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## SIGNIFICANT BREAKTHROUGH ON TIRIS URANIUM PROJECT OPERATING COSTS

**ESTIMATED OPERATING COSTS REDUCED BY 35%  
TO US\$19.40/LB U<sub>3</sub>O<sub>8</sub>**

### SIGNIFICANT POSITIVE IMPACT ON TIRIS PROJECT ECONOMICS

**Aura Energy Limited (AEE; ASX, AURA; AIM)** is pleased to announce that following ongoing metallurgical optimisation and modelling, particularly around the leach reagent recycle and consumption, the operating cost for the Tiris Uranium Project has been reduced by an estimated 35%.

**The estimated Tiris operating cost now stands at US\$19.40/lb U<sub>3</sub>O<sub>8</sub>**

Aura is currently completing a Definitive Feasibility Study (DFS) on the Tiris Project which includes additional resource definition work and metallurgical test work. This breakthrough has arisen from additional internal modelling using previous test work data to optimise primary leach reagent usage, the recycle of leach agent in the plant and consumption of the leaching reagent via impurities.

Commenting on the outcome, Peter Reeve, Aura Energy's Executive Chairman, said "Aura has continued to work at improving the financial outcomes of the Tiris Project and this reduction in operating cost will have a significant impact on project cashflow. It will also positively impact the approval threshold required for the project given current uranium prices. The technical team is diligent and experienced and this breakthrough is testament to the team's work. The Tiris Project has many natural attributes including shallow mining, beneficiation and a low development capital. Incorporating this new optimised reagent usage in the study to lower the operating cost below US\$20 per pound uranium now makes the Tiris Uranium Project one of the most compelling uranium development projects in the world".

The refinement of the estimate represents the most accurate assessment of the Tiris operating cost since the initial conservative approach in the Scoping Study. Additional test work is required to confirm all aspects of the operating cost; however, Aura has maintained conservative assumptions which may lead to a further adjustment in operating cost with additional test work and optimisation modelling.

The Tiris Uranium Project will process very fine grained carnotite mineralisation in a calcrete setting from shallow mining depths of zero to five metres. The carnotite is found within a friable weathered granite composite that, when washed and scrubbed, releases the liberated carnotite in the beneficiation stage. This increases the leach feed grade by between 5 and 7 times (see Figure 1). The beneficiation stage significantly reduces the required plant size from the leach stage to product packaging, leading to a capital cost of US\$45 million.

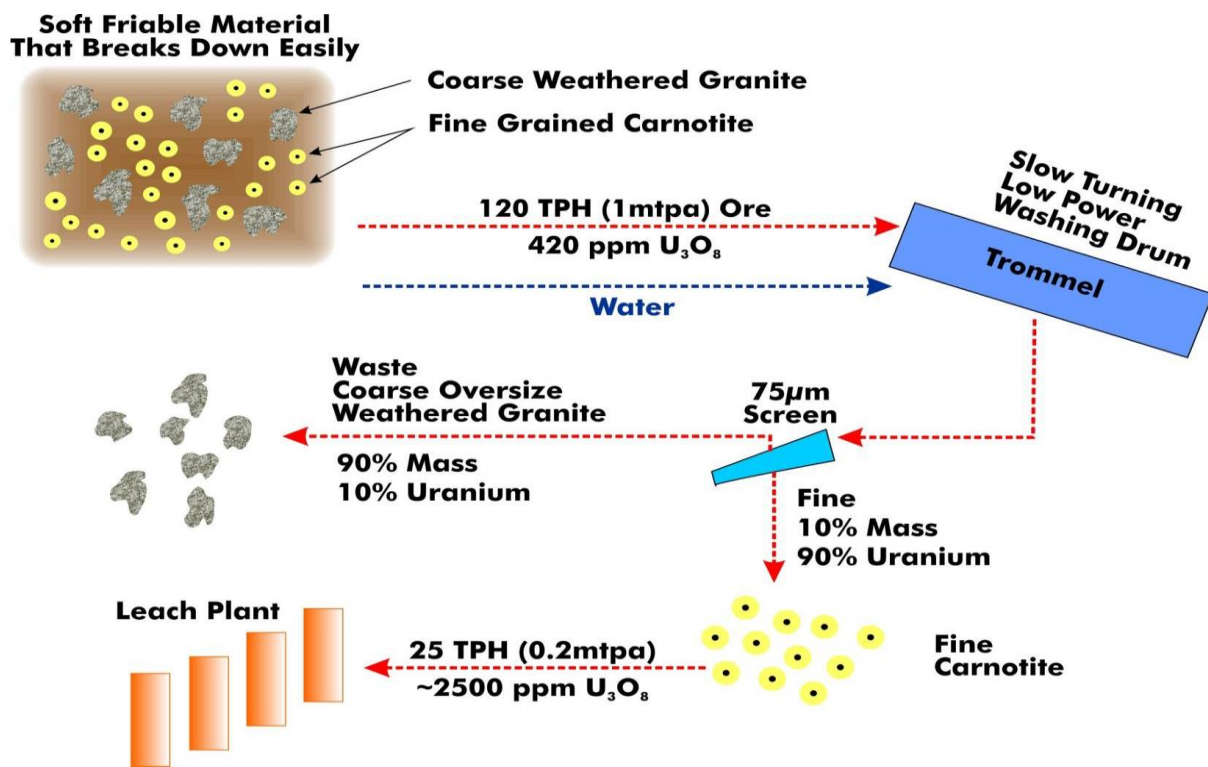
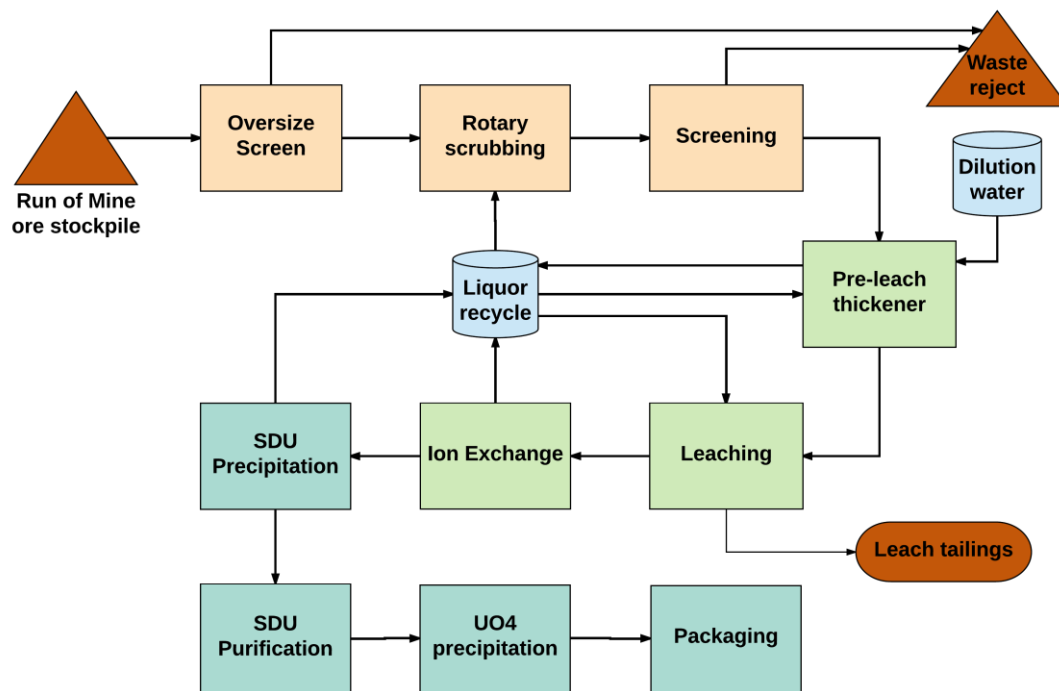


Figure 1: Beneficiation schematic process diagram

The leach plant utilises an alkali leach with soda ash (sodium carbonate) as the lixiviant. In the Tiris Scoping Study, Aura maintained a conservative approach for estimating the consumption of soda ash, assuming there would be negligible soda ash recycled in the process plant. Similarly, Aura maintained a conservative approach with respect to the consumption of reagent from the build-up of impurities in the process streams.

Since the commencement of the Tiris DFS, Aura has applied a focus on reducing the soda ash requirement in the project, given this is a significant component of the Tiris operating cost. The primary method to reduce this cost was via a reduction in consumption; however, Aura also commenced exploration for local sources of soda ash as another cost mitigation step.

Additional steady state simulation modelling of the process was used to examine the effects of recycle and impurity build up in the Tiris leach circuit, exploring optimisation of reagent requirements and the water balance. This is illustrated in the Tiris process flowsheet (see Figure 2), showing the distribution of recycled liquor. The modelling focused on optimisation of liquor recycle streams through scenario based simulation to minimise losses of recovered soda ash in the beneficiation circuit. This modelling defined that requirements for soda ash could be reduced by 32% when compared with Scoping Study estimates.



**Figure 2: Tiris overall process flow diagram**

Scenario analysis on the effect of increasing the quantity of reagent consuming minerals in the beneficiation feed also demonstrated that there was minimal impact on leach reagent consumption. This was primarily driven by rejection of these minerals in the beneficiation stage of the processing circuit.

Another collateral benefit of the reagent and process stream optimisation has been a reduction in the process flow volumes to the leach circuit. This flow reduction will lead to a strong reduction in the size of the leach circuit and consequently the capital cost of that section of the plant. The quantity of this reduction will be determined as part of the leach circuit engineering and design currently underway. Importantly the optimisation has also led to a substantial reduction in the process make-up water requirements from the Scoping Study estimates.

Over the remaining course of the Tiris DFS, test work will be conducted to further define the geometallurgical domains and better understand variability in the mineralisation. This will allow continued optimisation of process parameters, process equipment, consumables and further scope for review of the operating and capital cost estimates.

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During the Tiris DFS, Aura has also continued to progress the resource evaluation program to upgrade elements of the Inferred Resource to a higher category. With this optimisation of the operating cost for the Tiris Project the current resource cut-off grade of 100 ppm  $U_3O_8$  will be reviewed and adjusted lower. This adjustment will likely increase the amount of material available in the current resource for processing above the break-even price.

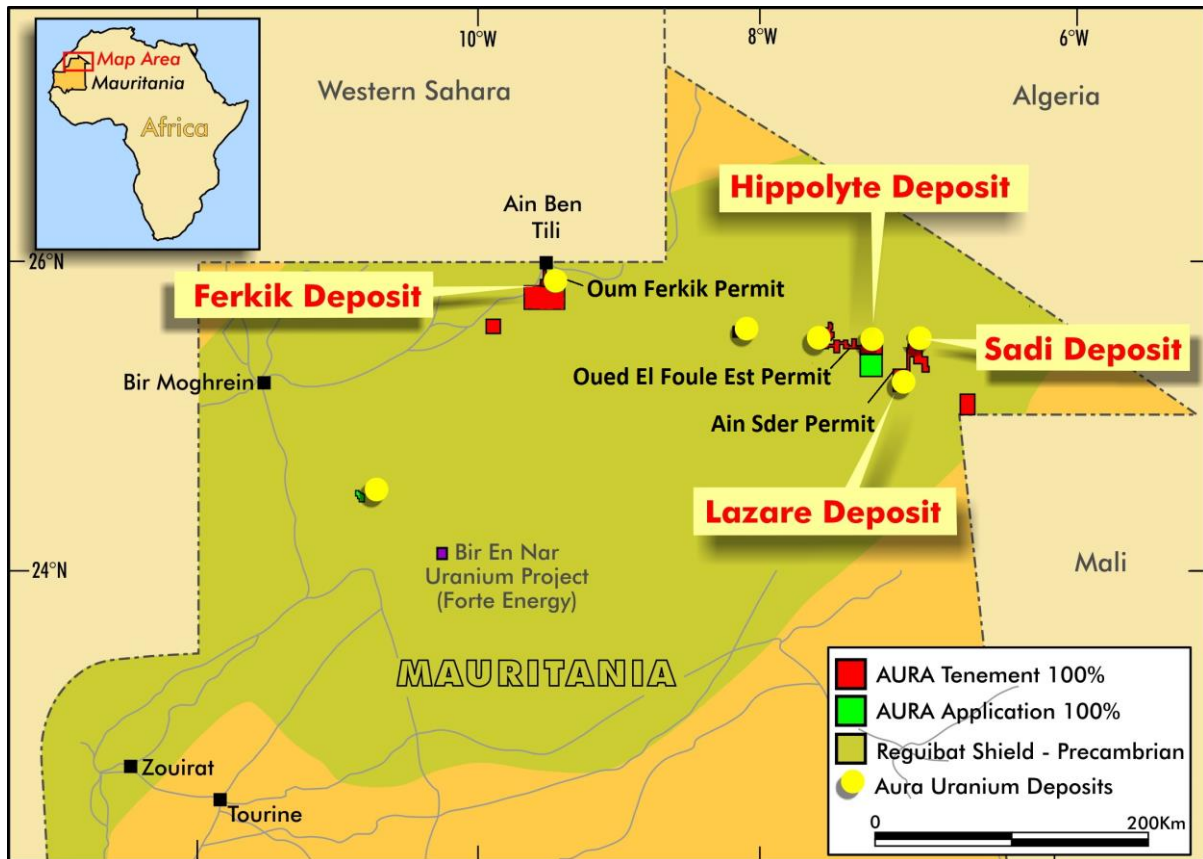


Figure 3: Location of Tiris Project main resources

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#### **NOTES TO PROJECT DESCRIPTIONS**

- (1) There is a low level of geological confidence associated with inferred mineral resource and there is no certainty that further exploration work will result in the determination of indicated measured resource or that the production target will be realised.
- (2) The Company released to the ASX the Tiris Project Scoping Study on 16 July 2014 and the Company believes that no material change to forecast capital and operating costs and forecast production rates have occurred since the release.
- (3) There is a low level of geological confidence associated with inferred mineral resource and there is no certainty that further exploration work will result in the determination of indicated measured resource or that the production target will be realised.

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