

**ASX RELEASE**

26 June 2018

## Leaching Efficiencies Continue to Improve in Test Work - Potential Larger Reductions in Size of Leach Circuit

### Highlights

- **Third leach test result significantly improves on previous successful test work.**
- **Subsequent to ASX release of 20 June 2018, which reported leach test results indicating the potential to reduce required leach tank capacity for treatment of Lake Maitland beneficiated concentrates by half that of 2016 BPD Study, third leach test results now indicate potential to further reduce the capacity, by up to two thirds of 2016 BPD Study, amongst other potentially significant efficiencies.**
- **Further highlights the opportunity for significant reductions in both the capital and operating costs of the hydrometallurgical plant for the Wiluna Uranium Project.**
- **Leaching and ion exchange test work is ongoing with more test work expected to be completed in Q3 2018.**
- **Share Purchase Plan open to eligible shareholders:**  
<http://www.toroenergy.com.au/investors/share-purchase-plan>

Toro Energy Limited (ASX:TOE) (**Toro** or the **Company**) is pleased to announce an update on the results of leach test work currently being undertaken in advancing the next stage of the **Beneficiation** and **Process Design** studies ('**BPD Studies**') for the Company's 100% owned Wiluna Uranium Project in Western Australia (refer to **Figure 1**). The latest result is a significant improvement on the previous result which had already confirmed the potential to substantially decrease the size of the leach circuit and decrease the leach residence time required for the treatment of Lake Maitland beneficiated concentrates<sup>1</sup>.

Three leach tests have now been performed on a single beneficiated concentrate (Mets065 – Clay80)<sup>2</sup>. The first test was undertaken to confirm the leaching characteristics from the first stage scoping level BPD Studies in 2016<sup>1</sup>. The second test was performed to leach the concentrate at a higher pulp density to assess the leaching characteristics at high pulp densities and to increase the leach liquor tenor. The third test was aimed at pushing the pulp densities to the highest possible without losing efficiencies, after the success of the second test.

The outcomes of the third leach test on the beneficiated concentrate Mets065 include:

- the calculated leach tank capacity required for leaching Clay80 beneficiated concentrates was reduced to approximately one third of that of the 2016 BPD Study, a more than 25% improvement on the previous test<sup>2</sup> (**Table 1**);
- residence time was the same as the previous test, one third of the 2016 BPD Study (**Table 1**);

<sup>1</sup> Refer to the Company's ASX announcement of 20 June 2018

<sup>2</sup> Refer to the Company's ASX announcement of 30 January 2018 for sample details and beneficiation results

- continued confirmation that carbonate leaching can be used on the Clay80 beneficiated concentrates; and
- that higher pulp densities (as much as 58% solids content) can be used in leaching without losing extraction efficiency.

Running the leach at higher pulp density has a number of advantages, namely:

- reducing the size of reaction vessels;
- increasing leach liquor concentration;
- reducing equipment size downstream; and
- decreasing reagent consumption, steam and process water.

The results of this third leach test highlight that there are even greater size reduction possibilities in both the leach circuit and in all plant equipment downstream of it than previously thought from the recent successful test work (leach test 2 in **Figure 2**). This will allow further reductions in the capital and operating costs of the hydrometallurgical plant beyond those already highlighted in the Company's previous BPD Studies.

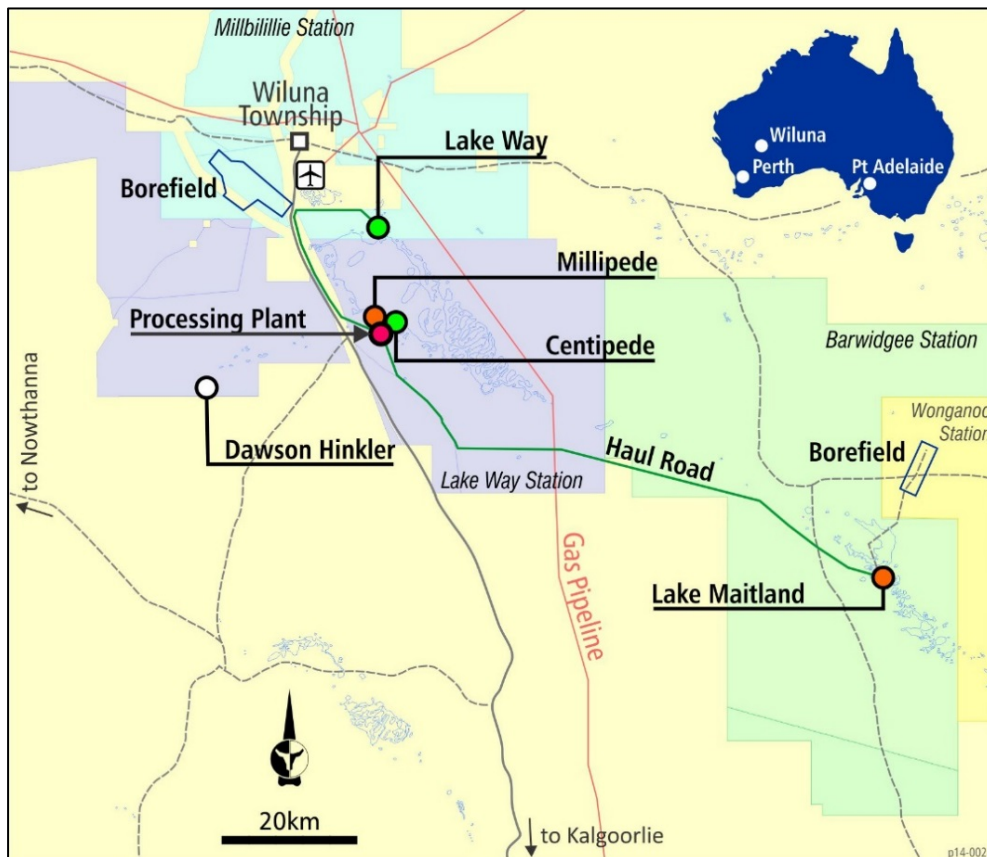


Figure 1: Location of the Wiluna Uranium Project

This is the first of a number of samples to be tested in this phase of the processing studies. Leach testing will also be performed on Mets062, Mets085 and Mets089 beneficiated concentrates under optimised conditions to generate leach liquor for ion exchange test work. Further leach test work on Mets065 will also be undertaken to determine the highest possible pulp densities that can be used to further increase leach liquor tenor without losing extraction efficiencies.

The further work required to complete Phase 1 Leaching and ion exchange test work is ongoing and is anticipated to be completed by Q3 2018.

## Share Purchase Plan Update

The Company is pleased to provide an update in relation to its Share Purchase Plan (**SPP**), details of which are contained in the Company's ASX announcements of 31 May 2018. The SPP booklet with a personalised application form was despatched to eligible shareholders around Monday 4 June 2018. If you would like to receive an electronic copy of your personalised application form this can be requested through OzFinancial Australia, the advisors assisting the management of the SPP, at <http://www.toroenergy.com.au/investors/spp-form>

The SPP offer has been extended as announced by the Company on Monday 25 June 2018 and will now close on Monday 2 July 2018. Shares issued under the SPP will rank equally with existing fully paid ordinary shares in the Company and are expected to be allotted on Thursday 5 July 2018. The Company reserves the right to vary the timetable for the SPP, including the closing date of the SPP offer.

## Background

The aim of Phase 1 in the second stage of the BPD Studies is to further evaluate and optimise conditions in the hydrometallurgical plant developed in the 2016 Scoping Study. This will entail confirmation of the leaching characteristics and ion exchange efficiency on leach liquors. Testing will be conducted only on Lake Maitland Clay80 concentrates produced in the Beneficiation Design test work, namely Mets062, Mets065, Mets085 and Mets089. The Clay80 lithology is one of the common lithologies within the Wiluna Uranium Project and the dominant lithology of the Lake Maitland deposit, the largest of the Wiluna Uranium Project deposits. It has been identified as the early feed to the mill<sup>3</sup>.

The concentrate samples were produced by de-sliming and rejecting +500 µm material. This announcement reports on the third leach test in a series of three completed so far on the Mets065 concentrate sample. Leach test 1 was conducted to confirm the leaching characteristics achieved from the 2016 scoping level BPD Study test work. Leach test 2 was conducted at a higher pulp density to assess the leaching characteristics and to increase the leach liquor tenor. Leach test 3 was conducted at even higher pulp densities than the second test after the success of the second test.

## Leach Results

The initial leach test was conducted at 35% solids. Rapid leach extractions were achieved with 98.9% uranium extraction occurring in the first eight hours, with 99.2% extraction achieved after 24 hours. The final leach liquor contained 529 mg/L uranium. This leach test confirmed the ability to use carbonate leaching on Clay80 Mets065 concentrate.

The second leach test was conducted at 50% solids with similar extractions to the initial test. Uranium extraction was rapid, reaching 98% within the first eight hours and 98.7% after 24 hours. The final leach liquor concentration increased to 1126 mg/L.

The third leach test (the focus of this announcement) was conducted in order to assess the leaching characteristics of the highest percent solids possible. The leach was conducted at 58% solids and achieved uranium extractions of 97.7% after eight hours and 98.4% after 24 hours.

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<sup>3</sup> Refer to the Company's ASX announcement of 28 September 2016

Figure 2 displays the leach curves for all three leach tests, labelled according to the pulp densities used in each test. The leach kinetics only slightly decrease as the pulp density increases and the overall extraction is very similar. The final leach liquor concentration increases as the pulp density increases. After 24 hours the leach liquors contain 529, 1126 and 1514 mg/L for the respective leaches.

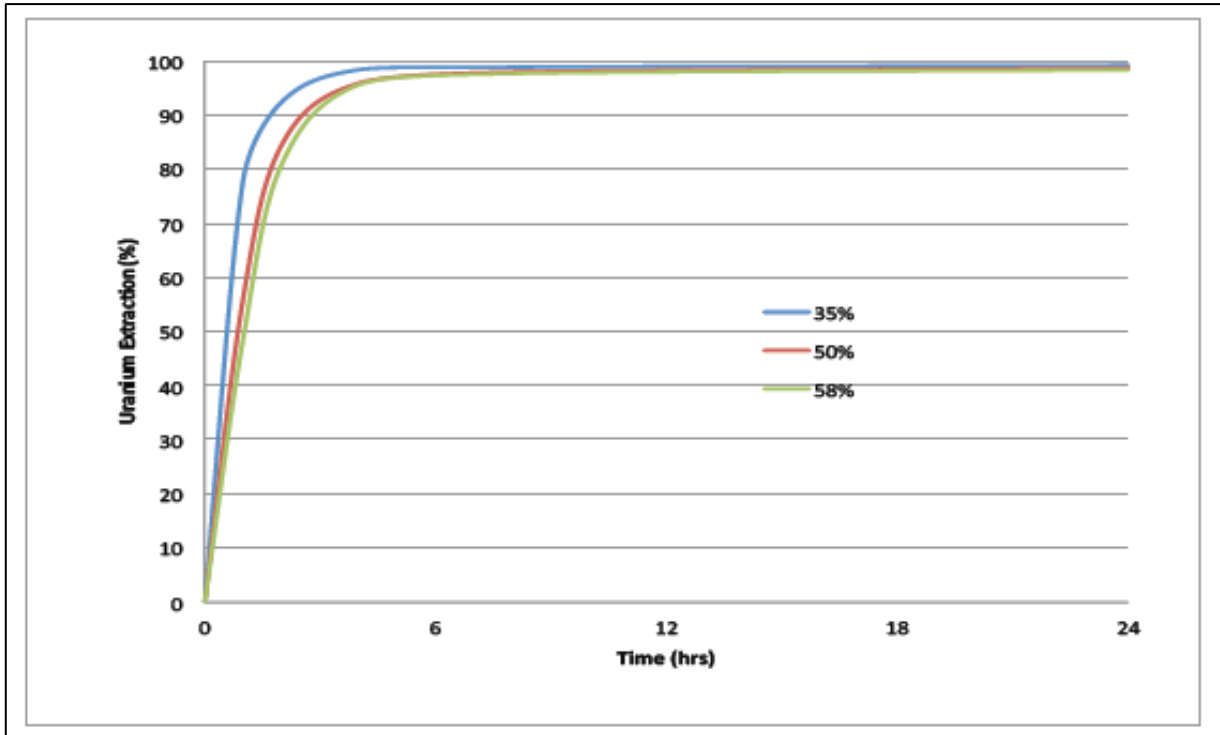


Figure 2: Leach Test Results - leach kinetics

### Leach Tank Size Calculations

Based on the above leach test results the leach tank size calculation is presented in **Table 1** along with the comparative from the 2016 scoping study. The leach concentrate from the scoping study was produced by rejecting +75  $\mu\text{m}$  material and de-sliming resulting in approximately 71% mass rejection. Testing of additional samples has indicated that optimum leach concentrate will be produced by rejecting +500  $\mu\text{m}$  material and de-sliming, which equates to approximately 50% mass rejection. Although this results in an increased mass of solids feeding the leach, by increasing the leach feed pulp density and decreasing the residence time, the size of the leach circuit can be decreased by nearly two thirds from approximately 2325m<sup>3</sup> to 857m<sup>3</sup> (see **Table 1**).

**Table 1: Leach Tank Size Comparison**

	Units	Scoping	Updated (58 wt%)
<b>Leach Tank Details</b>			
Residence time (total)	hrs	24	8
Capacity required (overall)	m <sup>3</sup>	2325	857
% of Scoping Capacity	%	100	37
<b>Leach Feed</b>			
Rate (fresh)	dtph	56.4	97.9
solids content	wt%	42.6	58.0
Rate	m <sup>3</sup> /hr	97	107

**ENDS**

**FURTHER INFORMATION:**

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*Toro's flagship asset is the 100% owned Wiluna Uranium Project, located 30 kilometres southwest of Wiluna in Central Western Australia. The Wiluna Uranium Project has received environmental approval from the state and federal governments providing the Project with the opportunity to become Western Australia's first uranium mine. Toro will maximise shareholder returns through responsible mine development and asset growth including evaluating the prospectivity of its asset portfolio for minerals other than uranium and increasing their value.*

[www.toroenergy.com.au](http://www.toroenergy.com.au)

## FORWARD LOOKING AND CAUTIONARY STATEMENTS

### Forward Looking Statements

This announcement may contain certain “forward-looking statements” which may not have been based solely on historical facts, but rather may be based on the Company’s current expectations about future events and results. Where the Company expresses or implies an expectation of belief as to future events or results, such expectation or belief is expressed in good faith and believed to have a reasonable basis. However, forward looking statements are subject to risks, uncertainties, assumptions and other factors, which could cause actual results to differ materially from future results expressed, projected or implied by such forward-looking statements. Such risks include, but are not limited to Resource risk, metals price volatility, currency fluctuations, increased production costs and variances in ore grade or recovery rates from those assumed in mining plans, as well as political and operational risks in the Countries and States in which we operate or sell product to, and governmental regulation and judicial outcomes. For a more detailed discussion of such risks and other factors, see the Company’s Annual Reports, as well as the Company’s other filings. Readers should not place undue reliance on forward looking information. The Company does not undertake any obligation to release publically any revisions to any “forward looking statement” to reflect events or circumstances after the date of this announcement, or to reflect the occurrence of unanticipated events, except as may be required under applicable securities laws.

### Cautionary Statement

The Studies are based on lower-level technical and economic assessments and are insufficient to provide certainty that the conclusions of the Studies will be realised. Further, the Company cautions that there is no certainty that the forecast financial information contained in the Studies will be realised. All material assumptions underpinning the forecast financial information are set out in this announcement. This forecasted financial information is deduced from an underlying mining production rate deemed possible due to the size of the Mineral Resources at Lake Maitland. Refer ASX announcement dated 1 February 2015 that shows Lake Maitland deposit has sufficient Mineral Resources to support a 2Mt/a mining operation. The estimated mineral resources underpinning the Studies have been prepared by competent persons in accordance with the current JORC Code 2012 Edition and the current ASX Listing Rules. Toro has concluded it has a reasonable basis for providing the forward looking statement included in this announcement. The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements and, in the case of estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed.