COMBINED ANNUAL EXPLORATION REPORT
CR110 (GR102-09)
EL24884, EL24906, EL25228

FOR PERIOD ENDING 19TH January 2011

BATCHelor - ADELAIDE RIVER PROJECT NT

Pine Creek SD5208 1:250,000
Batchelor 5171 1:100,000

Titleholder: Territory Uranium Company Limited

Report No. 2011- 007
Prepared for Territory Uranium Ltd
By A Chapman
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CONTENTS

CONTENTS.....................................................................................................................2
List of Figures..................................................................................................................2
List of Appendices...........................................................................................................2
1. SUMMARY...................................................................................................................3
2. LOCATION AND ACCESS...........................................................................................3
3. TENEMENT STATUS AND OWNERSHIP.................................................................6
4. GEOLOGY....................................................................................................................7
5. PREVIOUS EXPLORATION.........................................................................................1
   5.1 Exploration by Other Companies........................................................................1
   5.2 Previous Exploration by Territory Uranium.......................................................1
6. EXPLORATION DURING YEAR 3...............................................................................4
8. REFERENCES...............................................................................................................6

List of Figures

Figure 1: Location Map.................................................................................................5
Figure 2: CR110 Regional Geology (NT250K Geology map).........................................1
Figure 3 Targets on EL25228.......................................................................................5

List of Appendices

Appendix 1 Historical Data
1. SUMMARY
The project area is approximately 80km due south of Darwin and consisted of three tenements: EL24884, EL24906 and EL25228. EL24884 was relinquished at the end of year 4, EL24906 was sold to Anhui in February 2010 and EL25228 was reduced from 60 to 50 blocks.

Interpretation on Territory Uranium’s Rum Jungle – Pine Creek Project has led to the identification of three similar target areas where uranium prospective ‘Rum Jungle’ stratigraphy exists (the same stratigraphy as that at Thundelarra’s Thunderball Uranium Prospect) under recent cover within EL25228 and EL25229. RAB and RC drilling on all three of these targets was planned for 2010 but only two of the drill programs have been completed (on EL25229) due to delays in the start of the 2010 field season (unseasonal late start to the dry) and September-October heavy rains. No exploration was completed on EL24906 due to the sale and on EL24884 which has now been relinquished.

2. LOCATION AND ACCESS
The project area is approximately 80km due south of Darwin and consists of three tenements: EL24884, EL24906 and EL25228 (Figure 1).

EL24884 is situated approximately 2km SE of Batchelor, NT (Figure 1). Topography is undulating with low hills over the western side of the tenement, with steeper hills on the eastern side. The tenement has numerous creeks which can flood in heavy rains during the wet season. There are no roads to the tenement, although a faint track is marked on the 1:50,000 mining tenure maps extending from the end of the Gould runway to the west.

EL24906 is situated approximately 12km SE of Batchelor, NT, and 8km N of Adelaide River (Figure 1). The western boundary of the Licence runs along the Stuart Highway, while the northern boundary is partly bounded by the Tortilla Flats road. The southern boundary follows Stapleton Creek, and part of the south-eastern border is bounded by the Adelaide River. Tenement boundaries are easily accessed along established roads. Topography for most of the tenement is low relief, with some floodplains. The western border of the Licence has higher relief around Heaton Hill and south in the area bounded by Stapleton Creek. The tenement has numerous creeks which can flood in heavy rains during the wet season.
EL25228 is situated approximately 12km east of Adelaide River, NT, and 120km SSE of Darwin (Figure 1). The Stuart Highway crosses the southern portion of the Licence near Mt Darwent and is near the western boundary of the Licence near Mt Tymn. Access to EL 25228 is via the Stuart Highway (in the southern area) and along the Ringwood Station road in the northern part. Different tracks traverse the Licence, but most of the tenement is inaccessible during the wet season. Topography for most of the tenement is low relief, with some floodplains and black soil plains. The Adelaide River borders the NW part of the Licence, while the Howley Creek transects the eastern portion. The southern border of the Licence has higher relief and areas around Mt Foelsche, Mt Tym and Mt Darwent are also notable ridges rising out of black soil plains. The tenement has numerous creeks (many feeding into Howley Creek) which can flood in heavy rains during the wet season.
Figure 1: Location Map
3. TENEMENT STATUS AND OWNERSHIP

Tenement Status and Landowner information is summarised in the table below:

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<th>Tenement</th>
<th>Blocks</th>
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<td>20/01/2006</td>
<td>3 20/01/2011</td>
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<td>Muljono Pty Ltd</td>
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<td>23/11/2006</td>
<td>3 23/11/2008</td>
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There are 11 other mineral claims within the original (prior to reduction) EL 25228; 10 cover the Mt Tymn Au prospect and are held by Montfall Pty Ltd (MCN’s 1326, 3026, 3029, 3030, 3032, 3033, 3035, 3036, 3038, 3039). MCN 4277 covers the H23 prospect and is held by Agricola Gold. EL 10321 held by Agricola Gold is enclosed within EL 25228 (Figure 1). Reservation from Occupation (RO) 24350 covers radio telecommunication repeater sites plus the railway line. A 30m wide easement transects the Licence from the NE to the SW which contains a high pressure gas pipeline. These tenements excise the area of EL 25228.

EL24906 has been sold to Anhui Geology and Mining Investments the transfer was completed on 25/2/2010. TUC will retain uranium rights on EL 24906 and the right to explore and mine within this tenement for uranium. Anhui will maintain Royalty rights equivalent to 1% NSR on uranium mining by TUC. Both parties will maintain some pre-emptive rights on EL24906 with respect to future commercial arrangements. Some exploration cost sharing facilities are present for both parties.

Requirements for 4th or 5th year 50% reduction were met as follows (Figure 1):

- EL24884 Tenement Relinquished
- EL24906 Sold to Anhui.
- EL25228 partial waiver from reduction applied for 50 of 62 blocks to keep
4. GEOLOGY

The project is situated within the Pine Creek Geosyncline, a tightly folded sequence of Lower Proterozoic rocks. A full description of the geology and stratigraphy of the Pine Creek Geosyncline can be found in several texts, including Ahmad et al., (1993; Ahmad, 1998). The 1:100,000 Batchelor – Hayes Creek Region Geological Special map covers the tenement areas (Crick, 1980).

EL24884

The tenement is in the Rum Jungle area, which has an Archaean basement complex unconformably overlain by a Proterozoic sedimentary succession comprising the Manton, Mount Partridge, South Alligator and Finniss River Groups of the Pine Creek Orogen. Uranium and base metal mineralisation occur in the Mt Partridge Group sediments around the margins of the Archaean domes and are associated with faulting. Lally (2002) recognised at least 7 structural deformation events.

EL24884 overlies Lower Proterozoic metasediments from the Mount Partridge Group. The calcareous sediments of the Whites Formation cover the NW corner of the tenement, which is overlain by the shales and argillites of the Wildman Siltstone in the centre of the tenement. The gritty sandstones of the Acacia Gap Quartzite Member have been mapped in the eastern part of the Licence (Figure 2). The Archaean Rum Jungle Dome is approximately 4.5km north of EL24884, while the Archaean Waterhouse Complex is just less than 6km west of the tenement.

The Rum Jungle uranium deposits are located in the vicinity of the Rum Jungle and Waterhouse Complexes, and are hosted within carbonaceous and pyritic shale of the Whites Formation, adjacent to the contact with the Coomalie Dolomite (Ahmad, 1998). Base metal mineralisation at Woodcutters (approximately 12km NNE of EL24884) is hosted within carbonaceous dolomitic shales of the Whites formation, and consists of sub-vertical veins in an anticlinal hinge (Ahmad, 1998). There are no recorded mineral occurrences within the tenement, but the Waterhouse No.1 U-Cu mineral occurrence is 600m east of EL24884 (Figure 2).

EL24906 & EL25228

The area covers the Finniss River Group (Burrell Creek Formation) which is dominantly feldspathic greywacke with interbedded siltstones. A very small section (<1 block) in the SE part of EL25228 is underlain by Gerowie Tuff and Mt Bonnie
Formation from the Mt Partridge Group (Figure 2). The Mount Shoobridge fault transects the central part of the tenement and regional maps show some NNW-trending (north plunging) symmetrical folds throughout the tenement. Quartz veins parallel to these folds and within fold noses are common.
Figure 2: CR110 Regional Geology (NT250K Geology map)
5. PREVIOUS EXPLORATION

5.1 Exploration by Other Companies

Previous exploration from the 1970’s to the present has been reviewed and summarised in previous annual reports for these tenements. Exploration ranged from airborne geophysics to drilling exploring for uranium, gold and base metals, geochemical exploration was also undertaken. Historical exploration is summarised in Appendix 1.

On EL24884 and large soil program was undertaken and a minor amount of drilling but exploration focused on prospects to the east and west including the White Bomb and Water House prospects.

On EL24906 exploration primarily involved rock chip, soil and stream sampling for gold and some base metal analysis (especially in the North West corner of the tenement). Historical drilling was limited to the H22 gold prospect (5 RC holes) and the Mt Woods gold prospect (6 RC and 1 diamond hole).

On EL25228 exploration was undertaken by Central Pacific Minerals, Aquitaine, Pan Dor mining, WMC, Ringwood and others. Exploration involved drilling, geophysics and geochemistry primarily for gold and uranium.

5.2 Previous Exploration by Territory Uranium

EL24884

Work undertaken on EL24884 in 2007 included purchase of digital imagery, minor rock chip sampling (not assayed) and reprocessing of geophysical data to enhance radiometric data and anomalies.

Field reconnaissance visits were attempted to investigate radiometric anomalies using geochemistry and ground radiometrics on 5th January 2008 and 2nd February 2008. These visits were stopped due to excessive flooding from cyclone activity cutting off key access routes as well as by damaged gate locks at entry points.

Reconnaissance rock chip sampling and a broad space Auger program (58 holes for 46m) was completed in 2008 to test for uranium and base metal mineralisation. Two rock chip samples returned a significant geochemical anomaly with elevated U (75ppm (5 x
background)), Ni (908ppm), Zn (2,000ppm), Pb (1,730ppm), P (4,400ppm), Ag (2.35ppm), Cu (470ppm) and Co (1,400ppm).

In 2009 follow up soil sampling the rock chip of sample 74ppm U indicated a weak uranium anomaly trending NW. Weakly elevated U, Cu, Pb and Zn results are associated with this trend. At total of 3 rockchip samples and 25 soil samples were taken.

**EL24906**

In 2006-2007 Territory Uranium exploration consisted of historic data compilation including tenure, datasets, open file reports and geo-referencing of relevant maps. This enabled an informed review of the tenements prospectively in regards to Gold and Uranium. Also field reconnaissance and a small rock chip program were completed.

In Year 2 a total of 490 scintillometer readings were taken over the main anomalies identified from radiometric survey data with readings confirming the anomalies. The highest readings (>500 mSv) were from H22 and Anomaly 1. Also 31 rock chip samples were taken in conjunction with the traverses but only 8 were assayed with no significant results returned.

One drill hole was completed for 60m on EL24906 at the shear 1 prospect. 43 samples were taken no significant Au assays were returned and no multi elements assays were completed.

A tenement scale auger program was completed with 68 holes on 2 lines to test for gold, base metals and uranium. Results indicate a number of weak Au and U anomalies along strike from significant structures and known anomalies.

After 2009 has been limited due to the sale process of this tenement, as part of a package, to Anhui Geology and Mining Investment Ltd. Anhui is a major Chinese exploration and mining entity and it is hoped that this deal will allow Anhui to establish itself in the exploration industry in the Northern Territory. This sale was established as a direct result of attending the Ministers delegation to China in 2008. The sale was completed and the organisation of the tenement transfer was finalised in February 2010.

**EL25228**

Work done during Year 1 of tenure consisted of a historic data compilation, which included a review of targets and prospects outlined from the previous work. Also the available geophysics (from both regional NTGS airborne surveys) and Open File Company Surveys were reviewed by a Consultant Geophysicist.

Work done included checking:
a) historic tenure in MapInfo, using a MapInfo file supplied by DPIFM (containing exploration tenure, but not mining tenure)
b) checking NTGS datasets, such as COREDAT, MODAT, Explorer 3
c) checking open file company reports submitted for previous tenure covering EL 25228
d) georeferencing relevant maps and plans into MapInfo to obtain locations of samples and mapped geology within EL 24906.
e) register check of sacred sites with the AAPA

The data compilation work shows that uranium exploration has been sporadic and limited within EL 25228. Most of the work has concentrated on exploration for gold and there still appears to be some gold targets for follow-up.

A total of 14 RC holes for 606m were drilled in 2008 at the Brumby prospect, a mineralised quartz reef system within folded gold prospective sediments, 25km south of Adelaide River town. Extensional drilling on the main reef system was disappointing but exploration holes targeting soil anomalies 500m to the north intersected oxide mineralisation on two separate reefs. Results on the two newly identified reefs are promising as neither of the reefs have been drilled previously and scope remains for improvements in grade and thickness.

In June and July 2009, a low level detailed (100m line spaced) airborne magnetic and radiometric survey was completed by Fugro Airborne Surveys Pty. Ltd. to reveal any previously hidden opportunities in this uranium-rich province. The survey area was along strike of the Adelaide River uranium mine (historical production of ~3,500t @ 0.5% U3O8*) and North West of the Fleur De Lys uranium mine (historical production of ~122t @ 0.22% U3O8*) (Figure 3). The survey covered parts of EL25223, EL25224, and EL25228.

The data acquired during the survey included Total Magnetic intensity, Total count, Potassium count, Uranium count, Thorium count and a digital terrain model.

The survey has revealed a number of discrete radiometric anomalies for follow up work. Subtle anomalies are located on major fault zones and in association with the uranium prospective unconformity line. Reconnaissance investigation was commenced but due to access restrictions only 1 rock chip sample was taken from the SE anomaly (10ppm u).
6. EXPLORATION DURING YEAR 4/5

EL24884

No exploration was completed on EL24884. Territory Uranium intended to complete a RAB program in year 5 but due to budgeting restraints was unable to drill the program. The tenement was subsequently relinquished due to Territory Uranium being unlikely to meet future expenditure commitments on this tenement.

EL24906

Exploration in 2009 has been limited due to the sale of this tenement, as part of a package, to Anhui Geology and Mining Investment Ltd. Anhui is a major Chinese exploration and mining entity and it is hoped that this deal will allow Anhui to establish itself in the exploration industry in the Northern Territory. This sale was established as a direct result of attending the Ministers delegation to China in 2008. The sale has been completed and the Transfer was completed in February 2010.

EL25228

Recent interpretation on Territory Uranium’s Rum Jungle – Pine Creek Project has led to the identification of three similar target areas where uranium prospective ‘Rum Jungle’ stratigraphy exists (the same stratigraphy as at Thundelarra’s Thunderball Uranium Prospect) under recent cover within EL25228 and EL25229 (Figure 3). RAB and RC drilling on all three of these targets was planned for 2010 but only two of the drill programs have been completed (on EL25229) due to delays in the start of the 2010 field season (unseasonal late start to the dry) and September-October heavy rains.

The completed programs have resulted in significant including the identification of gold, uranium (with grades upto 4,244ppm) and REE mineralisation at the Quantum prospect on EL25229. Also this new discovery has confirmed and improved TUC’s exploration model for uranium deposits undercover. RAB drilling of the target on EL5228 is planned for 2011.
Adelaide River uranium mine
Historic Production
3,447t@0.5% $\text{U}_3\text{O}_8$*

Georges Creek uranium mine

Fleur De Lys uranium mine
(near Cosmo Howley)
Historic Production
122t@0.22% $\text{U}_3\text{O}_8$*

Figure 3  Targets on EL25228
8. REFERENCES


Crick, I., 1980. Geology of the Batchelor-Hayes Creek Region. *BMR 1:100,000 Geological Special*.

Rade, J., 1956. Shearing along anticlines as an important structural feature in uranium mineralisation in the northern part of the Northern Territory of Australia. *Journal of Economic Geology*.


Appendix 1
Historical Data review Summary