Report Period: 30/7/2010 to 29/7/2011

David Esser and Darryn Hedger

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EXECUTIVE SUMMARY

This annual report describes the work carried out in EL 27728 up to the 29th July 2011. EL 27728 is located over the western end of the Murphy Inlier, NT and is held by Murphy Uranium Pty Ltd, which is a wholly owned subsidiary of Bondi Mining Limited (Bondi). EL 27728 has the potential to host unconformity style and sandstone hosted style uranium deposits, similar to those located in the Alligator Rivers Uranium Field at the northern end of the McArthur Basin and the Westmoreland deposit approximately 100km to the east of the project area, respectively.

Exploration during the 2010-2011 field season comprised an Airborne EM survey in September 2010 which covered the northern portion of EL 27728. This data has been processed and preliminary modelling and interpretation of the data was completed. Further interpretation and modelling of the data was conducted during January and February 2011.
1 INTRODUCTION

Bondi Mining Limited, through its wholly owned Australian subsidiary Murphy Uranium Pty Ltd, is the holder of EL 27728. The license is located west of the Westmoreland Uranium Field and forms part of Bondi’s Murphy Project targeting uranium deposits about the Murphy Inlier in the Northern Territory. The Murphy Project currently comprises EL’s 24694, 24841, 25708, 25709, 25710, 26138, 26139, 26140, 27379, 27728, 27729, and 27730. Refer to Figure 1 for the Murphy project tenement locations.

This annual report covers all the exploration work carried out within EL 27728 up to 29th of July 2011. Exploration during the 2010-2011 field season comprised an Airborne EM survey in September 2010 which covered the northern portion of EL 27728. This data has been processed and preliminary modelling and interpretation of the data was completed. Further interpretation and modelling of the data was conducted during January and February 2011.
2 LOCATION & ACCESS

EL 27728 is located approximately 130km west of the NT - QLD border and 170km south east of the McArthur River mine in eastern NT, see Figure 2. The license straddles three 1:250,000 map sheets; Wallhallow, Burnette Downs, and Calvert Hills. Access is via the Barkly Highway from Mt. Isa, to the Barkly Roadhouse, then via the Tablelands Highway to the Calvert Hills Road. Access around the project area is via graded station roads and tracks. An alternative access can be gained via Cape Crawford to the north via the Tablelands highway, or from the east by the Calvert Hills Rd which crosses the border near Wullogorang.

Figure 2 - Project Location and Access Map.
3 TENURE DETAILS

Murphy Uranium Pty Ltd who are a 100% owned subsidiary of Bondi Mining Limited (Bondi) was granted the tenement 30th July 2010. In December 2008 a Letter of Agreement was signed between Bondi and Japan Oil, Gas and Metals National Corporation (JOGMEC) wherein JOGMEC can earn a 51% undivided interest in the project by funding AUD $3 million in exploration over four years. Bondi is the operator of the exploration program. Tenement details are shown below in Table 1 and sub-block identification is shown in Figure 3. Exploration expenditure for this period totaled $17,976.62 (inc. tenement costs). Refer to the Expenditure Report in Appendix 1 for details.

Table 1: Tenement details

<table>
<thead>
<tr>
<th>Exploration Licence No.</th>
<th>No. of Blocks</th>
<th>Area (km²)</th>
<th>Grant Date</th>
<th>Expiry Date</th>
<th>Expenditure Commitment</th>
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<tr>
<td>EL 27728</td>
<td>31</td>
<td>101</td>
<td>30/07/2010</td>
<td>29/07/2016</td>
<td>$15,000</td>
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</tbody>
</table>

![Figure 3 - EL 27728 Sub-Block identification Map.](image)
4 REGIONAL GEOLOGY

The Murphy Project tenements are situated within the Calvert Hills, Wallhallow, Mount Drummond and Brunette Downs (Northern Territory) 1:250,000 geological sheets. The first geological observations in the area were reported by explorer Gregory in 1861. The Redbank copper deposit was discovered in 1916 by prospectors, however little geological work was done until the late 1930s when the federal government funded the Aerial Geological and Geophysical Survey of Northern Australia (“AGGSNA”). The discovery of uranium in 1955 at Pandanus Creek led to increased interest from mining companies.

The oldest rocks exposed in the area are early Proterozoic sediments, volcanics and intrusives of the Murphy Metamorphics which were deformed and regionally metamorphosed prior to 1875 Ma (refer to Figure 4 and Figure 5). The Murphy Metamorphics are represented mainly by phyllitic to schistose metasediments and quartzite and are overlain by two Proterozoic cover sequences; the Cliffdale Volcanics and the Westmoreland Conglomerate. The cover sequences were laid down after the early deformation and metamorphism of the basement and before a period of major tectonism, which began at about 1620 Ma. The oldest cover sequence is the Cliffdale Volcanics unit, which unconformably overlies the Murphy Metamorphics. The Cliffdale Volcanics contain over 4000 m thickness of volcanics of probably sub-aerial origin, more than half of which consist of crystal-rich ignimbrites with phenocrysts of quartz and feldspar. The remainder are rhyolite lavas, some of which are flow banded. The ignimbrites are more common in the lower part of the sequence, with the Billicumidjii Rhyolite Member occurring towards the top.

The Cliffdale Volcanics are comagmatic with the Nicholson Granite and together they comprise the Nicholson Suite. SHRIMP dating of both the Nicholson Granite and the Cliffdale Volcanics gave an age of 1850 Ma (Scott et al, 2000). The Nicholson Granite is predominantly an I-type granodiorite. The Nicholson Suite shows little evidence of fractional crystallisation and on this basis the potential for forming large tonnage deposits is considered to be minor, although small tonnages of high grade are possible. In the vicinity of the granites there are no significant potential host rocks documented. Potential exists for small Sn and W deposits within the granite and for smaller Cu and Au deposits outside the granite.

Unconformably overlying the Nicholson Suite is the Tawallah Group. This is the oldest segment of the southern McArthur Basin. The base is a sequence of conglomerates and sandstones comprising the Westmoreland Conglomerate. The conglomerates thin out to the southeast and are in turn unconformably overlain by the Seigal Volcanics; an andesitic to basic sequence containing interbedded agglomerates, tuffs and sandstones. Together these units comprise about two-thirds of the total thickness of the Tawallah Group. The Seigal Volcanics are overlain (in ascending order) by the McDermott Formation, the Sly Creek Sandstone, the Aquarium Formation and the Settlement Creek Volcanics. Age dating of volcanics within the Tawallah Group indicates a depositional age of between 1780 and 1710Ma.
To the south and south-west of the Murphy Tectonic Ridge, the Tawallah Group is unconformably overlain by shallow marine and fluvial sandstone and siltstone of the mid Proterozoic (1570 -1590 Ma) South Nicholson Group. To the southwest of the Murphy Tectonic Ridge, the South Nicholson Group appears to have been deposited directly onto lithologies of the Murphy Metamorphics.

To the west of the exposed parts of the Murphy Tectonic Ridge and the area in which the Murphy Project tenements are located, Proterozoic Rocks are concealed by Quaternary colluvium and black soil plain and Cambrian shallow marine sediments of the Barkly Group. Sporadic outcrop of Westmoreland Conglomerate and Murphy Metamorphics indicates that the depth to potentially prospective lithologies is minimal in the eastern half of the tenement holding. Interpretations of Proterozoic geology presented with the BMR Calvert Hills 1:250 000 geological map publication indicate that the Murphy Tectonic Ridge continues to the west under younger cover rocks and the Murphy Project tenement block.
Figure 5 - Stratigraphy of Murphy Inlier Region
4.1 Structure and tectonics

Cratonisation of the northern Australian orogenic domains during the Barramundi Orogeny was accompanied by the establishment of a fundamental framework of deep-seated NW, NNW to NNE and NE-trending crustal structures (Etheridge et al., 1987). It is widely speculated that these structures were reactivated and became the major controlling influence on the depositional geometry of succeeding basin phases and the localisation of subsequent deformation (e.g., Plumb, 1979; Etheridge and Wall, 1994; Rogers, 1996). The majority of models for the evolution of the McArthur Basin promote extensional tectonics, in which specific fault orientations acted as normal or ‘growth’ structures and others acted as accommodation or transfer structures during various stages of basin formation. The most influential aspect of McArthur Basin geology that has driven extensional models is the presence of significant volcanic and coarse grained clastic rocks at the base of the basin succession (Rogers, 1996).

The igneous rocks of the Westmoreland region are markedly bimodal with respect to silica content, a typical feature of intracratonic riftting. No rocks older than the Murphy Metamorphics are known east of the Westmoreland area, implying that the detrital sediments of the Tawallah Group were derived from either within or west of the Murphy Tectonic Ridge. The Tawallah Group is dominated by shallow-water marine sediments deposited on a regionally extensive platform.

Subsequent contractional reactivation of earlier ‘extensional fault systems’ is thought to have occurred at least three times during and after basin development (Plumb, 1994; Rogers, 1996).
5 LOCAL GEOLOGY

Most of EL 27728 is covered by Cainozoic material consisting of recent alluvium, tertiary laterite, sandstone and siltstone, black soils and accreted carbonate outcrops of an undesignated formation (refer to Figure 6 – 1:250,000 Published Geology). Small exposures of Cambrian sediments, belonging to the Georgina Basin, are scattered through the tenement and consist of conglomerates, dolomitic limestone (fossiliferous in parts), ferruginous grey and white quartz sandstone and mudstone. Neoproterozoic meta-sediments belonging to the South Nicholson Group also occur in and around the southern parts of the tenement.

Figure 6 – 1:250,000 Published Geology.
SUMMARY OF PREVIOUS WORK

A comprehensive review of previous mineral exploration was carried out and an outline is presented here. Important information gained from this review includes the following:

- First recorded work in the area was by Mount Isa Mines in 1956 and consisted of crude airborne radiometric surveys. The results of this work located the Westmoreland deposits and most likely all of the significant outcropping occurrences.

- There was a distinct hiatus in exploration between 1963-1970, reflecting a slump in the global demand for uranium; the post war proliferation of nuclear weapons had slowed and the nuclear power industry was still in its infancy.

- A second wave of exploration commenced in the 1970’s as the demand for uranium for use in nuclear power stations increased. Many of the companies were also operating in the Alligator Rivers region, at the northern end of the Pine Creek fold belt, and much of their focus was on this area after the discovery of significant deposits at Jabiluka, Ranger, Nabarlek and Koongarra. The similarity between the two areas was known, however at this time the nature of the Alligator Rivers deposits was poorly understood and exploration was targeted toward roll front and sandstone hosted uranium deposits in both areas. By the time unconformity type uranium deposits were understood, uranium exploration restrictions were in place and work did not resume in the area until recently.

- More detailed radiometric surveys have been carried out. This work has revealed many outcropping anomalies related to brecciation, quartz veining (silicification) and iron-metasomatism (ferruginisation) associated with faulting in the Nicholson granite and Murphy Metamorphics. None of these anomalies appear to warrant follow-up work, however they indicate that processes associated with the formation of unconformity type uranium deposits have been active in the early Proterozoic basement.

- The region has been explored for gold, base metal (sedex type deposits) and kimberlite hosted diamonds by several major companies. No significant gold or base metal discoveries were made. A large number of diamonds were recovered from Ashton’s Creswell prospect outside the licence and the area is currently under an ERL.

- An airborne GEOTHEM survey carried out by BHP targeting unconformity U-Au-PGE deposits indicated the usefulness of input EM surveys in targeting unconformity uranium deposits under cover. In particular the ability to locate basement conductors related to graphite in fault zones or clay alteration. Part of the BHP survey covers the current EL.

- The western covered region of the Murphy Inlier has the potential to host an unconformity type uranium deposit at depth

A list of the ATPs and ELs previously covering area about EL 27728 is provided in Table 2.
Table 2: Previous tenements over EL 27728

<table>
<thead>
<tr>
<th>Licence</th>
<th>Company</th>
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<tbody>
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<td>ATP 444</td>
<td>MIM</td>
</tr>
<tr>
<td>ATP 983</td>
<td>Carpentaria Exploration Company</td>
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<tr>
<td>ATP 3401</td>
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<tr>
<td>EL 122</td>
<td>Noranda Australia</td>
</tr>
<tr>
<td>EL 886 &amp; EL 887</td>
<td>T.W. Cawley and R.A. Weston</td>
</tr>
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<td>EL 1339</td>
<td>AAR Ltd/Otter Exploration &quot;Coolibah&quot; JV</td>
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<td>EL 1427</td>
<td>Mines Administration/Otter Exploration &quot;Bowgan Creek&quot; JV</td>
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<td>EL 8997, 8998, 9163 &amp; 9660</td>
<td>BHP</td>
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</table>
7 2011 EXPLORATION PROGRAM

7.1 Airborne EM Survey

On 6th October 2010 Fugro Airborne Services completed an Airborne Electro-Magnetic survey (AEM) comprising a total of 2,355 line kilometres covering the Murphy West target area (1,478 line km at 500m spacing), the UC19 area (624 line km at 300m spacing) and the UC 17 survey (253 line km at 300m spacing). Refer to Figure 7 for location of the AEM survey. A small portion of the Murphy West survey area (51 sq km out of 600 sq km) covered the northern portion of EL 27728 (Figure 7). The data from this survey was included as Appendix 2 in the 2010 annual statutory exploration activity report for EL’s 26138, 26139 & 26140.

An interpretation of the data from the AEM survey was completed in November (J. Coggon, 2010). The interpretation identified a thick, weakly conductive sequence which corresponds with the Cambrian limestone and Proterozoic Westmoreland sandstone in the Murphy West area. The Proterozoic, basement rocks appear to be resistive, however, the penetration of the AEM is limited to 300m due to the masking effect of a shallow near surface conductor, which is black soil or weathered limestone. Previously un-identified NW trending faults and folds were defined by the AEM survey and these areas have potential for hosting uranium mineralisation. The conductivity map and a quasi-section of the conductivity in the Murphy West area are illustrated in Figure 8 and Figure 9 respectively.

Once interpretation of the GEOTEM data has been completed any significant anomalies identified will be followed-up using ground electro-magnetics (EM). The follow-up by ground EM was deferred until late 2011 due to delays in the completion of the AEM survey.

![Figure 7 - Location of Aerial EM Survey.](image-url)
Figure 8 - Image of conductivity from 0 - 100m as defined by the AEM.
Figure 9 - GeoTEM survey quasi-section showing conductivity at 605,250mE.
8 CONCLUSIONS

Exploration in 2010 comprised a 69,000 line kilometre airborne magnetic and radiometric survey covering the northern portion of EL27728. The survey was flown at 100m spaced north - south lines at a height of 50m.

The interpretation of the AEM data by Coggon concluded;
- There is a strong, near surface conductor over the Murphy West area, attributed to the black soil and weathered limestone. This conductive layer reduced survey penetration to approximately 300m.
- The Murphy inlier basement in the Murphy West area, is resistive with no strong conductors being identified.
- A weakly conductive layer within the Cambrian limestone and Westmoreland sandstone was identified in the Murphy West area.

New NW trending faults with conductive zones were identified at Murphy West from the AEM. These zones have the potential to host uranium mineralisation.

9 RECOMMENDATIONS

It is recommended that uranium exploration move away from the interpreted Nicholson Granite, under shallow cover, and focus on the new geophysical targets areas along the northern, and the north – western edge of the tenement.

10 FUTURE WORK

Future work will involve;
- Further modelling and interpretation of the AEM data and definition of targets for a ground EM survey.
- Assuming the AEM interpretation is favourable, conduct ground EM survey
- Re-evaluation of the geological models and targeting strategy for the Murphy project
- Soil sampling over untested target areas defined by aeromagnetic and airborne EM survey interpretations
- Follow-up RC / diamond drilling of significant EM conductors defined by ground EM survey and soil geochemical anomalies, if warranted.
REFERENCES


