



ASX ANNOUNCEMENT



13 APRIL 2018

AUTHIER PILOT METALLURGY PROGRAM UPDATE

Sayona Mining Limited (ASX: SYA) ("Sayona" or the "Company") is pleased to report the following update on the pilot plant program underway at SGS Lakefield for the Authier Lithium Project.

The Company has completed the batch and locked cycle phase of the pilot program which had the aim of establishing the optimal conditions for the continuous pilot plant program. The pilot plant operations have now commenced.

During batch and locked cycle testing, the Company has been able to achieve concentrate grades of 6% at metallurgical recoveries of 80%.

Approximately five tonnes of mineralised pegmatite will be processed through the pilot plant. The plant will operate for a minimum of 100 hours at a feed rate of 50 kilogram per hour. The pilot program involved stage-crushing the ore to -3.35mm (see Figure 1). The crushed ore then passes through a grinding mill, cyclones for de-sliming, magnetic separation for iron removal, mica and spodumene flotation (Figure 2 and 3).

The objectives of the pilot plant program include:

- Confirm the flowsheet and process parameters for concentrate production;
- Produce engineering data for equipment sizing and plant design; and
- Generate ~500 kg of spodumene concentrate for downstream testing and marketing purposes.

The results of the pilot program are expected to be available by the end of April and will be incorporated into the Definitive Feasibility Study ("DFS") which will be completed during Q2 2018. On completion of the pilot program, optimisation work will continue with the objective of maximising metallurgical recoveries and de-risking the metallurgical performance of the full-scale operations.

SGS Canada Inc. has considerable experience in developing spodumene concentration flowsheets. Over the past 10 years, SGS has operated pilot plants for several North American hard rock lithium deposits.

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Figure 1: Sample preparation (crushing) area at SGS Canada Inc.

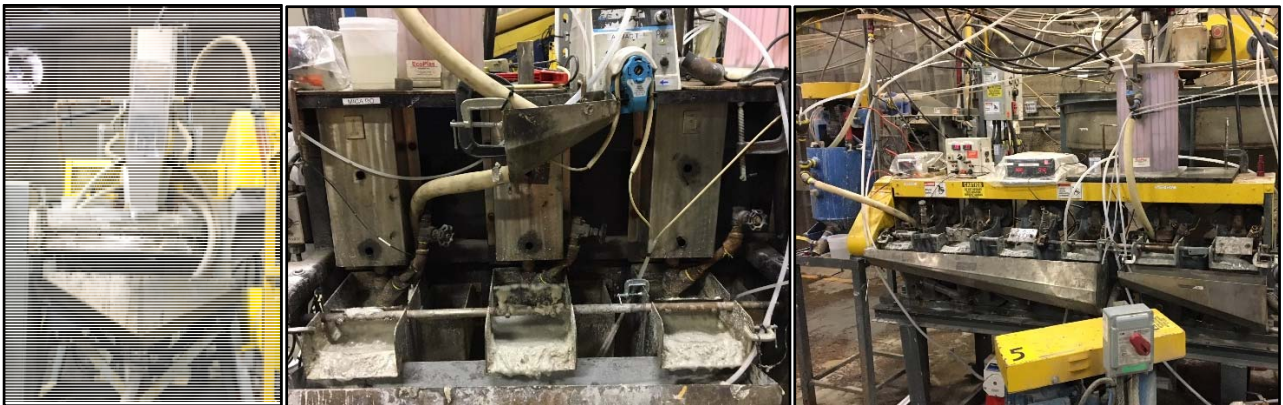


Figure 2: Pilot plant in operation: Wet high-intensity magnetic separator (left), mica flotation (centre) and spodumene flotation (right)

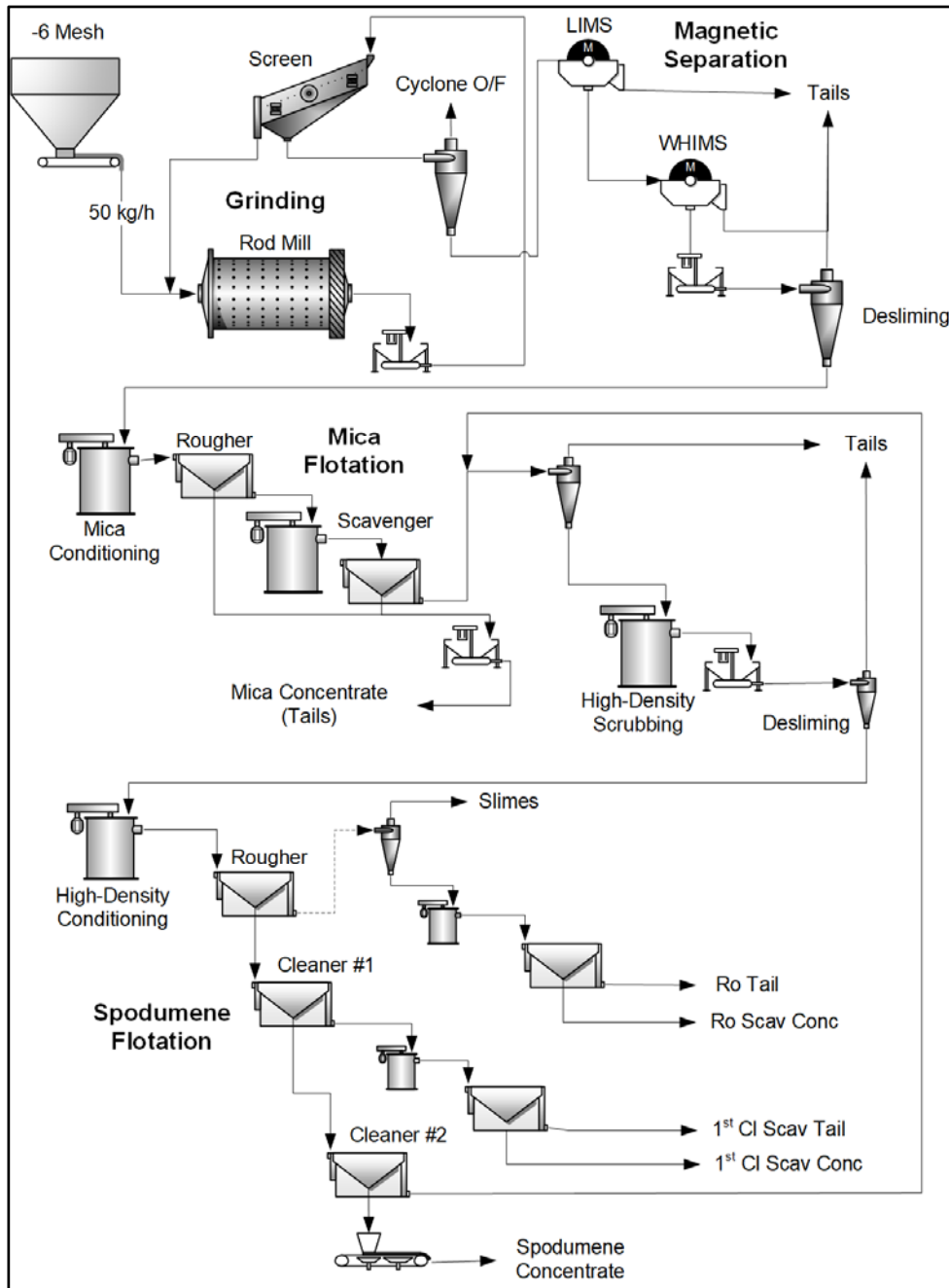


Figure 3: Pilot plant flowsheet

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Sayona Mining Limited is an Australian-based, ASX-listed (SYA) company focused on sourcing and developing the raw materials required to construct lithium-ion batteries for use in the rapidly growing new and green technology sectors.

The Company's primary focus is the development of the advanced stage Authier lithium project in Quebec, Canada. Authier mineralisation is hosted in a spodumene-bearing pegmatite intrusion with more than 31,100 metres of drilling in 176 diamond holes.

The Authier JORC (2012) compliant Ore Reserve and Mineral Resource estimates are tabulated below at a 0.45% Li₂O cut-off grade.

Authier JORC Ore Reserve Estimate (0.45% Li ₂ O cut-off grade)			
Category	Tonnes (Mt)	Grades (%Li ₂ O)	Contained Li ₂ O
Proven Reserve	4.9	0.99%	55,341
Probable Reserve	5.3	1.06%	64,363
Total Reserves	10.2	1.03%	120,098

Authier JORC Mineral Resources Estimate (0.45% Li ₂ O cut-off grade)			
Category	Tonnes (Mt)	Grades (% Li ₂ O)	Contained Li ₂ O
Measured	6.09	1.01%	61,509
Indicated	11.55	1.04%	120,120
Inferred	2.82	0.98%	27,636
Total Resources	20.46	1.02%	209,265

The Authier lithium deposit is amenable to open-cut mining methods, and processing using a crushing, grinding and flotation flowsheet to produce on average 96kt per year of 6% Li₂O concentrate over the projected 17 year mine life.

The Company is currently completing a Definitive Feasibility Study, due for completion in 2Q0218. During the second half of 2018, the Company will complete the permitting, offtake and financing with the plan to commence construction in the 1Q2019 and first production in 2020.

In addition, the Company controls a portfolio of lithium and graphite exploration projects in Western Australia.

Sayona Mining is committed to the local communities in which we operate, the environment and responsible management of natural resources and the safety of our people, suppliers and communities.

Please visit us as at www.sayonamining.com.au

Forward Looking Statements

This announcement may contain forward-looking statements. These forward-looking statements are based on Sayona's expectations and beliefs concerning future events. Forward looking statements are necessarily subject to risks, uncertainties and other factors, many of which are outside the control of Sayona, which could cause actual results to differ materially from such statements. Sayona makes no undertaking to subsequently update or revise the forward-looking statements made in the announcement, to reflect the circumstances or events after the date of that announcement.

Reference to Previous ASX Releases

This document refers to the following previous ASX releases:

- Expanded Authier JORC Resource, 12 April 2018
- Authier maiden JORC Ore Reserve estimate, 11 December 2017
- Updated Metallurgy Results, 5 November 2017

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and all material assumptions and technical parameters continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.