Quantum Resources Limited
ACN 006 690348

WARE RANGE
NORTHERN TERRITORY

EXPLORATION LICENCE 25010

ANNUAL REPORT

FOR THE PERIOD
1 SEPTEMBER 2010 to 31 AUGUST 2011

BY
A. DUTTON

DUE DATE: 30 SEPTEMBER 2011

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DISTRIBUTION:
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Quantum Resources, Melbourne
TENEMENT REPORT INDEX

COMPANY / OPERATOR: Quantum Resources Limited

PROJECT: Ware Range

TENEMENTS: EL 25010

REPORTING PERIOD: 1 September 2010 to 31 August 2011

AUTHOR: A. Dutton

DUE DATE: 30 September 2011

STATE: Northern Territory

LATITUDE: 18° 27’00’’ to 18° 39’00’’S

LONGITUDE: 129° 42’00’’ to 129° 56’00’’ E

AMG mN: 7937600mN to 79599900mN

AMG mE: 573900mE to 598400mE

1:250,000 SHEET: Birrindudu SE52-11

1:100,000 SHEET: Ware 4860 & Nongra 4861

MINERAL DISTRICT: Ware Range

COMMODITY: Uranium, Gold

KEYWORDS: Tanami Region, Ware Range, Uranium, RadonX cup survey
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1. **SUMMARY OF EXPLORATION ACTIVITIES**

This report contains collation of exploration activities over Exploration Licence 25010 between the 1st of September 2010 and the 31st of August 2011. Activities undertaken during the current reporting period include:

- The previous Mining Management Plan was amended to incorporate drilling of the calcrete deposit. The revised MMP was approved by the Department of Resources.
- Quantum applied for an Aboriginal Areas Protection Authority Certificate during the reporting period. A Site Survey was completed and an Authority Certificate received.
- A field reconnaissance was undertaken to confirm drilling locations, establish access to the sites and determine logistical requirements for a drilling program.
- A Partial Waiver of Reduction was submitted and approved by the Department of Resources enabling Quantum to retain 39 blocks until 12th August 2012.

Previous exploration undertaken by Quantum includes RadonX cup survey targeting buried channel hosted and possible unconformity related uranium mineralisation. The RadonX cup data from 133 locations was collected and sent to the Geoforce, Perth laboratory for analysis. The survey results have been encouraging; the RadonX cups exhibited values that are significantly higher than background levels. Anomalous responses were identified over the area possibly associated with the calcrete. A drill program is planned to determine the significance of these anomalies and test for the presence of uranium mineralisation.

2. **TENEMENT STATUS**

Exploration Licence 25010 was granted on the 1st of September, 2006. The tenement underwent a compulsory 50% reduction on the 1st of September, 2008 and subsequently two reduction deferrals were granted on the 29th of September 2009 and 3rd of August 2010. A further 25% reduction (partial reduction) was undertaken on 31st August 2011.

3. **LOCATION AND ACCESS**

EL25010 is located approximately 700 kilometres south of Darwin, Northern Territory and 500 kilometres south west of Katherine. Due to the remoteness of the licence, exploration activities will likely require helicopter support. By road, the tenement can be reached from Darwin along the Stuart Highway to Katherine and then to Willeroo along the Victoria Highway. From Willeroo, the Delamere Road and Buntine Highway provide access to Inverway Station. The tenement is situated approximately eighty kilometres south of the Inverway Station. Roads and tracks in the region are few and paucity of landmarks makes navigation difficult. During the wet season, roads and tracks may become treacherous due to flooding.
4. GEOLOGY

The following description of geology has been adapted from Blake (1975) and Crispe et al. 2007.

4.1 REGIONAL GEOLOGY

The project area lies within the Palaeoproterozoic Tanami Region. The Tanami Region is part of the North Australian Craton. It abuts the Arunta Region to the south and east and is onlapped by younger cover sequence including the extensive Palaeozoic Wiso Basin on its northeastern margin. To the west, sedimentary succession of the Mesoproterozoic Birrindudu Basin overlies and separates the Tanami Region from similar age rocks in the Halls Creek Orogen.

The oldest and rarely exposed rocks in the Tanami Region are Neoarchaen (2520-2500 Ma) amphibolites facies gneiss and metasedimentary rocks of the Browns Range Metamorphics and the Billabong Complex. Overlying the Archean basement is the metasedimentary succession of Tanami Group (1880-1830) and volcanics and siliciclastic sedimentary rocks of Ware Group (1825-1810 Ma). An unconformity marking the major deformational and metamorphic event known as Tanami Orogeny (ca. ~1830 Ma) separates the Tanami Group from Ware Group.

The Tanami Region sequence is unconformably overlain by quartz sandstone, lithic arenite, and conglomerates of Pargee Sandstone representing the syn-tectonic sedimentation related to the 1730 Ma Strangways Orogeny. The Pargee Sandstone itself is unconformably overlain by Meso- to Neopaleoproterozoic platform cover sequence comprising sandstone, siltstone, shale, and carbonate of Birrinduddu Group.

The Palaeozoic Antrim Plateau volcanics and Redcliff Pound Group and Mesozoic sediments together form the post-Proterozoic geological record in the Tanami Region.

Detail mapping and structural analysis indicates that Tanami Region experienced complex and protracted structural evolution. Its deformational history was largely influenced by tectonic events occurring in the neighbouring Halls Creek Orogen and Arunta Region. At least six deformational events (D1-D6), two metamorphic events and several period of intrusive activity have been recognized in the Tanami Region.

Metamorphic grade in the Palaeoproterozoic sequence of Tanami Region ranges from greenschist to amphibolites facies. During 1825-1790 Ma, voluminous graitoids, dominated by I-type, biotite granodiorite and monzogranite were intruded in the Tanami Region. Based on their geochemistry these granites have been subdivided into the Birthday, Federick and Grimwade Suites.

4.2 LOCAL GEOLOGY

The geology of tenement EL25010 is dominated by Cainozoic sediments; sand silt and gravel deposits obscuring the basement rocks. Lateritisation occurs only in small areas, and typically consist of 1-2m thick pisolitic layer on the top, followed by 2-3m thick mottled zone in the middle and a bleached zone at the bottom.

The Gardiner Sandstone belonging to the Birrindudu Group comprising mainly medium grained sublithic arenites and quartz arenites crop out along the north-eastern boundary of the tenement.
5. EXPLORATION

5.1 2008-2009

RadonX Cup Survey

A RadonX cup survey was carried out over the north-western part of the tenement. The area chosen for the radon cup survey is in the transition from erosional to depositional in the Dingo Creek, as well as being adjacent to a favourable structure i.e. major fold axis that form Ware Range. The technique, sample locations and the analytical results of this survey have been previously reported. The aim of the survey was to delineate areas that show anomalous emission of radon gas, a decay product of uranium. The areas with higher radon gas discharge than the background level are considered to possess surface/subsurface enriched uranium source.

The sampling programme covered six traverses in two sets of three lines collecting RadonX cup data from 133 locations. Results show that recorded radon values are significantly higher than the background levels (Figure 4). The elevated values from the eastern and western sets of traverses exhibited strong trend that appear to align with the paleochannels. Furthermore, the elevated values from the western traverses tend to extend further to the south beyond tenement boundary.

RadonX cup data strongly indicate possible existence of a sediment hosted uranium mineralisation within or proximal to the tenement, and is probably associated with the Dingo Creek drainage system. It is believed that the most likely mineralisation type is a calcrete hosted deposit.

5.2 2009-2010

During the 2009-2010 reporting period, ground follow-up work consisting of gamma-ray spectrometer survey and geological mapping was carried out to locate near-surface occurrence of uranium mineralisation at locations where RadonX anomalies were detected. The spectrometer survey showed absence of near-surface radiometric response suggesting exposed calcrete/silcrete is anomalously low in uranium.

The ground follow-up work did not reveal presence of any near-surface uranium mineralisation that would explain the RadonX anomaly; it is, therefore, deduce that a relatively deeper uranium source may be responsible for these anomalies. To test this idea a drilling program was proposed.

5.3 2010-2011

Activities undertaken during the current reporting period included:

- The previous Mining Management Plan was amended to incorporate drilling of the calcrete deposit. The revised MMP was approved by the Department of Resources.
- Quantum applied for an Aboriginal Areas Protection Authority Certificate during the reporting period. A Site Survey was completed and an Authority Certificate received.
- A field reconnaissance was undertaken to confirm drilling locations, establish access to the sites and determine logistical requirements for a drilling program.
- A Partial Waiver of Reduction was submitted and approved by the Department of Resources.
enabling Quantum to retain 39 blocks until 12th August 2012.

5.4 Proposed Exploration Program and Budget

The proposed exploration program and budget for the coming year is detailed below and will include drilling of the calcrete deposit and spectrometer surveying of the drill spoil to determine if any uranium is present.

<table>
<thead>
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<th>Cost</th>
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6. BIBLIOGRAPHY


Figure 2 - Geology
Figure 3 - RadonX cup survey results