toro energy
AUSTRALIA'S URANIUM

ASX Release

ASX: TOE

28 May 2025

Updated Scoping Study Results for the Lake Maitland Uranium Project

CAUTIONARY Statement: Updated Scoping Study Results for the Lake Maitland Uranium Project

The estimates contained in this announcement are part of order of magnitude technical and economical assessment and are partially supported by Inferred Mineral Resources (see ASX announcement of 21 October 2019 and 18 June 2024, and further information in the rest of this ASX announcement). The Scoping Study ('Study') referred to in this announcement has been undertaken to determine the potential viability of a combined mine, beneficiation, and hydrometallurgical processing plant at the Company's Lake Maitland Uranium Project as a stand-alone operation. The Study is based on low level technical and economic assessments that are not sufficient to support an estimation of Ore Reserves or to provide assurance of an economic development case at this stage, or to provide certainty that the conclusions of the Study will be realised. Further, the Company cautions that there is no certainty that the forecast financial information contained in the Study will be realised. Further exploration and evaluation work and appropriate studies are required before Toro will be in a position to estimate any Ore Reserves or to provide any assurance of an economic development case.

The Scoping Study has been completed to a +/- 30% level of accuracy in line with a scoping level study accuracy. The Study is based on the material assumptions outlined below. These include assumptions about the availability of funding. While Toro considers all of the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the Study will be achieved. 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.

To achieve the range of outcomes indicated in the Study, funding of approximately A$291m will likely be required. Investors should note that there is no certainty that Toro will be able to raise that amount of funding when needed. It is also possible that such funding may only be available on terms that may be dilutive or otherwise affect the value of Toro's existing shares. It is also possible that Toro could pursue other value realisation strategies such as a sale or partial sale of the Project. If it does, this could materially reduce Toro's proportionate ownership of the Project noting that Toro has an agreement in place with Japanese partners who 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. The Study includes appropriate assessment of realistically assumed modifying factors together with other relevant operational factors. Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the Study.

The Study is based on Indicated Resources of approximately 65% (U_3O_8 resource) and Inferred Resources of 35% (V_2O_5 resource after integration into the U_3O_8 resource for the re-optimisation – see ASX announcement of 14 December 2021) which underpin the production target disclosed in the Study. However, the Inferred Resource is of far less comparative value by weight according to current market prices. There is a low level of confidence associated with an Inferred Resource estimation and there is no certainty that further exploration work will result in the determination of indicated mineral resources or that the production target itself will be realised. The stated Inferred Resources that make up the production target are based on the Company's current expectations of future results or events and should not be solely relied upon by investors when making investment decisions. Further evaluation work and appropriate studies are required to establish sufficient confidence that this target will be met.

The Mineral Resource Estimate in this announcement was reported by the Company in accordance with Listing Rule 5.8 via ASX announcements dated 1 February 2015, 1 February 2016, 21 October 2019 and 14 December 2021. The Company confirms it is not aware of any new information or data that materially affects the information included in the previous announcements and that all material assumptions and technical parameters underpinning the estimates in the previous announcements continue to apply and have not materially changed.

Forward-looking Statements: This announcement contains forward-looking statements which are identified by words such as 'may', 'could', 'believes', 'estimates', 'targets', 'expects', or 'intends' and other similar words that involve risks and uncertainties. These statements are based on an assessment of present economic and operating conditions, and on a number of assumptions regarding future events and actions that, as at the date of this announcement, are considered reasonable. Such forward-looking statements are not a guarantee of future performance and involve known and unknown risks, uncertainties, assumptions and other important factors, many of which are beyond the control of the Company, the Directors and the management. The Directors cannot and do not give any assurance that the results, performance or achievements expressed or implied by the forward-looking statements contained in this announcement will actually occur and investors are cautioned not to place undue reliance on these forward-looking statements. The Directors have no intention to update or revise forward looking statements, or to publish prospective financial information in the future, regardless of whether new information, future events or any other factors affect the information contained in this announcement, except where required by law or the ASX Listing Rules. Toro has concluded that it has a reasonable basis for providing these forward-looking statements and the forecast financial information included in this announcement.

Highlights

Excellent financial outcomes

- **NPV pre-tax of approximately A$907.9M** at a discount rate of 8%
- Pre tax IRR of 56%
- Expedited **payback period of only 1.5 years**
- Total **EBITDA of A$2,326.9M**
- Total undiscounted cash flow of **A$1,956.5M pre-tax**
- Average **EBITDA of A$129.3M** per annum
- Average undiscounted cash flow before tax of A$120M per operating annum
- Estimates assume a US$85.00/lb U_3O_8, US$5.67/lb V_2O_5 price and a A$:US$ 0.65 exchange rate

Modest CAPEX

- **US$194M (orA$298.4M) capital cost estimate** including contingency and EPCM
- Includes all infrastructure for the proposed stand-alone Lake Maitland operation, including:
  - entire processing facility with beneficiation plant and ability to produce both a uranium and vanadium product; and
  - all mining & administration related infrastructure, access roads, power plant, borefield and a reverse osmosis desalinisation plant for water supply
- A$146.6M non-processing infrastructure build cost (A$106.2M excluding contingency and EPCM)
- A$151.8M processing infrastructure build cost (A$110M excluding contingency and EPCM)

Low operating cost estimates

- C1* Cash operating cost of US$15.46/lb U_3O_8 over the first 5 years
- C1* Cash operating cost of US$22.67/lb U_3O_8 over Life of Mine (**LoM**)
- All In Sustaining Cost (AISC)# of US$20.68/lb U_3O_8 over the first 5 years
- All In Sustaining Cost (AISC)# of US$28.37/lb U_3O_8 over LoM
- Robust estimate operating margins
- **C1 (US$15.46) and AISC (US$20.68) for the first 5 years provides Toro with very strong margins during the initial payback period**

Mining and Production

- Mine life of approximately **16.3 years**
- Low average strip ratio of 1.59
- Process approximately **2Mt of ore per annum** (front of beneficiation plant)
- Annual average production approximately 1.3Mlbs U_3O_8 (100% Indicated Resource) and 0.75Mlbs V_2O_5 (100% Inferred Resource) (refer to precautionary statement above and discussion on production schedule below for further details)
- Total production approximately 22.0Mlbs of U_3O_8 and 12.3Mlbs of V_2O_5 (refer to resource table for the Wiluna Uranium Project contained in **Annexure A** for further information as well as discussion on production schedule below)

Toro Energy Limited (ASX: TOE) ('the **Company**' or '**Toro**') is pleased to announce the most recent update to the Scoping Study for the proposed stand-alone Lake Maitland Uranium-Vanadium operation (**Study**), located approximately 105 km southeast of Wiluna township in Western Australia and 730 km NE of Perth (refer to **Figure 1**).

The new scoping study update utilises a recently completed resource estimation of the Lake Maitland deposit (refer to ASX announcement of 24 September 2024) that both improves its accuracy and aligns the estimation technique with the other deposits in the greater Wiluna Uranium-Vanadium Project, Lake Way and Centipede-Millipede. Due to the new resource estimation and associated resource block model this new scoping study update has included a complete re-optimisation of the proposed Lake Maitland mining pit and associated delivery schedule of ore to the mill. The improved resource estimation and associated pit optimisation and mine rescheduling has not only confirmed the impressive A$900M+ pre-tax net present value (**NPV**) of the stand-alone Lake Maitland operation but has shown a significant acceleration of the payback period to only 1.5 years. The NPV of the proposed stand-alone Lake Maitland uranium-vanadium mining and processing operation is now A$907.9M (at a discount rate of 8%), approximately A$75M (9%) more than the previous scoping study update of A$832.8M (refer to ASX announcement of 18 June 2024).

The new scoping study update was completed by mining engineers at SRK Consulting Australasia (**SRK**) and metallurgical and processing engineers at Strategic Metallurgy. All calculations were based on a uranium price of US$85/lb U_3O_8, a vanadium price of US$5.67 V_2O_5 and a A$:US$ exchange rate of 0.65. All costs were increased according to the consumer price index (CPI) where appropriate. Full details of the study are provided below inclusive of a sensitivity analysis that shows the effect on project cashflow of an up to 30% increase or decrease in the price of U_3O_8, price of V_2O_5, A$:US$ exchange rate, operating cost (OPEX) and capital cost (CAPEX).

Management Commentary

Commenting on the enhanced outcomes of the Lake Maitland Scoping Study Toro's Executive Chairman, Richard Homsany, said: "*This is an exciting development for Toro and its shareholders and the Board is very pleased to report the new Scoping Study results for the proposed stand-alone Lake Maitland mining and processing operation, which uses the recently completed, more accurate resource estimation and re-engineering of the proposed mining operations. The result is a more accurate study that clearly demonstrates just how robust the potential economics of the proposed project are, with an* ***uplift of A$75M or 9% to a base case of A$908M in pre-tax NPV$_8$*** *and a significant reduction in the* ***payback period to a very swift 18 months from the commencement of mining and processing****.*

As we have stated previously, the Lake Maitland deposit comprises a significant proportion of the Wiluna Uranium Project's resources, so we cannot understate just how transformational the stand-alone Lake Maitland operation is on the potential economics of the entire Wiluna Uranium- Project. These latest estimates at Lake Maitland outline its potential to be brought into production and capacity to generate significant returns when regulatory settings align. Importantly Lake Maitland's upside and quality continue to improve with each evaluation Toro undertakes, further strengthening the case that Wiluna is an asset of global significance. Policy changes at the WA State government level to facilitate Toro's project development and unlock the considerable value in WA's uranium industry are warranted and, in the context of assisting many countries with nuclear power in their energy mix to achieve decarbonisation, are more than well overdue.

As global uranium markets strengthen, Toro is pleased to report the cost estimates and outcomes for Lake Maitland are on track to be highly competitive globally with strong free cash-flow projections and with:

- ***an excellent 56% IRR over LoM***
- ***short payback period of 1.5 years***
- ***a low C1 operating cost of US$15.46/lb U_3O_8 in years 1 to 5 when high grade uranium resource is being processed***
- ***a strong life of mine C1 operating cost of only US$22.67/lb U_3O_8***
- ***a low AISC cost of US$20.68/lb U_3O_8 in years 1 to 5 when high grade uranium resource is being processed***
- ***a strong life of mine AISC cost of only US$28.37/lb U_3O_8***
- ***a modest total CAPEX of A$216.2M plus 20% for contingency and 15% for EPCM over a 16.3 year mine life producing a total of 22Mlbs U_3O_8 and 12.3Mlbs V_2O_5.***
- ***total EBITDA of A$2.326.9***
- ***total undiscounted cash flow of A$1,956.5M pre-tax***

With continuing work streams, Toro remains confident about the further scope to improve these Scoping Study outcomes resulting from Lake Maitland's close proximity to Toro's 100% owned Centipede-Millipede and Lake Way uranium deposits within the Wiluna Uranium Project. The potential integration of additional resources from these deposits could further increase the production and value at a Lake Maitland processing operation.

As *Lake Maitland is only one (1) of three (3) uranium deposits in Toro's Wiluna Uranium Project, the potential upside from here (base case A$908M in pre-tax NPV for Lake Maitland only) with further evaluation and development is large and exciting for our shareholders, especially in the context of rising uranium demand and prices.*"

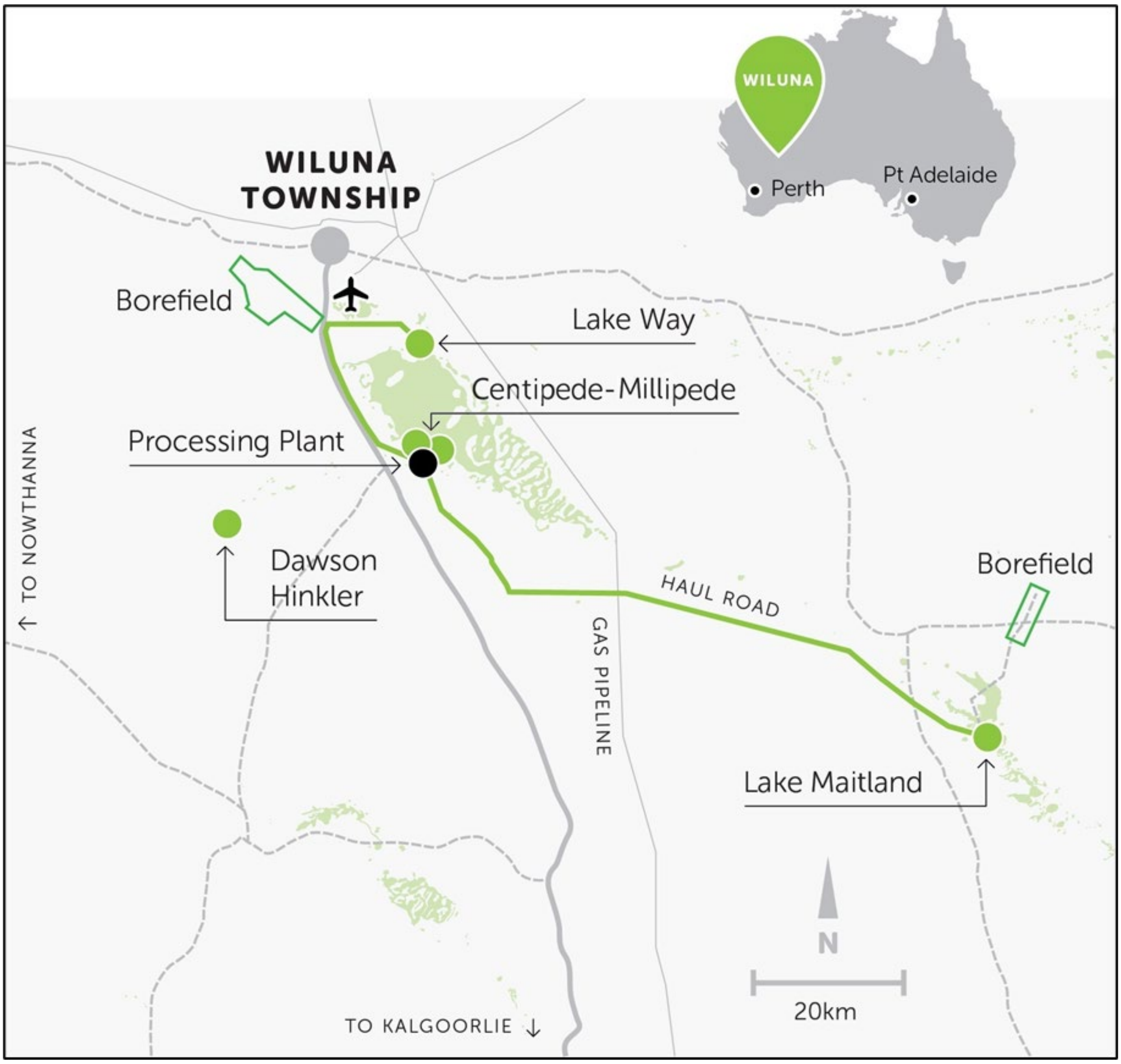

Figure 1: The location of Toro's Wiluna Uranium Project and the relative location of the Lake Maitland Deposit to the other deposits within the greater Wiluna Uranium Project.

Scoping Study Update

Key Estimates and Findings

The key project capital, operating and financial estimates are presented in **Table 1** below.

Table 1: Key findings and assumptions of scoping study.

	Metric	Study Result
Resources	Life of Mine (**LoM**)	**16.3 years**
	Plant Ore Throughput	**2Mtpa**
	Run-of-Mine (**RoM**) Uranium Grade (Years 1-5)	**541 ppm U_3O_8**
	LOM Uranium Grade (LoM)	**383 ppm U_3O_8**
	Average Strip Ratio (LoM)	**1.59 tonne waste/tonne ore**
	Uranium Metallurgical Recovery	**79.8%**
	Vanadium Metallurgical Recovery	**60%**
Production	Annual Uranium Production	**1.3Mlbs U_3O_8**
	Annual Vanadium Production	**0.75Mlbs V_2O_5**
	Total Uranium Production (LoM)	**22Mlbs U_3O_8**
	Total Vanadium Production (LoM)	**12.3Mlbs V_2O_5**
	Non-Processing and Mining Capital	**A$106,2million**
	Process Plant Capital)	**A$110.0million**
	EPCM (15%) and Contingencies (20%)	**A$82.2M**
	Total Capital	**A$298.4million**
Operations	Exchange Rate A$:US$	**0.65**
	C1* Cash Operating Cost (Years 1-5)	**US$15.46/lb U_3O_8**
	C1* Cash Operating Cost (LoM)	**US$22.67/lb U_3O_8**
	AISC# Operating Cost (Years 1-5)	**US$20.68/lb U_3O_8**
	AISC# Operating Cost (LoM)	**US$28.37/lb U_3O_8**
Project Economics	Uranium Price Assumption	**US$85.00/lb U_3O_8**
	Vanadium Price Assumption	**US$5.67/lb V_2O_5**
	EBITDA	**A$2,326.9**
	Total Undiscounted Cash Flow (before tax)	**A$1,956.5 million**
	Project NPV at 8% discount rate (pre-tax)	**A$907.9 million**
	Project IRR (pre-tax)	**56%**
	Payback Period	**1.5years**

Notes to Table 1:
*C1 Cash Operating Cost includes all mining, processing, maintenance, transport and administration costs plus a by-product credit for vanadium pentoxide sales revenue, but excludes royalties and sustaining capital.
#AISC is All-In Sustaining Cost, which is C1 Cash Operating Cost plus royalties and sustaining capital.

Scoping Study Background

The Scoping Study contemplates mining and processing potential uranium ore from the Lake Maitland Uranium Deposit as a stand-alone operation and producing a uranium peroxide product (yellow cake), for sale. It also contemplates stripping vanadium from the uranium processing flow stream, which is liberated from the uranium ore mineral, a potassium uranium vanadate, along with the uranium during leaching, to produce a low value sodium hexavanadate, as a by-product.

A potential stand-alone Lake Maitland uranium (with vanadium by-product) operation was scoped for contemplation as a potential viable alternative to the already proposed greater Wiluna Uranium Project that had previously received state and federal environmental approval. In that project the Lake Maitland Uranium Deposit is one of three (3) uranium deposits whereby potential uranium ore is planned to be mined from the Lake Maitland Uranium Deposit and trucked some distance north to a processing plant at the Centipede-Millipede Deposit. The potential stand-alone Lake Maitland operation contemplates the potential viability of only mining potential uranium ore from the Lake Maitland Uranium Deposit and processing it in a facility directly on site, next to the mining pit. None of the other uranium deposits owned by Toro in the region would be utilised. The potential stand-alone Lake Maitland operation would also differ from the greater Wiluna Uranium Project in that it contemplates a different processing flow sheet with major changes to the processing plant and reagent volumes (see below), and a simpler more conventional mining method.

Sensitivity Analysis

The financial sensitivities analysis for the proposed Lake Maitland stand-alone operation considered variations of +/- 30% across U_3O_8 price, V_2O_5 price, U_3O_8 production yield, A$:US$ exchange rate, total operating costs, and capital costs on NPV post tax at an 8% discount rate. This is presented in **Figure 2**. In undertaking the analysis each sensitivity parameter estimate was considered independently.

From this analysis, it is evident that the NPV is most sensitive to changes in U_3O_8 price and the foreign exchange rate, slightly sensitive to operating costs and capital expenditure but relatively insensitive to the price of V_2O_5. The U_3O_8 yield has the same affect on NPV as U_3O_8 price.

Given the sensitivity of NPV to changes in U_3O_8 price and the foreign exchange rate, these two parameters were also investigated separately for their effect on NPV and the internal rate of return (IRR) as shown in **Figures 3 and 4.**

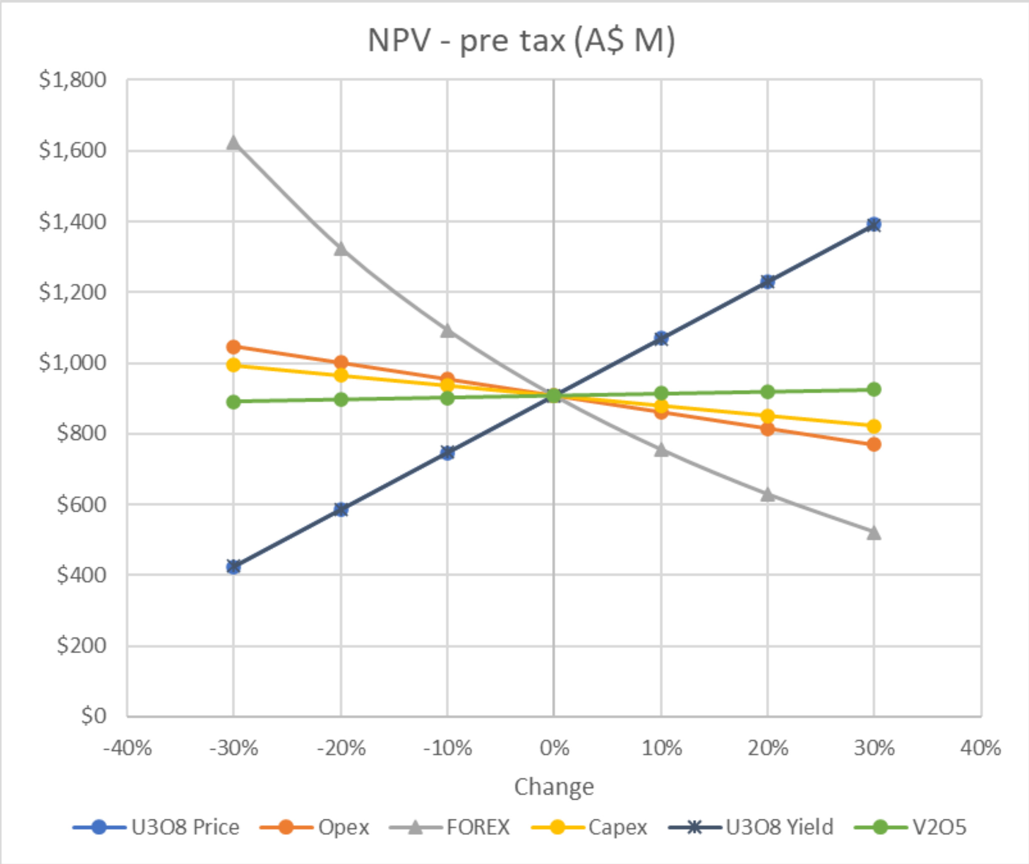

Figure 2: Deterministic sensitivity analysis examining the effect of changes in U_3O_8 price, V_2O_5 price, Opex, Capex, A$:US$ exchange rate and U_3O_8 yield on post tax NPV.

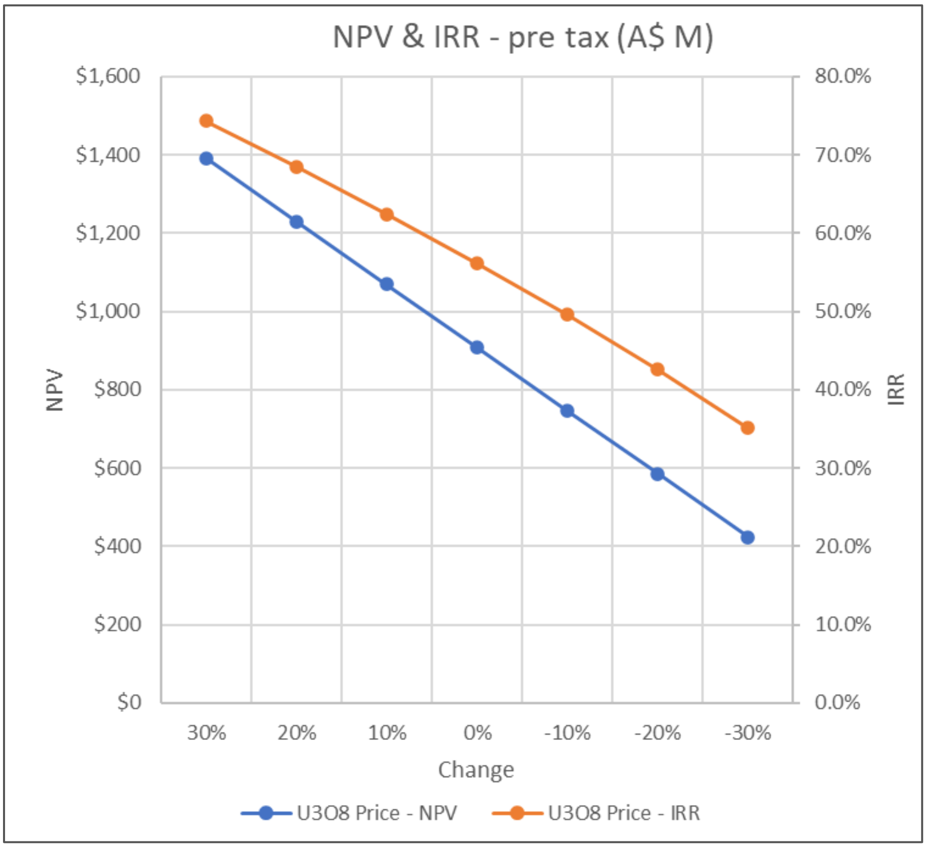

Figure 3: Deterministic sensitivity analysis – Effect of changes in U_3O_8 price on NPV and IRR.

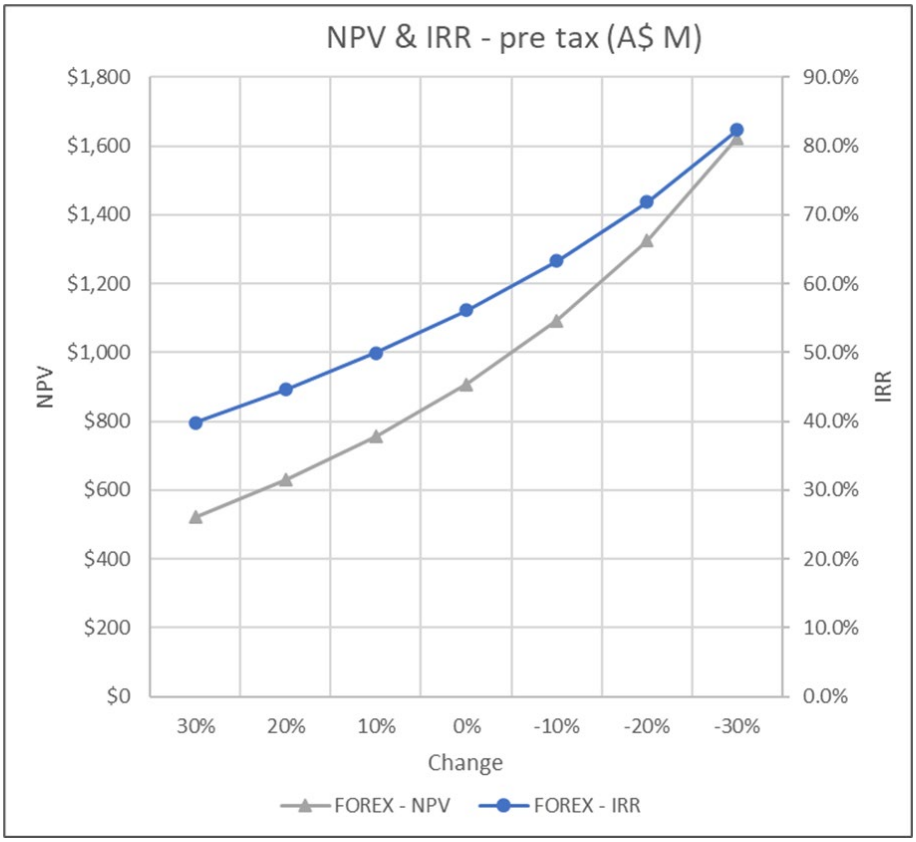

Figure 4: Deterministic sensitivity analysis – Effect of changes in A$:US$ exchange rate on NPV and IRR.

Scoping Study Introduction

The Scoping Study contemplates mining and processing potential uranium ore from the Lake Maitland Uranium Deposit as a stand-alone operation and producing a uranium peroxide product (yellow cake), for sale. It also contemplates stripping vanadium from the uranium processing flow stream, which is liberated from the uranium ore mineral, a potassium uranium vanadate, along with the uranium during leaching, to produce a low value sodium hexavanadate, as a by-product.

A potential stand-alone Lake Maitland Uranium (with vanadium by-product) operation was scoped for contemplation as a potential viable alternative to the already proposed greater Wiluna Uranium Project that had previously received state and federal environmental approval (refer to ASX announcements of 9 January 2017, 21 June 2017 and 10 July 2017). In that project the Lake Maitland Uranium Deposit is one of three (3) uranium deposits whereby potential uranium ore is planned to be mined from the Lake Maitland Uranium Deposit and trucked some distance north to a processing plant at the Centipede-Millipede Deposit. The potential stand-alone Lake Maitland operation contemplates the potential viability of only mining potential uranium ore from the Lake Maitland Uranium Deposit and processing it in a facility directly on site, next to the mining pit. None of the other uranium deposits owned by Toro in the region would be utilised. The potential stand-alone Lake Maitland operation would also differ from the greater Wiluna Uranium Project in that it contemplates a different processing flow sheet with major changes to the processing plant and reagent volumes (see below), and a simpler more conventional mining method.

The Lake Maitland Uranium Deposit and proposed operation is located approximately 730km NE of Perth or 50km directly east of 50km Mt Keith nickel operations (refer to **Figure 1**). Access to the deposit is via the Goldfields Highway, turning east at Leinster along the access road to the Bronzewing Gold Mine and then north along the Barwidgee Road. An alternative route is along the Barwidgee Road from the north, via the township of Wiluna. The deposit and proposed operations are located on the mining lease M53/1089 which is 100% owned by Redport Exploration Pty Ltd, a wholly owned subsidiary of Toro. The mining lease M53/1089 is in good standing.

The Scoping Study focuses solely on the Lake Maitland uranium and vanadium resource which has recently been re-estimated using a lower grade cut-off for the resource envelope of 70ppm U_3O_8 (previously 100ppm U_3O_8) to contain a stated uranium resource of 33.3Mt at 403ppm U_3O_8 for 29.6Mlbs of U_3O_8 at a 100ppm U_3O_8 cut-off and a stated vanadium resource of 50Mt at 285ppm V_2O_5 for 31.4Mlbs V_2O_5 at a 100ppm V_2O_5 cut-off. All of the Lake Maitland uranium resource (as U_3O_8) is in Indicated status and all of the vanadium resource (as V_2O_5) is in Inferred status according to JORC 2012. More information on this resource can be found below and the JORC Table 1 for this resource can be found in the ASX announcement of 24 September 2024. The resource estimation is based on 11,337 composited 0.5m samples from 1,807 drill holes across the entire deposit, with no part of the deposit unaccounted for.

Uranium concentrations are derived by both geochemistry and inference from downhole probes that measure radiation using the relationship between the geochemistry and radiation in drill holes with geochemistry.

Inherent within this resource as part of the uranium 'ore' mineral, is vanadium, which, as would be expected, is extracted along with the uranium in the leaching process and found to be still present in pregnant leach solution downstream in the ion exchange (**IX**) process. Toro has decided to strip this from the IX resin for a low value, but worthwhile, by-product. Given this, Toro has also estimated the amount of V_2O_5 within the Lake Maitland Uranium Deposit and integrated it into the uranium resource being contemplated in this scoping study. As already stated above, the V_2O_5 resource is Inferred only and its value has been considered immaterial to the overall value of the Wiluna Uranium Project in consideration and so was not used in the determination of what is potential ore and not ore in the optimisation of the pit.

The geology of the Lake Maitland Uranium Deposit is well known, with the mineralisation being interpreted as a shallow groundwater carbonate related uranium deposit (see further below). The 'ore' mineral is entirely the potassium-uranium vanadate, carnotite, with the chemical formula $K_2(UO)_2(VO4)_2.3H_20$. This means that vanadium is definitively related to uranium within the deposit. The mineralisation is relatively flat lying and continuous, with the upper resource limits within 1-1.5m from the current surface of the salt lake, Lake Maitland, and the lower resource limits approximately no deeper than 6m from the surface. Given the carnotite mineralisation has formed from the current and geologically recent ground water table, the deposit wraps itself around the current western shores of Lake Maitland.

The mining technique proposed to be used at the stand-alone Lake Maitland operation is conventional open cut using truck and shovel but with pre-mine dewatering where necessary. Although not targeted specifically in any detail, the higher grade central parts of the deposit are proposed to be mined first so that the average grade of the potential ore decreases over time.

The new proposed processing plant, developed over the recent years of research, will include a beneficiation plant using conventional coarse screens and desliming, pre and post-leach pressure filtration, alkaline leach, IX, sodium diuranate (**SDU**) precipitation, redisolution and uranium peroxide precipitation (yellow cake). To take advantage of the vanadium inherent in the pregnant leach solution due it being a fundamental part of the uranium ore mineral targeted in the leach, vanadium is proposed to be separated in the IX plant and stripped from the IX resin prior to striping uranium, before being precipitated as a red cake (sodium hexavanadate -NaVO) prior to final product preparation as a by-product of the operation.

Environment, Social and Governance (ESG)

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 the studies detailed in this announcement may also necessitate an amendment to the proposal the subject of each environmental approval received.

ESG principles will be taken into account in how Toro conducts its business, including corporate governance systems, people management systems, support for local communities and the traditional owners of the land and management of our operations. It will undertake activities as a responsible member of the community.

Toro has a good working relationship with the traditional owners of the land, having supported the group's recently successful native title claims over the area. This relationship actively continues 'on-the-ground' as Toro explores for non-uranium commodities in the area currently. Meaningful engagement will be made with the local community as Toro develops Lake Maitland. Wherever possible training and employment opportunities will be made available for the nearby communities including local procurement. It will encourage suppliers and contractors to adopt similar policies, standards and practices.

All key aspects of the Lake Maitland uranium-vanadium project pertaining to environmental considerations and external relations are captured in the Environmental Protection Authority (**EPA**) report 1580, which is publicly available on the EPA's website at https://www.epa.wa.gov.au/proposals/extension-wiluna-uranium-project.

Geology

The Lake Maitland Uranium Deposit is a shallow groundwater carbonate related uranium deposit. It is one of many deposits of this type in the NE Yilgarn of Western Australia, which have been interpreted, described and categorised in the most recent Australian Institute of Mining and Metallurgy (**AusIMM**) monograph on Australian mineral deposits by Shirtliff et al (2016).

The principal 'ore' mineral at Lake Maitland and all of the NE Yilgarn deposits is carnotite, a yellow coloured hydrated potassium uranyl vanadate with the chemical formula $K_2(UO)_2(VO_4)_2.3H_20$ (see **Figure 5**). Within the mineral carnotite, both uranium (U) and vanadium (V) are in oxidised valence states, U6+ (as opposed to U4+ in uraninite) and V5+ (as opposed to the more mobile V4+).

The carnotite precipitates within shallow groundwater systems that also contain Mg-Ca carbonate geochemistry, often in the form of cemented carbonate (dolocrete and calcrete). It forms as micro to crypto-crystalline coatings on quartz grains, bedding planes and slippage planes in sediments, in the interstices between sand and silt grains, in voids, fissures and general cavities within dolocrete/calcrete/silcrete, as well as small concentrations (or 'blotches') in silty clay and clay horizons, and even on root tubes that reach the 'ore zone'.

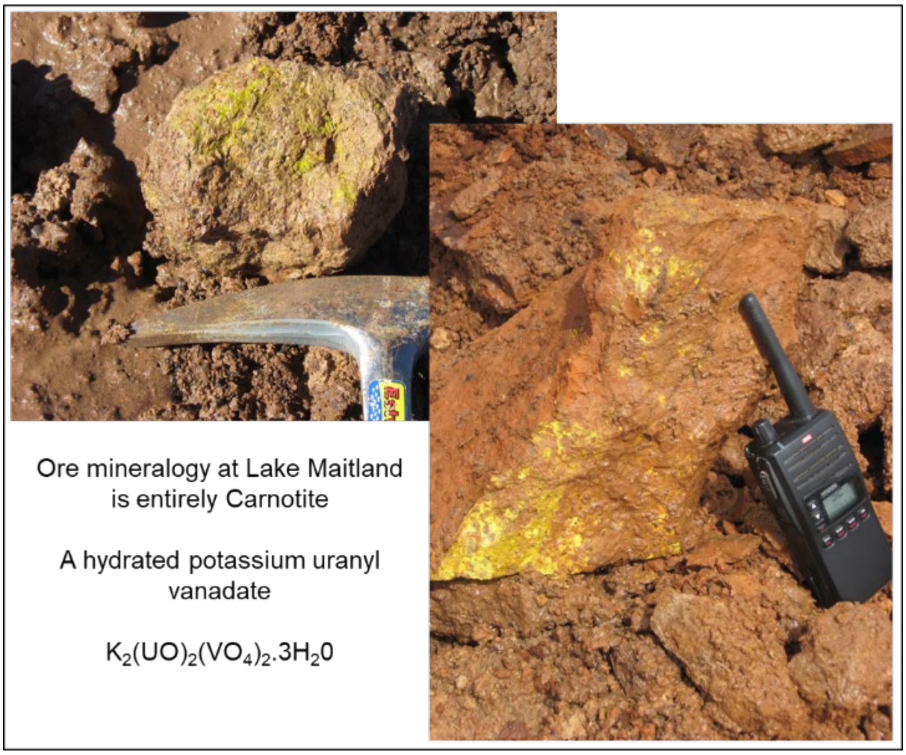

Figure 5: Photographs of the yellow 'ore' mineral, carnotite, of Toro's shallow groundwater carbonate related uranium deposits, inclusive at Lake Maitland.

The shallow groundwater carbonate related uranium deposits of the NE Yilgarn can be further catergorised into three sub-types based on their geomorphic position within the groundwater drainage network, which gives them unique geological characteristics. Lake Maitland is a playa lake type, occurring within the lake bed sediments of the Lake Maitland playa lake, mimicking its western shoreline and hosted by an extremely fine grained and consistent sedimentary package dominated by clay, as would be expected in a lacustrine setting with very limited development of carbonate cementation (see **Figure 6**).

Importantly, metallurgy has been able to take advantage of the dominance of clay within the Lake Maitland Uranium Deposit, whereby a simple cyclone based de-slime following a coarse screen has been shown to significantly beneficiate the potential ore and have downstream benefits to the hydrometallurgy (see below for further details).

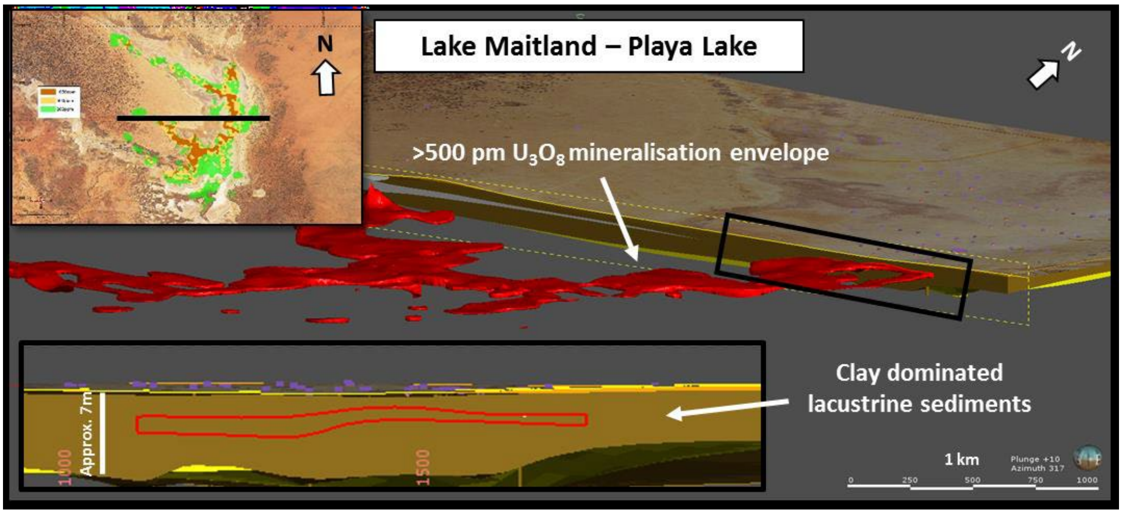

Figure 6: Plan view and 3D cross-section through the playa lake type Lake Maitland shallow groundwater carbonate related uranium deposit showing the high grade core of the deposit. See text and the source (Shirtliff et al, 2016) for further details.

Mineral Resources

The Scoping Study relies on the recent re-estimation of the Lake Maitland U_3O_8 resource (see ASX announcement of 24 September 2024). Only the 'economics' of the U_3O_8 resource have been considered when determining what is potential ore or waste in the Lake Maitland Uranium Deposit.

The recent re-estimation of the Lake Maitland U_3O_8 resource was completed in late 2024 by Mr Daniel Guibal of Condor Geostats Services Pty. Ltd. in close consultation with SRK Consulting and there has been no additional information that would have changed the resource in any way since then. The results of the re-estimation and the related JORC Table 1 for the estimate were presented in the ASX announcement of 24 September 2024, however are also summarised in **Table 2** below.

The resource for the vanadium by-product is dealt with separately later as it is relatively immaterial to the viability of the project in consideration.

eU_3O_8 Factor and Disequilibrium

The U_3O_8 resource is made up of a combination of eU_3O_8 values derived from measurements of radiation from a downhole gamma probe as well as U_3O_8 values derived by direct measurement of U concentrations from geochemical analysis of drill samples. The geochemistry drill holes are also probed and so act as a confirmation tool for the eU_3O_8 derived from the probe.

Positive secular disequilibrium and other factors at Lake Maitland mean the geochemistry values for uranium are consistently higher than those derived from the gamma probe. To account for the differences observed between geochemistry and probe measurements of uranium, a factor of 1.25 has been applied to all gamma derived eU_3O_8 across the deposit.

A merged assay table was created for the resource estimation that was a combination of the factorised radiometric and chemical values for U_3O_8 but with geochemistry given priority. More detailed information can be found in the JORC Table 1 accompanying the ASX announcement of 24 September 2024.

Mineralisation Envelope and Geological Model

The mineralisation has been found to be associated with the water table and is therefore more correlated to depth from the surface than any given lithology, with grades being maintained across different lithologies. The geological model for Mineral Resource estimation is a straightforward mineralisation envelope based on the concentration of uranium that represents the point at which the background uranium level ends and the uranium mineralisation starts (in a classic bimodal distribution). At Lake Maitland, this has been determined to be 70 ppm U_3O_8 (merged and factored). Examination of 3D wireframes of different grade shells of the resource provides a high level of confidence to this interpretation of a groundwater-controlled deposit.

The upper and lower surfaces constraining the mineralisation were modelled according to the first and last occurrences of 70 ppm U_3O_8 values for each hole. The 3D wireframe for constraining the estimation was built by intersecting the upper and lower surfaces, with a lateral constraint based on contouring of 2D indicators. The data were composited to 0.5 m before applying the indicator test. After intersecting the upper and lower contacts with the lateral constraint, the main mineralised shape was manually trimmed to reduce extrapolation beyond the drilling coverage.

Figure 7 shows the drill holes discarded from the mineralisation envelope (blue) because they failed the indicator test. **Figure 8** shows the final envelope in plan view.

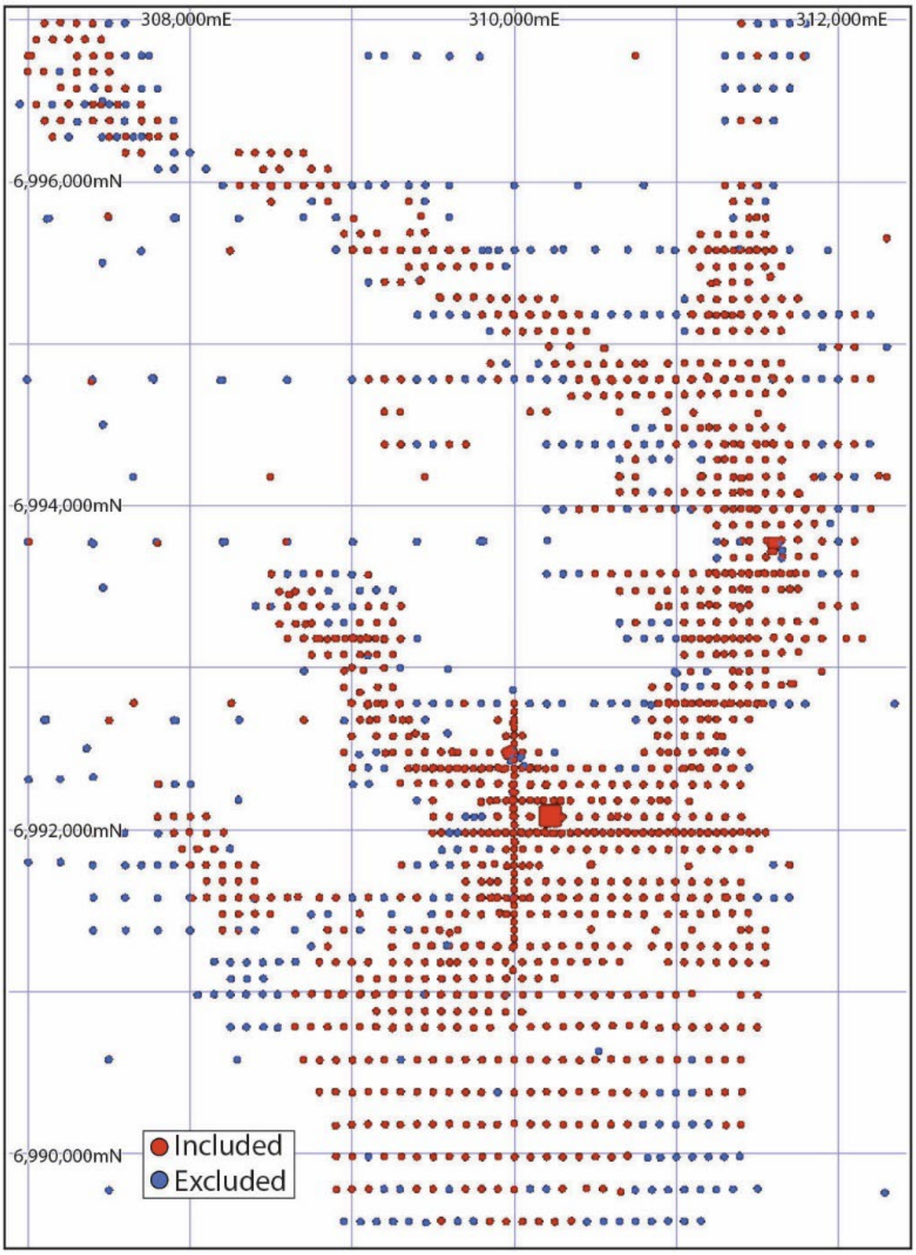

Figure 7: Drill holes excluded from the mineralisation envelope (blue)

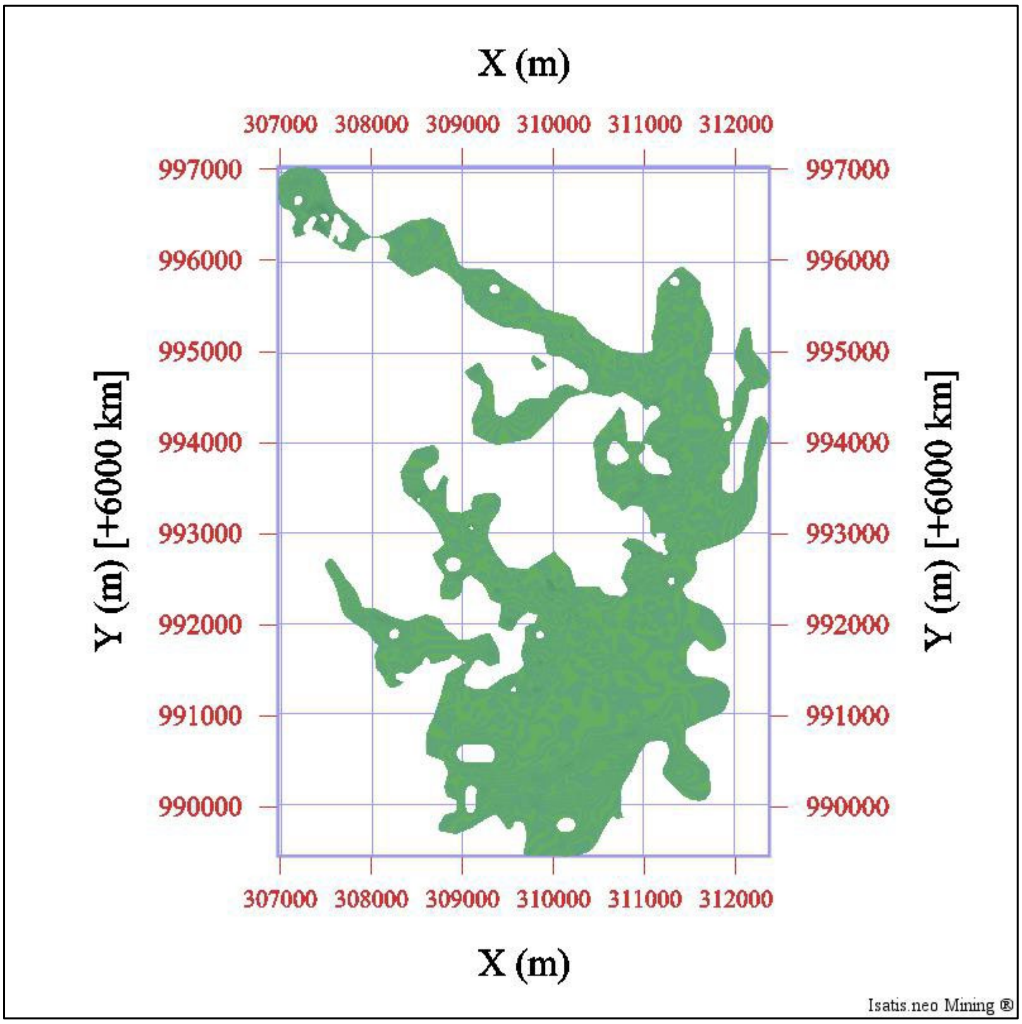

Figure 8: Final Lake Maitland 70 ppm mineralisation envelope in plan view

Sample Compositing

The merged radiometric and geochemical values were composited. Any unsampled intervals were assigned a zero U_3O_8 grade, under the assumption that sampling had not occurred because a geologist had assessed the interval as being unmineralised. A composite length of 0.5 m was used. The mineralised domain wireframe was used to code the drill holes, and compositing was done along the coded length using a 'best fit' philosophy. This option allows some deviation from the 0.5 m length to avoid creating residuals at the ends of the mineralised intervals.

Density Estimation

Density was determined by calibrated gamma-gamma probe measurements down drill holes across the deposit. The gamma-gamma probe was calibrated directly with reference sonic core holes so that both dry and wet density measurements could be obtained. The gamma-gamma density measurements were found to match wet density values, so all measurements were re-calibrated to a dry density value using both the wet and dry density determinations from the sonic core. Density was then averaged over geological units so that each geological domain in the block model had a single average dry density value. Density values range from 1.30 t/m^3 to 1.66 t/m^3.

Estimation Domains

The Lake Maitland deposit follows a main channel roughly oriented north–south and three tributary channels roughly oriented 315° to the northwest. To account for the different orientations, the deposit has been split into three domains: D1, D2 and D3 (**Figure 9**). The domain limits are arbitrary ('soft' boundaries during the resource estimation process).

This resulted in the following numbers of holes and 0.5 m composite samples used in the estimation:

D1 contains 383 holes and 2,064 composites.

D2 contains 972 holes and 6,916 composites.

D3 contains 452 holes and 2,357 composites.

Globally there are 1,807 holes and 11,337 composites.

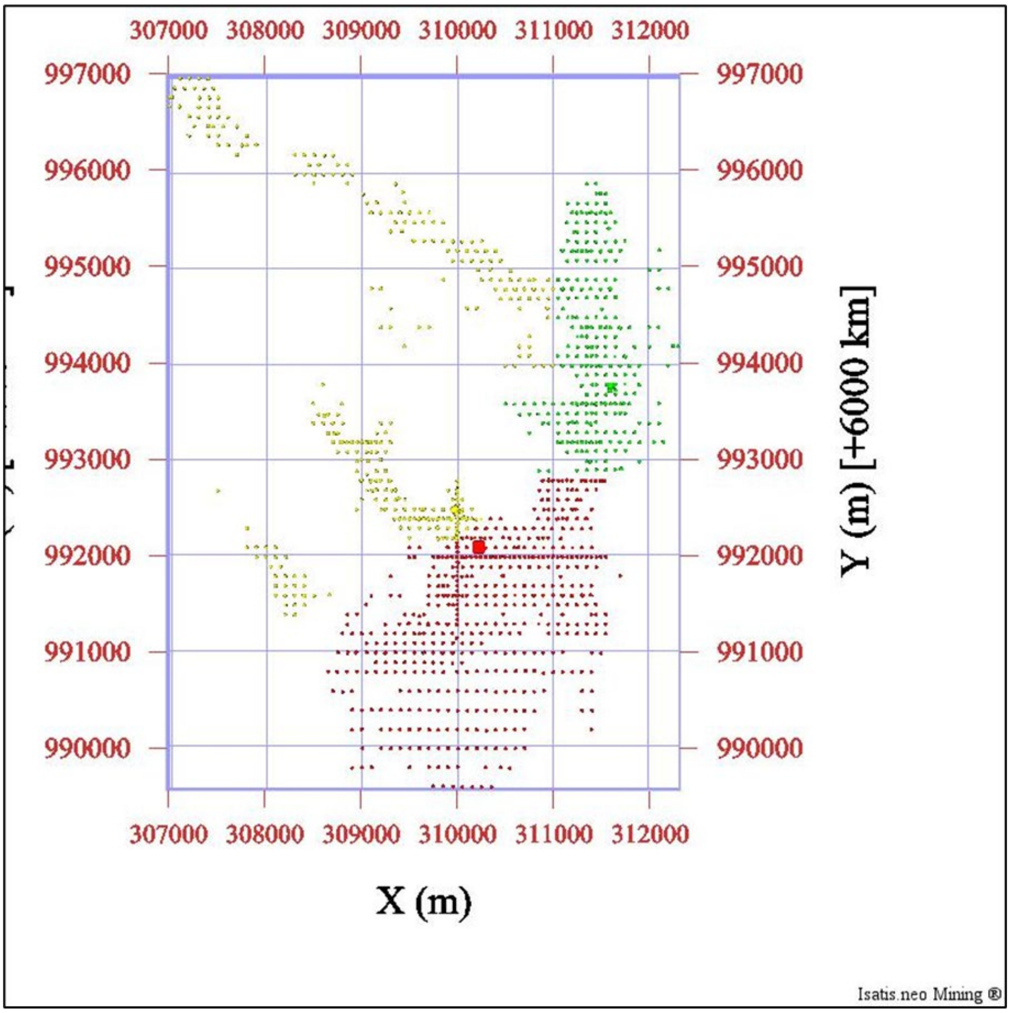

Figure 9: Lake Maitland mineralisation domains

Estimation

Prior to the estimation, the data were declustered using a 100 m × 200 m × 0.5 m declustering cell. The data were not top-cut because top-cutting had a minimal impact on the mean grade of the declustered data. Instead of top-cutting, the influence of high grades was restricted during kriging.

Two runs of ordinary kriging (**OK**) were applied on panels of 50 m × 50 m × 0.5 m, which was considered in line with the average 100 m × 100 m drill spacing across the deposit. The second run was used to populate attributes of the very few blocks that were not informed by the first run. Restrictions on the influence of high grades were set at a threshold of 4,000 ppm U_3O_8 for all domains, with a radius of 10 m. Data with grades higher than the threshold value and at a distance more than 10 m from the block to be estimated are set to the threshold value.

Uniform conditioning (**UC**) was then applied to the OK grades of each panel based on a 10 m × 10 m × 0.5 m theoretical selective mining unit (**SMU**) to better reflect the grades that may be encountered during mining given the smoothing effect of OK. When applied to the block model, the proportion of the panel above a cut-off is estimated, and the grade associated with that proportion is also estimated. To better predict the location of the theoretical SMU grades within the larger OK panels, localised uniform conditioning (**LUC**) was also applied. As a validation check, the grade-tonnage results from the LUC model were compared to the UC model: the results were closely aligned, with only small rounding differences noted.

JORC Classification

In accordance with the JORC Code (2012) guidelines, the Mineral Resource classification is based on the drill spacing, the existence of geochemical data in such numbers that the radiometric data are well supported, and on the quality of the estimation as measured by the kriging slope of regression.

For the Lake Maitland deposit, the resource is drilled at an average 100 m × 100 m spacing, with two small zones drilled at a much closer spacing of around 5 m × 5 m. Based on drill spacing, the entire uranium resource is classified as Indicated, and no part of the Mineral Resource is based on extrapolation. With less drill holes having geochemistry, and hence vanadium values, the entire vanadium resource is classified as Inferred.

V_2O_5 By-product Potential

V_2O_5 is an expected by-product of the Lake Maitland uranium project as vanadium is extracted with the uranium in the leaching process of potassium uranyl vanadate carnotite ($K_2(UO)_2(VO4)_2.3H_2O$), and is separated from the uranium in the ion exchange (**IX**) part of the processing circuit. Toro investigated (through laboratory testing) the method of isolating vanadium in the IX flow stream. A preliminary economic assessment suggests the additional costs of doing so exceed the potential value added to the project by being able to isolate and sell V_2O_5 to market.

An estimate of V_2O_5 Mineral Resources has been undertaken that resulted in an estimated V_2O_5 resource inside the U_3O_8 resource envelope (which has a 70ppm U_3O_8 cut-off) of 50 Mt grading 285 ppm V_2O_5 for a total of 31.4Mlb of V_2O_5 at a 100 ppm V_2O_5 cut-off (see **Table 2** and see above for further details on the resource estimation). The V_2O_5 Mineral Resource has been estimated using similar techniques as described for the U_3O_8 estimation except that only drill holes with vanadium geochemistry were included. The OK methodology was used to estimate V_2O_5 due to there being fewer data available for V_2O_5 and the drill spacing being wider than that used to estimate U_3O_8. No estimation using UC or LUC methodology was performed.

For the scoping study, prior to the pit optimisation, the V_2O_5 resource has been integrated into the U_3O_8 resource by re-estimating the V_2O_5 resource spatially inside the estimation panels created for the U_3O_8resource estimation, so that in the Lake Maitland U_3O_8 Mineral Resource model, each block has an average grade for both U_3O_8 and V_2O_5.

The estimated V_2O_5 resource inherent within the U_3O_8 resource at Lake Maitland is classified as Inferred in accordance with JORC Code (2012) guidelines as there is a lower level of confidence in the average grades and tonnes of V_2O_5 compared to that of U_3O_8. This lower level of confidence should be considered when assessing the V_2O_5 production estimates for the project.

Toro is confident the Inferred V_2O_5 Mineral Resources will be converted to Indicated Mineral Resources in accordance with the JORC Code (2012) guidelines with further drilling and geochemical assessment of additional holes, as uranium is proven to already be present in existing holes across the same area and vanadium is intimately linked to the uranium via the potassium uranyl vanadate mineral, carnotite. This relationship is shown by the correlation that exists between U_3O_8 and V_2O_5 (correlation coefficient of 0.83) in the geochemical assay results from all diamond drill holes – within the 100 ppm U_3O_8 cut-off (**Figure 10**).

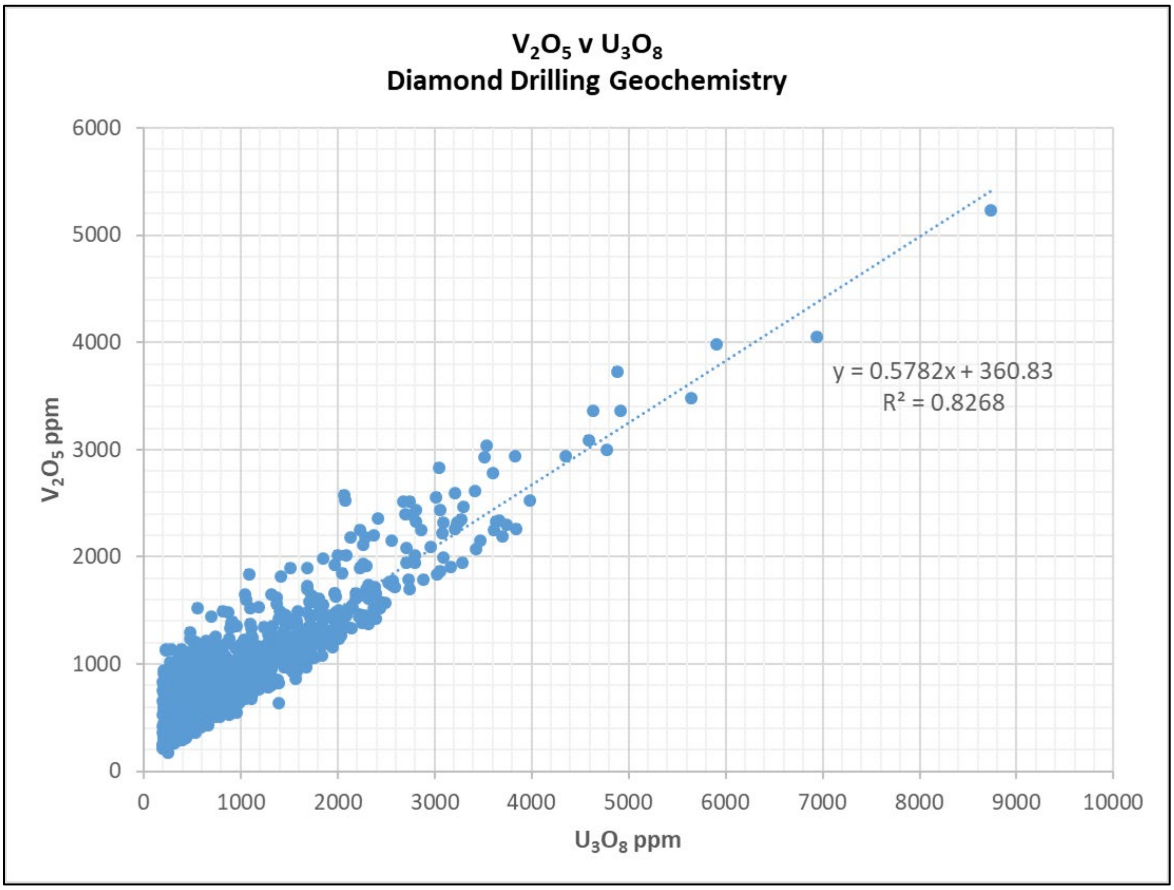

Figure 10: Bivariate plot showing relationship between U_3O_8 and V_2O_5 (calculated from uranium and vanadium, respectively) in geochemistry from all diamond drill holes inside the 200 ppm U_3O_8 cut-off

Mineral Resource classification

In accordance with the JORC Code (2012) guidelines, the Mineral Resource classification is based on the drill spacing, the existence of geochemical data in such numbers that the radiometric data are well supported, and on the quality of the estimation as measured by the kriging slope of regression.

For the Lake Maitland deposit, the resource is drilled at an average 100 m × 100 m spacing, with two small zones drilled at a much closer spacing of around 5 m × 5 m. Based on drill spacing, the entire uranium resource is classified as Indicated, and no part of the Mineral Resource is based on extrapolation.

Mineral Resource Statement

The Mineral Resource estimates presented in **Table 2** were derived from the Mineral Resource model and, after validation and reporting, are considered to represent the Mineral Resource estimates for the Lake Maitland uranium deposit as at 24 September 2024.

The estimates are inclusive of all material contained within the Mineral Resource model and are based on application of the ≥100 ppm U_3O_8 grade cut-off criterion applied to individual model cells.

The Competent Person's Statement and JORC Table 1 for the Mineral Resource estimate is provided in the publicly available ASX announcement of 24 September 2024, regarding the Lake Maitland Mineral Resource. The uranium resources are classified as Indicated, whereas the vanadium resources are classified as Inferred (see above for more information).

Table 2: Mineral Resource estimate tabulation

Mineral Resource classification	Tonnes (Mt)	U_3O_8 (ppm)	V_2O_5 (ppm)	U_3O_8 (Mlb)	V_2O_5 (Mlb)
Measured	0	0	0	0.	0.0
Indicated	33.3	403	0	29.6	0.0
Inferred	50.0	0	285	0.0	31.4

Note: Mineral Resource estimate for the Lake Maitland uranium project containing both uranium (as U_3O_8) and vanadium (as V_2O_5) resources estimated within the 70 ppm U_3O_8 envelope at a 100 ppm cut-off for both U_3O_8 and V_2O_5, in accordance with the JORC Code (2012) guidelines.

Mining

Mining Philosophy

The mineralisation at the Lake Maitland deposit is typically shallow and flat and the surrounding topography is also flat. Conventional open pit mining involving truck-and-shovel equipment is proposed as the mining method. Based on the current mineralisation extents and preliminary anticipated production rates, the primary mining fleet will likely consist of:

Excavators – up to a maximum class size of ~200 t.

Haul trucks – up to a maximum class size of ~100 t.

It is expected that traditional drill and blast methods will only be required by exception, with free-dig being primarily adequate because the host sediments are largely unconsolidated clay/silt with some minor agglomerations of dolocrete-calcrete. In waste, mining flitch heights of up to 2.5 m are expected to be implemented for exposing the top of mineralisation (carnotite) contact. Once exposed, mining will extract the carnotite down to the bottom contact of the mineralisation.

Grade control drilling is expected to take place ahead of mining, using a 10 m × 10 m drill pattern. Grade control drilling will primarily be done to confirm the rock type (i.e. ore and waste) and contained grades for benches immediately ahead of active mining.

With the uranium mineralisation being located beneath/within the standing groundwater level, the interfaces between mining, pit dewatering activities, local and regional hydrogeological settings will be important relationships to be maintained in further project studies.

Mining Model

All mineralisation modelled by the Mineral Resource model has been made available to open pit optimisation for potential 'processing'. The block size of the Mineral Resource model measures 10 mE × 10 mN × 0.5 mRL.

A 5% ore loss factor and 5% waste dilution factor (at zero grade) have been applied throughout the mining study to account for anticipated mining hygiene. These factors require further investigation to confirm appropriateness for use in further and more-refined studies for Lake Maitland.

Uranium equivalent grade

A uranium equivalent grade (UEq) has been used to express the value of uranium together with the value from vanadium. Based on the costs and revenue associated with U_3O_8 and V_2O_5 produced, UEq has been coded in the mining model as:

$UEq = U_3O_8 + (0.04455 \times V_2O_5)$.

The value of vanadium in terms of the preliminary economics has nominal impact on the ultimate pit shell selection. During the study, concerns were raised on incorporating V_2O_5 into the mine planning works given the Mineral Resource has been classified as Inferred. When undertaking strategic LoM scheduling (see below), SRK has applied ore/waste cut-offs based on the value of the U_3O_8 Mineral Resource only.

Open Pit Optimisation

GEOVIA'S Whittle™ software was used to undertake open pit optimisation for the project. The block model was reblocked to 40 m × 40 m × 0.5 m for optimisation to better fit mining operations. Whittle™ generates nested pit shells with different revenue factors, based on the highest project cashflow. At an RF of 1.00, the ultimate pit shell is found where the marginal cost for an additional unit of product is equal to the net revenue received for that additional unit of product. This solution is specific to the revenue and project cost assumptions.

The pit optimisation resulted in a pit shell as presented in **Figure 11** with a total of 41.7 Mt of potential waste and 35.2Mt of potential ore with an average grade of 370ppm U_3O_8 and 256ppm V_2O_5. It is important to note that the potential ore is based on the U_3O_8 resource only, which is 100% Indicated (JORC 2012). This is explained in more detail below, in the discussion on the production schedule.

The key Basis of Design (BoD) input parameters used in the mining scoping study are presented in **Table 3**. Industry benchmarking has informed the mining unit costs of A$3.08/t mined for waste and A$3.78/t mined for ore – commensurate with a small-scale to medium-scale mining operation with a shallow (<10 m) open pit anticipated to require minimal drill and blast.

Future refinements of the study should seek to critically review and assess these BoD parameters to confirm/enhance their level of refinement, particularly as the project moves beyond a scoping level of project definition.

The RF 1.00 pit shell was selected for analysis as the shallow nature of the deposit is anticipated to be low risk for the project in terms of the NPV.

The key optimisation output associated with the RF 1.00 pit shell is outlined in **Table 4**, and the associated pit shell is depicted in **Figure 11**.

Table 3: Summary of BoD key input parameters

Item	Input	Unit
U_3O_8 metal price	85	US$/lb U_3O_8 produced
V_2O_5 metal price	5.67	US$/lb V_2O_5 produced
Offsite charges	0.50	US$/lb U_3O_8 produced
Royalty for uranium	5% of the metal price	US$/lb U_3O_8 produced
Royalty for vanadium	5% of the metal price	US$/lb V_2O_5 produced
Exchange rate	0.70	A$:US$
Selling price in Whittle™	80.24	US$/lb U_3O_8 produced
Selling price in Whittle™	4.89	US$/lb V_2O_5 produced
Discount rate	8	%
Whittle™ block size	40 × 40 × 0.5	mE × mN × mRL
Slope angle	18	degrees
Mine OPEX – Ore	3.78	A$/t ore mined
Mine OPEX – Waste	3.08	A$/t waste mined
Mine OPEX – Pit dewatering	Included in Mine OPEX – Waste	A$/t rock mined
Mine OPEX – Grade control	Included in Mine OPEX – Ore	A$/t ore mined
Process cost for Whittle™	18.52	A$/t ore processed
Process cost	14.05	A$/t ore processed
Ore transport	0.32	A$/t ore processed
G&A	3.46	A$/t ore processed
Process metal recovery	82	% U_3O_8
Process metal recovery	60	% V_2O_5
Processing plant feed rate	2,000,000	tonnes ore feed per year
Ore loss	5	%
Waste dilution	5	%
Calculated pit rim COG (excluding impacts from OL and DIL)	89.4	ppm UEq
Calculated pit rim COG (including impacts from OL & DIL)	93.8	ppm UEq

Table 4: Open pit optimisation result – RF 1.00 pit shell

Optimisation scenario	Revenue Factor	Ore tonnes (Mt)	Waste tonnes (Mt)	Stripping ratio (Waste: Ore)	U_3O_8 grade (ppm)	V_2O_5 grade (ppm)
U_3O_8_LUC	1.00	32.2	52.8	1.64	386.17	285.82

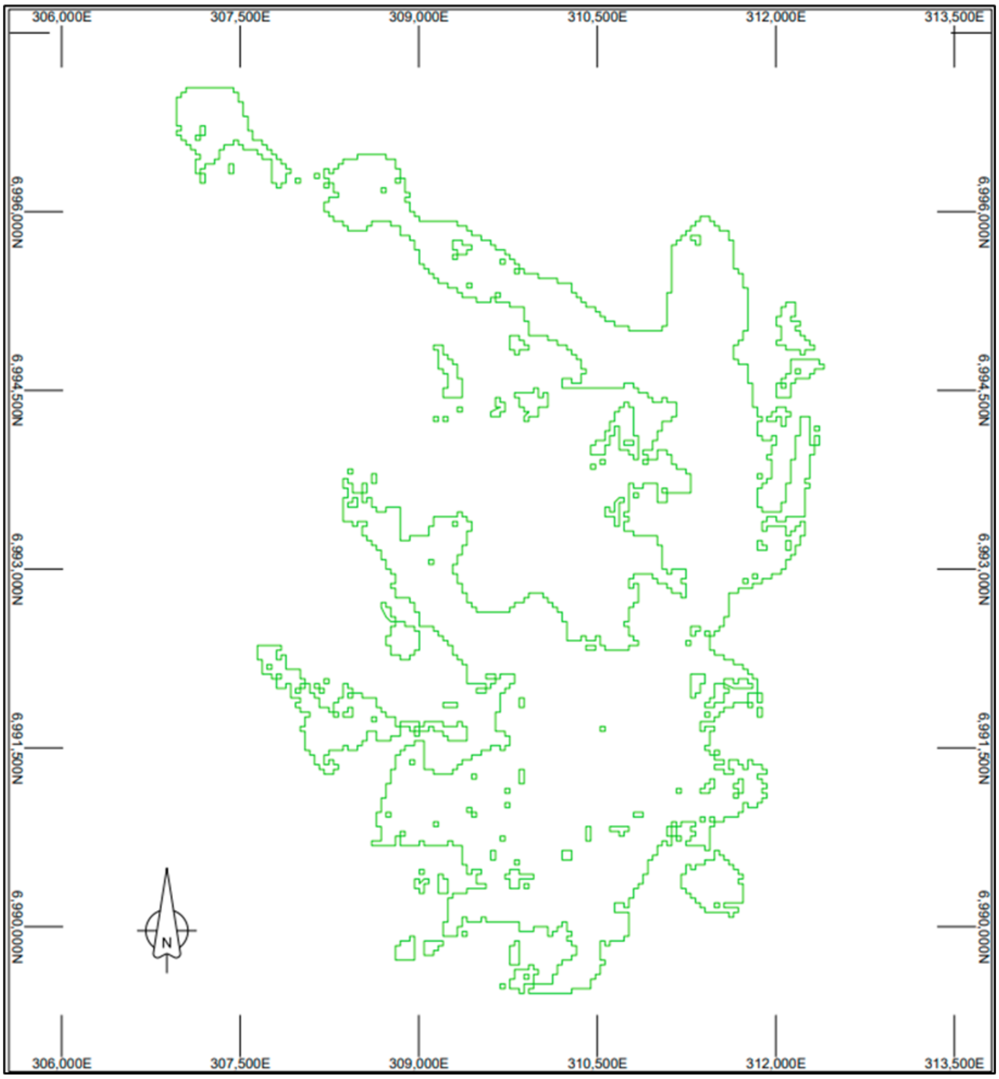

Figure 11: Open pit optimisation result – RF 1.00 pit shell

Production Schedule

An LoM production schedule has been developed following several design parameters:

- Achieve 2 Mt/a mill feed
- Elevate U_3O_8 grade profile as high as possible in early years:
  - U_3O_8Eq cut-off grades are binned as:
    - 93.8 ppm ≤ Low Grade <160 ppm
    - 160 ppm ≤ Medium Grade <360 ppm
    - 360 ppm ≤ High Grade.

- Stockpiles for each grade bin to promote blending and feeding for high-grade ore early in the mine life, with maximum capacities of 500 kt each (i.e. three 500 kt bins).

The LoM production schedule outcomes are presented in **Figure 12** and **Figure 13**. As noted in above, the U_3O_8 Mineral Resource is classified as Indicated, and the V_2O_5 Mineral Resource is classified as Inferred – both in accordance with JORC Code (2012). The metal contribution from each product is presented in **Figure 14**.

The proportion of value which U_3O_8 and V_2O_5 contribute to the project is weighted heavily towards U_3O_8 – ~95% vs 5%, respectively, in terms of gross project revenue, as outlined further below.

The LoM production schedule was used as the primary basis from which mining equipment and manning requirements were estimated for the project, and these primarily informed non-processing infrastructure (NPI) requirements. The LoM production schedule also formed the basis of the mining physicals and grades for the Lake Maitland economic evaluation.

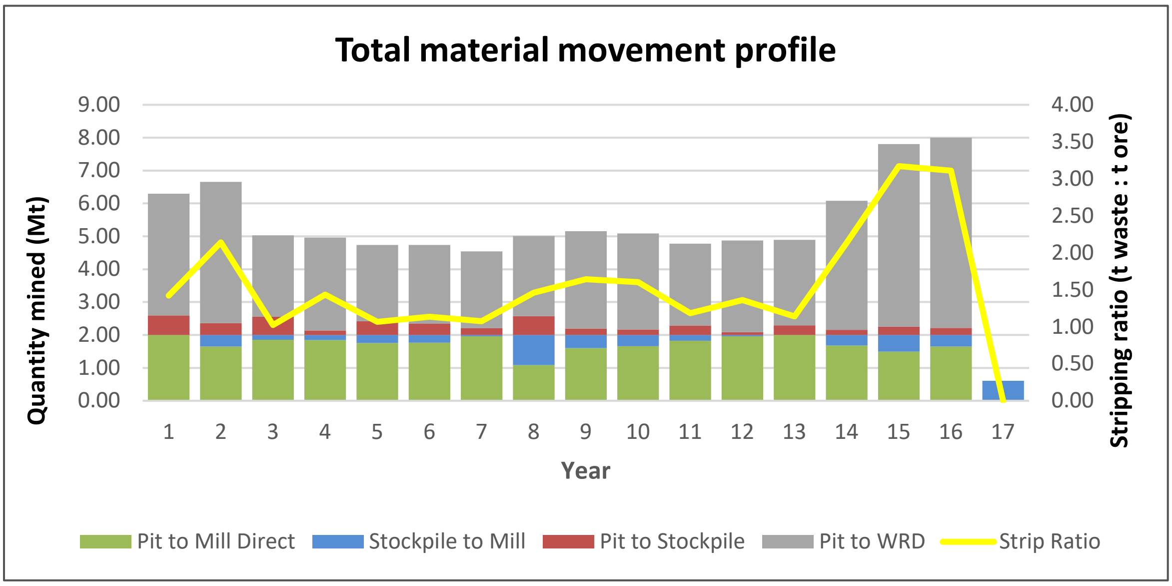

Figure 12: LoM production schedule – diluted total material movement

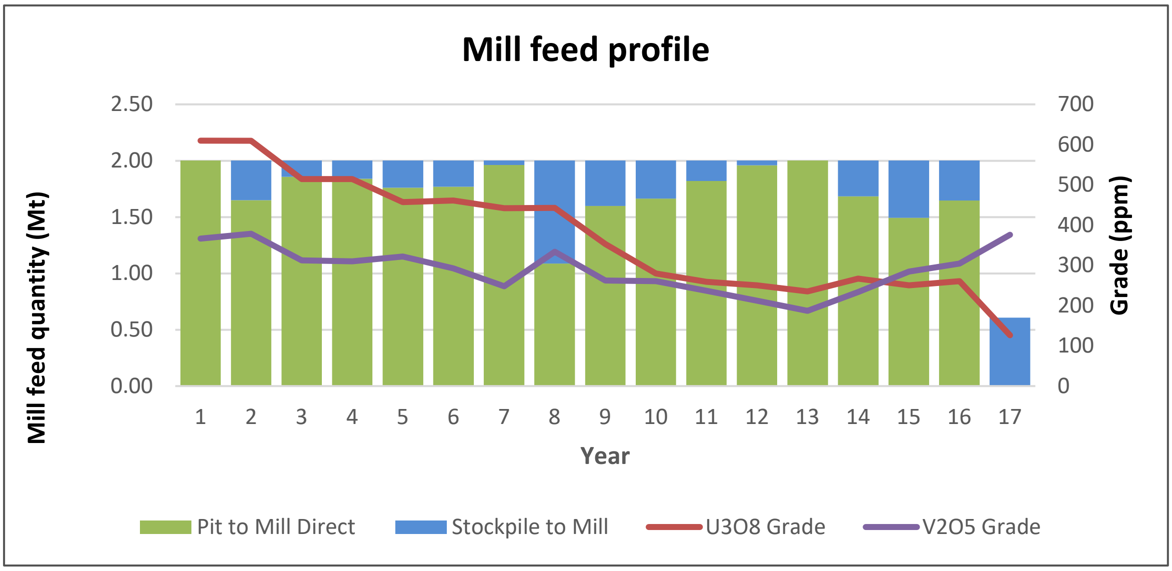

Figure 13: LoM production schedule – Mill feed

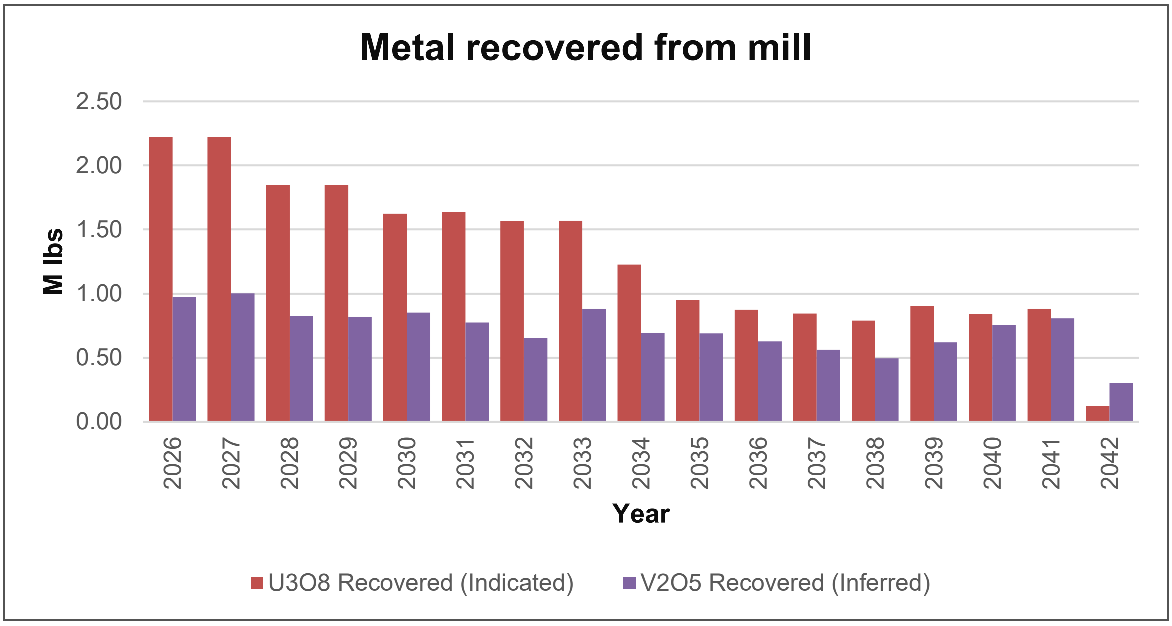

Figure 14: Metal recovered from mill

Observations noted by SRK regarding the schedule outputs are as follows:

- achieved 2 Mt/a of mill feed
- 16.3-year mine life
- delayed some of the upfront waste stripping presented by the 2022 mining schedule
- high U_3O_8 grade profile for the first 7 years of mine life
- maximises metal production in early mine life by increasing U_3O_8 grade profile to above 610 ppm, leveraging off the updated pit staging logic and grade bin stockpiling set-up
- enables flexible strategic blending due to an increased stockpile capacity
- processing capacity has been assumed to be 2 Mt/a from Year 1 – future study iterations should seek to apply a ramp-up profile for the processing plant, as guided by respective specialists
- the nominal mine production rates for both scenarios are typically between approximately 4 Mt/a and 6 Mt/a, but ramps up to ~8 Mt/a at the end of mine life – SRK notes this is the typical production rate of one to two small-sized mining dig units.

Life of Mine (LoM) pit sequencing

Figure 15 through Figure 22 depict the pit sequencing associated with the LoM production schedule.

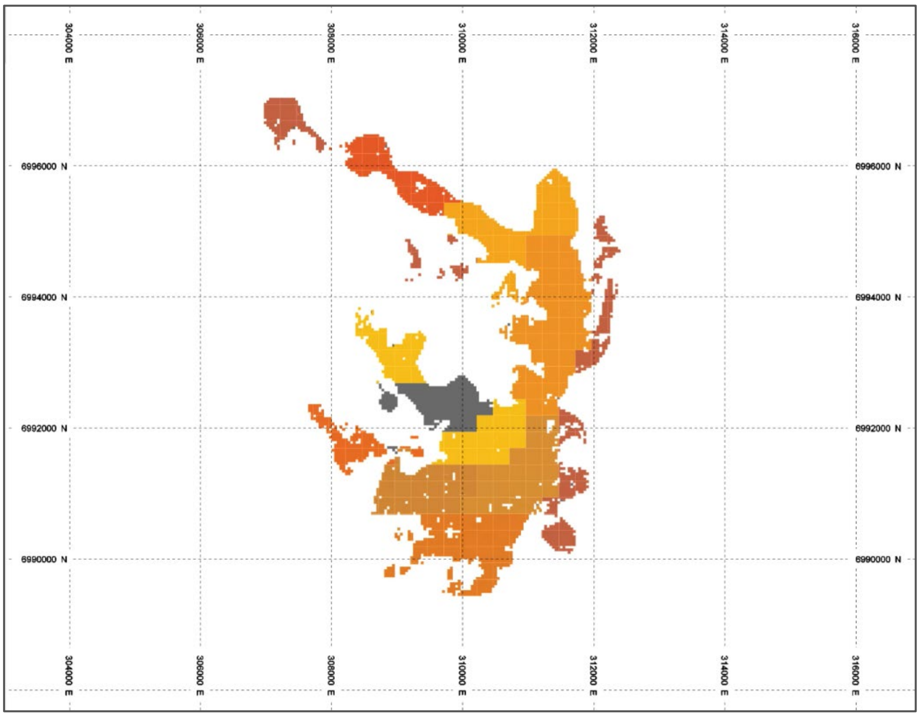

Figure 15: End of Year 1

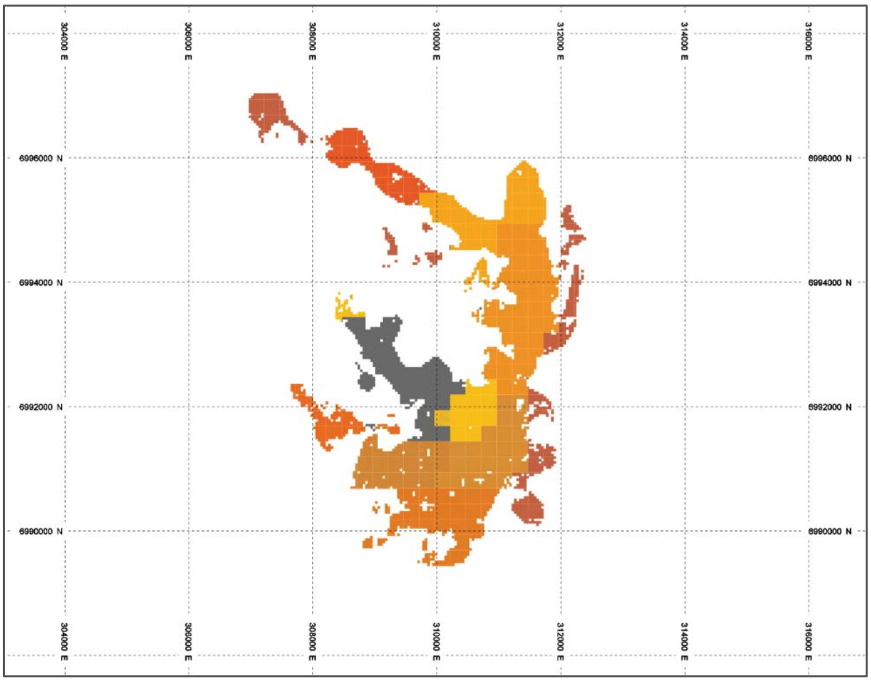

Figure 16: End of Year 2

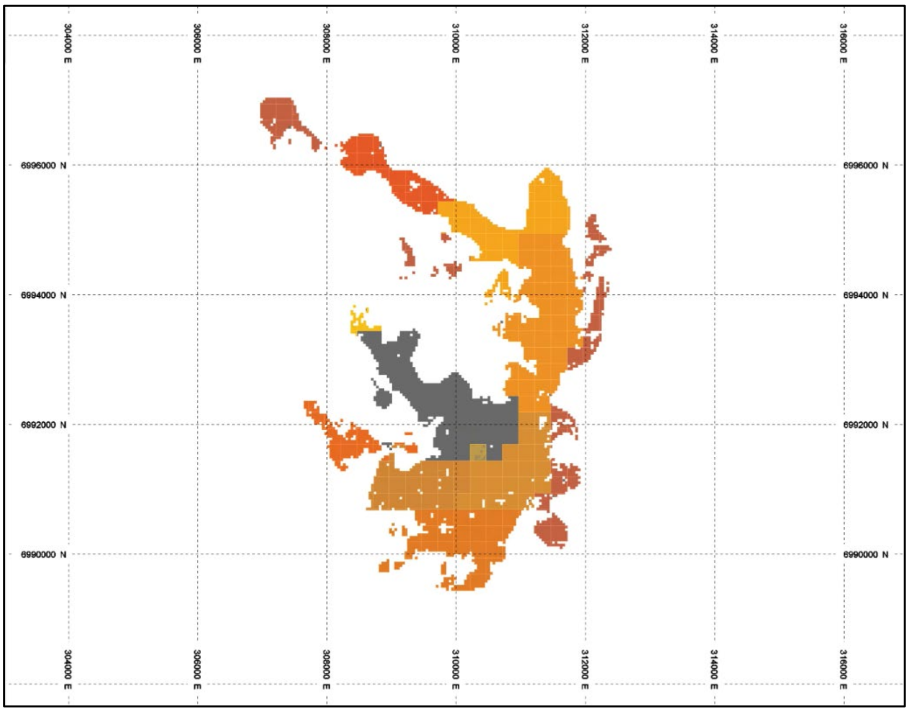

Figure 17: End of Year 3

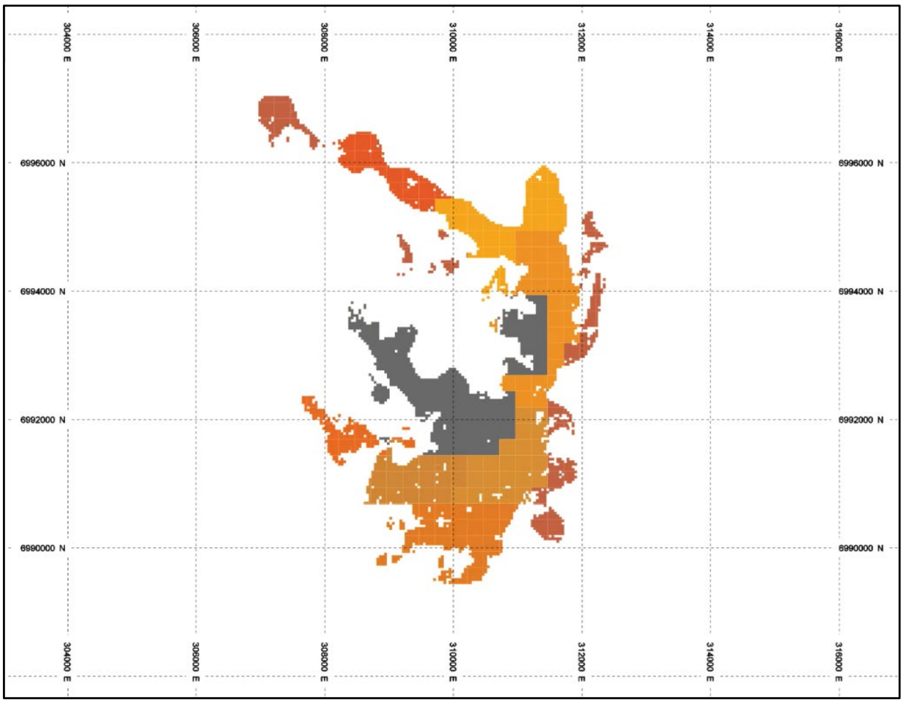

Figure 18: End of Year 4

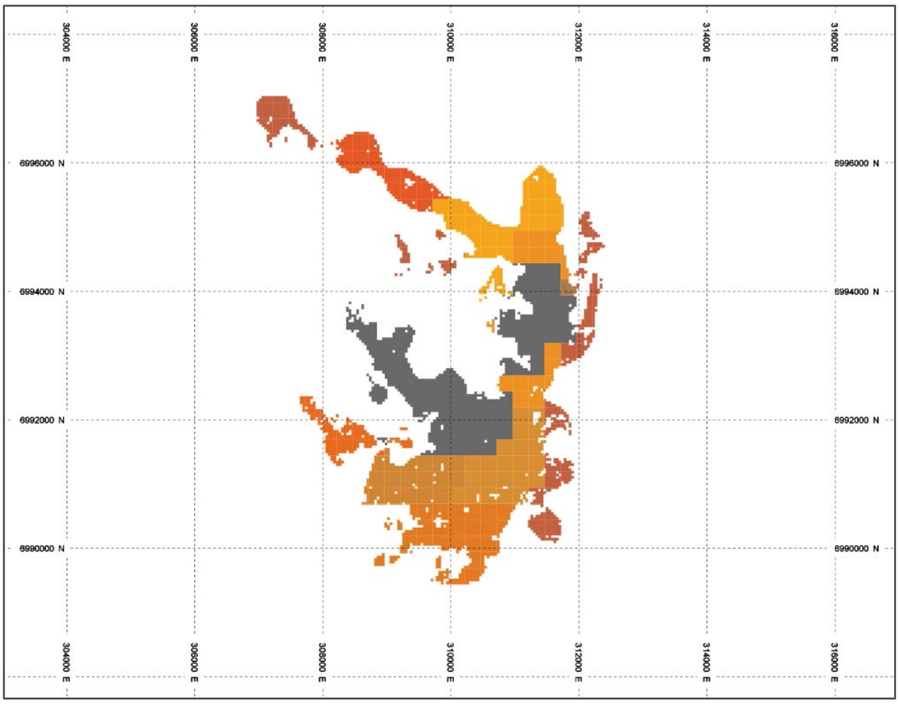

Figure 19: End of Year 5

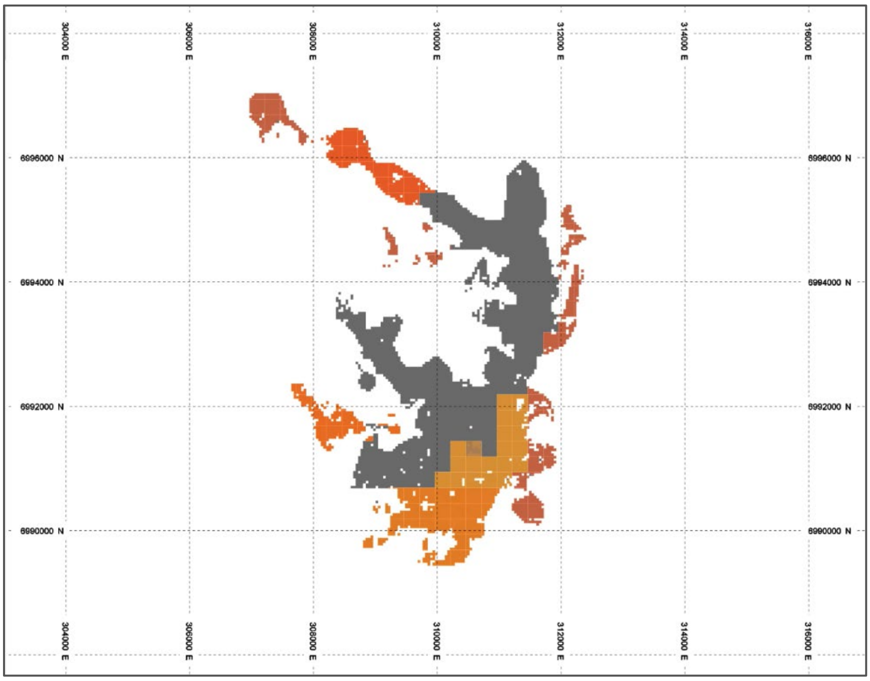

Figure 20: End of Year 10

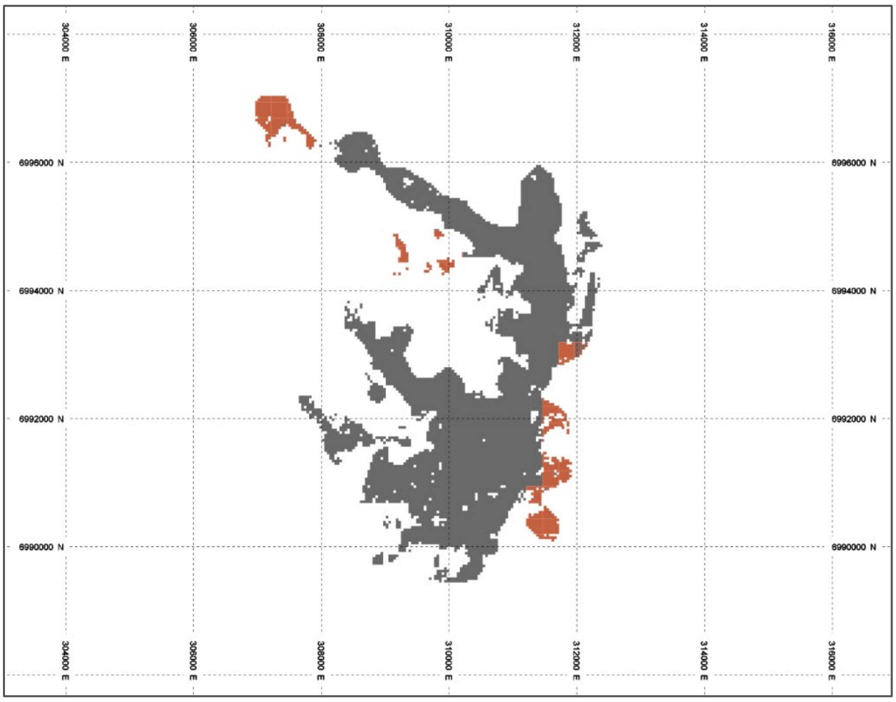

Figure 21: End of Year 15

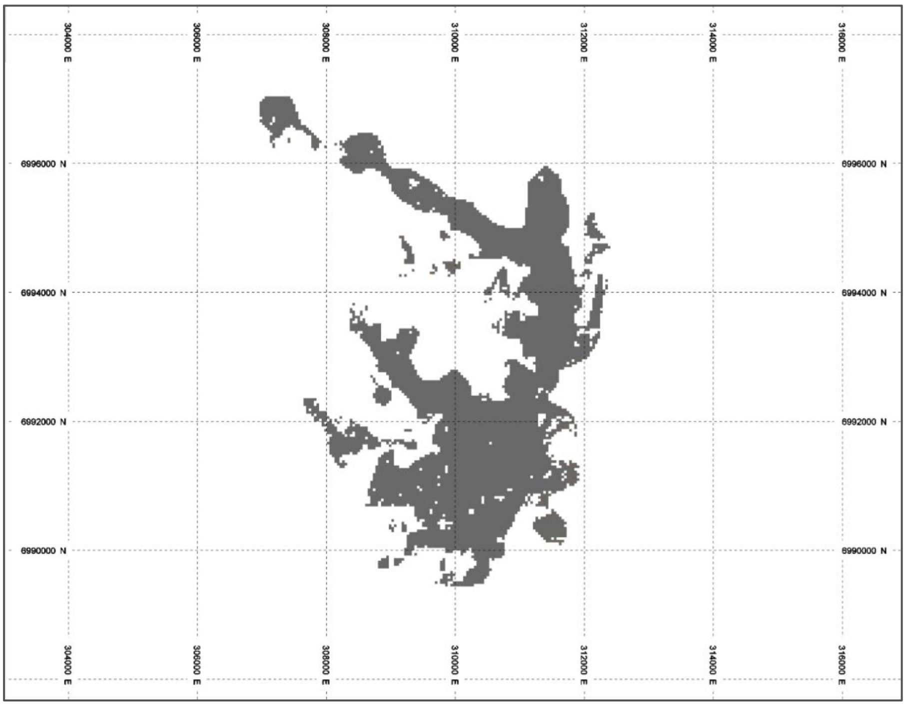

Figure 22: End of LoM

Processing

The proposed new processing circuit, inclusive of the beneficiation plant, is shown in the block flow diagram of the processing flow sheet in **Figure 23**. A description of each of the main areas of the processing circuit follows.

Beneficiation Plant

The beneficiation plant is intended to selectively recover fine carnotite in the RoM ore to a high grade, low mass concentrate stream. Coarse, barren material is separated from the RoM ore via screening with the oversize transferred to a coarse ore stockpile. The screen undersize is further beneficiated by rejection of ultra-fine, barren clays (slimes) which are discharged to a slimes waste storage facility. The remaining concentrated material represents a significantly lower portion of the feed mass at a substantially higher grade. This concentrate is filtered and washed before being transferred to the hydrometallurgical plant. In brief, the beneficiation plant will consist of the following:

- ***RoM scrubbing and screening*** - intended to break down clay agglomerates in the feed and allow for subsequent separation of low grade coarse material from the fine uranium bearing minerals. Large rocks and other coarse material in the potential ore are screened out using a vibrating grizzly above the bin and clay is washed from the surface of coarse rocks and clay agglomerates are broken down as they pass through the scrubber. Slurry discharges from the scrubber onto the primary screen whereby coarse rocks (+2mm) are separated from finer ore. Coarse rocks, mostly devoid of uranium content, are conveyed to the coarse ore stockpile and the fine material in the screen undersize is pumped to the fine classification area.
- ***Fine Classification Area*** - intended to separate the remaining low grade, coarse material in the primary screen undersize from higher grade fines prior to de-sliming. The slurried primary screen undersize is pumped through the primary cyclones to provide an initial classification, from which the underflow is then pumped to a series of secondary screens that selectively screen out material at progressively finer sizes to remove all +75µm material. All oversize material is conveyed to the coarse ore stockpile. Primary cyclone overflow is recombined with the secondary screen undersize and pumped to the secondary cyclones where the majority of the ultra-fine clay (slimes) is separated from coarser material. The slimes,

which should contain a significant portion of the uranium, are then directed to the de-sliming circuit and the coarser material will be sent directly to the leach feed thickener.

- ***De-sliming*** **-** intended to selectively separate low grade slimes from higher grade carnotite in a desliming circuit consisting of a series of two cyclone clusters. Separation is possible as a result of both the relatively high density and slightly coarser size distribution of carnotite relative to slimes. Some carnotite is expected to be lost to the slimes stream owing to both cyclone inefficiency as well as due to some carnotite being ultra-fine. Underflow from both de-sliming cyclone clusters, now mostly free of slimes, is directed to the leach feed thickener.
- ***Leach feed preparation*** **-** intended to dewater the concentrate produced in the beneficiation circuit to remove saline process water from the beneficiation concentrate via a thickener prior to a washing and filtration process. Flocculent is added to the thickener feed to assist with rapid and effective dewatering of solids as well as for improved downstream filtration characteristics. The leach feed filters are horizontal vacuum belt filtration units operated in parallel, each with two separate washing stages. The first wash of the filter cake is with clean water (produced in a reverse osmosis plant), the second is with liquor generated in the hydrometallurgical plant which contains significant concentrations of reagents (sodium carbonate and sodium bi-carbonate) that can be recycled to the leach circuit.

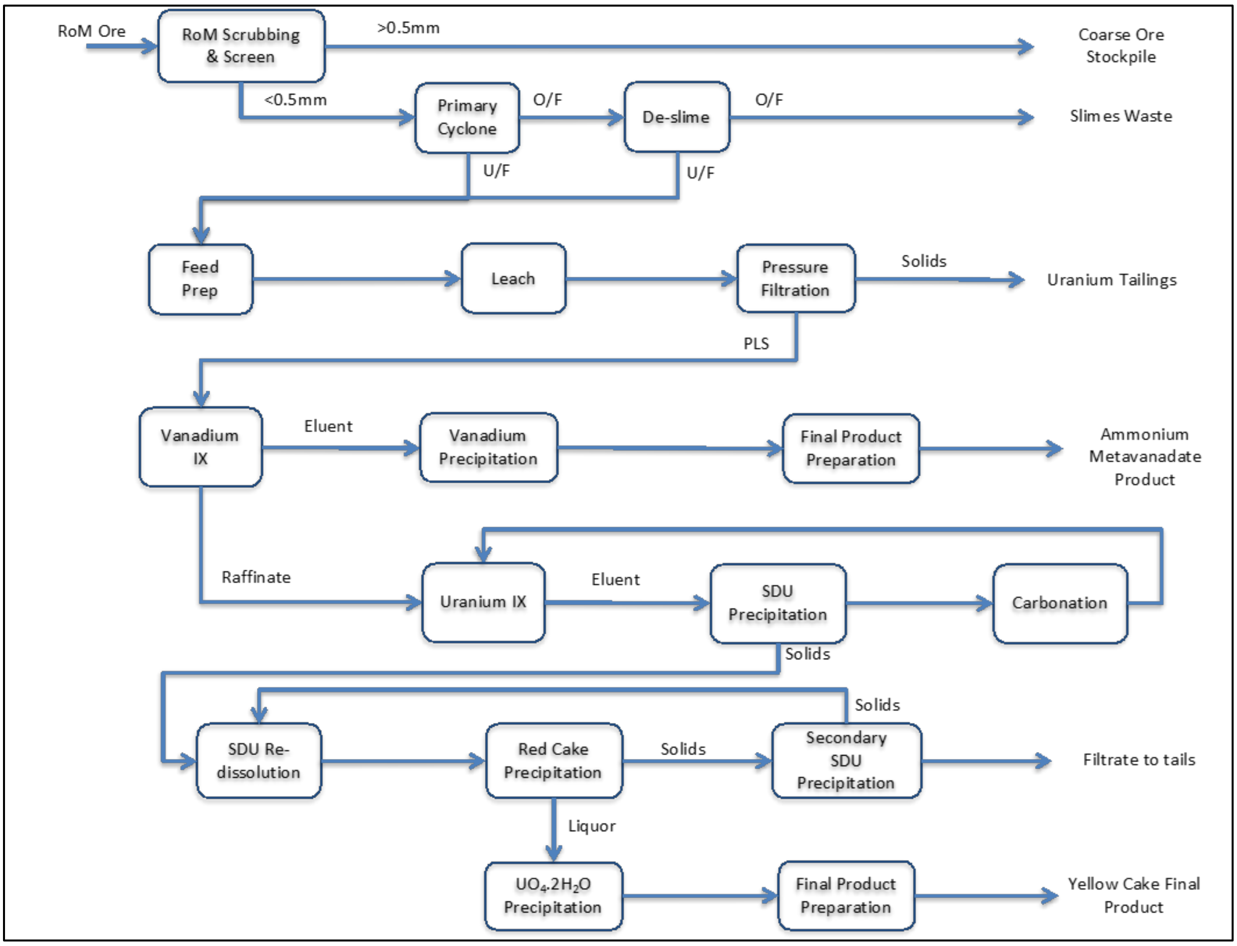

Figure 23: Block flowsheet of the scoping study process flowsheet

Hydrometallurgical plant

The hydrometallurgical plant is intended to extract uranium and produce a final saleable product from the concentrate produced in the beneficiation plant. This is achieved through a series of refining steps following a moderately high temperature, alkaline leach of the beneficiation concentrate. Consumption of reagents is kept to a minimum through regeneration and recycling of select process streams in the plant.

Further detail of each major unit operation in the hydrometallurgical plant is provided below.

- ***Leach*** – intended to provide sufficient residence time to leach uranium from carnotite in a moderately hot, alkaline environment. The required concentration of sodium carbonate and sodium bi-carbonate in the leach, as determined from testwork, is maintained through addition of fresh reagents to ensure rapid and near complete extraction of uranium from the concentrate. The remaining unreacted solids are then separated from the uranium rich pregnant leach solution (**PLS**) and washed on horizontal vacuum belt filters before being directed to the uranium tailings storage facility. The PLS and secondary filtrate from the leach discharge filter are directed to the lime precipitation and ion exchange areas respectively.

- ***Vanadium Ion Exchange (IX)*** – recovers vanadium from the leach PLS. The PLS is pumped through a polishing filter and is then pre-heated before passing through the ion exchange column. Vanadium loads onto the IX resin and the raffinate solution is pumped to the Uranium IX area. The loaded resin is then washed with water to remove any entrained raffinate solution and is then stripped with sodium carbonate solution. The IX strip solution is pumped to the vanadium precipitation area.

- ***Vanadium Precipitation*** **–** precipitates vanadium as an ammonium metavanadate solid product. The strip liquor from the vanadium ion exchange area is mixed with ammonium carbonate to precipitate the vanadium as ammonium vanadate. Sodium hydroxide is a by-product of the reaction and carbon dioxide is added to convert this to ammonium bicarbonate for eventual re-use in the vanadium IX strip cycle. Any uranium co-extracted or entrained into the vanadium IX strip liquor is not precipitated in this process. The ammonium metavanadate solid product is filtered, dried and packaged for transport. The filtrate, containing sodium bicarbonate and residual uranium is sent to the uranium IX stripping stage for use as a stripping solution.

- ***Uranium Ion Exchange (IX)*** – recovers and upgrades the uranium from the vanadium IX raffinate. The Vanadium IX raffinate is pumped through the uranium IX columns and the uranium adsorbs onto the resin. The resin is then washed and subsequently stripped with ammonium bicarbonate solution. The enriched uranium strip solution is then pumped to the lime precipitation stage. The uranium IX raffinate is pumped to the process water tank.

- ***Lime precipitation*** – intended to provide sufficient residence time for the reaction of slaked lime with sodium bi-carbonate in the PLS to produce sodium hydroxide and calcium carbonate (limestone). This reaction minimises the consumption of sodium hydroxide (NaOH) in the subsequent SDU precipitation area. Slaked lime addition is controlled to meet the stoichiometric requirements for the reaction with sodium bi-carbonate. Limestone precipitated out in this reaction is filtered out of the solution using a vacuum disk filter and recycled to the leach. Filtrate, now free of sodium bicarbonate, is pumped to the SDU precipitation area.

- ***SDU precipitation*** – intended to provide the required conditions and residence time for the precipitation of sodium diuranate (**SDU**) from the PLS. NaOH is added in excess to react with soluble uranyl carbonate salts and precipitate SDU. The SDU precipitate is initially dewatered in a high-rate thickener then a cyclone before the underflow is pumped to a horizontal vacuum belt filter where the SDU precipitate is washed and further dewatered. Thickener overflow is pumped to the carbonation circuit and the cyclone overflow is returned to the SDU precipitation feed. Underflow from the thickener can be recirculated to act as a seed for more rapid and effective precipitation of SDU. The SDU filter cake is directed to the SDU re-dissolution area for further refining. The filtrate is directed to the carbonation column.

- ***Carbonation*** – intended to react carbon dioxide gas, a by-product from the power plant, with sodium hydroxide in the SDU filtrate, to form sodium carbonate. To a lesser extent, sodium carbonate in the SDU filtrate also reacts with carbon dioxide to produce sodium bi-carbonate. In this way sodium carbonate and sodium bi-carbonate is "re-generated" and overall reagent utilisation in the process is improved. The carbonated liquor discharged from the carbonation area is recycled back to the leach area where the re-generated reagents are utilised.

- ***SDU re-dissolution*** – intended to selectively re-dissolve SDU, leaving an unreacted insoluble gangue residue. In this way gangue can be removed from the SDU precipitation filter cake and a more pure uranium solution can be subjected to further downstream refining. The SDU precipitation filter cake is re-slurried with a dilute sulfuric acid to dissolve SDU precipitate. Any unreacted solids are filtered out using a vacuum disk filter and transferred back to the leach. The filtrate, now largely free of all impurities except vanadium, is directed to the red cake precipitation area.

- ***Red cake precipitation*** **–** selectively precipitates vanadium from the SDU re-dissolution filtrate. In this way a more pure uranium liquor is produced for downstream precipitation. Similarly, the vanadium precipitate represents a concentrated vanadium stream that could in future be further processed to produce a vanadium product. NaOH is added to raise the pH of the SDU re-dissolution filtrate and precipitate vanadium as red cake. Some uranium also precipitates, although the majority of the uranium remains in solution. The red cake is filtered using a vacuum disk filter and is transferred to the secondary SDU precipitation area. The filtrate, now free of vanadium, is directed to the $UO_4.2H_2O$ precipitation area.

- ***Secondary SDU precipitation*** **–** intended to recover any uranium inadvertently precipitated along with red cake produced in the red cake precipitation area as well as residual uranium in the filtrate produced in the $UO_4.2H_2O$ precipitation area. NaOH is added in excess to react with uranium salts in solution and precipitate SDU. Vanadium largely does not precipitate and remains in solution. The SDU precipitate is filtered out using a vacuum disk filter and is recycled back to the SDU re-dissolution area. Filtrate from the secondary SDU precipitation filter has an appreciable concentration of vanadium and is pumped to the uranium tailings storage facility, but in future may be redirected to a dedicated vanadium refining circuit.

- ***$UO_4.2H_2O$ precipitation*** – intended to produce a high purity uranyl peroxide precipitate from the red cake precipitation filtrate. The precipitate is transferred to the final product area for drying and conversion to a final product. Hydrogen peroxide is added in excess to react with uranium in solution and produce a pure uranyl peroxide ($UO_4.2H_2O$) precipitate. NaOH is added to raise and control pH in the reaction. The precipitate is dewatered in a thickener ahead of the final product preparation area.

- ***Final product preparation*** – The final product preparation area is a vendor supplied turn-key package that is made up of dewatering, calcining and final product packaging operations. The intent of the final product preparation area is to remove all moisture from the uranyl peroxide precipitate, upgrade the product to a marketable state (via calcination) and finally package the product safely in drums for transport. All necessary ancillary services (ventilation, gas scrubbing etc) are catered for in the final product preparation area.

Processing Design Criteria

The key design criteria and production data for the processing plant is given in **Table 5**.

Table 5: Production data

Parameter	Unit	Value
Annual throughput	M dt/a	2.0
Feed rate	dt/h	250
Head grade	ppm U_3O_8	543
	ppm V_2O_5	298
Beneficiation concentrate	M dt/a	1.2
Uranium distribution	% U	85.6
Hydrometallurgical plant feed	dt/h	147
Uranium grade	ppm U_3O_8	788
Hydrometallurgical plant recovery	% U	94.9
Overall recovery	% U	81.3
	% V	58.2
Annual production	Mlb/a U_3O_8	1.944
	t/a NH_4VO_3	445.9
Feed rate	dt/h	545

Processing Operating Costs

The key operating costs for the processing plant are provided in **Table 6**. The total processing plant operating costs are A$34.82 M per annum, where power generation and General & Administration costs are anticipated to cover the entire project. Labour is the largest contributor to costs – at 33% of the total operating costs.

Table 6: Operating cost estimates

Description of controlled variable	A$ M per annum	A$/lb U_3O_8*
Reagents	7.33	3.77
Electrical power	2.92	1.50
Steam	4.43	2.28
Processing plant labour	11.40	5.86
Maintenance and consumables	2.06	1.06
G&A	6.70	3.44
Total	**34.82**	**17.91**

Note: *assuming nominal U_3O_8 production.

Processing Capital Costs

The capital costs for the processing plant are provided in **Table 7**. The total processing plant capital cost (including power generation) is A$132.0 M (real), which includes a 20% contingency. A factor of 15% (of equipment cost) has been applied for estimating the EPCM (engineering, procurement and construction management) cost. This factor was derived from data available from past projects.

Table 7: Processing capital cost estimates

Processing plant item	Value (A$ M)
Beneficiation	
Leach	39.9
Lime precipitation	13.8
SDU precipitation	2.4
Carbonation	3.4
IX	0.4
SDU re-dissolution	4.0
Red cake precipitation	1.3
Secondary SDU	1.4
Uranyl peroxide precipitation	1.3
Final product preparation	1.9
Vanadium precipitation	22.4
Reagents preparation	4.2
Lime slaking	2.1
Clean raw water	6.2
Saline raw water	3.3
Steam/cooling water	0.1
Air	3.4
Power generation	0.2

Processing plant item	Value (A$ M)
Subtotal	**132.0**
EPCM (15% of equipment cost assumed)	19.8
Total	**151.8**

Tailings Storage Facility

It is intended that tailings produced from processing of ore would be stored in the voids created from the mining of overburden, waste and ore. To achieve tailings management objectives, the following approach to tailings management would be adopted:

- The overall area of disturbed footprint arising from mining activities and associated tailings storage is to be minimised.
- A practical operating strategy would be implemented that takes cognisance of the mining schedule and the concomitant need for, and effects of, pit dewatering.
- The TSF would be developed in such a way that it maintains its integrity during operations and after mine closure, taking potential natural processes such as flood events into account.
- The TSF would be developed to produce an acceptable final landform and post-closure land use.
- As much supernatant water as practicable would be recycled to the processing plant to minimise water usage and the area required for evaporation facilities.

The approach for tailings deposition is defined at a conceptual level and apart from an ex-pit starting TSF to facilitate the initial phase of the project, has not been specifically costed for the scoping-level project evaluation.

As noted in Section 5, the TSF at closure and in the post-closure period will include water barriers around the sides of the TSF and a multi-layered cover. The TSF would also include a low-permeability liner in the base. As the TSF would be partly below the water table, its base and perimeters would be established using low-permeability clay liners to prevent groundwater flow into and out of the area in which the tailings is confined. The tailings has a very low permeability and seepage would therefore be released very slowly (if at all).

Figure 24 is a schematic representation of the TSF at closure and post-closure.

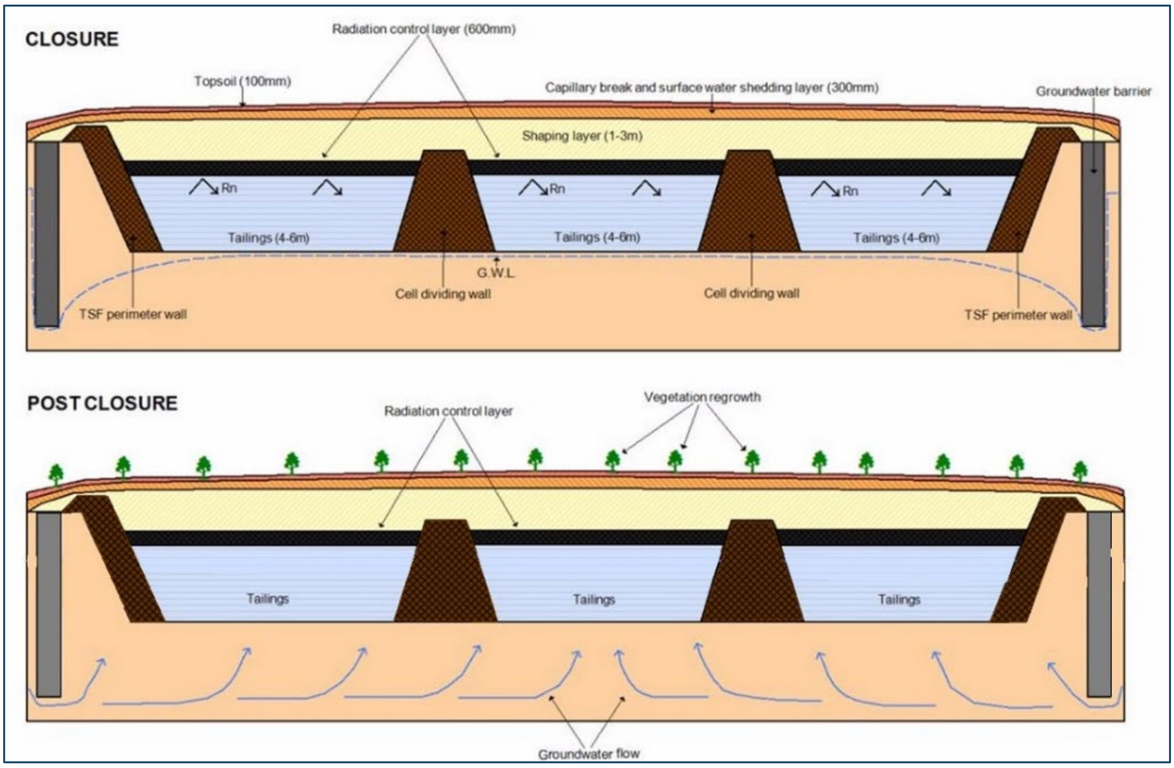

Figure 24: Schematic of the TSF at closure (top) and post-closure (bottom).

Non-processing Infrastructure (NPI)

Basis of Estimate

The NPI is required to support operations at the Lake Maitland site. The primary purpose of the NPI is to provide refuelling and maintenance capacity for heavy and light vehicles used at the Lake Maitland site and amenities for site personnel (office space, crib rooms, ablutions, access roads, etc.).

The LoM production schedule developed by SRK (as outlined above) formed the basis for identifying the required NPI and construction facilities to support the operation with an average capacity of 2 Mt/a RoM ore feed and 5.5 Mt/a of waste movement.

The NPI capital costs were derived from a combination of recent and prior budget quotations from vendors, and where applicable, database cost information from past projects that has been escalated to the estimate base date.

To reduce the installation requirements and simplify the scalability of the NPI facilities, all NPI options have been developed, where possible, on the principle of modular construction. An example is wastewater treatment facilities that can be supplied as container-sized modules.

The NPI facilities scoped and costed are outlined in the following sections.

- ***Mine service facilities –*** Costs for the mine fleet maintenance, workshops, and stores have been based on dome shelters. These buildings are commonplace throughout the mining industry and are a low-capital cost option for the maintenance and workshop units. A typical layout of these types of facilities (Haulpak) is shown in **Figure 25**. In all cases, full concrete hardstands have been allowed – these are designed to meet the weight loading of the facility and its equipment installation. An allowance has been detailed to fully fit out each facility with all operational fixed and hand tools required to service and operate the maintenance facilities. These include light cranes, vehicle hoists, lube systems, safety equipment and small tools.

Figure 25: Example of Double-container height Haulpak workshop.

- ***Potable water treatment –*** To meet the accommodation village's daily water demand, a water treatment facility is required. Water is to be drawn from a bore located near the accommodation village. A delivery pump would deliver bore water to the installed raw water tank. The raw water tank would have level controls using float levels to allow control of the inlet and discharge pumps. From this tank, raw water would be supplied to the water treatment plant, which includes ultrafiltration membranes (as pre-filtration) and reverse osmosis membranes for final water treatment. Permeate (treated water) from the reverse osmosis unit would be connected to a potable water storage tank (supplied by others). This storage tank allows for connection of the provided reticulation pump set, which will feed the accommodation village. A typical arrangement of a potable water treatment plant is shown in **Figure 26**.

- ***Wastewater treatment –*** The plant site and accommodation village wastewater treatment facility allows for the biological pre-treatment and evaporation of wastewater from the accommodation village. The accommodation village and amenities buildings costs for the 200-plus person camp allow for a domestic sewage stream to gravity-feed a suitably sized pump well and wastewater treatment facility. An installed wastewater treatment plant is shown in **Figure 26**.

Figure 26: Example of a modular water treatment facility proposed for the Project.

- ***Truck and vehicle washdown facilities*** -– Two washdown facilities have been allowed: a light vehicle washdown using an automated light vehicle wash unit and a water cannon system with a structural operator platform for heavy vehicles. While the locations are separated from each other to avoid interaction with the mine fleet, both facilities are located near the water treatment dams and oily water separators. The washdown facilities are on concrete hardstands, with runoff to be diverted to drive-in sumps and flow through to the water settlement ponds and oily water separation systems.

- ***Lubricants and waste oil management*** **–** The capital costs for storage facilities for transmission fluids, oils and lubricants allow for concrete bunded areas with fluid storage tanks for all new fluids, including piping systems, close to the workshops, and plumbed pipework into the facilities. Waste fluid storage tanks have been included in separate concrete bunds to allow for decanting into transport modules for removal from the site, and recycling.

- ***Waste oily water treatment*** – The oily water treatment facilities include an oily water separator at the heavy vehicle and light vehicle workshops, with underground drainage to the settlement ponds. The waste treatment area consists of a sized oily water separator for the vehicle washdown and drainage pipework from the diesel fuel facility, wash water drains from the hardstand to a drive-in sump allowing for solid waste settlement, and a series of settlement and evaporation ponds to complete the water treatment process.

- ***Emergency services facility*** – The construction of the emergency services facility allows for a steel-clad undercover structure for parking of the emergency response vehicles, allowing unhindered access to the medical treatment room. The building consists of a 15-m long transportable building segregated into a treatment room, office, emergency response office, and wet facilities.

- ***NPI-specific vehicles*** – NPI-specific vehicles are associated with the operational requirements outside the processing plant and mining fleet and include light vehicles (4-wheel drive) for management, supervision, fleet maintenance, emergency services, geology, testwork, and general maintenance. An allowance for one service truck, two light-duty cranes for yard work, heavy lifts in the maintenance area, and unloading vehicles is included. A forklift has been included for the warehouse, pallet unloading, and light yard works. Two large buses and two 10-seat buses have been allocated to site logistics and transfer of fly-in fly-out personnel. A single bobcat has been included for sump cleanouts and general light yard works.

- ***Mobile firefighting equipment*** – It is common practice for mine sites to have a fire tender and mobile firefighting equipment in case of site emergencies and bush fires to both protect the facility and to assist the country fire services in case of emergency. A fire tender (truck) has been allowed, supported by a 4-wheel drive Landcruiser (or similar) tray-back support vehicle. Tenders are available second-hand in the Australian market.

- ***Medical and rescue vehicles*** – The allowance for site medical and rescue vehicles includes a dedicated ambulance and a 4-wheel drive emergency rescue vehicle.

- ***Laboratory*** — An on-site laboratory has been costed, based on a requirement for a 14 m × 15 m building and undercover shelter area for sample and material storage and handling.

- ***Explosives magazine*** **–** The costs include allowance for a steel-clad building on a hardstand for an explosives magazine typical of an open cut mining operation of this size. The area includes a fenced-off yard space for loading and unloading of materials, security gates, a site office (transportable type) with pump-out ablutions, a site generator, site lighting, and fire systems.

- ***Gatehouse*** – The gatehouse includes a site office (transportable type) on a concrete hardstand, a boom gate, communications, power hook-up, communications, fixed double hard gates, and external lighting. The closed-circuit television is included in the overall systems site installation.

- ***Induction and training facilities*** – The induction and training building has been included in the accommodation village. The segregation between the operating facilities and the arrivals point for new personnel and new starters is intentional.

- ***Accommodation allowance*** – Indicative personnel levels have been assumed based on benchmarking from similar projects. The accommodation allowance covers the nominated staffing numbers, an allowance for camp operations, and several rooms for contractor personnel or visitors. The allowance is intended to provide a guide for the personnel levels associated with running the project – from the mine fleet through processing, maintenance shutdowns and administration. Rosters and personnel numbers have been estimated allowing the development of indicative accommodation levels at the site, and an allowance for scheduled maintenance shutdown crews has been included in the final accommodation village numbers.

- ***Main access road*** – A new standalone main access road (unsealed) into the Lake Maitland project from the Goldfields Highway has been costed, based on a required road length of 66 km.

- ***Wet tailings facility*** – Allowance for an on-site wet tailings facility to service the project until mining creates sufficient area within the open pit to allow for in-pit tailings deposition has been included. As noted in Section 8, apart from the ex-pit starting TSF to facilitate the initial phase of the project, no upfront or ongoing cost allowances have specifically been made for the in-pit tailings deposition approach, due to the TSF currently being defined at a conceptual level.

Non-processing (NPI) Capital Costs

The NPI capital costs are provided in **Table 8**. The total non-processing plant capital cost is A$127.5 M (real), which includes direct and indirect costs, and the application of 20% contingency. A factor of 15% (of equipment cost) has been applied for estimating the EPCM cost. This factor has been derived from data available from past projects.

Table 8: NPI capital cost estimates

Processing plant item	Value (A$ M)
Mining support fleet	4.3
Offices/administration	1.1
Ambulance/medical rescue	1.6
Ablutions	0.4
Light vehicle workshop	1.2
Heavy vehicle workshop	4.5
Boilermaker's workshop	0.5
Explosives storage	1.3
Laboratory	1.9
Fuel farm vehicle refuelling	6.9
Fire water	1.3
Truck wash facility	1.8
Light vehicles administration	4.3
Stores building	0.1
Hydrocarbon/battery storage	3.5
Waste collection/storage	0.3
Tyre change facility	1.7
Power and lighting	3.9

Processing plant item	Value (A$ M)
Water	1.5
Borefield	6.1
Sewerage	1.2
Communications	0.3
Oily water	2.0
Earthworks, roads, parking, drainage	4.1
Security	1.1
Wet tailings facility (Section 9.2.17)	7.9
Main access road (unsealed)	13.4
Accommodation village	49.4
Subtotal	**127.5**
EPCM (15% of equipment cost assumed)	19.1
Total	**146.6**

NPI Capital Cost Exclusions

The following items are not included in the NPI capital cost estimate:

- corporate data systems and office IT equipment
- any off-site works at remote operations centre or other localities that may be required to integrate the new facility into the process control and business management systems
- owner's team costs for project delivery and operations readiness
- costs for the in-pit tailings deposition (apart from the ex-pit starting TSF to facilitate the initial phase of the project)
- future foreign exchange fluctuations
- operating costs
- working capital
- operating spares
- project financing costs
- permit costs
- all sunk costs
- environmental approvals cost
- statutory costs
- land costs
- GST.

Power Supply

Power will be supplied by a sized-to-requirements gas fired power station with the gas supply coming from a connection to the near-bye gas pipeline running through the goldfields. Steam will be produced by a natural gas fired boiler as per the requirements determined by process modelling.

Energy costs are derived from a wholesale supply gas price of AU $14.3/GJ. An energy conversion efficiency factor for gas to electrical power of 34.86% has been used to calculate the cost per kWh.

Logistics

Product Packaging and Transport

Finished uranium product would be packaged at the processing plant in 205 L drums, which would be weighed, labelled with an identification number, then sealed, stacked and braced in sea containers.

Product Transport Routes

Up to eight containers per month would be transported by road on the Goldfields Highway to Kalgoorlie and the Eyre Highway to South Australia for shipment from Port Adelaide or railed from there to Darwin Port for shipment (see **Figure 27**).

Product transport would be undertaken in accordance with the *Code of Practice for the Safe Transport of Radioactive Material* (ARPANSA, 2008) and applicable legislation.

The final vanadium product would be transported in a similar fashion to uranium, although it is anticipated that the concentrate will be transported by truck a distance of 717 km to Geraldton Port for shipment.

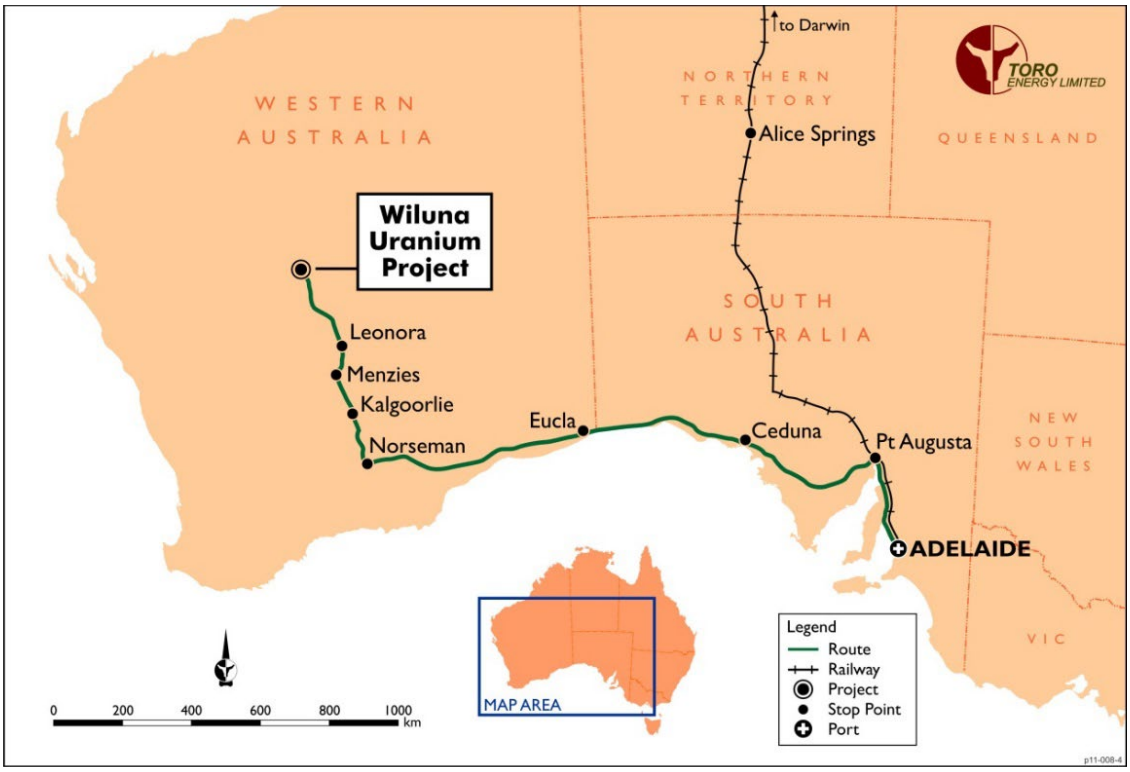

Figure 27: Proposed transport route for uranium product to Darwin via Adelaide.

General Regional Access

Access to the Wiluna Uranium Project is from the two-lane sealed Goldfields Highway that runs from Kalgoorlie to the town of Wiluna. The town of Wiluna is serviced by a commercial airport located 120 km northwest of the project. A regular commercial service operates from Perth. Other airstrip options also available at Leinster and BHP's Mount Keith nickel mining operation.

Personnel Requirements

The primary workforce is envisaged to be employed on a fly-in fly-out basis. For its duration, the project will directly employ approximately 200 personnel at full production capacity and requires a workforce of approximately 350 during the construction period.

Uranium Market and U_3O_8 Pricing Assumption

The updated Scoping Study is based on a Company assumption for the uranium price of US$85/lb U_3O_8. The key driver of the uranium industry is the demand from nuclear energy utilities. This is affected by demand for, and the share of, electricity generated by nuclear means. The vast majority of uranium is sold under private contracts between producers and utilities on a long term supply basis (3 to 15 years), and priced at a premium to spot pricing at the time of delivery. This premium has varied over time. Based on previous spot price and contract price comparisons, the average premium is 29% over the last 10 years (Cameco, Uranium Price, 2022).

According to the Australian Government's Office of Chief Economist Resources and Energy Quarterly (March 2024 Edition) a long period of low prices has resulted in many uranium projects being deferred or cancelled, leading to expected uranium shortfalls in the near to medium term. Prices have been buoyed as a result of-mine production cuts from excess supply and depressed demand, including further production cuts due to COVID-19 related issues. Large uranium producers showing supply-side discipline in recent years include Cameco's shut down of Rabbit Lake and suspension of McArthur River, as well as Kazatomprom announcing production cuts. Uranium mines typically require an extensive approvals process, which has the potential to exacerbate supply shortages over the longer term and create a baseline for structurally higher prices.

Nuclear energy is increasingly important to the global clean energy mix, especially for countries that plan to reach the goal of limiting global warming to +1.5°C by 2050 in accordance with the Paris Agreement on climate change. The uranium market is forecast to be driven therefore by increases in demand for cleaner base load electricity production. As concerns about greenhouse gas emissions from fossil fuels continue rising, uranium is seen as an attractive alternative for reliable base load power supply as it produces no greenhouse gas emissions and consumes relatively little fuel in comparison to fossil fuel plants. The increasing but intermittent renewable energy supply elevates the need for reliable back-up power generation. As available grid storage options are currently limited by costs and other factors, natural gas generators remain the key back-up power source. Recent supply-chain and geopolitical events affecting fossil fuel markets has resulted in record high natural gas prices making nuclear power a relatively cost effective option. Construction of Small Modular Nuclear Reactors to complement carbon free renewable energy is also forecasted to be an increasing source of uranium demand. The reliability and predictability of nuclear power make it a viable complement for renewable sources of energy that supports grid stability, reliability and predictability.

Energy diversification and energy security are critical global issues. The Russia-Ukraine conflict has affected the uranium market and saw a circa 20% jump in uranium spot prices within one month of the war breaking out (Cameco, Uranium Price, 2022). This could lead to a fragmented market where CIS-aligned countries are restricted from trading with western-aligned countries.

As nuclear energy is poised to increase in the future, the demand for uranium is expected to increase in the coming years. Global energy consumption was forecast to rise nearly 50% from 2018 to 2050 (US Energy Information Administration (EIA) International Energy Outlook (IEO) 2019). France and the United Kingdom have all announced plans to build and commission reactors close to the year 2030 (World Nuclear Association, Nuclear Power in the United Kingdom, July 2022, World Nuclear Association, Nuclear Power in France, March 2022 and World Nuclear Association, US Nuclear power policy, August 2022). Furthermore, multiple nuclear reactor re-starts in Japan were announced by its Prime Minister in August 2022 in addition to a desire to build next generation reactors as alternative solutions for Japan's energy security (Foreign Policy, Japan's Nuclear About-Face, August 2022). Germany plans to postpone the closure of the country's last three nuclear plants as a result of energy shortages arising from Russia decreasing gas supply to the country. Supply shortages are expected to occur this decade putting upward pressure on spot prices.

Between September 2021 and October 2021, the uranium spot price increased sharply driven by the investment management fund Sprott Physical Uranium Trust (**SPUT**) escalating its physical uranium purchase. It purchased 41.3Mlbs U_3O_8 over 2021 and 17.2Mlbs U_3O_8 in 2022 to date. SPUT intends to hold its inventory indefinitely and considers the shift towards green energy will accelerate uranium demand, especially given the recent rise in natural gas and coal prices. Other funds such as UK-based Yellow Cake Plc and the Kazakhstan-based ANU Energy OEIC Limited have also been buying physical uranium from industry participants.

According to the World Nuclear Association's (**WNA**) Nuclear Fuel Report (2019), the gap between forward demand in 2023 is currently 40Mlbs U_3O_8 and while this gap should narrow with mine restarts/expansions and new mines, the supply-demand imbalance with be prolonged (see **Figure 28**).

The WNA reference case forecasts growth of 55% in nuclear power to 2040 (World Nuclear Association: The Nuclear Fuel Report, Global Scenarios for Demand and Supply Availability 2019-2040). The OECD and the International Atomic Energy Agency jointly forecast a 58% rise in installed nuclear generating capacity to 2040 in the high case and a decline of 11% in the low case (OECD Nuclear Energy Agency and International Atomic Energy Agency: Uranium 2020 Resources, Production and Demand). There are currently 436 reactors operable worldwide with an additional 156 reactors currently under construction or planned (World Nuclear Association, World Nuclear Power Reactors and Uranium Requirements (September 2022)).

Without a material and sustained increase in the long-term uranium price, supply deficits are projected to continue and the continued ability for secondary supplies to cover the shortfall remains uncertain. Secondary supply sources include material from commercial and government inventories, enricher underfeeding, and depleted uranium tails recovery (WNA Association, Supply of Uranium (August 2019)). The supply gap is currently being covered mainly by underfeeding at enrichment facilities and utility/producer inventory draw-down, but secondary supplies are declining and may not be sufficient to fill the supply deficit.

Low uranium prices have curtailed supply. Contract prices must rise to incentivise re-start production to meet known demand and this price needs to take into account the steep cost inflation prevailing in economies worldwide. The industry recognised incentive price is in the range of $60-80/lb (Boss Energy Ltd Diggers and Dealers Presentation, 3 August 2022). The long term uranium price at 30 April 2025 was US$80/lb and the spot price was US$67.73/lb U_3O_8 (Cameco, Uranium Price, 2022).

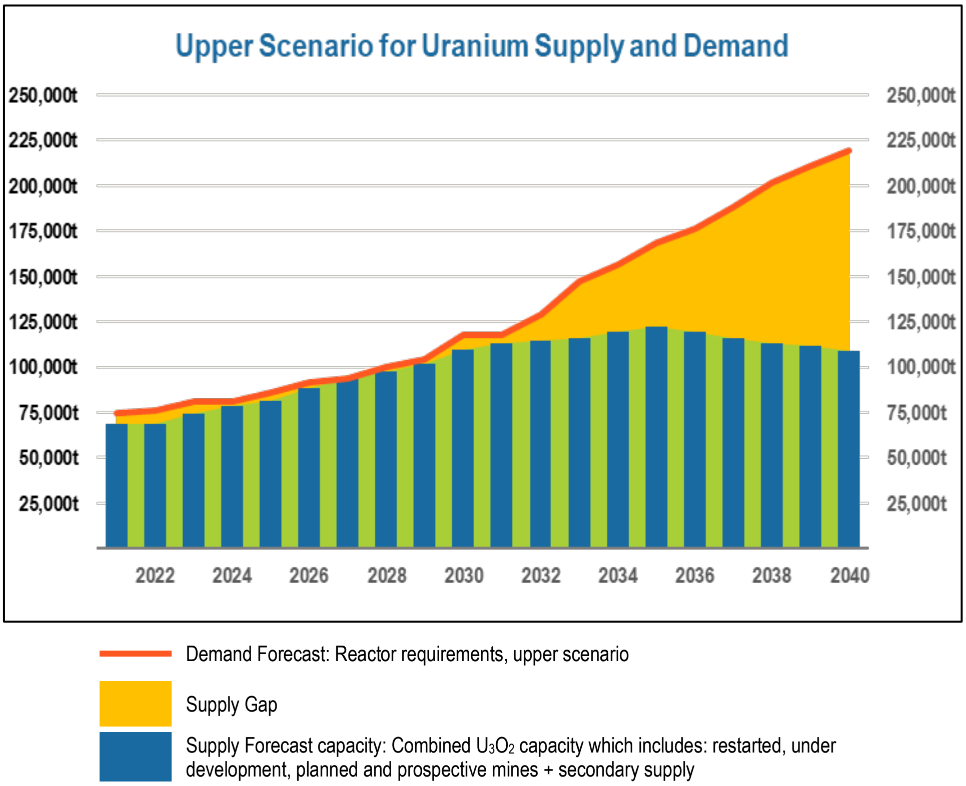

Figure 28: World Nuclear Association, Nuclear Fuel Report 2023 - 2040

Vanadium Market and V_2O_5 Pricing Assumption

The Scoping Study is based on a Company assumption for the vanadium price of $5.67/lb V_2O_5 and this assumption has not changed in the updated model. The NPV of Lake Maitland is not sensitive to the V_2O_5 price and Toro has used an average price of US$5.67/lb. The price is not a consideration for assessing the viability of a by-product of uranium processing, as no matter the grade of vanadium, if the Indicated uranium resource is being processed, the vanadium is processed with it. The vanadium price is cyclical in nature, with demand and supply imbalances driving prices above US$30/lb V_2O_5 on two occasions over a 15-year timeframe (V_2O_5 spot price source: Fastmarkets – see **Figure 29**). The average price since 2004 is US$9/lb in mid-2020 adjusted pricing (TTP Squared pers. comm. See **Figure 30**). The V_2O_5 price on 7 May 2024 was US$5.00/lb (using Europe Price – as quoted from Vanadiumprice.com).

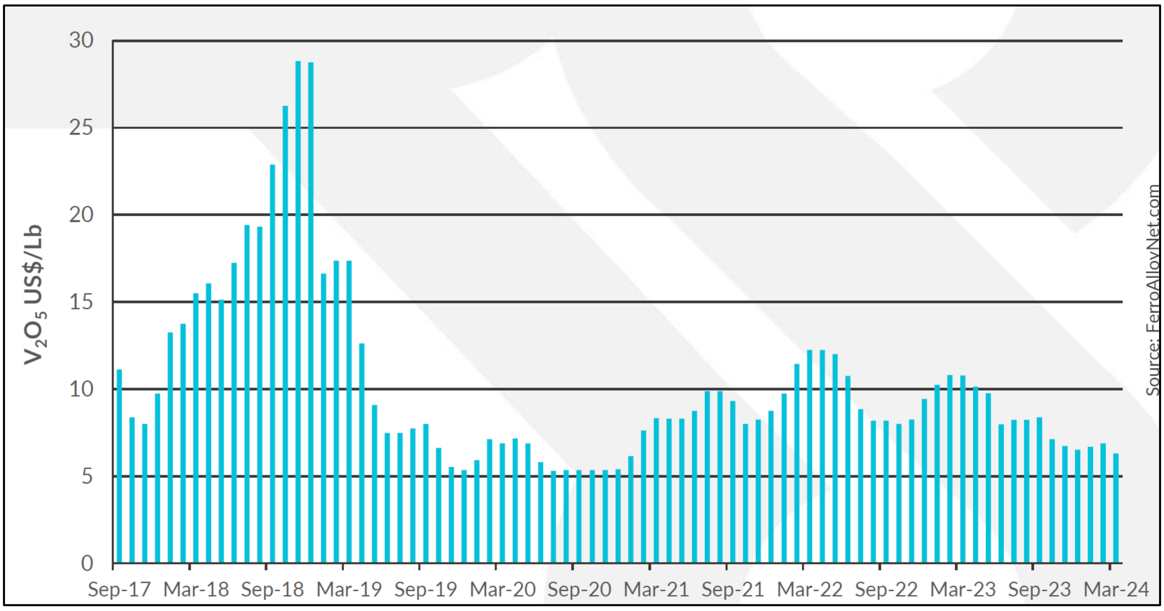

Figure 29: Historical V_2O_5 price in US$/lb from 2017 to 2024 (98% V_2O_5), according to FerroAlloyNet.com

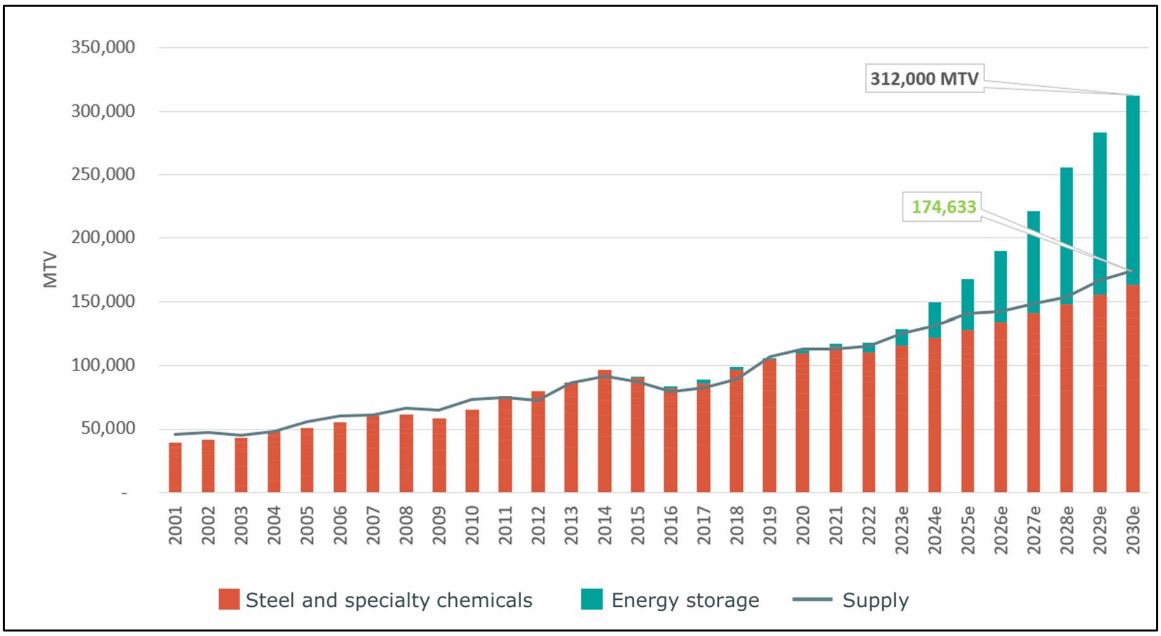

Figure 30: Supply and demand for vanadium according to US based vanadium specialist, TTP squared Inc.

The biggest demand for vanadium metal by far comes from the steel industry where it is used in the production of vanadium steel alloys, as well as in specialised aeronautical alloys, chemicals and batteries. The use of vanadium in steel is expected to continue over the long term, especially considering the new national standards imposed on Chinese manufacturers by the Chinese government in September 2018, which will require significant increases in the amount of vanadium going into vanadium steel alloys in China (Mining.com, January 2019). However, the possibility of market disruption also exists for the future demand for vanadium due to the take-up of vanadium redox batteries (**VRBs**). The VRB is an efficient storage and re-supply solution for renewable energy, being scalable and suitable for large scale applications. China in particular is investing heavily in large scale VRBs. Toro assumes ongoing market growth and limited capacity increases globally will continue to affect price.

A$:US$ Exchange Rate

Toro has assumed a A$:US$ exchange rate of 0.65 for the life of mine. Since achieving parity approximately one decade ago, the A$ has been in decline relative to the US$. At the time of publishing the current A$:US$ exchange rate is approximately 0.64 . These reasons give Toro reasonable grounds to make the exchange rate assumption.

Economic Evaluation

Evaluation Basis and Technique

SRK has undertaken an evaluation of the scheduled tonnages presented by the LoM production schedule (as already presented above) for the proposed open pit mining truck-and-shovel operation. SRK has adopted the DCF method to determine the project's NPV. The basis of this exercise is to evaluate various options and provide a preliminary economic assessment of the open pit truck-and-shovel mining and processing operation on a 100% equity, ungeared basis.

SRK has projected the cashflow forward in real terms and then applied the Reserve Bank of Australia target inflation rate of 2.0% to convert the cashflow into nominal terms before calculating depreciation, tax and movement in working capital.

It is anticipated that the uranium concentrate will be transported by truck 2,685 km to the Port of Adelaide and then shipped to the overseas market. The estimated road transport costs have been deducted to determine the net revenue. The assumptions for determining a net revenue of U_3O_8 product are listed in **Table 9**.

It is anticipated that the vanadium concentrate will be transported by truck 717 km to Geraldton Port and then shipped to the overseas market. The estimated road transport costs have been deducted to determine the net revenue. The assumptions for determining a net revenue of V_2O_5 product are listed in **Table 9**.

Table 9: Net revenue assumptions

Input item	Base case evaluation	
	U_3O_8	V_2O_5
Price (US$/lb)	85.00	5.67
Exchange rate	0.65	0.65
Price (A$/lb)	130.77	8.72
Processing recovery	79.8%	60.0%

The U_3O_8 recovery parameters applied to the financial model are as per a recovery curve that is variable based on head grade of RoM feed and as tested in bench scale recovery tests of beneficiation and processing. The resulting LoM average processing recovery from the recovery curves and applied to the economic evaluation is 79.8% for U_3O_8 and 60% for V_2O_5.

It has been assumed that the product will be sold at the time of production and there will be no stock carry-over. For accounts payable and receivable, 30 days for debtors and creditors has been applied.

A corporate tax of 30% was applied and calculated in nominal terms with tax losses carried forward and offset in the following year.

A WA State value-based royalty of 5.0% for concentrate material (as defined by the *Mining Regulations 1981* (WA)), as well as deducting allowable expenses, which include the cost of converting concentrate to delivered product and transport of concentrate, has also been applied to the model.

The evaluation adopts a discount rate of 8.01% (nominal post-tax).

A sale price of US$85/lb has been assumed for U_3O_8 and US$5.67 for V_2O_5; refer to the explanations above for more detail. An exchange rate of 0.65 A$:US$ has been adopted for this evaluation, the explanation for which has also already been presented above.

Production Schedule

The mining and processing production schedules used in the evaluation were those already presented in **Figures 12**, **13** and **14** above.

Capital Cost Summary

The Capex estimates used are those already presented above but are summarised here in **Table 10**.

Table 10: Pre-production project capital cost estimate

Area	Pre-Production Capital	Cost (A$ M)
Non-processing infrastructure	Mining support fleet	4.3
	Other infrastructure	60.4
	Site access and accommodation village	62.8
	EPCM	19.1
	Subtotal	**146.6**
Processing Plant	Plant	132.0
	EPCM	19.1
	Subtotal	**151.8**
Total		298.4

Source: SRK and Strategic Metallurgy

Cash Flow

Figure 31 shows the projected LoM cashflow (post-tax). Note that the dates used are not indicative of actual timing dates and should be disregarded as such.

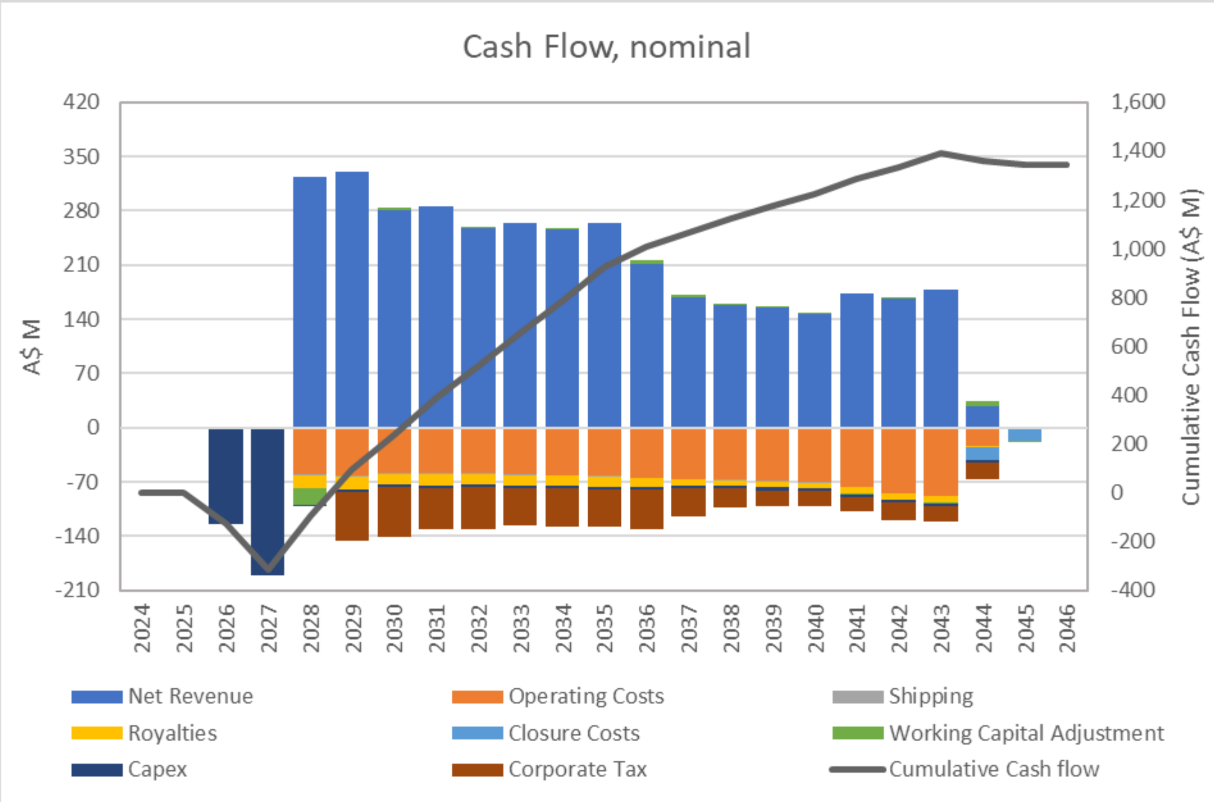

Figure 31: Projected LoM cashflow from the economic evaluation.
(Note that the dates used are not indicative of actual timing dates and should be disregarded as such.)

Gross revenue contributions

The contribution from U_3O_8 and the V_2O_5 by-product to the gross revenue over the LoM of A$2,980.6M has been calculated as approximately 96.4% and 3.6% respectively.

Project Funding

The Lake Maitland Uranium Project's technically simple and strong economic fundamentals give Toro the foundation to source traditional financing through debt and equity markets. This may include other fund raising channels that could benefit shareholders. However, there is no certainty Toro will be able to source the required finance. Toro has not commenced formal financing discussions beyond having in place agreements with Japanese partners. Reputable Japanese entities 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 US$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, Incorporation (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.

To achieve the range of outcomes indicated in the Scoping Study, funding of approximately A$298.4M will likely be required. Typical project development financing involves a combination of debt and equity. The Company may also elect to pursue alternative funding options, which could include undertaking a corporate transaction, seeking a further joint venture partner or partial asset sale. Toro is of the opinion that there is a reasonable basis to believe that requisite future funding for development of Lake Maitland will be available when required. However, the economic analysis does not price in the cost of funding over and above the application of the discount factor of 8%, based on conventional mining methods and a very short capital payback period. It is also a possibility such funding may only be available on terms that may be dilutive or otherwise affect the value of Toro's existing shares. The grounds on which this reasonable basis is founded include:

- Finance availability for high-quality projects remains robust.
- The Lake Maitland Uranium Deposit is technically simple and has a rapid payback of only 2.5 years from commercial production.
- The strategic nature of uranium, especially in the context of urgent global energy issues.
- The Lake Maitland Uranium Deposit has significant potential to grow the Mineral Resource base that forms this Scoping Study from neighbouring 100% owned uranium deposits, which may further strengthen the potential Wiluna Uranium Project economics.
- The release of the Scoping Study results enables Toro to discuss the outcomes with potential financiers.
- Toro has an agreement in place with Japanese partners who have the right to earn a combined 35% interest in the Lake Maitland Uranium 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.
- Australia is a stable mining and investor friendly jurisdiction with a history of successful traditional debt financing of mining projects.

Risks

Key risks for the Lake Maitland Uranium Project include:

- To proceed with the mining of Lake Maitland an amendment to the proposal the subject of each environmental approval received is necessary. The Western Australian government is presently not supportive of uranium mining and are likely to decline any amendments or not refer them for assessment. Also further environmental approvals may be needed due to the extended size of the Lake Maitland pit and relocation of the processing plant from Centipede to Lake Maitland.
- Processing test-work has been based on a limited number of drill samples and these drill samples were collected from locations in the former, much smaller and higher grade optimised pit. The re-optimised pit is much larger and incorporates large low grade areas of the deposit that may have a higher variability in the geology that may decrease the performance and effectiveness of the newly proposed beneficiation and processing design. Toro needs to undertake further drilling in these low grade areas for geological analysis and metallurgical testing, to increase confidence in the behaviour of the potential Lake Maitland ore within the newly proposed processing circuit.
- The current beneficiation and processing plant design is based on individual lab based test-work only. The next step is to test this design with a large scale fully functional pilot plant. There is a possibility that the successes in the lab cannot be replicated at pilot plant scale.
- Steep cost inflation and inflationary pressures prevail in the global economy. If these conditions are prolonged or rise further the estimates in this Scoping Study may need to be revised.
- Toro will need to undertake further work on in-pit as-you-mine tailings storage which may eventuate into an increase in either CAPEX or OPEX for the Project.
- The marketability of uranium and acceptance of uranium mining is subject to numerous factors beyond the control of Toro. The price of uranium may experience volatility over short periods of time. These factors include demand for nuclear power; political and economic conditions in uranium, costs; interest rates, inflation and currency exchange fluctuations; governmental regulations; availability of financing of nuclear plants; reprocessing of spent fuel and the re-enrichment of depleted uranium tails or waste; sales of excess civilian and military inventories (including from the dismantling of nuclear

weapons) by governments and industry participants; changes in public acceptance of nuclear power generation as a result of any future accidents or terrorism at nuclear facilities production levels and costs of production.

- Some of the Lake Maitland study components, although mostly comprehensive, have been done in isolation and are in need of an update. In particular, the hydrology, hydrogeology and TSF studies have not yet been revised in parallel with the most recent mining and processing studies, which have yielded reasonable change for the project. Updating these components, and subsequently ensuring all interfaces between each study component are well aligned, may highlight additional requirements for the project that would impact the current understanding on key project timing, constraints and costs.
- Following on from the above point, there is potential for a compounding risk profile of key project outcomes given the typical accuracy of scoping level that each stand-alone study component has been working to.

Opportunities

Opportunities were identified to improve the Lake Maitland Uranium Project as it progresses. These include:

- Toro has found that U_3O_8 values in drilling results derived from geochemistry are often higher than what can be explained by positive disequilibrium and are often above the 1.25 disequilibrium factor already applied across the Lake Maitland deposit to gamma probe derived U_3O_8 values. There is therefore a possibility that further core based drilling with geochemistry and upgrading of the U_3O_8 resource from Indicated to Measured will result in an increase to the overall U_3O_8 resource and ultimately more U_3O_8 produced by any mining and processing operation.
- Due to the inherent relationship between uranium and vanadium in the potassium uranium vanadate ore mineral, carnotite, Toro considers it is likely that with further drilling the V_2O_5 resource will be upgraded to Indicated status according to JORC 2012 and in doing so increase the value of the resource and the Project.
- Further refinement of the Project flowsheet to reduce costs may be possible after a large scale pilot of the beneficiation circuit.
- The proposed production schedule does not include any Mineral Resources from Toro's three other wholly owned uranium deposits comprising the Wiluna Project namely, Centipede, Millipede and Lake Way. This could lead to increased mine life, total production and revenue adding considerable value to the Project. Integrating the other uranium deposits under the broader Wiluna Uranium Project may add value to the project in terms of extending the project and de-risking the dependency on Lake Maitland as a stand-alone operation.
- Further beneficiation test work at Toro's three other 100% owned uranium deposits comprising the Wiluna Project, Centipede, Millipede and Lake Way, could show that parts of those deposit may be amenable to the same significant cost efficiencies as established in the Scoping Study for Lake Maitland.
- Conversely to what is noted above under risk, updating of the Study components to ensure interfaces between each Study component are well aligned may highlight potential opportunities/synergies for the Project, particularly in relation to foreseen interfaces between pit dewatering, mining, hydrology, waste rock storage, tailings storage, hydrology, hydrogeology and mine closure.

Ends –

This announcement was authorised for release to the ASX by the Board of Toro Energy Limited.

For further information contact

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About Toro

Toro Energy Limited (ASX:TOE) is an ASX listed uranium development and exploration company with projects in Western Australia. Toro's tenure in Western Australia is also prospective for gold and base metals. Toro is committed to building an energy metals business with the flagship Wiluna Uranium Project as the centrepiece. The Wiluna Uranium Project consists of the Centipede, Millipede, Lake Maitland, Lake Way uranium deposits 30km to the south of the town of Wiluna in Western Australia's northern goldfields.

Please visit www.toroenergy.com.au for further information.

Annexure A – Wiluna Uranium Project Resources Table

Wiluna Uranium Project Resources Table (JORC 2012) at 100 ppm cutoffs inside U_3O_8 resource envelopes for each deposit – Proposed Wiluna Project plus satellite deposit, Dawson Hinkler. The JORC Table 1 for these resources can be found in the ASX announcement 24 September, 2024.

A - Wiluna Uranium Project Resources Table (JORC 2012) At 100ppm cut-offs inside U_3O_8 resource envelopes for each deposit - Proposed Mine Only									
		Measured		Indicated		Inferred		Total	
		U_3O_8	V_2O_5	U_3O_8	V_2O_5	U_3O_8	V_2O_5	U_3O_8	V_2O_5
Centipede-Millipede	Ore Mt	7.5	-	21.3	-	10.0	73.1	38.7	73.1
	Grade ppm	428.0	-	392.0	-	206.0	281.0	351.0	281.0
	Oxide Mlb	7.1	-	18.4	-	4.5	45.2	30.0	45.2
Lake Maitland	Ore Mt	-	-	33.3	-	-	50.0	33.3	50.0
	Grade ppm	-	-	403.0	-	-	285.0	403.0	285.0
	Oxide Mlb	-	-	29.6	-	-	31.4	29.6	31.4
Lake Way	Ore Mt	-	-	15.8	-	-	18.7	15.8	18.7
	Grade ppm	-	-	406.0	-	-	307.0	406.0	307.0
	Oxide Mlb	-	-	14.1	-	-	12.7	14.1	12.7
Total Wiluna Project	**Ore Mt**	**7.5**	**-**	**70.3**	**-**	**10.0**	**141.8**	**87.8**	**141.8**
	Grade ppm	**428.0**	**-**	**400.3**	**-**	**206.0**	**285.8**	**380.6**	**285.8**
	Mlb	**7.1**	**-**	**62.0**	**-**	**4.5**	**89.3**	**73.6**	**89.3**
Dawson Hinkler Satellite	Ore Mt	-	-	17.3	-	32.1	ID	49.4	ID
	Grade ppm	-	-	236.0	-	159.0	ID	186.0	ID
	Oxide Mlb	-	-	9.0	-	11.3	ID	20.3	ID

Note: ID = Insufficient data for an estimation currently.

Data in the table has been rounded to 1 decimal place, which is the nearest 100,000t or lbs in the case of ore and contained oxide respectively.

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, Lake Maitland and the satellite deposit Dawson Hinkler.

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 Shirtliff 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 Shirtliff takes responsibility for the integrity of the data supplied for the estimation. Dr Shirtliff 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.