Yellow Rock Resources Limited ABN 90 116 221 740
Address 420 Newscastle Street | West Perth | WA | 6005
Mailing Address PO Box 332 | Leederville | WA | 6903
web www.yellowrock.com.au
p (08) 9227 6300 f (08) 9227 6400 e info@yrr.com.au



20 December 2012

# Nowthanna Hill Uranium Resource confirmed at 3.06 MT

**ASX [YRR].** Web page: www.yellowrock.com.au

## HIGHLIGHTS

- **Review of historic drilling data confirms JORC- compliant Indicated Mineral Resource of 3.06MT at a grade of 0.44 kg/t $U_3O_8$ which is contiguous with the Toro Energy Ltd Nowthanna Indicated Mineral Resource (7.31 MT at 0.45 kg/t)**
- **Mining licence application has been in progress for some time.**
- **There is scope to increase the resource**
- **Tenement is situated 47 kilometres south east of Meekatharra**

Yellow Rock Resources (Yellow Rock or the Company) is pleased to announce an update on its Nowthanna Hill Uranium Project.

## DETAIL

The Nowthanna Hill Uranium Project is situated approximately 47 kilometres south east of Meekatharra and is accessible via the Great Northern Highway (bitumen) and the Sandstone Road.

The project consists of tenement application M51/771 which covers a portion of the calcrete palaeochannel within the Quinn's Lake inland drainage. This same palaeochannel and lake contains the calcrete-hosted uranium deposits at Nowthanna and Nowthanna South owned by Toro Energy Ltd.

The geological setting of the Nowthanna Hill Uranium Project is an inland drainage landscape of alluvial and eluvial deposits of Tertiary, Quaternary and Recent age. These minerals are developed from extensive weathering and leaching of the nearby Archaean mafic and ultramafic rocks high in vanadium and the uranium-bearing granite domes. Continual degradation and pediment formation of the landscape has resulted in the formation of alluvial drainage channels, lake sediments and extensive regional sheet wash. Within these alluvial channels and lacustrine sediments, carbonate-rich horizons known as calcretes become the favoured surfaces for uranium mineral precipitation. The processes of formation of uraniferous calcretes are complex and dependent upon the following major factors:

- Available concentration of uranium salts and granite sources
- Available supply of vanadium salts (these act as a catalyst or reagent)
- Significantly mature inland drainage basin catchment
- Correct balance of salinity and pH to allow dissolution and re-precipitation of potassium, calcium, vanadium and phosphate salts that concentrate and contain the uranium minerals
- Long term fluctuations in the water table to allow periodic cycles of flooding and evaporation and thus re-precipitation and concentration of minerals

Uranium occurs in the form of the minerals carnotite (uranium, potassium vanadate) or more rarely, autunite (calcium, uranium phosphate). In the Nowthanna area uranium is concentrated at the interface between shallow calcrete units and lacustrine clays mainly less than 15m below surface. Hence all the defined resources are shallow. Under the microscope uranium is found within carnotite grains between 2 and 15 microns in diameter, either free or within calcite and associated with quartz and clays. In some areas the uraniferous deposits are associated with gypsum (calcium sulphate) common to the salt lake environment.

The reviewed data from previous work by Dominion Mining Ltd and Acclaim Uranium NL shows that there is a high grade uranium deposit between 1 metre and 7 metres beneath surface and varying in thickness from 1 to 2 metres over a strike distance of 2 kilometres. The mineralisation is within carnotite (uranium-potassium vanadate) associated with lacustrine clays.
The extent of the shallow uranium deposit as defined by Acclaim Uranium NL (see Figure 1) was modeled by Snowden & Associates in 1998 as follows:

| **Lease** | **Category** | **Tonnes** | **Grade** | **Contained Tonnes** |
|---|---|---|---|---|
| **M51/771 (YRR)** | **Indicated Resource** | **3,059,000** | **0.437 kg/t $U_3O_8$** | **1,337 $U_3O_8$** |
| E51/776 (Defiance Mining-Acclaim) | Indicated Resource | 7,309,451 | 0.450 kg/t $U_3O_8$ | 3,289 $U_3O_8$ |

The Department of Mines and Petroleum (DMP) has a resource figure for YRR Nowthanna deposit quoted below:

| **Lease** | **Category** | **Tonnes** | **Grade** | **Contained Tonnes** |
|---|---|---|---|---|
| **M51/771 (YRR)** | **Inferred Resource** | **2.98MT** | **0.423 kg/t $U_3O_8$** | **1,261 $U_3O_8$** |

This was derived by subtraction from the latest quoted Toro Energy Ltd figure (derived from Defiance Mining NL) and is similar to the Snowden figure of 1998. However recent work has confirmed that the more accurate resource is that quantified by Acclaim at 3.059MT that was derived from the original block volumes. The Acclaim resource was estimated from 68 Air Core holes (12 to 15m deep) for 1052 metres and grade was tested by assay as well as radiometric logging. A 0.75kg/t lower cutoff was used and a bulk density of 1.5 for resource block estimation.
Refer to WAMEX reports A54794 (Acclaim 1998) and A58248 (Acclaim 1999).

Additional exploration potential of Nowthanna is considered very good due to the fact that:

- Western Mining Corporation in the 1970s drilled some deeper RC holes into bedrock and found Archaean mafics and schists. The available reports do not detail whether any assays for gold or base metals were completed.
- Exploration drilling and sampling on much of the lease has been shallow and focused on calcrete layers only.
- The western part of the tenement was not completely covered by drilling, although known to have a good uranium response (from work by Dominion Mining Ltd in 1991 (see Figure 2)
- There is limited geochemical data for elements other than uranium (for example the Acclaim report mentions possible strontium and some microscope calcrete samples contained gold and tellurium)
- A Mining Lease application is still in progress for this tenement.

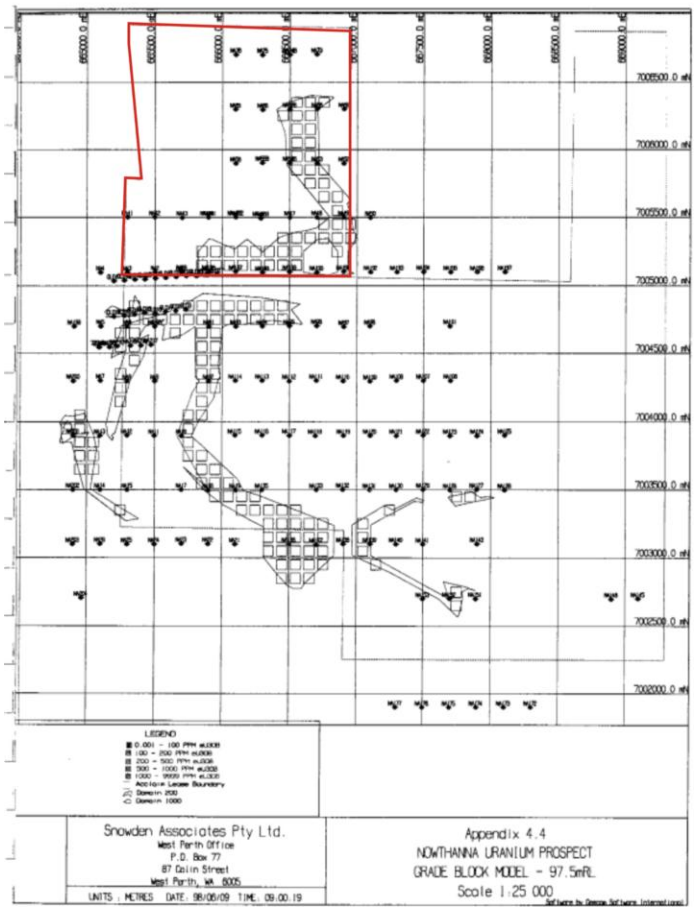


*Figure 1: Example of Block Model Flitch 97.5 mRL by Acclaim Uranium NL 1998*
*The red tenement outline is the current YRR holding.*

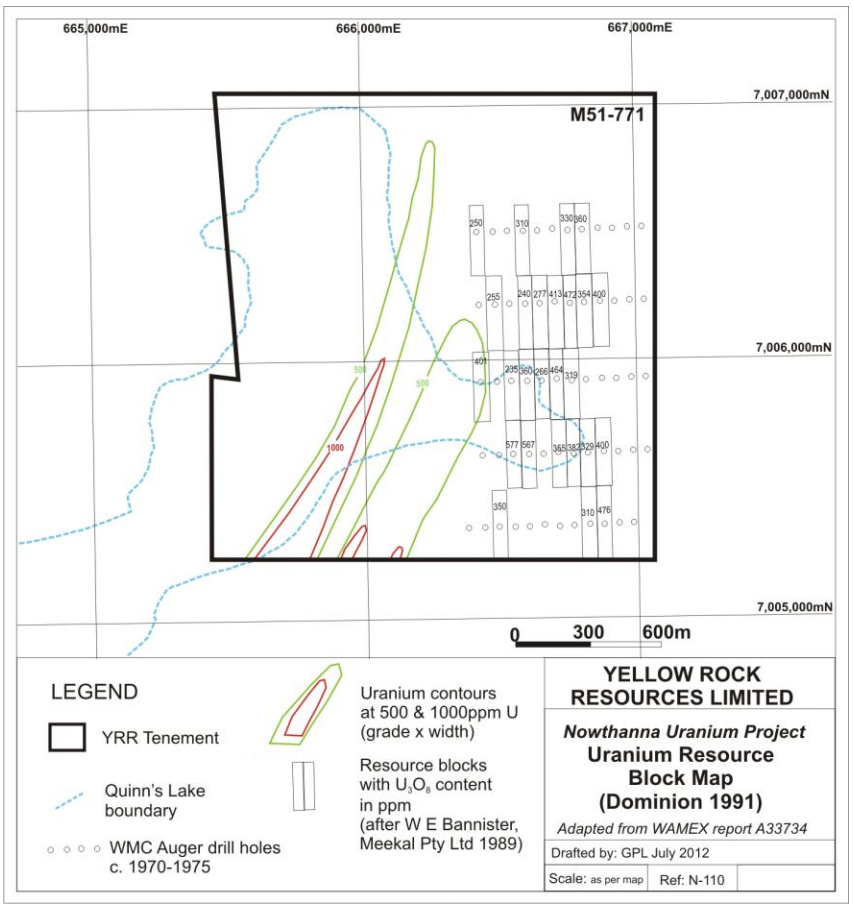


*Figure 2: Dominion Resource Blocks and grade contours in 1991*

**Yours Sincerely**

**Leslie Ingraham**

**Executive Director**

Competent Person's statement

*The information in this statement that relates to Exploration Targets, Exploration Estimates, Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by independent consulting geologist Brian Davis B.Sc (hons), Dip.Ed.*

*Mr Davis is a Member of The Australian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. Brian Davis is employed by Geologica Pty Ltd.*

*Mr Davis has sufficient experience which is relevant to the style of mineralization and type of deposit under consideration and to the activity which is undertaken to qualify as a Competent Person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Davis consents to the inclusion in the report of the matters based on the information made available to him, in the form and context in which it appears".*