

## Kayelekera Operations Restart Guidance

**Lotus Resources Limited (LOT) (Lotus or the Company)** is pleased to provide an update on its progress for the restart of the Kayelekera operations, located in Malawi, Central Africa.

### HIGHLIGHTS

- **The Company has developed a five-stage approach, focussed on an optimal production restart from the current care and maintenance state.**
  - Developing the work programs and cost estimates required to bring the existing plant back into production.
  - Undertaking a study to re-engineer the front-end of the circuit to include additional processing steps to upgrade ore prior to milling and leaching.
  - Reviewing potential process improvements that could be implemented in the main circuit.
  - Undertaking a feasibility level restart study that incorporates the results of the foregoing programs along with a new production plan.
  - Proceeding with a front-end engineering study (FEED) to further work up the optimal level of engineering from the feasibility study.
- **Lotus remains focused on ensuring asset security, Covid-19 compliance, plant and tenure maintenance and environmental responsibility during the care and maintenance period.**

Eduard Smirnov, Managing Director, commented: "We aim to position the Kayelekera Project for rapid and cost-optimal production restart as uranium price environment improves. The developed five-stage approach to the restart study is to ensure our objectives are achievable. Our operations and regional teams have taken steps to identify potential operating cost improvements to the existing operation and we will continue that path. We look forward to providing further updates on our progress towards restart readiness."

### RESTART STUDY ACTIVITIES

The Company is well advanced with the scoping of the various stages of its restart study. The five-stage approach being considered incorporates the following.



## 1. Refurbishment of Existing Plant

The planned work program will identify the activities and costs required to bring the existing Kayelekera plant back into production, specifically:

- Assessment of processing plant (crushers, mills, resin pulp tanks, dryers, etc)
- Acid plant inspection and refurbishment requirements
- Geotechnical studies on plant foundations
- Nanofiltration inspection / review
- Tailings dam inspections
- Dams and surface water infrastructure inspections
- Mobile equipment requirements
- Re-commission camp
- Consideration of future staffing requirements

These will be incorporated into a stand-alone report with a timeline and capital cost estimate. The work program will be conducted with the support of qualified external technical consultants.



**Figure 1 – Kayelekera Process Plant Layout**



## 2. Re-engineering Processing Circuit Front-end

The planned review of the front-end of the processing circuit will focus on developing a process that will allow lower grade ores to be economically treated and will consider the following:

- A review of potential improvements to material handling to better handle wet and sticky ores
- Use of upgrading processes including ore sorting, dense media separation and size/gravity separation
  - a key consideration is upgrading the uranium content and the rejection of high acid-consuming gangue minerals
- Applicability of low-grade stockpiles to the upgrading process
- Defining a revised feed ore protocol for subsequent use in the mine plan and production scheduling

This will result in a stand-alone report with recommendations for the preferred upgrading process and associated capital and operating cost estimates. Qualified external technical consultants will be retained to assist with the review.



**Figure 2 – Process Plant Front-end Circuit**



### 3. Main Circuit Potential Process Improvements

The review of the process plant and associated infrastructure undertaken as part of our previous due diligence work indicated a number of potential improvements that could be implemented in the main circuit, including:

- Process improvements around acid recovery and process efficiency
- Resin in pulp studies
- Power studies to reduce diesel consumption including investigation of alternatives
- Yellow cake dryer study

These potential improvements, including timelines and capital cost estimates, will be further investigated with the support of qualified external technical consultants.

Decisions on the timing of the plant refurbishment study, the review of the front-end of the processing circuit and the review of potential main circuit process improvements will be made following completion of cost and schedule estimates which are currently underway.

### 4. Restart Feasibility Study

The feasibility study as currently envisaged is to commence following completion of the above-listed studies and reviews and will include the following work packages.

- Geotechnical studies for pit design
- Hydrology and hydrogeology studies along with a revised site water balance
- Tailings dam capacity requirements based on revised schedules
- Process modelling
- Updated mine design and scheduling
- Production scheduling optimisation to determine the optimal throughput and production rates based on the upgrading attributes and performance of stockpile materials
- Incorporation of the refurbishment and front-end redesign to overall project capital
- Execution methodology and schedule
- Operating, sustaining and working capital requirements
- Developing discounted cashflow models to define project economics

### 5. Front-end Engineering Design (FEED)

Front-end engineering design work is planned to follow the completion of the feasibility study. This would focus on progressing the level of engineering from the feasibility study such that a Class 3 (or Class 2) cost estimate could be generated to ensure project cost control moving forward.

In parallel with this work, the Company will also start developing an operational readiness program designed to ensure a successful transition from engineering through the plant and mining infrastructure upgrades and start-up into commissioning, ramp-up and steady-state operations. A critical part of this work will be to ensure alignment with operational personnel and effective risk management as the project progresses.



## ADDITIONAL INFORMATION

A short list of external technical consultants qualified to undertake the foregoing activities has been prepared. Some of the selected consultants were involved in the original construction, commissioning and production ramp-up of the Kayelekera operations. Work packages are being developed and will be issued to the consultants for bid in due course.

In addition to the study work, a drilling program to investigate resource extensions around the current mine plan is currently being assessed.

The restart decision of the Kayelekera operations is subject to a significant recovery in the uranium price to a level providing for sustainable and profitable production.

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## ABOUT LOTUS RESOURCES

Lotus Resources Limited (LOT:ASX) is a minerals exploration and development company. The Company recently acquired a 65% interest in the Kayelekera Uranium Project in Malawi. The project is held via a 76.5% holding in Lily Resources Pty Ltd. Kayelekera hosts a high-grade resource with an existing open pit mine and demonstrated excellent metallurgical recoveries (87.5%) having historically produced over 10.9Mlb of uranium between 2009 and 2014. The March 2020, JORC 2012 compliant Mineral Resource for Kayelekera is shown below.

For more information, visit [www.lotusresources.com.au](http://www.lotusresources.com.au)

### Annexure 1. Kayelekera Mineral Resource March 2020<sup>1</sup> (Reported above a 300ppm U<sub>3</sub>O<sub>8</sub> lower cut-off for in situ material; and a 200ppm U<sub>3</sub>O<sub>8</sub> lower cut-off for the low-grade stockpiles).

	Mt	Grade (U <sub>3</sub> O <sub>8</sub> ppm)	U <sub>3</sub> O <sub>8</sub> (M kg)	U <sub>3</sub> O <sub>8</sub> (M Lb)
Measured	0.7	1,010	0.7	1.5
Measured - RoM Stockpile <sup>2</sup>	1.6	760	1.2	2.6
Indicated	18.7	660	12.3	27.1
Inferred	3.7	590	2.2	4.8
<b>Total</b>	<b>24.6</b>	<b>660</b>	<b>16.3</b>	<b>36.0</b>
Inferred - LG Stockpile <sup>3</sup>	2.4	290	0.7	1.5
<b>Total All Material</b>	<b>27.1</b>	<b>630</b>	<b>17.0</b>	<b>37.5</b>

<sup>1</sup> The information in this announcement that relates to the Mineral Resource at Kayelekera was announced on 26 March 2020. Lotus confirms that it is not aware of any new information or data that materially affects the information included in the announcement of 26 March 2020 and that all material assumptions and technical parameters underpinning the Mineral Resource estimate in that announcement of continue to apply and have not materially changed.

<sup>2</sup> RoM stockpile has been mined and is located near mill facility.

<sup>3</sup> Low-grade has been mined and placed on low-grade stockpile and are considered potentially feasible for blending or beneficiation, with studies planned to further assess this option.

Figures have been rounded. Grade has been determined from a combination of XRF and downhole logging derived eU<sub>3</sub>O<sub>8</sub> grades. In situ Mineral Resources are depleted for mining to 31 December 2013, when mining ceased, with stockpiles depleted to the end of processing in June 2014. Metal content is based on contained metal in the ground and takes no account of mining or metallurgical recoveries, mining dilution or other economic parameters. An in-situ bulk density of 2.29g/cm<sup>3</sup> was applied for Arkose material and 2.20g/cm<sup>3</sup> for mudstone material to all blocks within the model.

