mt Eclipse Sandstone) within essentially flat and Quaternary aeolian sand covered plains. There are no known uranium prospects or drillholes within the Licence areas beside the shallow shot holes for the seismic surveys related to petroleum exploration (Line NT_Ext).

EL28701 is ~20 kms to the southwest of the Bigrlyi uranium deposit, which was discovered within the Mount Eclipse Sandstone by Central Pacific Minerals NL (CPM) in 1971 following up surface radiometric anomalies. Most of the uranium mineralisation encountered to date within the Ngalia Basin is in the basal Mt Eclipse Sandstone. Central Pacific Mines NL sub-divided the basal 500m of the Mt Eclipse Sandstone into eight units, namely Units A to H (Pope, 1978). Unit C contains most of the known mineralisation. More recently, exploration companies (Thundelarra) have identified significant uranium mineralisation within Tertiary channels incised into the Mt Eclipse or related to buried topography.

The uranium is thought to be sourced from the Southwark Granite, transported in oxidising solutions and precipitated in reduced sandstones containing carbonaceous material and pyrite such as the Mount Eclipse Sandstone, although more recent work (CSIRO, pers. comm.) suggests most of the ‘carbonaceous matter’ are vanadium minerals. Uranium minerals include carnotite in the oxidised zone and uraninite±montroseite in the fresh rock below the water table. Diagnostic alteration in the Bigrlyi deposit includes hematitisation, chloritisation and kaolinisation.

Three exploration models exist at present, namely:-

- uranium associated with structures and associated with redox fronts within, although not restricted to the Mt Eclipse Sandstone;
- within Tertiary channels overlying the Mt Eclipse Sandstone and
- associated with surficial calcrete deposits.

5. WORK DONE

5.1 Permitting and access

Since the grant of EL28701 Royal has been attempting to finalise an Exploration Agreement with the CLC on behalf of the traditional owners.

Royal operates the tenements within the Ngalia Basin as a single project to minimise logistic costs as the area is remote. An MMP was lodged for drilling on nearby projects in May 2012. Royal is still awaiting approval of the program.

Consequently work on EL28701 has been restricted to data compilation in preparation for reconnaissance trips.
Figure 1: Djambinismba Project Location
Figure 2: Djambinismba Project Regional Geology (after Mt Doreen 1:250,000 Sheet, 2006)
5.2 Data Compilation

The public data sets (geology, geophysics and geography and some open file reports were acquired and relevant maps scanned and georeferenced for viewing by GIS software. An extensive search was also undertaken for any lithological information from the shot holes, currently without success.

6. RESULTS

6.1 Data Compilation

The magnetic, gravity and historic shot hole locations are shown on Figures 3 to 5 together with the interpreted structures at the base of the Mt Eclipse which have been assumed to extend into the Mt Eclipse.

7. CONCLUSIONS AND RECOMMENDATIONS

The Licence area is considered to be completely underlain by Mt Eclipse Sandstone over an irregular basement, which in turn is overlain by incised Tertiary channels, probably controlled by structure and the incompletely buried topography. Younger Quaternary aeolian units cover most of the Licence area, except for the prominent Djambinismba Mesa composed of the Mt Eclipse Sandstone.

It is assumed that the structures extend through the Mt Eclipse Sandstone. This may not be the case and future reconnaissance mapping along the interpreted surface projections of the structures will focus on this aspect. The NW-SE trending may be responsible for the development of the mesa and will be one of the targets areas although scree will be a problem. This also assumes that access to the area is permitted and there are no heritage issues.

It is too early to draw conclusions until field reconnaissance has been completed to test the model.

Radon surveys may be tested if any structures are identified extending to the surface.
Figure 3: Djaminisamba Project - Interpreted structures over airborne magnetic image
Figure 4: Djambinismba Project - Interpreted structures over gravity (B.A. 2.67) image
Figure 5: Geology over depth contours - base of Mt Eclipse Sandstone
8. REFERENCES


