ASX ANNOUNCEMENT

SAYONA MINING LIMITED

24 SEPTEMBER 2018

POSITIVE AUTHIER DEFINITIVE FEASIBILITY STUDY REAFFIRMS POTENTIAL OF SUSTAINABLE NEW LITHIUM MINE

Highlights

- **Positive definitive feasibility study (DFS) for Authier Lithium Project shows potential for profitable and sustainable new lithium mine, delivering jobs, investment and other economic benefits to local community**
- **Pre-tax net present value (NPV) of C$184.8m (AUD $194.0m), pre-tax internal rate of return (IRR) of 33.7% and estimated payback of 2.6 years**
- **Life of mine (LOM) revenue C$1,394m; projected 1.58 million tonnes (Mt) of spodumene concentrate sales over 18 years**
- **Low start-up capital expenditure of C$89.9m, with production scheduled for 2020**
- **Downstream test work underway to produce lithium carbonate and hydroxide from pilot plant concentrate, with results to be used for a Pre-Feasibility Study**

Emerging lithium miner Sayona Mining Limited (ASX: SYA) announced today a positive definitive feasibility study (DFS) for its flagship Authier Lithium Project in Canada, which demonstrates the project's potential to deliver a profitable and sustainable new lithium mine that will provide new jobs, investment and other benefits for all stakeholders.

The new mine could create 150 jobs in construction and up to 160 jobs in operation, with the Company giving priority to local employment and suppliers. Sayona is targeting a number of potential markets for its product, which is in increasing demand due to the role of lithium-ion battery technology in the clean energy revolution for cars and electricity.

Key findings of the DFS include:

- Pre-tax NPV of C$184.8 million and IRR 33.7% (real terms at 8% discount rate);
- Annual average concentrate production of 87,400 tonnes at 6% Li_2O;
- Average annual revenue of C$80 million;
- Mine gate cash costs of C$416/t and FOB Port cash costs of C$482/t (US$366/t);
- Initial capital expenditure of C$89.9 million;
- Updated Ore Reserve of 12.10 Mt @ 1.00% Li_2O (Proven Reserve 6.10Mt @ 0.99% Li_2O and Probable Reserve 6.00 Mt @ 1.02% Li_2O) delivers a mine life of 18 years.

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The DFS incorporates an increased JORC resource, results from a number of technical optimisation programs and realignment of pricing to reflect more recent industry forecasts. It includes results from the phase 3 drilling program, pilot plant metallurgical testing and further optimisation of the Authier resource and reserve.

Welcoming the DFS findings, Sayona's Managing Director, Dan O'Neill, said: "This study confirms the technical and financial viability of constructing a simple, low-strip ratio, open-cut mining operation and processing facility producing spodumene concentrate for the lithium-ion battery market.

"The clean energy revolution is driving demand for new lithium projects such as Authier, providing a positive long-term outlook. We will now step up our engagement with potential partners and investors, while continuing our close consultations with the local community and government to ensure sustainable and beneficial outcomes for all stakeholders."

Significantly, the Authier project is located close to the established mining support city of Val d'Or (45 kilometres to the south-east) and the city of Amos (20 km to the north). It will benefit from Quebec's excellent infrastructure including low-cost hydro-electric power, extensive rail and road networks and the region's skilled labour, along with close proximity to US markets including the Tesla Giga factory in Nevada.

Authier DFS Key Study Outcomes and Assumptions

The DFS has been completed to an accuracy of -10/+15% and has contributions from a number of leading industry service providers including BBA, SNC-Lavalin and ASDR. All of the metallurgical testing was undertaken at SGS Canada Inc. at their Lakefield, Ontario facility that has been operating for over 70 years. SGS has considerable experience in testing for Canadian lithium projects. Dr Gustavo Delendatti was the Competent Person for the Mineral Resource estimate.

Key outcomes of the DFS include an NPV of C$184.8 million over an initial 18-year mine life, based on the current Proven and Probable Ore Reserve estimate of 12.10 Mt @ 1.00% Li_2O at a 0.55% Li_2O cut-off grade (Table 1).

Table 1– Authier JORC Ore Reserve Estimate (0.55% Li_2O cut-off grade)

Category	Tonnes (Mt)	Grades (% Li_2O)	Contained Li_2O (t)
Proven Reserve	6.10	0.99	60,390
Probable Reserve	6.00	1.02	61,200
Total Reserves	**12.10**	**1.00**	**121,590**

Note: The Ore Reserve estimate is based on the details published in a separate ASX release "Authier JORC Ore Reserve Estimate", 24 September 2018. The Ore Reserve Estimate is inclusive of dilution and ore loss.

The pre-tax Internal Rate of Return ("IRR") is estimated at 33.7% and payback on capital is 2.6 years. The LOM cash operating costs are estimated at C$416 per tonne (mine gate basis) or C$482 per tonne FOB Port of Montreal, based on a development capital expenditure of C$89.9 million and a life-of-mine capital cost estimate of C$83.6 million.

Table 2– Authier Lithium Project DFS Highlights		
Description	**Unit**	**Results**
Average Annual Ore Feed to the Plant	tonnes	675,500
Annual Average Spodumene Production	tonnes	87,400
Life-of-Mine	years	18
Life-of-Mine Strip Ratio	waste to ore	6.9:1
Average Spodumene Price	US$/tonne	675
Initial Development Capital Costs	C$ million	89.9
Total Life of Mine Capital Costs	C$ million	83.6
Total Net Revenue (real terms)	C$ million	1,394
Total Project EBITDA (real terms)	C$ million	460
Average Life of Mine Cash Costs (Mine-gate)	C$/tonne	416
Average Life of Mine Cash Costs (Montreal Port FOB)	C$/tonne	482
Net Present Value (real terms @ 8% discount rate)	C$ million	184.8
Pre-Tax Internal Rate of Return	%	33.7
Project Payback Period	years	2.6
Exchange Rate	CAD:USD	0.76

The Company will continue to pursue opportunities to optimise and enhance the value of the project, including:

- Additional definition and expansion drilling to optimise the size of the resource and reserves and extend the project mine life. The drilling will target potential shallow extensions of the resource in the eastern and western sectors which have the potential to reduce the overall waste to ore ratio;
- Further metallurgical test work to improve processing metallurgical recoveries. The DFS assumes a metallurgical recovery of 78% and a 6% Li_2O concentrate grade however recovery rates of up to 79% and concentrate grades higher than 6% Li_2O have been achieved in metallurgical testing; and
- Completing a Pre-Feasibility Study (PFS) to assess the economic and technical viability of producing lithium hydroxide and/or carbonate from Authier spodumene concentrates at a site to be determined. This follows the positive results of the Scoping Study (see ASX release, Lithium Carbonate/Hydroxide Concept Study Demonstrates Positive Technical and Economic Viability, 30 August 2017).

The Authier deposit will be mined by open cut methods enhanced by the shallow and thick nature of the mineralisation, allowing spodumene ore to be processed from the commencement of mining. The DFS demonstrated a LOM strip ratio of 6.9:1 (waste to ore) providing a low mining cost.

BBA designed a concentrator plant to process 675,500 tpa of ore feed using conventional flotation technology suitable for a pegmatite orebody. The plant will produce a 6% Li_2O concentrate suitable for feedstock to downstream lithium conversion plants.

The DFS pricing is based on the average price forecasts of three leading lithium industry research groups including BMO, Canaccord Genuity and Macquarie Bank. The DFS assumes that concentrates are delivered FOB to an export ship at the Port of Montreal. The real LOM average price assumption is US$675/tonne for a 6% Li_2O concentrate. The

modelled price for the DFS is a significant discount to the current market pricing and is considered conservative.

The Company is exploring three separate options for the monetisation of the spodumene concentrates, including:

1. Exporting concentrates through a Quebec Port and selling to a Chinese lithium carbonate processing facility;
2. Selling concentrates into the Quebec domestic market. Two downstream facilities are currently planned within the province and are expected to be in operation by 2019-2020; and
3. Processing and producing a lithium carbonate/hydroxide product through an integrated downstream processing facility at a site to be determined. The Company has completed a Concept Study assessing the economic and technical viability of constructing the downstream plant. The Company is currently undertaking a downstream testwork program at SGS to produce lithium carbonate and hydroxide from spodumene concentrate produced during pilot plant operation. Results will be incorporated into a PFS.

The Company plans to move the project forward with a number of work programs, including:

- Bridging engineering;
- Further flowsheet optimisation
- Final engineering and design;
- Procurement of long lead items; and
- Construction and commissioning.

The Company is also progressing its environmental permits and mining lease and believes the approvals can be achieved within the planned development timetable even if some permitting uncertainties still exist.

Authier Project Schedule	2018		2019				2020			
Milestone	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
Bridging Engineering										
Ministerial Authorisation #1										
Mining Lease and Approval Period										
Detailed Engineering										
Procurement										
Off-Take										
Financing										
Early Work and Construction Facility Installation										
Construction										
Completion of Commissioning										
Start of Mining Operations										
Full Production										
Downstream Testing										
Downstream PFS										

Figure 1: Authier development timetable

AUTHIER FEASIBILITY OVERVIEW

Introduction

The Authier project comprises 20 mineral claims totalling 674 hectares, extending 3.4 kilometres in an east-west, and 3.1 kilometres in a north-south direction. The mineral claims are located on Crown Land. The tenure is in good standing and there is no known impediment to obtaining a licence to operate. The claims are subject to a number of underlying vendor royalties.

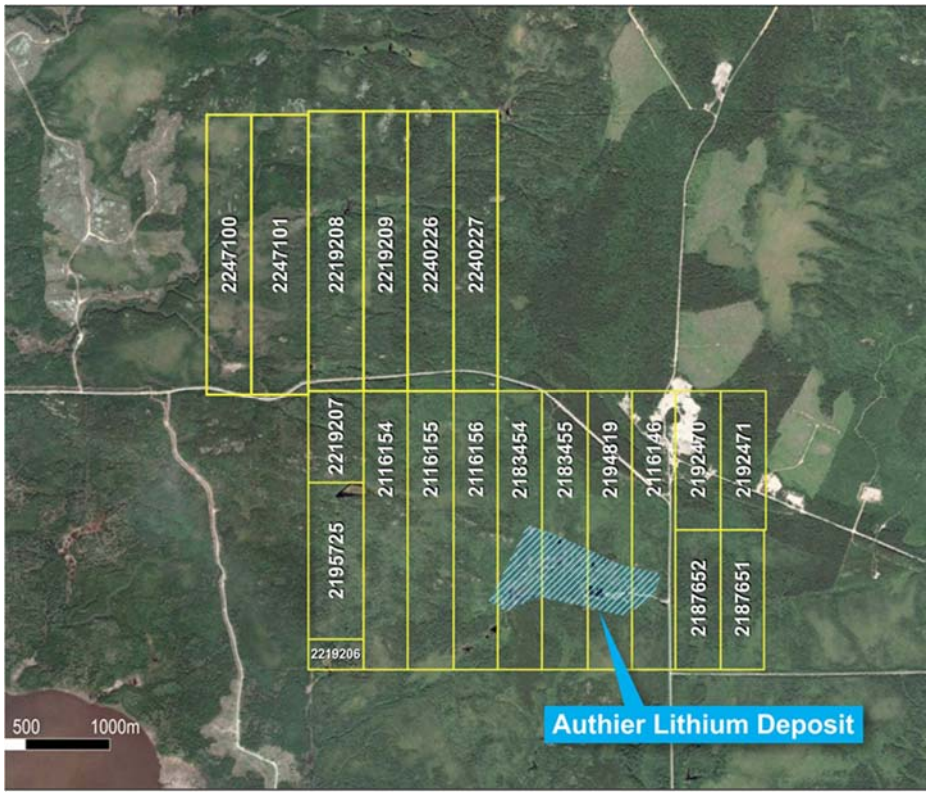


Figure 2: Authier project tenure

The Authier property is located in the Abitibi-Témiscamingue Region of the Province of Québec but more specifically in the Municipality of La Motte. La Motte is centred in a well-developed mining region with many resource industry support facilities and services. The towns of Rouyn-Noranda, Val-d'Or and Amos have populations of between 25,000 and 60,000 and are well known for their mining history.

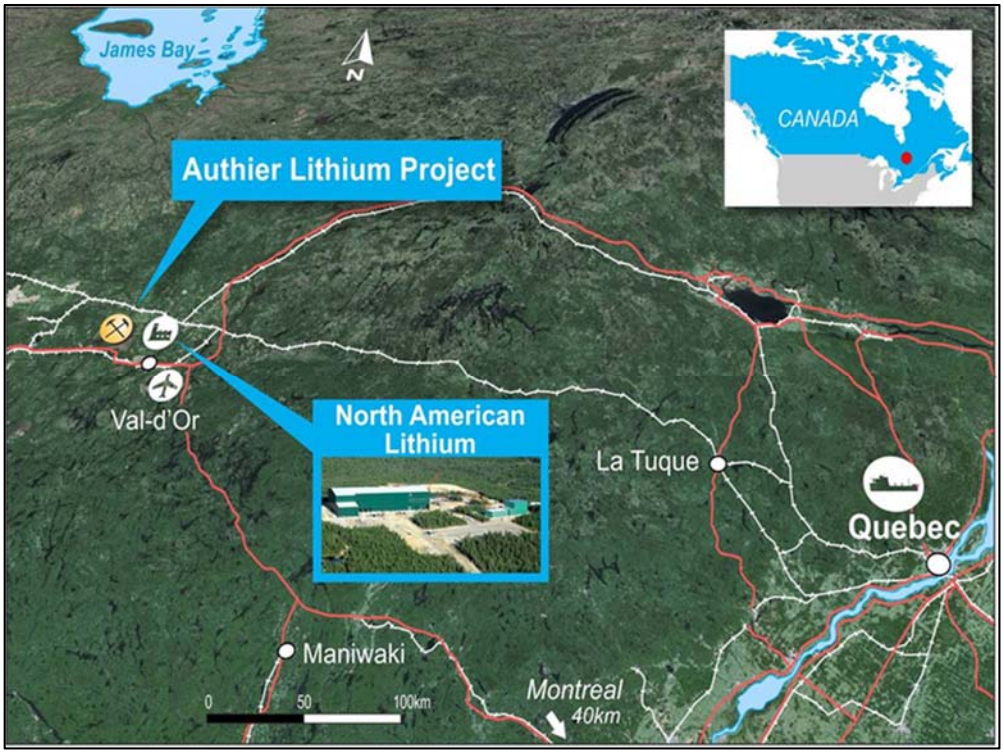


Figure 3: Authier project location and access to infrastructure

Authier Mineralisation

Mineralisation is hosted within spodumene-bearing pegmatite intrusions. The Authier project hosts two separate mineralised pegmatite systems, including:

- Authier Main - 1,100 metres long striking east-west, with an average thickness of 25 metres (ranging from 4 metres to 55 metres), dipping 40 to 50 degrees to the north. The deposit outcrops in the eastern sector and then extends up to 10 metres under cover in the western sector. The deposit remains open in all directions; and
- Authier North - 500 metres long striking east-west, with an average thickness of 7 metres (ranging from 6 metres to 8 metres), dipping at 15 degrees to the north. The Authier North pegmatite appears at shallow levels (15 to 25 metres vertical depth). The deposit remains open in all directions.

The lithium mineralisation at the Authier project is related to multiple pulses of spodumene bearing quartz-feldspar pegmatite. Higher lithium grades are related with high concentrations of mid-to-coarse spodumene crystals (up to 4 cm long) in a mid-to-coarse grained pegmatite facies.

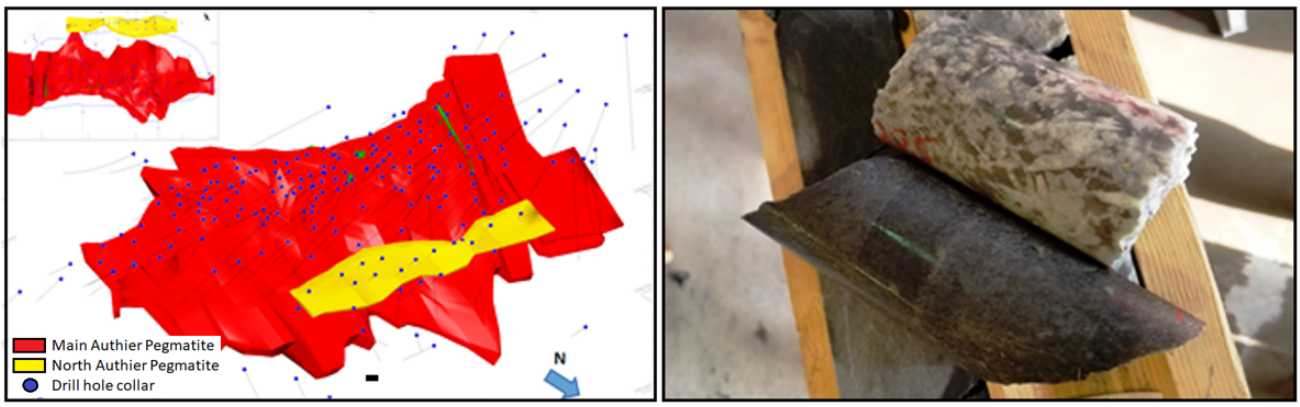


Figure 4: Authier deposit geological envelopes and an example of pegmatite mineralisation and host waste rock

JORC Mineral Resource

The project has more than 31,000 metres of diamond drilling. The project was initially drilled between 1991 and 1999 by Raymor Resources, and by Glen Eagle between 2010 and 2012, and Sayona has completed three phases of drilling totalling more than 11,000 metres. Holes were typically drilled perpendicular to the strike of the mineralised pegmatite to provide high confidence in the grade, strike and vertical extensions of the mineralisation.

An independent JORC (2012) Mineral Resource estimate has been prepared (see ASX release, 24 September 2018) and is outlined in Table 1.

The Mineral Resource estimates for the Authier deposit includes Authier Main and Authier North pegmatites and is based on 1.5 m composite analytical data, no top-cut, and a 0.55% Li_2O cut-off grade. The estimation was based on an Inverse Distance Cubed (ID3) interpolation. A total of 199 drill holes were used for the solid modelling and updated mineral resource estimate (MRE).

A block size of three (3) metre (N-S) by three (3) metre (E-W) by three (3) metre (vertical) was selected for the resource block model. This was based on drill hole spacing, width and general geometry of mineralisation but primarily by the selected smallest mining unit (SMU) from the feasibility study. Three dimensional mineralised wireframes were used to domain the Li_2O data using a 0.4% Li_2O cut-off over a minimum drill hole interval length of two metres as a guideline to define the width of mineralised interpretations on sections (i.e., polygons). Sample data was composited to 1.5 m down hole lengths. Variable search ellipse orientations were used to interpolate the blocks.

Table 3– Authier JORC Mineral Resource Estimate (0.55% Li_20 cut-off grade)

Category	Tonnes (Mt)	Grades (%Li_20)	Contained Li_20
Measured Resource	6.58	1.02	67,100
Indicated Resource	10.60	1.01	107,100
Mea. + Ind. Resource	**17.18**	**1.01**	**174,200**
Inferred Resource	3.76	0.98	36,800
Total Resource	**20.94**	**1.01**	**211,000**

Production Profile

The DFS is based on an average ore feed rate of 1,850 tonnes per day or approximately 675,500 tonnes per annum to the process plant to deliver average annual spodumene concentrate output of 87,400 tonnes (there are year-on-year variances depending on the mined grade of ore) at 6% Li_2O. The LOM production target of 12.1 million tonnes is comprised entirely of Proven and Probable Ore Reserves.

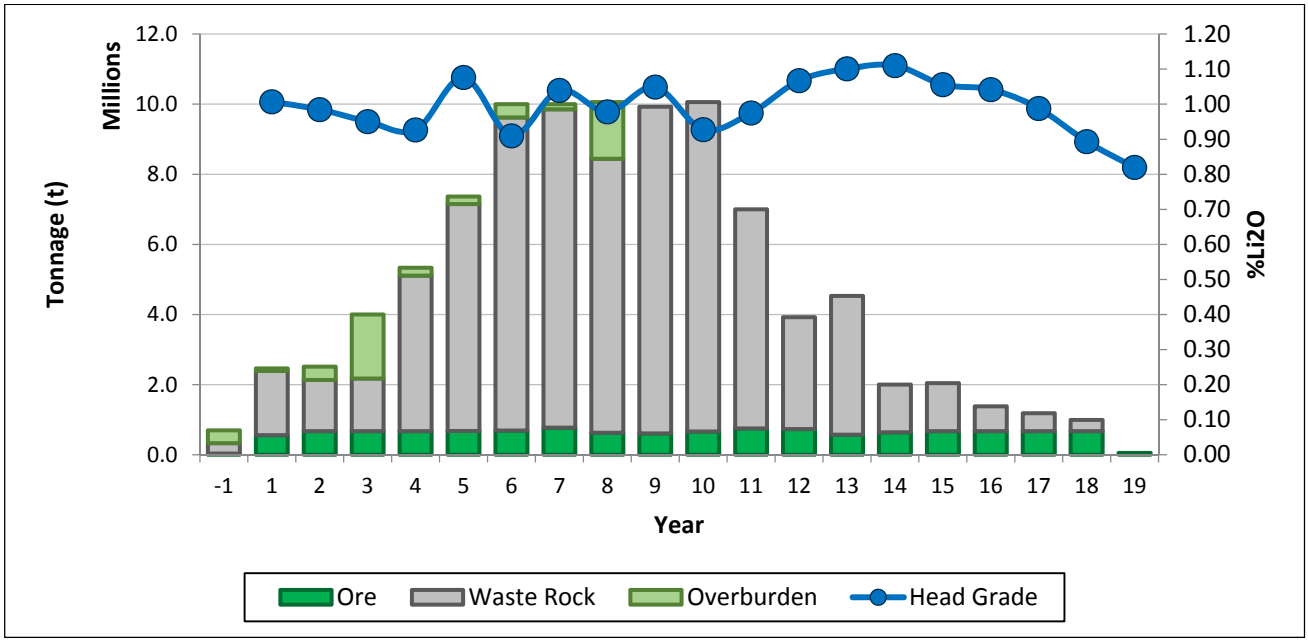


Figure 5: Authier LOM ore, overburden and waste scheduling

Ore Reserves

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 material.

The mining study for the DFS has considered:

- Mine planning criteria (dilution, ore losses and cut-off grade criteria);
- Open pit optimisation to determine pit shell for eventual economic extraction of the orebody;
- Mine design and scheduling;
- Mine infrastructure and layout;
- Mine production scheduling;
- Mining capital and operating cost estimation;
- Revenue and cost modelling; and
- JORC (2012) Ore Reserve reporting.

Sayona retained Journeaux Associates to assist with the pit slope design for the Authier Lithium project. The objective of the study was to review the existing structural geology model developed by Sayona and based upon geological data collected from exploration core-oriented boreholes drilled in 2016 and 2017.

The existing structural geology data and the results obtained from the laboratory direct shear tests served to review the existing designed pit slopes and to recommend optimum stable economical pit slopes. The rock tested can be considered Very Hard (100-200 MPa) to Extremely Hard (>200 MPa), ranging from 136 to 242 MPa. The pit design parameters recommendations are outlined in Table 4.

Table 4 – Geotechnical Pit Design Parameters (Journeaux 2018)		
Parameter	**Unit**	**Value**
Overall Slope Angle (rock)	degrees	48 & 59*
Overall Slope Angle (overburden)	H:V	4H:1V
Bench Height (single bench)	metres	6.0
Bench Height (triple bench)	metres	18.0
Batter Face Angle	degrees	65 & 80*
Berm Width (triple bench)	metres	7.2
*South and North wall, respectively		

Pit optimisation for the DFS was completed using the Pseudoflow command in Deswik.CAD based on conventional open pit mining using trucks and a hydraulic shovel, at a 0.55% Li_2O cut-off grade. The cut-off grade considers the economic assumptions outlined in the DFS but is artificially elevated to takes into account the metallurgical recovery limitations.

The basic optimisation principle of the algorithm operates on a net value calculation for each block in the model (i.e., revenue from sales less total operating cost including mining, processing, and general and administration costs) in order to determine to what extent the deposit can be mined profitably. The Ore Reserve statement outcomes, derived from a detailed open-pit design based on the pit optimisation exercise, are outlined in Table 5.

Table 5– Authier JORC Ore Reserve Estimate (0.55% Li_20 cut-off grade)			
Category	**Tonnes (Mt)**	**Grades (%Li_20)**	**Contained Li_20**
Proven Reserve	6.10	0.99	60,390
Probable Reserve	6.00	1.02	61,200
Total Reserves	**12.10**	**1.00**	**121,590**
Note: The Ore Reserve estimate is inclusive of ore dilution and ore loss			

The design outlines a pit of 1,000 metres in length (east-west), an average of 600 metres width (north-south) and a final pit depth of 200 metres.

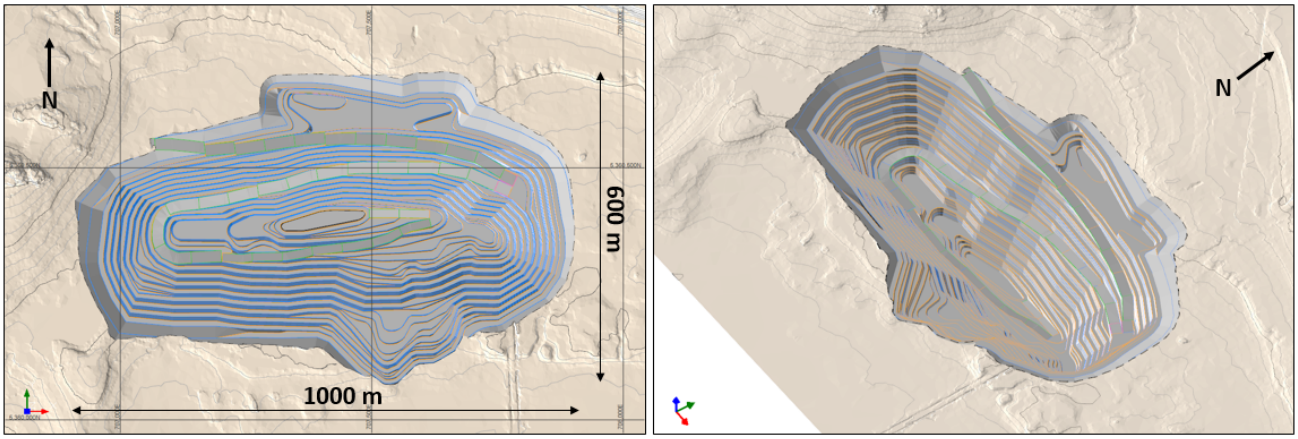


Figure 6: Isometric views of the Authier pit

Mining Process

Mining will be undertaken using drill and blast, and conventional bulk mining methods utilising hydraulic excavators and dump trucks delivering ore to the primary jaw crusher or to the ROM stockpile. For blending purposes it is assumed that only 25% of the ore will be dumped directly into the crusher. The remaining 75% of the ore will be trucked from the blasted faces to the ROM stockpile and fed to the primary jaw crusher using a front-end loader.

The scale of the project indicates that the operation is best suited to a fleet comprising 60 metric tonne rigid body dump trucks (average of height units throughout the mine life) being loaded by two hydraulic excavators and one front-end loader. Drilling activities will be executed by a maximum of two down-the-hole drill rigs. All hard rock material will be drilled with 5" diameter holes. A mixed ancillary fleet will be used to support load and haul operations. Shifts will operate 24 hours per day, 7 days per week, 365 days per year.

The planned mining activities include:

- Clearing of vegetation, topsoil stripping and removal to a storage location on site;
- Overburden removal to a separate storage facility. The overburden thickness averages approximately 6 metres and ranges from 0 to 12 metres;
- Haul road construction and sheeting of ramps;
- Drilling and blasting of ore and associated waste including pre-splits on final walls;
- Loading of ore and waste from the pits; and
- Haulage of ore to the ROM pad and waste to the co-disposal waste/tailings pile.
- Crushing and weighing of material to comply with the permit limits.

The mine development used a total of five push-backs, or phases, designed to meet the following objectives:

- Enable the mining of high grade mineralisation as early as possible;
- Effectively reduce the stripping ratio in the initial mining stages;
- Balance the stripping ratio over the period of the mine life;
- Maintain a minimum mining width between two working phases; and
- Blend the high-grade and low-grade ore feeds over the LOM.

Table 3- Summary Metrics for Each Mining Phase							
Material	**Units**	**Ph - 1**	**Ph - 2**	**Ph - 3**	**Ph - 4**	**Ph - 5**	**Total**
Total In Pit	(Mt)	6.3	10.0	2.1	26.7	50.6	95.6
Waste Rock	(Mt)	3.8	7.0	1.4	22.9	43.1	78.2
Overburden	(Mt)	0.4	1.8	0.4	1.2	1.6	5.3
Total ROM Feed	(Mt)	2.0	1.3	0.3	2.6	5.9	12.1
Head Grade	(% Li_2O)	0.98	1.02	0.88	1.01	1.01	1.00
Strip Ratio	t:t	2.1	7.0	5.7	9.2	7.6	6.9

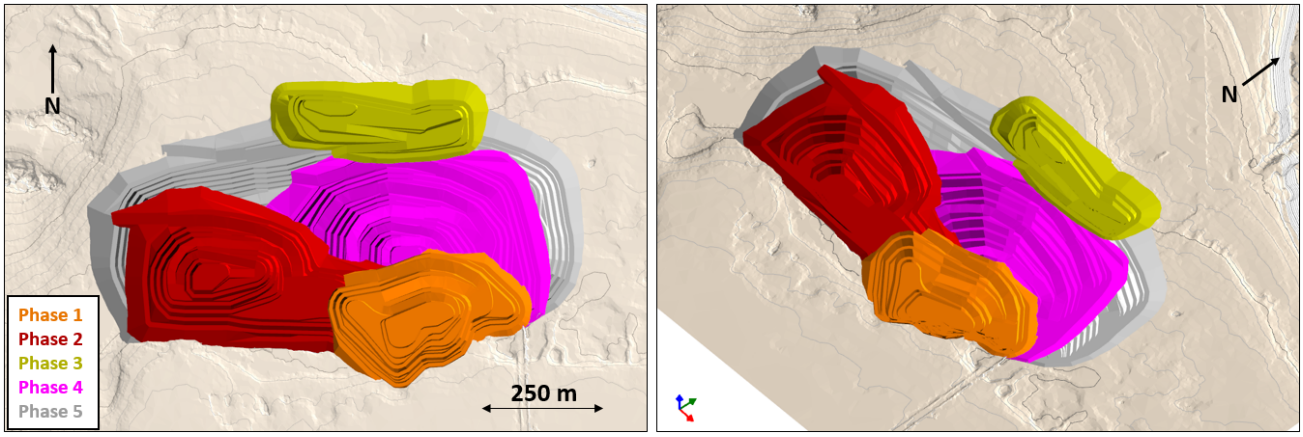


Figure 7: Schematics demonstrating the planned mining phases

Project Layout

The project has a relatively small footprint of less than 400 hectares. The ore will be mined from a single open pit, and the waste rock and filtered tailings will be co-disposed in order to facilitate water management and reduce the environmental footprint. The waste pile will be located north-west of the open pit. Ponds will be built to collect run-off from the waste and tailings pile, overburden pile, industrial site, and dewatering from the pit. The overburden pile will be located close to the waste rock and tailings pile in order to optimise progressive reclamation work. The layout also considers non-process infrastructure, traffic flows, site access, pit exclusion zones and haul roads.

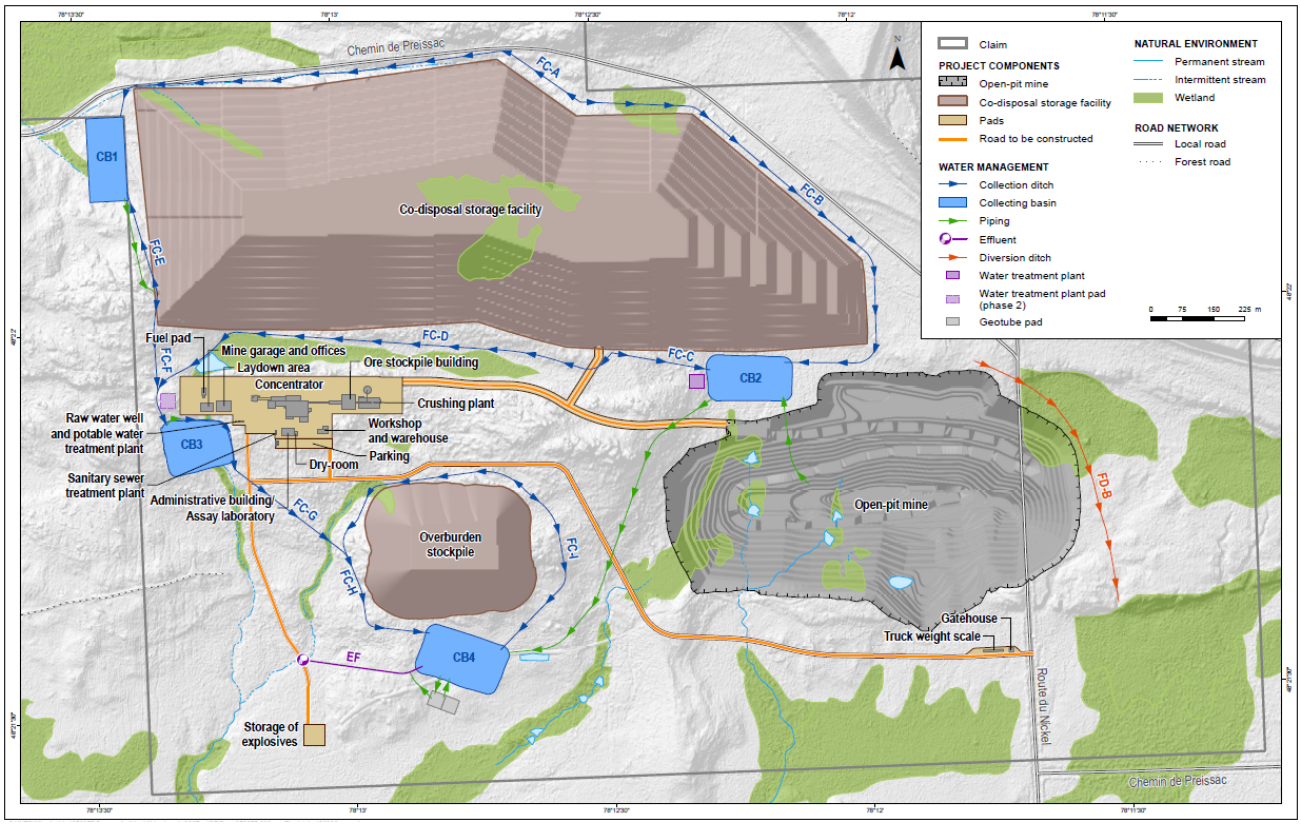


Figure 8: Site layout schematic

Processing Plant

Samples from the Authier deposit have been subjected to several metallurgical test work programs (1999, 2012, 2016, 2017, and 2018). In 1999, testing on a 40 tonne bulk sample produced concentrate grading between 5.78% and 5.89% Li_2O with lithium recoveries between 68% and 70% from a sample with average head assay of 1.14% Li_2O.

In 2012, Glen Eagle tested a 270 kg sample from drill core. The batch tests incorporated magnetic separation and spodumene flotation without mica pre-flotation. Tests produced concentrate grading 6.4% Li_2O with 85% recovery. Results were incorporated into a Preliminary Economic Assessment of the project.

In 2016, Sayona completed testing on a representative 430 kg sample (including 5% mine ore dilution). Concentrate grades varied from 5.4% to 6.1% Li_2O at recoveries between 71% and 79%. Ore dilution had a negative impact on flotation performance.

In 2017, two representative samples were prepared and flotation tests were undertaken to assess the impact of dilution and processing with site water. The program demonstrated the ability to produce a concentrate grade of 6.0% Li_2O at recoveries greater than 80%. Results from the 2016-2017 test work program were incorporated into the Authier updated pre-feasibility study.

Several heavy liquid separation test work programs have been undertaken since 2016. The test work programs showed that dense media separation was not a viable flowsheet option for spodumene recovery for the Authier project.

A pilot plant testing program was undertaken in 2018 on a roughly 5 tonne sample. Two composite pilot plant feed samples were prepared from drill core to represent Years 0 to 5

and Years 5+ of the operation. Batch and locked-cycle-testing was undertaken on each composite prior to pilot plant operation. Optimised batch flotation tests produced 6.0% Li_2O concentrate grade at 82% recovery. Locked-cycle test results showed Composite 1 achieved 5.9% Li_2O concentrate grade at 84% recovery; and Composite 2 achieved 5.9% Li_2O concentrate grade at 83% recovery.

The pilot plant flowsheet included grinding, de-sliming, magnetic separation, mica and spodumene flotation. The optimised flowsheet produced a 6% Li_2O concentrate at a 79% lithium recovery. There was some variability in the results over the total program. For the optimised pilot plant flowsheets, Composite 1 produced concentrate ranging from 5.9% to 6.0% Li_2O with recoveries ranging from 67% to 71%. For Composite 2, concentrate grade ranged from 5.8% to 6.2% Li_2O with lithium recovery from 73% to 79%.

Table 7, summarises results from the 2018 pilot plant test work program.

Table 7- Optimised Results from the 2018 Pilot Plant Testing Program

Test	Sample	Grade, % Li_2O	Recovery, %
Batch	Composite 1	5.96 - 6.04	80 – 82
	Composite 2	5.92 – 6.05	79 – 81
Locked-Cycle	Composite 1	5.85	84
	Composite 2	5.86	83
Pilot Plant	Composite 1	5.90 – 5.95	67 - 71
	Composite 2	5.83 – 6.19	73 - 79

Concentrate produced from the pilot program is being used for marketing purposes and for a downstream test work program to produce lithium carbonate and hydroxide. Results will be used to provide engineering data which will be incorporated into a downstream PFS.

BBA designed a concentrator to process 675,500 tpa of ore using conventional flotation technology suitable for the Authier pegmatite orebody. The plant will be located near the open-pit.

The process flowsheet is presented in Figure 10. Run-of-mine ore (ROM) will be transported from the mine to the crushing plant. The ore will be fed to a three-stage crushing circuit reducing the particle size to P_{80} of 9 mm. The crushed ore will be stored under a protected dome and conveyed to a ball mill in closed-circuit with hydrocyclones. Crushed ore will be ground to a particle size (P_{80}) of 180 µm. The ground ore will be passed through a magnetic separation circuit to remove iron-bearing silicate minerals and then de-slimed prior to mica flotation. Following mica flotation, the slurry will flow to an attrition scrubber and hydrocyclones for second-stage de-sliming prior to spodumene flotation.

Magnetic and mica concentrates, slimes, and spodumene flotation tailings will be thickened and filtered prior to dry stacking. Truck and loading units will be used to dispatch tailings to the waste rock facility.

The spodumene concentrate will be filtered to roughly 6% moisture and stockpiled in a covered storage area prior to bulk shipment to a port and/or a Canadian off-taker. The plant will produce a LOM average of 87,400 tonnes of 6% Li_2O concentrate suitable for sale to lithium carbonate conversion plants that supply feed-stock to lithium battery manufacturers.

Table 8 gives an overview of the key process plant parameters.

Table 8- Authier Metallurgical Parameters Summary		
Parameter	**Unit**	**Value**
Process plant throughput rate	tpa	675,500
Metallurgical recovery	%	78%
Concentrate production	tpa	87,400
Spodumene concentrate grade	Li_2O	6.00%
Iron grade in concentrate	% Fe_2O_3	1.00-1.80 %

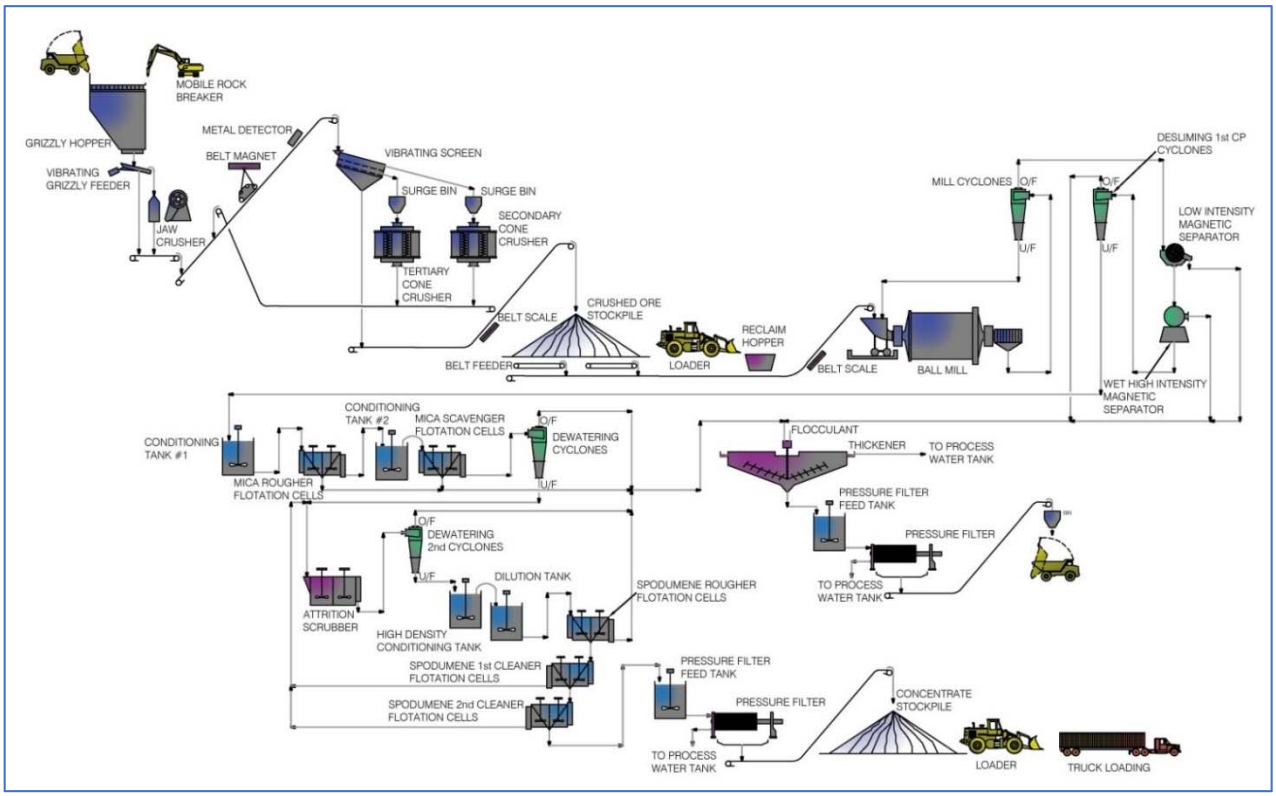


Figure 10: Process plant flowsheet

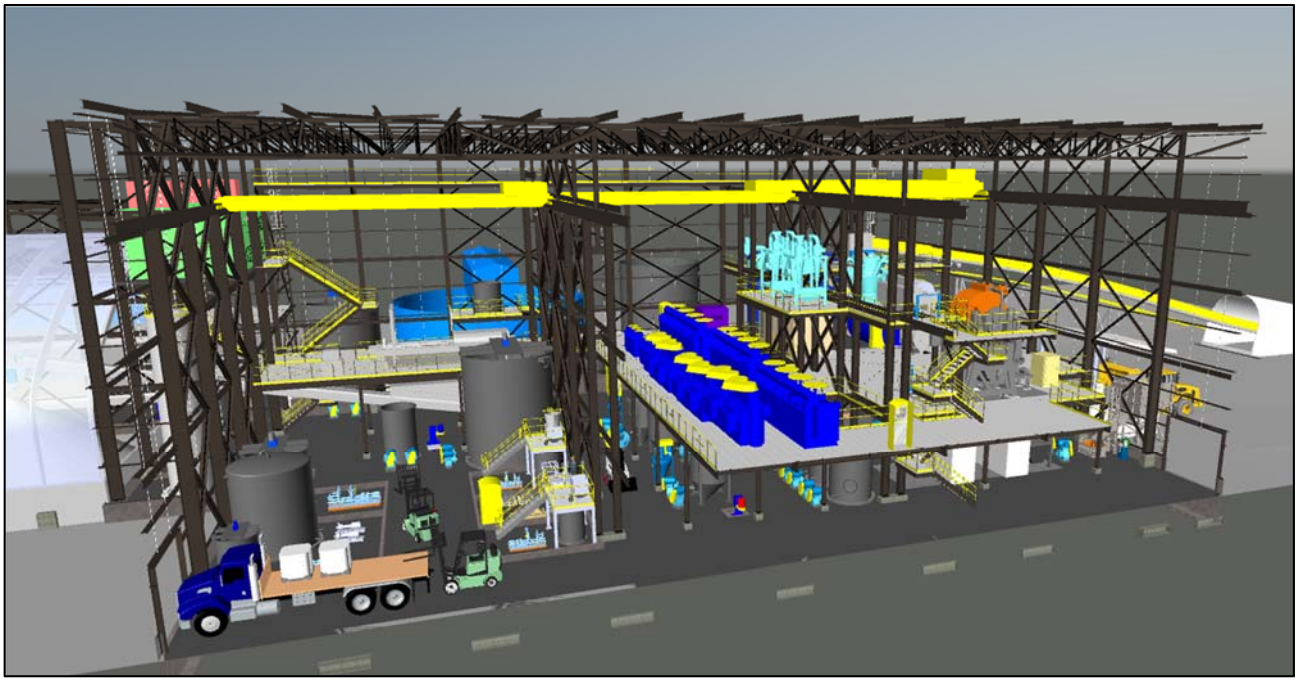


Figure 11: 3D schematics of the processing plant

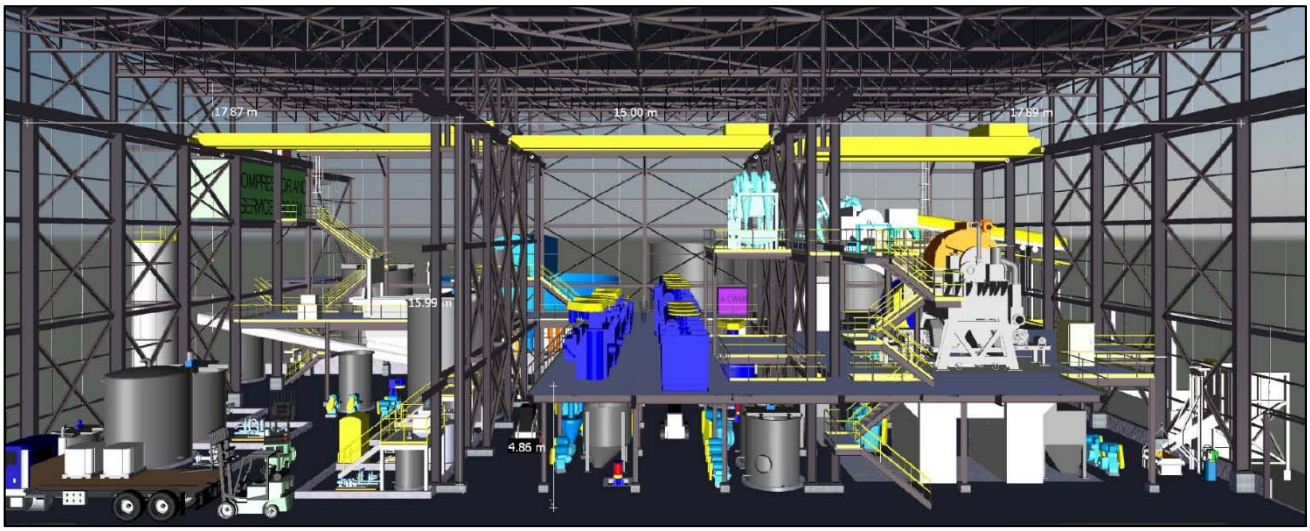


Figure 12: 3D schematics of the processing plant

The tailings will be hauled by truck to the waste pile and co-disposed with the non-mineralised material coming from the mine.

Infrastructure

Authier is located close to the established mining support city of Val d'Or (45 kilometres to the south-east) and the city of Amos (20 kilometres to the north). The project is readily accessible by national highway and a high-quality rural road network five kilometres east of the project site. Other infrastructure in close proximity to the project includes:

- The Canadian National Railway has an extensive rail network throughout Canada. The closest rail connecting to export shipping ports is at Cadillac, 20

kilometres to the south-west. The rail network connects to Montreal and Quebec City, and to the west through the Ontario Northland Railway and North American rail system;
- Quebec is a major producer of electricity as well as one the largest hydropower generators in the world. Green and renewable energy is well distributed through a reliable power network. Power will be accessed 5 kilometres to the east of the project site via an electricity grid supplied by low-cost hydro-electric power. The estimated maximum power level needed for the project in full operation is 7.5 MW; and
- Val d'Or is serviced several times daily by various airlines from Montreal.

Project infrastructure will include the following elements:

- Processing plant;
- ROM ore pad;
- Waste and dry tailings co-disposal pile;
- Overburden pile;
- Administration facility;
- Assay laboratory;
- Personnel changing area (dry);
- Workshop, tyre change, warehouse and storage areas;
- Explosive magazine storage;
- Fuel, lube and oil storage facility; and
- Reticulated services, including power, lighting and communications, raw water and clean water for fire protection, process water and potable water, potable water treatment plant, sewage collection, treatment and disposal.

Logistics

The base objective of the logistics component of the proposed Authier lithium project is to transport approximately 87,400 tonnes per annum of spodumene concentrate at 6% Li_2O to a selected port facility. The product will then be loaded on to bulk carrier vessels in, most likely, 15,000 to 25,000 tonnes consignments for export to the purchaser.

Sayona commissioned a transport and logistics company to assess the feasibility of transporting the spodumene concentrate from the onsite concentrate storage area to the port. The study assessed the two following options:

- a combination of bulk-trucks and bulk-railcars, and
- the use of bulk-trucks for transport from site to port

The study concluded that the optimal scenario would be to use a third-party transport contactor to haul from the mine to the port of Montreal using a fleet of b-train trailers and trucks (owner-operators).

The b-Trains would be leased through an owner-operator. Approximately seven 40-tonne loads will leave the mine daily. At destination, the product will be delivered to a covered storage shed. Material will then be transported from the shed to the side of the vessel using a front-end loader and trucks. Concentrate will be loaded into the vessel using a mobile harbor crane.

Financial Outcome

The key parameters and financial outcomes for the DFS are summarised in Table 9.

Table 9- Authier Lithium Project DFS Highlights		
Description	**Unit**	**Values**
Average annual ore feed to the plant	tonnes	675,500
Average annual grade to the plant	%Li_2O	1.00
Annual average spodumene production (6% Li_2O)	tonnes	87,400
Li_2O recovery	%	78.0
Life of Mine (LOM)	years	18
LOM strip ratio	waste to ore	6.9
Average spodumene price	US$/t	675
LOM operating costs (mine gate) – excluding royalties	C$ million	637.4
LOM transport and logistics costs (mine to port)	C$ million	103.7
Royalties purchase	C$ million	3.0
Development capital costs	C$ million	89.9
LOM capital costs	C$ million	83.6
Royalties	C$ million	19.5
Total net revenue	C$ million	1,394.4
Total project EBITDA	C$ million	460.2
Average LOM cash costs (mine gate) – excluding royalties	C$/tonne	404.0
Average LOM cash costs (FOB Port of Montreal) – excluding royalties	C$/tonne	469.7
Average LOM cash costs (FOB Port of Montreal) – excluding royalties	US$/tonne	356.9
Net Present Value (real terms @ 8% discount rate)	**C$ million**	**184.8**
Pre-tax Internal Rate of Return	**%**	**33.7**
Project payback period (After start of production)	years	2.6
Exchange rate	CAD: USD	0.76

Summary of the main assumptions:

1. **Exchange rates** - An exchange rate of $0.76 USD per CAD was used to convert the USD market price projections into Canadian currency. The sensitivity of the base case financial results to variations in the exchange rate was examined. Those cost components, which include U.S. content originally converted to Canadian currency using the base case exchange rate, were adjusted accordingly;
2. **Discount rate** – a discount rate of 8% has been applied for the NPV calculation;
3. **Inflation** – All the forecasts within the financial analysis are on a real basis, i.e. with no inflation adjustments; and
4. **Royalties** – The Quebec government does not impose any royalties on mineral production. However, Authier is subject to a number of vendor royalty payments and

a 1.40% Gross revenue royalty is applicable after the planned purchase of some existing royalties for a total of C$3.0 M.

Sensitivity Analysis

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.

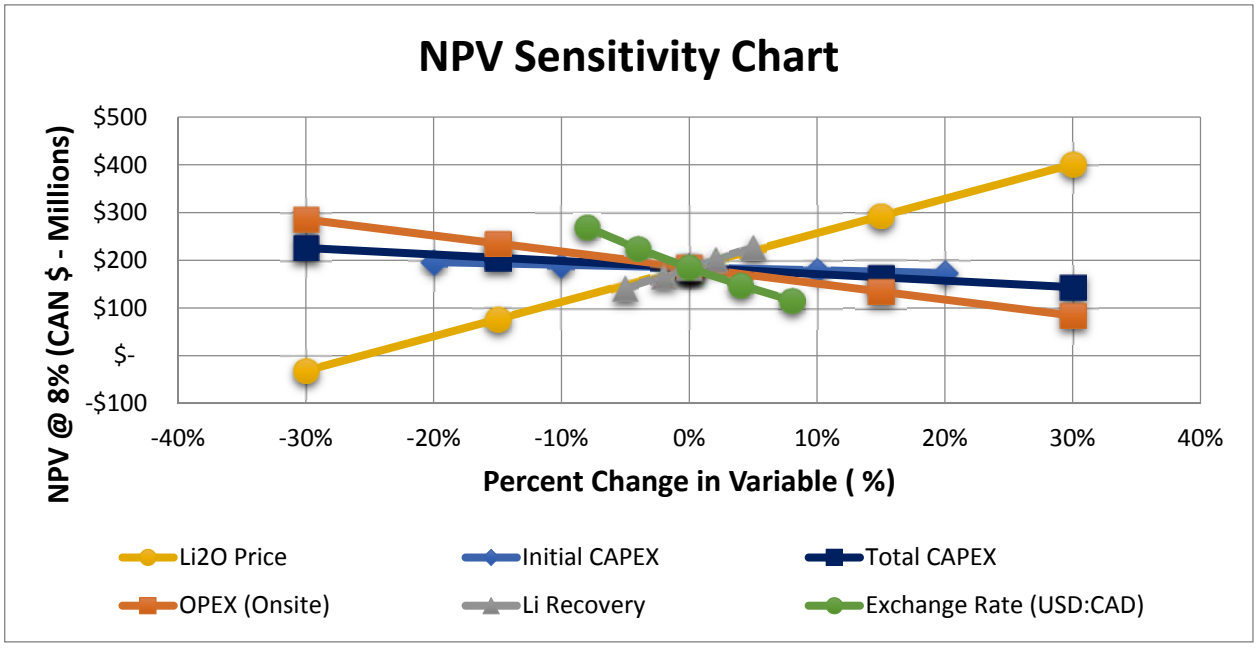


Figure 9: NPV sensitivity analysis

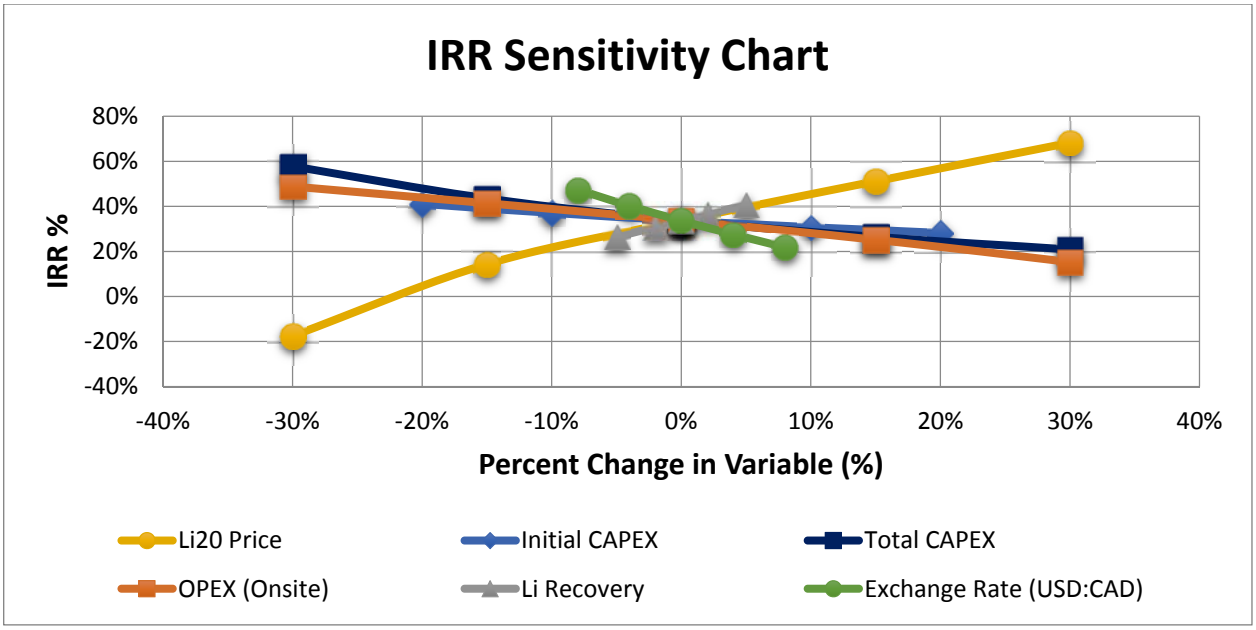


Figure 10: IRR sensitivity analysis

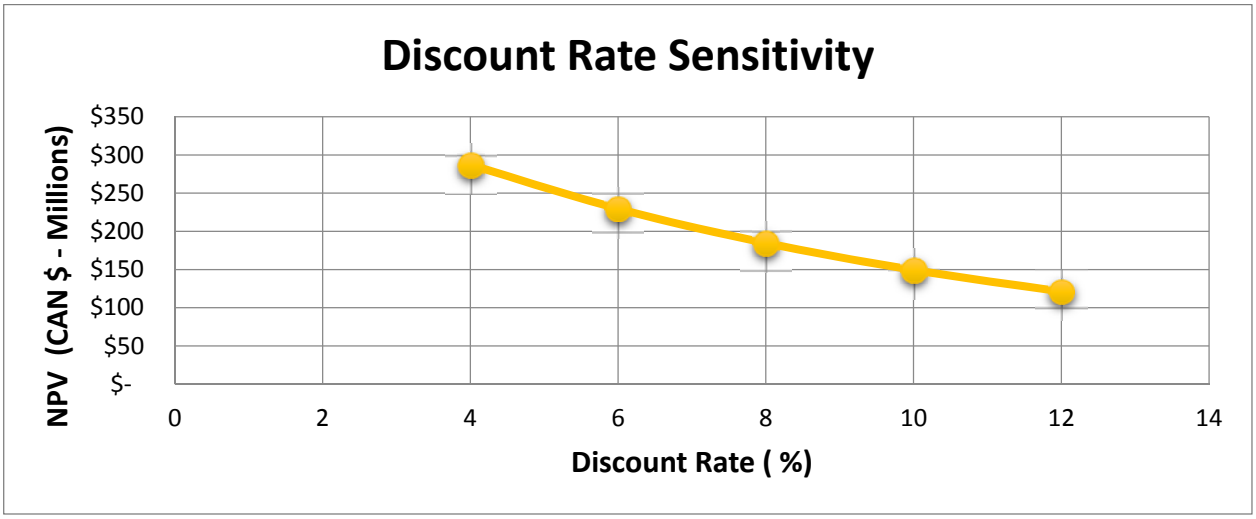


Figure 11: Discount rate sensitivity analysis

Capital Costs

The total capital expenditure proposed for the project is estimated at C$ 89.99M including a C$9.2M contingency. The present costs estimate pertaining to this study meets AACE Class 3 – estimate type criteria, which is usually prepared to establish preliminary costs forecast and assess the profitability potential of a project. The accuracy range for the costs estimate developed in this study has an expected accuracy range of -10% on the low side and +15% on the high side. The estimating methods include quotations from vendors and suppliers specifically sought for this project, approximate quantities and unit rates sourced from quotations and historic projects and allowances based on past projects. A summary of the capital expenditure distribution is shown in Table 10 below:

Table 10- Capital Cost Estimate Summary							
Cost Type	**Discipline**	**Labour Hrs**	**Labour (M$CAD)**	**Material (M$CAD)**	**Equipment (M$CAD)**	**Indirect (M$CAD)**	**Total (M$CAD)**
Direct Costs	Civil	46,351	6.77	1.12	0.73	-	8.62
	Concrete	22,798	2.48	1.75	-	-	4.23
	Structural	13,216	1.99	4.43	-	-	6.42
	Architectural	25,270	2.69	2.79	-	-	5.48
	Mechanical	49,669	6.41	1.74	20.61	-	28.76
	Piping	19,672	2.29	0.89	-	-	3.18
	Electrical	15,471	1.94	1.30	2.46	-	5.70
	Auto. & telecom	8,060	0.92	0.54	0.94	-	2.39
	Mining	-	-	-	-	4.34	4.34
Indirect Costs	Owner's teams	-	-	-	-	1.30	1.30
	EPCM	-	-	-	-	7.22	7.22
	Prelim/general	-	-	-	-	3.18	3.18
	Contingency	-	-	-	-	9.18	9.18
Grand Total		**200,507**	**25.49**	**14.55**	**24.74**	**25.22**	**89.99**

The major capital cost component for the project is the process plant and associated infrastructure. The process plant design and cost estimates were provided by BBA and compared to recent responses to a request for tender issued to a number of internationally recognised minerals processing plant suppliers. Remaining capital items have been derived from direct quotations or recent actual costs from recent mine developments.

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) and skilled workforce (Abitibi);
- No requirement for on-site accommodation camps and power plants;
- Low electricity costs in Quebec; and
- Simple deposit geology, mining and production processes.

The following items have been excluded from the BBA compiled capital estimate: funding costs, study and investigation costs, licenses and any royalties, all recruitment and training costs for the owners operations staff, commissioning costs outside of vendor supply, any costs required to finalise the commissioning of the mine, and all other operating costs of the owner required to support the delivery of the project.

Sustaining Capital Costs

The total sustaining capital cost is estimated at C$83.6M through the mine life. The sustaining capital cost is composed of the following items and presented on a yearly basis in Table 11.

- Mine equipment attributable to the need for additional mining equipment and fleet renewal over the years of operation.
- Process plant mobile equipment is attributable to the purchase and renewal of the front-end loaders handing material at the ore and concentrate stockpiles.
- Remaining site preparation activities attributable to the roads, platforms and other civil infrastructure planned to be built during pit operation.
- Tailings and water management infrastructure attributable to the subsequent preparation phases of site preparation for the tailings and waste pile. It includes peripheral ditches, new water collecting basin, increase in size of existing basin, site preparation, etc.
- Reclamation and closure attributable to dismantling infrastructure, restoration, rehabilitation and management of the site.
- Others, such as building maintenance, water treatment plant, wetlands compensation and royalties buy-back.

Operating Costs

The operating costs for the DFS have been prepared by the study participants. The majority of the mine-gate costs are associated with the mining operations (46%) which were prepared by Sayona and BBA and the processing plant facilities (35%) which were estimated by BBA. The balance of the costs (19%) are related to vendor royalties, administration, transport and other costs.

Processing costs and plant design were developed by BBA. The estimate is split into fixed cost and variable costs and based on an owner-operated mode supported by a basis of estimate document which identified source of pricing, methodology, accuracy, assumptions and exclusions.

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.

A summary of the operating costs distribution is shown in Table 11 below:

Table 11- Operating Cost Estimate Summary

Area	LoM M$ (CAD)	CAD/t of dry conc	USD/t of dry conc
Mining costs	305.6	193.7	147.2
G&A	67.3	42.6	32.4
Processing	228.8	145.0	110.2
Onsite laboratory	12.2	7.7	5.9
Process mobile equipment	14.4	9.1	6.9
Tailings & water management	9.2	5.8	4.4
Royalties	19.5	12.4	9.4
Total Operating Cost - Mine Gate	**656.9**	**416.4**	**316.4**
Transport cost	103.7	65.7	49.9
Total Operating Cost - FOB Montreal	**760.6**	**482.1**	**366.4**

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, aluminium 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 Lithium Carbonate Equivalent (LCE) in 2025[1] .

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 provides 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 LCE in 2016, a year-on-year increase of 38%[2]. 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 increase approximately 5 times from 189,000 tonnes in 2016 to 1,000,000 tonnes LCE by 2026[3] Figure 12. 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.

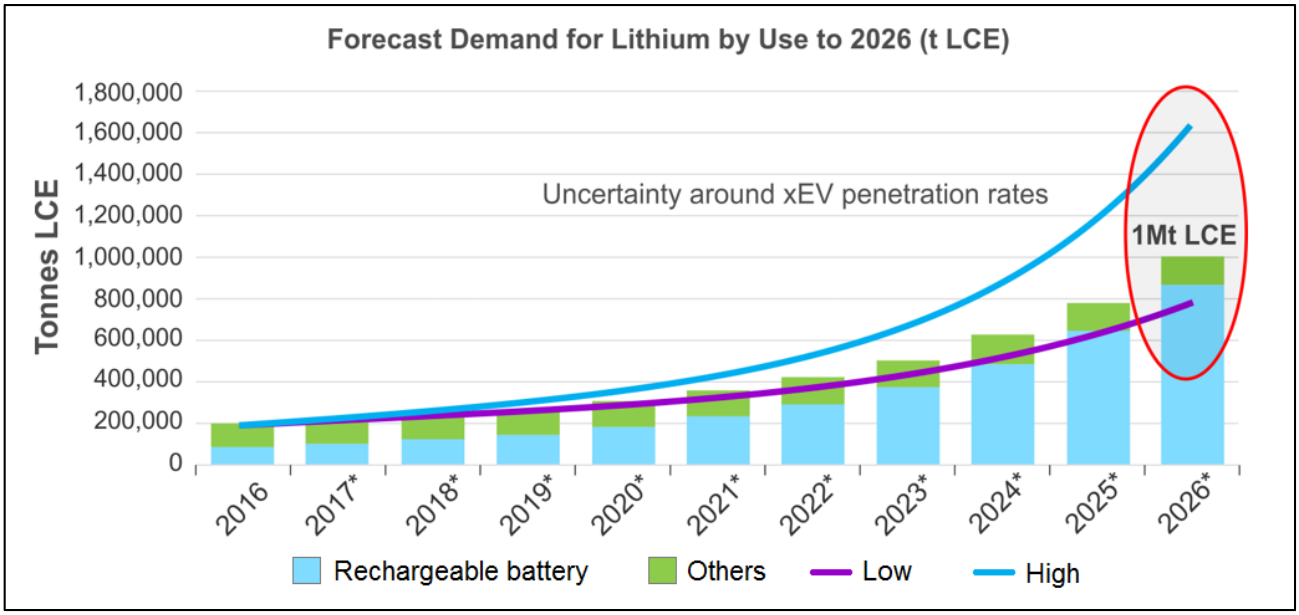


Figure 12: Roskill lithium demand projection.

According to Deutsche Bank[4] , within the battery segment, key drivers include:

[1] UBS, Lithium & Graphite: Driving Disruption, 15 June 2017
[2] UBS, Lithium & Graphite: Driving Disruption, 15 June 2017
[3] Source: Robert Baylis, Roskill, 9th Lithium Supply and Markets Conference, 31st May 2017
[4] Deutsche Bank, Lithium Market Update, Industry Report, 14 November 2017

- 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 48Kt LCE in 2016 to 453kt in 2025 (28% CAGR over the next nine years);
- Electric bicycles (E-bikes) – China is the world's largest producer and consumer of E-bikes. It sold c.3.1 million E-bikes in 2016 and growth will come from replacing the traditional lead-acid battery bikes that dominant the market currently. This represents growth in lithium demand from 5Kt LCE in 2016 to 68kt in 2025 (33% CAGR over the next nine 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. Forecast 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 46kt in 2016 to 63kt LCE by 2025, representing a CAGR of 3.6%. 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. Between 2015 and 2017, operations including Olaroz (Orocobre Ltd), Mt Cattlin (Galaxy Lithium) Mt Marion (Mineral Resources, Neometals, Gangfeng), and Wodgina Direct-Shipping-Ore (Mineral Resources) became new entrants to the market. Financing, commissioning and operating problems have resulted in the slow ramp-up of production from these new market entrants.

During 2018, Bald Hill (Tawana Resources Ltd), Pilgangoora (Altura Ltd), Pilgangoora (Pilbara Minerals Ltd) Mibra (AMG), La Corne (North American Lithium) and several small projects in China commenced commissioning and operations of new projects.

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 LCE 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 Li2O contained in spodumene concentrates allows production of LCE material on a ratio of 1:2.47 (i.e. 100kt of 6.0% Li_2O concentrate containing 6,000t of Li_2O 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.

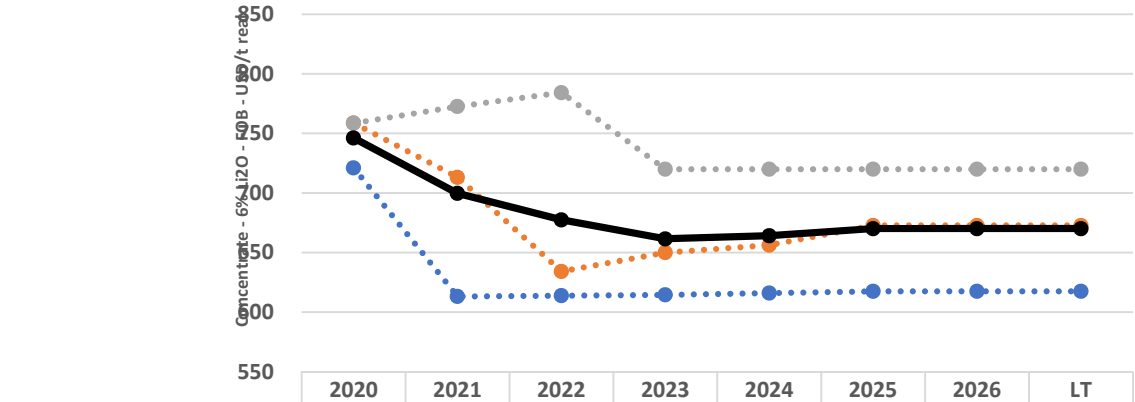
In recent years, concentrate prices reported to the market have risen with LCE pricing. Most spodumene contracts are done on a frame contract basis, in which the volumes are mutually agreed for a fixed period (typically up to a maximum of two years), and the pricing is negotiated over relatively short 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% Li20 concentrate (the contract stipulated that should Galaxy produce 6% Li20 concentrate then the pricing would be US$905 per tonne FOB)[5];
- April 2017 – Tawana Resources Limited agreed a fixed price for all production with Jiangte Special Electric Motor Co. Ltd no later than 21 March 2108 up to 31 December 2019 of >5.5%% concentrate at US$880/t FOB Esperance[6]. 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[7] . 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;
- 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[8]; and

[5] Galaxy Lithium ASX Release, "Lithium Contract Pricing", December 2016
[6] Tawana Resources ASX Release, "Lithium Offtake Agreement signed for Bald Hill Lithium and Tantalum Project", 26 April 2017
[7] Neometals ASX release, Min Update - Mt Marion Lithium Operations", 5 July 2017
[8] Altura ASX Release, "Altura completes binding offtake contracts with leading Chinese battery manufacturer and lithium converter", 10 July 2017

- 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[9].

Forecasts for lithium concentrate prices are available from independent industry analysts and investment banks and/or brokers. **Error! Reference source not found.**Figure 13 demonstrates three leading investment banking groups' spodumene concentrate price forecasts including BMO, Canaccord Genuity and Macquarie Bank.



	2020	2021	2022	2023	2024	2025	2026	LT
BMO	721	613	614	615	616	618	618	618
Canaccord Genuity	759	713	634	650	656	673	673	673
Macquarie Bank	759	773	784	720	720	720	720	720
Avg. (DFS Base Case)	746	700	677	662	664	670	670	670

Figure 13: Various lithium spodumene concentrate price forecasts

The real LOM average price assumption is US$675/tonne for a 6% Li_20 concentrate. The modelled price is at a significant discount to the current market pricing and is considered conservative.

Offtake

Sayona is exploring a number of options for selling high-quality spodumene concentrate that will be produced from a future operation at Authier. These include:

- Chinese converters - direct sales of concentrate to Chinese converters that produce lithium products suitable for the global battery markets. China, with the exception of the North American Lithium project in Quebec, are the only converters of spodumene into lithium carbonate and/or hydroxide in the world. A number of Chinese companies have expressed interest in purchasing Authier concentrates. In addition, the Company has a Memorandum of Understanding with Huan Changuan Lico Co Ltd for the potential purchase of Authier concentrates[10]; and
- Canadian converters – Two conversions plants are planned in Quebec and are expected to be in operation by 2019-2020.

[9] Galaxy Lithium ASX release, "Galaxy signs long term contracts offtake agreements for Mt Cattlin", 29 November 2017
10 Sayona ASX release, "Strategic Alliance Aimed at Rapidly Advancing Authier Towards Development", 9 November 2017

Optimisation and Value-adding Potential

A number of areas have been identified that could have a significant impact on the base economics of the project, including:

- *Continuing to increase the size of the Mineral Resource by testing extensions of known mineralisation along strike as well as by conversion of Inferred Mineral Resources to Reserves and extending the mine life;*
- *Infill definition drilling within the main resource zone where the mineralisation is not well defined and is currently treated as waste;*
- *Potential for an underground operation underneath the planned open-pit;*
- *Further metallurgical optimisation and enhancement to improve the metallurgical recoveries and concentrate grades, and costs. Historically, metallurgical recoveries of up to 85% and concentrate grades higher than 6% Li_2O have been achieved in certain parts of the deposit and further testing is required to ascertain whether this can be extended homogenously across the deposit;*
- *Reduction in the capital cost through the use of high-quality, refurbished used equipment. Val d'Or district is situated in a major mining district and may present opportunities for identifying suitable equipment; and*
- *Completion of binding off-take agreements that could potentially offer high spodumene prices in line with the current market prices which are higher than modelled in this study.*

In addition, Sayona is actively evaluating value-adding opportunities in the downstream lithium sector. Currently there are significant financial margins being achieved by the processing of spodumene concentrates into lithium carbonate. The Company has previously completed a scoping study, demonstrating the 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. A test work program is currently underway at SGS Canada Inc. in Lakefield, Ontario to produce lithium carbonate and hydroxide from Authier spodumene concentrate. The results will be incorporated into a pre-feasibility study for a downstream processing plant.

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.

Environmental Assessment and Approvals

The Regulations Designating Physical Activities (SOR/2012-147) identify the physical activities that constitute the "designated projects" that may require an environmental assessment by the Canadian Environmental Assessment Agency (CEAA). The CEAA is responsible for the *Canadian Environmental Assessment Act (2012).* As the project did not generate any "designated activity", an impact study under the *Canadian Environmental Assessment Act* is not required.

On the Provincial side, as the project is designed to remain under a maximum threshold of 2,000 tpd, no Environmental Impact Assessment (EIA) is required under the article 31.1 of the *Environment Quality Act*. Under this regulation, the permitting process would include a

formal public hearing administered by the BAPE (bureau d'audiences publiques en environnement).

Compliance with article 22 requirements, in principle, allows a more rapid permitting process without the BAPE formal public review. However, the project is facing social acceptability challenges because of its proximity to the Esker Saint-Mathieu-Berry.

On 29 June 2018, the Quebec Minister of Environment issued a press release inviting Sayona to submit the project to article 31.1 to answer public concerns and demonstrate social acceptability. At this stage the Company is progressing with the article 22 permitting option.

While there may be possible setbacks with the article 22 permitting, there is potential upside in terms of tonnage under the more formal article 31.1 process.

If required to undertake the BAPE process, the permitting period will likely be extended and may result in a rework of the project in relation to its mining and processing capacity.

Two provincial ministries will issue permits: the Ministère de l'Énergie et des Ressources Naturelle (MERN) and the Ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques (MDDELCC).

If the project is not subjected to an EIA, it could obtain certificates of authorisation under the provincial *Environmental Quality Act (LQE*), art.22, obtained from the MDDELCC for activities that may result in a change in the quality of the environment. In order to expedite the start of construction, preparation of the permit applications can begin before completion of the detailed project engineering. The following principal permits may be required from both federal and provincial government:

Government of Canada

- Approval under *Transportation of Dangerous Goods Act*, *1992*, art. 7 – emergency response assistance plan to import, offer to transport, handle or transport dangerous goods; and
- Agreement with Competent Minister or Permit under *Species at Risk Act*, art. 73 – activity affecting a listed wildlife species, any part of its critical habitat or the residences of its individuals.

Government of Québec

- Certificate of Authorisation under *Environmental Quality Act* ("LQE"), art. 22 – activities that may result in a change in the quality of the environment;
- Depollution Attestation under the LQE, art. 31.11 (see Règlement sur les attestations d'assainissement en milieu industriel) – emissions of a metal ore mining establishment with a mining capacity greater than 2,000,000 metric tonnes per year of ore or mine tailing processing capacity greater than 50,000 metric tonnes per year (operations involving ore beneficiation are included in ore processing operations);
- Authorisation under LQE, art. 32 – establish waterworks or install devices for waste water treatment;
- Authorisation under LQE, art. 48 – install atmospheric depollution equipment;
- Authorisation under Loi sur les espèces menaces ou vulnérables, art. 17 – activity carried out in threatened/vulnerable plant species habitat;
- Wildlife Management Permit under Loi sur la conservation et la mise en valeur de la faune, art. 26 – disturbance to beaver dams, eggs, nests or dens;

- Authorisation under Loi sur la conservation et la mise en valeur de la faune, art. 128.6 – activity carried out in wildlife habitat pursuant to Règlement sur les habitats fauniques;
- Lease under *Mining Act*, art. 100 – Mining Lease (the application must be accompanied by, among other things, an approved closure and rehabilitation plan and a scoping and market study on processing in Québec);
- Approval under *Mining Act*, art. 241 – tailings and waste storage and concentrator site;
- Authorisation under *Mining Act*, art. 232.2 – land rehabilitation and restoration work;
- Lease under Règlement sur la vente, la location et l'octroi de droits immobiliers sur les terres du domaine de l'État, art. 39 – occupation of Crown land;
- Forestry Permit under Loi sur l'aménagement durable du territoire forestier, art. 73 – forest development activities (related to timber felling, construction of infrastructure) by mining rights holder;
- Certificate of Authorisation (in accordance with LQE, art. 22) under Règlement sur les carrières et sablières, art. 2 – pit or quarry operation;
- Authorisation under LQE, art. 46 s) (Règlement sur le captage des eaux souterraines, art. 31) – wells (groundwater extraction for industrial water supply) if collection exceeds 75 m^3 per day;
- Permits under Règlement d'application de la Loi sur les explosifs, arts. 3, 4 and 6 respectively – possess, purchase, store and transport explosives;
- Approval under Loi sur le Bâtiment (Code de Construction), art. 8.08 – installation of petroleum equipment (storage of petroleum products);
- Certificate of Conformity under Loi sur le Bâtiment (Code de Construction), art. 8.12 – installation of high-risk petroleum equipment; and
- Maintaining a Register, Certificate of Conformity and Permit under Loi sur le Bâtiment (Code de sécurité), arts. 114, 115 and 120 respectively – installation and operation of petroleum equipment (including high-risk petroleum equipment).

Authier Environmental, Community and First Nations

Environmental Baseline Studies (EBS) were completed in October 2017 for the Authier project and are available on the Company's website (www.sayonamining.com.au and www.sayonaquebec.com). Additional studies were undertaken in May and June 2018 to complete information required based on the change of the location of some infrastructure. Previous studies were conducted during 2012 by Dessau.

A hydrogeological baseline study was initiated in Q2 2017. It included a drilling program with soil sampling, the construction of observation wells, soil and bedrock permeability testing, three piezometric surveys and groundwater sampling campaigns.

A vegetation and wetlands field study, including special-status plant species inventory, was completed in Q3 2017 by SNC-Lavalin. The study area has covered a wider range than what was surveyed in 2012.

A field inventory for snake, salamander and anuran was completed by SNC-Lavalin during 2017 and updated in 2018.

An ichthyological fauna inventory was completed during the study of bodies of water and streams during 2017 and updated in 2018.

A Community Relations Program has been developed to approach and engage local stakeholders. This program includes information sessions and consultations with municipalities, landowners, First Nation communities, non-governmental environmental organisations and recreational associations.

Consultation and community engagement efforts deployed throughout the project development allowed Sayona to outline stakeholders' main expectations. The objective of this program was to provide baseline information to address some of the communities' concerns and take them into consideration in the permitting process and in the design of the operation phase. The involvement of stakeholders will continue throughout the various project stages.

In May 2018, the Company delivered his Environmental Assessment Study (EAS) that presents the results of the baseline results (physical, biological and social environment), the project description and the effect of the project on the environment. Mitigation measures and environmental follow-ups were presented. This document was filed on the Company website (www.sayonaquebec.com) for public consultation.

At the same time, the closure plan was completed and submitted to the MERN for public consultation. This consultation was supposed to end on July 23 but as per stakeholder request, was extended to August 20. During that period (from May 18 to August 20), stakeholders were invited to send any comments, question or concerns to the Company through the website, Facebook, phone or by post.

The results of the EAS showed that the project will have no impact on the water quality of the Esker Saint-Mathieu-Berry and that all the impact on the other components will be low after the application of mitigation measures.

During the public consultation, stakeholders requested the Company conduct air quality and noise studies. The Company was also required to complete a geochemical analysis of the overburden. Those studies are ongoing.

During the public consultation, it was also required that the Company attempt to find an application for the reuse of waste rock and tailings material. Geochemical analysis is ongoing to determine if the material is suitable for use as a construction material. Results are expected in the coming months.

Mining License

Mining Lease Applications are initiated through the MERN. A Mining Lease will be granted only when the following conditions are fulfilled:

- Completion of a feasibility study;
- Completion of a scoping and marketing study for processing within Quebec;
- Rehabilitation and restoration plans have been approved;
- Certificate of authorisation stipulated in sections 22, 31.5, 165 and 201 of the Environment Quality Act has been issued; and
- A survey plan has been formalised by the Office of the Surveyor-General of Québec.

The initial term of the lease is 20 years. The lease may then be renewed no more than three times for a period of 10 years each time. After the third renewal, it may be renewed for

periods of five years. Within 30 days after the lease is issued, the lessee must establish a monitoring committee to foster the involvement of the local community in the project as a whole.

Before a Mining Lease can be granted for a metal mine project where the mine has a production capacity of less than 2,000 metric tons per day, a public consultation initiated by the proponent must be held in the region in which the mine will be located.

The Company has initiated early discussions with the La Motte Council and the Abitibiwinni First Nations community outlining the plans for the development of the Authier project.

Five information and consultation sessions were held in March and June 2018. The outcomes of the public consultation showed that some citizens have concerns about the proximity of the project to the Esker Saint-Mathieu-Berry. The Company has demonstrated that the project is located downstream from the Esker and will have no impact on the water quality in the waterway.

Project Implementation

The Company's project development plan encompasses the following activities, and is targeting construction commencing second half 2019 and commissioning mid-2020:

- Detailed 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.

Feasibility Study Team and Scope

The DFS has been prepared by well-credentialed consultants and organisations who, together, have significant experience and expertise in all aspects of lithium resource definition, mining, processing and infrastructure requirements in the province of Quebec.

Study Area	Contributor
Metallurgical test work	SGS Lakefield
Process engineering	BBA
Waste rock analysis	SGS Lakefield
Mining	BBA
Transport	Nolitrex Transport
Geotechnical	Journeaux
Tailings and water management	SNC Lavalin
Mine closure plan	SNC Lavalin
Mineral Resource Estimation	Dr. Gustavo Delendatti
Market Studies	Sayona Mining
Financial Modelling	BBA

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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

COMPETENT PERSON STATEMENTS

The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by Dr Gustavo Delendatti, a member of the Australian Institute of Geoscientists. Dr Delendatti is an independent consultant, and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which it is undertaking to qualify as a Competent Person as defined in the JORC Code (2012 Edition) of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves." Dr Delendatti was responsible for the design and conduct of this exploration drilling campaign, supervised the preparation of the technical information in this release and has relevant experience and competence of the subject matter. Dr Delendatti, as competent person for this announcement, has consented to the inclusion of the information in the form and context in which it appears herein.

The information in this report that relates to Ore Reserves is based on information compiled by Isabelle Leblanc, a member of the Ordre des Ingénieurs du Québec (''OIQ''). Isabelle Leblanc is an independent consultant and has sufficient experience which is relevant to the style of mining operation under consideration and to the activity which it is undertaking to qualify as a Competent Person as defined in the JORC Code (2012 Edition) of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves".

FORWARD LOOKING STATEMENTS

This presentation may contain certain forward looking statements. Such statements are only predictions, based on certain assumptions and involve known and unknown risks, uncertainties and other factors, many of which are beyond Sayona Limited's control. Actual events or results may differ materially from the events or results expected or implied in any forward looking statement. The inclusion of such statements should not be regarded as a representation, warranty or prediction with respect to the accuracy of the underlying assumptions or that any forward looking statements will be or are likely to be fulfilled. Sayona Mining Limited undertakes no obligation to update any forward-looking statement to reflect events or circumstances after the date of this presentation (subject to securities exchange disclosure requirements). The information in this presentation does not take into account the objectives, financial situation or particular needs of any person. Nothing contained in this presentation constitutes investment, legal, tax or other advice.

REFERENCE TO PREVIOUS ASX RELEASES

This ASX release refers to the following previous ASX releases:

- "Boost for Authier Project as JORC Reserve Expanded", 24 September 2018
- "Lithium Carbonate/Hydroxide Concept Study Demonstrate Positive Technical and Economic Viability", 30 August 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.