ANNUAL & FINAL REPORT OVER THE
HODGSON URANIUM
PROJECT

DUNMARRA & McARTHUR MINERAL FIELD,
NORTHERN TERRITORY

Hodgson Project
Exploration Licence: 26072

BY
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DISTRIBUTION
1. Northern Territory Department of Minerals & Energy
2. Diamantina Uranium Pty Limited
### PROJECT NAME:
HODGSON

### TENEMENTS:
Exploration Licences 26072

### MINERAL FIELD:
Dunmarra & McArthur Mineral Field

### LOCATION:

<table>
<thead>
<tr>
<th>Location</th>
<th>Code</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hodgson</td>
<td>5767</td>
<td>1:100 000</td>
</tr>
<tr>
<td>Nutwood</td>
<td>5766</td>
<td>1:100 000</td>
</tr>
</tbody>
</table>

HODGSON DOWNS    SD5314    1:250 000

### COMMODITIES:
Uranium and Diamonds
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1.0 HODGSON PROJECT

2.0 INTRODUCTION

The Hodgson Project is located approximately 500km southeast of Darwin in Northern Territory. The project comprises one Exploration Licence (EL 26072) which covers a total area of 388.7 km². The area can be reached via the Stuart Highway from Darwin. Vehicle access is gained via station tracks from Hodgson Down station to the north.

This report describes the results of literature research and target generation based on re-interpretation of magnetic/radiometric data carried out during the third year of the Licence.

During August 2011 consulting geologists Kastellco Geological Consultancy ("KGC") conducted a review of existing historical exploration data within the Northern Territory Geological Survey Database. This was conducted for all the Project area to identify any high potential base metal and uranium exploration targets and resulted in the identification of several targets that warrant further work.

Research over historical exploration reports determined that most companies concentrated in locating kimberlitic pipes (diamond deposits). Very little to no exploration was conducted for uranium and any other mineral commodities.

Throughout the tenure of the project, the tenement represented very grass roots exploration with very little evidence to support an extensive exploration programme based on this result historical. Subsequent to this the tenement was relinquished.

3.0 LOCATION AND ACCESS

The Hodgson Project is located approximately 500km southeast of Darwin in Northern Territory. The project comprises one Exploration Licence (EL 26072) which covers a total area of 388.7 km². The area can be reached via the Stuart Highway from Darwin. Vehicle access is gained via station tracks from Hodgson Down station to the north.

The Exploration Licence has the monsoonal tropical climate typical of northern Australia with vegetation ranging from grass covered alluvial plains adjacent to the major drainage, to open and moderately dense eucalypts forest. The licence area lies within the Gulf Fall physiographic division, with the Hodgson River located immediately to the west of the licence area.

4.0 TENEMENTS

The project is comprised of one granted exploration licence (EL) with the tenement details summarised in Table 1 and their locations are shown in Figures 1 and 2.

<table>
<thead>
<tr>
<th>Project</th>
<th>Tenement Number</th>
<th>Status</th>
<th>Current Area</th>
<th>Current Holder</th>
<th>Granted Date</th>
<th>Expenditure Covenant ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hodgson</td>
<td>EL26072</td>
<td>Granted</td>
<td>123 blocks</td>
<td>Diamantina Uranium Pty Ltd</td>
<td>02/04/2008</td>
<td>$73,800</td>
</tr>
</tbody>
</table>
5.0 REGIONAL GEOLOGY MINERALISATION

The Project covers parts of the southern boundary of the Dunmarra Basin, which is a large intracratonic basin in north-eastern Northern Territory. The Dunmarra Basin contains thin, but widespread Jurassic to Cretaceous sediments of fluvial and marine origin comprising sandstones, carbonaceous shales and minor marls and limestones. Some of these sediments are derived from uranium-enriched provinces to the north (Pine Creek Orogen), the northeast (McArthur Basin) and possible south (Tennant Region).

The Exploration Licence lies on the Bauhinia Shelf within the central south-western part of the McArthur Basin. Outcrop is dominated by sediments of the Middle Proterozoic (Carpentarian) Roper Group, which consist mainly of sequences of sandstone with lesser siltstone and minor shale. Minor exposures of tholeiitic dolerite occur in the northern part of the licence area (exposure outside the Exploration Licence) and have been ascribed an age of 1300Ma. Relatively mild post Roper Group deformation led to open folding and associated faulting and was followed by a period of uplift and erosion.

Massive, current-bedded and clean sandstones with intercalated conglomerate horizon of the Lower Cambrian Bukalara Sandstone form a horizontal cap overlying eroded Roper Group sediments, but are limited to restricted exposures. A hiatus in deposition occurred from Lower Cambrian until Lower Cretaceous times when sediments of the Petrel Formation were deposited. These comprise terrestrial sandstones overlain by marine siltstone, claystone and sandstone and form mesas across the northern and southern portions of the licence area.

The presence of uranium-enriched provinces alongside sandstone units deposited in continental and shallow marine environment suggests the Dunmarra Basin is potential for sandstone-hosted uranium that may include roll-front, tabular and tectonic/lithologic deposits. These types of deposits form when uranium is mobilised from uranium-rich rocks by oxidised groundwater and precipitated by reducing agents in sandstone such as carbonaceous material (detrital plant debris, marine algae), sulphides (pyrite, H2S), hydrocarbons (petroleum), and interbedded basic volcanics.

6.0 LOCAL GEOLOGY & MINERALISATION

EL 26072 is situated west of the Merlin diamond field. Cainozoic sediments, including residual soils, sand and alluvium are widely distributed throughout the tenement. The EL includes part of the central western area of the Proterozoic McArthur Basin and the eastern portion of the Dunmarra Basin. The Mesozoic Dunmarra Basin overlies the Macarthur Basin. The majority of the area is underlain by Mesoproterozoic Roper Group sediments and minor volcanics. Lower Cambrian mafic volcanics (Nutwood Downs Volcanics) lie immediately west of the EL and overlie Proterozoic Bukalara Sandstone. The Nutwood Downs Volcanics are equivalent to the Antrim Plateau Volcanics and consist of tholeiitic basalt, agglomerate and tuffs. Sandstone dykes in the basal lava flow suggest it was extruded before the underlying Bukalara Sandstone was lithified. Flat lying Cretaceous sediments unconformably overly the Proterozoic and Palaeozoic rocks. Dolerite sills intrude the Roper Group rocks.

A series of north to north-east trending faults are also mapped within the tenement. The numerous domes and anticlines along these faults suggest mostly strike-slip faulting.
Figure 1: Hodgson Project – Topographic Map
7.0 PREVIOUS EXPLORATION

In 1983, Ashton Mining and Aberfoyle Exploration conducted diamond exploration immediately north of northern portion of EL26072. Ashton Mining Limited, on behalf Aberfoyle Exploration Pty. Ltd., undertook a regional gravel sampling program in EL 3359 at a density of one sample per 14.98 square kilometres. A total of 86 gravel samples were collected and the heavy mineral fractions examined for kimberlitic indicator minerals. No indicator minerals found and the sampling program was considered to have adequately tested the licence area.

In 1985, Stockdale Prospecting Limited also conducted diamond exploration in the most north-western portion of EL 26072. Twenty one (21) samples were taken from major drainages within the exploration licences held by Stockdale to test the area for diamonds and kimberlitic indicator minerals. Sampling density was approximately 1:192km$^2$. Approximately 50 litres of -1.7mm+0.5mm material was collected at each site. Two positive results were obtained. Sample: T 6160 1 x kimberlitic garnet, collected in EL 4483 from a site south of the Roper River. Sample: T 7996 1 x diamond 0.0026 ct.

In 1987, Stockdale Prospecting Limited also conducted diamond exploration in the most eastern portion of EL 26072. Twenty one (21) samples were taken from major drainages within the exploration licences held by Stockdale to test the area for diamonds and kimberlitic indicator minerals. No economic mineralisation was detected during the ground survey.

In 1992, Stockdale Prospecting Limited conducted exploration for diamonds, base metals and gold within the eastern ‘half’ of EL 26072. Reconnaissance heavy mineral stream sediment sampling for diamonds was completed, and possible kimberlitic indicator minerals, mainly being spinels, were obtained from a number of samples draining breakaways of Cretaceous rocks. Infill samples were collected around the north-central licence area around Cretaceous rocks, confirming the anomalous nature of a number of catchments. Rare kimberlitic compositions were obtained, but results were not encouraging enough to warrant further diamond exploration. The Cretaceous cover is possibly a secondary source of the spinels.

In 1996, Stockdale Prospecting Limited targeted economic diamond mineralisation; however, more recent exploration targeted sediment-hosted base metal mineralisation. Reconnaissance heavy mineral stream sediment sampling for diamonds was completed, and possible kimberlitic indicator minerals, mainly being spinels, were obtained from a number of samples draining breakaways of Cretaceous rocks. Infill samples were collected around the north-central licence area around Cretaceous rocks, confirming the anomalous nature of a number of catchments. Rare kimberlitic compositions were obtained, but results were not encouraging enough to warrant further diamond exploration. The Cretaceous cover is possibly a secondary source of the spinels.
Figure 2: Hodgson Project – Geology Map
8.0 DIAMANTINA PTY LTD EXPLORATION 2010-2011

During January 2011 consulting geologists Kastellco Geological Consultancy ("KGC") conducted a review of existing historical exploration data within the Northern Territory Geological Survey Database. This was conducted for all the Project areas to identify any high potential base metal and uranium exploration targets and resulted in the identification of several targets that warrant further work.

Work during this term included literature searches and database compilation. Open file company reports were obtained from the Northern Territory Geological Survey and a review of past exploration data and geological concepts undertaken. Airphoto interpretation has identified geological and structural features for ground reconnaissance.

EL 26072 represents a greenfields exploration play for principally uranium deposits of varying genetic styles. The tenement is also considered to have potential to host diamond mineralisation. Past exploration has comprised heavy mineral sampling for kimberlitic indicator minerals and testing of magnetic and gravity anomalies for kimberlite pipes.

The targeting was undertaken at a high level to identify areas of interest that stand out in the regional re-interpreted geophysical data. Historical prospects were reviewed to determine the effectiveness of the previous exploration and evaluate remaining potential within the Exploration Licence area.

On a regional basis the Mt Hardy tenement is located in the highly prospective Dunmarra and McArthur Mineral Field. Through detail interpretation of airborne magnetic from the Northern Territory Geological Survey, the following radiometric anomalies were identified as shown in Table 2. The location of the radiometric target anomalies targets is represented in Figure 3.

Table 2: Uranium Anomalies warranted for follow up exploration work over EL26072

<table>
<thead>
<tr>
<th>Tenure Number</th>
<th>Radiometric Anomalies</th>
<th>Intensity of Anomaly</th>
<th>Strike Length of Anomaly</th>
<th>Width of Anomaly</th>
<th>Geological Setting</th>
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<tbody>
<tr>
<td>EL26072</td>
<td>1</td>
<td>Moderate to Strong</td>
<td>1.42 km Max</td>
<td>0.66 km Max</td>
<td>Abner Sandstone</td>
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<tr>
<td>EL26072</td>
<td>2</td>
<td>Strong</td>
<td>1.57 km Max</td>
<td>0.46 km Max</td>
<td>Bukalara Sandstone</td>
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<tr>
<td>EL26072</td>
<td>3</td>
<td>Strong</td>
<td>1.15 km Max</td>
<td>1.10 km Max</td>
<td>Bukalara Sandstone</td>
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<tr>
<td>EL26072</td>
<td>5</td>
<td>Moderate</td>
<td>1.70 km Max</td>
<td>0.65 km Max</td>
<td>Porcelainite Sediments</td>
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<tr>
<td>EL26072</td>
<td>6</td>
<td>Strong</td>
<td>1.40 km Max</td>
<td>0.70 km Max</td>
<td>Porcelainite Sediments</td>
</tr>
<tr>
<td>EL26072</td>
<td>7</td>
<td>Strong</td>
<td>1.16 km Max</td>
<td>0.55 km Max</td>
<td>Roper Group (siltstone/shale units)</td>
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<tr>
<td>EL26072</td>
<td>8</td>
<td>Strong</td>
<td>2.18 km Max</td>
<td>0.41 km Max</td>
<td>Roper Group (siltstone/shale units)</td>
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<tr>
<td>EL26072</td>
<td>4</td>
<td>Moderate to Strong</td>
<td>1.61 km Max</td>
<td>0.46 km Max</td>
<td>Bukalara Sandstone</td>
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</table>
Figure 3: Hodgson Project Areas showing Uranium Channel Anomalies

Radiometric Anomaly 1
1.42 km in length by 0.66 km in width

Radiometric Anomaly 2
1.57 km in length by 0.46 km in width

Radiometric Anomaly 3
1.15 km in length by 1.10 km in width

Radiometric Anomaly 4
Cluster of Radiometric Anomalies
1.61 km in length by 0.46 km in width

Radiometric Anomaly 5
Cluster of Radiometric Anomalies
1.70 km in length by 0.65 km in width

Radiometric Anomaly 6
1.40 km in length by 0.70 km in width

Radiometric Anomaly 7
1.16 km in length by 0.55 km in width

Radiometric Anomaly 8
2.18 km in length by 0.41 km in width
9.0 REFERENCE


