2008 ANNUAL REPORT
EXPLORATION LICENCE 24841,
MURPHY PROJECT, NT


George Tahan
August 2008
CONTENTS

EXECUTIVE SUMMARY ........................................................................................................ 2

1 INTRODUCTION ............................................................................................................. 3
2 LOCATION & ACCESS .................................................................................................. 4
3 TENURE DETAILS .......................................................................................................... 5
4 REGIONAL GEOLOGY .................................................................................................. 6
5 EXPLORATION PHILOSOPHY ...................................................................................... 9
6 SUMMARY OF PREVIOUS WORK ................................................................................ 9
7 BONDI’S WORK COMPLETED TO DATE ................................................................... 11
   7.1 SUMMARY OF WORK DONE TO JULY 2007 ......................................................... 11
   7.2 SUMMARY OF WORK DONE TO JULY 2008 ......................................................... 11
9 CONCLUSIONS ............................................................................................................ 21
10 FUTURE WORK ......................................................................................................... 21

FIGURES
   Figure 1 Location Map showing Murphy Project................................................................. 3
   Figure 2 Tenement Location Map .................................................................................... 4
   Figure 3 Simplified Regional Geology ........................................................................... 7
   Figure 4 Location of Alpha Track Etch Sample Sites on EL24841 .................................... 13
   Figure 5 Location of drillholes ....................................................................................... 14
   Figure 6 Schematic Section showing Stratigraphic Interpretation and a Proposed Angle Drilling Programme ........................................................................... 15
   Figure 7 Location of RAB Drill Collars on EL24841 ......................................................... 16
   Figure 8 (from AusSpec report) showing distribution of clay alteration associated with the Athabasca unconformity uranium deposits in Canada ......................................................... 19
   Figure 9 Schematic Diagram of Alteration associated with Unconformity Style Uranium ........................................................................... 19

TABLES
   Table 1. Tenement details. ............................................................................................ 5
   Table 2. Previous tenements over the EL 24841 area .................................................... 10

APPENDICES
   Appendix 1 Expenditure statement.
   Appendix 2 Fugro Airborne Geophysical survey
   Appendix 3 Douglas Haynes Discovery –Geophysics Interpretation Report
   Appendix 4 Alpha Track Etch Survey Results
   Appendix 5 Downhole Radiometrics Survey Profiles
   Appendix 6 Hychip Survey Report
   Appendix 7 Drillhole Details
EXECUTIVE SUMMARY

This annual report describes the work carried out in EL 24841 up to the 31/7/2008. EL 24841 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) The exploration licence was acquired because the area is believed to have accessible strike lengths of the unconformity between the early Proterozoic Murphy Inlier and the middle Proterozoic McArthur Basin, in particular the Westmoreland Conglomerate. Concealed southern extensions of the Emu Fault Zone are also believed to cut the area. Consequently EL 24841 is seen as having the potential to host unconformity-type uranium deposits, similar to those located in the Alligator Rivers Uranium Field at the northern end of the McArthur Basin.

Work during this period comprised a review of past exploration, and the results of the companies airborne EM/magnetic survey and a comprehensive mineral assessment, incorporating the airborne survey in addition to public domain geological, geochemical and geophysical data. The aim of this work was to:

(i) Map the lower Proterozoic and mid Proterozoic rocks under the Phanerozoic cover

(ii) Identify possible uranium source rocks

(iii) Delineate regional/local structures that display alteration indicating the conduits of oxidised fluids

(iv) Map conductive graphitic units or clay alteration in the basement rocks.

These Geological features were then used to embark on an ambitious detailed Alpha Particle Track Etch survey, which led to a major RAB scout drilling programme over targets that were defined by the surveys.

Results of preliminary evaluation revealed six target areas, which extend on to contiguous EL’s held by Bondi. The EM survey and mineral assessment also found highly conductive mafic intrusive dyke and sill complexes which are thought to be the conduits for flood basalts found in the southern portion of the McArthur Basin. Eight “high risk” Cu-Ni targets areas associated with these mafic complexes were also selected. It is planned to evaluate the best of these targets via drilling to confirm the potential for this type of mineralisation in the area in due course.
1 INTRODUCTION

Bondi Mining Limited, through its wholly owned Australian subsidiary Murphy Uranium Pty Ltd, is the holder of EL 24841. The licence 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 ELs 24694 and 24841, and ELAs 25708, 25709, 25710, 26138, 26139 and 26140 see figure 1.

This annual report covers all the exploration work carried out within EL 24841 up to 31/08/2008. Work during this period was directed at determining whether the regions under thin cover have the potential to host economic uranium mineralisation and the testing of selected target areas from the 2007 surveys. Activities involved an extensive review of previous exploration, and results of an airborne EM and magnetic survey and detailed mineral assessment aimed at selecting uranium targets. Results of this work highlighted several uranium and possible copper-nickel targets. These are now investigated and will remain the focus of attention in the succeeding exploration periods.
EL 24841 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 licence covers four 1:250,000 map sheets; Wallhallow, Burnette Downs, Calvert Hills and Mount Drummond. Access is via the Creswell Downs–Calvert Hills road, which crosses the border near Wollogorang.

Figure 2 Tenement Location Map
3 TENURE DETAILS

EL 24841 was originally taken out by Global Discovery Pty Ltd and was acquired from them by Canon Investments Pty Ltd (a wholly owned subsidiary of the Canadian company, Buffalo Gold Limited), and subsequently by Bondi Mining Limited who are the current operators of the licence under their fully owned subsidiary Murphy Uranium Pty Ltd. Tenement details are shown below in Table 1.

Table 1. Tenement details.

<table>
<thead>
<tr>
<th>Exploration Licence No.</th>
<th>No. Blocks (Area km²)</th>
<th>Grant Date</th>
<th>Expiry Date</th>
<th>Expenditure Commitment</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL 24841</td>
<td>297 (971)</td>
<td>1/8/2006</td>
<td>31/7/2012</td>
<td>$ 100,000</td>
</tr>
</tbody>
</table>

Exploration expenditure for this period totaled $929688.93 and a breakup is provided in the Expenditure Report in Appendix 1.
The Murphy Project area is located on the western end of the Murphy Inlier. The inlier is referred to as the Murphy Tectonic Ridge and represents a belt of lower Proterozoic basement that separates the middle Proterozoic McArthur Basin to the north and the middle Proterozoic Lawn Hill Platform - South Nicholson Basin to the south (See Figure 3). The oldest rocks in the region are the lower Proterozoic Murphy Metamorphics, which form the basal unit of the Murphy Inlier, and consist of isoclinally folded greenschist facies metasediments; typically quartz-feldspar-mica schists and gneiss with minor graphitic units. The Murphy Metamorphics form the core of the Murphy Tectonic Ridge and only outcrop in the NT portion of the inlier. The Cliffdale volcanics unconformably overlay the Murphy Metamorphics and are made up of a series of felsic volcanic and volcaniclastic rocks. The Cliffdale volcanics are only found at the eastern end of the inlier. Both the metamorphics and volcanics are intruded by granites and adamellites of the Nicholson Granite Complex which constitutes the majority of the rocks found in the inlier.

The northern margin of the Murphy Inlier is unconformably overlain by the Westmoreland Conglomerate, which is the oldest unit in the middle Proterozoic Tawallah Group, and marks the base of the southern portion of the McArthur Basin. The Westmoreland Conglomerate is made up of four sub-units;

(i) A basal volcanic derived (sourced from the underlying Cliffdale volcanics) conglomerate-breccia that grades up into a pebbly quartz sandstone;

(ii) An upward fining, coarse to medium grained ferruginous sandstone;

(iii) A coarse polymictic conglomerate and minor pebbly sandstone, which can be reverse faulted directly on the Cliffdale Volcanics; and

(iv) A porous, crossbedded, coarse grained quartz sandstone, with minor conglomerate bands and laminated tuffaceous siltstone in the lower part. The Seigal Volcanics lie conformably on top of the Westmoreland Conglomerate and consist of massive and amygdaloidal tholeiitic basaltic lavas with minor interbedded siltstones and sandstones. A thin shale bed is commonly found at the base of the Seigal Volcanics and marks the hiatus between deposition of the Westmoreland Conglomerate and the start of volcanism. The middle to upper Tawallah Group consists of interbedded sediments and volcanics. Sediments and volcanics of the McArthur Group lie unconformably over the Tawallah Group.

The southern margin of the Murphy Inlier is unconformably overlain by several belts of Lawn Hill Platform in addition to sediments of the south Nicholson Basin, which unconformably covers the Lawn Hill Platform successions. A thin unit of coarse sandstone and conglomerate, the Wire Creek Sandstone, marks the base of the Lawn Hill Platform in places and is conformably overlain by the Peters Creek Volcanics; a massive sequence of alternating basalt, rhyolite and rhyodacites with minor sediments. Both units can be found lying unconformably on the Murphy Inlier and are considered equivalents to the Tawallah Group in the McArthur basin. The Peters Creek Volcanics are unconformably covered by the Fickling Group, a sequence of conglomerates, sandstones, siltstones and dolomites. The Fickling Group belongs to the Lawn Hill Platform and in the area of the Murphy Inlier is
unconformably covered by shallow marine sediments of the South Nicholson Basin referred to as the South Nicholson Group. This group is also found lying unconformably over the western end of the Murphy Inlier or over the Benmara Beds, which can lie unconformably between the South Nicholson Group and the Murphy Metamorphics. The Benmara Beds are also a middle Proterozoic Tawallah Group equivalent and consist of a mixed rhyolite, trachyte, sandstone and conglomerate package.

Phanerozoic cover consists of mostly early to middle Cambrian sediments and basalts, and Cainozoic sediments. Outcropping of Proterozoic rocks in the project area suggests that Phanerozoic cover is not thick here, although locally developed thin Cambrian Antrim Plateau Basalt flows have been noted in magnetics to the north.

Structurally, the region is cut by a dominantly NW trending series of faults and joints paralleling the Calvert fault. Possible NNW trending extensions of the Emu Fault also pass through the west side of the region under the Phanerozoic cover. A second set of NE trending faults can also be seen paralleling the structural trend of the Murphy Tectonic Ridge. Both sets of faults commonly consist of high angle normal and reverse faults whose intersection appears to form structural blocks displaying horizontal movement and/or tilting. Lateral movement is also common in the NW trending structures. Numerous mafic, commonly doleritic, dykes parallel the faulting and are thought to be cogenetic with the mid Proterozoic volcanics of the Tawallah Group.
Small stratabound disseminated lead – zinc ± copper occurrences, associated with carbonaceous units are found within both the McArthur and Lawn Hill Platform – South Nicholson Basins. Copper mineralisation occurs as unconformity related and breccia pipe occurrences in the region. The latter deposit type forms sub-economic deposits in the Redbank area (Figure 3) which were mined on a small scale in the post war era. Minor tin occurrences have also been found around the Nicholson Granite Complex.

The region is best known for the uranium deposits at Westmoreland (Figure 3); notably the Redtree deposit (12,600t U₂O₆), the Jannagunna deposit (5,300t U₂O₆) and the Huarabagoo deposit (3,000t U₂O₆). Mineralisation in these deposits occurs as sandstone hosted uranium within the upper sandstone unit of the Westmoreland Conglomerate, directly below the contact with the Seigal Volcanics, and shows a strong association with fault hosted mafic dykes and sills. Minor mineralisation is also found within other units of the Westmoreland Conglomerate and in shear zones at the unconformity between the Cliffdale Volcanics and Westmoreland Conglomerate. Clusters of minor uranium occurrences area can be found to the west and east of the Westmoreland area, along the northern margin of the Westmoreland Conglomerate. To date only minor unconformity type uranium mineralisation has been found at the unconformity between the Murphy Metamorphics and the Westmoreland Conglomerate.
5 EXPLORATION PHILOSOPHY

The covered regions about the western end of the Murphy Inlier have not been adequately explored and it is believed that they have the potential to host high grade uranium mineralisation. The uranium mineralisation is envisaged to be either:

(i) unconformity type uranium deposits located at the lower Proterozoic – mid Proterozoic uniformity between the Murphy Metamorphics and Westmoreland Conglomerate, similar to those found in the Alligator Rivers Uranium Field, NT; or

(ii) sandstone hosted uranium deposits associated with the upper unit of the Westmoreland Conglomerate, below the contact with the Seigal volcanics, similar to those found in the Westmoreland uranium deposits, QLD.

6 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, basemetal (sedex type deposits) and kimberlite hosted diamonds by several major companies. No significant gold or basemetal discoveries were made. A large number of diamonds were recovered from Ashton’s Creswell prospect outside the licence and the area is currently under a 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 24841 is provided in Table 2.

**Table 2. Previous tenements over the EL 24841 area.**

<table>
<thead>
<tr>
<th>Licence</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATP 444</td>
<td>MIM</td>
</tr>
<tr>
<td>ATP 983</td>
<td>Carpentaria Exploration Company</td>
</tr>
<tr>
<td>ATP 3401</td>
<td>ESSO Australia</td>
</tr>
<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>
<tr>
<td>EL 1339</td>
<td>AAR Ltd/Otter Exploration “Coolibah” JV</td>
</tr>
<tr>
<td>EL1427</td>
<td>Mines Administration/Otter Exploration “Bowgan Creek” JV</td>
</tr>
<tr>
<td>EL 1253</td>
<td>Mines Administration/Union Oil JV</td>
</tr>
<tr>
<td>EL1234</td>
<td>Mines Administration/ESSO Australia JV</td>
</tr>
<tr>
<td>EL 2232</td>
<td>Amoco Minerals</td>
</tr>
<tr>
<td>EL 4392 &amp; 4438</td>
<td>Stockdale</td>
</tr>
<tr>
<td>EL 4352</td>
<td>Ashton Mining</td>
</tr>
<tr>
<td>EL 6836</td>
<td>Carpentaria Exploration Company</td>
</tr>
<tr>
<td>EL 7222 &amp; 7223</td>
<td>MIM</td>
</tr>
<tr>
<td>EL 8997, 8998, 9163 &amp; 9660</td>
<td>BHP</td>
</tr>
</tbody>
</table>
7 BONDI’S WORK COMPLETED TO DATE

7.1 Summary of Work Done to July 2007

In summary, the work completed up to 31 July 2007 consisted of;

- A comprehensive review and assessment of previous mineral and diamond exploration work.
- An airborne EM and magnetic survey.
- A mineral assessment and target selection by Douglas Haynes Discovery Pty Ltd comprising:
  - Compilation of public domain geological, geochemical and geophysical data;
  - An interpretation of the geological and structural data for the region;
  - A geophysical and geochemical interpretation of available data, incorporating the airborne EM survey.
  - Selection of potential target areas.

A detailed account and assessment of the 2007 work has been presented in the 2007 Annual Report by D. Hedger. This will not be repeated in this report.

7.2 Summary of Work Done to July 2008

In the 2008 period, Bondi carried out programmes designed to test some of the targets defined by the assessment of all the previous work to July 2007. Work comprised the following.

- Airborne geophysical- Magnetometer and Radiometric survey over the entire Murphy Project
- Interpretation of the airborne geophysical results to select targets for drilling
- Alpha Track Etch surveys
- Drilling
- Downhole radiometrics
- Hychip Survey report

7.3 Details of exploration procedures and results

7.3.1 Airborne Magnetometer and Radiometric survey

In September 2007, Bondi retained the services of FUGRO AIRBORNE SURVEYS PTY LTD to carry out an airborne geophysical survey over the Murphy Group of tenements, referred to as the Murphy Project. EL 24841 was incorporated in this survey. The Total area covered by the survey was 25937 line km. of which 9000 line km. were flown over EL 24841. The survey was flown at a height of 60m with N - S lines spaced at 100m, the rationale was to better define the structure and stratigraphy of the underlying basement rocks.
7.3.2 Interpretation of Airborne Geophysical survey results

Bondi retained the services of Douglas Haynes Discovery Pty Ltd to review, interpret and report on the results of the FUGRO survey. Douglas Haynes incorporated results from the early Alpha Cup Track Etch Survey results, with the results from the FUGRO airborne survey and the results of the airborne EM (HOISTEM) and magnetic survey which had been interpreted the previous year and reported in the 2007 Annual Report, a number of anomalies were delineated for drilling.

7.3.3 Alpha Track Etch Survey

One of Bondi's preliminary exploration techniques is to carry out buried Alpha Track Etch detector cups on a regional scale over and peripheral to selected structural features to measure emitted alpha radiation. The cups which contain an alpha particle sensitive strip are imported from Canada, and are buried 40 cm below surface for a period of at least 30 days before retrieval and despatch back to the suppliers for processing.

Initially detectors are placed proximal to the structures defined principally through aeromagnetics along traverses in a grid pattern at 800m line spacing with the cups buried 200m apart. If anomalous zones were identified infill lines were added at 400m spacing to refine the targets. A number of anomalies were identified using this technology.

This technique is ongoing and results are used in conjunction with results from the other exploration techniques to weight selectivity of targets in preparation for drilling (Fig 4 & Appendix 4) shows the survey’s details.
Figure 4 Location of Alpha Track Etch Sample Sites on EL24841
7.3.4 Drilling

Due to the lack of availability of high capacity drilling rigs in 2008 Bondi’s drilling campaigns did not commence until April of the same year when a (INSERT PSI ETC HERE) RAB/Aircore rig was contracted to carry out a preliminary programme to test some of the outlined anomalous targets. A total of 168 holes for approximately 9000 were drilled between May and August 2008. The first phase of the drilling comprised 138 holes. The second phase of the drilling comprised 30 drill holes, most of which were drilled into target UC19 due to anomalous down hole radiometrics and geochemistry from the phase 1 drilling.

Drill penetration was limited to a maximum of 106m; if ground water or clay intervals did not hinder advance to that depth.

Figure 5 Location of drillholes
Due to the rig’s depth limitations, it was decided to restrict the programme to testing the Westmoreland Conglomerate component of the stratigraphic sequence which is seen in a small outcrop in the north of the EL.

Apart from where it outcrops in the northern part of the EL, the Westmorland Conglomerate is generally overlain by a veneer of Antrim Plateau basalt. The basalt varies in thickness which, to some extent, has been affected due to structural upheaval. In the west and southwest of structures the basalt is generally thicker, several tens of metres thick, to the east and northeast it is thinner to absent. (Fig.6)

![Figure 6](image)

**Figure 6** Schematic Section showing Stratigraphic Interpretation and a Proposed Angle Drilling Programme

In turn, the basalt is overlain by Cretaceous sediments, also seen in outcrop in the north of the EL. The rest of the area within the EL is covered by a thin veneer of Cainozoic sediments.

168 holes were drilled and sampled at 1m intervals. All cuttings were riffle split and composites of samples were sent for analysis at ALS in Townsville. (Drillhole details and assay results are shown in Appendices 7 & 8)

All holes were drilled vertically along fences and radiometrically downhole probed. (Lithologic logs are in appendix 9)
7.3.5 Drilling Results

The Westmoreland Conglomerate was intersected at varying depths in approximately 70% of the holes. This variation was affected due to structural deformation, the physical absence of the Westmorland Conglomerate, and mechanical limitations of the drill rig rather than depositional undulations.
Radioactivity was recorded using hand held scintillometers. Readings were taken from the sample at surface and varied from a general background of 60 counts per second (c/s) to + 100c/s. Downhole gamma logging by Borehole Wireline Pty... confirmed and defined the radioactive peaks in more accurate detail in space. Whilst anomalous radioactivity is high in parts by background standards (x 10), there was no identified visible primary or secondary uranium mineralisation in the cuttings. The drilling; albeit shallow, defined the top of and confirmed the extent and distribution of the Westmoreland Conglomerate, and aided in delineation of regional structures. It also clarified the need for deeper drilling to test the formation and its potential for hosting lenses of uranium mineralisation as seen in Westmoreland.

7.3.6 Downhole Radiometrics

Borehole Wireline ...Downhole Logging Pty Ltd. was contracted to probe all the drill holes drilled on the EL. Full logs and profiles showing gamma response, total count and SP were prepared and are attached as (Appendix 5).
7.3.7 Hychip analysis

Auspec Summary Report

<table>
<thead>
<tr>
<th>Client</th>
<th>David Esor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company</td>
<td>Bondi Mining</td>
</tr>
<tr>
<td>Delivery Date</td>
<td>4th July 2008</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Details of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service</td>
</tr>
<tr>
<td>Method</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project</th>
<th>Murphy Project area, Bondi Mining RC samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aims</td>
<td>To provide detailed mineralogy of the samples submitted for analysis, provision of spectral indices to map out sample mineralogy and alteration mineral assemblages. Assessment of alteration patterns and possible prioritization of sub areas within the project area.</td>
</tr>
</tbody>
</table>

| Deliverables    | Summary report, with plots, spreadsheet of sample mineralogy with mineral parameter data. |

| Reporting       | 
| General Mineralogy | Illite, kaolinite, nontronite, dickite, dolomite, chlorite, smectite, (Fe-samcrete, Mg-samcrete, hematite and goethite. |
| Specific details of Important minerals | Illite: Illite is widespread in these samples and may represent an alteration halo. Although mostly muscovitic in composition, there appear to be two phases of illite in the samples, one a relatively high Al illite (leading to paragonite) and the other a lower Al illite with some Fe-Mg substitution (leading to phlogopite). The variations in the illite composition can be assessed using the “illite composition” parameter (discussed in the next section). These variations are evident as distinct intervals of different compositions between holes and within holes. The illite phases also display some crystallinity variations which may relate to an alteration zonation. The spatial patterns in the illite composition and crystallinity are discussed in the next section. Dickite: is often associated with syenite/ultrabasic hosted U mineralization, in some cases proximal and often forming a broad halo. Dickite is broadly observed in a number of holes, sometimes mixed with illite or nontronite and also with kaolinite. Notice that, in weathered rocks, a disordered kaolinite clay can form in transported material which is spectrally similar to a disordered dickite but can be distinguished from alteration dickite by some subtle spectral differences. These clay are indicated in the spreadsheet as “kaolinite-dickite” and in the comment field as “possible disordered kaolinite”. |

Auspec uses a non-intrusive, spectral analysis to test the elemental compositions of clay minerals present in rock samples, and therefore allows an accurate means of gaining rapid, quantitative results for identifying clay alteration assemblages. Murphy Uranium Pty Ltd is using clay alteration assemblage mapping of RAB drill chips to help define alteration halos, and vector in on potential uranium mineralization under cover, or at depth. Clay mineral assemblages of interest include illite, dickite, smectite, chlorite, and Fe-oxides (hematite, and goethite). Although illite, and dickite are found to be widespread, and when coupled with smectite are likely a product of the weathering of mafic to ultramafic volcanics; a clustering of samples containing crystalline, high aluminium illite (paragonite), and true dickite (non-kaolinic) are believed to possibly represent a distal (to medial) alteration halo similar to the ones found enveloping the unconformity deposits of the Althabasca basin in Saskatchewan Canada (ie. Cigar Lake, etc.).
Clay mineralization of interest include See Appendix 6 for details of the AusSpec International report.

Uranium targets UC 14, 15 and 18 are contiguous with other Bondi tenement and whilst preliminary investigations were carried out over these anomalies, extensive testing has been planned for the 2009 field season, Fig 8.
Figure 10 Map showing anomalies in contiguous ELs
Numerous anomalies have been identified using a variety of exploration techniques in the region covered by the Bondi Murphy Projects. Over the past twelve months a major exploration programme was carried out over EL 24841 where a cluster of anomalies were prioritised due to coincident favourable results from a variety of the exploration methods and due to relatively easier access. More than 75% of the work was carried out over anomalies UC 16, 19 and 22. There is much follow up work that will be done on these anomalies over the course of the next two exploration seasons including deep angle RC / Diamond core drilling in an attempt to define the entire stratigraphic setting and to test the unconformity in the anomalous targets.

As work progressed it became evident that Alpha Radiometric tracking surveys - albeit time consuming- were a relatively cheap, and effective exploration tool to use in this area of almost total recent cover. Alpha track etch surveys will continue to be used to refine existing targets, and to expand information over I regional scale features with potential for mineralization.

Results from work during this period have confirmed that the covered western end of the Murphy Inlier is prospective for uranium mineralisation and that previous exploration has not adequately tested this area for concealed uranium deposits. Limited drilling in the area indicates that cover thickness are not great.

An airborne input EM survey has located several EM anomalies in the area that could be related to graphitic schists in the basement faults or possible chlorite-illite alteration zones associated with unconformity uranium mineralisation. In addition the EM survey highlighted several mafic dyke and sills complexes. These complexes could be feeder zones for mid-Proterozoic and early Cambrian flood basalts within the southern McArthur Basin and as such could have potential for mafic hosted Cu-Ni mineralisation.

A detailed mineralisation assessment combining public domain data and information was successful in highlighting favourable mineralisation features such as the extension of the Westmoreland Conglomerate and Murphy Inlier under cover and altered structural zones. Results from this assessment found six main target areas for unconformity-type uranium deposits and eight target areas for possible mafic dyke-sill hosted Cu-Ni deposits. All the target areas are under cover and have not been previously tested.

Follow-up work will continue on the uranium targets will involve a detailed in ground radiometric and radon track etch surveys over major structures that intersect the main target areas, and along the Westmorland / Basement unconformity. This will
be followed by air-core/RC and Diamond drilling to test for the Westmoreland Sedimentary and Athabasca/Kombolgie Unconformity Uranium model.

The Cu-Ni targets represent “high risk’ exploration, and will not be tested during the course of the immediate programme.
Appendix 1 Expenditure statement.
Appendix 2 Fugro Airborne Geophysical survey

Submitted as part of Annual Report for EL24694
Appendix 3 Douglas Haynes Discovery – Geophysics Interpretation Report
Appendix 4 Alpha Track Etch Survey Results
Appendix 5 Downhole Radiometrics Survey Profiles
Appendix 6 Hychip Survey Report
Appendix 7 Drillhole Details
APPENDIX 8 Assay Results