



SAVANNAH  
RESOURCES PLC

AIM: SAV

29 January 2019

AN ENERGY METALS GROUP

## Savannah Resources Plc

### Mina do Barroso Lithium Project – Excellent Metallurgical Test Work Results

#### Highlights:

- **Excellent test work results continue to show that a conventional, 6% Li<sub>2</sub>O, low impurity concentrate can be produced with high recoveries;**
- Test work on drill core samples from the Grandao deposit has **produced concentrates containing 6%-6.5% Li<sub>2</sub>O**, with corresponding **lithium recoveries in excess of 80%**;
- The Grandao deposit currently represents the first five years of mine production, and test work is underway to gauge the variability in metallurgical response that might be expected;
- The lithium concentrates produced have **low iron and impurity levels** with market research and initial customer discussions indicating that such concentrates should be suitable for conversion to either lithium carbonate or lithium hydroxide for use in lithium ion batteries;
- Planning underway to run a pilot programme on a bulk sample of ore to define the process flow sheet to a level suitable for final plant design; and
- Work is continuing on testing other deposits within the project area.

Savannah Resources plc (AIM: SAV, FWB: SAV and SWB: SAV) ('Savannah' or the 'Company'), the AIM quoted resource development company, which is focused on becoming Europe's most significant producer of lithium spodumene concentrates from its Mina do Barroso Project in Portugal ('Mina do Barroso', 'MdB' or 'the Project'), is pleased to announce that its ongoing metallurgical test work programme continues to successfully produce saleable grades of lithium spodumene products.

The Project is targeting an average annual production of 175,000 tonnes of spodumene concentrate at a grade of 6% Li<sub>2</sub>O. Process development is also aiming at the production of feldspar and quartz by-products for the regional ceramics industries in the region, which, coupled with ongoing resource exploration, will reduce the environmental footprint of the project and add substantially to the project viability.

**Savannah's CEO, David Archer said:** "To see such excellent results from the metallurgical test work is encouraging as it continues to validate Mina do Barroso as a conventional lithium project in terms of the process flow-sheet and the product produced. Ongoing test work will continue to help refine our understanding of the behaviour of the produced material and I look forward to continuing to update our shareholders over the coming months."

### **Test Work Overview**

Savannah has successfully produced high grade spodumene concentrate by a standard, whole of ore flotation process from a composite of core samples taken from the Grandao deposit. Grandao currently represents the first five years of mining.

For this test work, which was managed by Savannah's own team representatives and conducted in Perth at ALS Laboratories, the sample was subjected to an industry standard beneficiation process, to generate a high grade spodumene concentrate, which consisted of:

- Conventional crush and grind;
- Desliming and low intensity magnetic separation;
- Flotation to remove mica bearing minerals ahead of spodumene flotation; and
- Conventional spodumene rougher and cleaner flotation using industry standard reagents to generate a high-grade lithium concentrate.

This test work programme was conducted on a fresh pegmatite composite with a  $\text{Li}_2\text{O}$  head grade of 1.3% which was higher than the head grade of 1.1% previously assumed in the scoping study. Variability work is now underway to reassess the deposit grade and to assess the expected variation of metallurgical response to different grades and ore types.

The spodumene concentrate produced had an unoptimized grade of 6.15%  $\text{Li}_2\text{O}$  at a lithium recovery of 82.4%. One test produced a concentrate  $\text{Li}_2\text{O}$  grade of 6.50% at a reduced  $\text{Li}_2\text{O}$  recovery. This test was conducted using an open flotation circuit with intermediate tailings streams not included in the final  $\text{Li}_2\text{O}$  recovery. Recycling of these streams is expected to improve the overall  $\text{Li}_2\text{O}$  recovery in planned closed circuit test work with the  $\text{Li}_2\text{O}$  concentrate grade still expected to remain at >6%.

A similar result has been obtained in a second round of testing, using the above process on the same sample at ALS Laboratories, demonstrating the selected process is robust and the results are reproducible.

Savannah's market research and initial potential customer correspondence has indicated that a concentrate with the specification achieved is suitable for conversion to either a lithium carbonate or lithium hydroxide for use in lithium ion batteries. Penalty elements such as iron were below the limits specified by customers.

Spodumene product assayed chemical grades are shown below:

Product	Grade (%)							
	Li <sub>2</sub> O	Fe	Al <sub>2</sub> O <sub>3</sub>	SiO <sub>2</sub>	TiO <sub>2</sub>	Mn	S	P
Spodumene Concentrate	6.15	0.57	25.1	62.6	<0.01	0.15	<0.01	0.30

Savannah is progressing the metallurgical test work programme at laboratory scale, in order to;

- test the variability;
- do further optimisation by doing locked cycle testing; and
- test the recovery of acceptable feldspar and quartz concentrates.

Finally, it is planned to do pilot scale testing on bulk samples of Grandao ore in the next few months, in order to confirm the flow sheet process parameters and to provide the necessary information for the final plant design. Savannah is in discussions with the laboratories that have the capability to complete a suitable pilot programme and a decision will be made once all tenders have been received and reviewed.

### **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 Noel O’Brien, FAusIMM, MBA, B. Met Eng. Mr O’Brien is not an employee of the company but is employed as a contract consultant. Mr O’Brien is a Fellow 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 O’Brien 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\*\***

## CONTACT US

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### **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".