

16 July 2020

Mina do Barroso Lithium Project Update

Excellent Metallurgical Results from Spodumene Lithium Conversion Test work

Savannah is pleased to announce that the ongoing metallurgical test work programme associated with its Mina do Barroso Lithium Project (“Mina do Barroso” or the “Project”) continues to produce excellent results. The latest test work evaluated the refining characteristics of Mina do Barroso’s spodumene concentrate for the production of battery grade, lithium chemicals. The key findings are summarised below:

- High lithium recovery rates were achieved from 49kgs of Grandao concentrate via the first two stages of conventional processing (calcination/acid roasting and water leaching) in the production of lithium chemicals
- The third stage (solution purification followed by causticisation and lithium crystallization) of production of battery grade chemicals was planned but has been temporarily postponed due to COVID-19 related restrictions at the laboratory in the United States
- Impurity levels are manageable from the first two stages, and production of battery grade lithium hydroxide should be readily achievable from the third stage of testing
- Savannah will update the market on the third stage once more clarity on the revised schedule can be provided

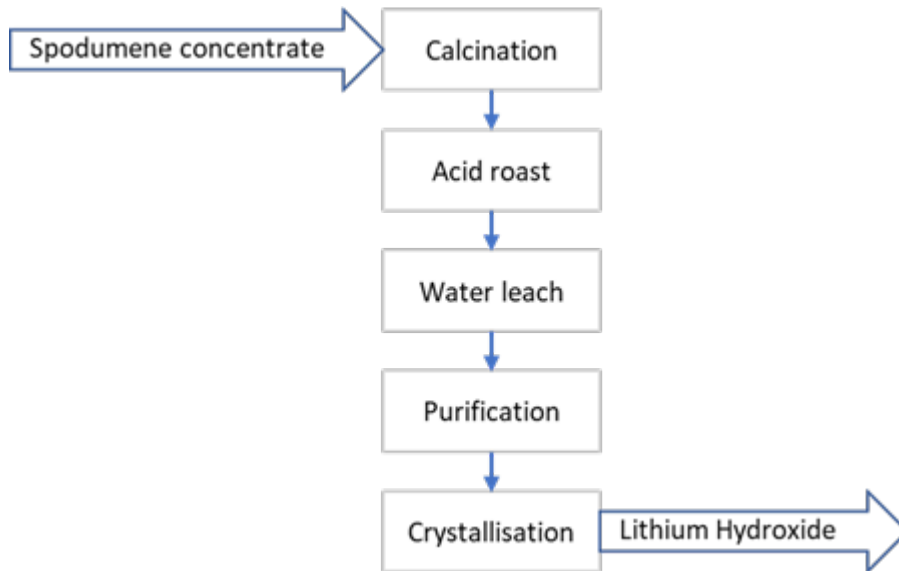
David Archer, Savannah's Chief Executive Officer said, "It is encouraging to see excellent results from the metallurgical test work which continues to validate Mina do Barroso as a conventional lithium project in terms of the process flowsheet. These latest results give a further clear indication that battery grade lithium chemicals can be produced efficiently from Mina do Barroso concentrate and provide increased confidence in the Project both for Savannah and the potential customers for our lithium concentrate product.

Test work will continue over the coming months to complete the programme and to help refine our understanding of the behaviour of the material. We expect the results to provide more evidence for our potential customers regarding the suitability of the Project’s lithium concentrate for refining into lithium hydroxide, the key lithium-ion-battery chemical.”

Overview of the lithium concentrate refining characteristics test work

Savannah's consultant, FLSmidth (<https://www.flsmidth.com/>) has completed the first two phases of a three-phase programme to assess the refining characteristics of the Mina do Barroso spodumene via conventional calcination, leaching and purification to produce battery grade lithium chemicals.

Figure 1. Process of spodumene concentrate production to lithium hydroxide production



Phase 1 (Calcination and acid leach)

Savannah has successfully completed a programme of calcination testing (heating in controlled conditions), achieving effective conversion of spodumene from the alpha to beta phase (changing its atomic structure), as required for downstream extraction of lithium. The laboratory scale study was performed by FLSmidth in the United States on a 49 kg sample of spodumene concentrate produced from drill core broadly representative of the first five years of mining from the Grandao deposit.

Progressive samples of solids were taken during the batch calcination and tested for acid soluble lithium content. The results showed that 96% of lithium was converted to the acid-soluble beta phase by heating the spodumene to 1,075°C for a period of 30 – 50 minutes. This was validated by an electric tube furnace test, which achieved 98% conversion within 30 minutes. These results are typical of lithium refining operations and support selection of a conventional processing route.

A composite of the calcined solids was then mixed with sulphuric acid and the acidified calcine roasted at 275 – 300°C for 1 hour, then subjected to a water leach test. The water-soluble lithium grade reported corresponded to a conversion rate of 96.1%. Furthermore, impurities, such as iron, were all at levels that should be readily manageable by conventional purification methods.

Phase 2 (Water leach and vacuum filtration)

Further test work was completed by FLSmidth on the pre-treated (roasted/acid baked) Savannah concentrate from phase 1 of the program to evaluate the efficiency of a lithium water leach, and the subsequent solid-liquid separation via vacuum filtration.

Seven water leach tests were executed in a small test programme developed to evaluate the effect of temperature and percent solids on leach kinetics and lithium extraction. Key results were:

- Lithium extraction of up to 94.6% was achieved.
- Lithium extraction was not sensitive to either temperature or percent solids. This indicates that no heating is required for the leach, and that high concentration leach solutions can be produced, both reducing the overall operating cost.

Slurry from the leach tests was dewatered and washed by vacuum filtration on a standard test rig. The filtration rates recorded indicate that relatively rapid and efficient dewatering and filtration of the material is possible.

Phase 3 (Purification and crystallization)

The third phase of testing involves solution purification followed by causticisation and lithium hydroxide monohydrate (LiOH.H₂O) crystallization to produce battery grade lithium products. Based on the composition of the leach solutions, downstream processing steps should be straightforward by conventional methods.

This step has been postponed due to COVID-19 related restrictions at the laboratory. At this stage it is not clear when the restrictions will be lifted to allow this work to proceed. Savannah will update the market when further information is available.

Competent Person Statement

The information in this announcement that relates to exploration results is based upon information compiled by Mr Dale Ferguson, Technical Director of Savannah Resources Limited. Mr Ferguson is a Member of the Australasian Institute of Mining and Metallurgy (AusIMM) and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the December 2012 edition of the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves” (JORC Code). Mr Ferguson consents to the inclusion in the report of the matters based upon the information in the form and context in which it appears.

The information in this release that relates to metallurgy and metallurgical test work has been reviewed by Mr Tim Newton, MAusIMM, MSc (Mineral Economics), GradDip (Extractive Metallurgy), B. Eng. (Chemical Engineering). Mr Newton is not an employee of the company, but is employed as a contract consultant. Mr Newton is a Member of the Australasian Institute of

Mining and Metallurgy, he has sufficient experience with the style of processing response and type of deposit under consideration, and to the activities undertaken, to qualify as a competent person as defined in the 2012 edition of the “Australian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves” (The JORC Code). Mr Newton consents to the inclusion in this report of the contained technical information in the form and context as it appears.

Regulatory Information

This announcement contains inside information for the purposes of Article 7 of Regulation (EU) 596/2014.

****ENDS****

For further information please visit www.savannahresources.com or contact:

Savannah Resources PLC
David Archer, CEO

Tel: +44 20 7117 2489

SP Angel Corporate Finance LLP (Nominated Advisor)
David Hignell / Charlie Bouverat

Tel: +44 20 3470 0470

finnCap Ltd (Joint Broker)
Christopher Raggett

Tel: +44 20 7220 0500

WH Ireland (Joint Broker)
James Joyce/ Matt Chan (Corporate Finance)
Adam Pollock/ Jasper Berry (Corporate Broking)

Tel: +44 20 7220 1698

St Brides Partners Ltd (Financial PR)
Charlotte Page / Cosima Akerman

Tel: +44 20 7236 1177

About Savannah

Savannah is a diversified resources group (AIM: SAV) with a portfolio of energy metals projects - lithium in Portugal and copper in Oman - together with the world-class Mutamba Heavy Mineral Sands Project in Mozambique, which is being developed in a consortium with the global major Rio Tinto. The Board is committed to serving the interests of its shareholders and to delivering outcomes that will improve the lives of the communities we work with and our staff.

The Company is listed and regulated on AIM and the Company's ordinary shares are also available on the Quotation Board of the Frankfurt Stock Exchange (FWB) under the symbol FWB: SAV, and the Börse Stuttgart (SWB) under the ticker "SAV".