

ASX Release

August 31, 2018

Renascor Resources Ltd
ABN 90 135 531 341

Head Office

36 North Terrace
Kent Town, SA 5067
Australia

CONTACT

T: +61 8 8363 6989

F: +61 8 8363 4989

info@renascor.com.au

www.renascor.com.au

ASX CODE

RNU

Developing
 Australia's Largest
 Graphite Deposit

Successful locked-cycle tests and bulk concentrate production

- **Initial locked-cycle tests and bulk concentrate production further support ability to produce high-grade flake concentrates from Siviour Graphite Deposit**
- **Six-cycle continuous circuit tests produce high-grade concentrates with increased graphite recoveries and potential to reduce process plant capital requirement through elimination of a regrind and cleaner flotation stage**
- **Bulk sample concentrate production by independent Canadian laboratory using mineral process parameters adopted in Siviour Pre-Feasibility Study produces high-grade concentrates**
- **Positive results from these tests provide basis for potential process improvements in upcoming test programs to support the Siviour Definitive Feasibility Study**

Renascor Resources Limited (ASX: RNU) is pleased to announce the results of on-going metallurgical testing on its Siviour Graphite Project on South Australia's Eyre Peninsula.

Initial locked-cycle tests and bulk concentrate production have confirmed the ability to produce high-grade graphite concentrates from Siviour. These tests validate the mineral process parameters adopted in the Siviour Pre-Feasibility Study (see Renascor ASX announcement dated 14 March 2018) and provide a basis for potential improvements in graphite recovery and process design in the Siviour Definitive Feasibility Study.



Figure 1. Siviour flotation tests

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Commenting on the results, Renascor Managing Director David Christensen stated:

"These positive results further support the ability to produce a high quality graphite concentrate from Siviour at amongst the lowest cost of any graphite development globally. The potential to increase recoveries and decrease the Project's capital requirements is particularly pleasing.

Importantly, we now have additional concentrate sample for further customer evaluation and the necessary technical basis to progress the Siviour DFS through variability and other advanced metallurgical test work into detailed process plant engineering".

Discussion

In preparation of advanced mineral processing programs to support the Siviour Definitive Feasibility Study, Renascor recently completed initial locked-cycle tests and a bulk sample production program.

Locked-cycle tests

A locked-cycle test (LCT) is a repetitive batch flotation test conducted to assist flowsheet design. In an LCT, the flotation tailings from key stages in the circuit are returned to an appropriate stage in the following cycle, thus simulating a continuous flotation circuit on a laboratory scale.

Prior to undertaking the LCT, Renascor had completed several series of batch flotation tests, which formed the basis of the initial flowsheet design parameters adopted in Renascor's Pre-Feasibility Study. See Renascor ASX announcement dated 14 March 2018.

The recently completed LCT built upon the previous batch tests by undertaking six cycles of batch tests in a repeated circuit. In contrast to the previous batch tests, the LCT simulated continuous circuit behaviour by recycling selected flotation tailings from previous stages. This continuous circuit is more representative of actual plant performance and provides a better understanding of the impact of the recycle on final concentrate grade and graphite recovery.

The LCT was performed on a 15kg portion of the main bulk composite sample used for the majority of metallurgical test work to date. This sample had a head grade of approximately 12% total carbon (TC) and is considered representative of ore expected to be mined in the first five years of Siviour's production.

The LCT produced graphite concentrates with average grade of 95.9% TC and a recovery of 93%, compared to a recovery of 91% from previous batch test results. This improvement in recovery is in line with expectations, as the selected cleaner tailings (which were rejected in batch testing) are recycled upstream in the LCT, where they are subject to additional grinding and recovery by flotation.

At the start of the LCT program, a sighter test was conducted which examined modifications to the flowsheet used for the Siviour Pre-Feasibility Study. Renascor found that by reducing the average size of the flotation feed by approximately 10% and screening an intermediate concentrate at 300 microns instead of 150 microns, one regrind stage and one cleaner flotation stage could be removed from the flowsheet. This modified flowsheet was used for the six cycles of the LCT, suggesting a similar modification may be adopted for the Siviour Definitive Feasibility Study.

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Renascor recently completed a bulk sample production program utilising flowsheet design parameters adopted in the Siviour Pre-Feasibility Study.

Work was undertaken by SGS Lakefield in Canada, processing a 200 kg bulk sample from Siviour. The bulk sample was a composite of diamond drill core with an approximate head grade of 11% TC (the average head grade adopted in the Siviour Pre-Feasibility Study for the initial three years of small-scale production was 12.8% TC).

While only limited flowsheet development was carried out as part of the bulk flotation test program, the results are consistent with previous test work, and Renascor considers that it further supports the process design criteria adopted for the Siviour Pre-Feasibility Study.

The combined graphite concentrate that was generated at the end of the bulk test program graded 94.8% TC with a total sample mass of 18.4 kg. The sample prepared from the program will be used for evaluation by potential offtake partners and further metallurgical testing.

Next Steps

The positive results from both the initial locked-cycle tests and the bulk sample program offer strong support for the validity of the flowsheet adopted for the Siviour Pre-Feasibility Study. Renascor has now completed several test programs at different facilities, yielding consistent results. This confirms the repeatability of testwork and provides a strong basis for potential process improvements in upcoming test programs to support the Siviour Definitive Feasibility Study.

Next step metallurgical test programs will include variability testing and further optimisation programs to support the Definitive Feasibility Study process engineering.

Competent Person Statements

The information in this document that relates to metallurgical test work results is based on information compiled and reviewed by Mr Simon Hall, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Hall is a consultant to the Company. Mr Hall has sufficient experience relevant to the mineralogy and type of deposit under consideration and the typical beneficiation thereof to qualify as a Competent Person as defined by the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code, 2012 Edition). Mr Hall consents to the inclusion in the report of the matters based on the reviewed information in the form and context in which it appears.

This report may contain forward-looking statements. Any forward-looking statements reflect management's current beliefs based on information currently available to management and are based on what management believes to be reasonable assumptions. It should be noted that a number of factors could cause actual results, or expectations to differ materially from the results expressed or implied in the forward-looking statements.

For further information, please contact:**David Christensen**
Managing Director

+61 8 8363 6989

info@renascor.com.au