

24 OCTOBER 2016

HIGH-GRADE LITHIUM INTERSECTED OVER LARGE WIDTHS DURING AUTHIER DRILLING

Highlights

- High-grade spodumene mineralisation intersected 62 metres at 1.35% Li20 including, 16 metres at 1.65 % Li2O from 12 metres
- Longest intercept of spodumene mineralisation recorded in drilling at Authier
- Drilling program is demonstrating the potential to expand the size of the JORC Resource

Sayona Mining Limited (ASX: SYA) ("Sayona" or the "Company") is pleased to announce the assay results from its first diamond drill holes at the Authier lithium project, Quebec.

The first two diamond drill holes intersected high-grade spodumene mineralisation, including:

- Hole 1 62 metres at 1.35 % Li₂O from a downhole depth of 12 metres, and includes 16 metres at 1.65 % Li₂O from a downhole depth of 27 metres; and
- Hole 2 49 metres at 1.18 % Li₂O from a downhole depth of 50 metres (vertical depth of 30 metres) including, 17 metres at 1.49 % Li₂O from a downhole depth of 81 metres.

The aim of the drilling program is to increase the size of the resource and improve the confidence level of the JORC resource categories. The first two drill holes were planned to test the geometry of the Authier pegmatite at shallow levels in the eastern sector and increase the resource category from indicated to measured.

More than 3,300 metres of drilling has been completed in 16 diamond holes. The drilling has intersected significant zones of spodumene mineralisation and extended the areas of known mineralisation. The Company believes the new drilling has the potential to expand the size of the existing JORC Resource, and mineralisation remains open in all directions.

In addition, the discovery of a second pegmatite body, located 400 metres north of the Authier pegmatite, highlights the potential for discovering new pegmatites within the large tenement package. The new pegmatite, not visible from the surface, was intersected at shallow levels between 15 metres to 21 metres downhole depth and contained visible spodumene mineralisation

Corey Nolan, Chief Executive Officer, commented "The Company is very encouraged by the widths and high-grade nature of the mineralisation intersected in the drilling. The Company believes the new drilling will have the potential to expand the size of the JORC resource at the completion of the program. The new resource will be incorporated into the pre-feasibility study which is currently underway".



Diamond Drilling Program

The Company is currently completing a diamond drilling program at Authier of up to 4,000 metres with the objectives, including:

- Converting the inferred mineral resources to measured and indicated through further drilling;
- Exploring for extensions to the existing mineral resources and other potential mineralisation within the tenement package;
- Collecting geotechnical data for incorporation in the Authier Feasibility Studies; and
- Collecting additional drill core for any additional metallurgical testing that may be required to complete a Definitive Feasibility study, planned for 2017.

The first two diamond drill holes (see Table 1) have intersected high-grade spodumene mineralisation, including:

- Hole AL-16-001, intercepted 62 metres at 1.35 % Li2O from a downhole depth of 12 metres including 16 metres at 1.65 % Li2O from a downhole depth of 27 metres (see Figure 1); and
- Hole AL-16-002, 60 metres step-back of hole AL-16-001, intercepted 49 metres at 1.18 % Li2O from a downhole depth of 50 metres (vertical depth of 30 metres) including, 17 metres at 1.49 % Li2O from a downhole depth of 81 metres (see Figure 1).

The lithium mineralisation at 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 axis) in a mid to coarse grained pegmatite facies.

The first two drill holes were planned to test the geometry of the Authier pegmatite at shallow levels in the eastern sector and increase the resource category from indicated to measured.

More than 3,300 metres of drilling has been completed in sixteen diamond holes. Drill core is being progressively logged and sent to the laboratory for lithium analysis.

Table	Table 1 – 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-16-001	707525	5360175	330	180	-45	87	12.00	74.00	62.00	1.35
including							27.00	43.00	16.00	1.65
AL-16-002	707525	5360245	330	180	-45	111	50.00	99.00	49.00	1.18
including							81.00	98.00	17.00	1.49



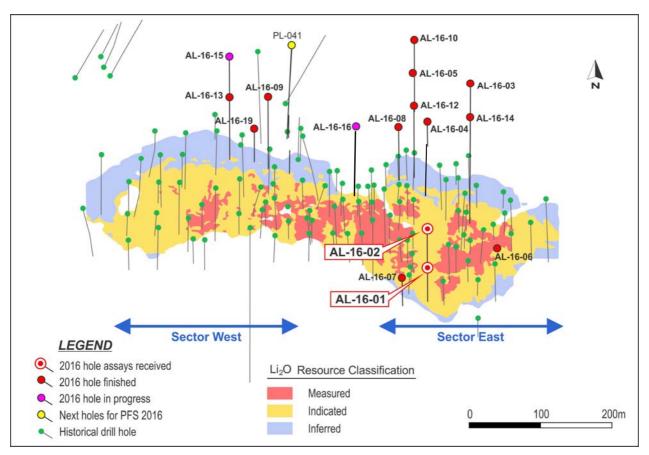


Figure 1: Drill hole collar location plan

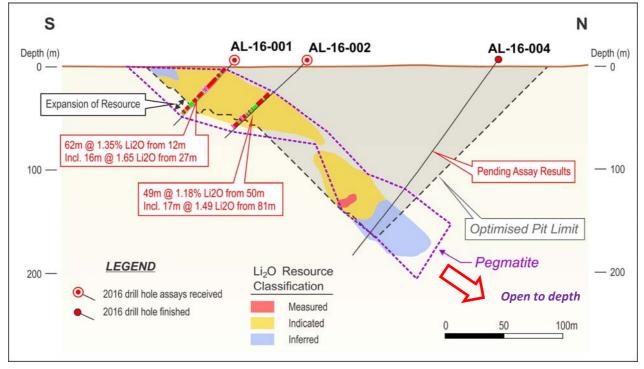


Figure 2: Cross section showing Hole AL-16-001 and Hole AL-16-002



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Sayona Mining Limited is an Australian, ASX-listed (SYA), company focused on sourcing and developing the raw materials required to construct lithium-ion batteries for use in the rapidly growing new and green technology sectors.

The Company's primary focus is the development of the advanced stage Authier lithium project in Quebec, Canada. Authier mineralisation is hosted in a spodumene-bearing pegmatite intrusion with more than 18,000 metres of drilling in 139 holes.

The Authier JORC compliant Mineral Resource estimate is tabulated below at a 0.5% Li20 cut-off grade.

Authier JORC Mineral Resources Estimate (0.5% Li ₂ 0 cut-off grade)				
Category	Million Tonnes	Grades Li ₂ 0	Contained Li ₂ 0	
Measured	2.08	0.95%	19,730	
Indicated	5.16	0.97%	50,092	
Inferred	1.88	0.93%	17,480	
Total	9.12	0.96%	87,302	
Cautionary Not	e - Mineral Resources	are not Mineral Reserv	ves and do not have	

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

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

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

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Reference to Previous ASX Releases

This release refers to the following previous ASX releases:

"Authier JORC Resources", 5 July 2016

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

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. 	 All holes reported in this program have been Diamond Core Drillholes (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). 	 Core drilling, core diameter size HQ. Standard tube and bit. Core was oriented using a Reflex ACT III tool.



Criteria	JORC Code explanation	Commentary
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 99%. 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, alpha and beta angles of structures as core orientation using reflex tool completed for all holes done in 2016 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 also been undertaken. 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. 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. The entire target mineralisation type core (spodumene pegmatite) and surrounding 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 	 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 barren host rock.



Criteria	JORC Code explanation	Commentary
	 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. 	 In general at least two host rock sample was collected each side from the contacts with the mineralised pegmatite. Sample preparation of drill core samples collected during the 2016 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. Sample sizes are considered appropriate.
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 all 2016 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). The analyses 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 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 (lower) and 10,000 ppm (upper). 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 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.
Verification of sampling and assaying	• The verification of significant intersections by either independent or alternative company personnel.	• All the pegmatite intersections and assay results have been reviewed by the Competent Person and Sayona's geologist and personnel.



Criteria	JORC Code explanation	Commentary
	 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. 	 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 in 2016 was logged by 2 geologists, a Sayona's 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. 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 this 2016 drilling campaign by Sayona. 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 No adjustments to assay data have been undertaken.
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 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. 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. A LIDAR topography will be available in the following weeks.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	• Drill holes were drilled perpendicular to the lithium mineralised pegmatite as shown on the



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	 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. 	 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.
<i>Orientation of data in relation to geological structure</i>	 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 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.
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

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 in one block of map designated claim cells located at the border between the La Motte Township and the Preissac Township, totalling 19 claims covering 653.57 ha. The Property extends 3.4 km in the east-west direction and 3.1 km northsouth. From the 19 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. Glen Eagle 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



Criteria	JORC Code explanation	Commentary
		 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). 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 Property, which has been excluded for exploration and mining activities. 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.
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 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. The project has more than 18,000 metres of drilling in 139 diamond holes, and 2,283 assay samples. The project was initially drilled between 1991 and 1999, 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 2016 Sayona has drilled more than 3,300 metres of drilling. The exact drilling meterage will be reported when the drilling campaign ends.
Geology	Deposit type, geological setting and style of mineralisation.	The deposit is hosted in a spodumene-bearing pegmatite intrusion. The deposit is 825 metres long, striking east-west, with an average



Criteria	JORC Code explanation	Commentary
		thickness of 25 metres, minimum 4 metres and maximum 55 metres, dipping at 40 degrees to the north.
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. 	Drill hole details are reported in the body of this announcement as Table 1.
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 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. 	 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 0.5 % lower cutoff 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 	 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.



Criteria	JORC Code explanation	Commentary
	drill hole collar locations and appropriate sectional views.	
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.
<i>Other</i> <i>substantive</i> <i>exploration</i> <i>data</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.	 The Glen Eagle 2010-2012 diamond drilling campaign 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. Details of metallurgical testwork were detailed in previous other ASX release. Results of ongoing metallurgical testwork will be reported when results are ready.
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 indicated through further drilling; Converting the mineral resources to reserves; Exploring for extensions to the existing mineral resources and other potential mineralisation within the tenement package; Consolidating other potential resources / mineralisation in the district; Studying options for improving the project economics, including: Operating and capital cost reductions (e.g. leasing and purchasing of second hand equipment); Metallurgical optimization using latest technologies available like photometric sorting. Downstream processing options including the production of high-value lithium carbonate; Completion of an Environmental Impact Statement and Bankable Feasibility Study; Negotiating production off-take agreements; and Sourcing development finance and constructing the project. Sourcing the project. Sourcing the project. Sourcing the project.