



# ASX ANNOUNCEMENT



12 APRIL 2018

## AUTHIER LITHIUM PROJECT JORC MINERAL RESOURCE EXPANSION

### Highlights

- Mineral Resource increased following Phase 3 drilling program
- 86% of the new Mineral Resource in the Measured and Indicated categories
- Potential to expand the resource through further drilling
- Expanded Mineral Resource to be incorporated into the Definitive Feasibility Study

Sayona Mining Limited (ASX: SYA) ("Sayona" or the "Company") is pleased to announce an updated independent JORC Mineral Resource estimate for the Authier lithium project.

The expanded, JORC 2012 compliant Mineral Resource estimate has been increased from 186,939 tonnes to 209,476 tonnes of contained lithium oxide compared to the November 2017 estimate. The new resource includes in-pit, infill mineralisation in the eastern and central part of the Authier Main resource, and a depth extension of the Main Authier pegmatite in the west zone. In addition, The Northern Pegmatite resource has been expanded to include new mineralisation from the Phase 3 drilling program which extended the mineralised strike from 300 metres to 500 metres.

Table 1– Authier JORC Mineral Resources Estimate (0.45% Li <sub>2</sub> O cut-off grade)			
Category	Tonnes (Mt)	Grades %Li <sub>2</sub> O	Contained Li <sub>2</sub> O
Measured	6.09	1.01%	61,509
Indicated	11.55	1.04%	120,120
Inferred	2.82	0.98%	27,636
<b>Total</b>	<b>20.46</b>	<b>1.02%</b>	<b>209,265</b>

The Mineral Resource has been estimated and reported in accordance with the guidelines of the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code 2012). A summary of the estimation methodology and competent person statement is included in this announcement.

The new mineral resource will be incorporated into the Definitive Feasibility Study ("DFS") that is currently underway. On completion of the DFS the Company will report a new JORC compliant Ore Reserve estimate.

### SAYONA MINING LIMITED

Phone: +61 7 3369 7058

Email: [info@sayonamining.com.au](mailto:info@sayonamining.com.au)

Address: Suite 68, 283 Given Tce, Paddington QLD 4064

Post: PO Box 1357, Milton, Qld 4064, Australia

[www.sayonamining.com.au](http://www.sayonamining.com.au)

ASX Code: SYA

## JORC Mineral Resource Estimate Overview

The Authier project area comprises 20 mineral claims totalling 674.89 hectares, and extends 3.4 kilometres in an east-west, and 3.1 kilometres in a north-south direction, respectively. The mineral claims are located over Crown Lands. The tenure is all in good standing and there is no known impediment to obtaining a licence to operate. The claims are subject to a number of underlying vendor royalties.

The Authier project is situated 45 kilometres north-west of the city of Val d'Or, a major mining service centre, situated in the Province of Quebec. Val d'Or is located approximately 500 kilometres north 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.

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 at 40 degrees to the north. The deposit outcrops in the eastern sector and then extends up to 10 metres under cover in the western sector. Drilling in the main Authier pegmatite resource totals 22,000 metres in 157 diamond holes; 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. Drilling in Authier North total 19 holes for 910 metres.

Both Authier and Authier North deposits remain open in all directions. A magnetic geophysical survey has demonstrated that Authier mineralisation is hosted within a strong east-west trending magnetic low anomaly. Future exploration will focus on identifying extensions of known mineralisation within this structural feature.

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.

The Authier project has been subject to more than 29,000 metres of drilling. The project was initially drilled by Raymor Resources between 1991 and 1999, and then by Glen Eagle between 2010 and 2012. Sayona has completed three phases of drilling totalling 10,255 metres in 68 holes (includes 19 holes for 910 metres at Authier North). 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.

Prior to Sayona's three drilling programs, NQ size diamond core was halved, 1.5 metre sections were assayed for Li<sub>2</sub>O content at an ALS laboratory in Vancouver using Inductively Coupled Plasma Mass Spectrometry. Glen Eagle had a rigorous "good industry practise" quality control process, including routine assaying of standards, duplicates and blanks. During the preparation of the Glen Eagle 43-101, SGS recommended that Glen Eagle twin 3 historical drill holes. The program demonstrated strong correlations with historical drill assays.

During Sayona's phase 1 and phase 2 diamond drilling programs of 8,084 metres, HQ diameter holes were drilled at near 100% core recovery and 1.0 metre sections were assayed for Li<sub>2</sub>O content at an ALS laboratory in Vancouver using Inductively Coupled Plasma Mass Spectrometry. The Company's quality control program included regular assaying of standards, duplicates and blanks. In addition, the program has had oversight of SGS Canada's internal quality controls.

Sayona's Phase 3 diamond drilling program included 2,170.45 metres of NQ diameter holes, which also delivered near 100% core recovery. One metre sections were assayed for Li<sub>2</sub>O content at an ALS laboratory in Vancouver using Inductively Coupled Plasma Mass Spectrometry. The Company's quality control program included regular assaying of standards, duplicates and blanks. In addition, the program has had oversight of SGS Canada's internal quality controls.

The independent resource estimate was undertaken using reported intercepts calculated using arithmetic averages, no top-cut, and a 0.45% Li<sub>2</sub>O cut-off grade calculated from the December 2017 Company's Pre-Feasibility Study ("PFS").

The PFS has confirmed the technical and financial viability of constructing a simple, low-strip ratio, open-cut mining operation and processing facility producing spodumene concentrate. The Authier deposit will be mined by open cut methods enhanced by the shallow and thick nature of the mineralisation, allowing spodumene ore to be processed from the commencement of mining. The PFS demonstrated a LOM strip ratio of 6.95:1 (waste to ore) providing a low mining cost. The Company believes with further drilling it can expand the size of the resource and provide better definition of the orebody.

A concentrator plant to process 700,000 tpa of ore feed using conventional flotation technology suitable for a pegmatite orebody. The plant will produce a 6% Li<sub>2</sub>O concentrate suitable for feedstock to lithium carbonate conversion plants.

The resource estimation was based on an Inverse Distance Squared interpolation using Micromine software. The parent block dimensions used were 3 metres x 3 metres x 3 metres with sub-blocks of 1.5 metres x 1.5 metres x 1.5 metres in accordance with the drill spacing and pegmatite body geometry.

The resource has been estimated and reported in accordance with the guidelines of the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code 2012). The Global JORC compliant resource estimate at 0.45% Li<sub>2</sub>O cut-off grade is tabulated below:

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

## Authier Main Deposit

Approximately 98 % of the resource is formed by the Authier Deposit (main Authier pegmatite). The resource has been updated to include in-pit, infill mineralisation in the eastern and central part of the Authier Main resource, and a deep extension of the pegmatite in the west zone

**Table 3 – Authier Main JORC Mineral Resources Estimate (0.45% Li<sub>2</sub>O cut-off grade)**

Category	Tonnes (Mt)	Grades %Li <sub>2</sub> O	Contained Li <sub>2</sub> O
Measured	6.03	1.02%	61,506
Indicated	11.19	1.04%	116,376
Inferred	2.81	0.98%	27,538
<b>Total</b>	<b>20.03</b>	<b>1.02%</b>	<b>205,420</b>

## Authier North

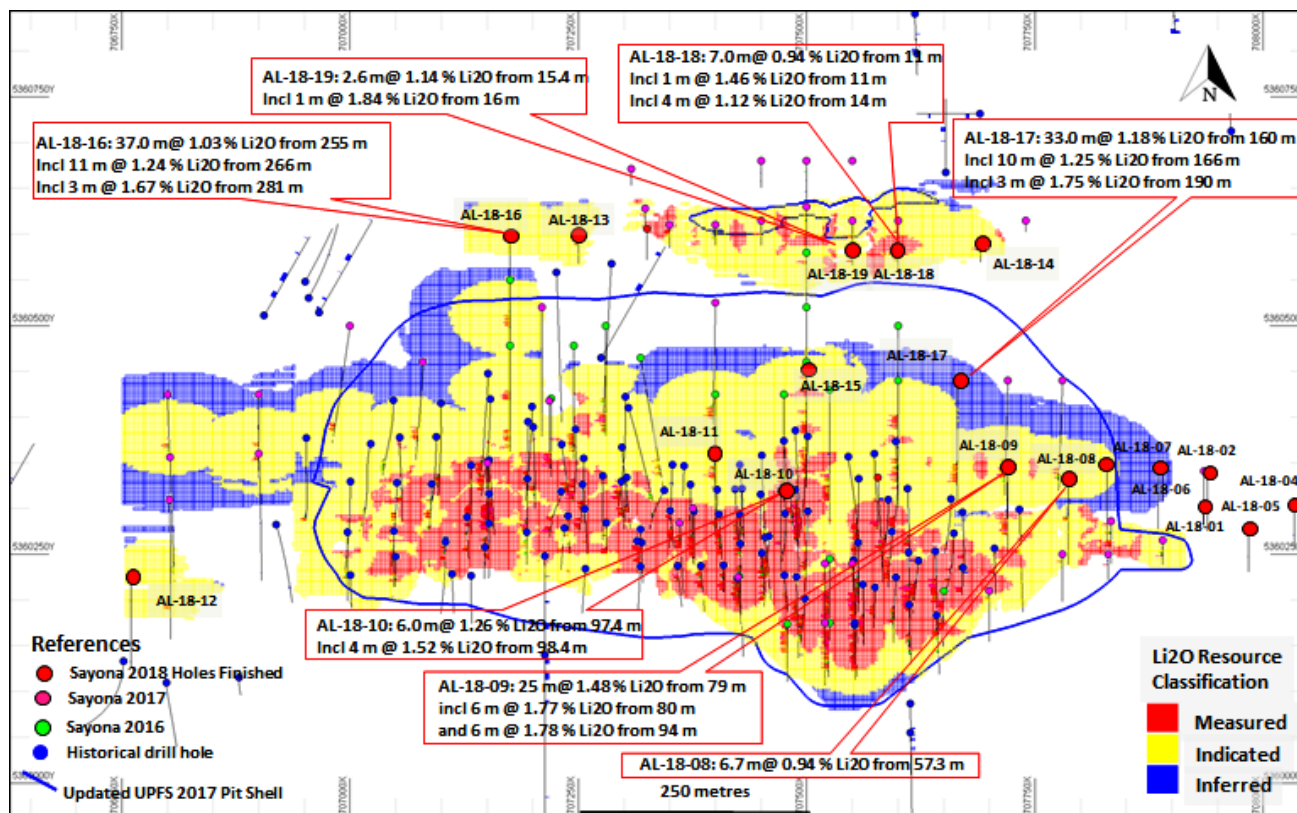
The remaining 2 % of the global resource is contained within the Authier North pegmatite where the Phase 3 drilling program has extended the strike length of the mineralised envelope from 300 metres to 500 metres.

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

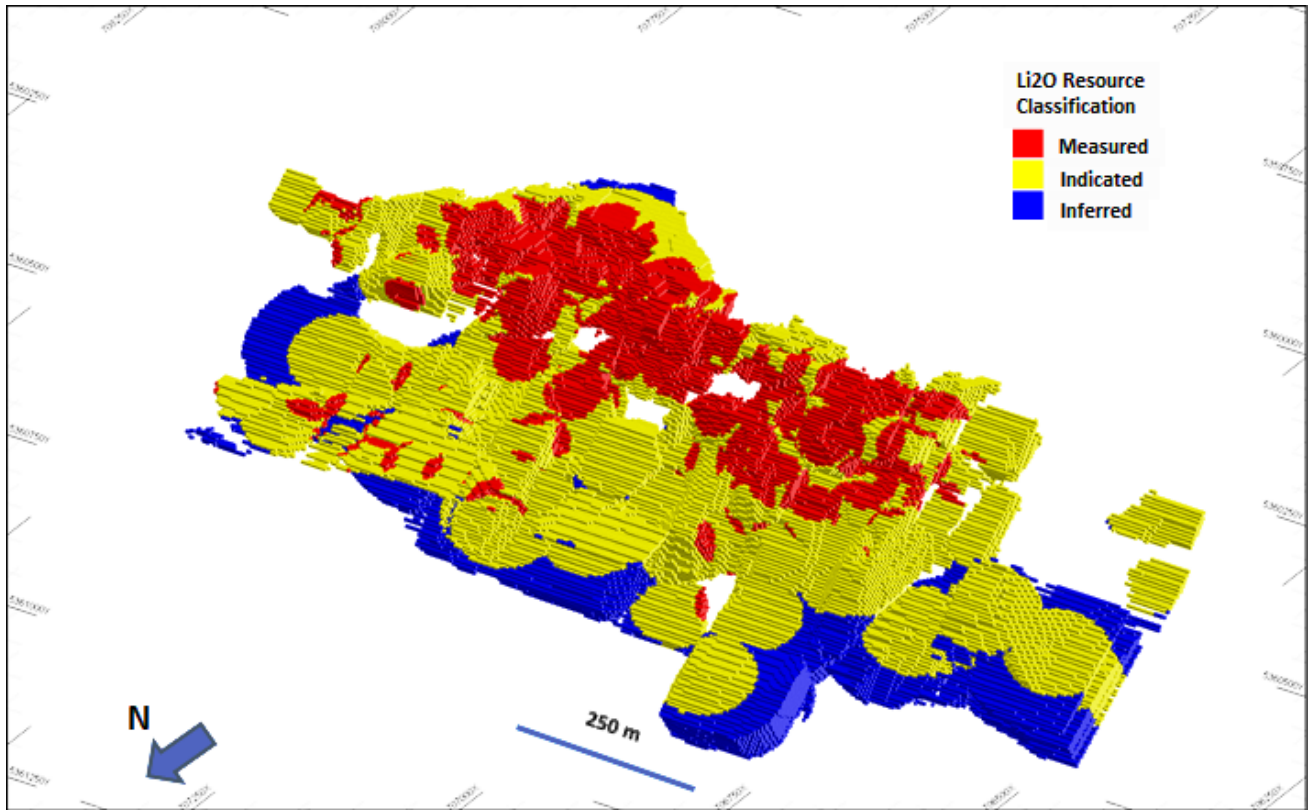
Category	Tonnes (Mt)	Grades %Li <sub>2</sub> O	Contained Li <sub>2</sub> O
Measured	0.06	0.91%	546
Indicated	0.36	0.95%	3,420
Inferred	0.013	0.69%	90
<b>Total</b>	<b>0.43</b>	<b>0.94%</b>	<b>4,056</b>

This updated Mineral Resource will be incorporated into the Definitive Feasibility Study (“DFS”) underway and a new Ore Reserve will be published at the time DFS is finalised.





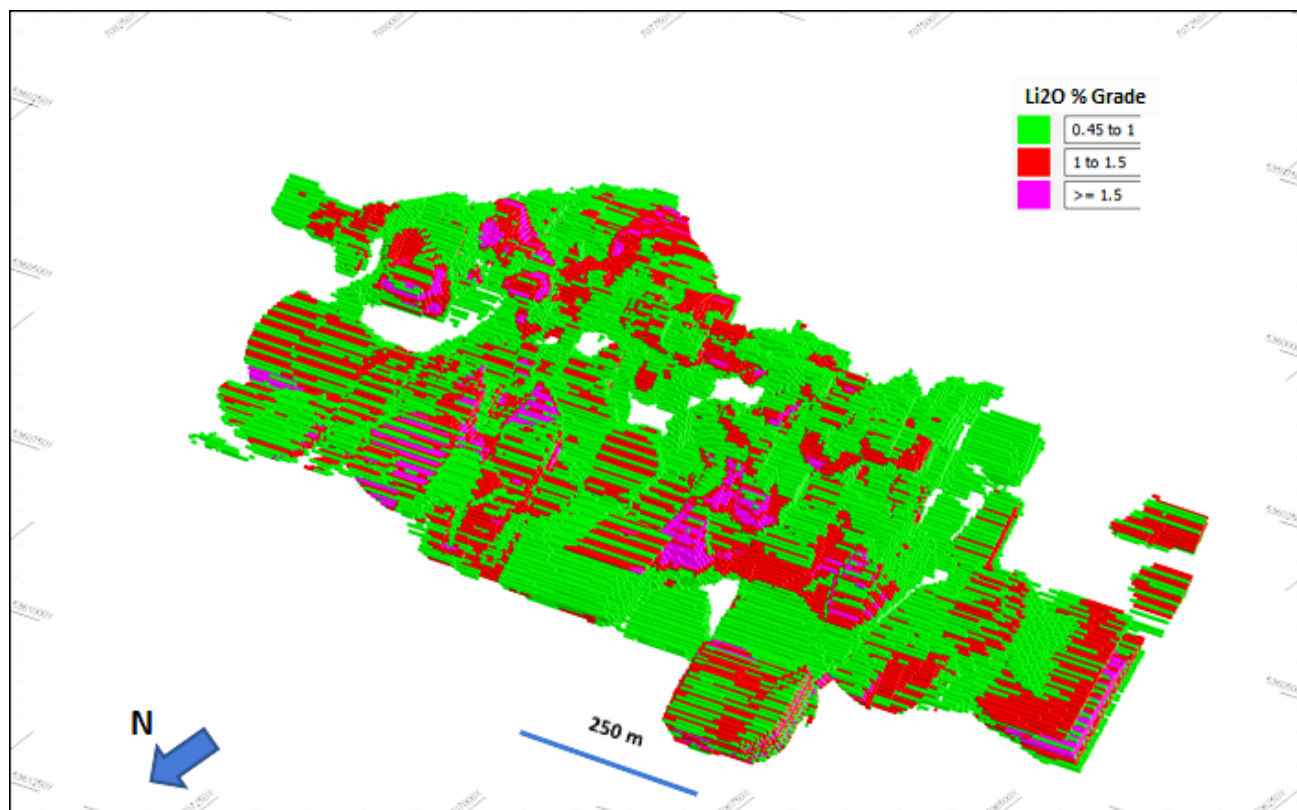
**Figure 1:** Drill hole collar location plan, updated resource classification block model, pit contour at 300 m RL (PFS 11 December 2017) and significant intercepts from the 2018 drilling.



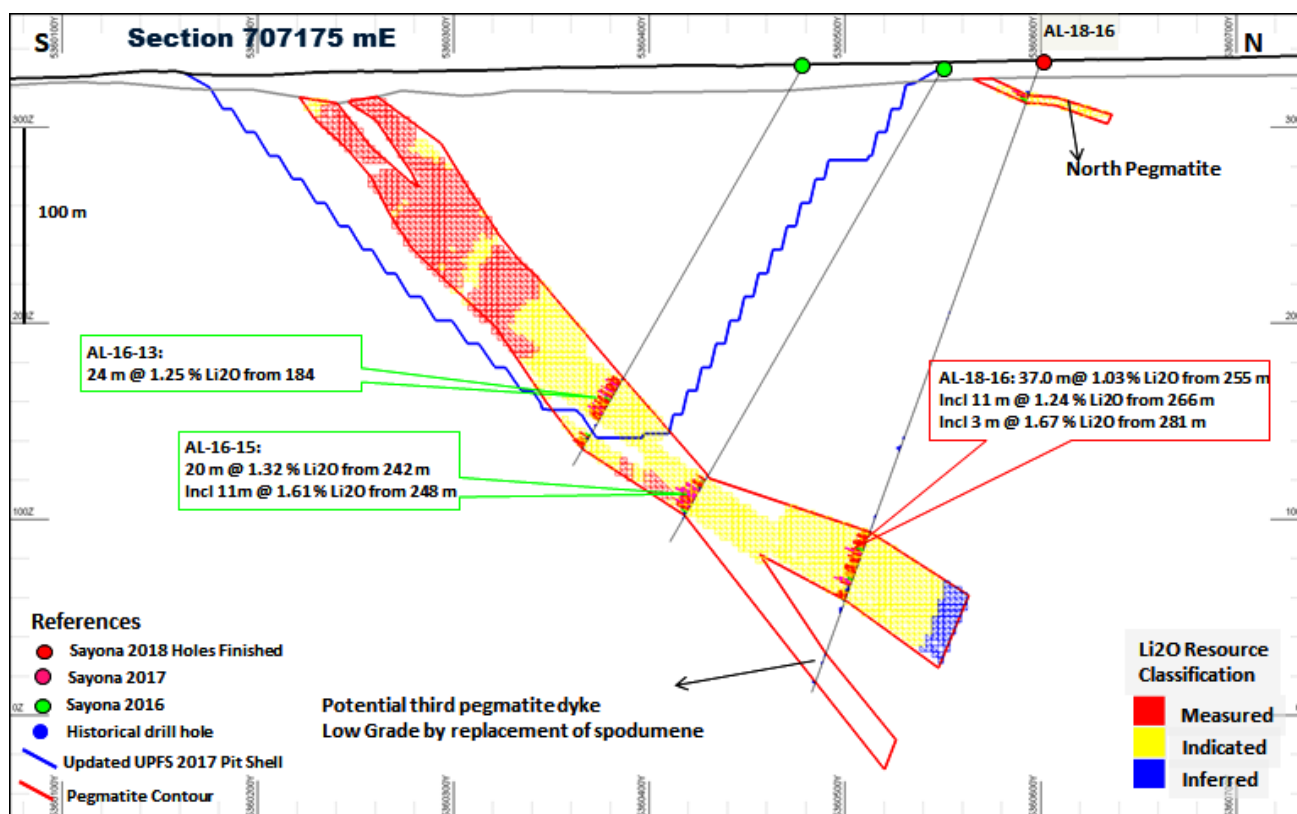
**Figure 2:** Lithium block model demonstrating the distribution of Measured, Indicated and Inferred Mineral Resource categories for Authier and Authier North. Note the high level of Measured Resource near the surface

The Measured Mineral Resource was defined within areas of close spaced diamond drilling of less than 35 metres by 35 metres, and where the continuity and predictability of the spodumene bearing pegmatite was high. The Indicated Mineral Resource was assigned to areas where drill hole spacing was less than 60 metres by 60 metres. The Inferred Mineral Resource was assigned to areas where drill hole spacing was greater than 60 metres by 60 metres generally in the edges of the known mineralisation mostly in the down-dip extensions beyond the last drill holes in each section.

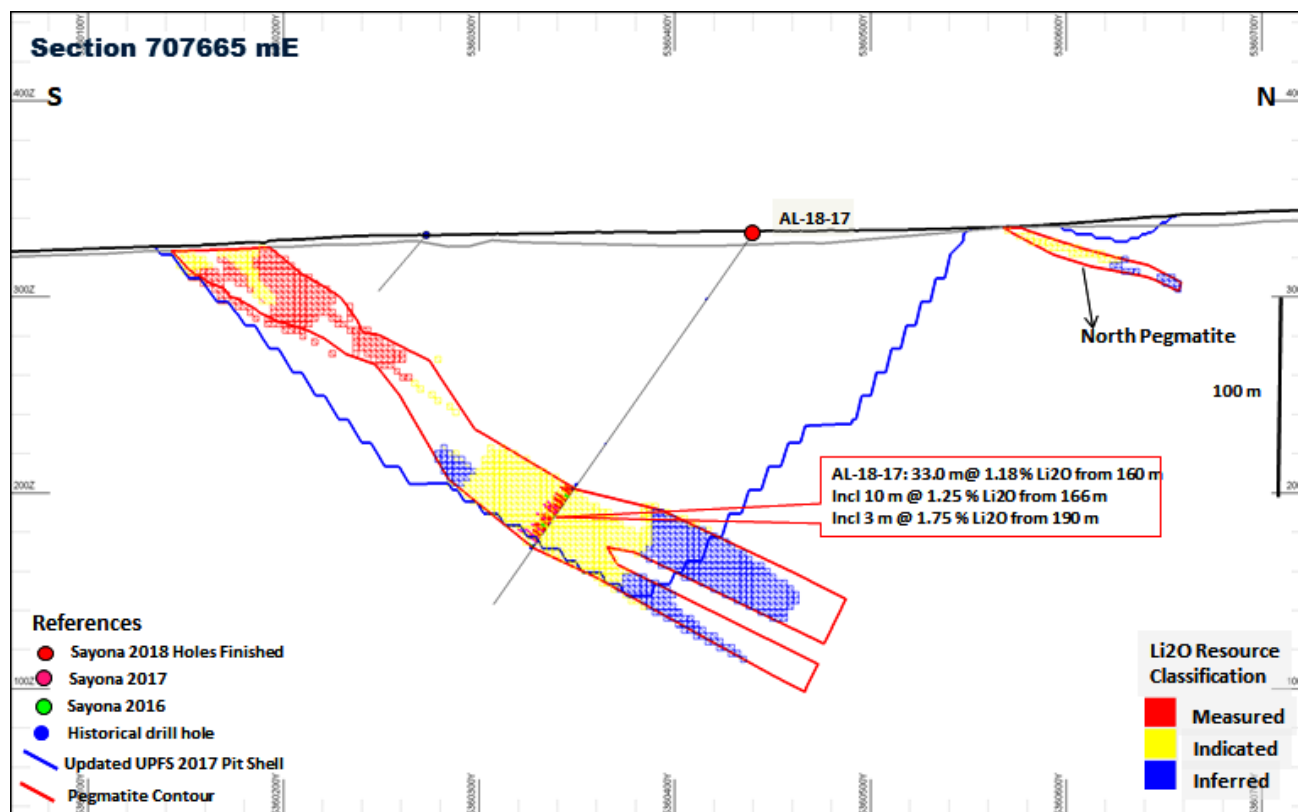
The following solid and cross-sections, Figures 3 to 8, confirms the strong geological and grade continuity of the deposit as well as the new zones of resource infill and extension.



**Figure 3:** Lithium block model outlining the Li<sub>2</sub>O grade distribution throughout the deposit

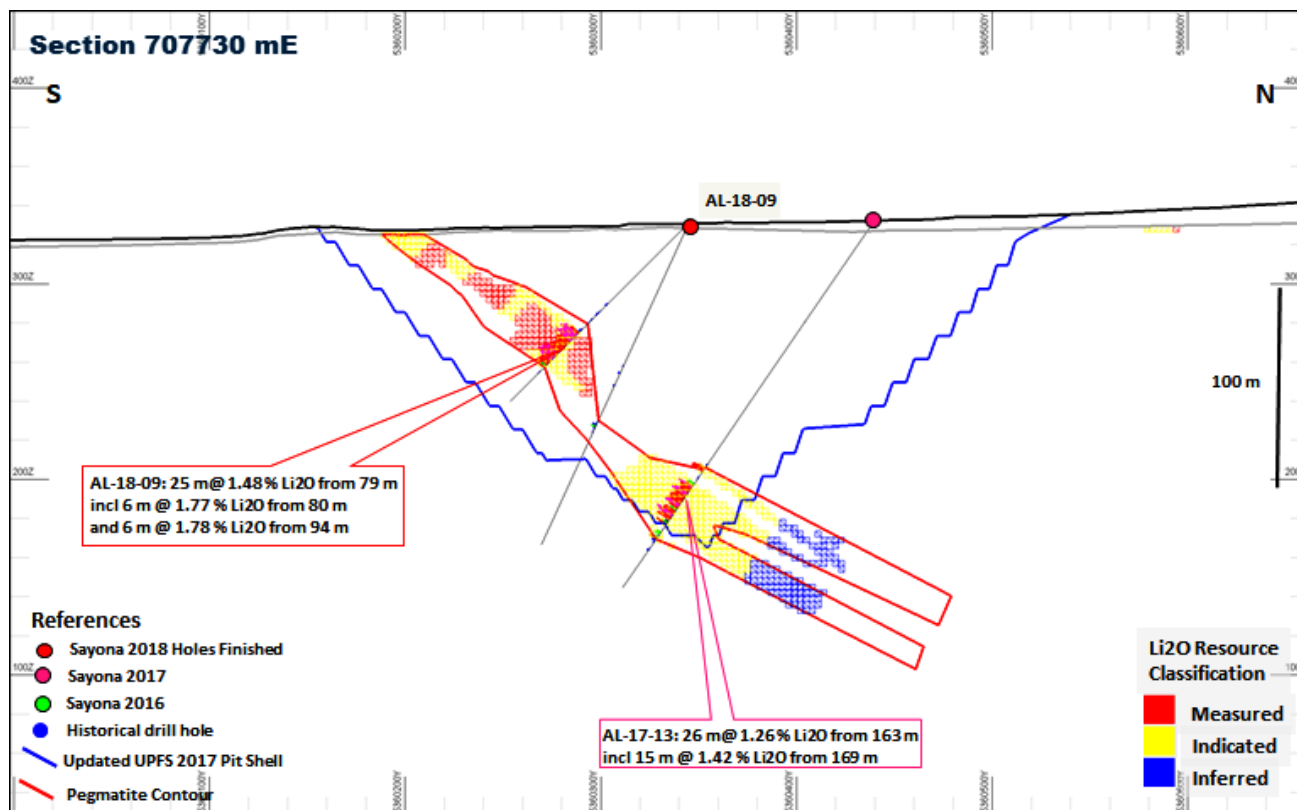


**Figure 4:** Authier Section 707175mE looking West, with updated resource block model. Hole AL-18-16 intercepted the deepest mineralised extension of the Authier Main pegmatite.



**Figure 5:** Updated lithium resource classification block model with pit contour from PFS December 2017 for section 707665 in the East part of Authier main pegmatite.





**Figure 6:** Updated lithium resource classification block model with pit contour from PFS December 2017 for section 707730 mE in the East part of Authier main pegmatite where hole AL-18-09 filled a gap on the resource at mid to shallow levels of the main Authier pegmatite.

The JORC compliant Mineral Resource estimate is based on 0.45% Li<sub>2</sub>O cut-off grade. The cut-off grade was calculated in the PFS. Figure 6 and Table 3 demonstrate the grade and tonnage sensitivity to variation in the cut-off grade. Typically, the tonnage and grade variation is not significant to between 0.3% and 0.6% Li<sub>2</sub>O cut-off grade estimates, reflecting the low coefficient of variation in the grade of the deposit.

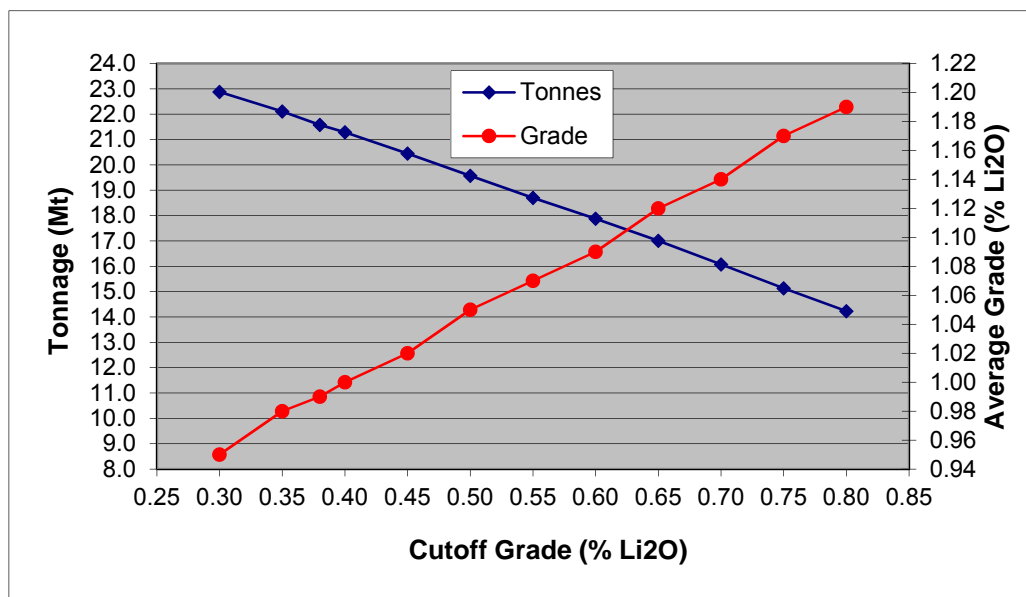


Figure 6: Grade and tonnage curve at various cut-off grade factors

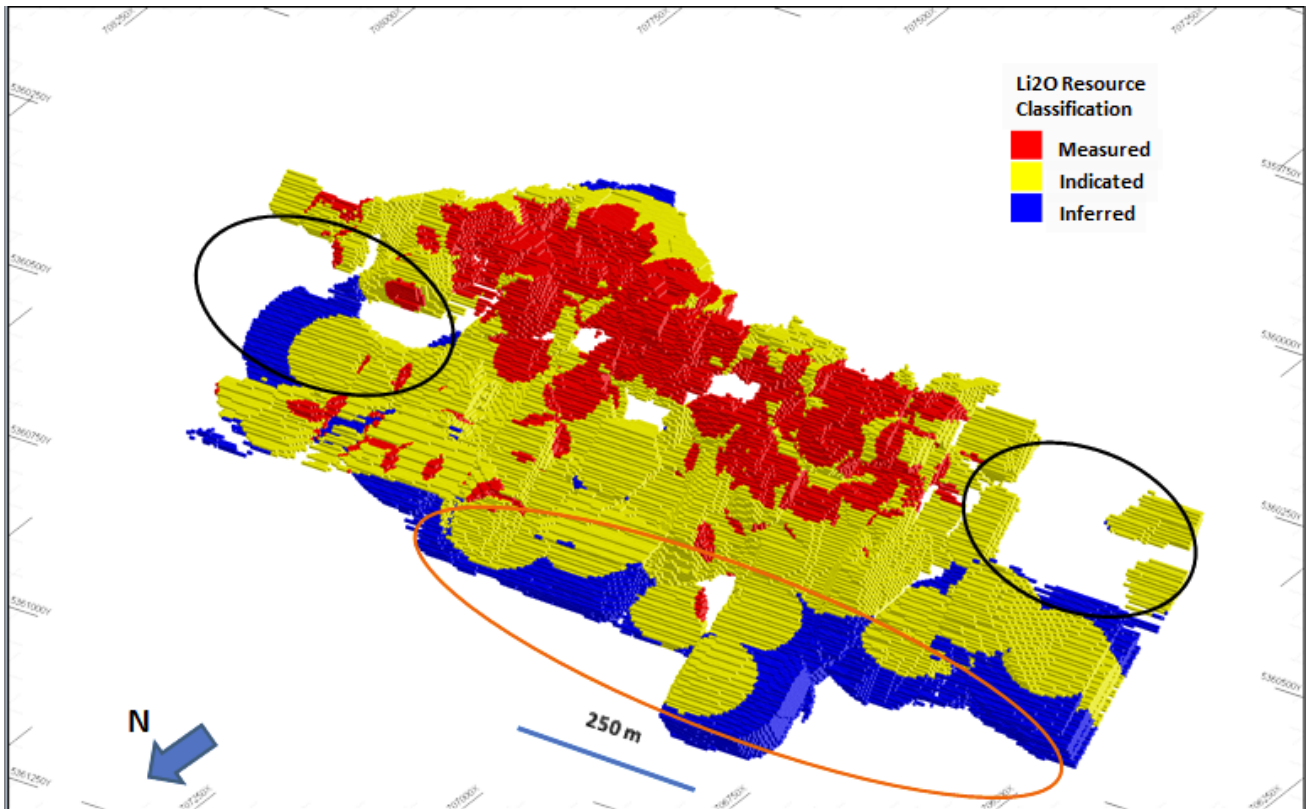
Grade & Tonnage at Various Cut-off Grades (0.45% Li <sub>2</sub> O cut-off grade) Measured, Indicated and Inferred Mineral Resources			
Cut-off Grade Li <sub>2</sub> O	Tonnes (Mt)	Grades % Li <sub>2</sub> O	Contained Li <sub>2</sub> O (T)
0.30%	22.88	0.95	217,360
0.35%	22.11	0.98	216,678
0.38%	21.58	0.99	213,642
0.40%	21.29	1.00	212,900
0.45%	20.45	1.02	209,265
0.50%	19.57	1.05	205,485
0.55%	18.70	1.07	200,090
0.60%	17.88	1.09	194,892
0.65%	17.01	1.12	190,512
0.70%	16.07	1.14	183,198
0.75%	15.13	1.17	177,021
0.80%	14.23	1.19	169,337

Table 5: Grade and tonnage at various cut-off grade factors

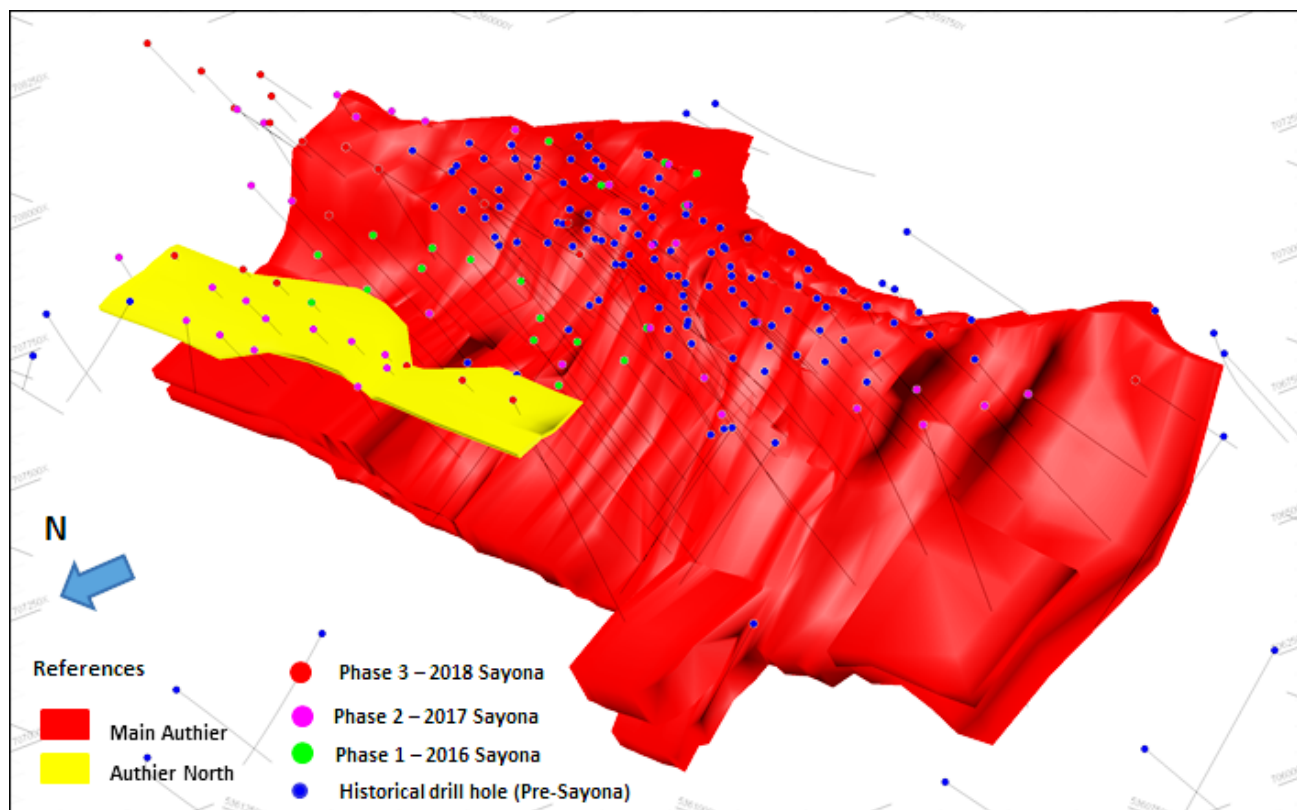
### Authier Project Resource Expansion Potential

The Company believes there is further potential to optimise the main resource area including:

- Infill drilling within the main deposit where there is no resource due to lack of drilling density (shown as black circles on Figure 7), especially in the east and west, and to add the resource base; and
- Converting inferred resources into a higher resource classifications by further higher density drilling (shown as blue on the diagram).



**Figure 7:** Black circles represent areas where further density of drilling is required to increase the resource. Additionally, some of the blue Inferred Resource areas have the potential to be converted to higher resource categories with further drilling. The orange ellipse shows the potential for increasing resources at depth.



**Figure 8:** Authier deposit geological envelope at a 0.45% Li<sub>2</sub>O cut-off grade

For more information, please contact:

Corey Nolan

Chief Executive Officer

Phone: +61 (7) 3369 7058

Email: [info@sayonamining.com.au](mailto:info@sayonamining.com.au)

Sayona Mining Limited is an Australian, ASX-listed (SYA), company focused on sourcing and developing the raw materials required to construct lithium-ion batteries for use in the rapidly growing new and green technology sectors. Please visit us as at [www.sayonamining.com.au](http://www.sayonamining.com.au)

## COMPETENT PERSON STATEMENT

The information in this report that relates to Exploration Results 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 drilling programs and 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.

## Summary Drill Hole Details from Sayona 2018 Drilling Program

Table 6 – Drill hole collar location and intercept information (downhole Intersections in metres)										
Drill Hole	East	North	RL	Azimuth	Dip	Depth	From (m)	To (m)	Thickness (m)	Grade (%Li2O)
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
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

**Table 6 – Drill hole collar location and intercept information (downhole Intersections in metres)**

Drill Hole	East	North	RL	Azimuth	Dip	Depth	From (m)	To (m)	Thickness (m)	Grade (%Li <sub>2</sub> O)
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

## 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
<i>Sampling techniques</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>All holes reported in this program have been Diamond Core Drillholes (DDH).</li> <li>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.</li> <li>High to low grade lithium-bearing mineralisation (spodumene) is visible during geological logging and sampling.</li> <li>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.</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>Drilling techniques</i>	<ul style="list-style-type: none"> <li>• <i>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).</i></li> </ul>	<ul style="list-style-type: none"> <li>• Core drilling, core diameter size NQ. Standard tube and bit.</li> <li>• In previous drilling campaigns of Sayona, core diameter size HQ, standard tube and bit</li> <li>• Core was not oriented in this campaign. In previous campaign of Sayona core was oriented using a Reflex ACT III tool.</li> <li>• All core drilling before 2016 was NQ core diameter size, standard tube and bit, not oriented.</li> </ul>
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <li>• <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li>• <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Diamond drill hole core recoveries and RQD are logged. Measurements are taken systematically down hole between core blocks i.e. ~3 metre increments.</li> <li>• Core recovery has been above 99%.</li> <li>• Based on drilling method being diamond core and the near 100% core recovery the sampling is representative.</li> <li>• High competence of the core tends to preclude any potential issue of sampling bias.</li> </ul>
<i>Logging</i>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Geological logging, RQD measurements, alpha and beta angles of structures as core orientation using reflex tool completed for all holes done in 2016 and 2017 by Sayona. For this 2018 drilling campaign and for metallurgical sample collection, not oriented core was collected and therefore no alfa and beta angle readings were performed.</li> <li>• 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.</li> <li>• For this campaign RQD and core recovery was systematically performed both, pegmatite and host rock.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>• In 2016 and 2017, diamond core from exploration and resource expansion drilling was subject of 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 also been undertaken.</li> <li>• The geological and geotechnical logging is at an appropriate level for the stage of development drilling being undertaken.</li> <li>• The logging of the geological features was predominately qualitative. Parameters such as spodumene abundance are visual estimates by the logging geologist.</li> <li>• 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 aluminum tags.</li> <li>• 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.</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <i>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.</i></li> <li>• <i>Whether sample sizes are appropriate</i></li> </ul>	<ul style="list-style-type: none"> <li>• Drill core 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.</li> <li>• Sampling boundaries are based in geological contacts of spodumene-bearing pegmatite with barren host rock.</li> <li>• In general at least two host rock sample was collected each side from the contacts with the mineralised pegmatite.</li> <li>• Sample preparation of drill core samples collected during the 2018</li> </ul>



Criteria	JORC Code explanation	Commentary
	<i>to the grain size of the material being sampled.</i>	<p>drilling program completed at the SGS Canada Inc laboratory ("SGS") facilities in Sudbury, Ontario follows industry best practice, involving oven drying, crushing and pulverizing there to respect the specifications of the analytical protocol and then shipped to SGS Mineral Services laboratories in Lakefield, Ontario, for analysis.</p> <ul style="list-style-type: none"> <li>• Sample sizes are considered appropriate with regard to the grain size of the sampled material.</li> <li>• 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.</li> </ul>
<i>Quality of assay data and laboratory tests</i>	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <i>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.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Assaying of all 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 weighted and dried. Sample material is crushed to 75% passing 10 mesh (2mm), split to obtain a 250 g sub-sample which is then pulverized to 85% passing 200 mesh (75 microns).</li> <li>• The analyses of all 2018, 2017 and 2016 exploration and resource expansion drilling 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.</li> <li>• The analytical protocol used at SGS Lakefield is the GE ICP90A 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</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>(lower) and 10,000 ppm (upper).</p> <ul style="list-style-type: none"> <li>No geophysical or handheld tools were used.</li> <li>Quality control protocol ("QA/QC") involve a review of laboratory supplied internal QA/QC and in-house controls consisting in 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.</li> <li>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.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li><i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li><i>The use of twinned holes.</i></li> <li><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li><i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>All the pegmatite intersections and assay results have been reviewed by the Competent Person and Sayona's geologist and personnel.</li> <li>Lithium (ppm) reported in assays is converted to Li<sub>2</sub>O by multiply Li (ppm) X 2.153 (conversion factor)</li> <li>The entire drilling program conducted by Sayona in 2018 was logged by 2 geologists, a Sayona's employee and a contracted geologist from Services Forestiers et d'Exploration GFE ("Services GFE"), controlled by Sayona's Competent Person and using technicians from 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.</li> <li>The core boxes were photographed and are available for verification at Services GFE storage facilities less than 4 km southeast from the Authier project.</li> <li>No twinned holes were drilled during this 2018 drilling campaign by Sayona.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>Primary data was recorded on laptop computers directly into standardized Excel logging templates with built in look-up codes. This information is merged with the assay certificate data into a Sayona's in-house database</li> <li>No adjustments to assay data have been undertaken.</li> </ul>
<i>Location of data points</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>Specification of the grid system used.</i></li> <li><i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>Downhole surveys (dip and azimuth) for 2018 drilling were collected as single shot readings using a Reflex tool. Measurements are 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.</li> <li>The grid system used is 1983 North American Datum (NAD83)</li> <li>The level of topographic control offered by the collar survey is considered sufficient for the work undertaken at its current stage. A LIDAR topography will be available in the following weeks.</li> </ul>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li><i>Data spacing for reporting of Exploration Results.</i></li> <li><i>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.</i></li> <li><i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>Drill holes were drilled perpendicular to the lithium mineralised pegmatite as shown on the attached plan.</li> <li>Drill collars were sited to provide the best geological information possible to test the grade, strike and vertical extensions of mineralisation.</li> <li>The data spacing is sufficient to estimate geological and grade</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>continuity of observed mineralisation and therefore to produce a JORC compliant mineral resource estimate.</p> <ul style="list-style-type: none"> <li>• Sample compositing has not been applied.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>• <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Drilling grid orientation is perpendicular to the strike of the mineralisation determined by previous mapping and historical drilling.</li> <li>• No bias attributable to orientation of sampling upgrading of results has been identified.</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>• <i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All reasonable measures have been taken to ensure sample security along the value chain. These measures include the sample collection by company's field personnel, recording of sample dispatch, receipt reports and secure delivering of samples to SGS laboratory facilities.</li> <li>• 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.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No audit or review of the sampling techniques and data for this release has been carried out.</li> <li>• 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.</li> <li>• 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.</li> </ul>



## Section 2 - Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>The Authier Lithium 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 674.89 ha. The Property extends 3.4 km in the east-west direction and 3.1 km north-south.</li> <li>From the 20 claims composing the Property, 3 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.</li> <li>Sayona is conducting exploration work under valid intervention permits delivered by the Quebec Government, and there is no known environmental liabilities pertaining to the Property. Some of the claims containing mineral resources are subject to mining royalties</li> <li>Approximately more than 75% of the mineral resources are present inside the 3 claims (CDC 2183454-2183455 and 2194819). About less than 25% of the estimated mineral resources are present inside the claim (CDC2116146).</li> <li>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.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>• The Property is adjacent to a protected area reserved for groundwater catchment supply located just the north of the Property, which has been excluded for exploration and mining activities.</li> <li>• Sayona is conducting exploration work under 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 having valid work permits.</li> </ul>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li>• <i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The Property has been explored in the 1950's and 1960's for volcanic nickel-copper sulfides 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 amount of exploration work between 1966 and 1980 with delineation drilling programs from 1991 until 1999 with bulk sampling and metallurgical testing programs.</li> <li>• The project has more than 29,000 metres of drilling in 224 diamond holes, including 5 tonnes of pegmatite in 6 holes drilled for metallurgical purposes. The project was initially drilled between 1991 and 1999, and then by Glen Eagle between 2010 and 2012.</li> <li>• In 2010, Glen Eagle secured the mining rights and completed exploration work as well as 1,905 m of diamond drilling totaling 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.</li> <li>• Sayona Mining has completed three phases of drilling including 68 drill holes for 10,255 metres,</li> </ul>

Criteria	JORC Code explanation	Commentary
		including 19 drill holes for 910 metres in Authier North pegmatite. All the holes completed by Sayona for exploration and resource expansion purposes have used standard diamond drill holes (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.
<i>Geology</i>	<ul style="list-style-type: none"> <li><i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>Mineralisation is hosted within spodumene-bearing pegmatite intrusions. The Authier project hosts two separate mineralised pegmatite systems, including: <ul style="list-style-type: none"> <li>Authier Main - 1,100 metres long striking east-west, with an average thickness of 25 metres (ranging from 4 metres to 55 metres), dipping at 40 degrees to the north. The deposit outcrops in the eastern sector and then extends up to 10 metres under cover in the western sector; and</li> <li>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.</li> </ul> </li> <li>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.</li> </ul>
<i>Drill hole Information</i>	<ul style="list-style-type: none"> <li><i>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:</i> <ul style="list-style-type: none"> <li><i>easting and northing of the drill hole collar</i></li> <li><i>elevation or RL (Reduced Level – elevation above sea level in metres)</i></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>In 2018, Sayona drilled 2,170.45 metres in 19 diamond holes. The aim of the program was to extend the zones of mineralisation along strike and depth, expand the resource and reserve size, improve the resource and reserve categories and explore the Authier north</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>of the drill hole collar</i></p> <ul style="list-style-type: none"> <li>o <i>dip and azimuth of the hole</i></li> <li>o <i>down hole length and interception depth</i></li> <li>o <i>hole length.</i></li> </ul> <p>• <i>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.</i></p>	<p>pegmatite, discovered during 2016 Stage 01 drilling by Sayona.</p> <ul style="list-style-type: none"> <li>• Drill hole details are reported in the body of this announcement as Table 1.</li> </ul>
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <li>• <i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</i></li> <li>• <i>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.</i></li> <li>• <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No weight averaging or high-grade cut has been applied to any of the sample assay results.</li> <li>• Reported intercepts have been calculated as arithmetic averages using a 0.45 % lower cutoff grade, as described in the body text of this release.</li> <li>• 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.</li> <li>• Metal equivalent values have not been reported.</li> </ul>
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <li>• <i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li>• <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li>• <i>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').</i></li> </ul>	<ul style="list-style-type: none"> <li>• Drilling has been sited to intersect the lithium mineralisation orthogonally.</li> <li>• Drilling widths reported are downhole intercept widths and true width is approximately 90 % of drilling width.</li> </ul>
<i>Diagrams</i>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• A Collar Plan and typical cross-sections are presented in the body of this report. Drill hole details are reported in the body of this announcement.</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li>• <i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low</i></li> </ul>	<ul style="list-style-type: none"> <li>• The reporting is considered to be balanced.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<i>and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i>	
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The Sayona 2018 diamond drilling campaign was conducted after Sayona 2016 Stage 01 and Sayona 2017 Stage 02 drilling campaigns and the Glen Eagle 2010-2012 diamond drilling campaigns which were 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.</li> <li>• Details of metallurgical test work are described in Sayona PFS ASX releases dated on August 29, 2017 and February 16, 2017.</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li>• <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li>• <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Sayona's Project Development strategy is detailed as follows: <ul style="list-style-type: none"> <li>• Converting the inferred mineral resources to measured and indicated through further higher density drilling;</li> <li>• 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 the resource base;</li> <li>• Exploring for extensions to the existing mineral resources and other potential mineralisation within the tenement package;</li> <li>• Consolidating other potential resources / mineralisation in the district;</li> </ul> </li> <li>• Completion of Environmental studies and Definitive Feasibility Studies;</li> <li>• Negotiating production off-take agreements; and</li> <li>• Sourcing development finance and constructing the project.</li> </ul>

### 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	<ul style="list-style-type: none"> <li>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.</li> <li>Data validation procedures used.</li> </ul>	<ul style="list-style-type: none"> <li>The digital drill hole database was audited by the author using Micromine 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.</li> <li>For details on Database Integrity before 2016 please refer to Table 1 of ASX release "Authier Lithium Project JORC Resource Estimate" 7 July 2016.</li> </ul>
Site visits	<ul style="list-style-type: none"> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>For the April 2018 JORC estimate, the Author was stationed on site and was responsible for the overall management, coordination and execution of the drilling program (this was approximately 10 weeks).</li> <li>The Author was stationed on site and was responsible for the overall management, coordination and execution of Sayona Stage 1 drilling program in 2016 (approximately 10 weeks) and Sayona Stage 2 drilling program in 2017 (approximately 11 weeks)</li> <li>The author visited 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</li> </ul>
Geological interpretation	<ul style="list-style-type: none"> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>Drill hole logging by Glen Eagle and Sayona's geologists, through direct observation of drill core samples</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<p>have been used to interpret the geological setting.</p> <ul style="list-style-type: none"> <li>The continuity of the main mineralised body is clearly observed by Li<sub>2</sub>O grades 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.</li> <li>The mineralisation is related to a pegmatite intrusive with multiple phases of spodumene mineralisation.</li> </ul>
Dimensions	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>The Authier Lithium Mineral Resource includes two pegmatites striking east-west and dipping to the north: Authier Main and Authier North.</li> <li>Authier Main area extends over a strike length of 1,100 m, has an average width of 25 m, typically extends down just below 250 metres, and dips 40 - 50 degrees to the north.</li> <li>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.</li> </ul>
Estimation and modelling techniques	<ul style="list-style-type: none"> <li>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.</li> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>The assumptions made regarding recovery of by-products.</li> <li>Estimation of deleterious elements or other non-grade variables of</li> </ul>	<ul style="list-style-type: none"> <li>Inverse Distance Power (IDP) interpolation with an oriented 'ellipsoid' search was used for the estimates. Micromine software was used for the estimations.</li> <li>Three dimensional mineralized wireframes were used to domain the Li<sub>2</sub>O data. Sample data was composited to 1.0m down hole lengths. The Li<sub>2</sub>O values in intervals with assays below detection limit were set to half of detection limit.</li> <li>Based on the statistical analysis there is no need for grade capping.</li> <li>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.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p>economic significance (eg sulphur for acid mine drainage characterisation).</p> <ul style="list-style-type: none"> <li>• In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>• Any assumptions behind modelling of selective mining units.</li> <li>• Any assumptions about correlation between variables.</li> <li>• Description of how the geological interpretation was used to control the resource estimates.</li> <li>• Discussion of basis for using or not using grade cutting or capping.</li> <li>• The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li> </ul>	<ul style="list-style-type: none"> <li>• Three passes were used. The first pass had a range of 35 m, with a minimum of 4 samples. For the second pass, the range was 65 m, with a minimum of 3 samples. For the third pass, the range was extended to 120 m, with a minimum of 1 sample. A maximum of 20 samples was used for all three passes.</li> <li>• The parent block dimensions used were 3 m x 3 m x 3 m with sub-blocks of 1.5 m x 1.5 m x 1.5 m. The parent block size was selected on the basis of being approximately 25% of the average drill hole spacing.</li> <li>• The block model size used in the Mineral Resource estimate was based on drill sample spacing and pegmatite body geometry. Selective mining units were not modelled.</li> </ul>
Moisture	<ul style="list-style-type: none"> <li>• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li> </ul>	<ul style="list-style-type: none"> <li>• Tonnages and grades were estimated on a dry in situ basis.</li> <li>• A table in the body of the report demonstrates the grade and tonnage sensitivity to variation in the cut-off grade</li> </ul>
Cut-off parameters	<ul style="list-style-type: none"> <li>• The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>• The Mineral Resource has been reported at a 0.45% Li<sub>2</sub>O cut-off.</li> </ul>
Mining factors or assumptions	<ul style="list-style-type: none"> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• Taking into account the geometry and the depth of the mineralized zone, the Authier Lithium deposit will be mined using open-pit mining methods.</li> <li>• No dilution or ore loss factors have been taken into account in the JORC Resource.</li> </ul>
Metallurgical factors or assumptions	<ul style="list-style-type: none"> <li>• The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as</li> </ul>	<ul style="list-style-type: none"> <li>• Metallurgical testing at Authier Lithium deposit was conducted in</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p>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.</p>	<p>four stages; 1999, 2012, 2016 and 2017.</p> <ul style="list-style-type: none"> <li>• In 1999, Bumigeme Inc, processing consultants, conducted metallurgical testing on a 40 tonne bulk sample and produced concentrate grades between 5.78% and 5.89% Li<sub>2</sub>O at metallurgical recoveries between 67.52% and 70.19%, with an average head assay of 1.14% Li<sub>2</sub>O. At an average head grade of 1.35% Li<sub>2</sub>O, test work demonstrated a recovery of 75% and a concentrate grade of 5.96% Li<sub>2</sub>O.</li> <li>• In 2012, Glen Eagle completing testing on a 270 kilogram sample from drill core. Very attractive results including an 85% metallurgical recovery to a 6.44% Li<sub>2</sub>O concentrate was achieved with three stages of cleaning.</li> <li>• In 2016, Sayona completed a metallurgical testing program using core from twenty-three historical diamond holes totaling 430 kilograms, 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<sub>2</sub>O at recoveries between 71.2% and 78.6%. Mineralogical (using QEMSCAN) analysis of the final concentrates demonstrated that the ore dilution had a negative impact on flotation performance.</li> <li>• In 2017, two new 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 at 82% Li<sub>2</sub>O.</li> </ul>
Environmental factors or assumptions	<ul style="list-style-type: none"> <li>• Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental Baseline Studies (EBS) has been completed in October 2017 for the Authier project and results will be available over the</li> </ul>



Criteria	JORC Code explanation	Commentary
	<p>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.</p>	<p>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.</p> <ul style="list-style-type: none"> <li>• According to public databases and from field inventories lead during this study by Dessau and GFE, no endangered species or habitats were found</li> <li>• A plan regarding proposed waste and process residue facilities management and disposal has been prepared and included in the PFS report.</li> <li>• Sayona Mining conducted a geochemical characterization 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 identify any chemical that could potentially affect the surface or groundwater quality. No evidence of sulfides has been observed in the ore or in the waste rock.</li> <li>• 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.</li> <li>• A Community Relations Program is being developed to approach and engage local stakeholders. This program will include information sessions and consultations with municipalities, landowners, First Nation community, non-governmental environmental</li> </ul>

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Bulk density	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<p>organizations and recreational associations.</p> <ul style="list-style-type: none"> <li>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/m<sup>3</sup>.</li> <li>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/m<sup>3</sup>.</li> </ul>
Classification	<ul style="list-style-type: none"> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>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).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul style="list-style-type: none"> <li>Mineral Resource has been classified in accordance with the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC, 2012).</li> <li>The Authier Lithium Mineral Resource was classified as Measured, Indicated and Inferred Mineral resource based on drilling density, sample spacing and geological / mineralisation continuity.</li> <li>The Measured Mineral Resource was defined within areas of close spaced diamond drilling of less than 35m by 35m, and where the continuity and predictability of the spodumene bearing pegmatite was good. The Indicated Mineral Resource was assigned to areas where drill hole spacing was less</li> </ul>

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		<p>than 60m by 60m. The Inferred mineral resource was assigned to areas where drill hole spacing was greater than 60m by 60m generally in the edges of the known mineralisation mostly in down-dip extensions beyond the last drill holes in each section.</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• The Mineral Resource estimates appropriately reflect the view of the Competent Person.</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>• The results of any audits or reviews of Mineral Resource estimates.</li> </ul>	<ul style="list-style-type: none"> <li>• 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</li> <li>• No external audits have been undertaken on the Sayona JORC Resource estimate. However, SGS in Canada who are assisting with the preparation of the 2016 Authier Pre-Feasibility Study has reviewed the data for mine planning purposes.</li> </ul>
Discussion of relative accuracy/ confidence	<ul style="list-style-type: none"> <li>• 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</li> </ul>	<ul style="list-style-type: none"> <li>• 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 are properly stored and mineralised intervals can be reviewed when</li> </ul>

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	<p>of the factors that could affect the relative accuracy and confidence of the estimate.</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<p>required. Recognized laboratories have been used for all analyses.</p> <ul style="list-style-type: none"> <li>• The Mineral Resource statement relates to global estimates of tonnes and grade.</li> </ul>