## **ASX RELEASE**

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# Excellent uranium extraction results for Toro's Theseus Project, in WA

ORO

NERGY LIMITED

#### **Highlights:**

- Results from the first uranium extraction tests for the Theseus Project report extractions of 95.5% and 96.4% with a very low acid consumption.
- Uranium extraction is very quick, with nearly 75% of leaching occurring in two hours and is almost complete after 12 hours.
- The results confirm that extractable uranium minerals from Theseus mineralisation, such as uraninite and coffinite, are easily available for leaching.

#### First Pass Extraction Tests

Toro Energy Limited ("Toro", ASX Code TOE) is pleased to report the results of initial bottle roll \* extraction tests on mineralised material from the Theseus Project in Western Australia. Very high extraction rates of 95.5% and 96.4% were received for two composite samples with 75% of the extraction being completed in the first twelve hours. Additional bottle roll extraction tests will be finalised in the next few weeks.

The high tenor and speed of the uranium extraction suggest the Theseus mineralisation consists predominantly of uraninite and coffinite and is readily available for leaching. This is a very promising result and is comparable to preliminary recoveries from other Australian insitu recovery type deposits. Further studies will determine the exact nature of the uranium mineral speciation.



Figure 1: Location of Toro's Theseus drill holes used for the uranium extraction tests and graph showing extraction parameterS

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#### **Technical Discussion**

Five Theseus drill-hole samples were combined to make a composite sample suitable for bottle roll leaching tests. The locations of the drill holes are shown on Figure I and the assay results for the five original and the combined composite sample are shown in Table I. The 16.6kg composite, mineralised sample gave a head assay of 330ppm  $U_3O_8$  using an XRF analytical method. The mineralised sample consists of a variety of sand, minor clay and carbonaceous material obtained from aircore and mud-rotary drilling. The laboratory technical work was completed by ALS Ammtech based in Adelaide.

Hole ID	Sample ID	Easting	Northing	From (m)	To (m)	Width (m)	Sample Weight (g)	U <sub>3</sub> O <sub>8</sub> (ppm) ME- MS61	U <sub>3</sub> O <sub>8</sub> (ppm) ME- XRF15b <sup>#</sup>
LP00191	131567	464050	7489698	102	103	1	5,174	309	330
LP00191	131568	464050	7489698	103	104	1	3,932	279	290
LP00194	131571	463143	7489276	110	111	1	6,158	146	170
LP00199	131581	464168	7490053	104	105	1	1,345	1026	1080
LM0060	145000	463950	7489715	104	120	16	3,643	406	370
Composite Sample							16,608	318	330

Table 1: Toro's Theseus drill holes sample assays used for the uranium extraction tests

In the first bottle roll test a 1kg sub-set of the composite sample was treated with  $H_2SO_4$  to give an approximate pH of I and rolled for 48 hours resulting in a 95.5% extraction with an acid consumption of only 5.6kg/t. A second sample treated similarly with the addition of  $H_2SO_4$  to give an approximate pH of 0.5, resulted in a marginally higher 96.4% extraction and an acid consumption of 20.3kg/t. No oxidant was added for either of these two tests. Achieving very high extraction rates without the need for an oxidant at this early stage is highly encouraging.

A quantitative electron microscope scan (known as QEMSCAN) carried out on one sample reports up to 83% of the uranium minerals being available for leaching, mostly coating grains and in fractures. The leach results suggest that the figure of 83% may be an underestimation. This is an important factor for the proposed in-situ mining technique for Theseus. Further studies will test extraction parameters using alkaline leaches, by adding oxidant and varying the amount of acid being used. The final results are expected in the next few weeks.

Toro's Managing Director, Mr Greg Hall, said "these initial uranium extraction tests are extremely encouraging and demonstrate good metallurgical characteristics for the Theseus Project at this early stage of the project. The Theseus Project continues to achieve milestones on a path towards an initial resource statement in the third quarter of 2012".



\* "Bottle roll" leach results are a preliminary benchscale test under laboratory conditions to test for uranium extraction under controlled conditions. Recoveries do not necessarily reflect final expected metallurgical recoveries.

# An XRF assay method tends to report more accurate and reliable uranium assay results when compared to multi-digest ICP results, for results greater than 200ppm  $U_3O_8$ 

### COMPETENT PERSON'S STATEMENT

Information in this report relating to Exploration Results is based on information compiled by Mr Mark McGeough BSc, who is a Fellow of the Australasian Institute of Mining and Metallurgy. Mr McGeough is a full-time employee Toro Energy and has sufficient experience which is relevant to the styles of mineralisation and types of deposits under consideration and to the activity he is undertaking 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 McGeough consents to the inclusion in this release of the matters based on his information in the form and context in which it appears.

#### MEDIA CONTACT:

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Toro Energy is a modern Australian uranium company with progressive project development, acquisition and growth. The company is based in Adelaide, South Australia with a project office in Perth, Western Australia.

Toro's flagship and wholly-owned Wiluna uranium project (includes existing mining lease) is 30 kilometres southeast of Wiluna in Central Western Australia.

Wiluna contains two shallow calcrete deposits, Lake Way and Centipede, with prefeasibility and optimisation studies completed and a definitive feasibility study underway. Toro has advanced the Approvals process with an anticipated date of mid-2012, construction through 2013 and first uranium sales in 2014.

Toro has a new uranium project at Theseus in Western Australia, and owns uranium assets in Northern Territory, South Australia and in Namibia, Africa.

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