**ASX RELEASE** 

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# Drill core assays confirm high-grade uranium at the Theseus Project, WA

Toro Energy Limited ("Toro" ASX: TOE) is pleased to report assay results from three core drill holes completed at Theseus, WA during June this year. Highlights across the mineralised zone are:

LM184: 0.85m @ 0.29% cU<sub>3</sub>O<sub>8</sub> (0.25 m%GT) from 108.00m<sup>#</sup> LM185: 0.48m @ 0.21% cU<sub>3</sub>O<sub>8</sub> (0.11 m%GT) from 122.70m LM183: 0.90m @ 0.06% cU<sub>3</sub>O<sub>8</sub> (0.06 m%GT) from 103.74m

The assays provide physical confirmation of high-grade uranium mineralisation located within fine sands and silts with peak assay over 10cm of 1.64% cU<sub>3</sub>O<sub>8</sub> in LM184. The results are significant because:

- The assays demonstrate that over these mineralised intervals both the Prompt Fission Neutron (PFN) and gamma values report significantly lower pU<sub>3</sub>O<sub>8</sub>. and eU<sub>3</sub>O<sub>8</sub>. (Figure 1);
- The comparison of grade thickness values confirms that adjustments to both the PFN and gamma values will be needed to accurately measure uranium concentration at Theseus; and
- The assay results lend additional support to the disequilibrium factor of 1.4 previously reported from the closed lead canister work (ASX release 13 June 2012).



**Comparison of Results** 

Assay results support previous Disequilibrium data Figure 1: LM185 core showing silty fine sands, mineralised in a redox zone

The significance of these observations is that the actual uranium grade of the Theseus deposit is likely to be higher than previously reported. Furthermore, drill holes previously reported as below the GT cut-off of 0.1m% may in fact exceed the cut-off using the actual uranium content as measured by uranium assays (LM185, Figure 1 above is an example). This may have implications for the extent of defined mineralisation and ultimately project scale.

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### Sampling Program

Three core drillholes, LM183, LM184 and LM185, targeted uranium mineralisation within three representative zones located across the interpreted palaeodrainage system (Figure 2 & Appendix I).



Figure 2: Drillhole plan of the Theseus Prospect showing location of all drillhole collars ranked by m%GT, over interpreted depth to basement and palaeochannel system

After drilling, core was wrapped in plastic, frozen and transported in chest freezer to preserve the nature of the mineralisation. The mineralised segments are summarised in Table I below:

Drill Hole	Assay Result (cU₃O₅)	GT (m%)	Peak Assay (cU₃Oଃ)	Gamma Result (eU₃O₅)	GT (m%)	Peak Gamma (eU₃Oଃ)	PFN Result (pU₃O₀)	GT (m%)	Peak PFN (pU₃Oଃ)
LM183 from 103.74m- 104.64m	0.9m @ 0.06%	0.06	0.26%	0.9m @ 0.08%	0.07	0.15%	0.9m @ 0.03%	0.03	0.03%
LM184# from 108m – 108.85 m	0.85m @ 0.29%	0.25	1.64%	0.85m @ 0.17%	0.2	0.15%	0.85m @0.1 %	0.09	0.26%
LM185 from 122.7m – 123.18m	0.48m @ 0.21%	0.11	0.54%	0.48m @ 0.07%	0.04	0.09%	0.48m @0.07%	0.04	0.14

 Table 1: Mineralised intervals with chemical, PFN and gamma values.

 # Note: the assay interval for LM184 includes internal dilution of 0.45m that is assigned a value of zero.



Assays (reported as  $cU_3O_8$ ) from this core sampling program are from 10 to 20 cm thick intervals and processed using routine 4 acid digest ICPMS for all samples and pressed powder XRF for those samples reporting above 75ppm. For higher-grade samples reporting greater than 0.5% U the XRF fusion method was used in re-assay.

The detailed 10cm interval results for LM185 are shown on Figure 3 below:



igure 3 Representation of sampled 10cm intervals of core (LM185), with assay, PFN and gamma in comparable % U<sub>3</sub>O<sub>8</sub>.

Toro's Managing Director, Mr Greg Hall said: "Drilling these cored intervals has provided support to previous geotechnical results on positive disequilibrium within the higher grade intervals. Mineralisation also appears to be within a saturated, confined aquifer system that adds to the potential of mining with ISR methods in the future. Toro is also very encouraged by the confirmation in core of uranium mineralisation being associated with permeable fine silty sands."

#### Greg Hall

Managing Director

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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 decision date of late 2012, construction through 2013 and 2014, and first uranium sales in late 2014.

Toro's wholly owned Theseus Project is a recent discovery, indicating a high grade ISR potential mineralised system, with an initial JORC resource being evaluated for release. The Company also owns uranium assets in the Northern Territory and in Namibia, Africa.

#### www.toroenergy.com.au

Information in this report is based on information collated by Mr Stephen Pugh, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Pugh is a full-time employee of Toro, and has sufficient experience which is relevant to the style of mineralisation and type of deposit 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 Pugh consents to the inclusion in this release of the matters based on his information in the form and context in which it appears.

Downhole gamma and PFN measurements in 2012 drillholes were collected by GAA Wireline of Mt Barker SA. For further information on the use and calibration of the PFN readers are directed to the GAA Wireline website <u>www.gaawireline.com</u>

The down-hole PFN logging tool directly measures the amount of the isotope  $U^{235}$  that is present in all natural uranium. This is considered to give a reliable estimate of the grade of uranium for uranium results with a cut off at or above 0.5m @ 500ppm and are shown as  $pU_3O_8$ 

Gamma logging is a common method used to estimate uranium grade where the radiation contribution from thorium and potassium is very small. Sandstone and calcrete hosted deposits are usually of this type. Gamma logging does not differentiate for energy derived from thorium and potassium and thus the result is expressed as an equivalent value or  $eU_3O_8$ . A cut off of less than 0.5m @ 200ppm is applied for natural gamma results shown in Appendix 1.

Density and porosity data is also measured and the data is used to correlate lithological units. No deconvolved gamma data is available at this time for this ASX release.

GT is an estimation presented as  $m\% U_3O_8$ . It is calculated by multiplying the interval (metres width) by the average grade of the interval and presenting as a % figure. A GT figure 0.1% is considered as a minimum cut off for many operating ISR mines around the World.

# In calculating average grades for this interval 0.45m of missing core was given a value of zero  $cU_3O_8$ . m%GT is a measure of the grade and thickness of mineralisation by multiplying the grade in % by the width in metres

Hole ID	GDA94 Easting	GDA94 Northing	Interval cored From (m)	To (m)	Total Depth drilled (m
LM0183	464051	7489688	101.0	122.34	122.34
LM0184	465793	7488818	94.0	113	113.0
LM0185	467390	7486024	112.0	127.4	127.4

# APPENDIX 1: Drill-hole and core summary

All drill holes are vertical and intercepts are considered to be true widths.