

**13 September 2021**

## **SAYONA EYES POTENTIAL NAL RESOURCE INCREASE**

### **Highlights**

- **Project review shows potential to significantly increase lithium resource at newly acquired North American Lithium (NAL), supporting Sayona's plans for world-scale Abitibi lithium hub**
- **Diamond drilling completed in 2019 being audited, with potential to fast-track new expanded resource estimate and planning for resumption of operations**
- **Consultants BBA commissioned to conduct updated NI 43-101 and JORC study for resource estimate and subsequent feasibility study.**

**Emerging lithium producer Sayona Mining Limited (ASX:SYA; OTCQB:SYAXF)** is planning a further boost to its Abitibi lithium hub, with the potential for a significant resource expansion at the newly acquired North American Lithium (NAL) mine in Québec, Canada.

Extensive diamond drilling completed in 2019 is being integrated with other previous drill results which are being audited, with the potential to fast-track an increased resource estimate and the resumption of operations at NAL.

Consultants BBA Inc. have been engaged to produce an updated Canadian NI 43-101 study of NAL's resource base with subsequent conversion to Australia's JORC standard by year-end, as the basis of a scoping study for the production of spodumene (lithium) concentrate from 2023.

In 2017, NAL had a total foreign mineral resource estimate of 39.3 million tonnes @ 1.04% Li<sub>2</sub>O, up 18% from earlier studies (refer Table 1 for details and Cautionary Statement). Subsequent drilling has shown the potential for a resource expansion, including results for some 42 holes of around 12,000m which were completed during 2019 and which are being validated for inclusion into the drill database for the first time.

Sayona's Managing Director, Brett Lynch commented: *"Based on the extra drilling conducted since 2017, we anticipate the potential for a significant upgrade to the NAL resource base, which we aim to deliver before year-end.*

*"This only adds to the opportunity at NAL, which is the centre of our expanding Abitibi lithium hub supported by our Authier and Tansim Lithium Projects.*

*"Our Québec team is now on-site at NAL and progressing the feasibility study to allow us to successfully resume operations. We look forward to quickly getting NAL back into production, becoming North America's leading lithium operation and supporting its clean energy revolution."*



**Figure 1: NAL open pit and plant, looking south**

## NAL Resources and Reserves Estimates

In 2017, NAL completed a NI 43-101 Technical Report with an effective date of 24 August 2017 (refer Tables 1 and 2 below).

**Table 1: NAL 2017 Mineral Resources Estimate**

NAL 2017 Mineral Resources Estimate (0.6% Li <sub>2</sub> O cut-off grade)			
Category	Million Tonnes	Grades Li <sub>2</sub> O	Contained Li <sub>2</sub> O
Measured	13.5	1.08%	145,800
Indicated	25.8	1.02%	263,160
<b>Total</b>	<b>39.3</b>	<b>1.04%</b>	<b>408,960</b>
Inferred	18.4	1.06%	195,040

- Tonnages have been rounded to the nearest 0.1 Mt to reflect their approximate nature.
- 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 Mineral Reserves.
- The quantity and grade of reported Inferred resources in this Mineral Resource Estimate are uncertain in nature and there has been insufficient exploration to define these Inferred resources as Indicated or Measured, and it is uncertain if further exploration will result in upgrading them to these categories.

**Table 2: NAL 2017 Reserves Estimate (0.6% Li<sub>2</sub>O cut-off grade)**

Category	Million Tonnes	Grades Li <sub>2</sub> O	Contained Li <sub>2</sub> O
Proven	11.7	0.94%	109,980
Probable	8.8	0.93%	81,840
<b>Total</b>	<b>20.6</b>	<b>0.94%</b>	<b>193,640</b>

Note: Based on a 95% recovery; 18% dilution. Estimates have been modified by subsequent mining.

**Cautionary Note: National Instrument 43-101 is a national instrument for the Standards of Disclosure for Mineral Projects within Canada. The Mineral Reserves stated are foreign estimates and are not reported in accordance with JORC Code. A competent person has not done sufficient work to classify the foreign estimates as Mineral Resources in accordance with the JORC Code. It is uncertain that following evaluation and/or further exploration work that the foreign estimates will be able to be reported as Mineral Resources in accordance with the JORC Code. Please see below for the ASX listing rule Chapter 5 disclosures.**

### Activities Post 2017 Foreign Resource Estimates

Between 2017 and February 2019, approximately 1,689,000 tonnes were extracted from the pit at an average grade of 1.11% Li<sub>2</sub>O. During the same period, 1,356,000 tonnes were milled at an average grade of 1.18% Li<sub>2</sub>O.

Up until 2019 when NAL was placed in receivership, the project dataset comprised a total of 251 holes for a total of 42,630m including 203 diamond drill holes, eight geotechnical holes and 18,584 blastholes for a total of 185,840 m; 19,723 assays, underground sampling and modelling of 41 geological domains covering the NAL deposit.

Based on an arrangement with the creditors, additional diamond drilling was carried out between May and July 2019 with 42 holes approximating 12,000 m completed. This information is being validated and is anticipated to aid interpretation of the mineralised zones and potentially expand the extent of an updated NI 43-101 resource estimate study that Sayona has commissioned BBA Inc to complete.

### Project Background

NAL comprises 19 contiguous claims covering 582.31 ha, situated in La Corne township in Quebec's Abitibi-Témiscamingue region. The project lies 60 km north of the city of Val d'Or, a major mining service centre, and is easily accessed by provincial highways and all weather secondary roads. The region has a long history of lithium mining.

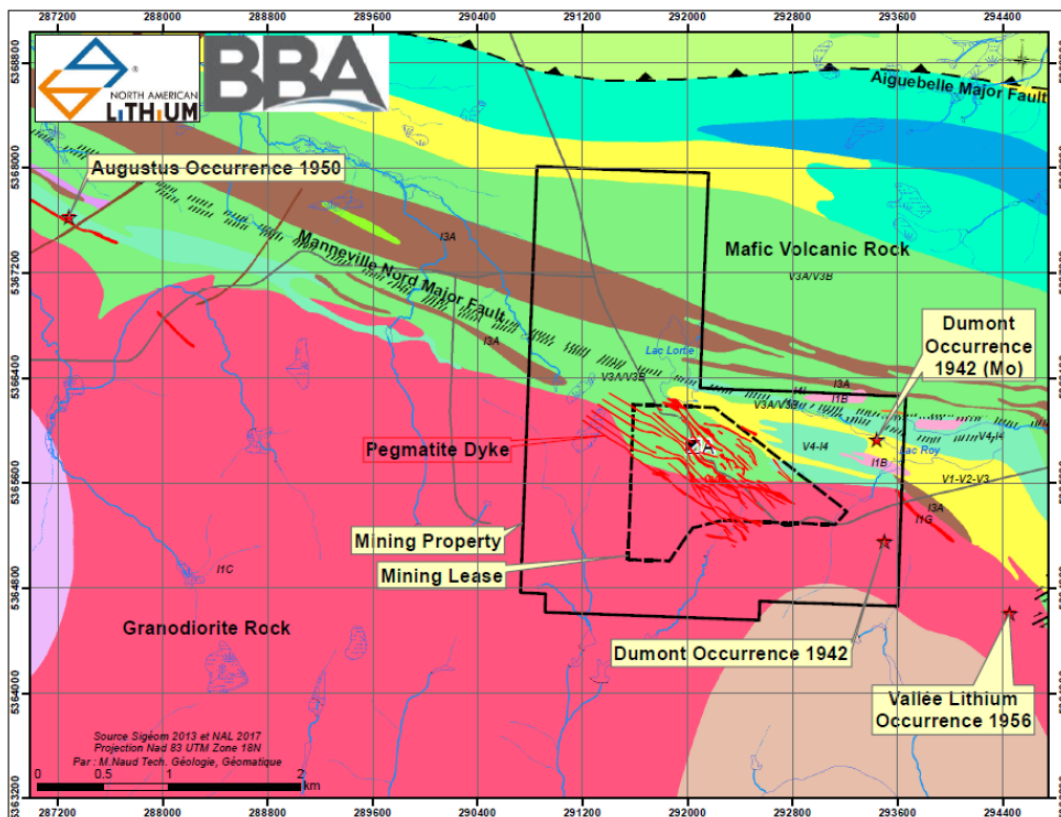
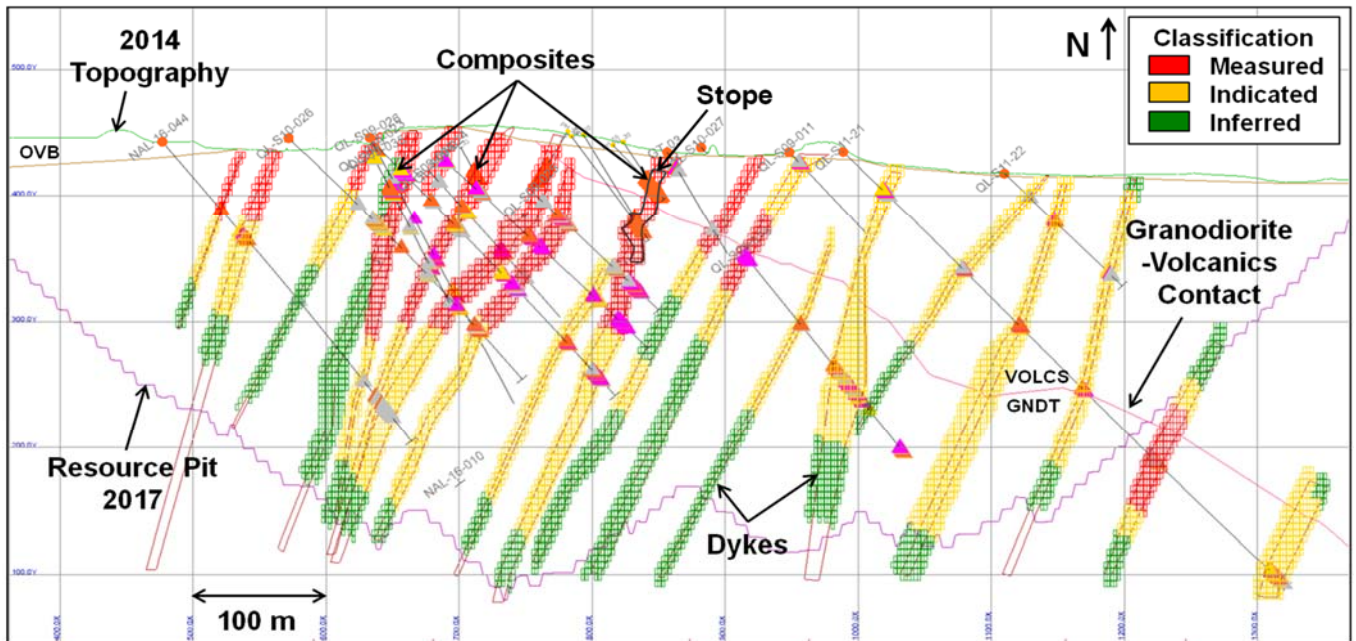


Figure 2: NAL deposit local geology map and mining property boundaries



**Figure 3: Representative section showing NAL 2017 Resource Classification with proposed 2017 optimised pit, looking north.**

This announcement is authorised by Sayona’s Board of Directors.

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For more information, please contact:

**Brett Lynch**

Managing Director

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

For media queries, please contact:

**Anthony Fensom**

Republic PR

Ph: +61 (0)407 112 623

Email: [anthony@republicpr.com.au](mailto:anthony@republicpr.com.au)

### About Sayona Mining

Sayona Mining Limited is an emerging lithium producer (ASX:SYA; OTCQB:SYAXF), with projects in Québec, Canada and Western Australia.

In Québec, Sayona’s assets comprise the Authier Lithium Project and its emerging Tansim Lithium Project, supported by a strategic partnership with American lithium developer Piedmont Lithium Inc. (Nasdaq:PLL; ASX:PLL). Sayona and Piedmont have also successfully undertaken the joint acquisition of North American Lithium, which hosts a former lithium mine and concentrator.

In Western Australia, the Company holds a large tenement portfolio in the Pilbara region prospective for gold and lithium. Sayona is exploring for Hemi-style gold targets in the world-class Pilbara region, while its lithium projects are subject to an earn-in agreement with Altura Mining Limited.

For more information, please visit us at [www.sayonamining.com.au](http://www.sayonamining.com.au)

### Reference to Previous ASX Releases

- NAL Acquisition Finalised and Production Plans Advance – 30 August 2021
- Quarterly Activities/Cash Flow Report – 30 July 2021
- Sayona Obtains Court Approval for NAL Acquisition – 30 June 2021

### 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 review of the exploration and drilling information, 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.

**Table 2 - Australian Securities Exchange Listing Rules Chapter 5.12 - Reporting Requirements for a Foreign and/or Historical Estimate – BBA Inc. 2017**

<b>Listing Rule</b>	<b>Criteria</b>	<b>Comment</b>
<b>5.12.1</b>	<i>The source and date of the historical estimates or foreign estimates.</i>	<p>The La Corne NAL Mineral Resource foreign estimate was sourced from the BBA Inc NI 43-101 Technical Report, North American Lithium Project Feasibility Study, effective date August 24, 2017 and signature date September 7, 2017.</p> <p>The Mineral Resource estimate was carried out by SGS Geostat (SGS) in accordance with the regulations from the Canadian Institute of Mining and NI 43-101 guidelines. The effective date of the resource is February 1, 2017. The Mineral Reserves for the project have been estimated as defined by NI 43-101 and are valid as of 1 May 2017.</p> <p>The resource estimates have been subsequently modified due to mining activities and new drill information so that they do not represent a current NI 43-101 report.</p>
<b>5.12.2</b>	<i>Whether the historical estimates of foreign estimates use categories of mineralisation other than those defined in Appendix 5A (JORC Code) and if so an explanation of the differences.</i>	The Mineral Resource and Reserve Estimates referred to in the report are all consistent with those terms defined in Appendix 5A of the Joint Ore Reserve Committee (“JORC”) 2012 Guidelines.
<b>5.12.3</b>	<i>The relevance and materiality of the historical estimates or foreign estimates to the entity.</i>	The foreign estimate is relevant and material to the entity as it pertains to a project that could be economically viable for the entity.
<b>5.12.4</b>	<i>The reliability of the historical estimates or foreign estimates, including by reference to any of the criteria in Table 1 of Appendix 5A (JORC CODE) which are relevant to understanding the reliability of the historical estimates or foreign estimates.</i>	All criteria in Table 1 of Appendix 5A have been addressed in the foreign estimate.
<b>5.12.5</b>	<i>To the extent known, a summary of the work programs on which the historical estimates or foreign estimates are based and a summary of the key assumptions, mining and processing parameters and methods used to prepare the historical estimates or foreign estimates.</i>	<p>The NAL 2017 foreign resource estimate was estimated using ordinary kriging (OK) in two passes. The first pass required a minimum and a maximum of nine and 15 composites, respectively. The maximum number of composites used in the interpolation from individual drill holes was four; therefore, at least three drill holes were required. The second pass required a minimum and maximum of seven and 15 composites, respectively. The maximum number of composites used in the interpolation from individual drill holes was four; therefore, at least two drill holes were required. The estimation was restricted by composites uniquely tagged by each dyke. SGS provided the block model to BBA to generate an optimised pit shell at 0.6 % Li<sub>2</sub>O.</p> <p>Geological and mineralisation domains were constructed using modern industry accepted software. The modelled geological boundaries were used to constrain grade estimations appropriately within each geological boundary.</p> <p>The NAL 2017 foreign resource included more than 42,600m in 203 diamond holes NQ diameter, eight geotechnical holes and 40 Pseudo-holes (underground stope sampling) completed from 2009 to 2016, and 2,143 assay samples (6,367 sample composites averaging 1m length). The project was initially drilled by previous owners between 2008 and 2011 and then by NAL in 2016 after open pit production from 2012 to 2014. Holes were typically drilled perpendicular to the strike of the mineralised pegmatite (Azimuth</p>

045°) to provide high confidence in the grade, strike and vertical extensions of the mineralisation. During open pit operations (2012–2014), some 39,468 production blast holes were drilled and geo-referenced. Some 7,720 of those blast holes, within or bordering on mineralisation, were sampled and analysed. This data was used primarily for grade control, mine planning and various reconciliations. The blast hole data was also used for broadly delineating mineralised bodies and ascertaining surface contacts, while refining the geological 3D model.

The mineral resource model is defined by blocks 10m (east-west) by 2.5m (north-south) by 5m (elevation) in size (10x2.5x5m) in accordance with the drill spacing and pegmatite body geometry. The resource block model was created as a percent model for volumetric and tonnage calculations. The mineral resource estimate was undertaken using reported intercepts calculated using weighted averages, no top-cut, and a 0.6% Li<sub>2</sub>O cut-off grade.

The mineral resource model is defined by blocks 10m (east-west) by 2.5m (north-south) by 5m (elevation) in size (10m × 2.5m × 5m) in accordance with the drill spacing and pegmatite body geometry. The resource block model was created as a percent model for volumetric and tonnage calculations. The mineral resource estimate was undertaken using reported intercepts calculated using weighted averages, no top-cut, and a 0.6% Li<sub>2</sub>O cut-off grade.

The classification was based on drill spacing and chemical continuity, the variography study (75m - 150m of grade continuity), exposure in the existing pit walls, and the lateral extents of the dykes outcropping at surface. The classification was completed using SGS' in-house software, GENESIS. The software uses an algorithm that is centred on the composites, as opposed to the blocks, so as to avoid classifying blocks between drill holes at a higher confidence level than blocks immediately surrounding drill holes. The drill grid spacing required to achieve measured and indicated resources is approximately 35m and 70m, respectively. The targeted drill grid for indicated resources from past exploration is around 50m. Inferred resources are classified where a single drill hole intersects a mineralised dyke, whose association with other drilling is supported by the geological interpretation.

The deposit covers an area about 1,500m long in the northwest direction and 500m wide in the east-northeast direction. The deposit is open to depth and is drill tested to 400m below surface. Individual dykes have an average thickness of 15m and range from a minimum of 2m to a maximum of 35m. Dykes dip at 70 degrees toward the southwest.

An additional estimation was completed using the inverse distance squared (ID2) method to compare with the kriged (OK) block model estimation. The mean of the kriged estimation above 0.6% Li<sub>2</sub>O and with no reporting cut-off is lower due to smoothing and the lesser impact of high-grade composites, as well as declustering in areas of denser information, such as the high grade area around existing mining.

The 2012-2014 blasthole dataset was not used in grade interpolation on account of the different sampling media, compared to core drilling, yet it was noted that the blast hole data generally correlated well with the interpretation and resource block model. The NQ size diamond core was halved, typically 1.0m length sections were assayed for Li<sub>2</sub>O content at an ALS laboratory in Vancouver using Inductively Coupled Plasma Mass Spectrometry. Narrow pegmatite dykes were covered with samples less than 1.0m length.

NAL and its predecessors had a rigorous “good industry practice” quality control process, including routine assaying of standards, duplicates and blanks



<p><b>5.12.6</b></p>	<p><i>Any more recent estimates or data relevant to the reported mineralisation available to entity.</i></p>	<p>No more recent NI 43-101 compliant resources estimate have been completed. Between 2017 and February 2019, approximately 1,689,000 tonnes were extracted from the pit at an average grade 1.11% Li<sub>2</sub>O. During the same period, 1,356,000 tonnes were milled at an average grade of 1.18% Li<sub>2</sub>O. Between May and July 2019 42 diamond drill holes approximating 12,000m were completed. This information is currently being accessed and validated.</p>
<p><b>5.12.7</b></p>	<p><i>The evaluation and/or exploration work that needs to be completed to verify the historical estimates or foreign estimates as mineral resources or ore reserves in accordance with Appendix 5A (JORC Code).</i></p>	<p>Sayona plans to undertake geological modelling using all project data that is available combined with mining activities subsequent to the 2017 Foreign Estimate in order to complete an updated N43-101 and JORC compliant resource estimate.</p>
<p><b>5.12.8</b></p>	<p><i>The proposed timing of any evaluation and/or exploration work that the entity intends to undertake and comment on how the entity intends to fund that work.</i></p>	<p>BBA Inc has been commissioned to complete a NI 43-101 compliant resource estimate which is anticipated to be completed by the end of 2021. Funding for this work is by use of existing working capital.</p>
<p><b>5.12.9</b></p>	<p><i>A cautionary statement proximate to, and with equal prominence as, the reported historical estimates or foreign estimates.</i></p>	<p>See Table 3 above. Sayona cautions that the mineral resources for the project are not reported in accordance with the JORC Code. A competent person has not yet done sufficient work to classify the resources as mineral resources in accordance with JORC code. It is uncertain that following evaluation or further work that the foreign estimate will be able to be reported as mineral resources in accordance with JORC Code.</p>
<p><b>5.12.10</b></p>	<p><i>A statement by a named competent person or persons that the information in the market announcement provided under rules 5.12.2 to 5.12.7 is an accurate representation of the available data and studies for the material mining project. The statement must include the information referred to in rule 5.22(b) and (c)</i></p>	<p>I, Gustavo L. Delendatti, confirm that I authored the information described under rules 5.12.2 to 5.12.7 and that the information is an accurate representation of all information and data to my knowledge. I am not an employee of Sayona nor do I hold any interest in any Sayona shares. I am an independent consultant based in San Juan, Argentina. I am a member of the Australian Institute of Geoscientist (MAIG 8009). I am a Competent Person under JORC 2012 Code &amp; Guidelines.</p> <p><b>I have not visited North American Lithium project</b></p> <p>I am responsible for the review of the exploration and drilling information, supervised the preparation of the technical information in this release and have relevant experience and competence of the subject matter. As competent person for this announcement, I have consented to the inclusion of the information in the form and context in which it appears herein.</p>