



# ASX ANNOUNCEMENT



11 DECEMBER 2017

## AUTHIER OPTIMISED PRE-FEASIBILITY STUDY DEMONSTRATES EXCELLENT RETURNS DEFINITIVE FEASIBILITY STUDY UNDERWAY

### Highlights

- Optimised PFS incorporates an updated Ore Reserve and Mineral Resource coupled with results from of a number of new studies
- Pre-tax NPV<sub>8</sub> of C\$221m (AUD\$227m), Pre-Tax IRR of 56% and capital payback 2.5 years
- LOM revenue C\$1,322m; 1.6Mt of spodumene concentrate sales over 17 years
- Low start-up capital expenditure of C\$64m and life-of-mine capital expenditure C\$110m

Sayona Mining Limited (ASX: SYA) ("Sayona" or the "Company") is pleased to announce the results of the Optimised Pre-Feasibility Study ("PFS") for the Authier lithium project in Canada.

The PFS incorporates the new expanded JORC Mineral Resource, results from a number of technical optimisation programs, and realignment of pricing to reflect a concentrate grade of 6% Li<sub>2</sub>O and more recent industry forecasts. The PFS confirms the technical and financial viability of constructing a simple, low-strip ratio, open-cut mining operation and processing facility producing spodumene concentrate. The positive PFS demonstrates the opportunity to create substantial long-term sustainable shareholder value at a low capital cost.

Key findings of the PFS, include:

- Pre-tax NPV<sub>8</sub> of C\$221 million and IRR 56% (real terms at 8% discount rate);
- Annual average concentrate production of 96,000 tonnes at 6% Li<sub>2</sub>O;
- Average annual revenue of C\$73 million and EBITDA of C\$35 million;
- Mine gate cash costs of C\$370/t and FOB Port cash costs of C\$430/t (US\$327/t);
- Initial capital expenditure of C\$64 million and C\$110 million over the life-of-mine; &
- Updated Ore Reserve of 11.66 Mt @ 1.03% Li<sub>2</sub>O (Proven Reserve 5.59Mt @ 0.99% Li<sub>2</sub>O and Probable Reserve 6.07Mt @ 1.06% Li<sub>2</sub>O) delivers a mine life of 17 years.

The Definitive Feasibility Study ("DFS") has now commenced and completion is expected in early 2018. In addition, a phase 3 drilling program has commenced to collect a large sample for pilot metallurgical testing and further optimisation of the Authier resource and reserve.

Corey Nolan, Chief Executive Officer, commented "The Company is very pleased to demonstrate Authier's potential to create significant shareholder value. The Company is now working towards completing a Definitive Feasibility Study, Mining Licence applications, offtake contracts and financing in 2018. This would enable construction of the project to commence in the second half of 2018 subject to receiving all the development permits".

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## PFS Update Program

The February 2017 PFS has been updated to incorporate the following new information:

- JORC Resource upgrade following the Phase 2 drilling program;
- Geotechnical and dilution studies;
- Improved metallurgical outcomes from the latest testing programs;
- Realignment of spodumene pricing to reflect current industry forecasts; and
- Review of operating and capital costs.

Based on the results of the new information, a new Proven and Probable Ore Reserve estimate of 11.66Mt @ 1.03% Li<sub>2</sub>O at a 0.45% Li<sub>2</sub>O cut-off grade (**Error! Reference source not found.**) has been defined.

Table 1– Authier JORC Ore Reserve Estimate (0.45% Li <sub>2</sub> O cut-off grade)			
Category	Tonnes (Mt)	Grades (%Li <sub>2</sub> O)	Contained Li <sub>2</sub> O
Proven Reserve	5.59	0.99	55,341
Probable Reserve	6.07	1.06	64,363
<b>Total Reserves</b>	<b>11.66</b>	<b>1.03</b>	<b>120,098</b>

Note: The Ore Reserve estimate is based on the details published in a separate ASX release “Authier JORC Ore Reserve”, 11 December 2017. The Ore Reserve Estimate is inclusive of 2% dilution and 5% ore loss

Key PFS financial and operating highlights are summarised in Table 2 and 3.

Table 2– Authier Lithium Project PFS Highlights			
Description	CAD\$	US\$	AUD\$
Average Spodumene Price	807	614	831
Initial Development Capital Costs	64	48	65
Total Life of Mine Capital Costs	110	84	113
Total Net Revenue (real terms)	1,322	1,004	1,361
Total Project EBITDA (real terms)	624	474	642
Average Life of Mine Cash Costs (Mine-gate)	370	281	381
Average Life of Mine Cash Costs (Montreal Port FOB basis)	430	326	442
Net Present Value (real terms @ 8% discount rate)	221	167	227
Pre-Tax Internal Rate of Return		56	
Project Payback Period		2.5	

Notes: CAD\$:US\$ 0.76 and CAD\$:AUD\$ 1.03

**Table 3– Authier Lithium Project PFS Operating Highlights**

Description	Unit	Results
Average Annual Ore Feed to the Plant	tonnes	686,000
Annual Average Spodumene Production	tonnes	96,000
Life-of-Mine	years	17
Life-of-Mine Strip Ratio	waste to ore	6.95:1

## Overview of New Work Programs

### *JORC Mineral Resources Upgrade*

In June 2017, the Company reported a JORC 2012 compliant Mineral Resource following the Phase 2 drilling program<sup>1</sup>. The Mineral Resource has been updated to include the Northern Pegmatite which was not previously incorporated in the Mineral Resource. In addition, the Authier Main pegmatite has been increased due to refinement of the lithium solids model for the main pegmatite. The Authier deposit has 20,183 metres of diamond drilling in 150 holes.

**Table 4 – Authier JORC Mineral Resources Estimate (0.45% Li<sub>2</sub>O cut-off grade)**

Category	Tonnes (Mt)	Grades %Li <sub>2</sub> O	Contained Li <sub>2</sub> O
Measured	5.86	1.01%	59,186
Indicated	10.19	1.03%	104,957
Inferred	2.30	0.99%	22,810
<b>Total</b>	<b>18.35</b>	<b>1.02%</b>	<b>186,953</b>

### *Geotechnical & Dilution Studies*

The Company has gathered and processed essential geotechnical and oriented core data during the 2016 and 2017 diamond drilling programs. The data has been used to characterize the wall rock massif quality, identify main structural trends and evaluate their potential effects on pit wall stability. The geotechnical data gathered included rock quality designation (“RQD”), core recovery, geotechnical logging of oriented structures (readings of alpha and beta angles of joints and fault planes), aiming to systematically track and highlight significant structural trends and faults zones. Additionally, a total of 380 point load tests were done on site and 10 samples for uniaxial compression strength (UCS) testing were performed at the Université de Montréal. The results from the 10 UCS samples correlate well with the point load tests done in the field. The rock tested can be considered Very Hard (100-200 MPa) to Extremely Hard (>200MPa), ranging from 136 to 242 MPa. These assumptions have been used to derive the pit design parameters outlined in Table 4.

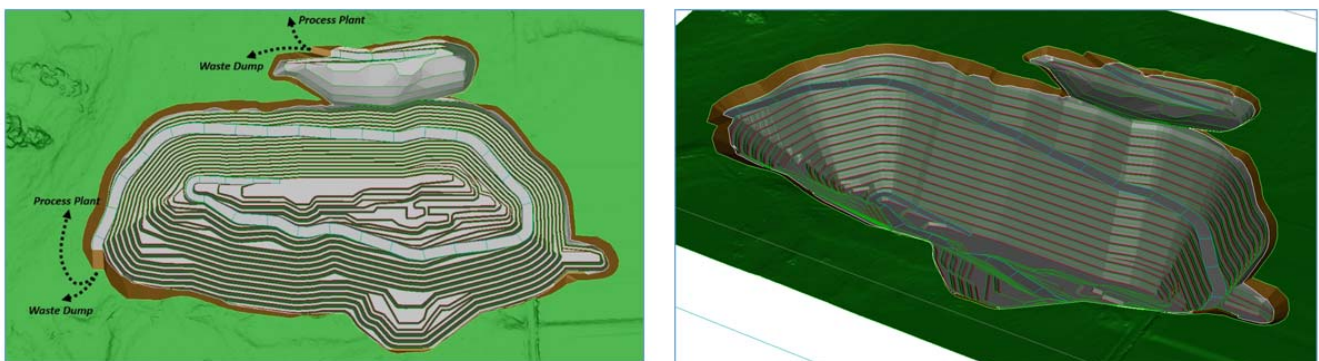
<sup>1</sup> See ASX release, “Authier JORC Resource Increased, 14 June 2017

Table 4 – Geotechnical Pit Design Parameters		
Parameter	Unit	Value
Overall Slope Angle (rock)	degrees	40 & 55*
Overall Slope Angle (overburden)	degrees	30
Bench Height (single bench)	metres	6.0
Bench Height (double bench)	metres	12.0
Batter Face Angle	degrees	60 & 77*
Berm Width (double bench)	metres	6.0
*South and North wall, respectively		

In addition, a detailed assessment of ore dilution and losses was completed. As a result an ore dilution of 2% and ore loss factor of 5% at 0% Li<sub>2</sub>O grade was adopted.

The new data was used for a pit optimisation utilising Whittle Software based on conventional open pit mining using trucks and a hydraulic shovel, at a 0.45% Li<sub>2</sub>O cut-off grade. The cut-off grade is based on the economic assumptions outlined in the PFS. The Measured and Indicated Resources were used for the optimisation studies to estimate the Ore Reserves. All the mineralised material classified in the Inferred Resource category was considered as waste for the pit optimisation process.

The design outlines a pit of ~1,000 metres in length (east-west), an average of 600 metres width (north-south) and down to a final pit depth of 200 metres. The maximum planned total material movement including waste, stockpile reclaim, and ore to the run-of-mine (“ROM”) pad is 9.5 Mtpa.



**Figure 1: Isometric views of the Authier pit**

The PFS demonstrated a LOM strip ratio of 6.95:1 (waste to ore) and 4.5:1 over the first three years.

### ***Metallurgical Programs***

The processing plant has been designed based on a number of metallurgical testing programs. Authier has been subjected to three prior metallurgical test work programs in 1999, 2012, and 2016.

During 2017, two new representative samples were prepared and flotation testing undertaken using different test conditions – see Table . The new results demonstrated the ability to produce concentrates grading significantly higher than 6% Li<sub>2</sub>O and at recoveries over 80%. This compares to the February 2017 Pre-Feasibility Study assumptions of 5.75% Li<sub>2</sub>O and 80% for concentrate grades and recoveries, respectively.

The results demonstrate that practical management of dilution in the mine and processing plant will be paramount to achieving the new metallurgical outcomes. The Company has completed a dilution study as part of the PFS, which included plans for managing dilution through grade control drilling, blasting patterns and mining techniques.

**Table 6 – Best Results from the 2017 Phase 2 and 3 Metallurgical Testing Programs**

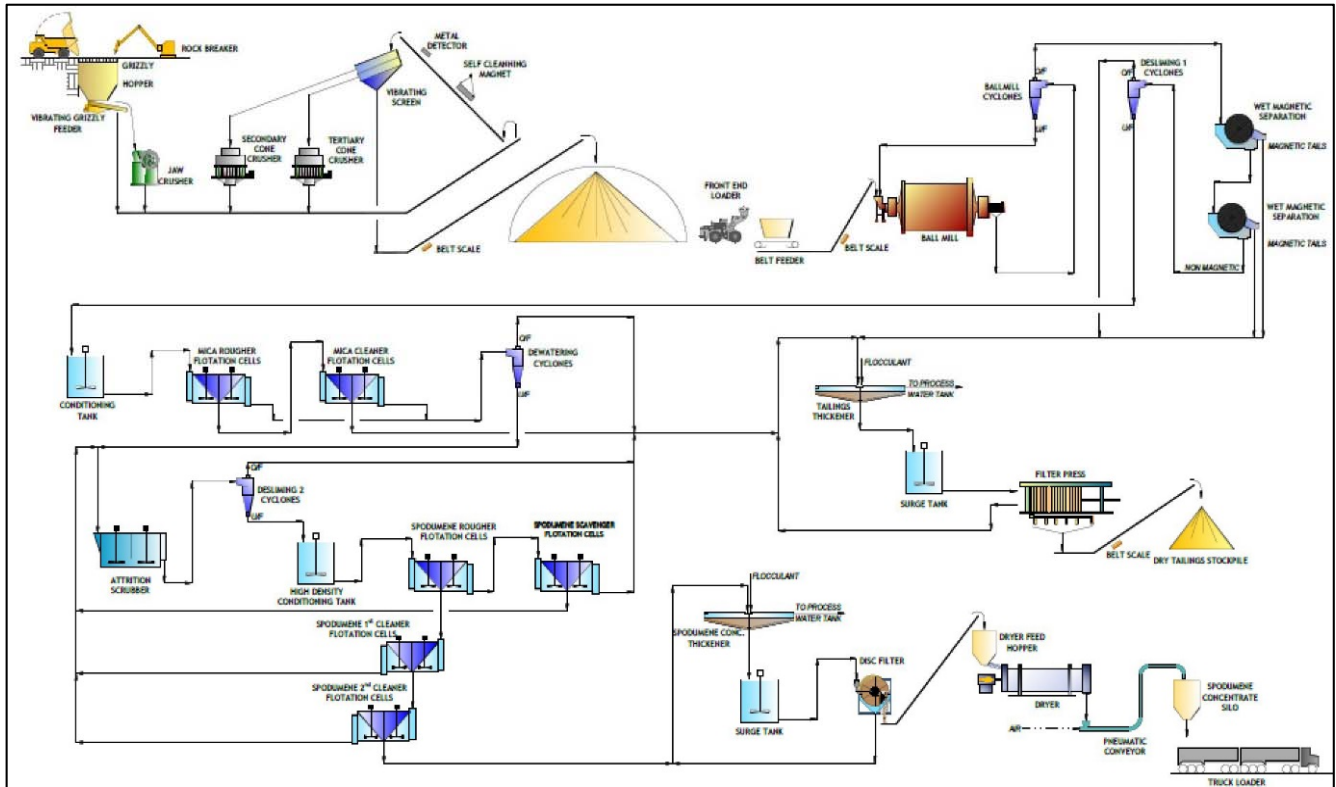
Sample	Description	Concentrate Grade %Li <sub>2</sub> O	Metallurgical Recovery %
F6	Grind 150 μ, 2 <sup>nd</sup> -Cleaner concentrate	6.32	83
	Grind 150 μ, 1 <sup>st</sup> -cleaner concentrate	5.95	85
F8	Grind 180 μ 2 <sup>nd</sup> -Cleaner concentrate	6.58	83
	Grind 180 μ 1 <sup>st</sup> -cleaner concentrate	6.31	85
F1	Grind 180μ, tap water	6.30	74
F2	Grind 150μ, tap water	6.03	81
F3	Grind 180μ, Authier site water	6.10	80
F4	Grind 150μ, Authier site water	5.95	80

F6 and F8 were samples from August 2017 program. F1-F4 were from the October 2017 program

For the purposes of the PFS, a concentrate grade of 6% Li<sub>2</sub>O and a processing recovery of 82% have been adopted. The concentrator plant will process 700,000 tpa of ore feed using conventional flotation technology suitable for a pegmatite orebody (see Figure 2). The processing plant comprised seven key areas, including:

- Three-stage crushing (jaw and two-stages of cone crushing);
- Ball mill grinding;
- Magnetic separation to reduce the iron content of the concentrate;
- Mica-flotation;
- Spodumene flotation;
- Concentrate dewatering and drying; and
- Tailings thickening and filtering for co-disposal with the main waste dump.

The plant will produce a 6% Li<sub>2</sub>O concentrate suitable for sale to lithium carbonate conversion plants that supply feed-stock to the lithium battery manufacturers. Further metallurgical test work will be undertaken aimed at improving the metallurgical recovery and concentrate grades.



**Figure 2: Process Plant Flowsheet**

### Capital Costs

The initial capital cost estimate to construct a new 700,000 tpa process plant, including selected mobile equipment, site infrastructure, and all direct and indirect costs is C\$64 million (Table 7) which is slightly less than previously estimated in the February 2017 PFS of C\$66 million. This estimate includes a contingency of 10%.

The major capital cost item for the project is the process plant and associated infrastructure. The process plant capital cost contains an estimate of the equipment cost, installation, instrumentation and control, piping, electrical and building costs. Process equipment costs were either obtained from budgetary quotes or the Wave International Ltd equipment cost database. Minor equipment costs were estimated based on historical data or with an allowance.

The study assumes that the majority of the mining fleet is leased to keep the overall up-front development capital cost as low as possible.

The project's low capital costs are attributable to a range of factors, including:

- Close proximity to established infrastructure – power lines (5 kilometres), sealed national highways (5 kilometres), rail (20 kilometres), local water supplies, and skilled workforce (Val d Or, Rouyn-Noranda and Amos);
- No requirement for on-site infrastructure such as accommodation camps and power plants;

- Low electricity costs in Quebec; and
- Simple deposit geology, mining and production processes.

The costs presented have been estimated to an overall accuracy of +/-25%, which is typical for this level of study. The estimates exclude any escalation over the LOM. The costs are derived from a combination of quotations from vendors and suppliers specifically sought for this project, and in some instances data sourced from other projects.

Table 7 – Authier Initial Capital Cost Estimates	
Cost Area	C\$ million
Site establishment	3.16
Process plant supply and install	35.50
Process plant support infrastructure	1.59
Non process infrastructure	6.79
Indirect costs	8.96
Mining fleet (1st year pre-production)	2.70
Contingency	5.54
<b>TOTAL</b>	<b>64.18</b>

Sustaining costs over the life of the project total C\$46 million (Table 8) and LOM capital costs total \$110 million.

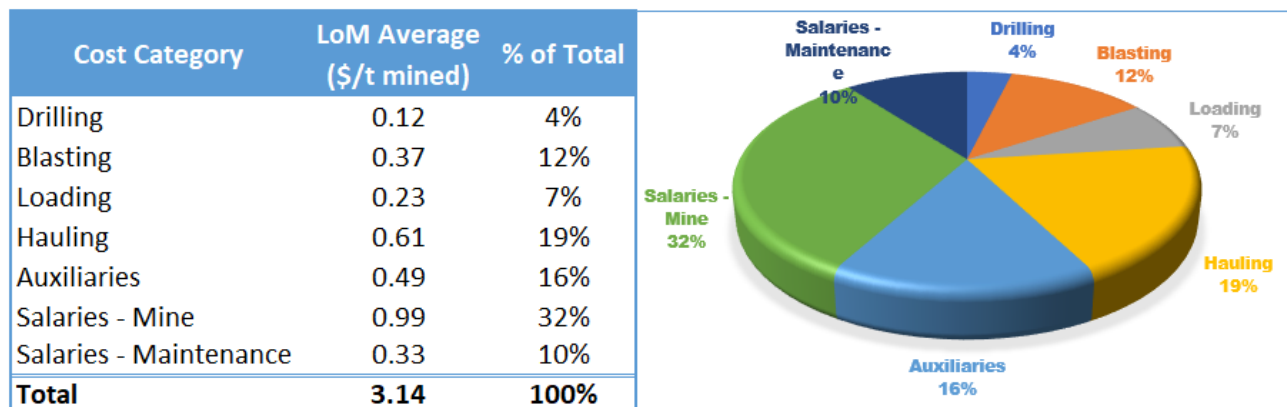
Table 8 – Authier Sustaining Capital Cost Estimates	
Cost Area	C\$ million
Mining (including equipment fleet leasing costs)	38.48
Mill Sustaining Capital	4.78
Rehabilitation and Closure Costs	2.50
<b>Total Sustaining Capital Costs</b>	<b>45.76</b>

### *Operating Costs*

The operating costs for the PFS have been prepared by the study participants. The majority of the mine-gate costs are associated with the mining operations (48%) which were prepared by Sayona and the processing plant facilities (36%) which were estimated by Wave International Ltd. The balance of the costs (16%) is attributable to vendor royalties, administration and marketing costs.

The mining costs are based on the leasing of the majority of the mining equipment to significantly reduce the initial capital expenditure of the project. The data was provided by Caterpillar and Atlas Copco. In addition, the Company has benchmarked its calculated mining costs to external mining contractors. The total unit mining costs of the project have been estimated at C\$3.14/tonne ore mined over the life of mine – see Figure 3: Mining cost

breakdown. The new unit mining cost estimate is slightly higher than the February 2017 PFS of \$2.94/tonne.



Note: Salaries account only for hourly employees. Staff salaries are built-in the G&A cost.

Figure 3: Mining cost breakdown

Wave International Ltd has prepared the operating costs are based on processing 2,000 tonnes per day of ore and have been established based on budgetary quotations. The process operating costs consist of manpower, energy, consumables, reagents, spares and others required for operation of the mineral processing plant.

The average life-of-mine cash operating cost is approximately C\$370/tonne of concentrate mine gate and C\$430/tonne FOB Montreal.

Table 9 – Authier Cash Operating Cost Estimates (LOM average per tonne of concentrate)		
Cost Area	C\$/tonne	US\$/tonne
Mining	178	135
Processing	134	102
Vendor Royalties	19	14
General, Administration and Marketing	39	30
<b>Mine gate costs</b>	<b>370</b>	<b>281</b>
Transportation FOB Port of Montreal	60	46
<b>Total Cash Operating Costs</b>	<b>430</b>	<b>327</b>



## *Markets and Pricing*

### **Markets**

Lithium concentrate produced from Authier will be classed as Chemical Grade specification. The principal markets for Chemical Grade concentrates are battery, lubricants, aluminum smelting and pharmaceuticals applications.

The future outlook for lithium demand is positive according to UBS estimates of demand growth of approximately 19% between 2016 and 2025, representing total demand of 874,000 tonnes LCE in 2025<sup>2</sup>.

The lithium market is currently experiencing a major demand shift driven by the increasingly critical role of the lithium-ion battery technology for storage applications in the automotive, consumer electronics and electricity storage/distribution sectors. The electrochemistry of lithium based batteries provide higher voltage, higher power density and lower discharge rates with no memory effect, when compared to competing technologies.

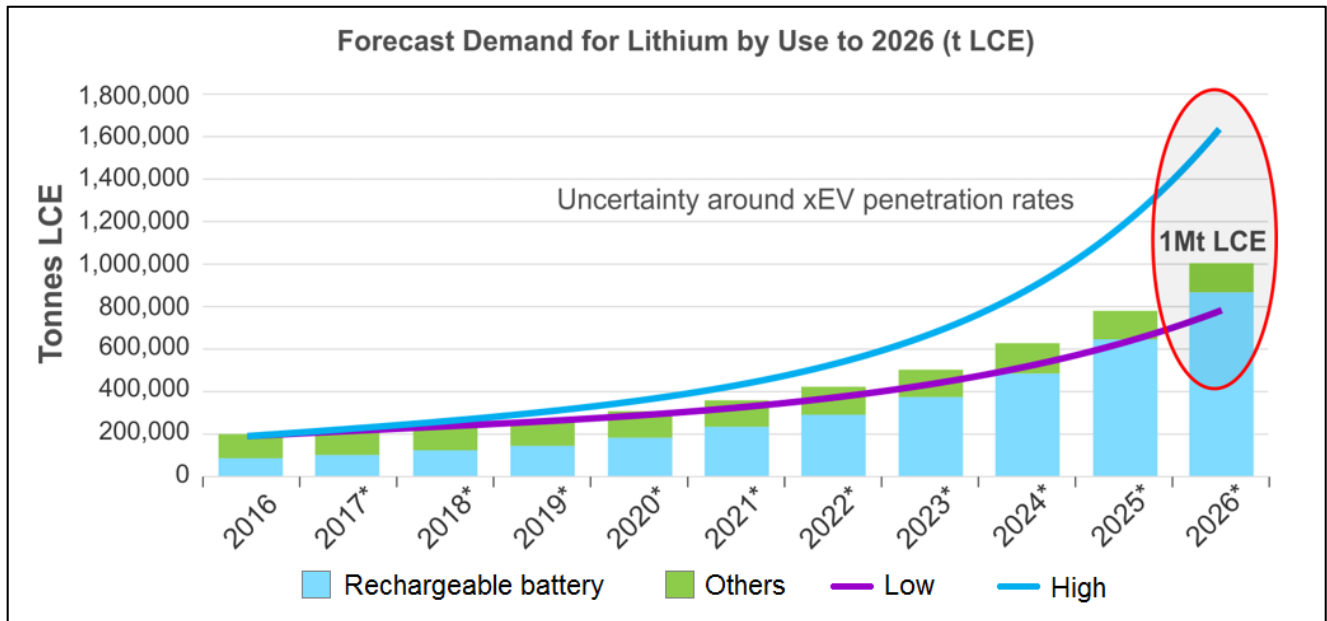
The lithium-ion battery or rechargeable market represented 42% of total lithium consumption or 81,300 tonnes of Lithium Carbonate Equivalent ("LCE") in 2016, a year-on-year increase of 38%<sup>3</sup>. Most industry commentators are forecasting the consumption of lithium in volume terms will continue to be driven heavily by the rechargeable battery sector. In a recent presentation, Roskill estimated that the total consumption of lithium could approximately 5 times from 189,000 tonnes in 2016 to 1,000,000 tonnes LCE by 2026<sup>4</sup> -Figure 4. Key macro demand drivers include, carbon emissions legislation aimed at reducing the reliance on fossil fuels, government incentives, environmental concerns, technological advancements, and the improved product offerings utilising lithium-ion batteries.

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<sup>2</sup> UBS, Lithium & Graphite: Driving Disruption, 15 June 2017

<sup>3</sup> UBS, Lithium & Graphite: Driving Disruption, 15 June 2017

<sup>4</sup> Source: Robert Baylis, Roskill, 9th Lithium Supply and Markets Conference, 31st May 2017



**Figure 4: Roskill lithium demand projection.**

According to Deutsche Bank<sup>5</sup>, within the battery segment, key drivers include:

- Electric vehicles (“EV”) – the adoption of electric vehicles is poised to rapidly expand over the next decade. Forecast global EV penetration (including hybrids and plug-in-hybrids) to increase from 4% of 2015 global auto sales (of which EV accounted for 0.6%) to 14% market share by 2025, of which EV makes up 2.6% of sales. This implied the EV market would grow from 0.5 million units in 2014 to 3 million global sales within ten years. This represents growth in lithium demand from 25Kt LCE in 2015 to 205kt in 2025 (23% CAGR over the next ten years);
- Grid scale battery storage – whilst at an early-stage, lithium-ion batteries have the capability to increase energy reliability in undeveloped grids, balance short term grid fluctuations, reduce grid congestion and load shift power requirements from peak periods. The introduction of the Tesla power wall has the potential to revolutionise this market as pricing becomes more affordable. Forecasts battery use in energy storage will grow to 50GWhpa by 2025, a 46% CAGR over 10 years. As a result, lithium demand will increase from virtually nil in 2015 to 34kt LCE in 2025; and
- Consumer electronics – lithium-ion batteries remain the dominant technology for consumer electronic applications. This segment could raise annual consumption from 42kt in 2014 to 63kt LCE by 2020, representing a CAGR of 3.5%. This will be driven by the increased power intensity of mobile headsets as the developing world transitions to smart phones.

Global lithium supply, representing ~83% of supply in 2016, is dominated by four key producers: Albermale, SQM, FMC and Sichuan Tianqui. In 2016, Olaroz, Mt Cattlin, Mt Marion

<sup>5</sup> Deutsche Bank, Welcome to the Lithium-ion Age, Industry Report, 9 May 2016

and La Negra were new entrants to the market. However, other supply responses have been slower than anticipated, and prices have soared to record highs. The supply responses from other potential new entrants looks to be slow due to funding constraints, and the potential for delays and cost overruns as seen by the new projects that have recently entered the market. This could result in a tight supply and demand outlook, and may support the continuation of the high prices currently being contracted.

## Prices

Lithium product prices respond to variations in supply, demand and the perceived supply/demand balance in a similar way to most raw materials. The most commonly referenced currency for lithium sales transactions is the USD, although most domestic transactions between Chinese domestic producers and consumers are conducted in the Chinese currency - Renminbi (RMB). The units of measure used in transactions vary from region to region and between product types.

There is no exchange traded market for hard-rock lithium concentrates or other lithium compounds. Predicting pricing for lithium is also difficult as many of the transactions are between private buyers and sellers for small quantities. Spot prices for lithium have become more widely quoted, although they are not thought to influence contract pricing, rather they reflect material available off-contract in small volumes and are likely higher (when the market is good) or lower (when the market is poor) than contract prices.

There are a number of pricing benchmarks for various lithium products (lithium carbonate or lithium hydroxide whose prices can vary significantly depending on grade). However, the most relevant benchmark for spodumene concentrate pricing is the Lithium Carbonate Equivalent price. This pricing data is typically only available via paid subscription services, such as Benchmark Mineral Intelligence, and the quality of the data is limited by the number of transactions available in the public domain.

There is more pricing information available for the pricing of lithium carbonate and lithium hydroxide. There is no direct link between concentrate prices and lithium carbonate price. However, the  $\text{Li}_2\text{O}$  contained in spodumene concentrates allows production of LCE material on a ratio of 1:2.47 (i.e. 100kt of 6.0%  $\text{Li}_2\text{O}$  concentrate containing 6,000t of  $\text{Li}_2\text{O}$  will contain enough lithium to produce 14,840t of lithium carbonate). Concentrate prices will reflect this value, less other processing and input costs borne by the downstream processor.

In recent years, concentrate prices reported to the market have risen with LCE pricing. Most spodumene contracts are done on a frame contract basis, in which the volumes are mutually agreed for a fixed period (typically up to a maximum of two years), and the pricing is negotiated over relatively short periods of time. Contracts recently reported in the public markets, include:

- December 2016 - Galaxy Lithium Limited ("Galaxy") announced it entered into sales contracts with Chinese buyers for all of 2017 at a base price of US\$830 per

- tonne FOB for 5.5% Li<sub>2</sub>O concentrate (the contract stipulated that should Galaxy produce 6% Li<sub>2</sub>O concentrate then the pricing would be US\$905 per tonne FOB)<sup>6</sup> ;
- April 2017 – Tawana Resources Limited agreed a fixed price for all production no later than 21 March 2108 up to 31 December 2019 of 6% concentrate at US\$840/t FOB Esperance<sup>7</sup> . The arrangement included a AUD\$25 million interest-free prepayment in three instalments (April, July and September). The agreement is for five years with prices for year 3 to 5 being based on prevailing market conditions;
  - July 2017 – Neo Metals Limited signed an offtake contract with Gangfeng Lithium, effective 1 July 2017, for 6% concentrates at US\$841/t CFR China<sup>8</sup> . The agreement includes a formula which is linked to the weighted average China import prices of lithium carbonate and lithium hydroxide. There is a floor price protection mechanism for the producer, which covers the cost of production plus a guaranteed margin; and
  - July 2017 – Altura Mining Limited announced that it has entered into two, five year supply contracts of 100,000 tonnes per annum of 6% concentrate. Annual pricing is set based on industry benchmarks with a floor price of US\$550/t and cap of US\$950/t for the first three years<sup>9</sup>; and
  - November 2017 – Galaxy announced extensions to contracts with Chinese buyers for the next five years and pricing for 2018 was at similar pricing to the 2017 contracts<sup>10</sup>.

Forecasts for lithium concentrate prices are available from independent industry analysts and investment banks and/or brokers. Spodumene concentrate price forecasts for the PFS have been derived from the average of three leading investment banking group's including Canaccord, UBS and Citibank. The real LOM average price assumption is US\$614/tonne for a 6% Li<sub>2</sub>O concentrate.

### ***Offtake***

The Company is exploring a number of options for selling high quality spodumene concentrate that would 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 lithium products has driven concentrate prices to record levels.

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<sup>6</sup> Galaxy Lithium ASX Release, "Lithium Contract Pricing", December 2016

<sup>7</sup> Tawana Resources ASX Release, "Lithium Offtake Agreement signed for Bald Hill Lithium and Tantalum Project", 26 April 2017

<sup>8</sup> Neometals ASX release, "Min Update - Mt Marion Lithium Operations", 5 July 2017

<sup>9</sup> Altura ASX Release, "Altura completes binding offtake contracts with leading Chinese battery manufacturer and lithium converter", 10 July 2017

<sup>10</sup> Galaxy Lithium ASX release, "Galaxy signs long term contracts offtake agreements for Mt Cattlin", 29 November 2017

The Company has undergone discussions with companies that have or are proposing to construct lithium carbonate plants in Canada, and have received strong interest for the supply of new concentrates to these facilities.

In addition, the Company has received strong interest from Chinese concentrate converters interested in sourcing and shipping the concentrate from Montreal to China for processing. The Company recently announced a Memorandum of Understanding (“MOU”) with Huan Changan Lico Co Ltd, a subsidiary of Fortune 500 Company, Minmetals Group. The MOU paves the way for advancing discussions to facilitate a development alliance exploring marketing, technical and financial opportunities for the Authier project, including, purchasing up to 100,000 tonnes of spodumene concentrate per annum; and

## Financial Outcomes & Sensitivity Analysis

The key parameters and financial outcomes for the PFS are set out below in Table 5.

Table 5 – Authier Lithium Project PFS Highlights		
Description	Unit	Results
Average Annual Ore Feed to the Plant	tonnes	696,000
Annual Average Spodumene Production	tonnes	96,000
Life of Mine	years	17
LOM Strip Ratio	waste to ore	6.95
Average Spodumene Price	US\$/t	614
Development Capital Costs	C\$ million	64
Total Life of Mine Capital Costs	C\$ million	110
Total Net Revenue (real terms)	C\$ million	1,322
Total Project EBITDA (real terms)	C\$ million	625
Average Life of Mine Cash Costs (mine gate)	C\$/tonne	370
Average Life of Mine Cash Costs (FOB Port of Montreal)	C\$/tonne	430
Average Life of Mine Cash Costs (FOB Port of Montreal)	US\$/tonne	327
Net Present Value (real terms @ 8% discount rate)	C\$ million	221
Pre-tax Internal Rate of Return	%	56
Project Payback Period	years	2.5
Exchange Rate	CAD: USD	0.76

The sensitivity of the pre-tax NPV and IRR was evaluated for changes in key driven variables and parameters such as:

- Capital cost;

- Processing recovery;
- Spodumene concentrate selling price;
- Open pit mining cost;
- Processing cost; and
- And exchange rate between \$CAD and \$USD.

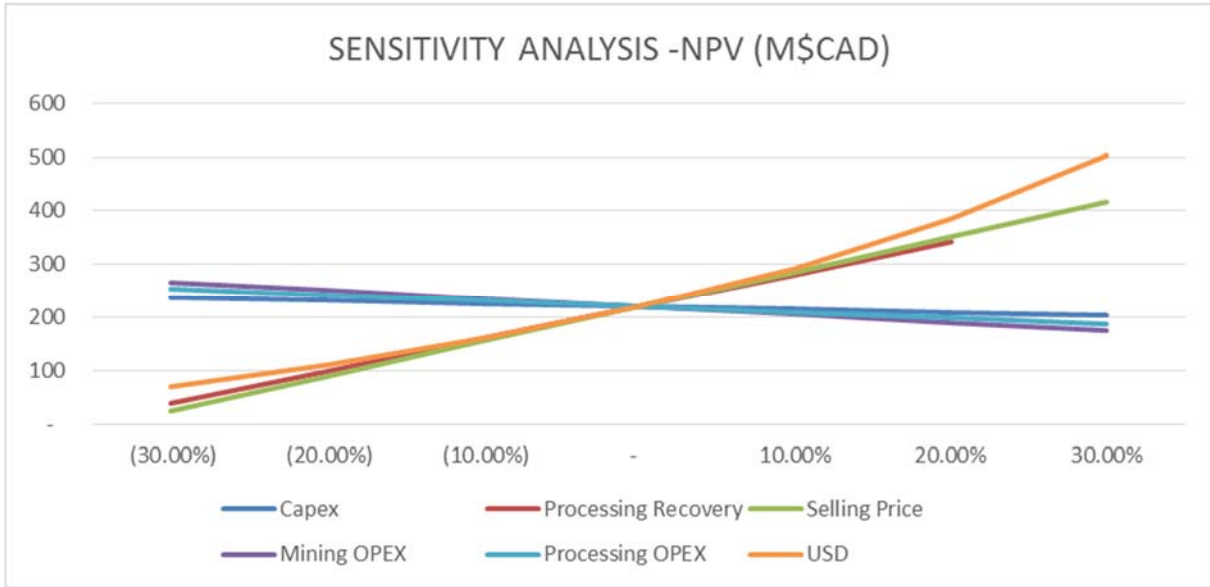


Figure 5 – Pre-Tax NPV sensitivity analysis

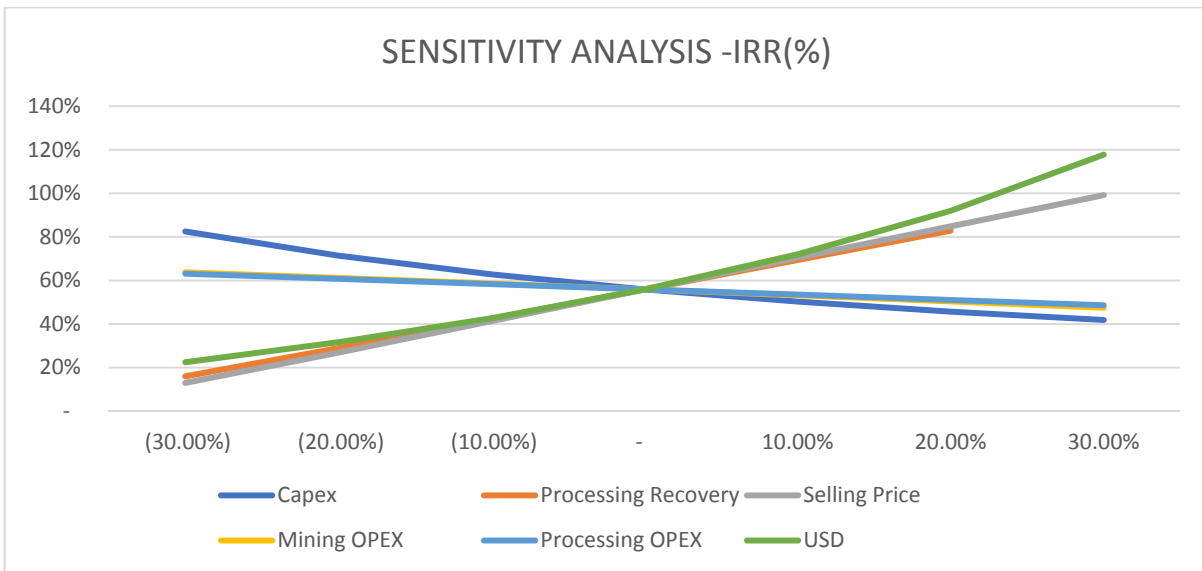


Figure 6 – Pre-Tax IRR sensitivity analysis

## Project Implementation

The Company's project development plan encompasses the following activities, and is targeting construction commencing second half 2018 and commissioning at the end of 2019:

- Phase 3 drilling for collecting a pilot plant metallurgical sample, and reserve definition and geotechnical purposes;
- Pilot plant metallurgical testing;
- Finalisation of the Definitive Feasibility Study;
- Final engineering;
- Procurement and ordering of long lead items;
- Completion of Environmental and Mining Lease permitting;
- Community and First Nations consultation;
- Binding Off-take agreements;
- Finance; and
- Construction and commissioning.

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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.

Please visit us as at [www.sayonamining.com.au](http://www.sayonamining.com.au)

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#### REFERENCE TO PREVIOUS ASX RELEASES

This ASX release refers to the following previous ASX releases:

- "Authier JORC Resources", 11 December 2017
- "Authier JORC Ore Reserves", 11 December 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.