



ASX ANNOUNCEMENT



31 October 2017

SEPTEMBER 2017 QUARTERLY REPORT

Highlights

- Significant improvement to Authier concentrate grades and recoveries demonstrated in new metallurgical testing program
- Downstream processing of Authier concentrates demonstrates positive economics
- Authier permitting and environmental studies advancing towards completion in 2018
- New Area C pegmatite at Mallina defined over 800m strike and returns rock results to 4.61% Li₂O
- New Deep Well tenement application prospective for lithium and conglomerate hosted gold
- \$4.9 million renounceable rights offering launched to fund Definitive Feasibility Study

Sayona Mining Limited (ASX: SYA) ("Sayona" or the "Company") is pleased to announce the activities report for the quarter, including:

- Authier, Canada – major focus on completion of the optimisation programs for the Authier Definitive Feasibility Study. In addition, completion of a Scoping Study for the downstream processing of Authier concentrates into lithium carbonate and/or lithium hydroxide;
- Western Australian Lithium, Australia – rock chip and soil sampling programs completed at Mallina. New tenement application, Deep Well, prospective for both lithium and conglomerate gold mineralisation; and
- Capital raising – a \$4.9 million, partially underwritten to \$2 million, renounceable rights offering on a 1:2 basis at 1 cent per share was announced to fund completion of the Authier Definitive Feasibility Study, Authier pilot metallurgical testing program and corporate costs was announced.

Authier, Canada

The Company's primary strategy is to focus on completing the studies required to commence the development of the project, including the Definitive Feasibility Study. Authier is a near-term development project and cash-flow generation opportunity. The Company believes it will create significant share value-uplift potential for shareholders as the project is advanced towards development.

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Metallurgical Optimisation and Final Process Flow Sheet Design

Following the completion of the 2017 Feasibility Study, the Company commissioned engineering consultants, DRA/Met-Chem, to review the test work and flow sheet proposed for the Authier project. Following the review, DRA/Met-Chem recommended a new testing program and compilation of a representative sample that didn't incorporate any wall-rock waste dilution like the Phase 1 metallurgical testing program for the PFS.

The objective of the Phase 2 metallurgical testing was to improve the overall recovery and grade of the project through optimisation of the flotation process, and reduce processing costs. The testing program was managed by DRA/Met-Chem and the test work was completed at SGS Lakefield.

The metallurgical testing program was undertaken with a new representative sample of the Authier deposit from diamond drill core. The new sample represents the average grade and representative mineralogy of the deposit over the life-of-mine. The sample was collected from four diamond drill cores and totalled approximately 50 kilograms.

The new results demonstrate the ability to produce concentrates grading higher than 6% Li₂O and at recoveries over 80% - see table below. This compares to the February 2017 Pre-Feasibility Study assumptions of 5.75% Li₂O and 80% for concentrate grades and recoveries, respectively.

Best Results from Phase 2 Metallurgical Testing Program			
Sample	Description	Concentrate Grade (%Li ₂ O)	Metallurgical Recovery (%)
F6	3rd - Cleaner Flotation Concentrate	6.53	80
	2nd - Cleaner Flotation Concentrate	6.32	83
	1st - Cleaner Flotation Concentrate	5.95	85
F8	3rd - Cleaner Flotation Concentrate	6.62	77
	2nd - Cleaner Flotation Concentrate	6.58	83
	1st - Cleaner Flotation Concentrate	6.31	85

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

Authier Downstream Processing Studies

During the quarter, the Company completed a downstream concept study on value-adding the Authier spodumene concentrates.

The Concept Study prepared by engineering consultants, Wave International ("Wave"), has demonstrated the potential technical and economic viability of constructing a lithium carbonate and/or hydroxide facility in Quebec.

The study evaluated the option of converting Authier's annual spodumene concentrate into either 13,000 tonnes of lithium carbonate or 14,000 tonnes of lithium hydroxide, utilising conventional processing technology, and leveraging the world-class infrastructure, low energy and reagent costs. Lithium carbonate and hydroxide are both high-value products used in the lithium-ion battery industry.

The Concept Study demonstrates that the Authier downstream project has the potential to be competitive on both capital and operating costs compared to benchmarked projects. The Company will explore options to either acquire or partner with other companies that have deposits in Quebec, as significant economies of scale are achievable at larger scale.

Cautionary Note Regard Concept Study

The Concept Study referred to in this announcement has been undertaken to determine the potential viability of downstream processing Authier concentrates into lithium carbonate and/or hydroxide. It is based on a low level technical and economic assessment and was based on the AACE International Recommended Practice No. 18R-97, as a Class 4 estimate (see Figure 1 below). The study has not been used as the basis for the estimation of Ore Reserves. Further technical and economic assessment including, metallurgical testing, Feasibility Study and permitting will be required to provide any assurance or certainty of an economic development case.

The Concept Study is based on the mine and concentrator assumptions (includes Ore Reserves) outlined in the February 2017 Authier Pre-Feasibility Study, Authier Updated JORC Resource report (14 June 2017), a report prepared by Wave International on the downstream capital and operating costs, Appendix – Project Design Criteria, and other material assumptions outlined elsewhere in this document. Whilst the Company considers all the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the outcomes indicated in the Concept Study will be achieved.

To achieve the potential downstream process plant development outcomes indicated in this Concept Study, additional funding will be required. Funding will be required to complete metallurgical testing (\$100,000), feasibility studies and permitting (approximately \$1,000,000) and development (approximately \$223 to \$240 million depending on whether it is a lithium carbonate or lithium hydroxide plant). Investors should note that there is no certainty that the Company will be able to raise the funding when needed. It is also possible that such funding may only be available at terms that may be too dilutive to or otherwise affect the value of Sayona shares. It is also possible that Sayona could pursue other 'value realisation strategies such as sale, partial sale or joint venture of the project. If it does, this could materially reduce Sayona's proportionate ownership of the project. Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the Concept Study.

The Company has concluded it has reasonable basis for providing forward looking statements included in this announcement and believes that it has a reasonable basis to expect it will be able to continue funding the feasibility activities for the project.

The next step in the project development plan is to convert Authier concentrates into lithium carbonate, complete of a Pre-Feasibility Study, permitting and site selection. This process will run in parallel with the completion of the mining and concentrate processing Definitive Feasibility Study, and strategic partnering process.

The Concept Study has confirmed the technical and financial viability of processing Authier spodumene concentrates into value added battery products including, lithium carbonate and lithium hydroxide. The positive Concept Study demonstrates the opportunity to create substantial long-term sustainable shareholder value at a competitive capital cost.

**Authier Downstream Processing Financial Highlights
(Approximate Values Derived from the Scoping Study)**

Description	Unit	Lithium Carbonate	Lithium Hydroxide
Annual Production Capacity	Tonnes	13,000	14,000
Ave Cash operating Costs*	C\$ per tonne	6,331	6,032
Ave Cash Operating Costs*	US\$ per tonne	4,812	4,585
Price forecast	US\$ per tonne	10,200	12,000
Initial Capital#	C\$ million	223	240
Total Capital#	C\$ million	284	301
Pre-tax NPV @ 9%DR	C\$ million	426	794
Pre-Tax IRR	%	31	44
Exchange rate	CAD\$:US\$	0.76	
* Cash Operating Costs includes mining, processing, administration, royalties, transport, and downstream processing			
# Capital expenditure includes all mine, concentrator and downstream process plant			

Environmental and Permitting Work Programs

Hydrogeological Survey

A ten-hole drilling program for the hydrogeology study has now been completed. The drill holes will be used to assess hydrogeological conditions prevailing in the project area. The information will be used to assess the current quality of the groundwater and to make the assessment of the potential projects impact on the ground water regime and quality in the area.

In addition, the data will be used to plan the pumping activities for the mine, and to provide information for the geotechnical engineering and geo-mechanics of the project. The program will improve the understanding of the project groundwater environment and is expected to mitigate the environmental risks attributable to the operation.

Environmental Survey Update

The autumn flora and fauna field survey has now been completed. The survey included:

- Creating a vegetation inventory, including wetlands and species with special status;
- Inventory of fish and fish habitat;
- Inventories of wildlife species with special status; and
- Assessment of surface water quality.

No major issues have been identified. Final environmental reports will be completed by the first quarter of 2018.

Mining Lease Application Process

The Company has now completed the project survey which is required for the Mining Lease approval process. The final three steps required to complete the Mining Lease application include, completion of Definitive Feasibility Study, environmental certification and rehabilitation plan. This is largely complete.

Stakeholder Engagement

The Company has commenced its recently designed local community and First Nations stakeholder engagement program. The program aims to ensure all environmental, social and economic concerns raised by stakeholders are integrated into the project development. Early discussions with the local La Motte council have not flagged any major issues and the council is looking forward to new investment and job creation for the region.

Western Australian Projects

Mallina Project

RC drilling carried out at Mallina in the previous quarter included eighteen holes for 1,343m, which targeted five spodumene pegmatites. Results included a peak assay of 1m at 1.62% Li₂O from 27m in drill hole SMRC005, and is less mineralised than surface rock geochemistry.

Petrographic study of drill chips has identified some pegmatites display a progressive alteration of spodumene into a mica- feldspar-quartz groundmass. This alteration appears to result from the effect of late stage pegmatite fluids that have introduced sodium and potassium into the pegmatite soon after its crystallisation and effectively remobilised lithium back into the magmatic fluid. This alteration is recorded at several locations worldwide including Cattlin Creek in Western Australia and Nanping, China.

The RC drilling carried out to date has lightly tested the Eastern and Western Group pegmatites which have a combined strike extent of over 4.5km. Opportunity is present for preserved spodumene mineralisation at depth, in parallel staked pegmatites, and areas of flat dip which would allow less favourable access to late fluids.

To provide a quantitative approach to assessing areas for further drill testing a soil geochemical programme was commenced with 331 samples collected. During this programme a new area of spodumene pegmatite has been identified, named the Area C prospect. This area lies centrally between the Discovery and the Eastern group of pegmatites which together now cover some 5km² x 3km².

Results are displayed in the figure below.

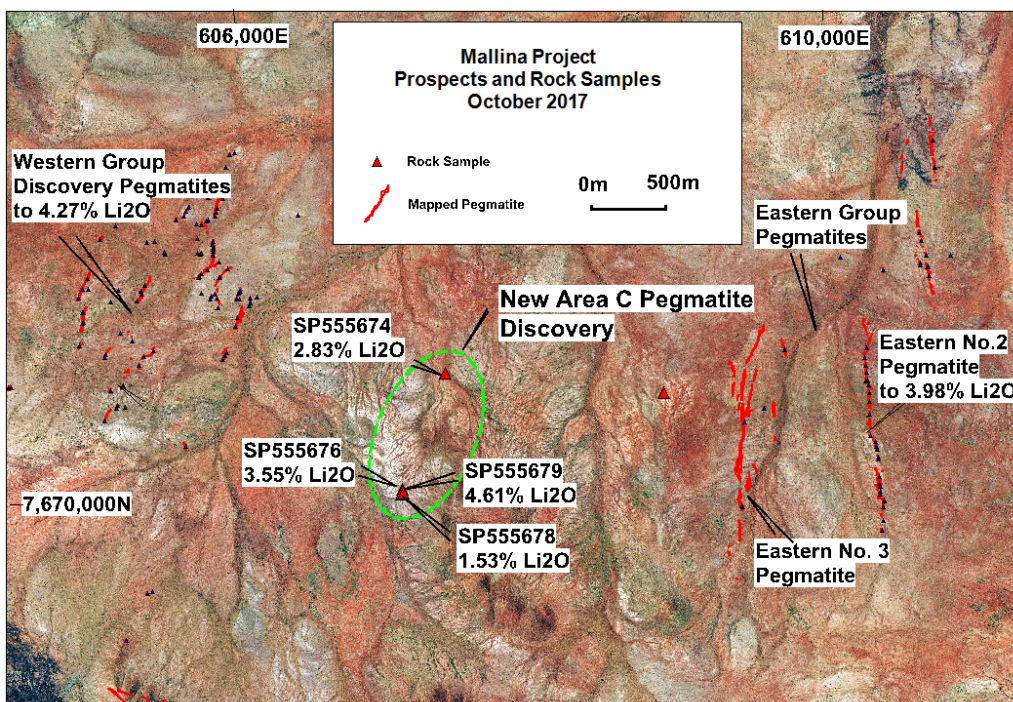


Figure 1 Mallina Pegmatites and New Area C Prospect Rock Sample Results

The Area C pegmatites are intermittently outcropping along an 800m+ strike extent and have been observed up to 15m in width. The true width or strike length of the system is not known. Assay results of the five rock samples collected range up to 4.61% Li₂O with spodumene the only observed lithium mineral. Results of soil sampling at Mallina to date are displayed in the figure below.

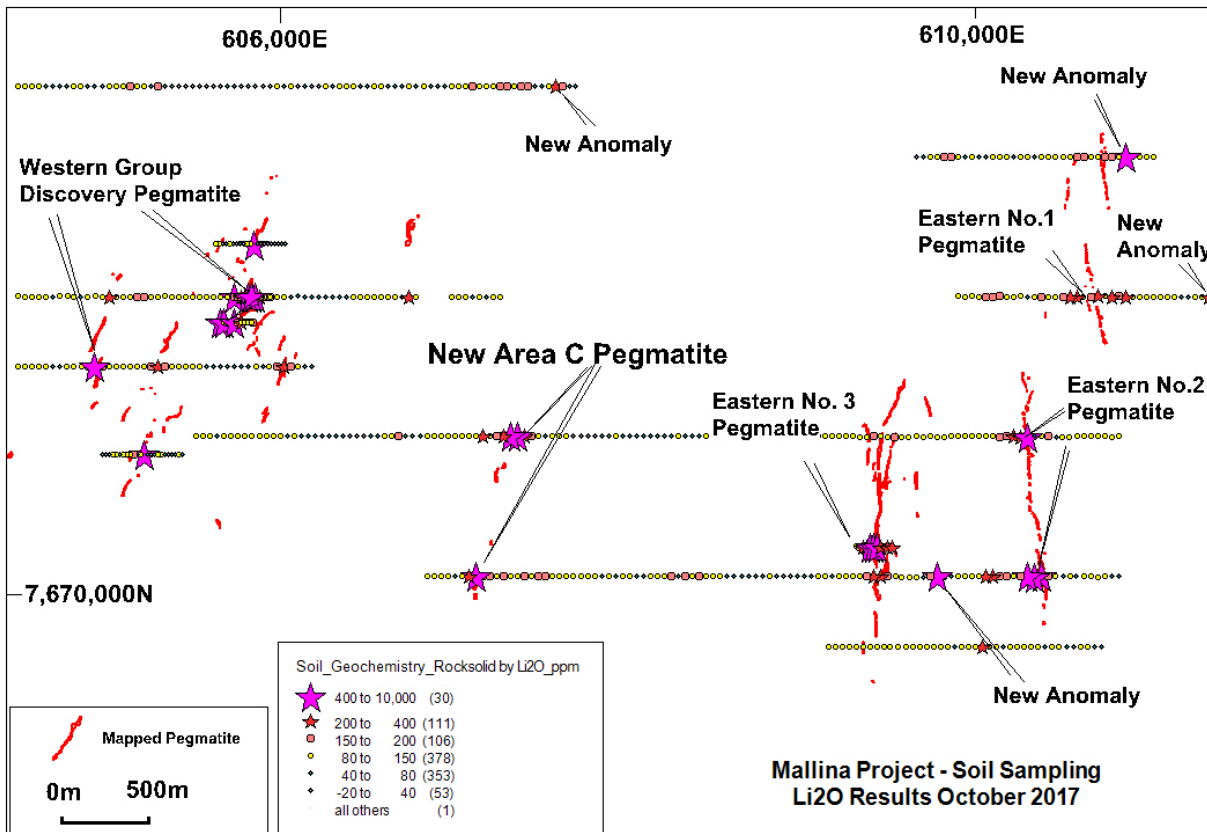


Figure 2 Mallina Soil Geochemistry Displaying Li₂O Results

The soil response in the northern area of the Area C prospect is the broadest yet recorded at the Mallina project. The soil sampling results also define a number of lithium geochemical anomalies, some coincident with identified pegmatites but also including a number without a known source. Each requires follow up pegmatite reconnaissance and infill geochemical sampling.

Following the success of the geochemical programme an additional 354 soil samples have been collected. Results of this work are pending.

The discovery of new spodumene pegmatites at Mallina is an encouraging result and planning for a possible second phase of drilling is underway.

Pilbara Lithium Projects

Outside of the Mallina tenement fieldwork was carried out over several other lithium tenements during the quarter.

A total of 93 rock samples of granite and pegmatite have been collected during geological reconnaissance at the Mt Edgar project. This work has identified several highly fractionated

granites with geochemistry typical of those which source spodumene pegmatites. Similar fractionated granites also occur in the nearby Moolyella tin field where spodumene pegmatites are developed. Assay of pegmatite rock samples includes anomalous and elevated lithium (to a maximum 474ppm Li₂O), tantalum (to a maximum 235ppm Ta) and tin (to a maximum 45ppm). These results are encouraging first pass results and identify several areas with clear targets for follow up sampling. A summary of results is displayed below.

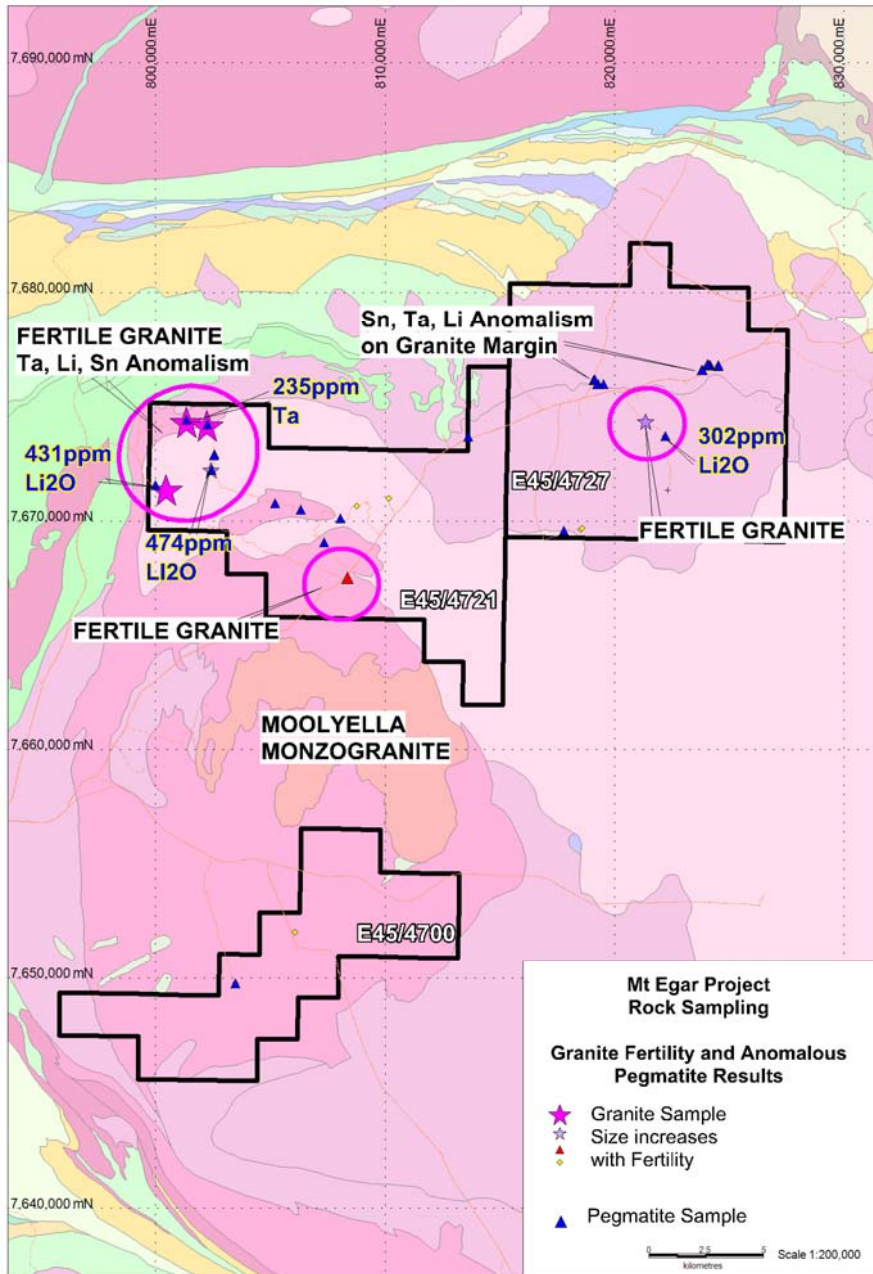


Figure 3: Mt Edgar project map

Tenements to the east and south of the Mt Edgar batholith failed to return fractionated or elevated geochemical signatures and have been surrendered or withdrawn from the Great Sandy Option Agreement (see tenement Schedule below for changes).

Deep Well Project

The Deep Well tenement application covers 119km², and was pegged to secure an area of interpreted granites intruding Mallina Formation sediments. The tenement geology is largely obscured by cover, but the interpreted geological setting appears similar to the Mallina project to the south where spodumene pegmatites are present.

Reconnaissance has failed to locate outcropping pegmatite but has identified volcanic rocks along the western tenement area. These volcanics include pillow basalts, flows and mafic fragmental typical of the Fortescue aged Mt Roe Basalt. They appear to be part of a previously unrecorded portion of Fortescue rocks, which the GSWA maps to the west and south (see figure 1 below). Poorly outcropping highly weathered volcanic and quartz pebble conglomerate are present east of the volcanics. The age of these conglomerates is uncertain, but their location adjacent to Fortescue aged volcanics indicates a potential for conglomerate hosted gold mineralisation, which has recently been identified at several nearby areas.

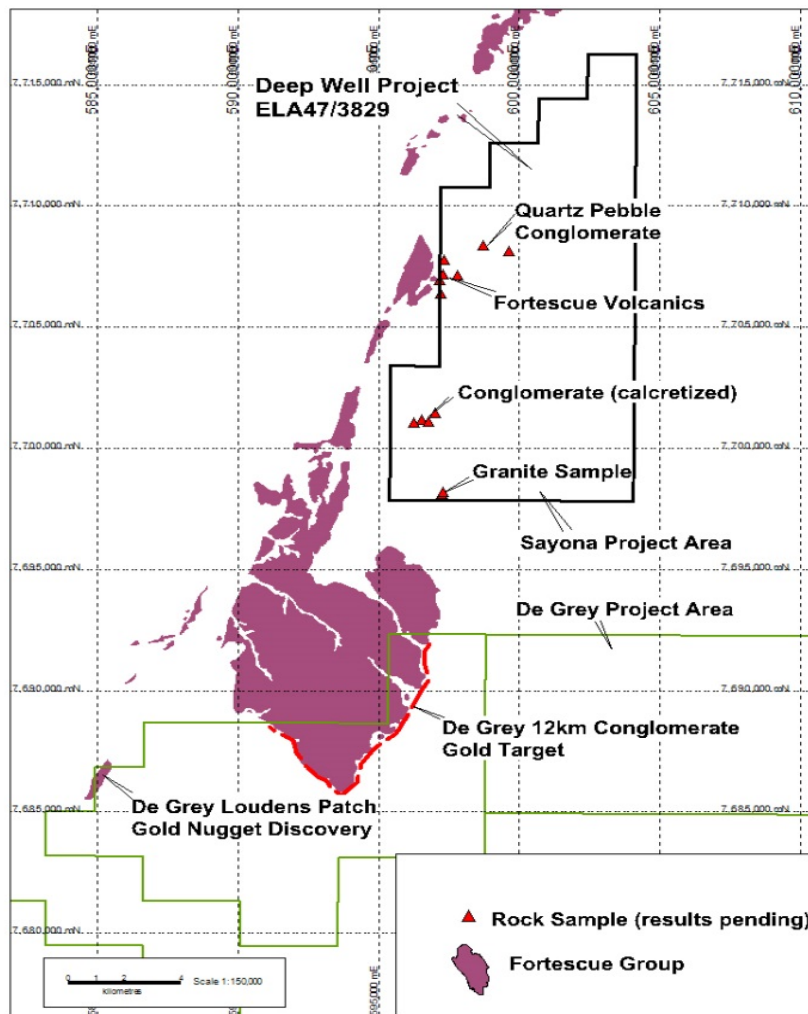


Figure 3 Deep Well Tenement, Fortescue Group and Nearby Gold Prospects

The conglomerate ranges from quartz pebble conglomerate to those being dominated by felsic volcanic and chert clasts. In some areas the rocks are strongly calcretised and may represent paleo-drainages, though sparse quartz veining suggests they have been affected by past deformation and are of a tertiary or older age. Further work is planned in order to better understand the areas geology and it's potential.

Mt Edon Lithium Project

No exploration was carried out at the Mt Edon project during the quarter.

Corkwood Graphite Project

During the quarter a reconnaissance of the Corkwood project included collection of six rock samples. These were collected in an area where past rock sampling returned anomalous cobalt mineralisation, close to the Snowbird graphite prospect.

In this area secondary copper, weathered from magmatic sulphides associated with pyroxenite intrusions has been exposed by historic costeaning.

The peak result of 0.275% Co in rock sample SK555232 also contained anomalous copper (2.7%) and nickel (2.42%). These results are encouraging and are being reviewed in combination with Sayona's VTEM survey, to determine if significant conductors with potential for base metals and cobalt mineralisation may be present at depth.

Corporate – Capital Raising to Fund Definitive Feasibility Study and Pilot Metallurgy Program

During the quarter, the company announced a pro rata renounceable rights issue, comprising an offer on the basis of one (1) new share for every two (2) existing shares held at an issue price of 1 cent (\$0.01) per share.

Under the Rights Issue, Sayona may issue a maximum of 487,409,777 new shares (subject to rounding) to raise up to \$4,874,097 before the costs of the offer.

The Rights Issue is partially underwritten up to \$2.0 million by Patersons Securities Limited, who are also acting as the lead manager to the issue.

The current timetable for the Rights Issue is set out below. The dates are indicative only and may change, subject to the Corporations Act and the ASX Listing Rules.

Activity	Date
Announcement of pro rata renounceable rights issue	Thursday, 28 September 2017
Lodge Appendix 3B	Thursday, 28 September 2017
Lodge Prospectus with ASIC and ASX - Release copy of offer documentation on ASX	Tuesday, 3 October 2017 Day 0
Trading of rights commences	Thursday, 5 October 2017
Trading resumes on an ex-entitlement basis	Friday, 6 October 2017

Record Date for Entitlement to participate in the Rights Issue	7pm (Brisbane time) Monday, 9 October 2017
Dispatch Prospectus and Entitlement and Acceptance Form to Shareholders	Wednesday, 11 October 2017
Trading of Rights ends	Friday, 27 October 2017
Last day to extend the offer closing date	Tuesday, 31 October 2017
Closing date for Rights Issue	Friday, 3 November 2017
Shortfall notification to ASX	Tuesday, 7 November 2017
Shortfall settled	Thursday, 9 November 2017
Issue date, deferred settlement trading ends	Friday, 10 November 2017
Normal ASX trading resumes	Monday, 13 November 2017

For more information, please contact:

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

Previous Disclosure - 2012 JORC Code

Certain Information relating to Mineral Resources, Exploration Targets and Exploration Data associated with the Company's projects in this March 2017 Quarterly Report has been extracted from the following ASX Announcements:

- Authier Lithium Project JORC Significantly Expanded, 23 November, 2016
- Authier Project Pre-Feasibility Study, 16 February 2017
- Authier Maiden JORC Ore Reserve, 16 February 2017
- Mallina Drilling Program Completed, 17 July 2017
- Authier JORC Mineral Resource Significantly Expanded, 16 June 2017

Copies of these reports are available to view on the Sayona Mining Limited website www.sayonamining.com.au. These reports were issued in accordance with the 2012 Edition of the JORC Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. 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. 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 announcement.

Tenement Schedule

Table 2: Tenement Schedule

Tenement	Name	Status	Interest at Beginning of Quarter	Interest at end of Quarter
E59/2092	Mt Edon	Granted	80%, with rights to 100% of pegmatite minerals*	80%, with rights to 100% of pegmatite minerals*
E59/2055	Mt Edon West	Granted	100% (pegmatite minerals)	100% (pegmatite minerals)
E45/2364	Tabba Tabba	Granted	Rights to 100% of pegmatite minerals*	Rights to 100% of pegmatite minerals*
ELA45/4703	Tabba Tabba East	Application	100%	100%
E45/4716	Red Rock	Application	100%	100%
ELA45/4726	West Wodgina	Application	100%	100%
ELA47/3475	Friendly Creek	Application	100%	0% (Withdrawn)
ELA45/4738	Cooglegong	Application	100%	100%
ELA45/4775	Carlindie	Application	100%	100%
E80/4511	Western Iron	Granted	100%	100%
ELA80/4949	Corkwood	Application	100%	100%
ELA80/4959	Killarney	Application	100%	0% (Withdrawn)
ELA80/4968	Keller	Application	100%	100%
ELA45/4813	Moolyella	Application	100%	0% (Withdrawn)
ELA47/3802	Friendly Creek	Application	0%	100%
ELA47/3829	Deep Well	Application	0%	100%
Great Sandy Pty Ltd Option				
E47/2983	Mallina	Granted	Option Rights to 80%	Option Rights to 80%
E46/1103	Dorringtons	Granted	Option Rights to 80%	Option Rights to 80%
E45/4687	White Springs	Granted	Option Rights to 80%	Option Rights to 80%
E45/4721	Mt Edgar	Granted	Option Rights to 80%	Option Rights to 80%
E45/4727	Mt Edgar	Granted	Option Rights to 80%	Option Rights to 80%
E45/4787	Mt Edgar	Application	Option Rights to 80%	Withdrawn form Option
E45/4788	Mt Edgar	Application	Option Rights to 80%	Withdrawn form Option
E45/4700	Mt Edgar	Granted	Option Rights to 80%	Option Rights to 80%
E45/4723	Mt Edgar	Application	Option Rights to 80%	Withdrawn form Option

Authier Canada				
Claim Number	Registered holder	Registration Date	Expiration Date	Area (hect)
2116146	Sayona Mining Limited	8/08/2007	7/08/2017	43.24
2116154	Sayona Mining Limited	8/08/2007	7/08/2017	42.88
2116155	Sayona Mining Limited	8/08/2007	7/08/2017	42.87
2116156	Sayona Mining Limited	8/08/2007	7/08/2017	42.86
2183454	Sayona Mining Limited	2/06/2009	1/06/2017	42.85
2183455	Sayona Mining Limited	2/06/2009	1/06/2017	42.84

Authier Canada				
Claim Number	Registered holder	Registration Date	Expiration Date	Area (hect)
2187651	Sayona Mining Limited	2/09/2009	1/09/2017	21.39
2192470	Sayona Mining Limited	22/10/2009	21/10/2017	21.08
2192471	Sayona Mining Limited	22/10/2009	21/10/2017	21.39
2194819	Sayona Mining Limited	19/11/2009	18/11/2017	42.82
2195725	Sayona Mining Limited	27/11/2009	26/11/2017	29.03
2219206	Sayona Mining Limited	22/04/2010	21/04/2018	5.51
2219207	Sayona Mining Limited	22/04/2010	21/04/2018	17.06
2219208	Sayona Mining Limited	22/04/2010	21/04/2018	55.96
2219209	Sayona Mining Limited	22/04/2010	21/04/2018	42.71
2240226	Sayona Mining Limited	9/07/2010	8/07/2018	42.71
2240227	Sayona Mining Limited	9/07/2010	8/07/2018	42.71
2247100	Sayona Mining Limited	23/08/2010	22/08/2018	42.75
2247101	Sayona Mining Limited	23/08/2010	22/08/2018	53.77