EL 24547
NONOUBA

ANNUAL AND FINAL REPORT

17 August 2007 to 4 July 2011

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SUMMARY

The Nonouba tenement, Exploration Licence 24547, is located approximately 70 kilometres southwest of Alice Springs. The tenement, covering 200 blocks, was granted to Deep Yellow Limited (DYL) on 17 August 2007.

The Nonouba area was previously explored for uranium by Uranerz from 1972-1983. Uranerz identified two prospects, Daria and Nonouba, and returned assays up to 1,900 ppm U3O8 over 0.5m, hosted by carbonaceous-pyritic Undandita Sandstone. The target was roll front uranium mineralisation as delineated at the Angela-Pamela project of Paladin/Cameco.

This annual and final report documents the exploration activities undertaken by DYL from grant on 17 August 2007 to 4 July 2011, when the tenement was surrendered outright. Activities included an RC drilling programme following a site clearance survey by the Aboriginal Areas Protection Authority (AAPA).

No significant uranium intersections were returned during the exploration programme.
1. INTRODUCTION

Exploration Licence (EL) 24547 was acquired by Deep Yellow Limited (DYL) to explore for roll-front uranium mineralisation.

This report covers exploration conducted on EL 24547 during the term of tenure, 17 August 2007 to 4 July 2011.

1.1. Tenure

Exploration Licence 24547 was granted over an area of 200 blocks to DYL on 17 August 2007. At the end of the second year of term the area was reduced to 178 blocks. A further reduction of 70 blocks was made at the end of the third year of term. EL 24547 consisted of 108 blocks at the time of outright surrender on 4 July 2011.

Prior to the conduct of on-ground exploration, the AAPA conducted a site clearance survey and issued an Authority Certificate which indicated 11 exclusion zones within the tenement area.

1.2 Location and Access

The Nonouba tenement, covering 560km$^2$, is located approximately 70 kilometres southwest of Alice Springs on the 1:250,000 Hermannsburg geological and topographic sheets (Figure 1). Exploration Licence 24547 is located within the Owen Springs Reserve.

EL 24547 is directly along strike from and contains similar host rocks to the Angela and Pamela uranium deposits (Figure 3) in the adjacent tenement, EL 25767 (owned by Paladin/Cameco).

Access to the tenement from Alice Springs is via Larapinta Drive (~50km). A network of station tracks provides access within the tenement.
Figure 1  Nonouba Tenement Location
Figure 1  Nonouba Tenement Blocks Showing Partial Relinquishments
2. GEOLOGY AND URANIUM MINERALISATION

2.1 Regional Geology

EL 24547 is located on the northern margin of the Amadeus Basin (Figure 3), an arcuate, east-trending intra-cratonic basin (Lally, Bajwah 2006). The stratigraphy of the basin includes a Neoproterozoic succession of shallow-marine and continental fluvio-glacial sediments, disconformably overlain by Cambrian shallow marine sediments. These are overlain disconformably and unconformably by Late Cambrian – Ordovician and Devonian-Carboniferous sediments (Lally, Bajwah 2006).

Sandstone-type uranium mineralisation occurs on the northern margin of the basin in the Late Devonian Undandita Member. This consists of fluvialite pebbly sandstone, minor siltstone and conglomerate (Lally, Bajwah 2006). Although overall the Undandita Member is generally oxidised, it contains a regionally extensive zone of reduced sedimentary rocks.

2.2 Uranium Mineralisation

Mineralisation of the adjacent Angela deposit (Figure 3) is associated with gently north dipping upper and lower redox boundaries within medium to coarse grained feldspathic, lithic sandstone of the Undandita Member. Both upper and lower redox boundaries can be mineralised but concentrations are generally higher on the upper boundary (Lally, Bajwah 2006). These boundaries are broadly planar but on a prospect scale they step across bedding to both higher and lower stratigraphies. This is controlled by permeability contrasts within the Undandita Sandstones.

2.3 Tenement Geology

EL 24547 is directly along strike from and contains similar host rocks to the Angela and Pamela uranium deposits in the adjacent tenement, EL 25767. The Nonouba tenement contains two prospective uranium prospects; Nonouba and Daria, 62 and 58 kilometres due west of EL 25767 respectively (Figure 3). The uranium is hosted by carbonaceous-pyritic Undandita Sandstone. The sediments are finer-grained compared to their counterparts in the Angela and Pamela deposits, hence the potential for fluid focusing will have been lower, potentially causing weaker uranium mineralisation.
3. PREVIOUS EXPLORATION

Uranium exploration of the Amadeus Basin began in 1972 with Uranerz Australia Pty Ltd (UAL). Airborne radiometrics identified several small anomalies near the northern margins of the basin. Scout drilling in 1973-1974 identified the Angela and Pamela deposits which were drilled in detail by UAL during 1975-1979 (Lally, Bajwah 2006).

Initial drilling west of Angela discovered minor mineralisation, identifying the potential deposits within EL24547 of Nonouba (grades from 0.004-0.41% U₃O₈) and Daria (grades less than 0.1% U₃O₈). Exploration of the Nonouba ground by UAL continued through to 1983.

Various companies other than UAL have performed drilling programmes across EL24547 from 1954 through to 1998, including AGIP, CRA, LENI and NLC (National Lead Company).

4. EXPLORATION COMPLETED

During the first year of term exploration work was limited to planning a drilling programme and conducting a reconnaissance visit in preparation pending the completion of a site clearance survey by the Aboriginal Areas Protection Authority (AAPA).

The AAPA issued an Authority Certificate with 11 exclusion zones on 30 August 2008 and an Authorisation under the Mining Management Act was granted on 1 September 2008 allowing the drilling programme to commence.

DYL undertook an RC drilling programme throughout December 2008 of 10 holes totalling 1,148 metres.
Reconnaissance work undertaken prior to the initiation of the drilling programme involved visiting the area and liaising with the rangers of Owen Springs Reserve to agree on the details of the drill site location, access and rehabilitation.

The RC programme was drilled by Gorey and Cole Drillers Pty Ltd (Figure 4). Holes were drilled from 83m to 251m in depth. Drill lines were positioned on north-south orientations in order for potential interception with the open-ended Angela deposit east of the tenement, striking east-west. These lines were also positioned to avoid the 11 exclusion zones outlined in the Authority Certificate.

Downhole gamma logging was carried out using a Gamma Logger W450, 100 Series. Gamma log data is displayed in Appendix 4. Gamma logs were used to select samples for assay.

All composite assay samples were submitted to ALS Chemex in Alice Springs and analysed for uranium by XRF (method ME_XRF_05) with a detection limit of 4ppm. Results indicated anomalous results in two holes of 335ppm $U_3O_8$ over 1m, and 205ppm $U_3O_8$ over 1m. Assay data are included as Appendix 1.

RC drilling intercepted interbedded sandstones and siltstones of various grainsize and clay contents. Downhole the lithologies were generally similar with no distinct definable units or identifiable stratigraphic cycles. The rocks display various levels of hardness and at times are silicified, a likely post depositional feature. Thin pebble layers were also intercepted in some holes. Alternating oxidised and reduced layers were identifiable downhole with varying widths.
Figure 4  2008 RC Drillhole Locations
5. REHABILITATION

Once drilling was completed all holes, drill sumps and access tracks were fully rehabilitated. Four traditional owners were employed for two days to help with the rehabilitation process.

The rangers from Owen Springs Reserve and Dave Waterson from Vegetation and Land Management (NT Government) have visited the drill area and are happy with the rehabilitation completed.

A brief site visit was also undertaken to complete 12 month monitoring of the rehabilitation programme completed during the previous reporting period.

Full details of the rehabilitation undertaken are documented in the Closure Report submitted to the Department of Resources in February 2011.

6. BIBLIOGRAPHY


