ASX ANNOUNCEMENT

SAYONA MINING LIMITED

24 SEPTEMBER 2018

BOOST FOR AUTHIER PROJECT AS JORC ORE RESERVES EXPAND

Highlights

- **Expanded Ore Reserve estimate for Authier Lithium Project in Canada increases total reserves to 12.1 million tonnes (Mt) @ 1% lithium oxide (Li_2O)**
- **Sayona focused on progressing Authier project towards production, ensuring sustainable and successful development for benefit of all stakeholders**

Emerging lithium miner Sayona Mining Limited (ASX: SYA) ("Sayona" or the "Company") announced today an expanded Ore Reserve estimate based on the Definitive Feasibility Study ('DFS') for the Authier lithium project in Quebec, Canada.

The DFS, which is the subject of a separate announcement made today, demonstrates the technical and financial viability of constructing a simple, open-cut mining operation and processing facility producing spodumene concentrate. The positive DFS demonstrates the project's potential to deliver a profitable and sustainable new lithium mine that will provide jobs and investment for the local community and increased value for shareholders.

The positive DFS is considered sufficient to determine, in accordance with the JORC Code 2012, that a subset of the Measured and Indicated Mineral Resource be classified as Ore Reserves – see 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 inclusive of dilution and ore loss.			

The DFS demonstrates that a viable mining and processing operation, and the infrastructure to support this, are available to develop the project.

The DFS takes into account all the modifying factors considered material to the development of the project and statement of Ore Reserves. The inputs into the economic and financial analysis were based on realistic assumptions of technical, engineering, operating and economic factors.

The capital and operating cost estimates were obtained from reputable consulting groups at the appropriate level of confidence for the DFS.

JORC Mineral Resource Estimate

The Authier project has been subject to more than 31,000 metres of drilling. Between 2010 and 2012, Glen Eagle completed 8,990 metres of diamond drilling in 69 diamond drill holes (DDH) of which 7,959 metres were drilled on the Authier deposit; 609 metres (five the DDH) were drilled on the Northwest and 422 metres on the south-southwest of the property.

Sayona Mining has completed three phases of drilling totalling more than 11,000 metres in 81 DDH. All the holes completed by Sayona and included in the Mineral Resource Estimate (MRE) have used standard DDH, HQ or NQ core diameter size, using a standard tube and bit. The drilling programs have been subject to very robust QA/QC procedures.

A revised independent JORC Mineral Resource (2012) estimate has been prepared and is outlined in Table 2.

Table 2– 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**

The Mineral Resource Estimate 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% Li2O 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) m (N-S) by three (3) m (E-W) by three (3) m (vertical) was selected for the resource block model of the Project based on drill hole spacing, width and general geometry of mineralisation but primarily by the selected SMU from the advanced feasibility study. Three dimensional mineralised wireframes were used to domain the Li_2O data using a 0.4 % Li2O cut-off over a minimum drill hole interval length of 2 m as a guideline to define the width of mineralised interpretations on sections i.e. polygons. Sample data was composited to 1.5m down hole lengths. Variable search ellipse orientations were used to interpolate the blocks.

For the Measured resource category, the search ellipsoid was 50 m (strike) by 50 m (dip) by 25 m with a minimum of seven composites in at least three different drill holes (maximum of two composites per hole) An ellipse fill factor of 60% was applied to the measured category i.e., that only 50% of the blocks were tagged as measured within the search ellipse. For the Indicated category, the search ellipsoid was twice the size of the Measured category ellipsoid using the same composites selection criteria. An ellipse fill factor of 85% was applied to the Indicated category. All remaining blocks were considered to be in the Inferred category generally in the edges of the known mineralisation mostly in the down-dip extensions beyond the last drill holes in each section. The strong geological and grade continuity as well as resource category distribution of the deposit are shown in solids and cross sections in Figures 2 to 12. Drill hole collar location plan and significant intercepts from

the Sayona 2018 resource expansion and exploration drilling program are shown in Figure 14 and table 4 respectively.

JORC Ore Reserve Estimate

The revised ore reserve was derived from the Sayona DFS on its 100% owned Authier lithium Project (see ASX release, 24 September 2018). The revised Ore Reserve Estimate totals 12.10Mt at 1.00% Li2O (see Table 3 below).

Table 3– 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 inclusive of dilution and ore loss.			

This revised Ore Reserve estimate is in line with Industry best practice standards and reported according to the guidelines set by the JORC Code, 2012 Edition.

The resource model used as the basis for this Ore Reserves update was also compiled by Dr. Gustavo Delendatti, based on the latest available drilling information.

The Mineral Resource Estimate 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% Li2O cut-off grade. The estimation was based on an IDS3 interpolation. A total of 199 drill holes were used for the solid modelling and updated resource estimate (MRE).

A block size of three (3) m (N-S) by three (3) m (E-W) by three (3) m (vertical) was selected for the resource block model of the Project based on drill hole spacing, width and general geometry of mineralization but primarily by the selected SMU from the advanced feasibility study. Three dimensional mineralised wireframes were used to domain the Li_2O data using a 0.4 % Li2O cut-off over a minimum drill hole interval length of 2 m as a guideline to define the width of mineralised interpretations on sections i.e. polygons. Sample data was composited to 1.5m down hole lengths. Variable search ellipse orientations were used to interpolate the blocks.

The Ore Reserves are reported at a 0.55% Li_2O cut-off, in line with the reporting of the Mineral Resources. This cut-off which is above the theoretical economic cut-off has been selected to increase the feed grade to the process facility.

BBA carried out open pit optimisation on the Measure and Indicated Resource material. Slope design criteria, mining dilution, ore loss and processing recoveries were applied in the pit optimisation process together with mining, processing, transport and sales cost estimates, and revenue projections to form the basis for pit designs and subsequent mining and processing schedules.

The outcome of the optimisation was used to perform the detailed pit design. The design indicates a pit of 1,000 metres in length (east-west), 600 metres width (north-south) and down to a final pit depth of 200 metres. The proposed open-pit is presented by the Figures below.

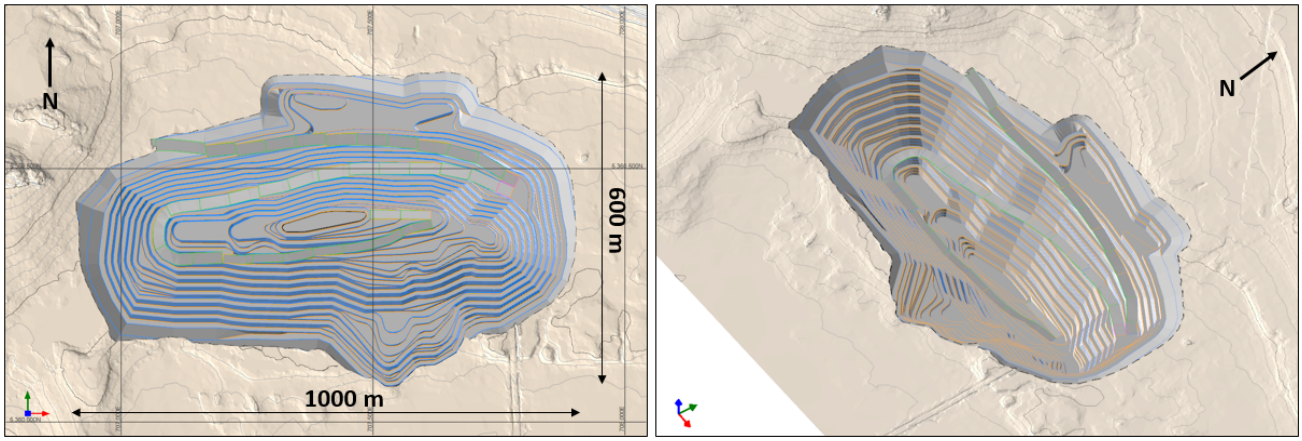

Figure 1: Reserves Pit Design

ASX Additional Information - Material Assumptions

Mineral Resource Estimate (Summary Information Required by Listing Rule 5.8.1)

Geology and Geological

The property geology comprises intrusive units of the La Motte pluton to the north and Preissac pluton to the south, with volcano-sedimentary lithologies of the Malartic Group in the centre. The volcano-sedimentary stratigraphy is generally oriented east-west and ranges between 500 metres and 850 metres in thickness (north-south). The volcanic units comprise principally ultramafic (peridotitic) metavolcanic flows with less abundant basaltic metavolcanics. Several highly metamorphosed metasedimentary units described as hornblende-chlorite-biotite schists occur on the south-central portion of the property generally in contact with the La Motte pluton to the north (Karpoff 1994).

The northern border of the Preissac pluton, composed of granodiorite and monzodiorite, runs east-west along the southern edge on the property. To the north, muscovite monzogranitic units of the La Motte pluton cover the property. Numerous small pegmatites generally composed of quartz monzonite are intruding the volcanic stratigraphy including the larger spodumene-bearing pegmatite which is the focus of the current Mineral Resource estimate.

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.

Drilling Techniques and Hole Spacing

The Authier project has been subject to more than 31,000 metres of drilling. Between 2010 and 2012, Glen Eagle completed 8,990 metres of diamond drilling in 69 DDH of which 7,959 metres were drilled on the Authier deposit; 609 meters (five DDH) were drilled on the Northwest and 422 metres on the south-southwest of the property.

Sayona Mining has completed three phases of drilling totalling more than 11,000 metres in 81 DDH. All the holes completed by Sayona and included in the Mineral Resource Estimate (MRE) were DDH, HQ or NQ diameter, standard tube and bit.

Sayona's Phase 1 (19 holes for 3,967 metres, September to November 2016) and Phase 2 (31 holes for 4,117 metres, January / May 2017) where performed using HQ diameter.

Sayona´s Phase 3 resource expansion drilling (17 holes for 2,170.45 metres, January to March 2018) was performed using NQ core diameter size.

The drilling programs have been subject to very robust QA/QC procedures.

Phase 3 drilling included a separate Metallurgical diamond drilling completed in November to December 2017 encompassing seven holes for 769.5 metres (including 680 metres PQ core diameter and 89.5 metres of HQ core diameter) where five tonnes of pegmatite sample were collected and used in the pilot plant metallurgical test performed for this DFS. Metallurgical drilling core in Phase 3 was not included in the resource.

Phase 3 drilling also included Condemnation drilling which was performed in April 2018 consisting of six diamond core holes NQ diameter for 342.65 metres.

Sayona's diamond core was oriented using a Reflex ACT III tool for Phase 1 and Phase 2 whereas Phase 3 diamond core was not oriented.

All core drilling before 2016 was NQ core diameter size, standard tube and bit, not oriented.

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.

DDH holes were drilled on nominally grid patterns ranging from 30 metres x 30 metres up to 50 metres x 50 metres. The grid pattern is considered an adequate spacing for establishing geological and grade continuity along strike and down dip and therefore appropriate for defining Measured, Indicated and Inferred Resource categories within the resource area.

Sampling and Sub-Sampling

Drill core HQ diameter samples cut to two halves with one half placed in a new plastic bag along with the sample tag sent for analysis. The other half was replaced in the core box with the second sample tag for reference.

Sampling boundaries are based in geological contacts of spodumene-bearing pegmatite with host rock.

In general, at least two host rock samples were collected each side of the contacts with the mineralised pegmatite.

Sample preparation of the drill core samples collected during the drilling programs is assayed at the SGS Canada Inc laboratory ("SGS") facilities in Sudbury, Ontario follows industry best practice, involving oven drying, crushing and pulverising onsite to respect the specifications of the analytical protocol, and then are shipped to SGS Mineral Services laboratories in Lakefield, Ontario, for analysis.

Sample sizes are considered appropriate with regards to the grain size of the sampled material.

For sample preparation and sub-sampling techniques, and details of drill core samples before 2016, please refer to Table 1 of ASX release "Authier JORC Resource Estimate", 7 July 2016.

Sample Analysis Method

Assaying of all 2016, 2017 and 2018 drilling sample received at SGS were processed according to the following procedure at the SGS preparation facilities in Sudbury, Ontario. All samples are inspected and compared to the chain of custody ("COC") and logged into the SGS laboratory management system, then weighed and dried. Sample material is crushed to 75% passing 10 mesh (2mm), split to obtain a 250g sub-sample which is then pulverised to 85% passing 200 mesh (75 microns).

The analyses of all 2016, 2017 and 2018 drilling sample were conducted at the SGS laboratory located in Lakefield, Ontario, which is an accredited laboratory under ISO/IEC 17025 standards accredited by the Standards Council of Canada.

The analytical protocol used at SGS Lakefield is the GE ICP91A 29 element analysis-sodium peroxide fusion, which involves the complete dissolution of the sample in molten flux for ICP-AES analysis. The detection limits for lithium are 10 ppm (lower) and 10,000 ppm (upper).

No geophysical or handheld tools were used.

Quality control protocols ("QA/QC") involve a review of laboratory supplied internal QA/QC and in-house controls, consisting of the insertion of in-house reference standards (high and low grade, prepared with material of the project and certified by lab round-robin), and samples of "barren" material ("blanks") on a systematic basis, with the samples shipped to SGS.

For Quality of Assay Data and Laboratory Tests of all samples before 2016, please refer to Table 1 of ASX release "Authier JORC Resource Estimate", 7 July 2016.

Mineral Tenement and Land Tenure Status

The property consists in one block of map designated claim cells located at the border between the La Motte Township and the Preissac Township, totalling 20 claims covering 717.72 hectares. The property extends 3.4km in the east-west direction and 3.1km north-south. Approximately 75% of the mineral resources are present inside the 3 claims (CDC 2183455, 2194819 and 2116145) and the rest in inside claims 2183454 and 2187652.

All tenements covering the deposit are in good standing and there are no known impediments to obtaining a license to operate.

Estimation Methodology

The Mineral Resource Estimate 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% Li2O cut-off grade. The estimation was based on an ID3 interpolation. A total of 199 drill holes were used for the solid modelling and updated resource estimate (MRE).

A block size of three (3) m (N-S) by three (3) m (E-W) by three (3) m (vertical) was selected for the resource block model of the Project based on drill hole spacing, width and general geometry of mineralisation but primarily by the selected SMU from the advanced feasibility study. Three dimensional mineralised wireframes were used to domain the Li_2O data using a 0.4 % Li2O cut-off over a minimum drill hole interval length of 2 m as guideline to define the width of mineralised interpretations on sections i.e. polygons. Sample data was composited to 1.5m down hole lengths.

The interpolation process was conducted using three successive passes with more inclusive search conditions from one pass to the next until most blocks were interpolated. Variable search ellipse orientations were used to interpolate the blocks. The general dip direction and strike of the mineralised pegmatite were modelled on each section and then interpolated in each block. During the interpolation process, the search ellipse was orientated following the interpolation direction (azimuth-dip (dip direction) and spin (strike direction) of each block, hence better representing the dip and orientation of the mineralisation.

The first pass was interpolated using a search ellipsoid distance of 50 m (long axis) by 50 m (intermediate axis) and 25 m (short axis) with an average orientation of 90° azimuth (local grid), -55° dip and 0° spin which represents the general geometry of the pegmatites in the deposit. Using search conditions defined by a minimum of seven composites, a maximum of 15 composites and a maximum of two composites per hole (minimum of three holes), 40 % of the blocks were estimated. For the second pass, the search distance was twice the search distance of the first pass and composites selection criteria were kept the same as for the first pass. A total of 79 % of the blocks were interpolated following the second pass. Finally, the search distance of the third pass was increased to 300 m (long axis) by 300 m (intermediate axis) by 150 m (short axis) and again the same composites selection criteria were applied. The purpose of the last interpolation pass was to interpolate the remaining un-estimated blocks mostly located at the edges of the block model, representing 21% of the blocks.

Resource Classification

The Authier Lithium Mineral Resource was classified as a Measured, Indicated and Inferred, based on drilling density, sample spacing and geological/mineralisation continuity in accordance with the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC 2012).

For the Measured resource category, the search ellipsoid was 50 m (strike) by 50 m (dip) by 25 m with a minimum of seven) composites in at least three different drill holes (maximum of two composites per hole) An ellipse fill factor of 60% was applied the measured category i.e. 50% of the blocks were first tagged as measured within the search ellipse. For the Indicated category, the search ellipsoid was twice the size of the Measured category ellipsoid using the same composites selection criteria. An ellipse fill factor of 85% was applied

the Indicated Category All remaining blocks were considered to be in the inferred category generally in the edges of the known mineralisation mostly in the down-dip extensions beyond the last drill holes in each section.

The input data is comprehensive in its coverage of the mineralisation and does not favour or misrepresent in-situ mineralisation. The definition of mineralised zones is based on high level geological understanding producing a robust model of mineralised domains. This model has been confirmed by infill drilling which supported the interpretation. Validation of the block model shows good correlation of the input data to the estimated grades.

The Mineral Resource estimates appropriately reflect the view of the Competent Person.

Cut-off Grade

The Mineral Resource has been reported at a 0.55% Li_2O cut-off. The cut-off grade is based on the detailed economic analysis performed in the Definitive Feasibility Study. Figure 14 demonstrates the grade and tonnage sensitivity to variation in the cut-off grade.

Mining and Metallurgical Methods and Parameters and Other Modifying Factors

Taking into account the geometry and the depth of the mineralised zone, the Authier Lithium deposit will be mined using open-pit mining methods.

Based on the metallurgical test work conducted at Authier, a 6% Li_2O concentrate can be produced using conventional flotation technology suitable for a pegmatite orebody. The processing plant comprised seven key areas including three-stage crushing, grinding, magnetic separation, mica-flotation, spodumene flotation, concentrate filtration, and tailings thickening and filtration.

No dilution or ore loss factors have been taken into account in the JORC Resource.

Notes to Accompany Mineral Resources Estimate Table:

- Assays for the updated 2018 Resource Estimate at the Authier project were derived from 190 Diamond Core Holes for 22,345 metres. This dataset includes the following Sayona´s drilling: 18 diamond core holes for 3,967 metres, HQ core size, 31 diamond core holes for 4,117 metres, HQ core size and 17 diamond core holes for 2,170.45 metres, NQ core size. Drilling before Sayona was NQ core size.
- Drilling density at Authier ranges from 30 metres x 30 metres up to 50 metres x 50 metres, with the grid pattern extending over the majority of the deposit area.
- Mineralisation wireframes were delineated based on a nominal 0.4 % Li_2O lower cut-off at start and end of each mineralised interval over a minimum drill hole interval length of two metres as guideline to define the width of mineralized interpretations on sections.
- A resource block model was constructed with parent block dimensions of three m (N-S) by three m (E-W) by three m (vertical) based on drill hole spacing, width and general geometry of mineralisation but primarily by the selected SMU from the advanced feasibility study.
- The Resource Estimate was based on an ID3 interpolation, 1.5 m composite analytical data no top-cut, and a 0.55% Li2O cut-off grade.
- The Authier Lithium Mineral Resource was classified as a Measured, Indicated and Inferred, based on drilling density, sample spacing and geological/mineralisation

continuity in accordance with the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC 2012).

- For the Measured resource category, the search ellipsoid was 50 m (strike) by 50 m (dip) by 25 m with a minimum of seven (7) composites in at least three (3) different drill holes (maximum of 2 composites per hole) An ellipse fill factor of 60% was applied to the measured category i.e. 50% of the blocks were first tagged as measured within the search ellipse. For the Indicated category, the search ellipsoid was twice the size of the Measured category ellipsoid using the same composites selection criteria. An ellipse fill factor of 85% was applied the Indicated Category All remaining blocks were considered to be in the inferred category generally in the edges of the known mineralisation mostly in the down-dip extensions beyond the last drill holes in each section.
- Specific gravity ("SG") measurements were conducted by SGS on 38 mineralised core samples collected from drill holes AL-10-01 and AL-10-11. The measurements were performed using the water displacement method (weight in air/volume of water displaced) on representative half core piece, returning average SG value of 2.71 t/m3. In 2017, Sayona perform an SG validation program on both mineralised and non-mineralised material. Cores samples were sent to ALS Val d'Or, which did the measurements using the water displacement method (weight in air/volume of water displaced) returning average SG value of 2.71 t/m3 for mineralised material and 2.90 t/m3 for non-mineralised material.
- The Resource Estimate was checked against previous estimates and internally against geological and mineralisation models.
- Future mining at the Authier deposit is planned to be open cut using drill-blast, standard excavator and truck mining methods. No other assumptions on mining methodology have been made.

Ore Reserve Estimate (Summary Information Required by Listing Rule 5.9.1)

Material Assumptions

The material assumptions which support the Ore Reserve Estimate, the Production Targets and the forecast financial information derived from the Production Targets are disclosed in the body of the announcement and outlined in the ASX Additional Information – Material Assumptions section, with the exception of commercially sensitive information.

The mining costs used in the calculation of the Ore Reserve Estimate were based on the physicals derived from the Life-of-Mine ('LOM') schedule, calculated mining costs, current fuel prices and an owner cost component developed by BBA, a mining consultant based in Montreal.

Criteria Used for the Classification of Ore Reserves

The Ore Reserves are reported at a 0.55% Li_2O cut-off, in line with the reporting of the Mineral Resources. This cut-off which is above the theoretical economic cut-off has been selected to increase the feed grade to the process facility.

BBA carried out open pit optimisation software on the Measure and Indicated Resource material. Slope design criteria, mining dilution, ore loss and processing recoveries were applied in the pit optimisation process together with mining, processing, transport and sales

cost estimates, and revenue projections to form the basis for pit designs and subsequent mining and processing schedules.

The outcome of the optimisation was used to perform the detailed pit design. The design indicates a pit of 1,000 metres in length (east-west), 600 metres width (north-south) and down to a final pit depth of 200 metres.

Mining Method and Assumptions

A conventional open pit mine method was chosen as the basis of the DFS. Ore is exposed at surface requiring minimal pre-stripping and pre-production mining activities. Mining dilution and ore loss were applied to the in-pit resource to estimate the Ore Reserves.

Major modifying factors include: 0.55% Li_2O cut-off grade; ore production average rate of 675,500 tpa; 78% recovery of Li2O as 6% Spodumene concentrate; average selling price of 675 USD/t Concentrate (888 CAD/t).; overall operating concentrate cost of 316 USD/t Concentrate at mine gate and 366 USD/t Concentrate FOB Montreal.

Processing Method and Assumptions

Based on a pilot plant testing program operated at SGS Lakefield, BBA have designed a concentrator plant to process on average 675,500 tpa of ore using conventional flotation technology suitable for a pegmatite orebody. The processing plant comprised seven key areas including three-stage crushing, grinding, magnetic separation, mica-flotation, spodumene flotation, concentrate filtration, and tailings thickening and filtration. The plant will produce a 6% Li_2O concentrate suitable for sale to downstream lithium conversion plants that supply feed-stock to the lithium battery manufacturers. The plant will be located near the open-pit.

The plant will produce a LOM average of 84,700 tonnes of 6% Li_20 concentrate suitable for sale to downstream lithium conversion plants that supply feed-stock to the lithium battery manufacturers.

Cut-off Grades

Using the economic parameters used for the pit optimisation exercise, the resulting open pit cut-off grade was initially calculated at 0.26% Li_2O. Preliminary life-of-mine exercises concluded that it would be economically beneficial to use a higher cut-off grade than what resulted from the optimisation parameters. A cut-off of 0.55% Li_2O was selected for the base case of this reserve reporting. Using such a cut-off improve the overall economics and avoid sending marginal material on which we don't make much profit and potentially negatively affects the concentrate grade due to its low Li_2O content. The cut-off grade is calculated by the total ore based cost divided by the net commodity value.

Estimation Methodology

Please refer to the discussion on this item as set out in the previous section which details the summary information required by LR 5.8.1 for Mineral Resource estimates.

Infrastructure

The Authier project is situated approximately 500 kilometres north-west of Montreal. The established mining support city of Val d'Or is situated 45 kilometres south-east of the project, and the city of Amos is 20 kilometres to the north. The project is readily accessible from Val

d'Or or Amos by the national highway and a high-quality rural road network five kilometres east of the project site.

Water requirements for processing can be serviced from the total implied water resources within the mine area. Power will be accessed 5 kilometres to the east of the project site via an electricity grid supplied by low-cost, hydro-electric power. Product will be shipped via Port of Montreal.

Economic

The economic analysis is based on cash flows driven by the production schedule. The cash flow projection includes:

- Initial and sustaining capital estimates;
- Mining, processing and concentrate logistics costs to the customer based on FOB Port of Montreal pricing;
- Revenue estimates based on concentrate pricing adjusted for fees, charges and royalties;
- Closure costs; and
- An 8% real discount factor.

Spodumene pricing was based on forecasts from a number of leading lithium industry research organisations.

Other factors, include:

1. The average head grade of the Ore has been estimated at 1.00% Li2O over the 18 years of processing operation;
2. Processing recoveries of 78% of Li2O as 6% spodumene concentrate;
3. LoM average spodumene selling price of US$675/t of concentrate at a discount rate of 8%;
4. An exchange rate of 0.76 USD per CAD was used to convert the USD market price projections into Canadian currency;
5. Transport and port charges of 65.7 CAD/t (dry)
6. Inflation – All the forecasts within the financial analysis are on a real basis i.e. with no inflation adjustments; and
7. 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% NSR royalty was assumed in the Ore Reserve Estimate and financial modelling undertaken for the DFS.

Other Non-Mining Modifying Factors

No material naturally occurring risks have been identified. The Authier ithium property comprises one block of 20 map designated claim cells covering 717.72 hectares that are properly granted and in good standing, and have sufficient area for open pit, plant and other infrastructure. Surface rights for all the claims composing the property are owned by the government. There is no reason to believe that the Company will not be able to secure the surface rights to construct the infrastructure related to a potential mining operation, including tailings storage and waste disposal areas, and processing plants. There are no apparent impediments to obtaining all government approvals required for the project. Sayona is conducting exploration work under valid intervention permits delivered by the

Quebec Government, and there are no known environmental liabilities pertaining to the property. Some of the claims containing Mineral Resources are subject to mining royalties. Road access has been granted.

Lithium concentrate produced from Authier will be classed as Chemical Grade specification, principally due to its iron content. The principal markets for Chemical Grade concentrates are batteries, lubricants, aluminium smelting and pharmaceutical applications. 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. For the Authier DFS, a review of lithium industry pricing forecasts of leading investment groups BMO, Canaccord Genuity and Macquarie Bank. The average pricing was retained for the base case pricing scenario of the DFS.

The Company is exploring a number of options for selling high-quality spodumene concentrate that will be produced from a future operation at Authier. This includes direct sales of concentrate to converters that produce lithium products suitable for the global battery markets.

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. The Company previously announced a Memorandum of Understanding ("MOU") with Huan Changuan 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 Authier concentrate production:
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 Authier. 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

A Community Relations Program has been developed to approach and engage local stakeholders. This program includes information sessions and consultations with municipalities, landowners, First Nations communities, non-governmental environmental organisations and recreational associations. Consultation and community engagement efforts will be deployed throughout the project development and operating phases.

For more information, please contact:

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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 and www.sayonaquebec.com

Reference to Previous ASX Releases

This release refers to the following previous ASX releases:

- "Authier JORC Resource Estimate", 7 July 2016
- "Authier Lithium Project JORC Resource Significantly Expanded", 23 November 2016
- "Authier Lithium Project JORC Resource Expanded", 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.

COMPETENT PERSON STATEMENT

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 Sayona's three exploration drilling campaigns, supervised the preparation of the technical information and audit of all the historical drilling data contained 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 the Ore Reserves for the Authier Lithium deposit is based on information compiled by Isabelle Leblanc, Professional Engineer and member of the Ordre des Ingénieurs du Québec (#144395). Isabelle Leblanc is the Mining Department Manager of BBA and has sufficient experience that is relevant to the activity of Ore Reserve estimation to qualify as a Competent Person as defined in the 2012 Edition of the Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Isabelle Leblanc was responsible for the mining engineering and financial sections of the Definitive Feasibility Study concerning the Authier project.

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.

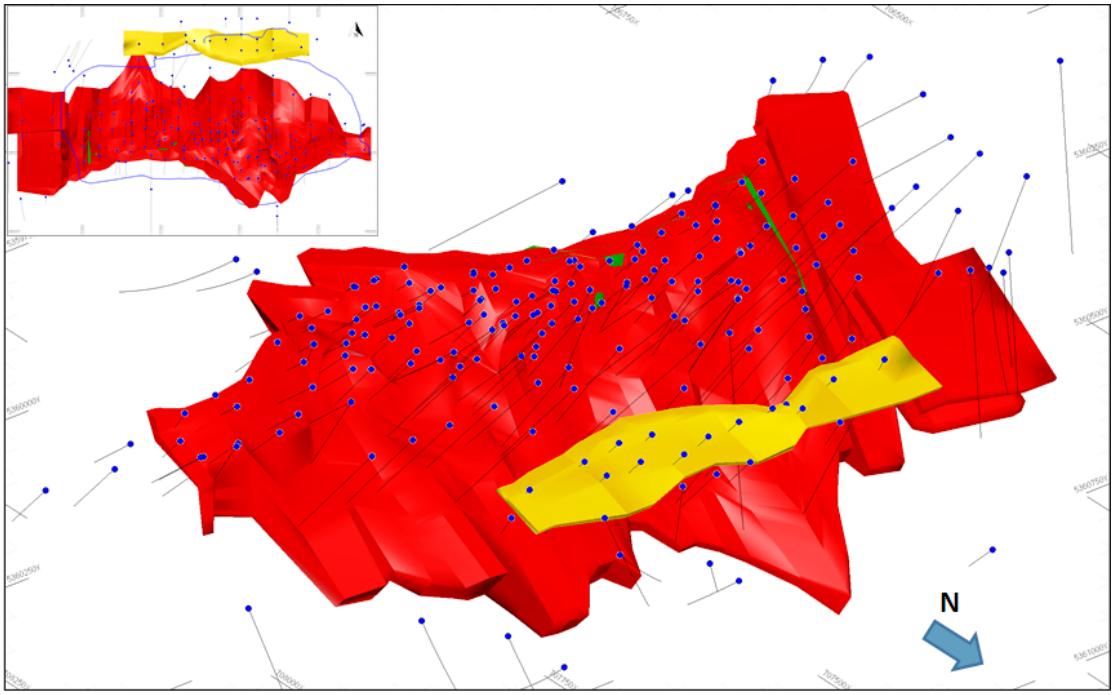

Figure 2: Isometric views of the mineralised solids (Main Authier pegmatite in red and Authier North in yellow)

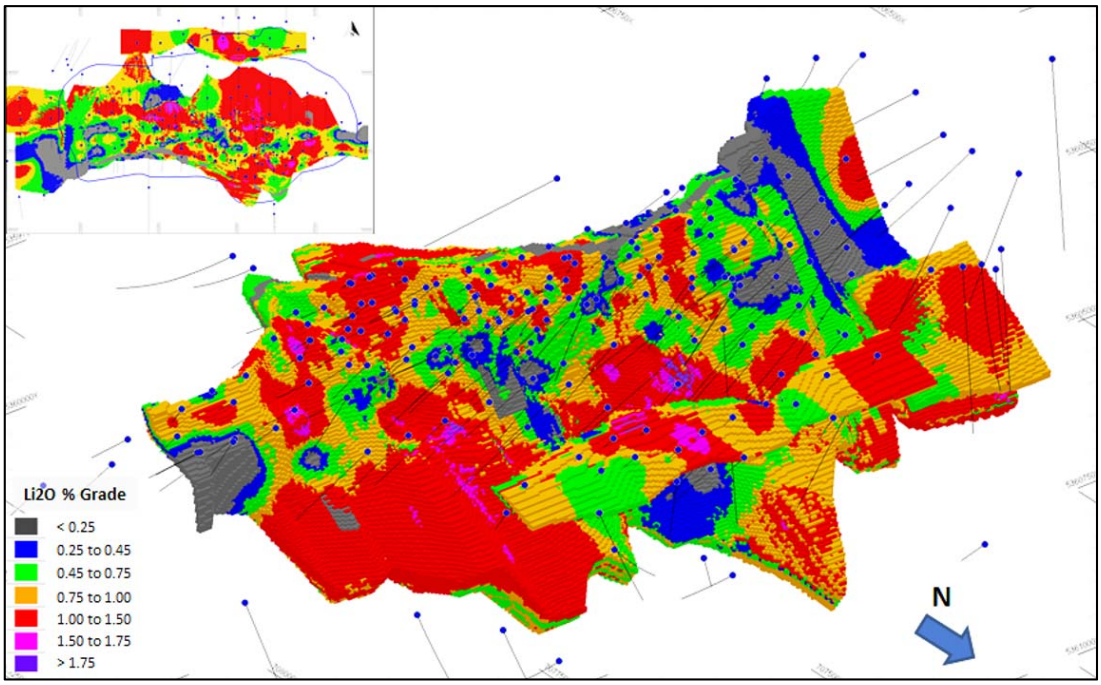

Figure 3: Isometric View (looking southwest) of the Interpolated Block Model showing Li2O % grades

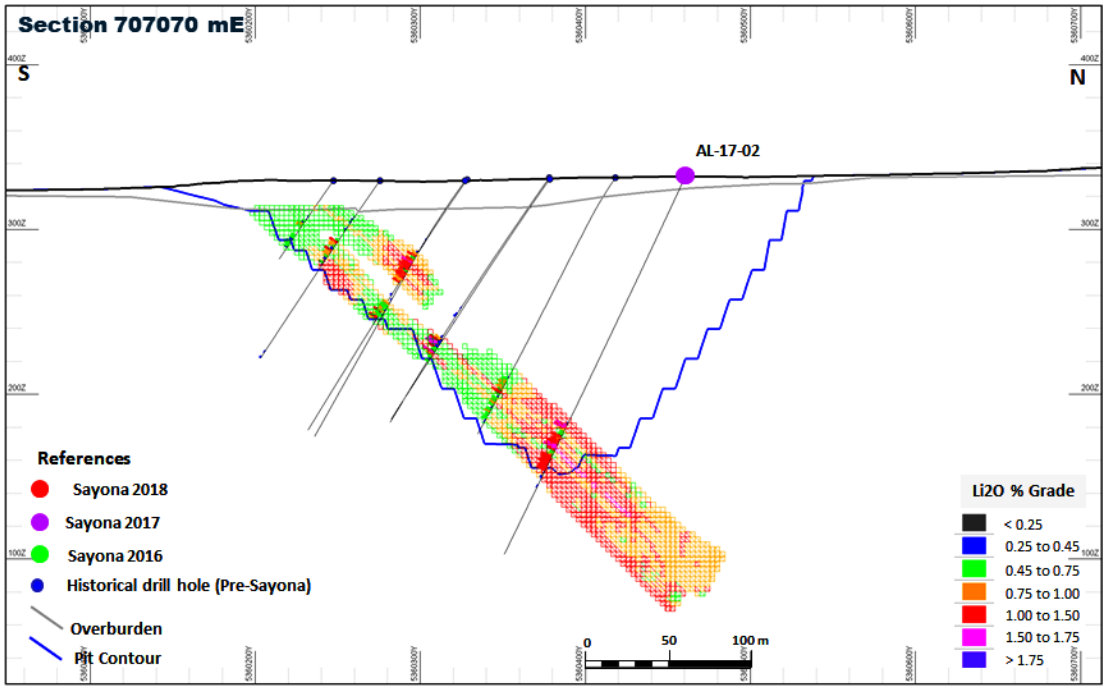

Figure 4: Section 707070 mE (looking West) block model Interpretation grade distribution using 0.55 % Li2O cut-off grade

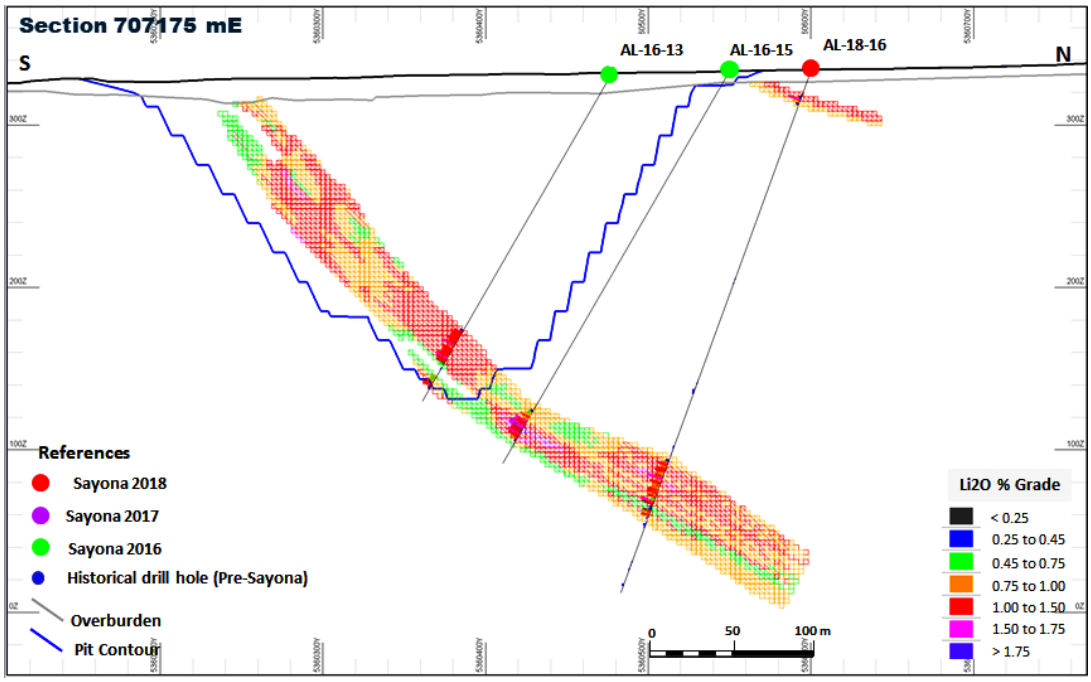

Figure 5: Section 707175 mE (looking West) block model Interpretation grade distribution using 0.55 % Li2O cut-off grade

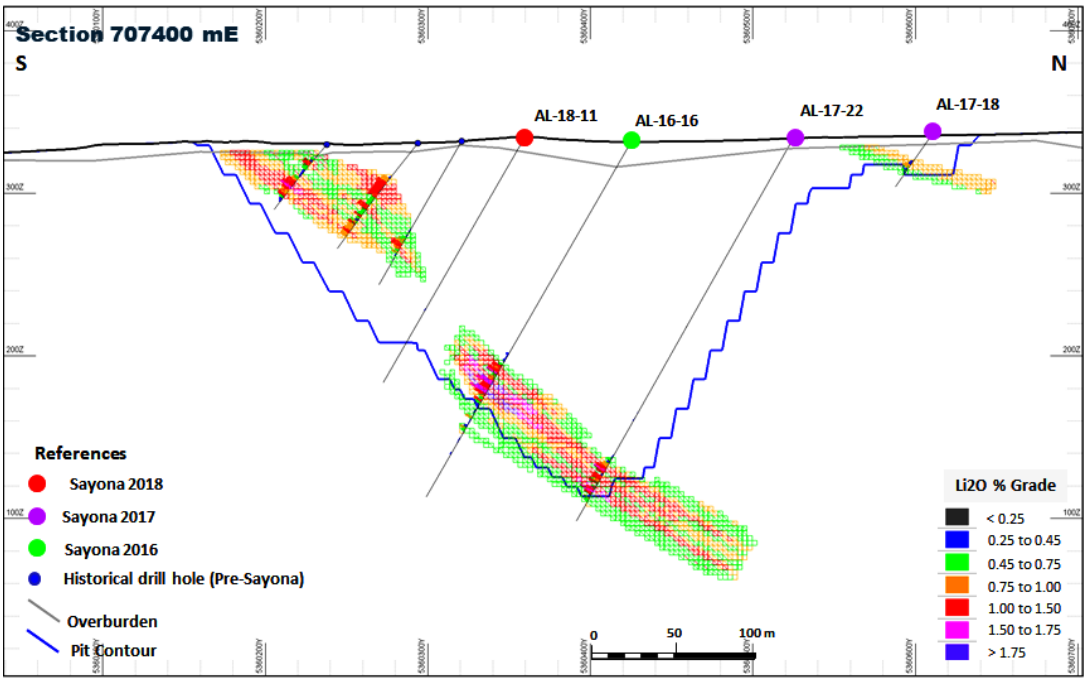

Figure 6: Section 707400 mE (looking West) block model Interpretation grade distribution using 0.55 % Li2O cut-off grade

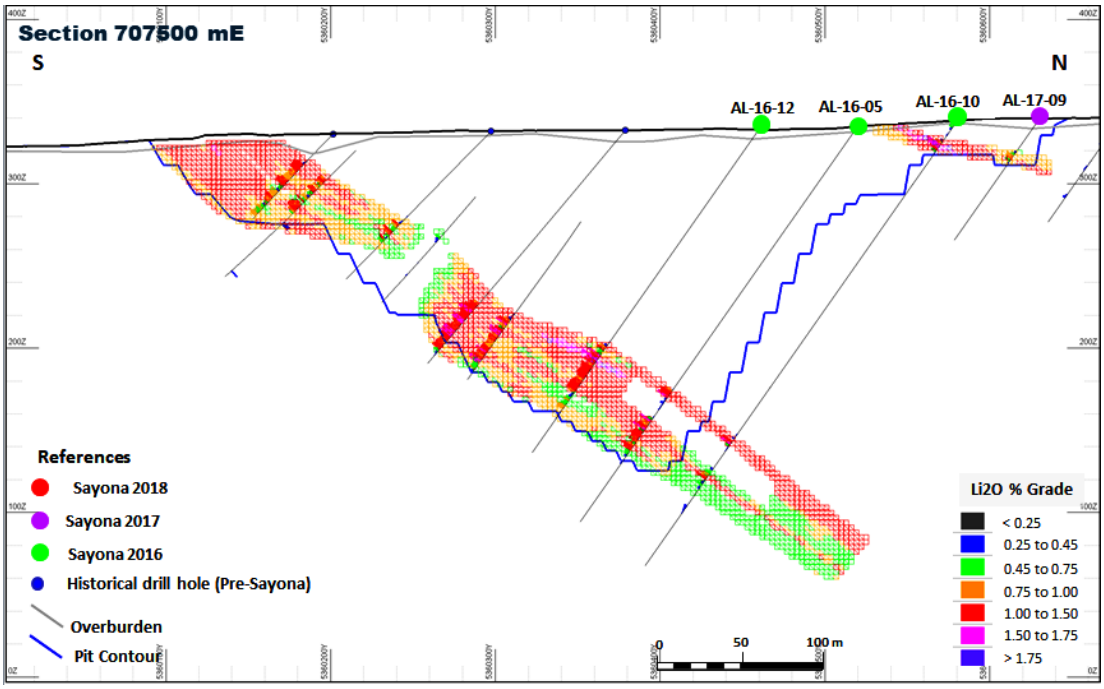

Figure 7: Section 707500 mE (looking West) block model Interpretation grade distribution using 0.55 % Li2O cut-off grade

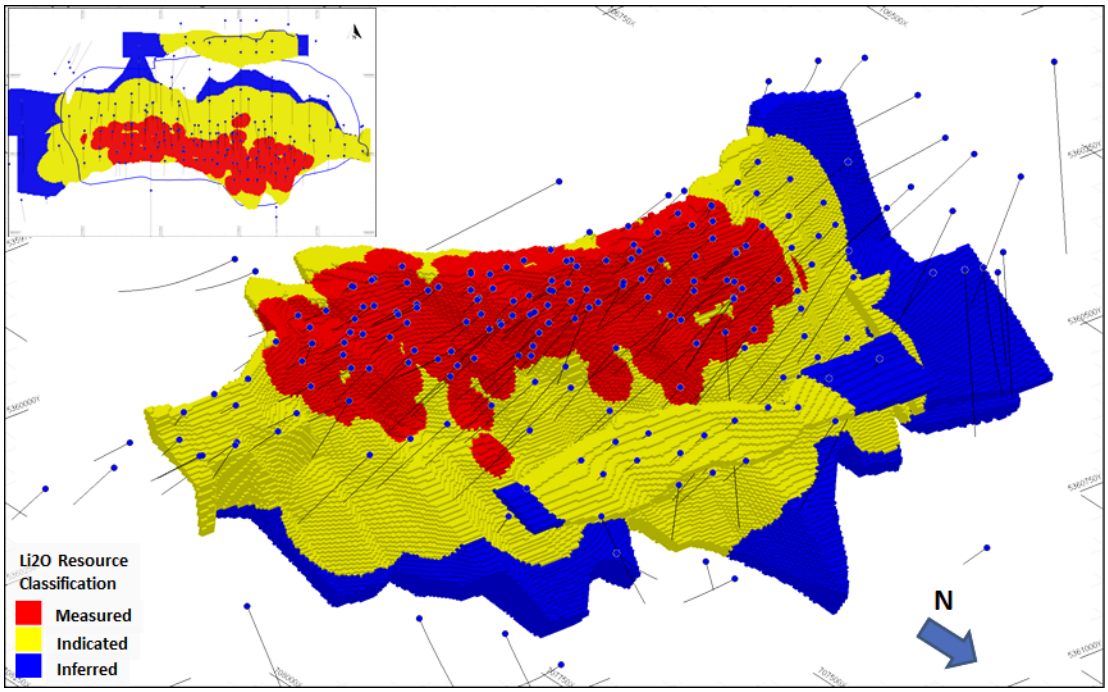

Figure 8: Isometric View (looking southwest) of the Interpolated Block Model for Authier showing Li2O Resource Classification

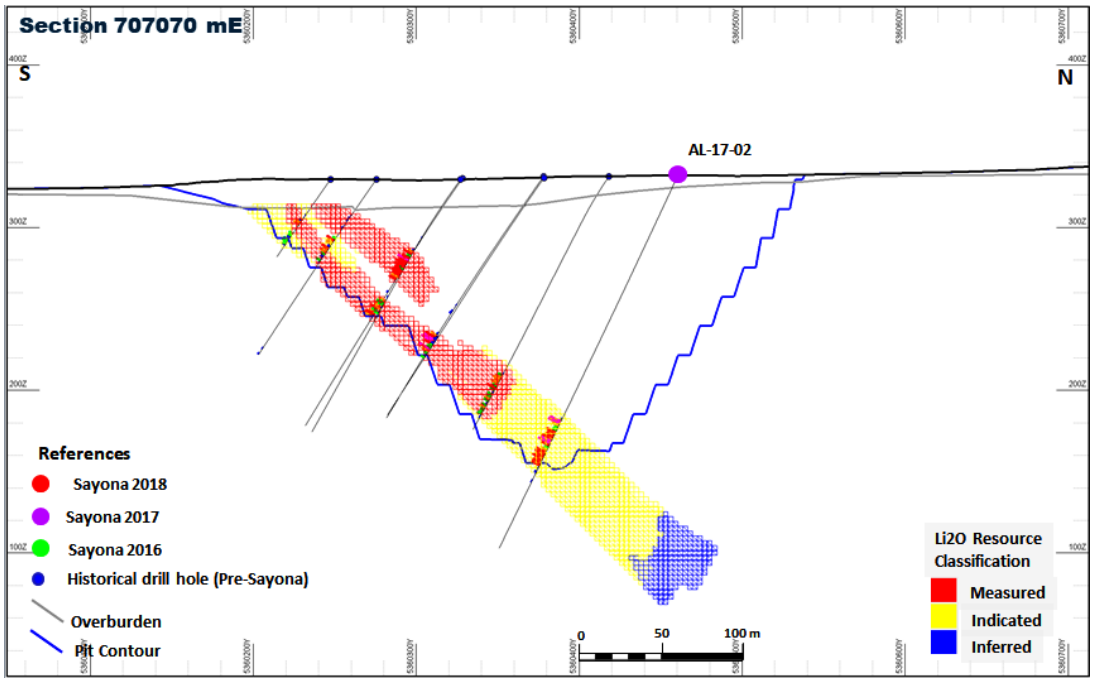

Figure 9: Section 707070 mE (looking West) of the Interpolated Block Model for Authier showing Li2O resource classification using 0.55 % Li2O cut-off grade

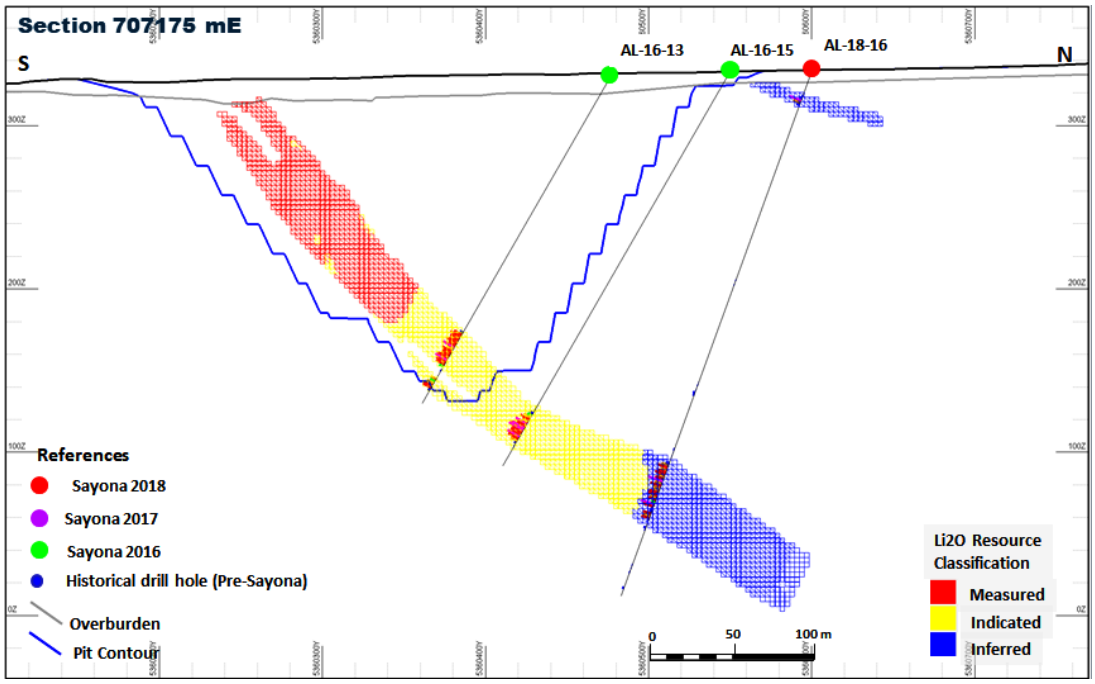

Figure 10: Section 707175 mE (looking West) of the Interpolated Block Model for Authier showing Li2O resource classification using 0.55 % Li2O cut-off grade

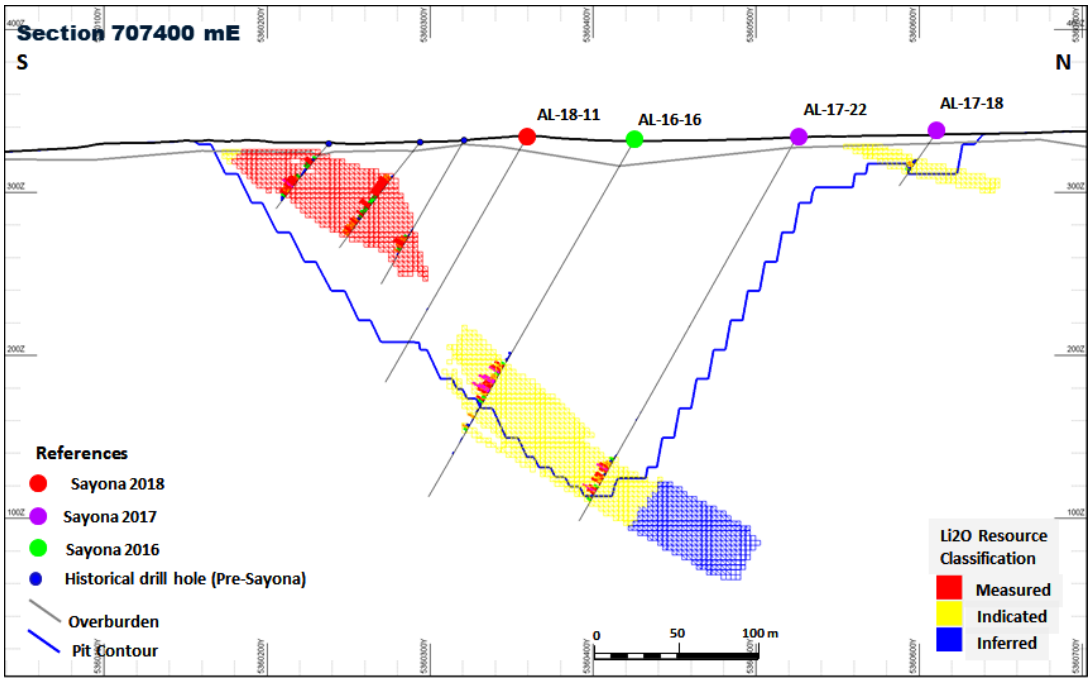

Figure 11: Section 707400 mE (looking West) of the Interpolated Block Model for Authier showing Li2O resource classification using 0.55 % Li2O cut-off grade

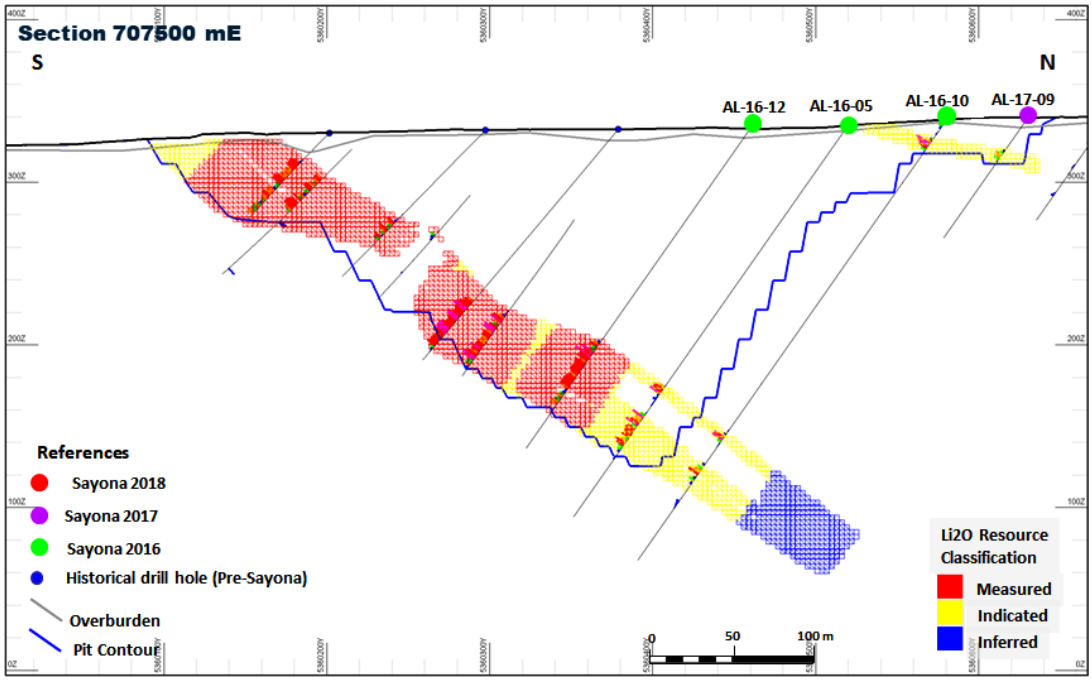

Figure 12: Section 707500 mE (looking West) of the Interpolated Block Model for Authier showing Li2O resource classification using 0.55 % Li2O cut-off grade

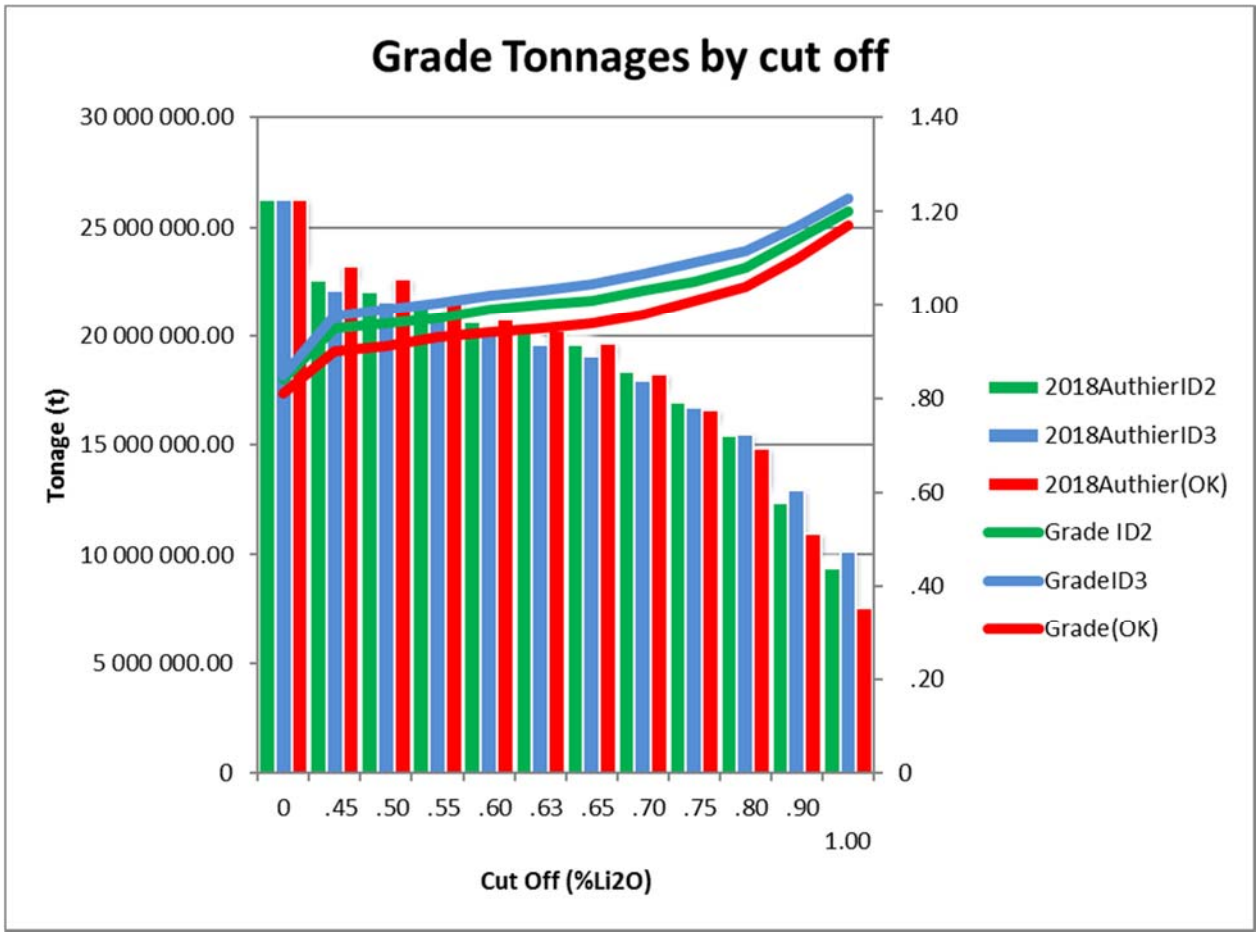

Figure 13: Grade Tonnage curve at various Li2O % cut-off grades for ID3, ID2 and OK for Authier resource project

Table 2: Grade and tonnage at various Li2O % cut-off grade

Grade & Tonnage at Various Cut-off Grades (Li_2O %) Measured, Indicated and Inferred Mineral Resources			
Cut-off Grade Li_20	**Tonnes (Mt)**	**Grades % Li_20**	**Contained Li_20 (T)**
0.00%	26.28	0.85	223,380
0.45%	22.12	0.98	216,776
0.50%	21.59	0.99	213,741
0.55%	20.94	1.01	211,000
0.60%	20.11	1.02	209,265
0.63%	19.59	1.03	205,122
0.65%	19.05	1.05	200,025
0.70%	17.96	1.07	200,090
0.75%	16.70	1.09	192,172
0.80%	15.45	1.12	173,040
0.90%	12.94	1.17	151,398
1.00%	10.16	1.23	124,968

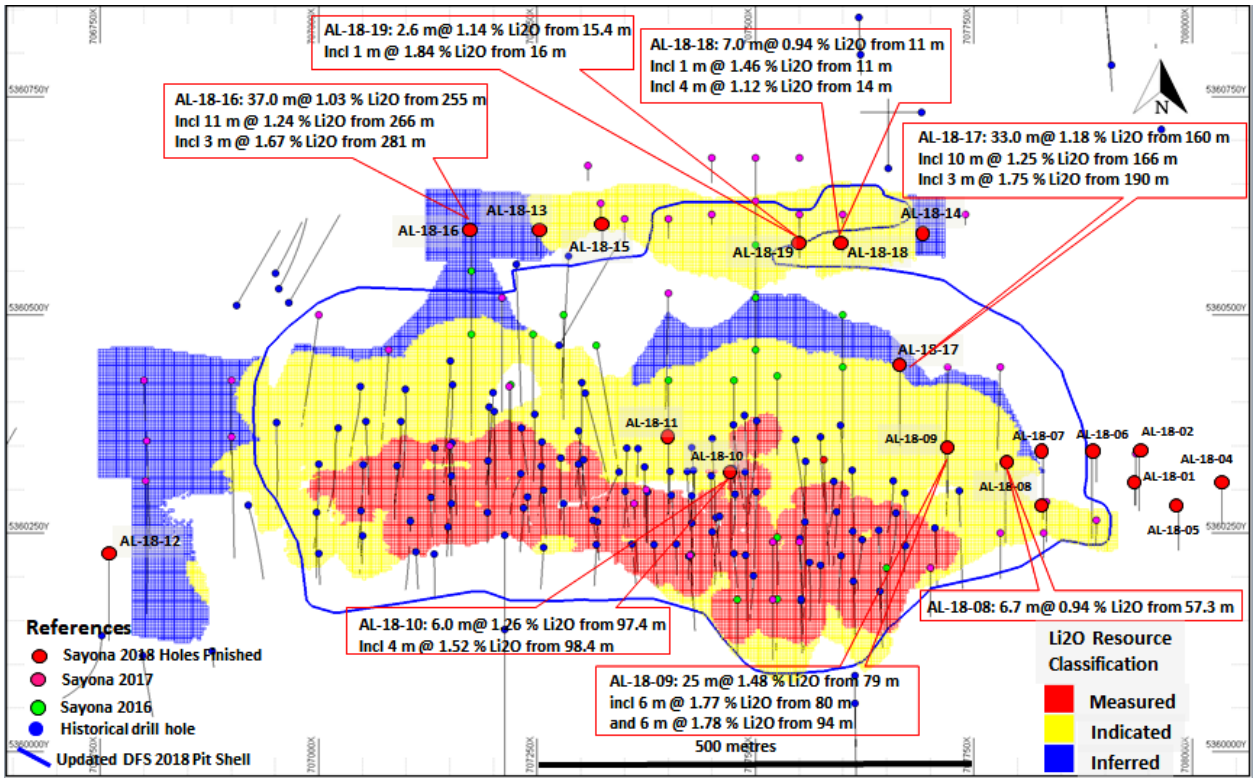

Figure 14: Drill hole collar location plan and significant intercepts from the Sayona 2018 resource expansion and exploration drilling program

Table 3: Resource expansion and exploration drill hole collar location and intercept information

Drill Hole	East	North	RL	Azimuth	Dip	Depth	From (m)	To (m)	Thickness (m)	Grade (%Li_2O)
AL-18-01	707939	5360341	333	180	-45	93				NSR*
AL-18-02	707934	5360304	333	180	-55	39				NSR
AL-18-03	708127	5360298	333	180	-55	75				NSR
AL-18-04	708034	5360307	333	180	-55	90				NSR
AL-18-05	707984	5360279	333	180	-45	69				NSR
AL-18-06	707885	5360342	333	180	-50	153				NSR
AL-18-07	707829	5360348	331.1	180	-55	129.45				NSR
AL-18-08	707786	5360332	331.1	180	-45	132	57.3	64	6.7	0.94
AL-18-09	707720	5360345	331.1	180	-45	129	79	104	25	1.48
including							80	86	6	1.77
including							94	100	6	1.78
AL-18-10	707472	5360320	333.28	180	-55	156	97.4	103.4	6	1.26
including							98.4	102.4	4	1.52
AL-18-11	707400	5360360	335	180	-55	175				NSR
AL-18-12	706760	5360224	330	180	-45	138				NSR
AL-18-13	707250	5360600	333.1	180	-55	57	16.85	22.05	5.2	0.82
including							18	20	2	1.02
AL-18-14	707690	5360590	338.1	180	-55	36	8	14	6	0.85
including							10	11	1	2.01

Drill Hole	East	North	RL	Azimuth	Dip	Depth	From (m)	To (m)	Thickness (m)	Grade (%Li_2O)
AL-18-15	707325	5360606	330	180	-55	60				NSR
AL-18-16	707175	5360600	333.1	180	-70	342	18	22	4	1.08
							255	292	37	1.03
including							266	277	11	1.24
including							281	284	3	1.67
AL-18-17	707665	5360440	332.46	180	-55	231	160	193	33	1.18
including							166	176	10	1.25
including							190	193	3	1.75
AL-18-18	707600	5360580	344	170	-55	39	11	18	7	0.94
including							11	12	1	1.46
including							14	18	4	1.12
AL-18-19	707550	5360580	344	170	-55	27	15.4	18	2.6	1.14
							16	17	1	1.84

Note: Downhole widths are not true widths
*NSR: Not Significant Results

JORC CODE, 2012 EDITION – TABLE 1

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. • Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. • Aspects of the determination of mineralisation that are Material to the Public Report. • In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	• All holes reported in this program have been Diamond Core Drill holes (DDH) • Diamond core typical sample length is 1.0 metre starting 2 to 3 metres above and below of the contact of the pegmatite with the barren host rock. • High to low grade lithium-bearing mineralisation (spodumene) is visible during geological logging and sampling. • The core selected for sampling was split and samples of half core were dispatched to a certified commercial laboratory for preparation and analysis of lithium according to industry standard practices. • Sample preparation and assaying techniques are within industry standard and appropriate for this type of mineralisation.
Drilling techniques	• Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	• Sayona's Phase 1 (2016) and Phase 2 (2017) Diamond core drilling, core diameter size HQ. Standard tube and bit. • Sayona´s Phase 3 (2018) Diamond core drilling, core diameter size NQ. Standard tube and bit. • Sayona´s Phase 3 metallurgical drilling (2017), core diameter size PQ, standard tube and bit for 680 metres and 89.5 metres of HQ core diameter size. • Core was oriented using a Reflex ACT III tool for Sayona´s Phase 1 (2016) and Phase 2 (2017) diamond core drilling. • Core was not oriented for Sayona's Phase 3 drilling (2018) including metallurgical and condemnation drilling.

Criteria	JORC Code explanation	Commentary
		• All core drilling before 2016 was NQ core diameter size, standard tube and bit, not oriented.
Drill sample recovery	• Method of recording and assessing core and chip sample recoveries and results assessed. • Measures taken to maximise sample recovery and ensure representative nature of the samples. • Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	• Diamond drill hole core recoveries and RQD are logged. Measurements are taken systematically down hole between core blocks i.e. ~3 metre increments. • Core recovery has been above 98%. • Based on drilling method being diamond core and the near 100% core recovery the sampling is representative. • High competence of the core tends to preclude any potential issue of sampling bias
Logging	• Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. • Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. • The total length and percentage of the relevant intersections logged.	• Geological logging, RQD measurements, core recovery, alpha and beta angles of structures as core orientation using reflex tool completed for all holes done in Phase 1 (2016) and Phase 2 (2017) by Sayona. • Geological logging, RQD measurements and core recovery completed for all holes done in Phase 3 (2018) as well as metallurgical drilling in 2017 and condemnation drilling in 2018 by Sayona. • Geological logging of main characteristics such as rock type, spodumene abundance, mica abundance, etc has occurred in summary and detail at the pegmatite intervals and surrounding host rock. • Detailed geotechnical logging including RQD, orientation data (alpha and beta angles) for structures (faults, fractures, etc), point load tests (1 each 10 metres average) has been undertaken for diamond holes in Phase 1 (2016) and Phase 2 (2017) drilling. • The geological and geotechnical logging is at an appropriate level for the stage of development drilling being undertaken. • The logging of the geological features was predominately qualitative. Parameters such as spodumene abundance are visual estimates by the logging geologist.

Criteria	JORC Code explanation	Commentary
		• Core is photographed after metre marks and sample intervals have been clearly marked on the core. The core was photographed dry and wet. The core boxes were identified with Box Number, Hole ID, From and To using aluminium tags. • The entire target mineralisation type core (spodumene pegmatite) and surrounding barren host rock has been logged, sampled and assayed. The footwall and hanging wall barren host rock has been summary logged.
Sub-sampling techniques and sample preparation	• If core, whether cut or sawn and whether quarter, half or all core taken. • If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. • For all sample types, the nature, quality and appropriateness of the sample preparation technique. • Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. • Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. • Whether sample sizes are appropriate to the grain size of the material being sampled.	• Drill core HQ and NQ diameter samples cut to two halves with one half placed in a new plastic bag along with the sample tag sent for analysis; the other half was replaced in the core box with the second sample tag for reference. • Full core PQ diameter samples were sampled metre by metre and placed in a plastic bag along with the sample tag sent for analysis. No remaining sample was left in the core box. • Sampling boundaries are based in geological contacts of spodumene-bearing pegmatite with host rock. • In general at least two host rock samples were collected each side from the contacts with the mineralised pegmatite. • Sample preparation of drill core samples collected during the 2016, 2017 and 2018 drilling programs completed at the SGS Canada Inc laboratory (“SGS”) facilities in Sudbury, Ontario follows industry best practice, involving oven drying, crushing and pulverising to the respective specifications of the analytical protocol and then shipped to SGS Mineral Services laboratories in Lakefield, Ontario, for analysis • Sample preparation and analysis of drill core samples collected during the 2018 metallurgical drilling program was completed at the SGS Canada Inc laboratory (“SGS”) facilities in Lakefield,

Criteria	JORC Code explanation	Commentary
		Ontario and follow industry best practice, involving oven drying, crushing and pulverising to the respective specifications of the analytical protocol. • Sample sizes are considered appropriate with regard to the grain size of the sampled material • For sample preparation and sub-sampling techniques details of drill core samples before 2016 please refer to Table 1 of ASX release "Authier Lithium Project JORC Resource Estimate" 7 July 2016.
Quality of assay data and laboratory tests	• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. • For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. • Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	• Assaying of Phase 1, 2016, Phase 2, 2017 and Phase 3, 2018 drilling samples received at SGS were processed according to the following procedure at the SGS preparation facilities in Sudbury, Ontario. All samples are inspected and compared to the chain of custody (COC) and logged into the SGS laboratory management system, then weighted and dried. Sample material is crushed to 75% passing 10 mesh (2mm), split to obtain a 250 g sub-sample which is then pulverised to 85% passing 200 mesh (75 microns). • The analyses of all 2016 and 2018 drilling samples were conducted at the SGS laboratory located in Lakefield, Ontario, which is an accredited laboratory under ISO/IEC 17025 standards accredited by the Standards Council of Canada. • The analytical protocol used at SGS Lakefield is the GE ICP91A 29 element analysis - sodium peroxide fusion, which involves the complete dissolution of the sample in molten flux for ICP-AES analysis. The detection limits for Li are 10 ppm (lower) and 10,000 ppm (upper). • For metallurgical sampling, the analytical protocol used at SGS Lakefield is Li using sodium peroxide fusion followed by IC-OES finish and Whole Rock Analysis (major elements) using X-ray fluorescence (XRF76V) with majors by Lithium metaborate fusion. Fusion involves melting the sample

Criteria	JORC Code explanation	Commentary
		with flux and casting it into a glass disc. • No geophysical or handheld tools were used. • Quality control protocol ("QA/QC") involve a review of laboratory supplied internal QA/QC and in-house controls consisting of the insertion of in-house reference standards (high and low grade, prepared with material of the project and certified by lab round-robin) and samples of "barren" material (blanks), on a systematic basis with the samples shipped to SGS. • For the metallurgical program Sayona did not perform in-house controls consisting of the insertion of in-house reference standards (high and low grade, prepared with material of the project and certified by lab round-robin) and samples of "barren" material (blanks), on a systematic basis with the samples shipped to SGS. • For Quality of Assay Data and Laboratory Tests of all samples before 2016 please refer to Table 1 of ASX release "Authier Lithium Project JORC Resource Estimate" 7 July 2016.
Verification of sampling and assaying	• The verification of significant intersections by either independent or alternative company personnel. • The use of twinned holes. • Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. • Discuss any adjustment to assay data.	• All the pegmatite intersections and assay results have been reviewed by the Competent Person and Sayona's geologist and personnel. • Lithium (ppm) reported in assays is converted to Li2O by multiply Li (ppm) X 2.153 (conversion factor) • The entire drilling program conducted by Sayona from 2016 to 2018 was logged by two geologists, a Sayona employee and Sayona's Competent Person using technicians from the Company contracted Services Forestiers et d'Exploration GFE ("Services GFE"). Services GFE provided the office, core logging and storage facilities to the Company which are located less than 4 km southeast from the Authier project near the town of La Motte.

Criteria	JORC Code explanation	Commentary
		• The core boxes were photographed and are available for verification at Services GFE storage facilities less than 4 km southeast from the Authier project. • No twinned holes were drilled during the 2016 and 2017 drilling campaign by Sayona. • All PQ drill holes were drilled in the same drilling pad as both previous Sayona's and historical holes, showing a fair to good correlation between the metallurgical versus recent and historical drill holes when it was possible (for further information please refer to chapter 11 of Authier DFS report). • Primary data was recorded on laptop computers directly into standardised Excel logging templates with built in look-up codes. This information was merged with the assay certificate data into a Sayona's in-house database • No adjustments to assay data have been undertaken. • For Verification of Sampling and Assaying details of all samples before 2016 please refer to Table 1 of ASX release "Authier Lithium Project JORC Resource Estimate" 7 July 2016.
Location of data points	• Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. • Specification of the grid system used. • Quality and adequacy of topographic control.	• Drill collar locations coordinates were surveyed using handheld Garmin GPS. Drill collar will be surveyed by professional surveyor at the end of this drilling campaign. • Collar positions previous to 2016 have been surveyed and the survey values are recorded as the final coordinates and hole orientation in the database by an independent and qualified land surveyor. • Downhole surveys (dip and azimuth) were collected as multiple shot readings using a Gyro tool for deep holes AL-17-03 to AL-17-08; AL-17-13 to AL-17-14; AL-17-22, AL-17-26 and AL-17-28. Downhole surveys (dip and azimuth) were collected as multiple shot readings using a Reflex tool for deep holes AL-17-01

Criteria	JORC Code explanation	Commentary
		and AL-17-02. Azimuth readings were affected by rock magnetism therefore the reflex tool was replaced by a gyro tool for deep holes. Downhole surveys were not completed for shallow holes done in 2017. Holes AL-17-29 and AL-17-30 were not downhole surveyed because the hole stability was compromised by faulting. • Downhole surveys (dip and azimuth) for 2018 drilling were collected as single shot readings using a Reflex tool. Measurements were made at the beginning (25 m below surface) and at the end of the hole length. An intermediate measure was done when drill hole length exceeded 150 m. • The grid system used is 1983 North American Datum (NAD83) • The level of topographic control offered by the collar survey is considered sufficient for the work undertaken at its current stage.
Data spacing and distribution	• Data spacing for reporting of Exploration Results. • Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. • Whether sample compositing has been applied.	• Drill holes were drilled perpendicular to the lithium mineralised pegmatite as shown on the attached plan. • Drill collars were sited to provide the best geological information possible to test the grade, strike and vertical extensions of mineralisation. • The data spacing is sufficient to estimate geological and grade continuity of observed mineralisation and therefore to produce a JORC compliant Mineral Resource estimate. • Sample compositing has not been applied.
Orientation of data in relation to geological structure	• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. • If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	• Drilling grid orientation is perpendicular to the strike of the mineralisation determined by previous mapping and historical drilling. • No bias attributable to orientation of sampling upgrading of results has been identified.
Sample security	• The measures taken to ensure sample security.	• All reasonable measures have been taken to ensure sample

Criteria	JORC Code explanation	Commentary
		security along the value chain. These measures include the sample collection by company´s field personnel, recording of sample dispatch and receipt reports, secure delivering of samples to SGS laboratory facilities. • For details on Sample Security of all samples before 2016 please refer to Table 1 of ASX release "Authier Lithium Project JORC Resource Estimate" 7 July 2016.
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	• No audit or review of the sampling techniques and data for this release has been carried out. • The quality control protocols implemented at Authier Lithium deposit are considered to represent good industry practice and allow some assessment of analytical precision and accuracy. The assay data is considered to display acceptable precision. • For details on Audits or reviews of all samples before 2016 please refer to Table 1 of ASX release "Authier Lithium Project JORC Resource Estimate" 7 July 2016.

Section 2 - Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. • The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.	• The Authier Lithium property consists of one block of map designated claim cells located at the border between the La Motte Township and the Preissac Township, totalling 20 claims covering 717.72 ha. The property extends 3.4 km in the east-west direction and 3.1 km north-south. • From the 20 claims composing the property, three claims were acquired by staking on November 27, 2009 (CDC 21955725) and July 9, 2010 (CDC 2240226 and 2240227), 15 claims were acquired through two separate purchasing agreements and one claim is held under an option agreement. On March 17, 2017 Sayona signed an option-to-purchase agreement to acquire 100 % of tenement CDC 2187652 located along strike to the east of the main Authier deposit. • Sayona is conducting exploration work under valid intervention permits delivered by the Quebec Government, and there are no known environmental liabilities pertaining to the property. Some of the claims containing mineral resources are subject to mining royalties • Approximately more than 75% of the mineral resources are present inside the three claims (CDC 2183454-2183455 and 2194819). About less than 25% of the estimated mineral resources are present inside the claim (CDC2116146). • The spodumene-bearing pegmatite intrusion is located on claims number CDC 2183455, 2194819 and 2116146, and extends at surface between approximately 707,050mE and 707,775mE in the East-West direction, and between 5,359,975 mN and 5,360,275 mN in the North-South direction. • The property is adjacent to a protected area reserved for groundwater catchment supply located just the north of the

Criteria	JORC Code explanation	Commentary
		property, which has been excluded for exploration and mining activities. • Sayona is conducting exploration work under a valid forest intervention permit delivered by the provincial Ministère des Ressources Naturelles et de la Faune ("MRNF"). As of the date of this report, the Company confirmed the validity of its work permits.
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	• The property has been explored in the 1950's and 1960's for volcanic nickel-copper sulphides mineralisation and, later, for lithium mineralisation since the late 1960's with the discovery of a significant spodumene-bearing pegmatite intrusion. The property saw significant amounts of exploration work between 1966 and 1980 with delineation drilling programs from 1991 until 1999 with bulk sampling and metallurgical testing programs. • The project has more than 32,000 metres of drilling in 231 diamond holes including seven holes PQ diameter drilled to collect five tonnes of pegmatite sample for pilot plant metallurgical testing. • The project was initially drilled between 1991 and 1999 by Raymor Resources, and then by Glen Eagle between 2010 and 2012. • In 2010, Glen Eagle secured the mining rights and completed exploration work as well as 1,905 m of diamond drilling totalling 18 holes targeting the deposit. During 2011, Glen Eagle drilled a total of 4,051 m mainly on the Authier pegmatite deposit and other areas. In 2012, Glen Eagle drilled a total of 3,034 m mainly on the Authier Pegmatite deposit and other areas.
Geology	• Deposit type, geological setting and style of mineralisation.	• Mineralisation is hosted within spodumene-bearing pegmatite intrusions. The Authier project hosts two separate mineralised pegmatite systems, striking east-west and dipping to the north: Authier Main and Authier North. • Authier Main area extends over a strike length of 1,100 m, has an average width of 25 m

Criteria	JORC Code explanation	Commentary
		(ranging from 4 metres to 55 metres) typically extends down below 250 metres vertical depth, and dips 40 - 50 degrees to the north. • Authier North area extends over a strike length of 500 m, has an average width of seven m and dips 15 degrees to the north. The Authier North pegmatite appears at shallow levels (15 to 25 metres vertical depth) • Both pegmatites remain 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.
Drill hole Information	• A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: • easting and northing of the drill hole collar • elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar • dip and azimuth of the hole • down hole length and interception depth • hole length. • If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	• From 2016 to 2018 Sayona completed three phases of drilling totalling 11,367 metres of drilling in 81 holes (including metallurgical test works drill holes and condemnation drill holes). • Phase 3 diamond drilling program was conducted in separate stages starting as metallurgical drilling during November/December 2017 (seven diamond holes PQ and HQ for 769.5 metres, collecting five tonnes of core for pilot metallurgical testing);, followed by the resource expansion and definition drill holes during January / March 2018 of 19 holes NQ diameter totalling 2,170.45 metres, and, finally, in April 2018, condemnation drilling, six holes NQ diameter for 342.65 metres. • Drill hole details for the resource expansion and definition holes of Phase 3 conducted in 2018 are reported in the body of this announcement as Table 2.
Data aggregation methods	• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are	• No weight averaging or high-grade cut has been applied to any of the sample assay results. • Reported intercepts have been calculated as arithmetic averages using a 0.4 % Li20 lower cutoff

Criteria	JORC Code explanation	Commentary
	usually Material and should be stated. • Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. • The assumptions used for any reporting of metal equivalent values should be clearly stated.	grade, as described in the body text of this release. • The majority of the lithium assay results show a simple normal population and it is not believed the reporting of intercepts is skewed by the inclusion of high and low grade results. • Metal equivalent values have not been reported.
Relationship between mineralisation widths and intercept lengths	• These relationships are particularly important in the reporting of Exploration Results. • If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. • If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').	• Drilling has been sited to intersect the lithium mineralisation orthogonally. • Drilling widths reported are downhole intercept widths and true width is approximately 90% of drilling width.
Diagrams	• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	• A Collar Plan and typical cross-sections are presented in the body of this Release. Phase 3 resource expansion and definition drilling details are reported in the body of this announcement as Table 2.
Balanced reporting	• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	• The reporting is considered to be balanced.
Other substantive exploration data	• Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	• The Sayona's Phase 3 diamond drilling campaign was conducted after Sayona's Phase 1, 2016 Stage 01 and Phase 2, 2017 drilling campaigns and the Glen Eagle 2010-2012 diamond drilling campaign which was preceded by prospecting, geochemical sampling and geophysical surveys that covered the property targeted areas. This work confirmed the presence of several pegmatite occurrences across the property having a similar geochemical signature to the main Authier pegmatite.

Criteria	JORC Code explanation	Commentary
		• Details of metallurgical test work are described in Sayona ASX release dated May 18th 2018. • All meaningful and material data reported.

Further work	• The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).
	• Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.
		• Sayona's Project Development strategy is detailed as follows:
		  • Converting the Inferred mineral resources to Measured and ildicated through further higher density drilling;
		  • Infill drilling within the main deposit where there is no resource due the low drilling density especially in the east and west extension, and to add to the resource base;
		  • Exploring for extensions to the existing mineral resources and other potential mineralisation within the tenement package;
		  • Consolidating other potential resources / mineralisation in the district;
		• Completion of details of engineering works;
		• Apply for permits;
		• Negotiating production off-take agreements; and
		• Sourcing development finance and constructing the project.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. • Data validation procedures used.	• The digital drill hole database was audited by the author using validation tools for: collar location, azimuth, dip, hole length, survey data and analytical values. There were no relevant errors or discrepancies noted during the validation. • For details on Database Integrity before 2016 please refer to Table 1 of ASX release "Authier Lithium Project JORC Resource Estimate" 7 July 2016.
Site visits	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits. • If no site visits have been undertaken indicate why this is the case.	• For the July 2018 JORC estimate, the Author was stationed on site and was responsible for the overall management, coordination and execution of the drilling programs. • The Author was stationed on site and was responsible for the overall management, coordination and execution of Sayona Phase 1 drilling program in 2016 (approximately 10 weeks); Phase 2 drilling program in 2017 (approximately 11 weeks); and Phase 3 drilling program (approximately 12 weeks) • The author visited the Authier Lithium deposit during 28 and 29 May 2016 prior to the project acquisition. For the July 2016 JORC Resource, the Author reviewed drill hole collars, surface geology and mineralised diamond core intervals stored at project field facilities and it was concluded that these were being conducted to best industry practice
Geological interpretation	• Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. • Nature of the data used and of any assumptions made. • The effect, if any, of alternative interpretations on Mineral Resource estimation. • The use of geology in guiding and controlling Mineral Resource estimation. • The factors affecting continuity both of grade and geology.	• The confidence in the geological interpretation at Authier Lithium deposit is considered to be good and is based on the drilling density and well known geological features. • Drill hole logging by Glen Eagle and Sayona's geologists, through direct observation of drill core samples has been used to interpret the geological setting. • The continuity of the main mineralised body is clearly observed by Li2O grades

Criteria	JORC Code explanation	Commentary
		correlated with spodumene rich pegmatite within the drill holes. The nature and continuity along strike of the lithium mineralisation would indicate that alternate interpretations would have little impact on the overall Mineral Resource estimation. • The mineralisation is related to a pegmatite intrusive with multiple phases of spodumene mineralisation.

Dimensions	• The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	• The Authier Lithium Mineral Resource includes two pegmatites striking east-west and dipping to the north: Authier Main and Authier North.
		  • Authier Main area extends over a strike length of 1,100 m, has an average width of 25 m (ranging from four metres to 55 metres) typically extends down below 250 metres vertical depth, and dips 40 - 50 degrees to the north.
		  • Authier North area extends over a strike length of 500 m, has an average width of 7 m and dips 15 degrees to the north. The Authier North pegmatite appears at shallow levels (15 to 25 metres vertical depth)
		• Both pegmatites remain open in all directions.

Estimation and modelling techniques	• The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used. • The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. • The assumptions made regarding recovery of by-products. • Estimation of deleterious elements or other non-grade variables of	• The Resource Estimate was based on an ID3) interpolation, 1.5 m composite analytical data no top-cut, and a 0.55% Li2O cut-off grade. • Three dimensional mineralisation wireframes were modelled based on a nominal 0.4 % Li_2O lower cut-off at start and end of each mineralised interval over a minimum drill hole interval length of 2 metres as guideline to define the width of mineralised interpretations on sections. • Based on the statistical analysis there is no need for grade capping. • An orientated 'ellipsoid' search was used to select data and was based on the observed lens geometry. The search ellipsoid was orientated to the average strike, plunge, and dip of pegmatite body.

Criteria	JORC Code explanation	Commentary
	economic significance (eg sulphur for acid mine drainage characterisation). • In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. • Any assumptions behind modelling of selective mining units. • Any assumptions about correlation between variables. • Description of how the geological interpretation was used to control the resource estimates. • Discussion of basis for using or not using grade cutting or capping. • The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	• Variable search ellipse orientations were used to interpolate the blocks. The general dip direction and strike of the mineralized pegmatite was modelled on each section and then interpolated in each block. During the interpolation process, the search ellipse was orientated following the interpolation direction (azimuth-dip (dip direction) and spin (strike direction) of each block, hence better representing the dip and orientation of the mineralisation. • The interpolation process was conducted using three successive passes, For the first pass (Measured resource category), the search ellipsoid was 50 m (strike) by 50 m (dip) by 25 m with a minimum of seven composites in at least three different drill holes (maximum of two composites per hole) An ellipse fill factor of 60% was applied the measured category i.e. 50% of the blocks were first tagged as measured within the search ellipse. For the second pass (Indicated category), the search ellipsoid was twice the size of the Measured category ellipsoid using the same composites selection criteria. An ellipse fill factor of 85% was applied to the Indicated Category. All remaining blocks were considered to be in the Inferred category (third pass) generally on the edges of the known mineralisation mostly in the down-dip extensions beyond the last drill holes in each section. • The parent block dimensions used were three m (N-S) by three m (E-W) by three m (vertical). • The block model size used in the Mineral Resource Estimate was based on drill hole spacing, width and general geometry of mineralisation but primarily by the selected SMU from the advanced feasibility study.
Moisture	• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	• Tonnages and grades were estimated on a dry in situ basis. • Figure 13 and table 3 in the body of the report demonstrates the grade and tonnage sensitivity to variation in the cut-off grade

Criteria	JORC Code explanation	Commentary
Cut-off parameters	• The basis of the adopted cut-off grade(s) or quality parameters applied.	• The Mineral Resource has been reported at a 0.55% Li2O cut-off.
Mining factors or assumptions	• Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	• Taking into account the geometry and the depth of the mineralised zone, the Authier Lithium deposit will be mined using open-pit mining methods. • No dilution or ore loss factors have been taken into account in the JORC Resource.
Metallurgical factors or assumptions	• The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	• Various metallurgical testing at the Authier Lithium deposit was conducted in; 1999, 2012, 2016, 2017, and 2018. • In 1999, Bumigeme Inc., processing consultants, conducted metallurgical testing on a 40 t bulk sample and produced concentrate grades between 5.78% and 5.89% Li_20 at metallurgical recoveries between 67.5% and 70.2%, with an average head assay of 1.14% Li_2O. At an average head grade of 1.35% Li_2O, test work demonstrated a recovery of 75% and a concentrate grade of 5.96% Li_2O. • In 2012, Glen Eagle tested a 270 kg sample from drill core. Attractive results production of a 6.44% Li_2O concentrate at 85% recovery was achieved with three stages of cleaning. • In 2016, Sayona completed a metallurgical testing program using core from 23 historical diamond holes totalling 430 kgs, representing the entire deposit geometry (including the anticipated 5% mine ore dilution), at SGS Lakefield in Canada. Concentrate grades varied from 5.38% to 6.05% Li_2O at recoveries between 71.2% and 78.6%. Mineralogical (using QEMSCAN) analysis of the final concentrates demonstrated that

Criteria	JORC Code explanation	Commentary
		the ore dilution had a negative impact on flotation performance. • In 2017, two representative samples were prepared and flotation testing undertaken using different test conditions including diluted and un-diluted, and with site water. The program demonstrated the ability to produce concentrate grades over 6% at metallurgical recoveries over 80% Li_2O. • In 2018, a pilot plant program was operated at SGS. Continuous testing with an optimised flowsheet produced concentrate grading between 5.8% to 6.2% Li_2O at recoveries ranging from 67% to 79% recovery. The flowsheet incorporated grinding, magnetic separation, de-sliming, mica and spodumene flotation.
Environmental factors or assumptions	• Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	• An Environmental Baseline Study (EBS) has been completed in October 2017 for the Authier project. Previous studies were conducted during 2012 by Dessau and GFE and didn't return environmental issues. Activities by DESSAU and GFE were performed to determine constraints linked to water and sediments quality and to environmental (physical, biological, human) impact. • In May 2018, the Company delivered its 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-up were presented. The results of the EAS showed that the project will have no impact on the water quality of the esker and that all the impact on the other components will be low after the application of mitigation measure. • According to public databases and from field inventories lead during this study by Dessau and GFE, no endangered species or habitats were found.

Criteria	JORC Code explanation	Commentary
		• A plan regarding proposed waste and process residue facilities management and disposal has been prepared and included in the DFS report. • Sayona Mining conducted a geochemical characterisation study of ore, waste rock and tailings samples. The program allows the classification of waste rock and tailings according to provincial authority's regulations standard for acid mine drainage and leachability, and identifies any chemical that could potentially affect the surface or groundwater quality. No evidence of sulphides has been observed in the ore or in the waste rock. • A rehabilitation and closure plan is a requirement under the "Loi sur les mines". It must be approved before the mining lease is issued, and a financial guarantee to fully implement the plan must be provided in three payments in the first two years following the approval of the plan. The rehabilitation plan has been submitted. • A Community Relations Program has been developed to approach and engage local stakeholders. This program includes information sessions and consultations with municipalities, landowners, First Nations communities, non-governmental environmental organisations and recreational associations. Consultation and community engagement efforts deployed throughout the project development allowed Sayona to outline stakeholders' main preoccupations and 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.

Criteria	JORC Code explanation	Commentary
Bulk density	• Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples. • The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit. • Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	• As part of the 2010 independent data verification program, SGS Geostat conducted specific gravity ("SG") measurements on 38 mineralised core samples collected from drill holes AL-10-01 and AL-10-11. The measurements were performed using the water displacement method (weight in air/volume of water displaced) on representative half core pieces weighting between 0.67 kg and 1.33 kg with an average of 1.15 kg, results average SG value of 2.71 t/m3. • In 2017, an independent data verification program performed by ALS Val d'Or was conducted to assess specific gravity ("SG") measurements on waste material using 14 mineralized core samples. The measurements were performed using the water displacement method (weight in air/volume of water displaced) on representative half core and resulted in an average SG value of 2.90 t/m3.
Classification	• The basis for the classification of the Mineral Resources into varying confidence categories. • Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data). • Whether the result appropriately reflects the Competent Person's view of the deposit.	• Mineral Resource have been classified in accordance with the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC, 2012). • The Authier Lithium Mineral Resource was classified as Measured, Indicated and Inferred Mineral resource based on drilling density, sample spacing and geological / mineralisation continuity. • The Measured Mineral Resource was defined in areas where the block model was filled with search ellipsoid of 50 m (strike) by 50 m (dip) by 25 m with a minimum of seven composites in at least three different drill holes (maximum of two composites per hole) An ellipse fill factor of 60% was applied the measured category i.e. 50% of the blocks were first tagged as measured within the search ellipse. The Indicated Mineral Resource corresponded to areas where the search ellipsoid was twice the size of the Measured category ellipsoid

Criteria	JORC Code explanation	Commentary
		using the same composites selection criteria. An ellipse fill factor of 85% was applied to the Indicated category. All remaining blocks were considered to be in the Inferred resource category generally on the edges of the known mineralisation mostly in the down-dip extensions beyond the last drill holes in each section. • The input data is comprehensive in its coverage of the mineralisation and does not favour or misrepresent in-situ mineralisation. The definition of mineralised zones is based on high level geological understanding producing a robust model of mineralised domains. This model has been confirmed by infill drilling which supported the interpretation. Validation of the block model shows good correlation of the input data to the estimated grades. • The Mineral Resource estimates appropriately reflect the view of the Competent Person.
Audits or reviews	• The results of any audits or reviews of Mineral Resource estimates.	• Prior to Sayona's acquisition of Authier, Internal audits have been completed by SGS Geostats at the request of Glen Eagle Resource Inc in a NI43-101 Technical Report, Preliminary Economic Assessment, 22 January 2013 • No external audits have been undertaken on the Sayona JORC Resource estimate. However, SGS in Canada who assisted with the preparation of the 2016 Authier Pre-Feasibility Study, has reviewed the data for mine planning purposes.
Discussion of relative accuracy/ confidence	• Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could	• The pegmatite geometry and continuity has been adequately interpreted to reflect the applied level of Measured, Indicated and Inferred Mineral Resource. The data quality is good and the drill holes have detailed logs produced by qualified geologists. All diamond core obtained by Glen Eagle and Sayona drilling campaigns is properly stored and mineralised intervals can be reviewed when required. Recognised laboratories have been used for all analyses.

Criteria	JORC Code explanation	Commentary
	affect the relative accuracy and confidence of the estimate. • The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. • These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	• The Mineral Resource statement relates to global estimates of tonnes and grade.

Section 4 Estimation and Reporting of Ore Reserves

(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve. • Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.	• The Ore Reserve Estimate is based in the updated JORC Mineral Resource Estimate released by Sayona Mining in this report and prepared by Dr. Gustavo Delendatti as Competent Person. The Mineral Resource was reported using a 0.55% Li_2O cut-off. • The Mineral Resource Estimate was reported as: o Measured Resource of 6.58 Mt at 1.02% Li_2O o Indicated Resource of 10.60 Mt at 1.01% Li_2O o Inferred Resource of 3.76 Mt at 0.98% Li_2O • The Mineral Resources are reported inclusive of Ore Reserves
Site visits	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits. • If no site visits have been undertaken indicate why this is the case.	• The author of the JORC Reserve Estimate did not visit the site due to weather conditions at the time of the preparation of the report. Due to her expertise and experience with similar projects in the vicinity of the Authier Project, a site visit in this instance was deemed unnecessary.
Study status	• The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves. • The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.	• An updated DFS study was prepared to convert a portion of the Mineral Resource to Ore Reserves. • As part of the Authier updated DFS study, a mine plan was developed that was technically achievable and economically viable. This mine plan considered material Modifying factors such as mining, processing, metallurgy, infrastructure, economic, marketing, legal, environmental, social and regulatory.
Cut-off parameters	• The basis of the cut-off grade(s) or quality parameters applied.	• The Mineral Resource provided was a geologically domained resource; this geological model was evaluated to determine which block produced cash surplus when treated as ore. • The marginal cut-off grade was calculated at 0.27 % Li2O. However, in order to optimise the Project's economic return, it was decided to use a higher number (a cut-off grade of 0.55% Li2O) to develop the production schedule and the Open Pit

Criteria	JORC Code explanation	Commentary
		Mineral Reserve Estimate on a standalone basis. • An exchange ratio of CAD:USD of 0.76:1.00 has been used for the study.
Mining factors or assumptions	• The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design). • The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc. • The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling. • The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate). • The mining dilution factors used. • The mining recovery factors used. • Any minimum mining widths used. • The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion. • The infrastructure requirements of the selected mining methods.	• In order to develop an optimal engineered pit design for the Authier deposit, an optimised pit shell was first prepared using a pit optimisation software. The basic optimisation principle of the algorithm operates on a net value calculation for each block in the model (in other words revenue from sales less total operating cost; mining, processing, and general and administration costs) in order to determine to what extent the deposit can be mined profitably. • The mining method is based on open pit mining. • The pit that has been designed for the Authier deposit is 1,000 m long and 600 m wide at surface with a maximum pit depth from surface of 200 m. The total surface area of the pit is roughly 400,000 m2. • Overall slope angle: 48° to 59° (South and North walls respectively) in rock and 14° in overburden, in accordance with the geotechnical recommendations • Face angle: 65º and 80º (South and North walls respectively) • Bench height: six m for single bench and 18 m for triple bench. • Safety berm: 7.2 m width (1 safety berm at each 18 m vertically) • Ramp grade: 10% and 12% at the bottom of the pit. • Ramp width of 17.0 m (single lane) and 23.0 m (double lanes) following industry practice standards. • The haul roads were designed to accommodate the use of conventional mining trucks such as a CAT 775G (63 t payload truck, with 5.3 m width) or equivalent. • Major assumptions for pit optimisation include: ore production rate of 0.7 Mtpa; 80% recovery of Li2O as 6.00% Spodumene concentrate; total Ore Based Cost of CAD$ 25.31 /t treated; and average overall mining cost of 3.14 CAD$/t mined. The NPV has been calculated with a selling price of 600 US$/t of concentrate with 60 CAD$/t transport cost and 12.00 CAD$/t

Criteria	JORC Code explanation	Commentary
		royalty. The discount rate was set at 8%. However, the economic parameters used at the time of the pit optimisation do not necessarily corroborate those calculated or used in the DFS. • The mining dilution was estimated at 4.4% at 0.43 %Li2O, and the Ore Losses have been estimated at 6.7% at 0.88 %Li2O. This is to take into account the fact that some low-grade material will be added into the Ore stream going to the Processing plant and that some of the Ore material will be directed to the Waste dump. • In order to access these reserves, 5.2 Mt of overburden and 78.2 Mt of waste rock must be mined. This total waste quantity of 83.4 Mt results in a stripping ratio of 6.9 to 1. • Minimum mining width was set at three metres. • The overburden thickness averages approximately six m and ranges from 0 to 12 m. • All the mineralised material classified in the inferred category was considered as waste for the Pit Optimization process. • Mining infrastructure include:, ROM pad, tailings pad, overburden pile, co-disposal pile (waste rock and dry tailings), haul roads, workshops, processing plant, gate-house and other buildings.
Metallurgical factors or assumptions	• The metallurgical process proposed and the appropriateness of that process to the style of mineralisation. • Whether the metallurgical process is well-tested technology or novel in nature. • The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied. • Any assumptions or allowances made for deleterious elements. • The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered	• In 2017, two representative samples were prepared and flotation testing undertaken using different test conditions including diluted and un-diluted, and with site water. The program demonstrated the ability to produce concentrate grades over 6% at metallurgical recoveries over 80% Li20. • BBA designed a concentrator to process 675,500 tpa of ore using conventional flotation technology suitable for a pegmatite orebody. • The ore will be crushed to a P_{80} 9 mm in three-stages crushing circuit. Crushed ore will be stored under a protected dome prior to milling. Crushed ore will be ground in a ball mill to P_{80} of 180 µm. The ground ore will be passed through magnetic separation to remove iron-bearing

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	representative of the orebody as a whole. • For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?	silicate minerals and then de-slimed prior to flotation. Following mica flotation, slurry will feed an attrition scrubber / de-sliming prior to spodumene flotation. • Further metallurgical optimisation testwork is on-going specifically for variability testing. Historically, recoveries of up to 85% 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. • Three bench-scale heavy liquid separation (HLS) testwork programs have been undertaken in 2016-17 on representative samples with various grind sizes. Testing examined the producing a final concentrate and tests to upgrade flotation feed. The results of this testing program indicated that DMS was not a viable process option for the Authier deposit. • All technologies proposed are proven and well tested with easily sourced components. • Potential deleterious elements have not been observed. The iron content of the Authier concentrate is too high to supply the ceramics or glass industry. • A pilot metallurgical testing program was operated in 2018. A ~five t sample was collected from Phase 3 drilling in 2107. The information collected from the pilot program was used for engineering purposes for the DFS.
Environmental	• The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.	• 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). Because the Project did not generate any "designated activity", an impact study under the Canadian Environmental Assessment Act is not required. • On the provincial side, no Environmental Impact Assessments (EIA) will be required for the Project as the proposed output remains less than

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		2,000 tpd (EQA Q-2, r.23). Mainly two provincial ministries will issue permits: the MERN and the MDDELCC. The Company is currently engaged with the local provincial authorities to establish the permitting regime for Authier. • Certificates of authorisation under provincial Environmental Quality Act (LQE), art.22, will have to be obtained from the MDDELCC for most of 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 the completion of the Detailed Engineering. • An EBS has been completed in October 2017 for the Authier project and results will be available over the following months. However, previous studies were conducted during 2012 by Dessau and GFE and didn't return environmental issues. Activities by DESSAU and GFE were performed to determine constraints linked to water and sediments quality and to environmental (physical, biological, human) impact. • In May 2018, the Company delivered its 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-up were presented. The results of the EAS showed that the project will have no impact on the water quality of the esker and that all the impact on the other components will be low after the application of mitigation measure. • According to public databases and from field inventories lead during this study by Dessau and GFE, no endangered species or habitats were found. • Whilst the environmental study didn't highlight any significant environmental issues, it recommended a focus on water and tailings management. As such, the Company has engaged consulting firms to undertake a

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		number of updated studies at part of this DFS, including: • Best practice tailings and waste rock disposal options. The DFS contemplates that the best practice is producing filtered tailings will be co-disposed with the waste rock in order to facilitate water management and reduce the footprint; • Progressive site reclamation and remediation planning during operation and for end of mine activities; • Geochemical characterisation program of waste rock and tailings. Results showed that the waste rocks and tailings are not acid generating and don't leach heavy metals. This is consistent with the experience of other nearby similar deposits and operations; • A hydrogeological study to assess the hydrogeological conditions prevailing in the area, the current quality of the groundwater, and identify any potential impacts on the project groundwater, plan the pumping activities, and to provide information for the geotechnical engineering and geo-mechanics of the project; • A rehabilitation and closure plan is a requirement under the "Loi sur les mines". It must be approved before the mining lease is issued, and a financial guarantee to fully implement the plan must be provided in three payments in the first two years following the approval of the plan. • Mining lease applications are initiated through the Ministère de l'Énergie et des Ressources naturelles ("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. • 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.

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		• 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 outlining the plans for the development of the Authier project. • A waste rock material and overburden stockpiles will be erected at proximity of the mine entrance/exit. They will have a volume of approximately 38.5 Mm^3 and 3.3 Mm^3 respectively. They will be strategically located to minimize hauling distances, and thus the size of the mining fleet. • A Community Relations Program has been developed to approach and engage local stakeholders. This program includes information sessions and consultations with municipalities, landowners, First Nations community, non-governmental environmental organizations and recreational associations.
Infrastructure	• The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.	• The Authier project is situated 45 kilometres north-west of the city of Val d'Or, a major mining service centre, with several operating mines and active exploration companies, situated in the Province of Quebec.Val d'Or is located approximately 466 kilometres north-east of Montreal. • The project is easily accessed by a rural road network connecting to a national highway a few kilometres east of the project site. • The Canadian National Railway is located around 20 km south of Authier. Such railway has the capacity to ship the concentrate to both Atlantic and Pacific coast. A sideway located in Cadillac, 27 km southwest of Authier by route, could be used to transit Authier's concentrate. • The regional resources regarding labour force, supplies and equipment are sufficient, the area being well served by geological and mining service firms. The cities of Val d'Or, Amos and Rouyn-Noranda are regional centres for the Abitibi region

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		and have the necessary infrastructures and workforce to support a mining operation. • The electrical power will easily be available from Hydro-Quebec. The estimated power demand for the project is estimated to be 5.3 MW • Based on a preliminary evaluation from Hydro-Québec, a total of 2.7 km of new network power line needs to be installed in order to supply power to Authier mine site • No detailed investigations into the water requirements and supply sources have been carried out. Primary water sources would be from pit dewatering, collection of surface runoff in natural or artificial structures, existing ponds, reclaim water from the TMF and other sources. Studies on the water supply balance and remedial measures will need to be conducted as part of the next development stages.
Costs	• The derivation of, or assumptions made, regarding projected capital costs in the study. • The methodology used to estimate operating costs. • Allowances made for the content of deleterious elements. • The source of exchange rates used in the study. • Derivation of transportation charges. • The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc. • The allowances made for royalties payable, both Government and private.	• Project Capital was derived on the following basis: • The overall plant layout and equipment sizing was prepared with sufficient detail to permit and assessment of the engineering quantities for the majority of the facilities for concrete, steelwork and mechanical items. The layouts enabled preliminary estimates of quantities to be taken for all areas. • Unit rates for labour and materials were obtained from quotations from fabricators and contractors experienced in the scale and type of work in the region • Fixed and firm pricing was obtained for major items of equipment. Budget pricing was obtained from reputable suppliers for minor items of equipment with the exception of low value items which were costed from Wave Consultant's database of recent project costs. • Contingency has been applied to account for the accuracy of the estimate. • Mining capital costs include site establishment costs and mobilization of equipment and pre-production costs. Pre-production includes clearing and stockpiling of topsoil.

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		• Process Plant Operating costs were compiled by BBA using first principal estimation and industry experience for projects of similar size and nature in the region. • Manning level and pay rates were derived by Sayona and BBA to suit the proposed process plant and scale of operation for the Quebec province location. • Consumables pricing were sourced from vendor quotes where applicable. • Flotation reagent consumption was based on metallurgical test work, the production schedule and factored from similar operations. • Crushing and grinding energy and consumables were derived from the comminution test work at SGS Lakefield Laboratory and vendor quotes. • Mine operating expenditure was based on mining volumes, and hourly operating costs for all the different mining equipment that are intended to be operated by the Company. The Company's team for Mine Management and Technical Services were based on personal levels required to manage the operation and comparable salary in the Province of Quebec • The selected Exchange rate is consistent with the exchange ratio data over the last 12 months. • Transport and part charges were derived from quotations by reputable suppliers. • Allowances were made for marketing and grade variability in the revenue factors. • The Quebec Government doesn't impose any royalties on mineral production. However, Authier is subject to a number of vendor royalty payments.
Revenue factors	• The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc. • The derivation of assumptions made of metal or commodity	• Spodumene pricing was based on an average of forecasts from BMO, Canaccord Genuity and Macquarie Bank. • Spodumene revenue factors were: • The average head grade of the Ore has been estimated at 1.00% Li2O over the 18 years of processing operation • Processing recoveries applied at 78%.

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	price(s), for the principal metals, minerals and co-products.	• Spodumene average price of USD 675 / t for 6.00% Li2O content • Exchange ratio of 0.76 CAD:USD • Vendor's royalty of 1.44 % NSR • Marketing and grade variability penalty have not been considered in the Reserves estimate
Market assessment	• The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future. • A customer and competitor analysis along with the identification of likely market windows for the product. • Price and volume forecasts and the basis for these forecasts. • For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.	• Lithium concentrate produced from Authier will be classed as Chemical Grade specification, principally due to its iron content. The principal markets for Chemical Grade concentrates are battery, lubricants, aluminium smelting, and pharmaceuticals applications. • 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. • There are a number of pricing benchmarks for various lithium products (lithium carbonate or lithium hydroxide whose prices can vary significantly depending on grade) but the most relevant for spodumene concentrate pricing is the Lithium Carbonate Equivalent (LCE) price. This pricing data is typically only available via paid subscription services, such as Benchmark Mineral Intelligence, and its limited by the number of transactions available in the public domain. • For the Authier DFS, Spodumene pricing was set to 675 USD$/t long-term real average, using an average of three investment groups spodumene concentrate price forecasts including, BMO, Canaccord Genuity and Macquarie Bank. • The Company is exploring a number of options for selling high-quality spodumene concentrate that will be produced from a future operation at Authier. This includes direct sales of concentrate to converters that produce lithium products suitable for the global battery markets. Strong demand for the lithium products has driven concentrate prices to record levels. • The company signed a non-binding Memorandum of Understanding

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		("MOU") with leading China based battery manufacturer, Huan Changyuan Lico Co Ltd ("Changyuan") to explore marketing, technical, and financial development options for the Authier lithium project

Economic	• The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.
	• NPV ranges and sensitivity to variations in the significant assumptions and inputs.
		• The economic analysis is based on cash flows driven by the production schedule. The cash flow projection includes:
		  • Initial and sustaining capital estimates.
		  • Mining, processing and concentrate logistics costs to the customer based on FOB pricing.
		  • Revenue estimates based on concentrate pricing adjusted for fees, charges and royalties.
		  • Closure costs.
		  • An 8% discount factor.
		• The Project DFS showed a positive NPV.

Social	• The status of agreements with key stakeholders and matters leading to social license to operate.	• The Authier property is located in Government land (public). • The Authier property is located about 26 kilometres from the Algonquin community of Pikogan and it is in Algonquin nation claimed territory. Furthermore, municipalities of La Motte, Preissac, Rivière-Héva and Amos are located close to the Authier property. • Considering this context, a communication plan is was prepared in order to open a dialogue concerning interests and concerns of municipalities, communities and groups impacted directly or indirectly with the mining project of Authier.
Other	• To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves: • Any identified material naturally occurring risks. • The status of material legal agreements and marketing arrangements. • The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be	• No material naturally occurring risks have been identified. • All the claims composing the Property are located over Public Land owned by the government. There is no reason to believe that the Company won't be able to secure the surface rights to construct the infrastructures related to a potential mining operation, including tailings storage and waste disposal areas, and processing plant. • There are no apparent impediments to obtaining all government approvals required for the project. Compliance with article 22 requirements, in principle, allows a more rapid permitting process without the BAPE

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	reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.	formal public review. If required to undertake the BAPE process, the permitting period will likely be extended. • Road access granted.
Classification	• The basis for the classification of the Ore Reserves into varying confidence categories. • Whether the result appropriately reflects the Competent Person's view of the deposit. • The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).	• Proven Ore Reserves were determined from Measured resource material. • Probable Ore Reserves were determined from Indicated resource material as per the guidelines.
Audits or reviews	• The results of any audits or reviews of Ore Reserve estimates.	• Ore Reserve estimates have been internally by BBA. No material flaws have been identified and the Ore Reserve is considered appropriate at a DFS level of study. • No external reviews or audits have been undertaken on the Ore Reserve.
Discussion of relative accuracy/ confidence	• Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate. • The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions	• The Ore Reserve is the outcome of the DFS that has taken into account geological, metallurgical, geotechnical, process engineering and mining engineering considerations. It has a nominal accuracy of -10/+15%. • The project has a NPV which makes it robust in terms of cast variations. It is sensitive to price variations for Spodumene and mining recovery of the ore from within the pit, and to the destination of the product. • All estimates are based on local costs in Canadian dollars. • There are no known undisclosed areas of uncertainty. • There has been no production to date, so no comparison or reconciliation of data can be made. Standard Industry practices have been used in the estimation process.

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	made and the procedures used. • Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage. • It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	