ASX ANNOUNCEMENT

SAYONA MINING LIMITED

31 January 2019

DECEMBER 2018 QUARTERLY ACTIVITY REPORT

Highlights

- **Authier Lithium Project permits targeted for Q3 2019**
- **Sayona joins study supported by Quebec Ministry of Economy and Innovation on development of an industrial cluster for lithium-ion battery production in the Province of Québec**
- **New Sustainability Manager strengthens Quebec executive team**
- **Agreement negotiated to acquire 100% of the Great Sandy Option tenure in the Pilbara**
- **Geochemistry advances targets in Pilgangoora district including new anomalous pegmatite at Tabba Tabba and a 1.4% Li2O pegmatite rock sample at Moolyella**

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

Sayona Mining Limited is an Australian company focused on developing the flagship Authier lithium project in Canada. In addition, the company controls a portfolio of lithium and graphite exploration projects in Western Australia.

Authier Project

Authier is a hard rock spodumene lithium deposit scheduled for development as an open cut mine initially producing a 6% spodumene concentrate. Production is planned to commence in 2020.

In September 2018, a Definitive Feasibility Study was completed, confirming the project's potential to deliver a profitable and sustainable new lithium mine that will provide new jobs, investment and other benefits for all stakeholders.

The new mine could create 150 jobs in construction and up to 160 jobs in operation, with the Company giving priority to local employment and suppliers. Sayona is targeting a number of potential markets for its product, which is in increasing demand due to the role of lithium-ion battery technology in the clean energy revolution for cars and electricity.

In December 2018, the Company announced its participation in a joint study on the development of a lithium-ion battery industry in Quebec.

The study, which will be carried out with the financial support of the Quebec Ministry of Economy and Innovation and other partners, represents a major step forward by Quebec in the fast-growing lithium-ion battery industry for energy and transport.

It will assess how Quebec can leverage its competitive advantages, including low-cost hydro-electric power and access to major markets, to ensure the province is strategically positioned to benefit from the clean energy revolution that is driving demand for lithium-ion battery technology.

Permitting

On 20 December 2018, Sayona lodged a mining lease application for the Authier deposit. A mining lease grants rights of access and use of the surface for mining purposes. Supporting documentation included:

- a rehabilitation plan;
- a definitive feasibility study; and
- a report certified by a geologist describing the nature and extent of the deposit and its probable value.

During the quarter, Sayona also filed an application to the Ministry of the Environment for initial overburden stripping and the construction of an overburden stockpile, water management facilities, an access road and other minor related infrastructure. The application included an updated Environmental and Social Evaluation (ESE) study. The update of the ESE reflects the company's commitment to comply with, or exceed, all Provincial and municipal regulatory requirements for the mine development. This application triggers the review process of the Authier project within the Ministry of the Environment.

In December 2018, Sayona also filed an updated Closure Plan with the Ministry of Energy and Natural Resources

These submissions demonstrate a significant forward step in the permitting process for the Authier project.

Following consultations with local stakeholders, Sayona has reaffirmed that the project does not have any major environmental issues. The project has also received unanimous support from the municipal council of La Motte, where is it located.

Test Work

During the quarter, further process engineering and test work studies were undertaken on site at Authier.

This included a review of the crushing circuit design and, based on the results, produced preliminary layouts for the crushing plant. Sayona has made initial contact with potential vendors for the crushing equipment.

A test work program was undertaken by SGS Canada Inc. to optimise flotation conditions. The aim of the work was to optimise magnetic separation, collector dosage, and conditioning variables.

Sayona also gave Ausenco a mandate to produce three process studies for process optimization and to prepare six long lead packages for tender. The process studies were related to a grinding circuit review, confirmation of flotation cell sizing and a flotation conditioning review. Ausenco also prepared technical documentation and specification for six long lead packages for process equipment. This work is scheduled for completion during Q1 2019.

SGS Canada Inc. continued the downstream program comprising decrepitation, sulfation and leaching test work.

Tansim Prospect

Tansim is situated 82 kilometres south-west of the Authier lithium project in Quebec. It comprises 65 mineral claims of approximately 12,000 hectares, and is prospective for lithium, tantalum and beryllium.

No significant work was undertaken during the period while activities focused on the Authier project.

A drilling program to follow up identified targets is scheduled to commence in February 2019.

Western Australian Projects

Western Australia is a premium lithium province with world-class, high-grade lithium deposits associated with rare metal pegmatites.

Sayona's leases In the Pilbara region cover some 1898km^2 and are centred in the world class Pilgangoora lithium district. Exploration during the quarter included collection of 103 rock samples during geological reconnaissance. At the Tabba Tabba project additional pegmatites were newly identified in the north of the project. These are tantalum rich and returned up to 352ppm Li_2O and 581ppm tantalum (not same sample). At Moolyella pegmatite in the southern project area returned up to 1.40% Li_2O. These encouraging results require further systematic exploration.

Reconnaissance in the East Kimberley identified further graphite mineralisation at the Corkwood project.

Subsequent to quarter end, Sayona exercised the Great Sandy Option and entered into an agreement to acquire 100% unencumbered interest in the six Option tenements (refer ASX announcement, 29 October 2019). The purchase terms comprise a final $300,000 option payment and the issue of fully paid ordinary shares in Sayona to a value of $100,000.

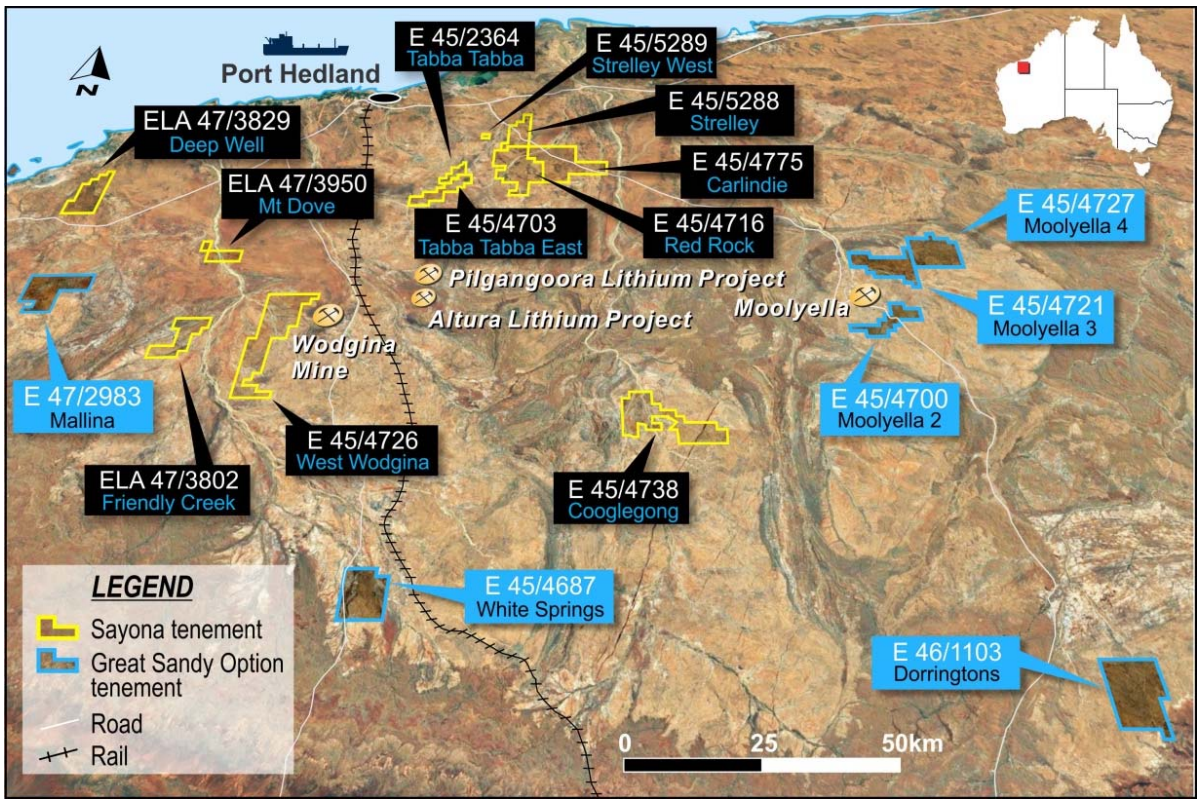

Figure 1: Sayona Lithium Tenements in Western Australia

Mallina Project

Of the Pilbara tenements, the Mallina project is the most advanced with multiple zones of spodumene pegmatite identified within a 25km^2 zone.

No activities were undertaken at the Mallina project during the quarter.

Tabba Tabba Project

The Tabba Tabba project comprises six tenements covering 588km^2, located 40km to the north of the Pilgangoora. The main Tabba Tabba tenement, E45/2364, is centred in an area of historic tin and tantalum mining.

During the quarter pegmatite was identified in the northern area of E45/2364 (see figure below). Nine rock samples were collected and display typical tantalum rich LCT fractionated pegmatite signatures. Sample SP555958 returned 352ppm lithium oxide, 240ppm tantalum and 378ppm tin as well as elevated cesium and rubidium. Sample SP555957 returned 581ppm tantalum, the highest tantalum assay in the group.

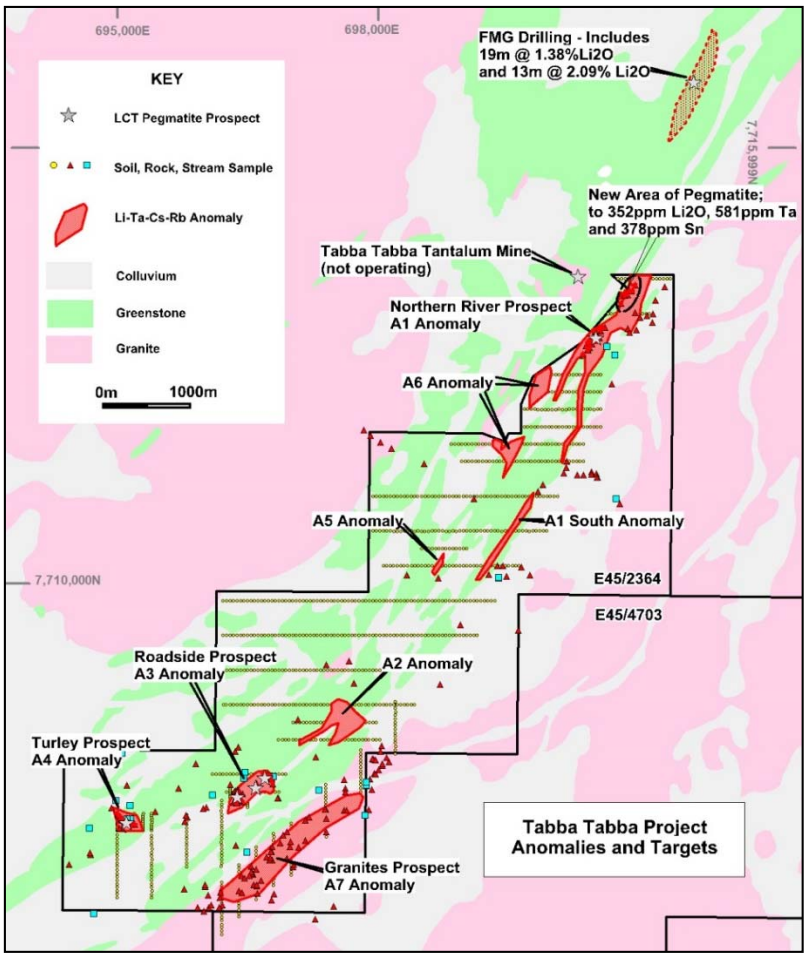

Figure 2 Tabba Tabba Project

The rock samples were collected on the western flank of the A1 geochemical anomaly, which is 2.3km in strike extent and up to 275m in width. Within the centre of the anomaly lenses of rare metal LCT pegmatite crop out, confirming a likely pegmatite source to the broader anomaly. It is encouraging that the anomaly is located only 2km along strike to the south from FMG drilling which has returned 19m@ 1.38% Li_2O and 13m@ 2.09% Li_2O (MINDEX site 236614).

Moolyella and Other Pilbara Project Areas

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 by other workers in the area.

Within Sayona's tenure (three tenements covering 334km^2) a number of lithium-cesium-tantalum (LCT) albite pegmatites have been identified. These fringe the Moolyella monzogranite and other similar fertile intrusions. Fifteen rock samples were collected from the northern portion of E45/4700. Three returned above 0.1% Li_2O with the highest, sample, SP555945, assaying 1.40% Li_2O with elevated tin (198ppm) and rubidium. All the samples were of mica rich pegmatite. Project geology is displayed in the figure below.

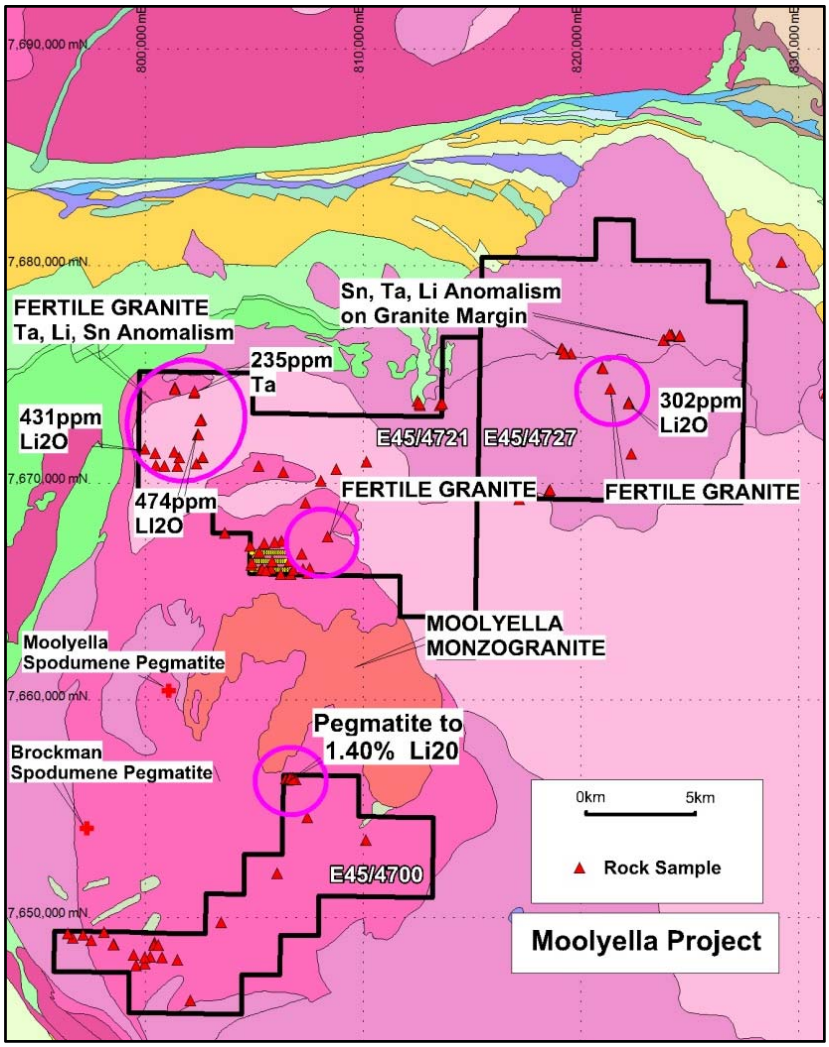

Figure 3 Moolyella Project

Further exploration is being planned to follow up theses encouraging results and to test more broadly the prospective margins of the source intrusions.

East Kimberley Graphite Exploration

The Corkwood project secures a 24km strike length of graphitic sediments of the Tickalara Metamorphics, a known host to high purity, coarse flake graphite deposits in the region. Past work by Sayona has included airborne electromagnetic (VTEM) surveying which identified a conductive target zone along the entire length of the project. RC drilling in 2015 identified broad intercepts of coarse flake graphite from surface with results including 16m@ 5.03% TGC (total graphitic carbon) from 13m in hole SKRC006 and 109m@ 1.84% TGC in hole SKRC017.

During the quarter the first reconnaissance of the southern project area was made. Many of the conductive targets are obscured by thin cover, due to the recessive nature of the host rock. Up to four graphitic horizons were observed with units up to 30m wide at surface (true thickness is not known).

A total of 71 rock samples of graphite gneiss were collected with results ranging from 0.44% up to 8.01% TGC. Results are displayed in the figure below.

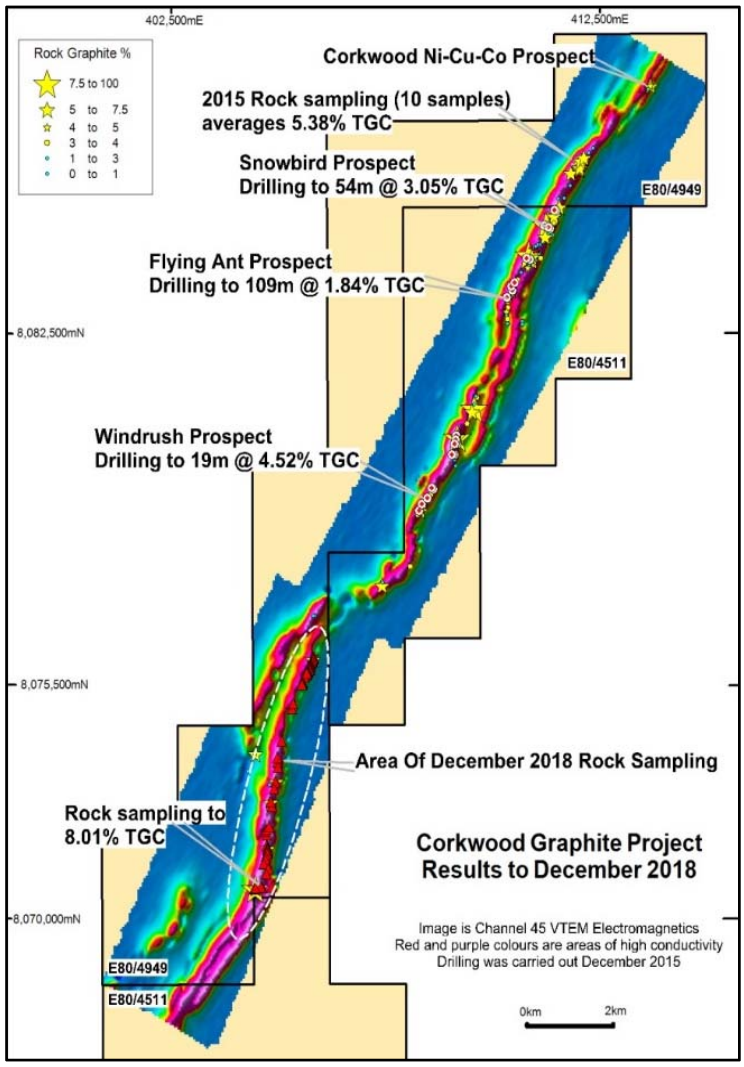

Figure 4 East Kimberley Graphite Project, Results and VTEM Imagery

Other Project Areas

No field exploration was carried out at the company's other Pilbara lithium tenements, the Mt Edon Lithium project in the South Murchison or the Deep Well Gold project during the quarter.

Corporate Activities

During the quarter Sayona opened an office in La Motte, which is north west of Montreal and the seat of the municipal council region where Authier is located.

This will become the new head office for the Sayona team in Quebec. The office is also open to the community to access information about the Authier project.

Subsequent to period end, the company also announced the appointment of Serge Rouillier as Manager for Sustainable Development. Serge is an experienced executive with a sound background in the mining industry. A native of Amos, a town in close proximity to the Authier project, Serge is a well-known and respected businessman in the region and has an active local network.

His mandate is to:

- Represent the company and the project in the community
- Liaise with all major stakeholders
- Facilitate and coordinate the permitting process
- Oversee the company's sustainable development commitments
- Maximise benefits for the local economy

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

Reference to Previous ASX Releases

This report refers to the following previous ASX releases:

- Acquisition boosts holding in World Class WA Lithium District - 29 October 2019;
- Authier permitting process on track for 2019 - 15 November 2019; and
- Sayona Backs Joint Study On Quebec's Clean And Green Battery Future – 3 December 2018.

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 relating to projects on Western Australia is based on information compiled by Mr. Simon Attwell, a Competent Person, and who is a Member of The Australasian Institute of Mining and Metallurgy. Mr. Attwell is an employee of Attgold Pty Ltd ("Attgold") which provides geological services to Sayona.

Mr. Attwell has sufficient experience that 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 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Attwell consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Tenement Schedules

Australian 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	100% (pegmatite minerals)	100% (pegmatite minerals)
E45/4703	Tabba Tabba 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%
ELA47/3802	Friendly Creek	Granted	100%	100%0
ELA47/3829	Deep Well	Application	100%	100%
ELA47/3950	Mt Dove	Granted	100%	100%
E45/5288	Strelley	Application	100%	100%
E45/5289	Strelley West	Application	100%	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	Moolyella	Granted	Option Rights to 80%	Option Rights to 80%
E45/4727	Moolyella	Granted	Option Rights to 80%	Option Rights to 80%
E45/4700	Moolyella	Granted	Option Rights to 80%	Option Rights to 80%

Canadian Tenement Schedule				
Claim Number	**Registered holder**	**Registration Date**	**Expiration Date**	**Area (hect)**
2116146	Sayona Mining Limited	8/8/2007	7/8/2019	43.24
2116154	Sayona Mining Limited	8/8/2007	7/8/2019	42.88
2116155	Sayona Mining Limited	8/8/2007	7/8/2019	42.87
2116156	Sayona Mining Limited	8/8/2007	7/8/2019	42.86
2183454	Sayona Mining Limited	2/6/2009	1/6/2019	42.85
2183455	Sayona Mining Limited	2/6/2009	1/6/2019	42.84
2187651	Sayona Mining Limited	2/9/2009	1/9/2019	21.39

Claim Number	Registered holder	Registration Date	Expiration Date	Area (hect)
2187652	Sayona Mining Limited	39853	43474	21.29
2192470	Sayona Mining Limited	22/10/2009	21/10/2019	21.08
2192471	Sayona Mining Limited	22/10/2009	21/10/2019	21.39
2194819	Sayona Mining Limited	19/11/2009	18/11/2019	42.82
2195725	Sayona Mining Limited	27/11/2009	26/11/2019	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	9/7/2010	8/7/2018	42.71
2240227	Sayona Mining Limited	40428	43319	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

JORC Code, 2012 edition – Table 1 (section 1; Sampling Techniques and Data)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	• Geochemical samples have been collected as a first pass assessment and orientation of project areas, as described in the main body text of this announcement. The samples have an irregular spacing reflecting the reconnaissance nature of the assessment. • Samples are grab samples. • The presence or absence of mineralisation was initially determined visually by the field geologist. • The type of geochemical sampling is a standard approach during the initial style reconnaissance.
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).*	• Not applicable, no drilling has been carried out
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.*	• Not applicable, no drilling has been carried out
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.*	• Not applicable, no drilling has been carried out. This information is of insufficient detail to support any Mineral Resource Estimation.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of*	• Not applicable, no drilling has been carried out • • No measures have been taken to ensure sampling is statistically representative of the in situ sampled material. The collection methodology is considered appropriate for this early stage assessment of the project. • The sample size is considered appropriate to

Criteria	JORC Code explanation	Commentary
	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.*	the early stage of exploration carried out.
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.*	• Sample analysis was carried out by ALS, Perth, a certified laboratory in compliance with AS/NZS-9001:2000. Lithium samples were submitted for analysis of a 48 element suite, determined by mixed acid digest followed by ICP-MS61. Graphite samples were determined by multi-stage Leco furnace with infra-red detection, method C-IR18. This is considered a total digest appropriate to the samples submitted. • Not used • No additional quality control measures beyond that of the Laboratory QA/QC were implemented.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• The results are considered acceptable and have been reviewed by multiple geologists. The company conducts internal data verification protocols which have been followed. • Li has been converted to Li_2O for the purposes of reporting. The conversion used was Li_2O = Li x 2.153. No other adjustments to assay data has 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.*	• Samples were located during collection by handheld GPS • The grid system used is Australian Geodetic MGA Zone 50 (GDA94). • The level of topographic control offered by the handheld GPS is considered sufficient for the work undertaken
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• There was no predetermined grid spacing to the rock sampling program. • The data spacing and distribution is not sufficient to establish the degree of geological and grade continuity appropriate for Mineral Resource estimation procedures. • Samples have not been composited.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• Sampling was carried out over small areas of the project and it is not known if they are representative. • Not applicable, no drilling has been carried out
Sample security	• *The measures taken to ensure sample security.*	• Industry standard sample security and storage were undertaken

Criteria	JORC Code explanation	Commentary
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No audits or reviews of the data have been conducted at this stage

JORC Code, 2012 edition – 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 licence to operate in the area.*	• The Option terms and tenement details are reported within the main text of this ASX release. • There are no impediments that have been identified for operating in the project areas
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Little past lithium exploration has previously been carried out over the companies Pilbara lithium project. • The graphite at the Kimberley project was first identified by nickel sulphide explorers, due to the similar conductive nature of the target mineralisation. • Together with government data provided by GSWA past information has allowed recognition of the projects potential.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Lithium is being targeted within rare metal pegmatites which represent the most fractionated and evolved pegmatite type. Sayona's main focus is in discovery of albite-spodumene pegmatite types which host high grade lithium mineralisation. Rare metal pegmatites are uncommon, typically hosted in greenstone rocks near to granite intrusion. • Graphite in the East Kimberley is formed by burial metamorphism of carbonaceous sediment of Palaeoproterozoic age. Mineralisation reflects the original bedding stratigraphy although it may be modified by later structural events.
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:* o *easting and northing of the drill hole collar* o *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* o *dip and azimuth of the hole* o *down hole length and interception depth* o *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.*	• No drilling was carried out.

Criteria	JORC Code explanation	Commentary
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 variation to laboratory reported assays has been made.
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').*	• Exploration is at an early stage and information contains insufficient data points to allow these relationships to be reported