

ASX RELEASE

7 March 2019

Further Potential Cost Reductions confirmed by Scoping Study Update for Wiluna Uranium Project

Highlights:

- The Scoping Study Update confirms beneficiation and process design development test work has resulted in further improvements to the potential capital and operating costs of the Wiluna Uranium Project¹.
- Potential capital cost of beneficiation and hydrometallurgical processing plant reduced to \$87.9M from the \$91.6M in the 2016 Scoping Study (inclusive of power plant and steam and cooling water)².
- Potential operating cost of beneficiation and hydrometallurgical processing plant reduced to \$14.59 per pound U₃O₈ from \$16.08 per pound U₃O₈ in the 2016 Scoping Study.
- Overall uranium recovery has potentially improved to 82.77% from the 80.25% disclosed in the 2016 Scoping Study.
- Potential improvements in cost are a result of changes to the processing flow sheet from opportunities highlighted in the recent test work outcomes³.

Toro Energy Limited (ASX:TOE) (the **Company** or **Toro**) is pleased to announce the results of its Scoping Study Update for the Company's 100% owned and environmentally approved⁴ Wiluna Uranium Project in Western Australia (refer to **Figure 1**). The update includes the implementation of changes to the proposed processing flowsheet design announced as part of the Company's 2016 scoping study in respect of the Wiluna Uranium Project (**2016 Scoping Study**) which have consequently resulted in potential improvements in the capital and operating cost of the project as well as a potential improvement in overall uranium recovery from the plant. The changes implemented to the processing flow sheet for this update to the 2016 Scoping Study (**2019 Scoping Study Update**) have resulted from the opportunities highlighted by the test work completed as part of the Beneficiation and Process Design studies (**Studies**) that have been ongoing since completion of the 2016 Scoping Study⁵.

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.

¹ Using Lake Maitland Clay80 Ore only as in the previous 2016 Scoping Study. Refer to the Company's ASX announcement of 5 December 2016 ASX concerning the release of the 2016 Scoping Study.

² The capital cost of the beneficiation and processing plant previously stated in the Company's ASX announcement of 5 December 2016 of \$78.5M did not include the cost of the power plant or steam/cooling water. Not including these two items results in the capital cost amounting to \$72.3M, considerably lower than the 2016 Scoping Study cost estimate.

³ Please refer to the Company's ASX announcements of 30 January 2018, 20 April 2018, 20 June 2018, 27 June 2018 and 12 September 2019 for further information.

⁴ Please refer to the Company's ASX announcements of 9 January 2017 and 10 July 2017.

⁵ Please refer to the Company's ASX announcement of 5 December 2016.

These results show the continued effort Toro is making to improve the value of its Wiluna Uranium Project through research, innovation and engineering opportunities despite the subdued uranium market. Toro is committed to ensuring the Wiluna Uranium Project is ready to take the early advantage in any future uranium price recovery.

As with the 2016 Scoping Study, the 2019 Scoping Study Update assumes the treatment of the Lake Maitland deposit Clay80 ore⁶ at an ore feed rate to the beneficiation plant of 2 Mtpa. The average grade of the ore feed was 567 ppm U₃O₈.

The key outcomes of the 2019 Scoping Study Update are a potential reduction in the operating costs of the beneficiation and processing plant to \$14.59 per pound U₃O₈, down from \$16.08 per pound U₃O₈ in the 2016 Scoping Study, as well as a potential reduction in the capital cost of the beneficiation and hydrometallurgical processing plant to \$87.9M, down from \$91.6M in the 2016 Scoping Study. There has also been a potential improvement in the overall uranium recovery from the plant to 82.77%, up from the 80.25% recovery achieved in the 2016 Scoping Study. A break-down of the differences in the capital and operating costs between the 2016 Scoping Study and the 2019 Scoping Study Update is summarised in **Tables 1 and 2** below.

Changes to process flowsheet from the 2016 Scoping Study include:

Beneficiation Circuit

- (a) Increased cut-point from 75µm to 500µm.
- (b) Primary cyclone underflow now direct to filter feed tank.
- (c) Pressure filtration in place of vacuum filtration on leach feed.

Hydrometallurgical Plant

- (a) Pressure filter in place of vacuum filtration on leach discharge.
- (b) Indirect steam addition in the leach via heating coils.
- (c) Leach Pregnant Leach Solution (**PLS**) and wash liquor combined and fed to ion exchange circuit.
- (d) Cooling heat exchanger on feed to ion exchange.
- (e) Thickener included ahead of lime precipitation filter.
- (f) Lime precipitation filter to be a horizontal vacuum belt filter (**HVBF**) in place of vacuum disk filter.
- (g) Carbonation circuit discharge liquor directed to ion exchange for sodium bi-carbonate make-up.
- (h) Disk filters in Sodium Diuranate (**SDU**) re-dissolution, red cake precipitation and secondary SDU precipitation replaced with candle filters as a lower capital cost alternative.

⁶ Please refer to the Company's ASX announcement of 29 August 2016 and conference presentation release of 8 March 2017.

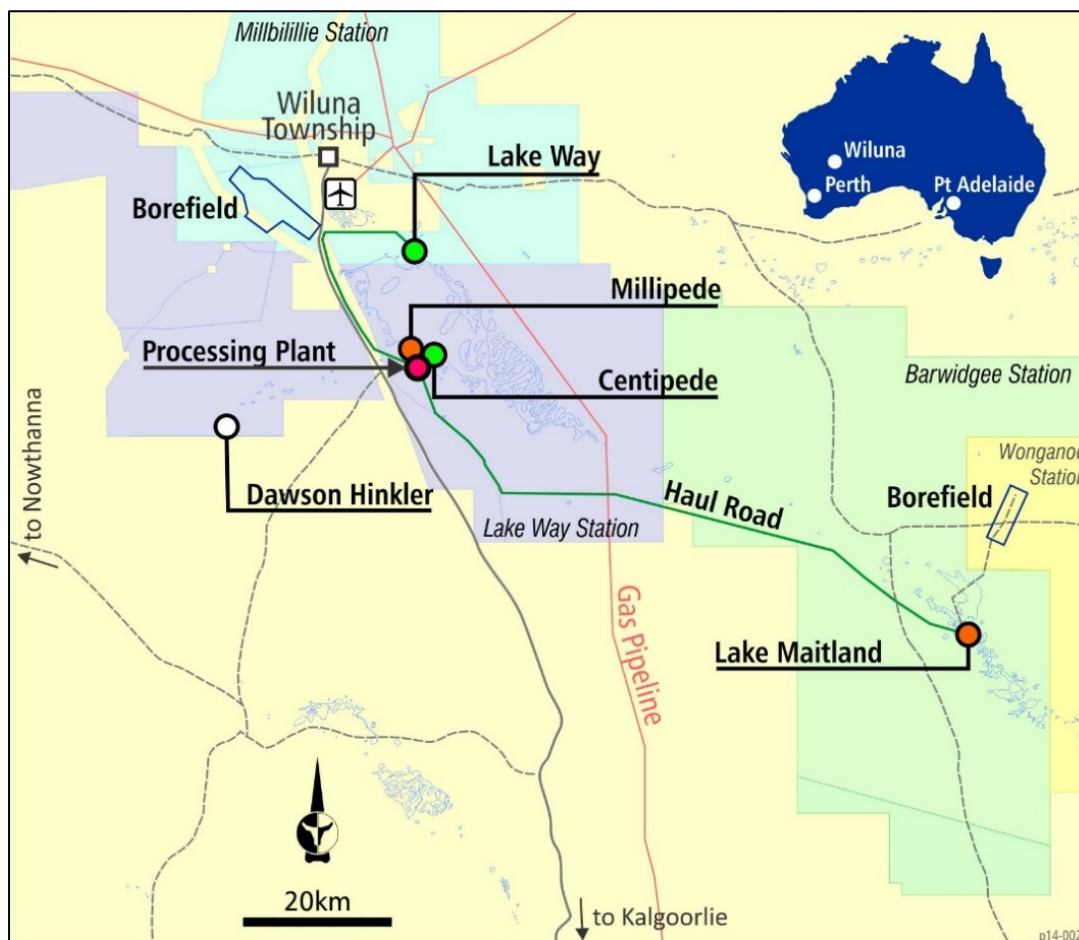


Figure 1: Location of Toro's 100% owned Wiluna Uranium Project in Western Australia

Estimated Capital Cost (A\$)		
Area Description	2016 Scoping Study	Updated Scoping Study
Beneficiation	32,790,238	26,528,745
Leach	8,164,566	8,162,734
Lime precipitation	1,066,954	1,857,145
SDU precipitation	2,988,661	2,467,816
Carbonation	405,720	297,322
Ion exchange	1,261,591	2,696,380
SDU re-dissolution	2,606,158	1,085,119
Red cake precipitation	2,773,774	1,195,702
Secondary SDU precipitation	2,637,028	1,059,299
UO ₄ .2H ₂ O precipitation	1,393,514	1,347,538
Final product preparation	15,651,861	16,481,259
Reagent preparation	1,462,634	2,049,891
Lime slaking	2,068,221	4,010,152
Clean raw water	2,156,949	2,776,565
Saline raw water	94,173	93,727
Steam and cooling water	1,191,796	2,396,888
Compressed air	163,627	163,627
Power generation	12,698,814	13,225,549
Total	91,576,279	87,895,458

Table 1: Summary of capital costs by area, 2016 Scoping Study vs 2019 Scoping Study Update⁷

⁷ The capital cost of the beneficiation and processing plant previously stated in the Company's ASX announcement of 5 December 2016 of \$78.5M did not include the cost of the power plant or steam/cooling water.

Description	Operating Cost (AUD / lb U ₃ O ₈)	
	2016 Scoping Study	Updated Scoping Study
Reagents	\$4.65	\$3.45
Electrical Power	\$1.37	\$1.19
Steam	\$1.34	\$1.68
Process Plant Labour	\$4.82	\$4.50
Maintenance & Consumables	\$0.92	\$0.85
General & Administration	\$3.02	\$2.92
TOTAL PROCESSING COST	\$16.13	\$14.59

Table 2: Comparison of 2016 Scoping Study and 2019 Scoping Study Update OpEx

Details of Improvements to the Processing Flow Sheet

Beneficiation Plant

A block flow diagram of major unit operations in the beneficiation circuit proposed for the Wiluna Uranium Project is presented in **Figure 2**.

Three (3) major process changes have been made in the beneficiation plant, namely:

- Increased cut-point from 75µm to 500µm;
- Primary cyclone underflow direct to filter feed tank; and
- Pressure filtration in place of vacuum filtration on leach feed.

The cut-size in the beneficiation plant has been increased substantially, from 75µm to 500µm. As a result, the ultra-fine screening (75µm) equipment and secondary cyclone circuit is no longer required. Instead, only a single vibrating screen deck will be required to remove >500µm material from the scrubber screen undersize.

Underflow from the 500µm screen will then be pumped to the primary cyclone. Underflow from the primary cyclone is produced at high density and will gravitate directly to the filter feed tank, bypassing the concentrate thickener.

Two (2) horizontal plate and frame pressure filters will now be used in place of the horizontal vacuum belt filters proposed in the 2016 Scoping Study flow sheet. A filter feed tank will be required to provide buffer capacity ahead of the filter. Pressure filtration is considered a technically lower risk and more effective technology for dewatering solids that may still contain a high ultra-fine “slimes” content.

The lower wash efficiency typical of a pressure filter will be offset by the lower moisture content in the filter cake produced. Pressure filtration typically allows for a lower capital cost of equipment as compared to vacuum filtration. It is acknowledged that no pressure filtration test work has been conducted on samples of either leach feed or discharge. Vacuum filtration testing has previously been conducted on several Lake Maitland Clay80 samples and has been shown to be relatively effective. In consultation with equipment vendors, preliminary filtration data has been estimated for pressure filtration by

referencing the results of vacuum filtration. Wash efficiency in the pressure filter has been estimated as considerably lower than what was achieved in vacuum filtration (50% vs 80%).

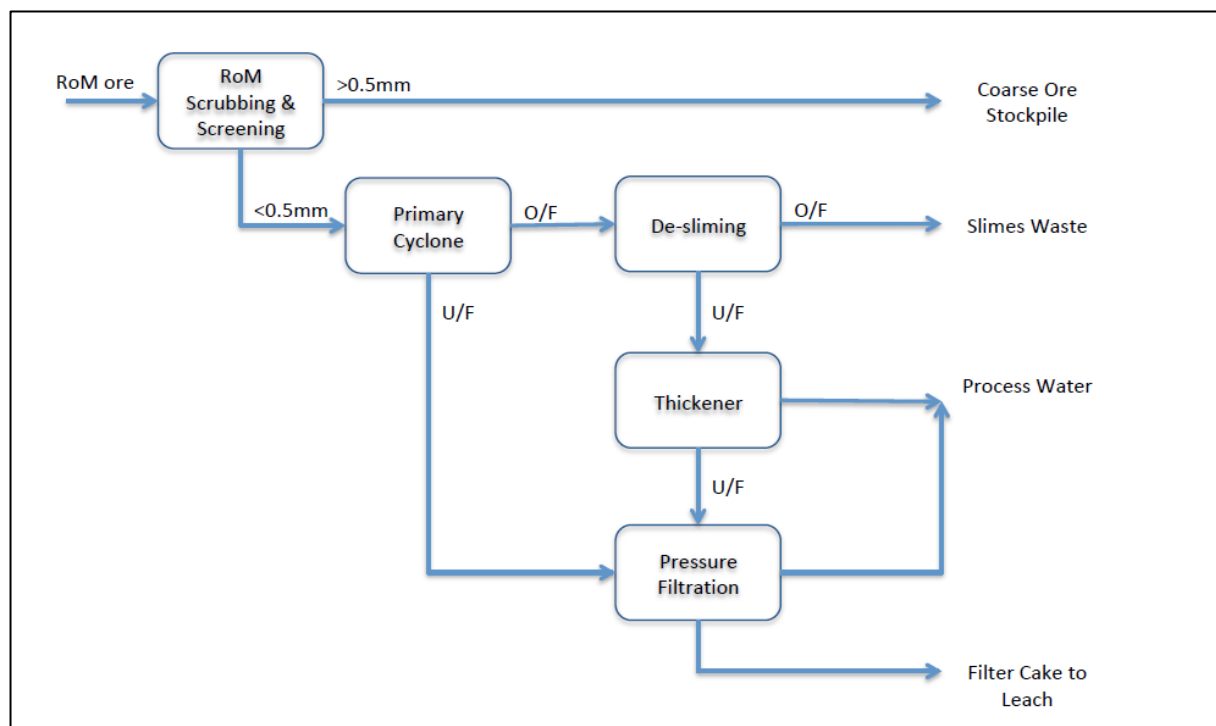


Figure 2: Beneficiation circuit block flow diagram

Hydrometallurgical Plant

A block flow diagram of major unit operations in the hydrometallurgical circuit is presented in **Figure 3**.

Several major process changes have been made in the hydrometallurgical plant, namely:

- Pressure filter in place of vacuum filtration on leach discharge;
- Indirect steam addition in the leach via heating coils;
- PLS and wash liquor combined and fed to ion exchange circuit;
- Cooling heat exchanger on feed to ion exchange;
- Thickener included ahead of lime precipitation filter;
- Lime precipitation filter to be a HVBF in place of vacuum disk filter;
- Carbonation circuit discharge liquor directed to ion exchange for sodium bi-carbonate make-up; and
- Disk filters in SDU re-dissolution, red cake precipitation and secondary SDU precipitation replaced with candle filters as a lower capital cost alternative.

Indirect addition of steam to the leach tanks, via heating coils or external heat exchangers, greatly reduces the ingress of water to the process so this will now be utilized for the leach circuit.

As with the leach feed filter, a single horizontal plate and frame pressure filters will now be used in place of the HVBF. A filter feed tank will be required to provide buffer capacity ahead of the filter. Filtration rates have been assumed at 50% greater than that of the leach feed filter, but will require confirmation in pressure filtration testing.

Combined PLS and wash filtrate from the leach filter will be directed to the ion exchange circuit, as opposed to 2016 Scoping Study where only wash filtrate was directed to the ion exchange circuit. The uranium enriched eluent will be directed to the lime precipitation circuit.

A cooling heat exchanger will be required on the feed to the ion exchange circuit to reduce temperature to 50°C or lower.

A HVBF will be used in place of a vacuum disk filter in the lime precipitation circuit. Quotations from vendors have indicated that an HVBF presents a lower capital cost solution.

Discharge from the carbonation circuit will no longer be directed to the leach circuit. Instead, discharge solution will be used as top-up in the sodium bi-carbonate reagent tank servicing the ion exchange circuit. The high sodium bi-carbonate and low uranium concentration in the discharge from the carbonation circuit makes this stream suitable for re-use in stripping of the ion exchange resin. In this way the ingress of fresh water to the ion exchange, SDU precipitation and carbonation circuits is minimised. A bleed stream is withdrawn from the carbonation circuit to control the buildup of chloride that would reduce efficiency of the ion exchange circuit.

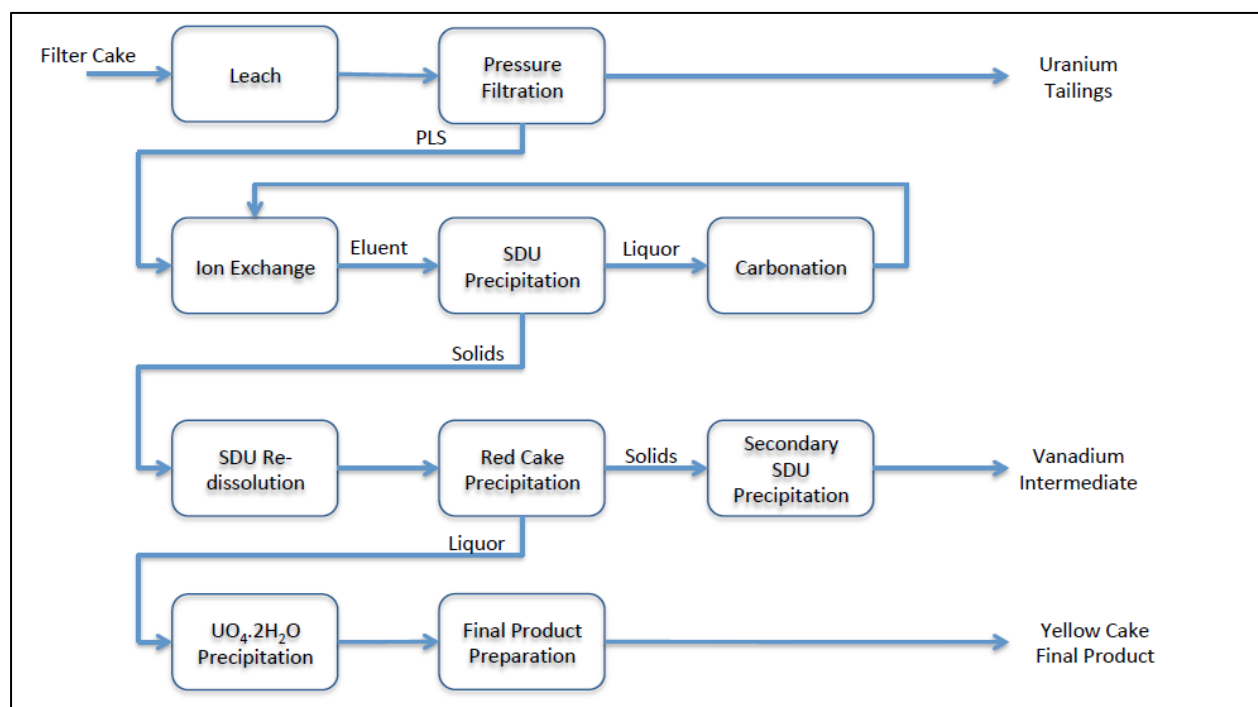


Figure 3: Block flow diagram of hydrometallurgical circuit

Details of Cost Estimates

The capital costs for the 2019 Scoping Study Update have been estimated by Professional Cost Consultants (PCC), a specialist engineering cost estimating company. The costs are estimated at an accuracy of +35% / -25%.

The Studies have not considered capital or operating costs outside the battery limits of the processing plant. The Studies included flow sheet design and capital and operating cost estimates from the RoM pad through to discharge of tailings and final finished product preparation. Accordingly total project capital costs and operating cost forecasts and revenue and production forecasts have not yet been determined.

The 2019 Scoping Study Update assumes the treatment of the Lake Maitland deposit Clay80 ore⁸ at an ore feed rate to the beneficiation plant of 2 Mtpa. The average grade of the ore feed was 567 ppm U₃O₈.

ENDS

FURTHER INFORMATION:

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Competent Persons Statement

The information in this document that relates to geology and exploration was authorised by Dr Greg Shirtliff, who is a full time employee of Toro Energy Limited. Dr Shirtliff is a Member of the Australian Institute of Mining and Metallurgy and has sufficient experience of relevance to the tasks with which they were employed to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Dr Shirtliff consents to the inclusion in the report of matters based on information in the form and context in which it appears.

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

⁸ Please refer to the Company's ASX announcement of 29 August 2016 and conference presentation release of 8 March 2017.

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.

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