# ANNUAL EXPLORATION REPORT EL 24884

# FOR PERIOD ENDING 19<sup>th</sup> January 2008 'BATCHELOR'

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

**Titleholder: Territory Uranium Company Pty Ltd** 

Report No. 2008-001 Territory Minerals Ltd By A Chapman 17 April 2008

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#### 1. SUMMARY

EL 24884 is SE of Batchelor township. Territory Uranium Company Pty Ltd is exploring for uranium, and applied for EL24884 due to its proximity to Rum Jungle U mineral occurrences. Work during Year 2 of tenure included geophysical interpretation/reprocessing of historical data. Field reconnaissance and geochemical sampling was hindered due to access issues.

#### 2. LOCATION AND ACCESS

EL24884 is situated approximately 2km SE of Batchelor, NT (Figure 1).

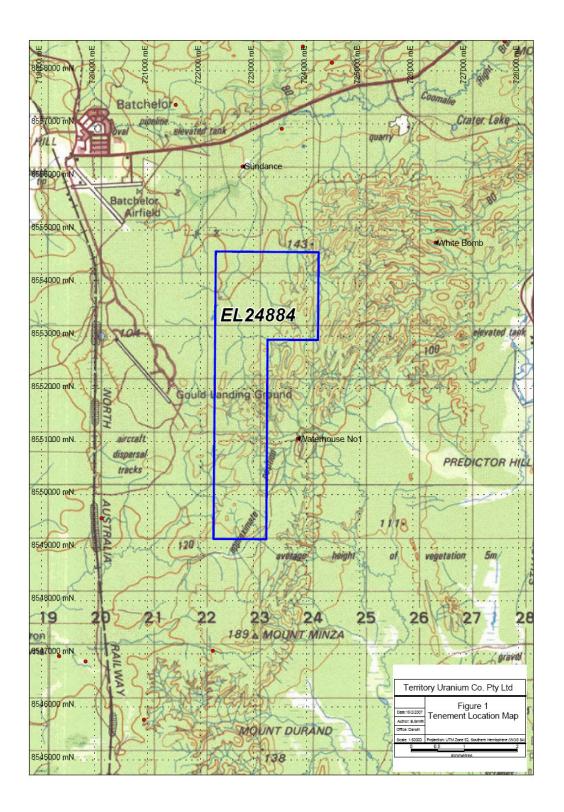
Topography is undulating with low hills over the western side of the tenement, with steeper hills on the eastern side. The tenement has numerous creeks which can flood in heavy rains during the wet season. There are no roads to the tenement, although a faint track is marked on the 1:50,000 mining tenure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

#### 3. TENEMENT STATUS AND OWNERSHIP

EL 24884 was granted on 20th January 2006 and expires on 19<sup>th</sup> January 2012. It comprises 4 graticular blocks that are all reduced in size to less than the full block due to underlying cadastre, or pre-existing tenements (Figure 1).

Underlying cadastre is NT Portion 2937 (Freehold) held by Stanley Corporation WA Pty Ltd in the northern area, and 2 freehold areas on the southern portion, held by A. S. Albany, and Berno Bros Pty Ltd. The block sizes were reduced on the eastern side due to being held by the Finniss River Aboriginal Land Trust.

The expenditure covenant set for the Second year was \$25,200.

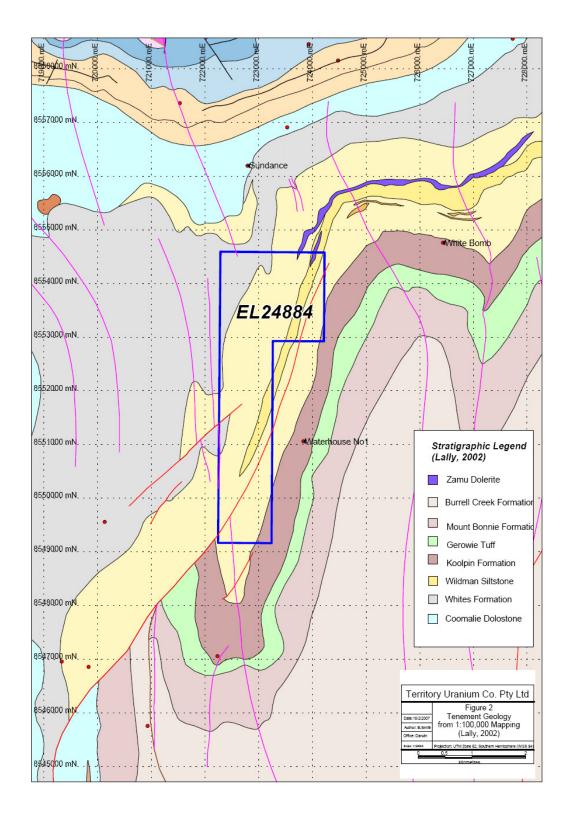


#### 4. GEOLOGY

Regional geology is outlined in many publications, notably Lally (2002) and Ahmad et al., (2006). 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).



#### 5. PREVIOUS EXPLORATION

Part of the work done on EL24884 for 2007 was a literature review and data compilation and the results are in the section below. Figure 3 shows the graticular block numbers within EL 24884.

CRA Exploration was granted **EL 610** in 1973 to explore for uranium. EL 610 covered all of EL24884, plus areas further south and east over a 180km2 area. Work completed includes auger drilling, rotary drilling, and surface radiometrics (100m x 200m gridded intervals using a handheld scintillometer). Anomalies A, C and G all fall west of EL24884, and work did not appear to extend further east towards EL24884. An anomaly 23 is shown within EL24884 (at approximately MGA52 722 500E / 8553800N; Figure 4) but is weak, at about 1.1x background, and was not investigated further. 1:50,000 mapping by CRA concentrated on areas outside EL24884. Two rock chip samples were collected within EL24884; sample 238764 had a max value of 134ppm Zn, and sample 238773 had a max value of 120ppm for Pb. There were no U values reported as assayed.

Pancontinental Mining Ltd held **EL's 1576 and 1577** (adjacent to each other) from 1977. A ground radiometric survey on a 100m x 25m grid using a scintillometer was carried out, with infill readings over 4 anomalies (none of which are within EL24844). Work after Year 1 concentrated on the Sundance prospect, north of EL24884, and the Glen Lucky area, east of EL24884. U anomalism is reported at both Sundance and Glen Lucky.

Occidental Mining carried out an airborne radiometric and magnetic survey (not reported) followed by ground radiometrics, track etch surveys, 1:5000 geological mapping and soil geochemistry on **EL 2201**. Track etch surveys delineated radon anomalies centred at MGA94 Zone 52:

724150E / 8553150N, and

723400E / 8553110N within EL24884 (Figure 4).

Ground radiometrics highlighted the Waterhouse No. prospect, with spot highs along strike to the north (further east of EL 24884). Shallow RAB drilling was carried out on areas and anomalies outside of EL24884; the above anomalies did not appear to be drill-tested. The radiometric survey covers the southern blocks (SD52997D, SD52997J) on a 200m x 25m grid. A spot high of 50cps (total count) within EL24884 was recorded at MGA52 723140E / 8550700N, which is mapped as grey blocky shales adjacent to drainage and a series of small north-trending pits. 1:5000 fact geological mapping covers the lower 2 blocks of EL24884. Soil sampling along the

same 200m x 25m grid gave spot highs of 14ppm  $U_3O_8$  (background is 8-10ppm  $U_3O_8$ ). There is a coincident track etch anomaly and soil anomaly along the eastern boundary of EL24884 (MGA 724150E / 8553150N; Figure 4). Mapping by Lally (2002) shows this anomaly to be straddling the interpreted contact between Wildman Siltstone and Koolpin Frm sediments. Two diamond drillholes tested anomalous areas north-east of the EL24884. It does not appear the RAB or diamond drilling tested the coincident track etch and soil anomaly, although it may have also been considered very low priority.

Mobil Energy Minerals Australia held **EL 3570** for a little over a year from 1982. Exploration targetted U mineralisation, with a ROAC (radon gas in soil) survey, ground magnetometer, ground gravity and ground EM surveys, RAB and diamond drilling were carried out (Appendix 2). Only 1 RAB hole (RAB hole 26) was just within the western boundary of EL24884 at MGA Zone 52 722270E / 8550500N, and this had a max value of 6ppm U. All other work was carried out to the west of EL24884, including geophysical surveys and ROAC surveys.

CSR Limited held **EL4537** for a year in 1984. CSR were examining the gold potential, and carried out a bulk stream sediment sampling programme, of which only one sample was taken within EL24884. Results were not presented (table missing) but CSR concluded that 'the area did not indicate any areas of anomalous gold concentration.'

P. Purich, and N. Byrne and Associates held **EL 4845**, which targetted gold mineralisation in the areas surrounding Sundance deposit. EL 4845, 4868 and 6725 were combined into **SEL 7366**. All of the exploration on these Licences appears to be outside the area of EL24884, and focussed on finding Sundance-style gold mineralisation. During the tenure, the White Bomb base metals prospect was identified, and reconnaissance sampling at Hill 133 identified anomalous gold to 1.9g/t Au, and mineral claims were applied for to cover these areas (outside EL 24884).

Newmont (**EL 6073**) also targetted gold occurrences within the Coomalie Dolomite and Whites Formation specifically "Sundance-style" mineralisation. Work consisted of soil and drainage sampling, outcrop sampling in the first 2 years, which highlighted a 5.76ppb Au BLEG anomaly at approximately MGA94 Zone 52 722500E / 8553900N. By Year 3, the exploration target changed from Sundance-style mineralisation to Pine Creek style stockwork Au, and Woodcutter's style Ag-Pb-Zn mineralisation. Anomalous base metals mineralisation was found from rock chip samples in the southern part of EL24884, but follow-up soil sampling did not produce coincident base metal anomalies. Poor assay results and an unfavourable structural

setting (shear zones are oblique to fold axes, not parallel to the anticlinal plane such as at Woodcutters) led to the Licence being relinquished.

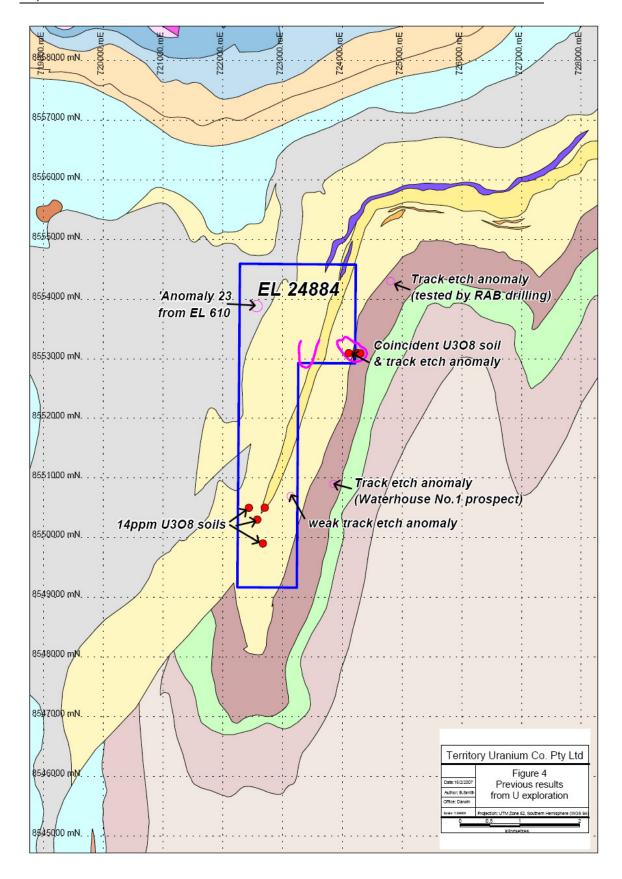
Aztec Mining explored for base metals on **EL7374**. Reconnaissance RAB drilling for magnesite was outside EL 24884, and encountered Pb-Zn mineralisation. 87 out of 104 RAB holes were drilled in the northern part of EL24884 on an initial 200m x 50m grid with follow-up 100m x 50m grid. The RAB drilling reflected a change of company focus from base metals to gold in the final year of tenure, and targetted the stream sediment sample anomaly from EL 6073 at 722500E / 8553900N. No areas of gold anomalism were found, with best result of 0.078g/t Au on the northernmost line (just outside EL 24884).

Work by Giants Reef Mining on **EL 8441** confirmed the anomalous stream sediment sample of 5.76ppb Au taken by Newmont on EL 6073 at 722500E / 8553900N. Giants Reef recorded a stream sediment sample taken nearby with a maximum value of 17ppb Au. No conclusion was reached for the anomalous result. The tenement was relinquished following failed negotiations to farm out the Licence. A base metal target in sinkholes west of Gould airstrip still remained a viable target, but this is outside the current Licence.

Nicron Resources (Woodcutters) drilled RAB holes to test for gold and base metals in **EL 9382**, in an area west of EL24884. No other fieldwork was carried out prior to relinquishment.

Savanna Resources held **EL 9753** for a year, and conducted a literature review, plus some reconnaissance checking of outcrops within the Licence. Savanna relinquished the Licence after finding that the prospective Coomalie Dolomite / Whites Formation contact was further north on ground it already held.

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#### 6. EXPLORATION DURING YEAR 1

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 (files attached in appendix).

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.

#### 7. PLANNED EXPLORATION FOR 2007

Once land access is established planned work includes;

- 1. Field reconnaissance to check previously defined U anomalies.
- 2. Surface geochem sampling for U mineralisation.
- 3. Targeted drilling based on geochem results.

Territory Uranium is committed to exploration in the Northern Territory, and fully expects to at least meet the covenant of \$26,000 during the next period. Territory Uranium would like to drill a combined track etch and soil uranium anomaly it has identified in this tenement.

#### 8. REFERENCES

Smith, B., 2007. Annual Exploration Report EL 24884. Territory Uranium Co Ltd, Report No. 2007-01

Ahmad, M., 1998. Geology and mineral deposits of the Pine Creek Inlier and McArthur Basin, Northern Territory. *AGSO Journal of Australian Geology and Geophysics*, 17(3), pp1-17.

Ahmad, M., Lally, J.H., and McCready, A.J., 2006. Economic Geology of the Rum Jungle Mineral Field, Northern Territory. *Northern Territory Geological Survey, Report 19.* 

Lally, J.H., 2002. Stratigraphy, structure and mineralisation, Rum Jungle Mineral Field, Northern Territory. *Northern Territory Geological Survey, Record 2002-005*.

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*.

### 9. EXPENDITURE

Expenditure for the reporting period was \$3,573 (A detailed breakdown is given in the 2008 Exploration Expenditure Report).