



# ASX ANNOUNCEMENT



15 NOVEMBER 2016

## AUTHIER LITHIUM PROJECT PROGRESS UPDATE

### Highlights

- Off-take options being evaluated to enhance project economics
- PFS progressing towards completion in 4<sup>th</sup> quarter 2016
- PFS to determine optimal project configuration, capital and operating costs
- Metallurgical testing demonstrates ability to produce a high-grade spodumene concentrate
- Additional environmental testing underway to support baseline environmental study

Sayona Mining Limited (ASX: SYA) ("Sayona" or the "Company") is pleased to announce an update on the development activities at the Authier lithium project, Quebec, Canada.

### Off-take and Project Value Adding Opportunities

The Company is exploring a number of options for selling or value-adding the high-quality spodumene concentrate that will be produced from a future operation at Authier. This includes direct sales of concentrate to converters that produce lithium products suitable for the global battery markets. Strong demand for the lithium products has driven concentrate prices to record levels and the Company has received strong interest for the supply of new concentrates to the market.

In early November, the Company attended a global lithium conference in China and held a number of discussions with interested parties seeking to establish long-term spodumene sales contracts. China is the global centre for the production of value-added lithium products and one of the potentially largest markets for the consumption of lithium-ion batteries. The Chinese Government has a stated clean energy policy, which includes significant investment subsidies, for growing electric vehicle sales from less than 500,000 in 2016 to over 5 million by 2020.

In addition, the Company is actively evaluating value-adding opportunities in the downstream lithium sector. Currently there is significant financial margins being achieved by the processing of spodumene concentrates into lithium carbonate. The Company is evaluating the technical and economic viability of building a lithium carbonate and/or hydroxide production conversion facility to enhance the project value, and improve the long-term competitive position of the project. Quebec is uniquely positioned with a number of significant commercial and market advantages. Quebec has excellent infrastructure including globally competitive, low-cost gas and electricity prices, skilled labour, road and rail transport networks, a supportive government, and is in close proximity to the US markets including, the Tesla Giga factory in Nevada.

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## **Metallurgical Testing**

SGS Lakefield in Canada is completing a detailed metallurgical test work program using 430 kilograms of drill core that was representative of the Authier deposit in terms of spodumene grade and mineralogical characterisation. This has included, adding the forecast 5% waste dilution that would occur mining, to the sample to as closely as possible simulate the ore feed to the metallurgical processing plant.

The process test work has successfully demonstrated the ability to produce high-grade concentrates using conventional flotation technology. The anticipated flow sheet incorporates crushing, grinding, mica removal via flotation, spodumene flotation, and drying and bagging. Authier ore has now been the subject of extensive metallurgical studies which the Company believes will significantly de-risk future commissioning and operation of the project.

The final stages of metallurgical test work program which incorporates locked cycle process testing of the Authier ore is nearing completion. Following completion of the locked cycle testing program, Bumigeme Inc will prepare an updated flow sheet, and capital and operating cost estimates for incorporation into the Pre-Feasibility Study ("PFS").

## **JORC Resource Upgrade and Pre-Feasibility Study**

The Company is working towards completing its PFS in 2016. Drilling data from the 3,800 metre resource definition and extension drilling program just completed will be incorporated into an updated JORC Mineral Resource estimate for the PFS. Geotechnical data collated during the drilling program will be incorporated into a new optimised mine plan.

The PFS will assess the development potential of a simple, low strip ratio, open-cut mining operation and processing facility producing spodumene concentrate.

The PFS is being prepared by SGS Canada and Bumigeme who together have significant experience and expertise in all aspects of lithium resource definition, mining, processing and infrastructure requirements in Quebec. The PFS will assess the technical and economic viability of developing the Authier project, and expands on the Authier NI43-101 Technical Report, Preliminary Economic Assessment, completed in 2013.

## **Environmental and Permitting**

A detailed base-line environmental study was completed at Authier in 2013. Whilst the report didn't highlight any significant environmental issues, it recommended a high-level focus on water and tailings management. As such, the Company has engaged consulting firms to undertake a number of updated studies, including:

- Tailings and waste rock disposal options including a geochemical characterisation program. However, based on the experience of other nearby similar deposits, the Company doesn't expect the tailings or waste rock to be acid generating or amenable to metal leaching; and
- A hydrogeological study to assess the hydrogeological conditions prevailing in the area, the current quality of the groundwater, and identify any potential impacts on the project ground water, plan the pumping activities, and to provide information for the geotechnical engineering and geo-mechanics of the project.

The Company is currently engaged with the local authorities to establish the permitting regime for Authier. It is expected that no Federal Government authorisation or Environmental Impact Assessment / Public Consultation process will be required if the project's planned annual production doesn't exceed 2,000 tonnes per day of ore (the same design rate in the 2013, Glen Eagle Resources, NI43-101, Authier Preliminary Economic Assessment). The Company will be required to apply for various operating permits and a mining lease.

### **Community Engagement**

The Company recently met with the local La Motte council mayor to outline its development plans for the project. Authier is expected to create between 40 and 60 direct jobs and a major investment in the local community. The Company is also planning a number of community forums during 2017.



**Figure 1:** Representatives of La Motte Council, including the Mayor, and Sayona CEO, Corey Nolan and Director, Dan O'Neill

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Sayona Mining Limited is an Australian, 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 18,000 metres of drilling in 139 holes.

The Authier JORC compliant Mineral Resource estimate is tabulated below at a 0.5% Li<sub>2</sub>O cut-off grade.

Authier JORC Mineral Resources Estimate (0.5% Li <sub>2</sub> O cut-off grade)			
Category	Million Tonnes	Grades Li <sub>2</sub> O	Contained Li <sub>2</sub> O
Measured	2.08	0.95%	19,730
Indicated	5.16	0.97%	50,092
Inferred	1.88	0.93%	17,480
<b>Total</b>	<b>9.12</b>	<b>0.96%</b>	<b>87,302</b>

Cautionary Note - Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources estimated will be converted into a Mineral Reserves estimate.

Authier is amenable to simple open-cut mining and processing methods, and is situated in close proximity to development infrastructure. The Company is currently completing a pre-feasibility study due for completion in late 2016.

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

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#### Reference to Previous ASX Releases

This release refers to the following previous ASX releases:

- "Authier JORC Resources", 5 July 2016
- "New mineralised pegmatite discovered at Authier, 11 Oct 2016"

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.