# YEAR 1 ANNUAL EXPLORATION REPORT

# EL 28517 "Coulter Creek" FOR PERIOD ENDING 8<sup>TH</sup> September 2012

1:250k Map Sheets: PINE CREEK

Titleholder: Territory Minerals

Target Commodities: Base metals, Uranium, Gold, Rare Earth Elements

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#### 1. SUMMARY

EL28517 is 100km south west of Darwin, and approximately 40km south west of the Adelaide River Town. EL28517 was granted for a period of six (6) years in 2011 to expire on 8th September 2017. The tenement is 171.43m<sup>2</sup> (59 blocks).

The tenement is situated on the western edge of the Pine Creek Geosyncline. Alluvial sediments cover most of the tenement. In the southern half of the tenement Lower Proterozoic basement sediments (Burrell Creek Formation) outcrop through the thin alluvial cover, a review of EM sections across the tenement indicate that the cover is less than 100m. Three uranium mineral occurrences and one base-metal occurrence are situated less than 3km east of the tenement.

Historical exploration includes exploration for gold, base-metal and uranium. Exploration records date back to the 70's with numerous tenements being pegged from then through to present.

Exploration on this tenement was postponed whilst the company re-organised its exploration strategy and land holdings in 2011/12. An exploration review of the tenement was completed during the year which revealed the following:

Exploration potential on this tenement is high. Structural and stratigraphic settings are excellent with Lower Proterozoic Basement (Burrell Creek Formation) cut by the Giants Reef Fault (a major mineralising structure) very close to the uranium prospective Mid Proterozoic unconformity Uranium and base-metal mineralisation close to and along strike of the tenement shows that mineralising fluids have been active in this area. Alluvial cover, over most of the tenement, is thin and would have restricted earlier attempts to locate mineralisation.

Exploration targets include Unconformity related uranium deposits and Vein/shear hosted base-metal, gold, uranium and REE mineralisation.

# 2. LOCATION AND ACCESS

EL28517 is 100km south west of Darwin, and approximately 40km south west of the Adelaide River Town. Access from Darwin is via the Stuart Highway onto Dorat Road (from Adelaide River) then west onto the Daly River Road which takes you to the southern end of the tenement. From their roads and bush tracks can be used to access other parts of the tenement. Access is only possible in the dry season because the tracks are impassable after rains.

#### 3. TENEMENT STATUS AND OWNERSHIP

EL28517 was granted for a period of six (6) years in 2011 to expire on 8th September 2017. The tenement is 171.43m<sup>2</sup> (59 blocks). There are no other mining leases or mineral claims shown within the Licence boundaries.

Underlying cadastre is summarised below and shown in Figure 1:

NT Portion/Section Number		Names of Owners/Occupiers	Address
000	02681	Tovehead Pty. Limited & Branir Pty Ltd	PMB 39, Winnellie NT 0822
000	03220	R.M. Williams Agricultural Co. Beef Pty Ltd	c/- Primary Holdings International Pty Ltd
			Suite 303 Level 3, 55 Lime Street, Sydney NSW 2000

Block reductions are not yet required as the tenement has just finished year 1.



Figure 1 Tenement Location Map

## 4. GEOLOGY

The tenement is situated on the western edge of the Pine Creek Geosyncline. Alluvial sediments cover most of the tenement (Figure 3). In the southern half of the tenement Lower Proterozoic basement sediments (Burrell Creek Formation) outcrop through the thin alluvial cover, a review of EM sections across the tenement indicate that the cover is less than 100m. To the north the cover thickens with Cambrian limestones forming a small sub basin. The eastern edge of the tenement parallels the contact between the Depot Creek Sandstone and the Burrell Creek Formation (uranium prospective Mid Proterozoic unconformity) only 5km to the east (Figure 3).

EL28517 borders Crossland Uranium's Chilling project to south and east. Most significantly are three uranium mineral occurrences and one base-metal occurrence less than 3km east of the tenement. Near the north east corner of the tenement there is a small historical tin mine and a hematite deposit on the Mid Proterozoic unconformity (Figure 1). Numerous Crossland uranium and base-metal prospects are situated to the south including the Mt Thomas Deposit 12km along strike from EL28517. Also The Daly River mineral field is 15km to the south east.



Figure 2 EM Sections across the tenement show the depth of cover and basin sediments.



Figure 3 EM Sections across the tenement show the depth of cover and basin sediments.

# 5. PREVIOUS EXPLORATION

Historical exploration includes exploration for gold, base-metal and uranium. Exploration records date back to the 70's with numerous tenements being pegged from then through to present. Previous holders were Territory Uranium Company which only made passing helicopter reconnaissance visits. Government records show two diamond holes and no surface sampling within the tenement. The two diamond holes were drilled in 1976 and will provide excellent information of cover depths and rock units. A radiometric and magnetic geophysical survey was completed by Crossland Uranium over the Chilling Project. Due to the shape of the project the survey also covered half of EL28517.

### 6. EXPLORATION DURING YEAR 1

Exploration on this tenement was postponed whilst the company re-organised its exploration strategy and land holdings in 2011/12. This re-organising is progressing successfully, although taking longer than expected, and includes the acquisition of a large gold project in far north Queensland from Republic Gold.

The far north Queensland Project when combined with the companies prospective NT holdings now allows TM to facilitate its growth through a newly floated ASX company planned in the coming year. Territory Minerals believes this float will put the company in an even stronger position to make discovery through its exploration in its NT and Queensland Projects.

Review of the exploration potential of the tenement during the year showed the following:

Exploration potential on this tenement is high. Structural and stratigraphic settings are excellent with Lower Proterozoic Basement (Burrell Creek Formation) cut by the Giants Reef Fault (a major mineralising structure) very close to the uranium prospective Mid Proterozoic unconformity (Figure 3). Uranium and base-metal mineralisation close to and along strike of the tenement shows that mineralising fluids have been active in this area. Alluvial cover, over most of the tenement, is thin and would have restricted earlier attempts to locate mineralisation.

Exploration targets include:

- Unconformity related uranium deposits.
- Vein/shear hosted base-metal, gold, uranium and REE mineralisation.

### 7. Conclusions/Recommendations

Exploration potential on this tenement is high. Structural and stratigraphic settings are excellent with Lower Proterozoic Basement (Burrell Creek Formation) cut by the Giants Reef Fault (a major mineralising structure) very close to the uranium prospective Mid Proterozoic unconformity. Uranium and base-metal mineralisation close to and along strike of the tenement shows that mineralising fluids have been active in this area. Alluvial cover, over most of the tenement, is thin and would have restricted earlier attempts to locate mineralisation.

Further Exploration is proposed on the following steps:

- Full data review of historical exploration.
- Acquisition of radiometric and magnetic data from the 2007 Crosslands uranium survey.
- Mapping of the southern section of the tenement and reconnaissance sampling of best target areas.
- RAB drilling to test the depth of cover to the east and north of the tenement.
- Gridded soil and rock chip sampling along and adjacent to the Giants Reef Fault.
- RAB/RC/Diamond drilling to follow up on best targets.

### 8. REFERENCES

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