

ASX ANNOUNCEMENT

ASX: SYA

31 January 2020

DECEMBER 2019 QUARTERLY ACTIVITIES REPORT

Quarter Highlights

- **Revised Definitive Feasibility Study (DFS) for Authier Lithium Project shows boost to profitability, with estimated net present value (NPV) increasing to C\$216 million from previous study's C\$184.8m**
- **Agreement signed with First Nation Abitibiwinini for exploration phase of Authier project as Sayona advances approval process**
- **Potential for a new lithium deposit at the Viau-Dallaire prospect, located within the Company's Tansim Lithium Project in Québec**
- **World class team assembled to support Sayona's bid for North American Lithium (NAL), with leading technical skills, managerial expertise and financial capacity**
- **Work progressing on WA tenements under earn-in agreement with leading lithium producer, Altura Mining.**

Emerging lithium miner Sayona Mining Limited (ASX: SYA) announced today its activities report for the December quarter 2019, as it continues to advance its lithium projects in Canada and Australia amid growing demand for the metal of the 21st century.

Authier Lithium Project

The Company's primary focus is the development of the advanced stage Authier Lithium Project in Québec, Canada. Authier is a hard rock spodumene lithium deposit scheduled for development as an open cut mine and concentrator, producing a 6% spodumene concentrate. The new mine could create more than 160 additional jobs for the benefit of the local community, with Sayona putting priority on engaging local workers and suppliers.

Pending the necessary stakeholder support and government approval, construction could commence as early as 2021, with the start of mining operations a year later.

Permitting and DFS

In early 2019, the Québec Environment Minister announced that the Authier project would be subject to the environmental impact assessment and review procedures under the BAPE (bureau d'audiences publiques en environnement). Under this process, Sayona is seeking approval to process in the order of 2,600 tonnes per day, providing for an approximate mine life of 14 years and estimated annual average spodumene concentrate production of around 115,000 tonnes (at 6% Li₂O).

In May 2019, engineering consultancy BBA was appointed to review the original mine plan and the 2018 DFS in accordance with the new approval process, and based on the optimised production levels. The revised DFS was announced in November 2019.

Key findings of the DFS included:

- **NPV (real terms @ 8% discount rate) of C\$216m vs previous study's C\$184.8m**
- **Pre-tax internal rate of return 33.9% vs 33.7%**
- **Annual average spodumene production – dry (6% Li₂O) of 114,116t vs 87,400t; 78% recovery rate**
- **Life of mine 13.8 years (based on a higher daily production rate of 2,600 tonnes per day compared to the previous DFS rate of 1,850t)**
- **Total EBITDA of C\$461m and total net revenue of C\$1,412m**
- **Initial capital costs C\$120m; life of mine capital costs C\$211m**
- **Project payback period of 2.7 years.**

The project's low capital and operating costs reflect its close proximity to established infrastructure including rail and road and access to a skilled local workforce, in addition to no requirement for on-site infrastructure such as accommodation camps and power plants. It also benefits from access to economical, environmentally friendly hydroelectric power and offers a simple deposit geology, mining and production processes.

Key outcomes of the DFS include an NPV of C\$216 million over an initial 13.8-year mine life, based on the current Proven and Probable Ore Reserve estimate of 12.10 Mt @ 1.00% Li₂O at a 0.55% Li₂O cut-off grade (refer table below).

The pre-tax Internal Rate of Return ("IRR") is estimated at 33.9% and payback on capital is 2.7 years. The LOM cash operating costs are estimated at C\$400 per tonne (mine gate basis) or C\$469 per tonne FOB Port of Montreal, based on a development capital expenditure of C\$120 million and a life-of-mine capital cost estimate of C\$211 million.

Authier Lithium Project DFS Highlights		
Description	Unit	Results
Average Annual Ore Feed to the Plant	tonnes	874,594
Annual Average Spodumene Production	tonnes	114,116
Life-of-Mine	years	13.8
Life-of-Mine Strip Ratio	waste to ore	6.9:1
Average Spodumene Price	US\$/tonne	693
Initial Development Capital Costs	C\$ million	120
Total Life of Mine Capital Costs	C\$ million	211
Total Net Revenue (real terms)	C\$ million	1,412
Total Project EBITDA (real terms)	C\$ million	461
Average Life of Mine Cash Costs (Mine-gate)	C\$/tonne	400
Average Life of Mine Cash Costs (Montreal Port FOB)	C\$/tonne	469
Net Present Value (real terms @ 8% discount rate)	C\$ million	216
Pre-Tax Internal Rate of Return	%	33.9
Project Payback Period (after start of production)	years	2.7
Exchange Rate	CAD:USD	0.76

In parallel with the DFS, Sayona has progressed a revised Environmental Impact Study (EIS) in accordance with BAPE requirements. The EIS is a rigorous scientific study containing all the necessary documentation to satisfy the necessary legal and regulatory requirements. The revision entailed further community engagement including the establishment of a project monitoring committee comprised of key stakeholders. The 14-member committee held its first meeting on 19 September 2019 and will remain active through to the completion of the Authier project and its eventual rehabilitation.

The revised EIS was submitted to Québec's Ministry of the Environment and the Fight against Climate Change (MELCC) on 22 January 2020, subsequent to period end. Following this, it will be submitted to the Public Hearings Office for further public hearings and review, ultimately leading to an expected recommendation for project approval under the BAPE in 2020.

Importantly, the revised EIS demonstrates the Authier project will not impact the water quality of the St-Mathieu Berry esker area that provides a main water resource for the region.

Sayona continues to engage closely with all stakeholders, including holding information sessions and consultations with local municipalities, landowners, First Nations communities, non-governmental organisations and other stakeholders, with the engagement effort led by its local team in Québec.

In December 2019, Sayona was pleased to announce an agreement with First Nation Abitibiwinini for the works during the exploration phase of the Authier Lithium Project. This agreement is aimed at ensuring a collaborative and mutually beneficial partnership for the development of the project.

Tansim Project

Tansim is situated south-west of the Authier project in Québec. The project comprises 141 mineral claims covering 8,500 hectares, and is prospective for lithium, tantalum, and beryllium.

Mineralisation is hosted within spodumene-bearing pegmatite intrusions striking east-west, dipping to the north and hosted by metasedimentary – metavolcanic rocks of the Pontiac sub-province. The main prospects are Viau-Dallaire, Viau and Vezina.

In November 2019 Sayona announced an Exploration Target* for the Viau-Dallaire prospect within the Tansim project, highlighting the potential for the development of a new lithium deposit.

Viau-Dallaire Exploration Target		
Range	Tonnes	Grade % Li ₂ O
Lower	5,000,000	1.2 to 1.3
Upper	25,000,000	1.2 to 1.3

* The potential quantity and grade of the Exploration Target is conceptual in nature, and is therefore an approximation. There has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.

Sayona bids for NAL mine

In September 2019, Sayona announced its intention to participate in the bidding process for the NAL operation in Québec. NAL has a lithium mine and concentrator located in Abitibi, near the mining district of Val d'Or, in close proximity to the Authier project. Spodumene production was halted in February 2019 and in September 2019, the Québec Superior Court invited bids for the assets.

During 2018, NAL produced around 114,000 tonnes of spodumene. With the necessary investment the operation also has the potential to produce battery-grade lithium carbonate. Sayona's bid has the unique advantage of being able to combine lithium produced from the Authier Lithium Project with the lithium at the NAL site, facilitating a significant improvement in plant performance and economics.

Sayona has assembled a world-class team to support the bid. The team includes established lithium producer Altura Mining, Primero Group Americas, a leading engineering firm specialising in lithium operations, engineers BBA and Hatch, financial advisers Jett Capital Advisors and PwC, and other leading consultants. Together they will provide the necessary technical skills, managerial expertise and financial capacity to develop NAL into a sustainable and profitable operation. Significantly, former NAL superintendent and plant manager, Ghislain Dubé, has joined Sayona's bid support team, providing his personal, in-depth knowledge concerning the NAL operation.

In January 2020, subsequent to period end, the appointed administrator for NAL, Raymond Chabot Inc, extended the bid deadline to no later than 2pm (Montréal time), 21 February 2020, compared to the previous 21 January deadline.

Sayona is confident of its team's ability to turn around the NAL operation, drawing upon established operational, engineering and environmental expertise together with the necessary financial backing.

Québec poised to be the new lithium province

In early October, Propulsion Québec released an independent study into the potential of the province's lithium-ion battery sector, amid strong growth in demand from the electric vehicle and energy sectors across North America. The study confirmed the economic potential of the lithium industry for Québec.

The study conducted by consultancy KPMG was supported by the Québec Government and other partners including la Société de développement de Shawinigan, Call2Recycle®, the Northern Plan Society, Hydro-Québec's Center for Excellence in Electrification of Transportation and Energy Storage, Nemaska Lithium, Mason Graphite and North American Lithium, Nouveau Monde Graphite, Lithion Recycling, RNC Minerals and Sayona Québec. A copy of the study is available at Sayona's website (see "Research Reports").

The study further supports comments by the Québec Premier that lithium is a 'jewel' for the province (Montréal Gazette, 19 August 2019). The Premier said the province's advantages including low- cost hydroelectric power, would reduce emissions and facilitate the development of a complete lithium value chain.

Sayona strongly supports Québec's strategy of developing a complete lithium value chain, from mining through to downstream processing, benefitting from the province's proximity to U.S. battery markets and its competitive advantages including world-class infrastructure and access to low-cost hydropower.

Western Australian Projects

Sayona's leases in Western Australia cover 1,849 sq km and comprise lithium tenure in the Pilbara and Yilgarn areas and graphite tenements in the East Kimberley. The Pilbara regional project covers 1,679 sq km and is centred in the world class Pilgangoora lithium district. The Company is exploring this area for hard rock spodumene mineralisation, associated with fractionated albite – spodumene pegmatite systems.

Altura Earn-in

In August 2019, Sayona announced an earn-in agreement with leading listed lithium producer, Altura Mining Limited (Altura). This will enable the Company to maximise the value of its Western Australia exploration assets.

Under the terms of the agreement, Altura will spend AUD\$1.5 million on exploration across the Pilgangoora project portfolio over a three-year period, earning a 51% interest. Sayona will retain the remaining project interest and the right to contribute to project evaluation and development in the future to participate in the upside potential.

Altura is a key player in the global lithium market. The company owns and operates the world-class Altura Lithium Project at Pilgangoora which commenced production in 2018. It also holds an extensive portfolio of exploration assets and is focussed on advancing exploration activity to realise value from those assets. The addition of the Sayona tenement package will provide upside for both companies.

The earn-in agreement includes the Pilbara lithium project tenure, the Mt Edon lithium project in the south Murchison and the Corkwood graphite project in the Kimberley. During the quarter, Altura completed a desktop review of the project data for the Western Australian tenements and carried out site visits in the Pilbara. Planning for the commencement of fieldwork is continuing.

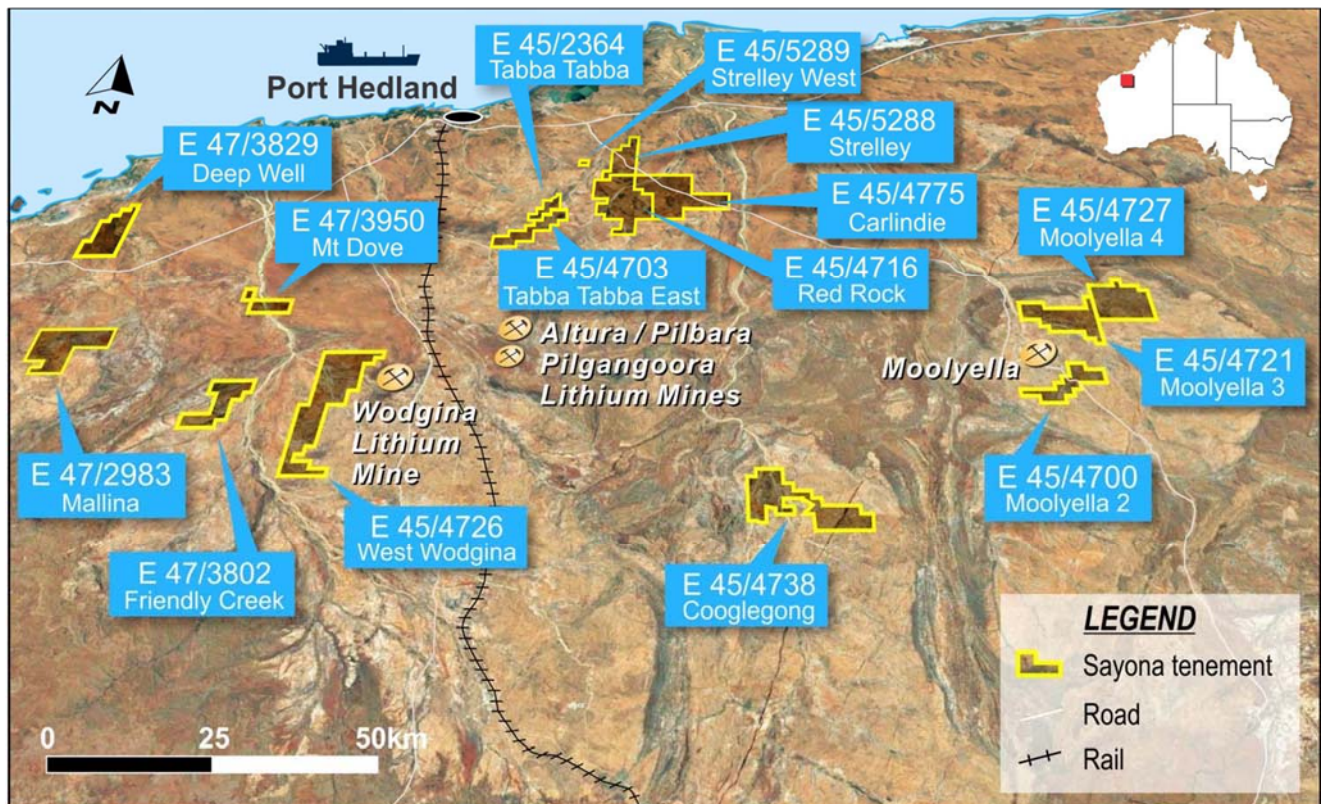


Figure 1: Sayona Lithium Tenements in Western Australia

A summary of the Pilbara projects is detailed below.

Mallina Project

Of the Pilbara tenements, the Mallina Project is the most advanced with multiple zones of spodumene pegmatite identified within a 25 sq km zone.

There is considerable scope for further drill testing, especially at the Area C prospect where shallow mineralisation is open at depth and along strike to the north and south.

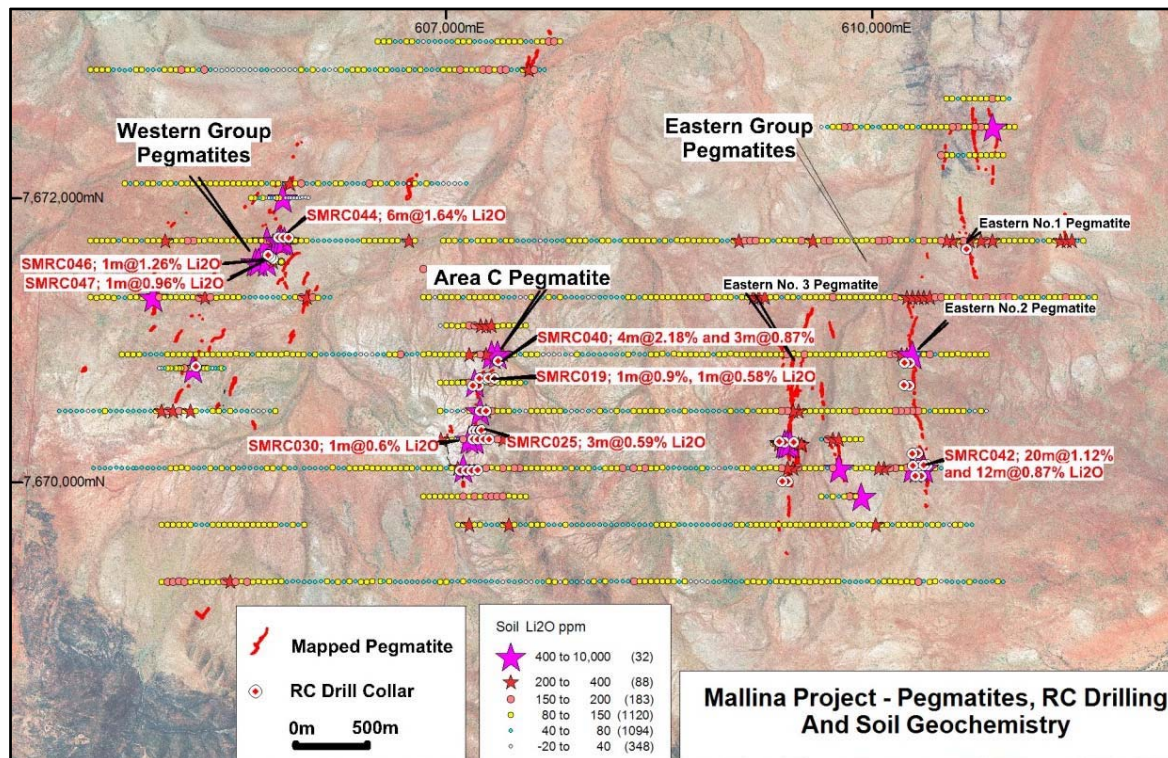


Figure 2 Mallina Project Geochemistry and Selected Drill Intercepts

Tabba Tabba Project

The Tabba Tabba Project comprises six tenements covering 588 sq km, located 40 km to the north of the Pilgangoora area in an emerging lithium province. The main Tabba Tabba tenement, E45/2364, is centred in an area of historic tin and tantalum mining.

Within Sayona's lease, seven main targets have been identified based on geochemistry, with three containing outcropping pegmatites displaying elevated tantalum and LCT type signatures.

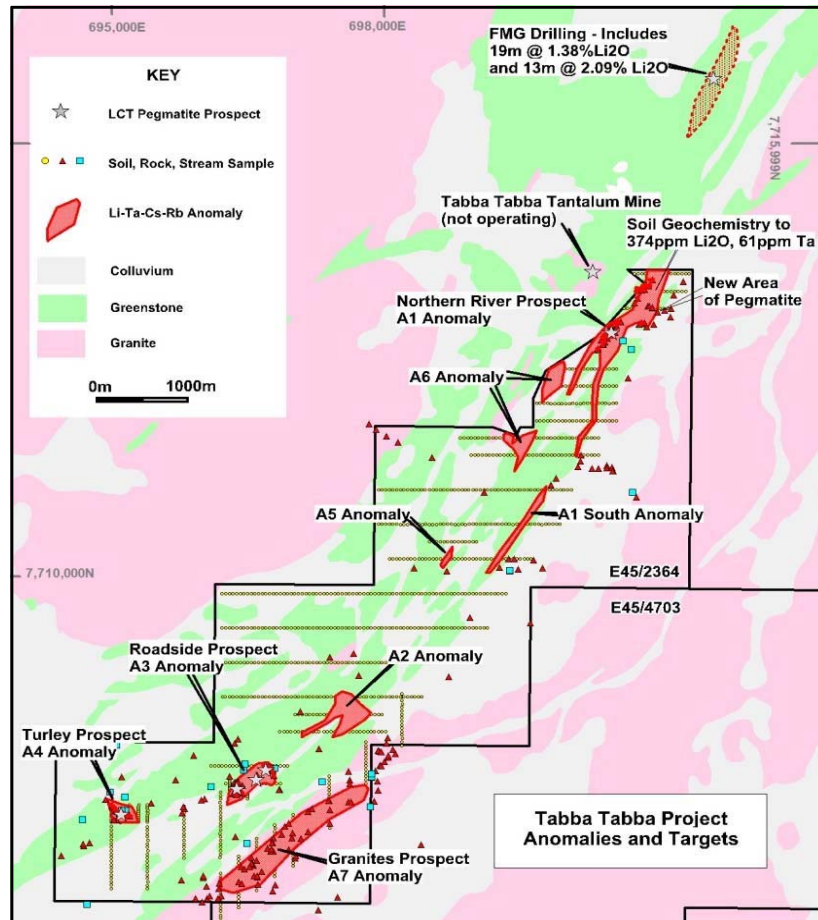


Figure 3 Tappa Tappa Project Anomalies and Targets

Moolyella Project

The Moolyella Project is located to the east of Marble Bar in an area of historic tin and tantalum mining. Mineralisation is associated with the nearby Moolyella monzogranite, and spodumene pegmatites have been identified in adjoining tenure.

At the Moolyella South prospect mapping and geochemistry has identified pegmatite with up to 1.40% Li_2O . A corridor of north striking pegmatites has been identified across a 300m wide zone as shown in the figure below.

Rock samples are mica rich and no spodumene has been observed in pegmatites to date, but results are encouraging evidence of a lithium anomalous portion to the pegmatite system.

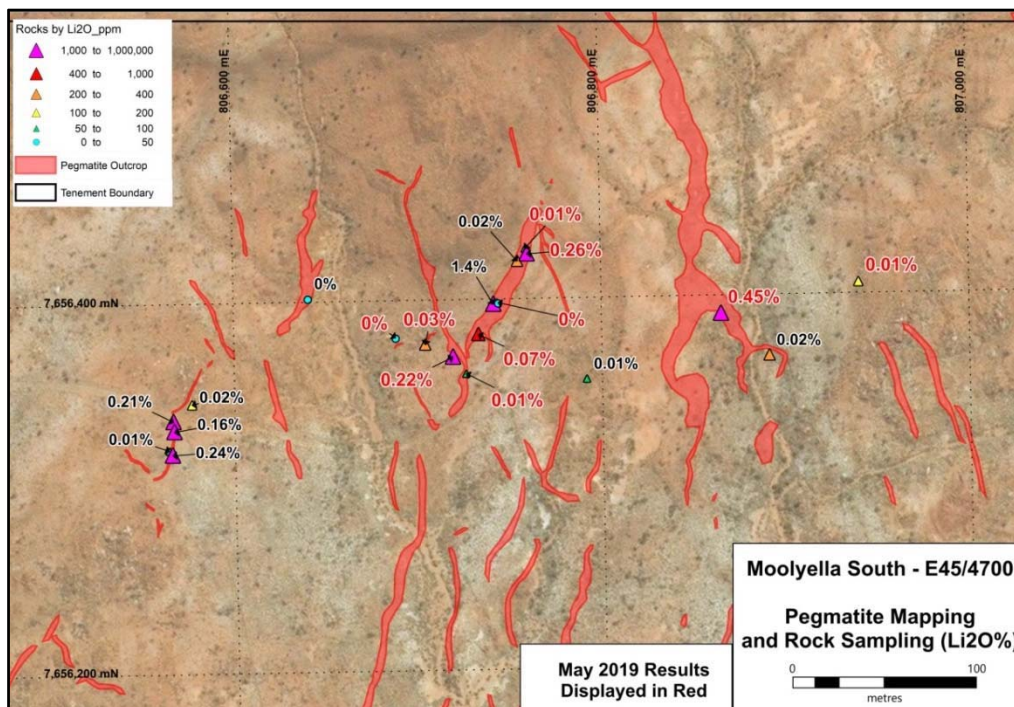


Figure 4 Moolyella South Pegmatite Mapping and Rock Sampling

Other Pilbara Tenure

No exploration was carried out over the other Pilbara project tenements for the period.

Mt Edon Project, South Murchison

The Mt Edon Project secures a large number of pegmatites which invade the Paynes Find greenstone belt. Historically, two small quarries have been developed to exploit feldspar and beryl pegmatites, and small scale eluvial and colluvial tantalum mining operations have developed close to LCT type pegmatites. Sayona's work at the Mt Edon pegmatite field has identified six geochemical anomalies. The Anomaly 2 area hosts lepidolite mineralisation with rock samples returning up to 1.57% Li₂O.

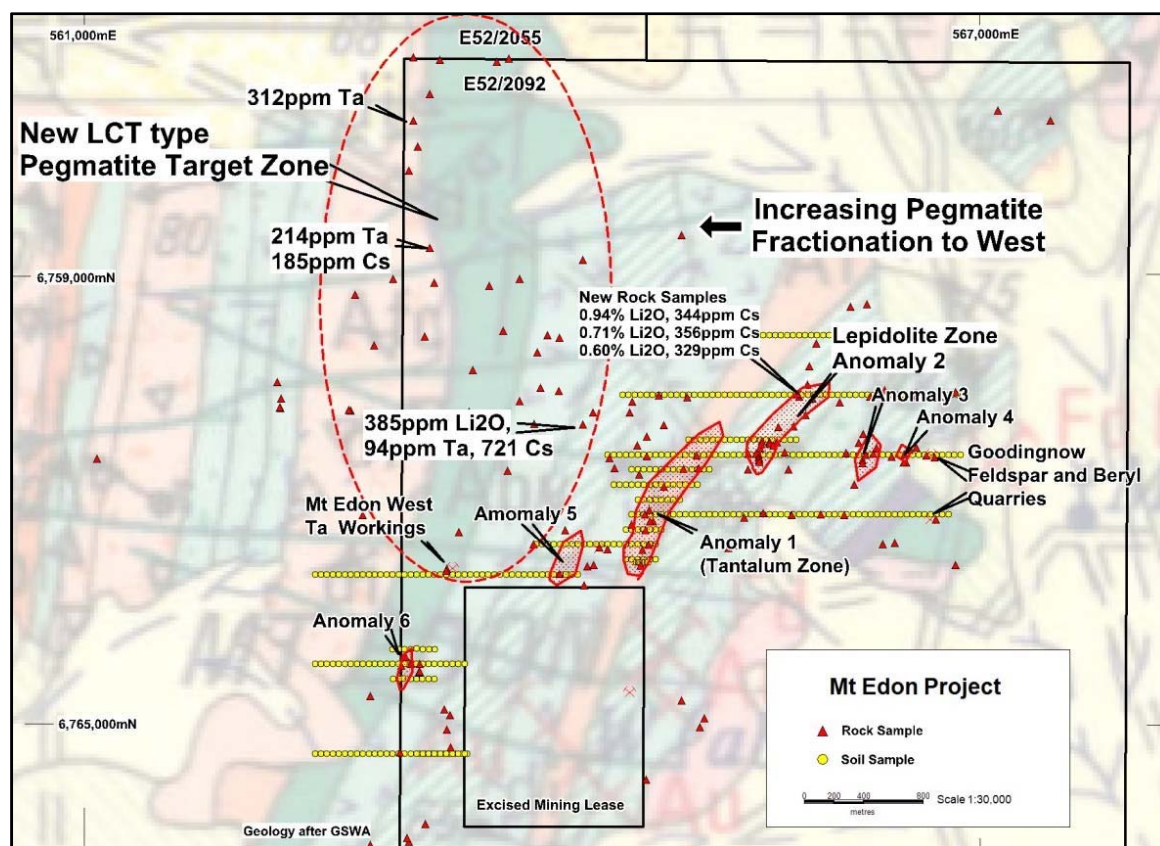


Figure 6 Mt Edon Project Anomalies and Targets

East Kimberley Graphite Exploration

The Corkwood Project secures a 24 km strike length of graphitic sediments of the Tickalara Metamorphics, a known host to high purity, coarse flake graphite deposits in the region.

Corporate

In October 2019, the Company announced that it had entered into a Controlled Placement Agreement (CPA) with Acuity Capital. The CPA provides Sayona with up to \$3 million of standby equity capital over the period to 31 January 2022.

In January 2020, subsequent to period end, Sayona secured a facility of up to \$2.75 million with a new investor, New York based Obsidian Global GP. The investment signals renewed investor confidence in the lithium sector. Funds will be directed to advancing the Company's key projects as Sayona builds momentum in its bid for NAL.

For more information, please contact:

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Email: info@sayonamining.com.au

Reference to Previous ASX Releases

This report refers to the following previous ASX releases:

- Sayona expresses interest to bid for North American Lithium - 17 September 2019
- Authier Definitive Feasibility Study and permitting update - 4 October 2019
- World-class team to support bid for North American Lithium – 10 October 2019
- Controlled Placement Agreement – 29 October 2019
- Sayona strengthens bid team for North American Lithium – 7 November 2019
- Revised Authier DFS shows boost to profitability – 11 November 2019
- Potential for New Lithium Deposit at Viau-Dallaire – 19 November 2019
- Additional information – Exploration Target at Viau-Dallaire – 20 November 2019
- Agreement with First Nation Abitibiwinni on Authier Project – 13 December 2019
- Sayona secures US investor backing to advance key projects – 10 January 2020
- Bid deadline extended for North American lithium – 17 January 2020
- EIS lodged as Sayona advances Authier approvals - 22 January 2020

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

Exploration Targets

The information in this report that relates to Exploration Targets 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 being undertaken 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, as competent person for this announcement, has consented to the inclusion of the information in the form and context in which it appears.

About Sayona Mining

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 has lithium projects in Québec, Canada, and in Western Australia.

Please visit us at www.sayonamining.com.au

Tenement Schedules

Australian Tenement Schedule				
Tenement	Name	Status	Interest at Beginning of Quarter	Interest at end of Quarter
E59/2092	Mt Edon	Granted	80% of pegmatite minerals*	80% of pegmatite minerals*
E59/2055	Mt Edon West	Granted	100% (pegmatite minerals)	100% (pegmatite minerals)*
E45/2364	Tabba Tabb	Granted	100% (pegmatite minerals)	100% (pegmatite minerals)*
E45/4703	Tabba Tabb East	Granted	100%	100%*
E45/4716	Red Rock	Granted	100%	100%*
E45/4726	West Wodgina	Granted	100%	100%*
E45/4738	Cooglegong	Granted	100%	100%*
E45/4775	Carlindie	Granted	100%	100%*
E80/4511	Western Iron	Granted	100%	100%*
E80/4949	Corkwood	Granted	100%	100%*
E47/3802	Friendly Creek	Granted	100%	100%*
E47/3829	Deep Well	Granted	100%	100%*
E47/3950	Mt Dove	Granted	100%	100%*
E45/5288	Strelley	Application	100%	100%*
E45/5289	Strelley West	Application	100%	100%*
E47/2983	Mallina	Granted	100% (pegmatite minerals)	100%* (pegmatite minerals)
E45/4721	Moolyella	Granted	100%	100%*
E45/4727	Moolyella	Granted	100%	100%*
E45/4700	Moolyella	Granted	100%	100%*

Note; *tenement subject to Altura Farm-In Agreement

Canadian Tenement Schedule		
Tenement	Location	Interest in Tenement
2116146	Authier, Québec	100%
2116154	Authier, Québec	100%
2116155	Authier, Québec	100%
2116156	Authier, Québec	100%
2183454	Authier, Québec	100%
2183455	Authier, Québec	100%
2187651	Authier, Québec	100%
2187652	Authier, Québec	100%
2192470	Authier, Québec	100%
2192471	Authier, Québec	100%
2194819	Authier, Québec	100%
2195725	Authier, Québec	100%
2219206	Authier, Québec	100%
2219207	Authier, Québec	100%
2219208	Authier, Québec	100%
2219209	Authier, Québec	100%
2240226	Authier, Québec	100%
2240227	Authier, Québec	100%
2247100	Authier, Québec	100%
2247101	Authier, Québec	100%
2472424	Authier, Québec	100%
2472425	Authier, Québec	100%
2480180	Authier, Québec	100%
2507910	Authier, Québec	100%

Tenement	Location	Interest in Tenement
1133877	Tansim, Québec	50%
2415443	Tansim, Québec	50%
2415444	Tansim, Québec	50%
2436732	Tansim, Québec	50%
2436733	Tansim, Québec	50%
2436734	Tansim, Québec	50%
2438472	Tansim, Québec	50%
2438473	Tansim, Québec	50%
2438474	Tansim, Québec	50%
2438475	Tansim, Québec	50%
2438476	Tansim, Québec	50%
2438477	Tansim, Québec	50%
2438478	Tansim, Québec	50%
2438723	Tansim, Québec	50%
2440836	Tansim, Québec	50%
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2440842	Tansim, Québec	50%
2440843	Tansim, Québec	50%
2440844	Tansim, Québec	50%
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2440846	Tansim, Québec	50%
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2440848	Tansim, Québec	50%
2440849	Tansim, Québec	50%

Tenement	Location	Interest in Tenement
2440850	Tansim, Québec	50%
2440851	Tansim, Québec	50%
2440852	Tansim, Québec	50%
2440853	Tansim, Québec	50%
2440854	Tansim, Québec	50%
2440855	Tansim, Québec	50%
2440856	Tansim, Québec	50%
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2440907	Tansim, Québec	50%
2440908	Tansim, Québec	50%
2440909	Tansim, Québec	50%
2440919	Tansim, Québec	50%

Tenement	Location	Interest in Tenement
2440920	Tansim, Québec	50%
2440925	Tansim, Québec	50%
2440930	Tansim, Québec	50%
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2440936	Tansim, Québec	50%
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2519268	Tansim, Québec	100%
2519269	Tansim, Québec	100%

Tenement	Location	Interest in Tenement
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2519271	Tansim, Québec	100%
2519272	Tansim, Québec	100%
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2519295	Tansim, Québec	100%
2519296	Tansim, Québec	100%
2519297	Tansim, Québec	100%
2519298	Tansim, Québec	100%

Tenement	Location	Interest in Tenement
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2519300	Tansim, Québec	100%
2519301	Tansim, Québec	100%
2519302	Tansim, Québec	100%
2519303	Tansim, Québec	100%
2519304	Tansim, Québec	100%
2519305	Tansim, Québec	100%
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2519321	Tansim, Québec	100%
2519322	Tansim, Québec	100%
2519323	Tansim, Québec	100%
2519324	Tansim, Québec	100%