

**ASX RELEASE**

1 September 2022

**Lake Maitland Uranium Project Scoping Study****HIGHLIGHTS**

- Further to the substantial increase in total  $U_3O_8$  production resulting from the recently completed Lake Maitland pit re-optimisation, Toro is pleased to advise that it is well advanced in its evaluation of a capital costs estimate for a stand-alone Lake Maitland uranium-vanadium mining and processing operation.
- The capital expenditure for a Lake Maitland operation is expected to be finalised in the short term and released ahead of the revised operating costs estimate.
- Toro's research and development activities over many years successfully identified and evaluated the opportunity to substantially reduce the size and cost of its processing facility at the Wiluna Uranium Project, by a redesign of the proposed plant and processing flowsheet that includes an initial beneficiation step.
- Beneficiation and process design studies for the Lake Maitland deposit in particular resulted in a potential large capital cost reduction for the hydrometallurgical processing plant to A\$87.9M from A\$134.1M in Toro's prior study for the Wiluna Uranium Project.
- As a result of the redesigned process, vanadium can be successfully produced as a by-product of the leaching and treatment of Lake Maitland uranium ore, at a small marginal cost including only an additional A\$5.7M in capex.
- Total processing infrastructure capex for Lake Maitland of A\$93.7M (inclusive of vanadium production) is expected to be adjusted primarily for inflation.
- Fundamentals for uranium are optimal with the global decarbonisation thematic, rising fuel prices and energy security positively impacting on potential demand for nuclear energy, the key driver of the uranium industry.
- Japan's Prime Minister recently announced it will commence planning for nuclear plant re-starts and the development of next generation reactors.
- Reputable Japanese entities JAURD (the Japan Australia Uranium Resources Development Co. Ltd.) and ITOCHU Corporation (ITOCHU) have the right to earn a combined 35% interest in the Lake Maitland Project upon paying US\$39.66M and contributing their proportionate share of expenditure thereafter, in the event a positive final investment decision for Lake Maitland has been made based on a definitive feasibility study.

Toro Energy Ltd (**Toro** or the **Company**) is pleased to advise that it is well advanced in its evaluation of a costs estimate for a stand-alone Lake Maitland uranium-vanadium mining and processing operation. Toro's research and development studies over many years have successfully identified and evaluated the opportunity to substantially reduce the size and cost of its processing facility at the Wiluna Uranium Project through a redesign of the proposed plant and processing flowsheet.

A new processing flowsheet was developed which includes an initial beneficiation step that produced a low mass, high grade uranium concentrate. The new processing flowsheet was found to improve efficiency the most in lithologies with high clay content and Lake Maitland, which hosts 75-80% of the Mineral Resources, is clay dominant. As Lake Maitland is most amenable to the improvements and cost reductions identified, a scoping study was initiated for a stand-alone Lake Maitland uranium-vanadium mining and processing operation.

This redesigned flowsheet has the potential to significantly enhance the technical and financial feasibility of the Wiluna Uranium Project, especially at Lake Maitland.

### **Scoping Study for Lake Maitland**

The Lake Maitland Scoping Study will include a complete engineering build and operational assessment from mining of the Lake Maitland resource through beneficiation, processing and treatment, to production of a ready to transport product for both uranium and vanadium. All stages of the operation will be costed by engineers to current prices, including all non-process related activities, in order to ascertain the current capital and operating cost of mining and processing Lake Maitland as a stand-alone uranium-vanadium operation.

The engineering will incorporate all of the changes and improvements to the processing and treatment of the potential ore from the Lake Maitland uranium deposit that have been proven possible by the research and development undertaken by Toro in recent years, as announced to the market. This includes research demonstrating that vanadium could be successfully produced, at a small marginal cost, as a by-product of the leaching and treatment of the potential Lake Maitland uranium ore.

As previously advised, the date for the substantial commencement condition contained in the State environmental approval for the Wiluna Uranium Project, granted pursuant to Ministerial Statement 1051 (**MS 1051**), has passed. Toro considers, and has sought advice to confirm, that the environmental approval granted by MS 1051 will remain valid notwithstanding that substantial commencement did not occur by the date specified in MS 1051, and that it will be open to the Company to apply under the *Environmental Protection Act 1986* (WA) for an extension of time for that condition at a later time during the life of the approval. It is also envisaged that favourable results from Toro's studies may also necessitate an amendment to the proposal the subject of each environmental approval received.

### **Key Improvements**

Toro's studies have validated the following key advances that result in major cost reductions for a stand-alone Lake Maitland operation:

- A beneficiation circuit (simple screening and de-sliming) to concentrate uranium that delivers a 76% mass reduction whilst maintaining a high uranium recovery of uranium, being as much as 84%. The substantial increase in uranium concentration results in a significant reduction in reagent cost as much less reagent is needed to precipitate and extract the uranium. It also

significantly decreases the size of the leach tank needed as well as the residence time in the leach circuit.

- The increase in post-leach liquor concentration will reduce equipment size downstream of the leach.
- A filtration and washing step (using desalinated water) which removes saline water by as much as 95-98% from de-slimes concentrate to produce a drier leach feed. This results in a significant reduction in reagent use and facilitates replacing direct precipitation with ion exchange in the processing circuit. The use of an ion exchange circuit removes the need for additional refining hence reducing complexity and costs.
- The ion exchange circuit will increase the concentration of uranium in the feed to the extraction facility (SDU plant) by over three times of that in the original studies and therefore reduces the size of the extraction facility by as much as one third.
- The ability to de-slime removes the need for capital intensive Counter Current Decantation tanks.
- A unique wash water recirculation to increase reagent utilisation and reduce reagent losses.

### **Lake Maitland Pit Re-Optimisation**

The initial stage of the Scoping Study, the Lake Maitland pit re-optimisation, has been completed. Pit re-optimisation work completed by SRK Consulting validates Lake Maitland as a stand-alone uranium-vanadium operation and the preferred first resource to be mined for the greater Wiluna Uranium Project. SRK incorporated improvements and potential cost reductions to processing from Toro's R&D activities in recent years together with the production of vanadium ( $V_2O_5$ ) as a by-product.

The Lake Maitland mining pit re-optimisation outlines the following key improvements when compared to Lake Maitland's mining pit scheduled as part of the greater Wiluna Uranium Project (refer to ASX Announcement of 4 May 2022):

- Significant lowering of the average grade of  $U_3O_8$  for the potential Lake Maitland ore to 370 ppm  $U_3O_8$  from 631 ppm  $U_3O_8$ .
- 167% increase in potential ore to 35.2 Mt from 13.2 Mt.
- 50% increase in potential uranium production to 23.5 Mlbs  $U_3O_8$  from 15.8 Mlbs  $U_3O_8$ .
- Potential production of 12.2 Mlbs of vanadium pentoxide ( $V_2O_5$ ) as a by-product.
- An increase in the size of the Lake Maitland mining pit with a revised pit rim cut-off grade of 109ppm  $U_3O_8$ , well below the 200ppm  $U_3O_8$  cut-off for the stated resource.
- A 74% increased forecast mine life to 17.6 years from 10.1 years despite a 54% increase in processing throughput for the revised processing plant.

Prior optimisations of the greater Wiluna Uranium Project result in all four (4) deposits producing 30.2 Mlbs  $U_3O_8$  based on the same US\$70/lb long term sale price (refer to ASX announcement of 30 January 2014). The Lake Maitland pit re-optimisation demonstrates:

- The Lake Maitland operation can now alone potentially produce 78% of that amount, being 23.5 Mlbs  $U_3O_8$  (scoping level calculations).
- A material haulage cost reduction by relocating processing plant to Lake Maitland from Centipede.

The re-optimisation results are based on the following material assumptions:

- US\$70/lb U<sub>3</sub>O<sub>8</sub> price and US\$5.67/lb V<sub>2</sub>O<sub>5</sub> price;
- AUD:USD exchange rate of US\$0.75; and
- most recent Lake Maitland resource estimation (refer ASX announcement of 14 December 2021).

### **JAURD and ITOCHU interest in Lake Maitland**

JAURD (the Japan Australia Uranium Resources Development Co. Ltd.) and ITOCHU Corporation have the right but not the obligation to earn a combined 35% interest in the Lake Maitland Project upon contributing USD\$39.6M to Toro and a proportionate share of expenditure thereafter, in the event a positive final investment decision for Lake Maitland has been made based on a definitive feasibility study.

JAURD is a Japanese company mandated to acquire uranium resources in Australia on behalf of its shareholders, being three Japanese utilities - The Kansai Electric Power Company, Incorporated (50%), Kyushu Electric Power Company, Incorporated (25%) and Shikoku Electric Power Company, Incorporated (15%) - and ITOCHU Corporation (10%), one of the world's largest uranium trading houses.

ITOCHU Corporation, founded in 1858, with 100 bases in 62 countries, is a reputable large Japanese trading house.

This announcement was authorised for issue by the board of Toro Energy Limited.

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### **FURTHER INFORMATION:**

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### **Cautionary Statement**

The studies referred to in this announcement are based on lower-level technical & 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 announcements dated 1 February 2015, 1 February 2016 & 14 December 2021 showing the Lake Maitland deposit has sufficient Mineral Resources to support a 2 Mt/pa mining operation.

### Competent Persons' Statement

#### **Wiluna Project Mineral Resources – 2012 JORC Code Compliant Resource Estimates – $U_3O_8$ and $V_2O_5$ for Centipede-Millipede, Lake Way and Lake Maitland.**

The information presented here that relates to  $U_3O_8$  and  $V_2O_5$  Mineral Resources of the Centipede-Millipede, Lake Way and Lake Maitland deposits is based on information compiled by Dr Greg Shirliff of Toro Energy Limited and Mr Daniel Guibal of Condor Geostats Services Pty Ltd. Mr Guibal takes overall responsibility for the Resource Estimate, and Dr Shirliff takes responsibility for the integrity of the data supplied for the estimation. Dr Shirliff is a Member of the Australasian Institute of Mining and Metallurgy (AusIMM) and Mr Guibal is a Fellow of the AusIMM and they have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity they are undertaking to qualify as Competent Persons as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code 2012)'. The Competent Persons consent to the inclusion in this release of the matters based on the information in the form and context in which it appears.