SAYONA MINING LIMITED

ASX ANNOUNCEMENT

ASX: SYA

23 May 2022

POSITIVE PRE-FEASIBILITY STUDY ENHANCES NAL VALUE

Highlights

- **Positive Pre-feasibility Study (PFS) shows value of North American Lithium (NAL) operation in Québec, Canada confirming technical and financial viability over 27-year life of mine**
- **Pre-tax net present value (NPV) (8% discount) estimated at approx. A$1 billion, with pre-tax internal rate of return (IRR) of 140% and capital payback within two years**
- **Modest capex for NAL restart of approx. A$100M, with upgrades to improve operational efficiency, grade, quality and recovery; long-lead equipment already ordered to facilitate Q1 2023 restart**
- **Results confirm potential for Abitibi lithium hub, adding to emerging northern hub and facilitating downstream processing as Company bolsters leading position in North American lithium industry.**

Emerging lithium producer Sayona Mining Limited (ASX:SYA; OTCQB:SYAXF) announced today a positive pre-feasibility study (PFS) for its flagship North American Lithium (NAL) Project in Québec, Canada, confirming the NAL operation's technical and financial viability. The PFS was conducted by Sayona Mining's Canadian subsidiary, Sayona Québec, which is owned by Sayona Mining (ASX:SYA, 75%) and Piedmont Lithium (ASX:PLL, 25%).

Forming the key part of Sayona's Abitibi lithium hub comprising NAL and the nearby Authier Lithium Project, the restored NAL operation and the Authier deposit, together with the Company's emerging northern Québec hub, comprise North America's largest lithium (spodumene) resource base.

This will allow Sayona to launch production ahead of other North American projects, generating sustainable cash flows and putting the Company on a fast track to go downstream into value-added lithium hydroxide or carbonate production. Québec is rapidly emerging as a leader in the battery sector, benefitting from its clean and sustainable hydropower, world-class infrastructure and proximity to market.

At NAL, the overriding development objective is for the restart of production, with the benefit of supplementary ore feed from Sayona Québec's (SYQ) wholly owned Authier Lithium Project, located just 30 km from the NAL site. Initially, NAL will produce a lithium concentrate for general market conversion, however NAL will become a primary feed source for SYQ's integrated downstream refined lithium products.

Sayona's Managing Director, Brett Lynch said the PFS showed the Company's ability to quickly transform the NAL operation to generate a successful turnaround in performance and allow a customised feed source for the planned lithium conversion facility at NAL.

"Sayona's acquisition of NAL and turnaround plan was not based simply on restarting the existing operation. Rather, it was based on our strategy of creating an Abitibi lithium hub, drawing upon the operation of our nearby Authier project and investing in plant upgrades to deliver improved profitability and performance," Mr Lynch said.

"We have been modest with our pricing assumptions, but as the sensitivity analysis indicates, there is potential for significant upside in the NPV projection given recent trends in spodumene prices. Accordingly, the project partners have already pre-ordered long lead equipment items in anticipation of a positive study result, ensuring we are ready for start-up in Q1 2023."

He added: "With an estimated NPV of around 1 billion Australian dollars, low capex of about A$100M, our fast speed to production and a lengthy 27-year life of mine, this is a unique opportunity for Sayona, adding to our rapidly growing northern Québec hub as the leading lithium (spodumene) resource base in North America. I look forward to driving this project forward as we move towards becoming North America's first local producer of spodumene next year.

"Notably, there are several options to move downstream, including completing the existing carbonate plant at NAL, which would provide for a low capex and accelerated pathway to market."

Figure 1: Abitibi and Northern Québec hubs

KEY RESULTS AND ASSUMPTIONS

Key outcomes of the PFS include an estimated pre-tax NPV of C$952 million (A$1.05 billion as at 23 May 2022) (8% discount rate), a pre-tax IRR of 140% and capital payback period within two years. The life of mine has been extended to 27 years, based on an estimated JORC Proved and Probable Ore Reserves of 29.2 Mt @ 0.96% Li_2O (Proved Reserve 1.2Mt @ 0.92% Li_2O and Probable Reserve 28.0Mt @ 0.96% Li_2O). The above includes conservative allowances for non (or low) mineralised diluted material from the upper and lower contact of the pegmatite / mining horizon.

Table 1: NAL Operation Including Authier Ore Supply – PFS Key Results

Item	Unit	Results	Results	Results
Average Annual Ore Feed to Plant	Mtpa	1.5		
Total Ore Mined	Mt	183.4		
Annual Spodumene Concentrate Production (@ 6% Li_2O)	Tonnes/y	163,266		
Rod Mill Feed Grade	%	1		
Blended Li_2O Recovery	%	67.7		
Life of Mine (LOM)	years	27		
Total Spodumene Concentrate Produced	Mt	4.4		
LOM Strip Ratio	waste:ore	5.3		
		AUD	**USD**	**CAD**
Spodumene Concentrate Market Price	$	1,836	1,242	1,634
Capital Cost Estimate	$M	102	69	91
Total Net Revenue	$M	7,888	5,335	7,020
Project EBITDA	$M	3,234	2,187	2,878
Total C1 Cash Cost	$M	3,812	2,578	3,392
Total Cash Cost FOB / tonne product	$	873	590	777
Pre-Tax Net Present Value (NPV)	$M	1,070	724	952
Pre-Tax Internal Rate of Return (IRR)	%	140	140	140
Discount Rate	%	8	8	8
Pre-Tax Project payback period	years	2	2	2
After-tax NPV	$M	844	571	751
After-tax payback period	Years	2.1	2.1	2.1
After-tax IRR	%	139	139	139
Exchange Rate	A$:C$ C$:US$	0.89	 0.76	

Sayona will implement a ROM (run-of-mine) ore stockpile management system whereby diluted material, lower grade ore and higher-grade feed will be segregated and managed via a stockpile management plan to ensure consistent feed to the plant. This will allow for production campaigns of similar material, providing the concentrate plant sufficient feed stock to maximise product recovery and grade.

Mr Lynch added: "*In doubling the expected mine life due to the expanded resource base at NAL, forecast tailings volumes on site significantly increased. Sayona has taken the proactive decision to dry stack tailings, reducing their environmental impact, in a move reflective of the Company's ESG focus.*

"This initiative requires detailed engineering to reach definitive feasibility study (DFS) standard. In the meantime, we plan on releasing an updated feasibility study for our Authier project later in Q2, further demonstrating the value of our Abitibi lithium hub."

Following Sayona's acquisition of the NAL mine and concentrator in La Corne, Québec, in August 2021 the project revision process was initiated upon completion of the acquisition and the provision of historical geological, mining and process data. The data reviewed allowed for the update of the Ore Reserves Estimate and increased concentrator mill throughput, from 3,800 tonnes per day (tpd) to 4,200 tpd to produce a 6% Li_2O spodumene concentrate.

PRE-FEASIBILITY STUDY SCOPE

The PFS has assessed strategic options for development, determined an economic open pit mine operation, production schedule and site layout for the preferred option. All works completed to date form the basis for progressing to a Definitive Feasibility Study (DFS), with a further refined overall accuracy of +/- 15%. Sayona plans to further tighten the overall accuracy via completion of the DFS, expected later in 2022.

The JORC Code 2012 Edition prescribes that a Pre-Feasibility Study (PFS) is a lower level of confidence than a Definitive Feasibility Study (DFS), however would normally contain mining, infrastructure and process designs completed with sufficient rigour to serve as the basis for an investment decision or to support progression of project financing. The PFS has been completed by independent consultants BBA to an accuracy of +/-30%, with contributions from a number of leading industry service providers. The Ore Reserve Estimate has been estimated by Ms Mélissa Jarry, P.Eng.

The PFS scope includes, but is not limited to:

- Resource modelling;
- Approvals and land tenure management;
- Open pit optimisation, mine design and planning;
- Metallurgical testwork, reporting and analysis;
- Process design;
- Road design and haulage studies;
- Preliminary design of non-process infrastructure, services and utilities;
- Market analysis;
- Human resources and operations management;
- Risk analysis;
- Capital cost estimation (+/- 30%);
- Operating cost estimation (+/- 30%);
- Preliminary project schedule;
- Financial evaluation and analysis;
- Preparation of a preliminary project execution strategy;
- Forward work plan.

NAL ORE RESERVES ESTIMATE

Table 2 below presents the NAL Ore Reserve Estimate. In addition to the 29.2 Mt of ore, a total of 150.4 Mt of waste and 3.8 Mt of overburden must be mined, resulting in an overall LOM strip ratio of 5.3.

Table 2: North American Lithium Project Ore Reserves Estimate

North American Lithium Project JORC Ore Reserve Estimate (0.60% Li_2O cut-off grade)			
Category	**Tonnes (Mt)**	**Grades (%Li_2O)**	**Contained Li_2O (kt)***
Proved Ore Reserve	1.2	0.92	10.9
Probable Ore Reserve	28.0	0.96	269.4
Total Ore Reserves	**29.2**	**0.96**	**280.3**

**Metallurgical recovery not applied*

Following the acquisition of the NAL mine and concentrator, the Authier Lithium Project's operating strategy was revised to include only mining operations and waste and water management on-site.

The Authier mine will serve as a supplementary or secondary mine and will deliver ore to NAL for processing. A memorandum of understanding (MOU) has been reached between the Authier operation and NAL, in which NAL agrees to buy 100% of the Authier ore material at a selling price of C$105/t (A$118/t), delivered to the NAL ore pad area.

The run-of-mine ore from Authier will be transported to the NAL site, where it will be blended with the NAL ore material using a ratio of 33% Authier / 67% NAL and fed to the primary crusher.

The assumptions made for Authier and incorporated in the NAL PFS are compliant with the upcoming Authier feasibility study. Furthermore, the Authier project's economics remain in line with Sayona's expectations.

The Company will continue to pursue opportunities to optimise and enhance the value of the project, including:

- Further metallurgical test work to improve processing metallurgical recoveries. The PFS assumes a metallurgical recovery of 67.7% for blended ore from NAL and Authier and 65.8% for NAL ore only; and
- Completing a Feasibility Study to assess the economic and technical viability of producing lithium hydroxide and/or carbonate from NAL spodumene concentrates at a site to be determined.
- Further definition of the geological model to be completed. This includes more sampling for lithium and iron grades, as well as modelling and further characterisation of the waste.
- Sayona has an extensive tenement footprint in the Abitibi area and there is potential to significantly increase its resource base and mine life.
- Completion of binding offtake agreements with partners that could potentially offer higher spodumene prices in line with current market levels

NAL PRE-FEASIBILITY STUDY OVERVIEW

Based on the substantially increased Mineral Resource Estimate resulting from NAL's recent drilling campaign (refer ASX announcement 1 March 2022), Sayona mandated BBA, an experienced Canadian engineering firm, to develop a Pre-feasibility Study (PFS) and Ore Reserves estimate for the North American Lithium (NAL) project and its integration with the Authier Lithium Project.

The previous Ore Reserves estimate, published in 2012, was based on the Feasibility Study Update (NI 43-101 Technical Report) prepared by Canada Lithium Corp. Following Sayona's August 2021 acquisition of the NAL mine and concentrator in La Corne, Québec, the NAL project was revised to update the Ore Reserves and increase concentrator mill throughput from 3,800 tonnes per day (tpd) to 4,200 tpd to produce a 6% Li_2O spodumene concentrate.

The NAL project will consist of a 4,200 tpd spodumene concentrator, extension of the current open pit, ore stockpiling and blending area, waste and overburden stockpiles, existing conventional tailings as well as new dry-stack tailings facilities, mine garage, administrative buildings and other infrastructure.

Property Description and Location

The NAL property consists of a contiguous group of 20 mineral titles (19 claims, 1 mining lease). All the claims are registered in the name of Sayona Québec Inc. for a total area of 699.9 ha. The mining lease was granted to QLI on 29 May 2012, on the basis of a Pre-feasibility Study (PFS) filed at the time in support of the application to be granted such a lease. The mining lease has an initial term of 20 years, expiring on 28 May 2032.

The property is situated in La Corne Township in the Abitibi-Témiscamingue region, approximately 38 km southeast of Amos, 15 km west of Barraute and 60 km north of Val-d'Or in the Province of Québec, Canada. The site is approximately 550 km north of Montreal and is serviced by road, rail and air. The property is centred near coordinates 291,964 m E and 5,365,763 m N, Zone 18N as located on the NTS map sheet 32C5 (Figure 2 below).

The NAL property is located approximately 70km by road from Sayona's Authier Lithium Project in the municipality of La Motte. Figure 3 shows the location of the two projects separated by the Harricana river and accessible to each other through the city of Amos.

NAL Mineralisation

Spodumene pegmatites are exposed on the property following stripping work in 2019, but most of the information on the spodumene dykes was initially acquired by diamond drilling. Two of the spodumene dykes exposed in the trenches on the hill south of the old mine are considered as the original mineralisation showing on the property.

Mining commenced in 1955 and although the three-dimensional nature of the dykes became more evident, the characteristics identified in exploration remained more or less the same. The background rock formations are split between granodiorite of the La Corne batholith, volcanics and some biotite schists, as well as the pegmatite dykes that mainly intrude the granodiorite and the volcanics. Figure 4 shows the property's geology, displaying the surface projection of spodumene-bearing dykes.

Figure 2: Location of NAL and Authier projects

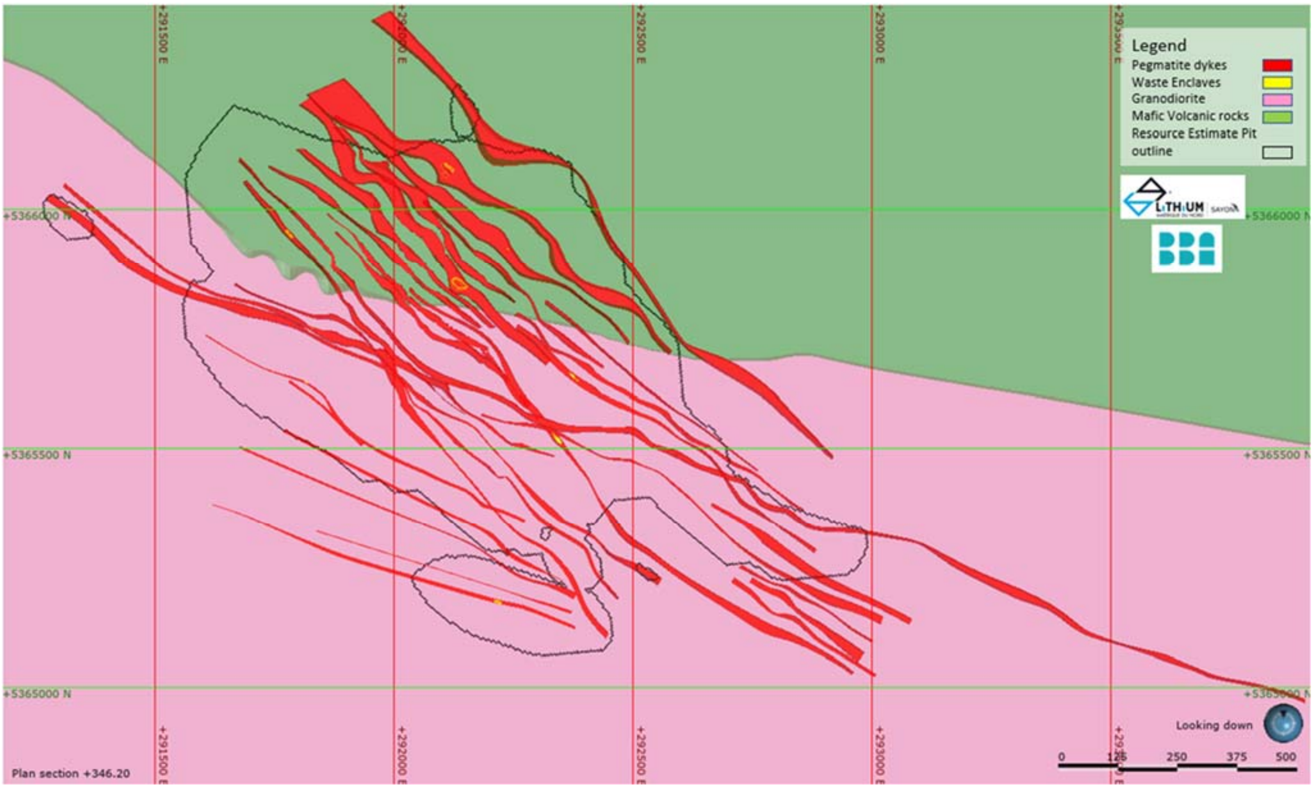

Figure 3: NAL geology map, showing open pit constrained Mineral Resources surface footprint

JORC Mineral Resources

The Mineral Resources Estimate was prepared by BBA Inc. with an effective date of 14 February 2022. The total NAL Mineral Resources Estimate (open-pit and underground) amount to 101.9 Mt of Measured, Indicated and Inferred Mineral Resource at a grade of 1.06% Li_2O.

Refer to the ASX announcement dated 1 March 2022 for further information about the NAL Mineral Resources Estimate. Section 1,2 and 3 of JORC Table 1 presented in appendices were taken from the Mineral Resources Estimate.

Table 3: North American Lithium Project Mineral Resources Estimate

NAL – Open Pit Constrained Mineral Resource Statement using a 0.6% Li_2O cut-off			
Category	**Tonnes**	**Li_2O %**	**Contained Li_2O (t)**
Measured	1,471,000	0.99	14,600
Indicated	52,806,000	1.01	533,300
Measured and Indicated	54,277,000	1.01	548,200
Inferred	13,874,000	0.96	133,200

NAL – Underground Constrained Mineral Resource Statement using a 0.8% Li_2O cut-off			
Category	**Tonnes**	**Li_2O %**	**Contained Li_2O (t)**
Measured			
Indicated	19,398,000	1.18	228,900
Measured and Indicated	19,398,000	1.18	228,900
Inferred	14,372,000	1.19	171,000

NAL – Total Open Cut and Underground Mineral Resource Statement			
Category	**Tonnes**	**Li_2O %**	**Contained Li_2O (t)**
Total JORC Resource (Measured, Indicated and Inferred)	**101,921,000**	**1.06**	**1,081,300**

Ore Reserves Estimate

The NAL Ore Reserves have been estimated for a total of 29.2 Mt of Proved and Probable Ore Reserves at an average grade of 0.96% Li_2O, which is comprised of 1.2 Mt of Proved Ore Reserves at an average grade of 0.92% Li_2O and 28.0 Mt of Probable Ore Reserves at an average grade of 0.96% Li_2O.

The Ore Reserves Estimates consider the open pit constrained portion of the Mineral Resources, which are estimated at 54.3Mt of Measured and Indicated Mineral Resource at a grade of 1.01% Li_2O. Inferred Mineral Resources were considered as waste.

Table 4 below presents the NAL Ore Reserve Estimate. In addition to the 29.2 Mt of ore, a total of 150.4 Mt of waste and 3.8 Mt of overburden must be mined, resulting in an overall LOM strip ratio of 5.3.

Table 4: North American Lithium Project Ore Reserves Estimate

North American Lithium Project JORC Ore Reserve Estimate (0.60% Li_2O cut-off grade)			
Category	**Tonnes (Mt)**	**Grades (%Li_2O)**	**Contained Li_2O (kt)***
Proved Ore Reserve	1.2	0.92	10.9
Probable Ore Reserve	28.0	0.96	269.4
Total Ore Reserves	**29.2**	**0.96**	**280.3**

**Metallurgical recovery not applied*

Notes:

1. *Ore reserves are measured as dry tonnes at the crusher above a diluted cut-off grade of 0.60% Li_2O.*
2. *Ore Reserves result from a positive pre-tax financial analysis based on a 6% Li_2O spodumene concentrate average selling price of US$1,242/t and an exchange rate of 0.76 US$:1.00 C$. The selected optimised pit shell is based on a revenue factor of 0.6 applied to a base case selling price of US$850/tonne of concentrate.*
3. *The reference point of the Ore Reserves Estimate is the NAL crusher feed.*
4. *In-situ mineral resources are converted to ore reserves based on pit optimisation, pit design, mine scheduling and the application of modifying factors, all of which support a positive LOM cash flow model. According to the JORC Code, inferred resources cannot be converted to ore reserves.*
5. *The waste and overburden to ore ratio (strip ratio) is 5.3.*
6. *The Ore Reserves for the Project have been estimated by Mélissa Jarry, P.Eng. OIQ #5020768, a Competent Person as defined by JORC.*
7. *Ore Reserves are valid as of 22 April 2022 and are depleted for all mining to 28 February 2019.*
8. *Totals may not add up due to rounding of significant figures.*

The Ore Reserves Estimates have been classified according to the underlying classification of the Mineral Resource Estimates and the status of the Modifying Factors. The status of the Modifying Factors is generally considered sufficient to support the classification of Proved Ore Reserves when based upon Measured Mineral Resources and Probable Ore Reserves when based upon Indicated Mineral Resources.

Analysis of the financial model on the main economic assumptions indicates that the project is robust in terms of all operating costs, recoveries, and product pricing; it is most sensitive and at greatest risk to changes impacting revenue, commodity prices, exchange rates and operating costs.

Applicable Modifying Factors

For the conversion of Mineral Resources to Reserves, it is necessary to apply a variety of modifying factors:

- Metallurgical Recoveries: ROM ore is subject to metallurgical recovery factors once feed material enters the crusher. Mineral processing at the crushing and concentrator plant results in Li_2O recoveries which affect the conversion of resources to reserves. Process plant global recovery of 67.7% for the blended material of NAL and Authier was considered. For the last five years out of the proposed 27 years of life of mine, NAL material will be processed and a global recovery of 65.8% was assumed for those years. These factors were developed based on metallurgical testwork programs on both the NAL material and a blend of Authier and NAL material.
- Cut-off Grade: A metallurgical cut-off grade (COG) of 0.60% Li_2O was used.
- Mining Dilution and Mining Ore Losses: A detailed dilution model was developed by BBA and coded into the mining block model. Several scenarios of varied dilution skins were generated and a dilution skin of 0.7 m was retained. The geological ore losses (dykes having a width under 2m) are approximately 4.3% and the mining dilution is approximately 14.4% dilution. To account for operational errors, an additional mining ore loss factor of 3% was considered.
- Iron content: The iron content can have an impact on the metallurgical recovery and on the quality of the spodumene concentrate. Inside the pegmatite dyke, the average iron content is 0.6% Fe while the average iron grade in the host rock is between 3.4% Fe and 6.9% Fe. The iron content in the ROM material has been reviewed and considered acceptable.

- Status of Environmental Approvals, Mining Tenements and Approvals and Other Government Factors: The NAL project already has existing environmental permits for mining operations and the concentrator is authorised for throughput of 3,800 tpd. Approval for 4,200 tpd production will be sought from the authorities during 2022 as well as other approvals for waste rock storage and dry-stacked tailings storage.

NAL Concentrator Supply Strategy and Production Profile

Following Sayona's August 2021 acquisition of the NAL mine and concentrator, Sayona's Authier Lithium Project operating strategy was revised to include only mining operations and waste and water management on-site.

The NAL PFS is based on an annual ore feed of circa 1.4 Mtpa to the process plant to deliver average annual output (steady state) of 168,000 tonnes annually of spodumene concentrate containing 6% Li_2O. The current LOM plan is based on a multi-stockpiles strategy (low grade, high grade and Authier) to enable optimal blending of ore.

Production levels and mill feed by source are detailed in Figure 4 below. It should be noted that the schedule was developed on monthly periods for pre-production and Year 1, quarterly periods for Years 2 and 3, and annual increments for the remaining initial mine life.

The run-of-mine ore from Authier will be transported to the NAL site where it will be blended with the NAL ore material using a ratio of 33% Authier / 67% NAL, and then fed to the primary crusher. The Authier project's feasibility study is currently underway and will be completed in Q2 2022.

Figures 4 and 5 present the ore production profile and expected concentrate production of the NAL concentrator.

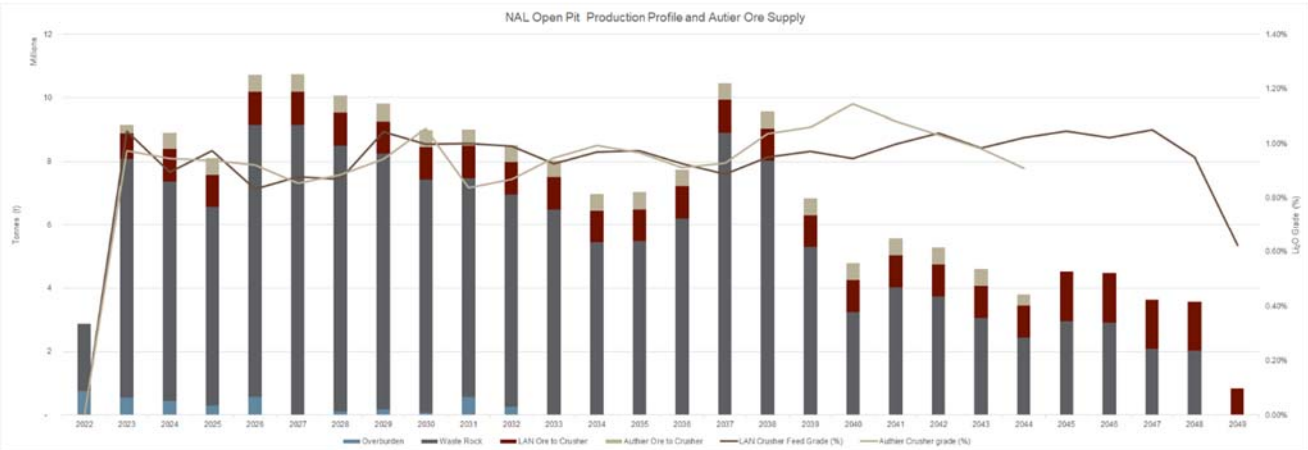

Figure 4: NAL Open Pit Production Profile and Authier Ore Supply

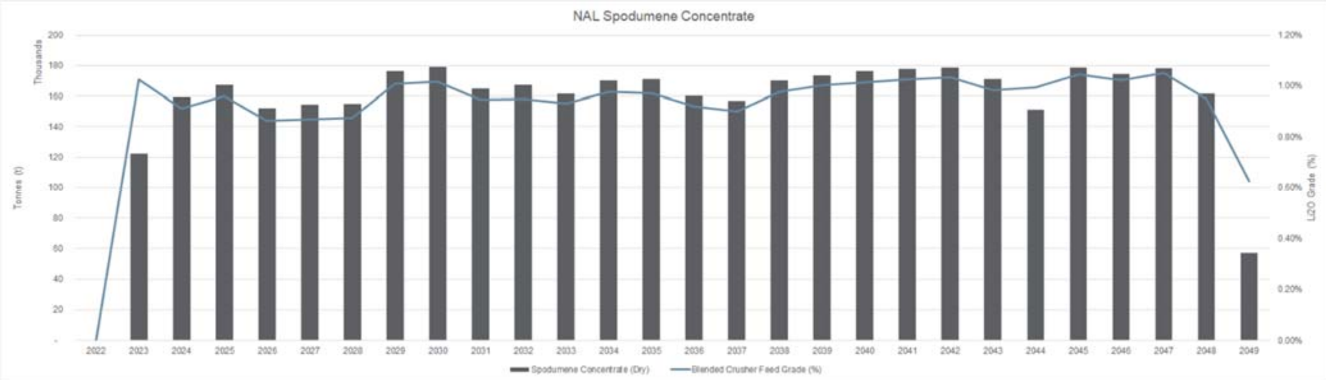

Figure 5: NAL Concentrate Production Profile

Capital Upgrades

Significant capital upgrades are planned for the restart of the NAL mine and concentrator. At the concentrator, Sayona plans to replace the crusher feed, adding an ore sorter, two classification screens, 1 LIMS, 1 WHIMS, a conditioning tank and refurbish the belt filter to enhance the operation, increasing the tonnage and quality of the concentrate. The major process plant upgrades are listed below.

Table 5: Major plant upgrades

Major Upgrades	Results
Modifications to the dump pocket and installation of an apron feeder ahead of the primary crusher.	To ensure a stable feed to the primary crusher and to avoid blockage which frequently occurred in previous operation.
Addition of an optical sorter in parallel to the existing secondary sorter.	Optical sorter is critical to remove waste from the pegmatite ore. In addition to meeting capacity requirements, the addition of a third sorter should allow for higher separation efficiency.
Installation of two additional stack sizer screens.	Testwork showed metallurgical performance is strongly sensitive to grind size. Historical data showed low rod mill power draws and screen overloading, resulting in high bypass of fines to the ball mill, which leads to a reduction in grinding rates. The addition of the two new screens will provide better separation.
Addition of a low-intensity magnetic separator (LIMS) prior to wet high-intensity magnetic separation (WHIMS). There was no LIMS in the previous flowsheet.	To remove ball mill grinding media chips to protect downstream WHIMS.
Addition of a second WHIMS in series with the existing unit prior to flotation.	Magnetic separation is a critical step in the process to remove iron-bearing material from Li_2O. In addition to meeting capacity requirements, a second WHIMS will allow for higher removal of iron prior to flotation.

Major Upgrades	Results
Upgrade of the existing high-density conditioning tank.	Increase conditioning, thus flotation efficiency.
Installation of a higher capacity spodumene concentrate filter.	Concentrate filtration was a bottleneck in the previous operation. Increased concentrate filtration capacity will meet throughput requirements.
Construction of a tailings filter plant.	To accommodate the filtered tailings option, in order to provide material to dry stacked tailings (quantity and quality). This will allow the site to have a smaller footprint.

Positive Financials

Cash flow modelling of the NAL project demonstrates a pre-tax, 100% equity Net Present Value (NPV) of C$952 million (A$1.05 billion as at 23 May 2022) (discount rate of 8%) with total earnings before interest, tax, depreciation and amortisation (EBITDA) cash flows over the 27 year project life of A$3,234M. The cash flow model utilises real dollars and therefore does not factor any inflationary impacts on revenue, operating and capital costs and uses an industry standard 8% discount rate. This generated an internal rate of return (IRR) of 140%.

PRE-TAX	
NPV @ 8% (A$M)	1,070
IRR	140%
Payback Period	2.0
POST-TAX	
NPV @ 8% (A$M)	844
IRR	139%
Payback Period	2.1

The results of the sensitivity analyses are detailed in Figures 12 - 15. The key outcome is the sensitivity to revenue (spodumene ore price) which is greater than both OPEX and CAPEX. Open pit mining operations such as the NAL operation is generally more susceptible to fluctuations in ore prices, therefore the result is not unusual. The upside however is that the project is very robust regarding pricing, providing a long-term stable platform to deliver strong cashflows and shareholder returns. The spodumene grade is also a significant factor of the project as the grade is directly tied to the revenue.

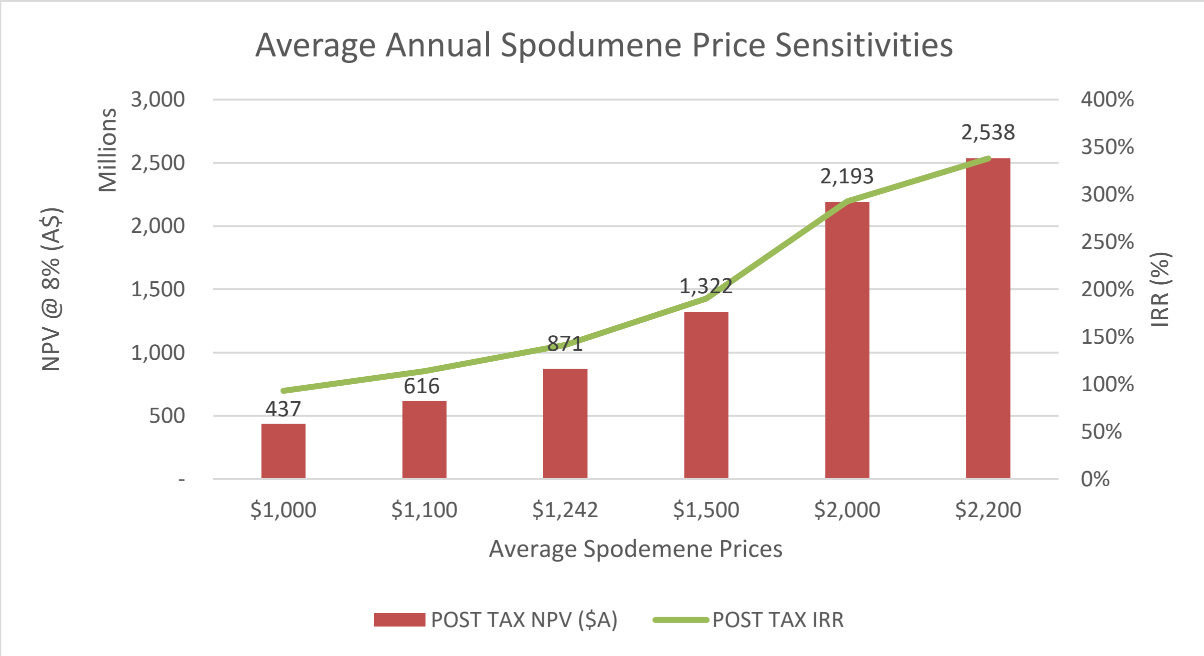

Figure 6: Average Annual Spodumene Price Sensitivities

Sayona is currently assessing a number of financing options that will provide the funding required to implement the development proposed under the PFS. While no funding agreements have been finalised, the Company is confident that appropriate funding will be available.

Mine Designs and Operations

Mining will be undertaken by conventional bulk mining methods utilising hydraulic excavators, dump trucks and drill and blast coupled to a ROM stockpile. Ore will be trucked directly from the blasted faces to the ROM stockpile and fed to the primary crusher using Front-End Loader (FEL). Allowance has been made for blending from the ROM and external stockpiles. The planned mining operation is based on 12 hour shifts with two crews working one week (7 days) double shifts and 2 weeks (14 days) single shifts.

Planned mining activities are as follows:

- Clearing of vegetation, stripping of topsoil and overburden, and removal to storage location on-site;
- Haul road and ramp construction;
- Drilling and blasting of ore and associated waste, including pre-splits on final walls;
- Loading of ore and waste from the pits; and
- Haulage of ore to the ROM pad and waste to dump areas.

The pit will be mined using 2m and 3m flitches for ore and waste respectively. This height gives reasonable production efficiency while keeping dilution to a minimum. In waste, the flitch height could be increased to improve efficiency within the limits of the equipment size. Table 6 below details the design parameters that have been used for the NAL pit designs.

Table 6 – Ultimate Pit Design Parameters

Sectors	Bench Height (m)	Bench Configuration	Stack Height (m)	Catch Bench Width (m)	Bench Face Angle (degrees)	Inter-ramp angle (degrees)	Geotechnical Cath berm interval (m)
South	10	Double	20	12	70	46	140
North East	10	Double	20	10	70	49	140
N, SE, SW, NW	10	Double	20	8	70	53	140
Overburden	10	Double	20	8	26	22	NA

The proposed pit has been designed based on the geotechnical requirements and recommendations prepared by Golder Associates. The design outlines a pit of ~1,350m in length, an average of 750m width and down to a final pit depth of 270m.

Figures 6 and 7 present plan and isometric views of the NAL pit. It was noted that only preliminary hydrogeology studies have been carried out for the project. Although to date no significant water inflows have occurred, a hydrogeology study is to be completed in the near term. Within the open pit, water will be managed via ditching on benches and through sumps in the pit floor. The actual drain requirements will be assessed during operations based on the performance of the dewatering system as the requirements are likely to vary with mine depth.

Mining will be undertaken using phases, commencing with the development of the actual Phase 1 at the south-east limit of the deposit, advancing to the north and in depth in six phases to reach the ultimate designed pit.

A minimum mining width of 40m has been applied in most areas. Working widths are reduced in select instances, such as the final pit benches. A 60m layback has been considered between the final pit and Lac Lortie. The existing mining lease boundary was also considered as a design limit.

The ultimate pit ramp system has been designed to accommodate 90t-class haul trucks even if in the near future 65t-class haul trucks will be used by the mining contractor (for the first four years of operations).

Phase 1 and 2 have been designed to suit this smaller truck size. For the last benches at the pit bottom, a single lane ramp has been used. The dual lane ramp width is designed at 26m and the single lane ramp at 18.5m.

All mine waste rock will be dumped external to the pit. The actual waste dump area is to be completed in the first few months of operation as it was previously filled during the 2017-2019 mining operations and a new waste area is planned.

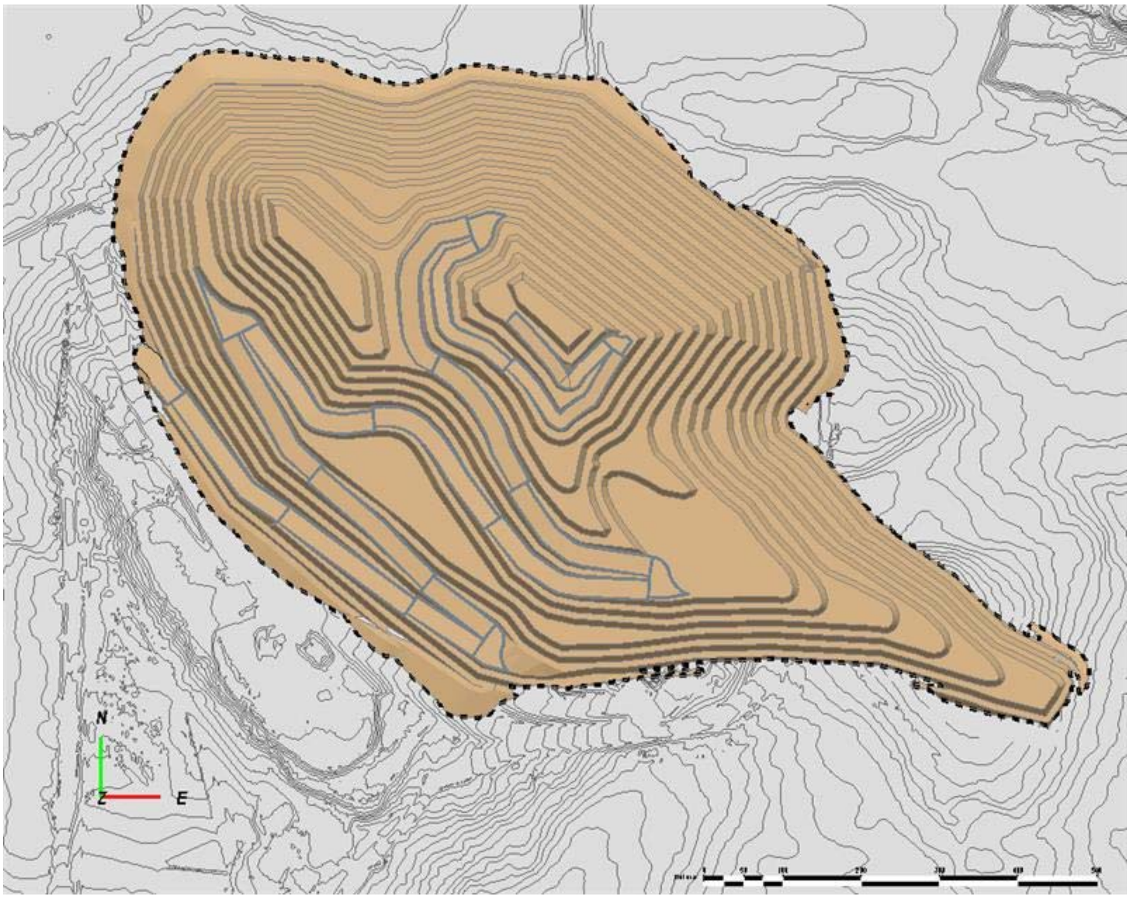

Figure 7: North American Lithium Ultimate Pit Design Plan View

Development of the LOM plan included pit optimisation, pit design, mine scheduling and the application of modifying factors to the measured and indicated portion of the in-situ mineral resource. Table 7 shows the material inventory for each mining phase. Tonnages and grades account for mining dilution, geological losses and operational mining loss factors.

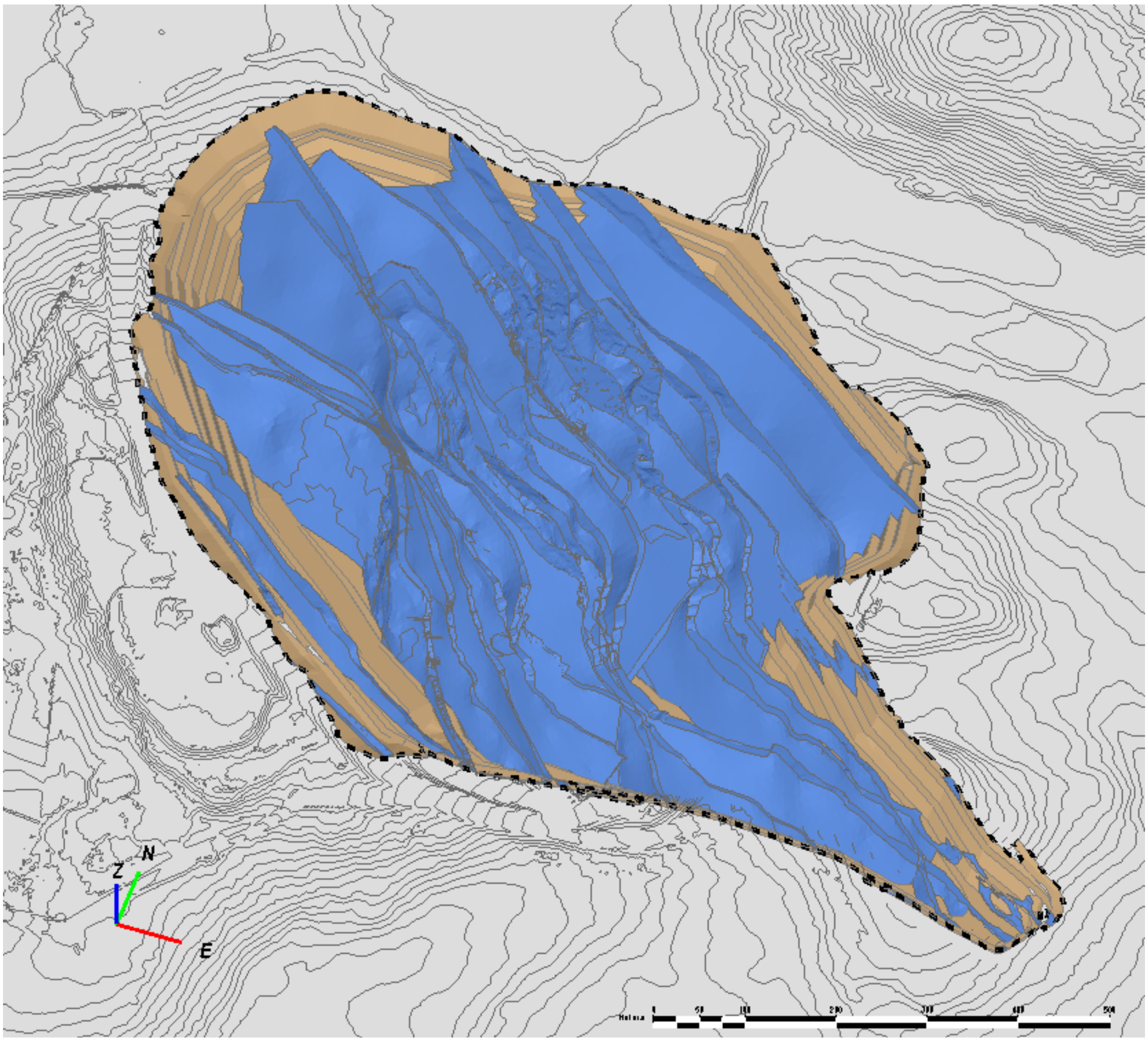

Figure 8: North American Lithium Ultimate Pit Design Isometric View (Pegmatite Dykes in Blue)

Table 7: NAL Project Mining Phases

	PH1	PH2	PH3	PH4	PH5	PH6	Total
Material							
Total In Pit (Mt)	7.6	16.3	38.8	21.0	15.1	84.7	**183.4**
Waste Rock (Mt)	6.4	12.0	34.2	17.2	12.2	68.3	**150.4**
Overburden (Mt)	0.0	1.5	1.2	0.4	0.0	0.8	**3.9**
Total ROM Ore (Mt)	1.2	2.8	3.5	3.3	2.9	15.5	**29.2**
Head Grade (%Li_2O)	0.93	0.87	0.87	1.0	1.01	0.98	**0.96**
Strip Ratio (t:t)	5.6	4.8	10.1	5.3	4.3	4.4	**5.3**

**Totals may not add up due to rounding of significant figures.*

Previously mined-out workings from an old underground operation exist on the site and mining in these areas will take place in the near term, necessitating particular consideration in detailed mine planning and operations. Portions of Phases 2 and 3 require the mining through of the old underground workings, with specific operating procedures in place. Drilling will be completed using remotely operated drilling rigs.

Based on the current understanding of the geometries and locations of the existing underground openings (U/G) in relation to the planned pit design, the majority of these U/G openings will be within the pit, i.e. will not intercept the final pit wall.

Local modifications to the short-term design will be required for safe and stable excavations in areas where stopes intersect the pit phases wall or floor, or drifts run parallel to the pit wall. Slopes in these areas should be developed with care to ensure the safety of personnel and prevent equipment damage due to collapsing stopes and drifts.

Investigation and evaluation of hazards relating to those underground workings, and design of mitigation, should be initiated during the detailed engineering design phase of the project and continued through the operating life of the mine.

The total volume represented by the underground stopes, drifts and shaft is less than 1% of the total final pit volume so these affect a relatively small portion of the overall operation.

Figure 9: Old Underground Workings

The PFS is based on mining being conducted by a specialist mining contractor for the first four years of operation and then by the owner's operations team and equipment fleet.

SAYONA MINING LIMITED

Infrastructure

The NAL property is located in an established mining district and supported by the city of Val d'Or (60 kilometres to the south) and the city of Amos (35 km to the northwest). The project is readily accessible by the national highway and a high-quality rural road network. Other infrastructure in close proximity to the project includes:

- The Canadian National Railway has an extensive rail network throughout Canada. The rail network connects to Montreal and Québec City, and to the west through the Ontario Northland Railway and North American rail system;
- Québec is a major producer of electricity as well as one the largest hydropower generators in the world. Green and renewable energy is well distributed through a reliable power network; and
- Val d'Or is serviced several times daily by various airlines from Montreal.

Current site infrastructure includes:

- Open pit;
- Processing plant;
- ROM ore pad;
- Waste stockpile;
- Conventional tailings pond;
- Overburden stockpile;
- Administration facility, including offices and personnel changing area (dry);
- Workshop, tyre change, warehouse and storage areas;
- Fuel, lube and oil storage facility; and
- Reticulated services, including power, lighting and communications, raw water and clean water for fire protection, process water and potable water, potable water treatment plant, sewage collection, treatment and disposal.

Proposed new site infrastructure includes:

- Expansion of the open pit;
- Upgrade to the processing plant, including additional ore sorter, crushed ore dome, crushing circuit upgrade, dedusting, additional WHIMS, and more;
- Additional tailings management facilities including dry-stacked tailing area and tailings filter plant;
- Additional waste stockpile area; and
- Relocation of the fuel, lube and oil storage facility.

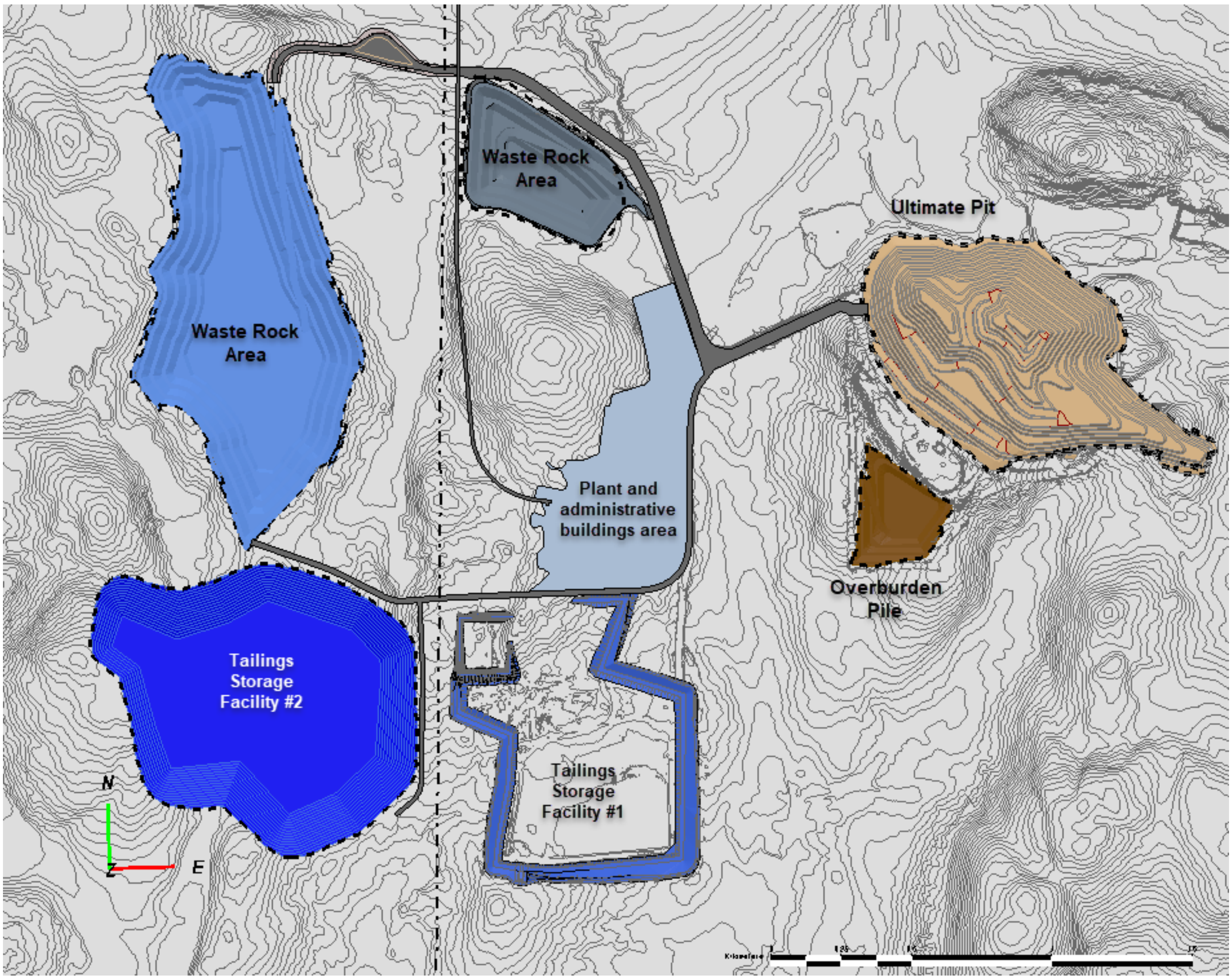

Figure 10: NAL Site Layout Schematic

Processing Plant

The NAL concentrator previously operated from 2013-14 and 2017-19. Figure 11 refers to the updated project flowsheet. The updated flowsheet is similar to the previous one, except for the fact that there is higher capacity on critical steps such as ore sorting, magnetic separation and high-density conditioning.

The crushing circuit includes conventional primary, secondary, and tertiary crushing combined with primary and secondary ore sorting to remove host rock dilution prior to the mill. A crusher by-pass circuit is currently under design and a megadome covering a crushed material stockpile is currently being envisioned. Design for the connection to the existing silo feeding the rod mill and operational strategy is currently being developed and is expected to be completed by the end of Q1 2023.???

The grinding circuit consists of a rod mill and ball mill in closed circuit with sizing screens. The grinding circuit product is deslimed and fed to a magnetic separation circuit to reject iron-bearing minerals. The non-magnetic stream is conditioned prior to spodumene flotation, which comprises rougher and scavenger cells and three stages of cleaning. The 6% Li_2O spodumene concentrate is dewatered on a belt filter. The tailings streams are thickened and will be fed to the existing Tailings Storage Facility #1.

When the existing Tailings Storage Facility #1 reaches capacity, tailings will be dewatered in a new tailings filtration plant and dry-stacked in the planned Tailings Storage Facility #2.

In 2023, the plant will begin processing NAL ore. In mid-2023, the plant will begin processing a blended feed comprising 67% NAL ore and 33% Authier ore. A blending strategy to minimise grade fluctuations will be further developed in the detailed engineering stage.

Feasibility-level metallurgical testing has been undertaken on both Authier and NAL ore samples separately. Testwork examined the impact of process variables, and the type and quantity of host rock dilution on process performance. Recent testwork programs operated batch flotation tests on blended feed samples.

A mass balance was produced based on the NAL restart flowsheet, feeding a blended ore consisting of 33% Authier ore and 67% NAL ore. Lithium recovery was estimated at 67.7% for the blend based on metallurgical testwork results and historical operational data.

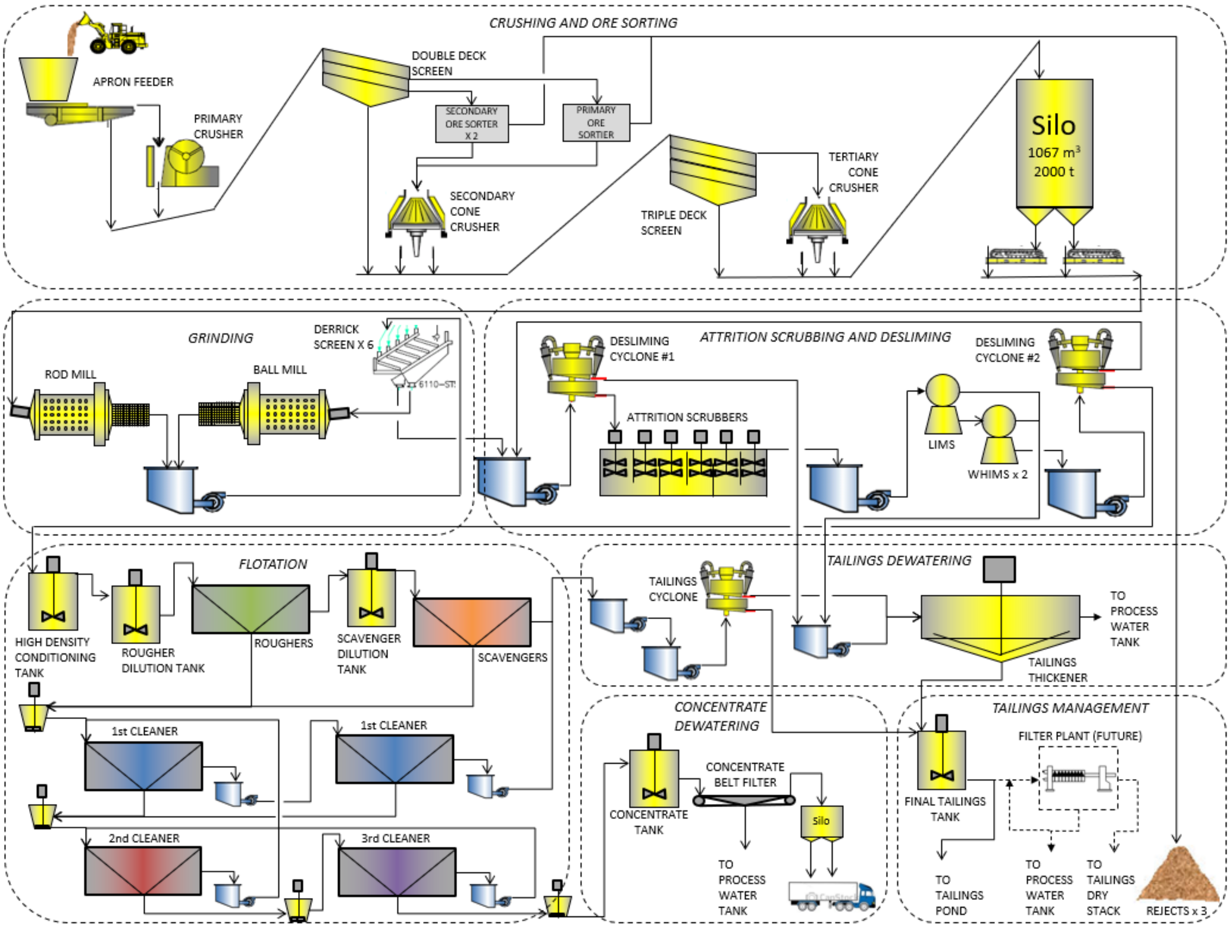

Figure 11: NAL Concentrator Flowsheet

Marketing and Pricing

Sayona has relied upon the Q1 2022 price forecast from consultancy Wood Mackenzie to assess its long-term pricing assumption for the spodumene price. Given recent market and spodumene price volatility, Sayona elected to consider a second source of pricing, the latest Q1-2022 Benchmark Mineral Intelligence price forecast. As such, over the next two years (2023-24), Sayona has elected to take the yearly average prices of each forecast for non-contracted spodumene volume.

For the contracted volume to Piedmont Lithium Inc (refer ASX announcement 11 January 2021), a price of US$900/t is assumed over 2023-24, while the remainder of the concentrate production uses market prices. From 2025 and beyond, Sayona is reverting back to market prices for the entire production as it seeks to pursue a lithium transformation project on-site, leveraging prior investments, in line with its commitments with the Government of Québec related to its acquisition of NAL.

Capital Costs

Sayona plans to replace the crusher feed, adding an ore sorter, two classification screens, 1 LIMS, 1 WHIMS, a conditioning tank and repalletise the belt filter to enhance the operation, increasing the tonnage and quality of the concentrate.

The total capital expenditure (CAPEX) proposed for the project is estimated at C$91M, including a C$14M contingency allocated across the first two years. The present costs estimate pertaining to this study qualifies as Class 4 – Pre-feasibility Study Estimate, as per AACE recommended practice R.P.47R-11. The accuracy of this CAPEX estimate has been assessed at ±30%.

The CAPEX estimate includes all the direct and indirect project costs, complete with the associated contingency. The estimating methods include quotations from vendors and suppliers specifically sought for this project, approximate quantities and unit rates sourced from quotations and historic projects and allowances based on past projects. A summary of the capital expenditure distribution is shown in Table 8 and sustaining capital expenditures in Table 9 below.

Table 8: NAL initial CAPEX

Expenditures	CAPEX (A$M)	CAPEX (C$M)
Mining	33.7	30.0
Infrastructure	12.7	11.3
Crusher	10.0	8.9
Concentrator	14.9	13.2
Tailings	12.9	11.5
Restart Indirect Costs	8.3	7.4
Filter Plant Direct Costs	0.0	0.0
Filter Plant Indirect Costs	0.0	0.0
Dry Stack	0.0	0.0
Owner's Cost	2.0	1.8
Contingency	5.3	4.7
Reclamation & Closure	2.6	2.3
Total CAPEX	102.4	**91.1**

Table 9: Sustaining CAPEX

Expenditures	SUSTAINING (A$M)	SUSTAINING COSTS (C$M)
Mining	99.9	88.9
Infrastructure	6.1	5.5
Crusher	0.0	0.0
Concentrator	0.0	0.0
Tailings	0.0	0.0
Restart Indirect Costs	3.2	2.9
Filter Plant Direct Costs	44.2	39.3
Filter Plant Indirect Costs	15.2	13.6
Dry Stack	28.9	25.8
Owner's Cost	4.3	3.8
Contingency	11.3	10.0
Reclamation & Closure	23.3	20.7
Total Sustaining CAPEX	236.4	**210.4**

Operating Costs

The mine operating expenditures ("OPEX") are estimated based on contract mining costs obtained from various mining contractors for the first four years of operations. In 2026, NAL will purchase a mining fleet to begin an owner/operator operation starting in 2027 for the remaining mine life. Final costs for the mining contract have not been negotiated yet with the mining contractor that will be retained for these operations.

The remaining LOM mine operating expenditures were estimated on suppliers' quotes and/or an internal database.

Table 10 presents the unit mine OPEX over the LOM. Unit contractor mining costs follow in Table 11.

Table 10: Mine operating costs

Mine OPEX	A$/t mined	C$/t mined
OPEX – Mining Contractor	$1.17	$1.04
OPEX - Equipment (Parts, Repair and Tyres/GET)	$1.11	$0.99
OPEX - Fuel	$0.81	$0.72
OPEX - Salaries	$1.27	$1.13
OPEX - Blasting	$0.52	$0.46
OPEX - Services	$0.22	$0.20
TOTAL MINE OPEX	**$5.09**	**$4.53**

Table 11: Mining contractor unit costs

Material Mined	A$/t mined	Value
Overburden	$10.24	$9.11
Waste	$4.92	$4.38
Ore	$6.67	$5.94

The process costs included the process plant and the filtration plant operation and water management costs.

A long-term diesel price of C$1.10/litre has been projected. A long-term electricity cost of C$0.053/kwh has been used.

Table 12 below shows estimated operating expenditures for the LOM.

Table 12: LOM operating expenditures

Operating Expenditures	A$M	A$/t conc.	C$M	C$/t conc.	US$M	US$/t conc.
Open Pit Mining - Owner	787	180	701	160	533	122
Open Pit Mining - Contractor	196	45	174	40	132	30
Mineral Processing	1,064	244	947	217	720	165
Water Treatment	15	3	13	3	10	2
WTP - Reagents	7	2	6	2	5	1
Tailings Transport and Placement	127	29	113	26	86	20
General and Administration (G&A)	278	63	247	57	188	43
Reclamation Bond Insurance Payment	14	3	12	3	9	2
Total Onsite Operating Costs	**2,487**	**569**	**2,214**	**507**	**1,682**	**385**

A memorandum of understanding (MOU) has been concluded between the Authier operation and NAL, in which NAL agrees to buy 100% of the Authier ore material at a selling price of C$105/t (A$118/t of ore mined) of ore mined, delivered to the NAL ore pad area. Authier ore purchased amounts to C$269.82/t concentrate.

Table 13: Authier Ore Costs

Expenditures	A$M	A$/t conc.	CA$M	C$/t conc.	US$M	US$/t conc.
Authier Ore Purchased	1,324	303	1,179	270	896	205

Financial Analysis

The PFS financial analysis has demonstrated that the NAL project is financially robust. The PFS' NPV and IRR were calculated based on the production of spodumene concentrate at a grade of 6.0% Li_2O over a 27-year life-of-mine. Table 14 provides a summary of the financial analysis, which demonstrates that the NAL project is economically viable.

Key outcomes of the PFS include an estimated pre-tax 100% equity NPV of C$952 million (A$1.05 billion as at 23 May 2022) (8% discount rate), a pre-tax IRR of 140% and capital payback within two years. The life of mine has been extended to 27 years, based on estimated JORC Proved and Probable Ore Reserves of 29.2 Mt @ 0.96% Li_2O (Proved Reserves 1.2Mt @ 0.92% Li_2O and Probable Reserves 28.0Mt @ 0.96% Li_2O).

Table 14: NAL operation including Authier ore supply - Financial analysis summary

Item	Unit	Value (A$)	Value (US$)	Value (C$)
Mine life	Years	27		
Strip Ratio	waste t: ore t	5.3		
Total NAL Mined Tonnage	Mt	183.4		
Total Mill Feed Tonnage, including Authier	Mt	37.2		
Total Mill Feed Grade, including Authier	%	1.00		
Revenue				
Average Concentrate Selling Price	$/t conc.	1,836	1,242	1,634
Exchange Rate	A$:C$ C$:US$	0.89	0.76	
Selling Cost				
Product Transport and Logistic Costs	$/t conc.	115	78	102
Project Costs				
Open Pit Mining	$/t conc.	225	152	200
Mineral Processing	$/t conc.	243	165	217
Water Treatment, Management and Tailings	$/t conc.	34	23	30
General and Administration (G&A)	$/t conc.	64	43	57
Authier Ore Purchase	$/t conc.	303	205	270
Project Economics				
Gross Revenue	$M	7,888	5,335	7,020
Authier Ore Purchased Cost	$M	1,325	896	1,179
Total Selling Cost Estimate	$M	503	340	448
Total Operating Cost Estimate	$M	2,488	1,683	2,214
Total Sustaining Capital Cost Estimate	$M	236	160	210
Total Capital Cost Estimate	$M	102	69	91
Undiscounted Pre-Tax Cash Flow	$M	3,234	2,187	2,878
Discount Rate	%	8	8	8
Pre-tax NPV @ 8%	$M	1,070	724	952
Pre-tax payback period	years	2.0	2.0	2.0
Pre-tax Internal Rate of Return (IRR)	%	140	140	140
After-tax NPV @ 8%	$M	844	571	751
After-tax payback period	years	2.1	2.1	2.1
After-tax IRR	%	139	139	139
Cash Cost, including Authier ore purchase	$/t conc.	684	463	609
All-In Sustaining Costs, excluding Authier	$/t conc.	738	499	657

Note: All-In Sustaining Costs = Cash Costs + Sustaining Capital + Exploration expenses + G & A expenses.

Summary of the main assumptions:

1. The financial analysis was performed on Proved and Probable Mineral Reserves as outlined in this report.
2. Tonnes of concentrate are presented as dry tonnes.
3. Exchange rates: An exchange rate of 0.76 US$ per C$ was used to convert the US$ market price projections into Canadian currency. The sensitivity of the base case financial results to variations in the exchange rate was examined. Those cost components, which include U.S. content originally converted to Canadian currency using the base case exchange rate were adjusted accordingly.
4. Discount rate – a discount rate of 8% has been applied for the NPV calculation.
5. Discounting starts at the beginning of 2023.
6. Revenue up to end of 2024 is based on the 50% of the concentrate sales at average benchmarked spodumene market prices and the remaining 50% of concentrate sales to the Piedmont Lithium contract price. An average of benchmarked spodumene market prices is used for 2025-2026. From 2027 onwards, the spodumene concentrate price used the Wood Mackenzie Q1 2022 real contract price forecast.
7. The Li_2O spodumene concentrate price of US$1,242 / tonne of concentrate is based on the yearly average of the price description above.
8. Authier ore is purchased at C$105/t of ore or$A118/t of ore.
9. The selling cost for the spodumene concentrate includes transport and logistics costs.
10. All costs and sales are presented in constant Q1 2022 C$, with no inflation or escalation factors considered.
11. All related payments and disbursements incurred prior to end of Q1 2022 are considered as sunk costs.
12. Royalties – NAL is not subject to any other royalty payments.
13. The accuracy of this CAPEX estimate has been assessed at ±30%.

Table 15 below shows all project costs for the life of the project.

Table 15: NAL total project costs

All Project Costs	A$M	C$M	US$M
Authier Ore Purchased	1,324	1,179	896
Total Selling Cost Estimate	503	448	340
Total Operating Cost Estimate	2,487	2,214	1,682
Total Sustaining Capital Cost Estimate	236	210	160
Total Capital Cost Estimate	102	91	69
Total Project Costs	4,653	4,141	3,147

Sensitivity Analysis

The sensitivity of the pre-tax NPV was evaluated for changes in key driven variables and parameters such as:

- Capital cost;
- Sustaining Capital cost;
- spodumene concentrate production volume;
- Project operating costs;
- Exchange rate between C$ and US$; and
- Spodumene concentrate selling price;

Post-Tax NPV sensitivities range from -20% to +20% to show the impact of the NPV outputs at an 8% discount rate. Complementing the Post-Tax NPV sensitivities is the Post-Tax IRR graph, which shows the overall project impact at these sensitivity ranges.

The Post-Tax sensitivity analysis shows that spodumene price, spodemene concentrate volume and exchange rates have the largest NPV variation. The operating expenditure is also showing a significant NPV variation and can be an opportunity to improve in the next steps of the NAL engineering study.

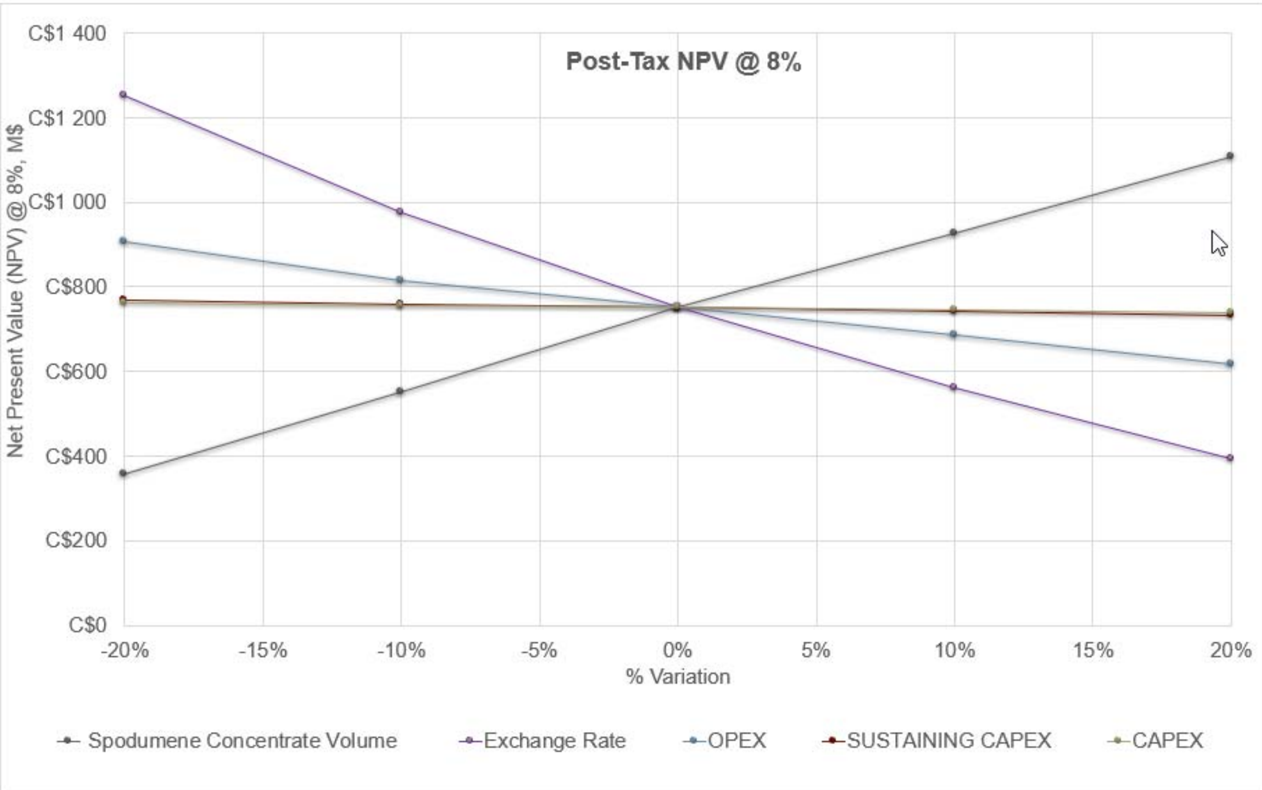

Figure 12: PFS sensitivity analysis on NPV @ 8%

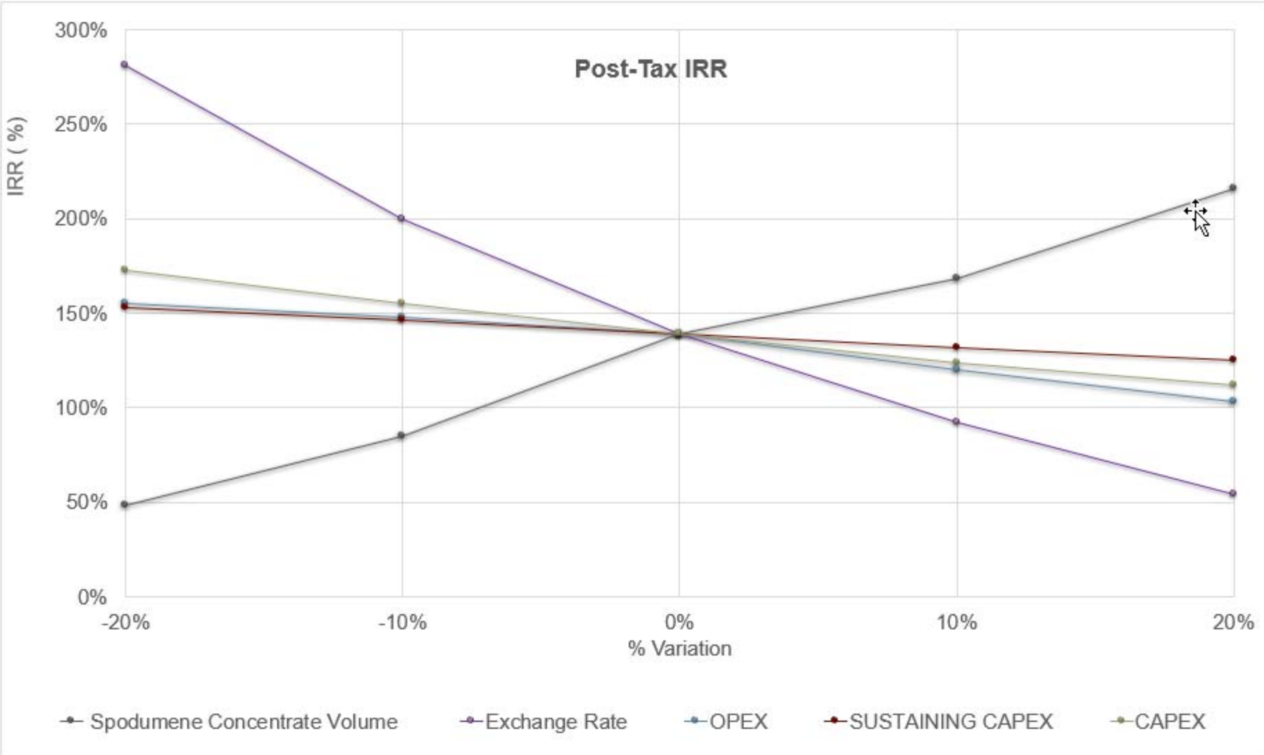

Figure 13: PFS sensitivity analysis on IRR

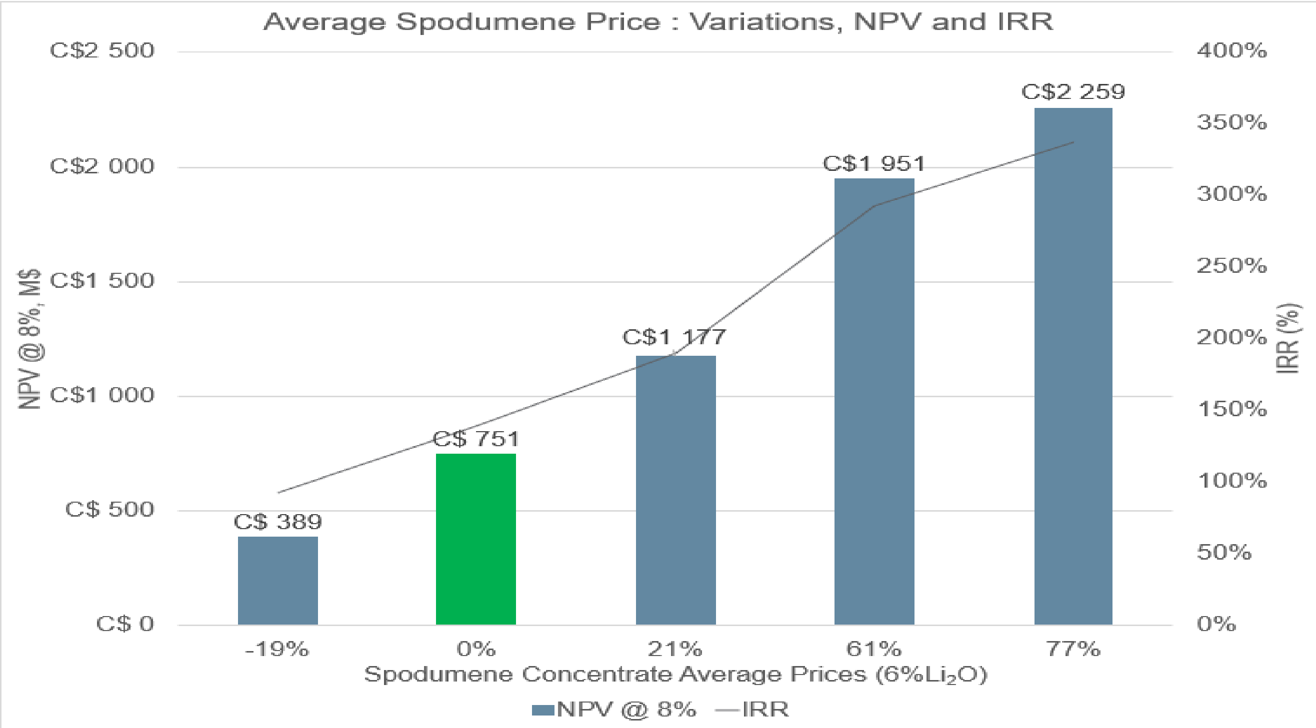

Figure 14: Average spodumene concentrate price sensitivities

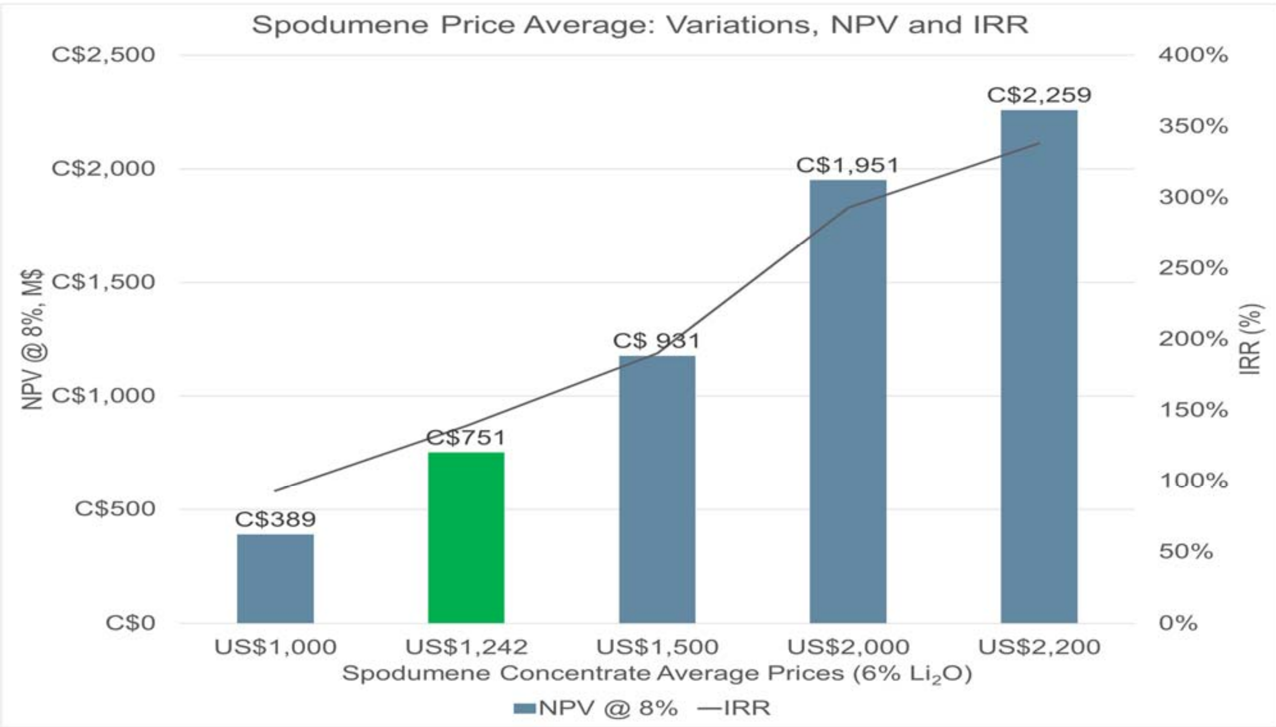

Figure 15: Average spodumene concentrate price sensitivities

Environmental Assessment and Approvals

Sayona plans to restart NAL mining and ore treatment operations in accordance with existing approvals by provincial and federal authorities. The concentrator has approval for throughput of 3,800 tpd. A planned increase to 4,200 tpd will be submitted to the authorities for approval during 2022.

Due to federal regulatory changes, request for a new approval by the Department of Fisheries and Oceans of Canada (DFO) is currently under examination. Approval is expected before August 2022.

Any changes to the project that could impact fish habitat will require a modification to the DFO approval.

The permitting process is ongoing for additional waste rock and tailings storage facilities, which are required to support project development. Permits related to the additional tailings storage facilities (TSF) are not required before 2022 and final approval is expected in 2023. Permits for the new waste rock storage facility are expected to be issued in 2022.

In terms of social acceptability of the project and relations with stakeholders, Sayona has put in place a monitoring committee in accordance with the Mining Act. Discussions are underway for the establishment of an Impact Benefit Agreement (IBA) with Abitibiwinni (Pikogan) and Lac Simon Firsts Nations. In coming months, several initiatives are planned to maximise socioeconomic benefits for all stakeholders.

Project Schedule and Implementation

The Company’s project development plan encompasses the following activities, targeting construction commencing in May 2022 and commissioning in early 2023:

- Detailed engineering;
- Procurement and ordering of long lead items;
- Completion of environmental permitting;
- Community and First Nations consultation;
- Binding off-take agreements;
- Finance; and
- Construction and commissioning.

PFS Study Team

The PFS has been prepared by well-credentialled consultants and organisations which have significant experience and expertise in all aspects of lithium resource definition, mining, processing and infrastructure requirements in the province of Québec.

Table 16: PFS study team

Study Area	Contributor
Metallurgical test work	Jarrett Quinn, Jarrett Quinn Consultant Inc.
Process engineering	Patricia Dupuis, BBA
Mining	Mélissa Jarry, BBA
Tailings and water management	Luciano Pichiaccia, BBA
Geotechnical (pit slopes)	Golder Associates (now WSP Global)
Environmental	BBA, GCM, Sayona

Study Area	Contributor
Mineral Resource Estimation	Todd McCracken, BBA
Marketing and Pricing	Philippe Pourreaux, PwC
Financial Modelling	Shane Ghouralal, BBA
Study Integrator	Isabelle Leblanc, BBA

Issued on behalf of the Board.

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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 North American Lithium together with 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 also holds a 60% stake in the Moblan Lithium Project in northern Québec.

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 Morella Corporation (ASX:1MC).

For more information, please visit us at **www.sayonamining.com.au**

COMPETENT PERSON STATEMENTS

The information in this report that relates to the Ore Reserves Estimate for the North American Lithium project is based on information compiled by Ms Mélissa Jarry, Professional Engineer registered with the Ordre des Ingénieurs du Québec (OIQ). Ms Jarry is a full time employee of BBA Inc., 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."

Ms Jarry supervised the preparation of the technical information in this release and has relevant experience and competence in the subject matter. Ms Jarry, as Competent Person for this announcement, has consented to the inclusion of the information in the form and context in which itappears herein.

The Competent Person relies on other professionals for all manner of things related to the Modifying Factors. These professionals are signatories of the North American Lithium Pre-feasibility Study report with an effective date of 22 April 2022.

Reference to Previous ASX Releases

This ASX announcement contains references to the following previous ASX releases:

- Quarterly Activities Report – 29 April 2022
- Sayona doubles Québec lithium resource base – 1 March 2022
- NAL acquisition finalised and production plans advance – 30 August 2021
- Piedmont Lithium invests in Sayona – 11 January 2021

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.

Appendix A

JORC Code, 2012 Edition – Table 1
NAL Project

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Section 1, 2 and 3 of the JORC Code Table 1 are documented in the 2022 NAL Mineral Resource estimate report (BBA 2022).

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.*	▪ Historic information from a NI 43-101 prepared for a previous owner and discussion with NAL staff. ▪ Sampling was completed using core drilling sampling. During the 2009, 2010, 2011, 2016 and 2019 drill programs, core was laid in wooden boxes at the drill site, sealed with a lid and strapped with plastic binding. At the owner's core facility, the core was washed, logged, and split using a diamond blade saw under the on-site supervision of the geologist. After cutting, the core samples were sealed with a plastic cable tie in labelled plastic bags with their corresponding sample tag. The plastic bags were placed in large rice sacks and secured with tape and a plastic cable tie for shipping to the laboratory. ▪ Standards and blanks were inserted into the samples sequence prior to shipping. ▪ The drill core was washed, photographed, and logged prior to sampling for the majority of the holes.
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).* ▪	▪ Historic information from a NI 43-101 prepared for a previous owner and discussion with NAL staff. ▪ Core Drilling ▪ Historical drilling includes drilling programs in 2009 and 2010 by CCIC geologists, in 2011 by M.E. Lavery, P.Geo., and completed by two independent contractor geologists. The same protocols for logging, core cutting, and sampling were used. ▪ In 2016, a drill program of 50 drillholes of NQ size was carried out for a total of 8,911m. This campaign was supervised by NAL Chief geologist Rémi Asselin, P. Eng., and two independent geologists.

Criteria	JORC Code explanation	Commentary
		▪ In 2019, a drill program of 42 drillholes of NQ size was carried out for a total of 11,487m. The campaign was supervised by the geology team of NAL.
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.*	▪ Historic information from a NI 43-101 prepared for a previous owner and discussion with NAL staff. ▪ Core recovery for these programs, was typically over 95%, with only occasional areas of sheared core with poor recovery. Inspection by the CP of the core confirms a high core recovery. ▪ Lengths were adjusted as necessary to reflect geological and/or mineralisation contacts, which periodically created the samples of less than 1m length. Pegmatite veins that were 0.4 m to 10 m in thickness were also sampled if spodumene was visible, except during the 2019 drill campaign. Longer sample lengths were taken of strongly sheared core or sections with poor core recoveries.
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.*	▪ Historic information from a NI 43-101 prepared for a previous owner and discussion with NAL staff. ▪ Core samples were logged geologically and geotechnically logged. ▪ Photographs of the core were taken systematically after core boxes were opened and laid out on the platform and, prior to any marking or cutting taking place, rock quality designation (RQD) measurements were generally taken at regular intervals of 6m, with the fracturing and recovery data being recorded. ▪ Logging was both quantitative and qualitative. ▪ In 2009, core logging was carried out by CCIC geologists and geological description and geotechnical information was recorded directly into core view v.5.0.0. software (Visidata Pty Ltd.) which was exported and backed up nightly on a secure data server. ▪ In 2010 the drill program, the nominal sample interval was 1m with more than 99.7% of the samples being 1 m or less. ▪ In 2011, the nominal sample interval was 1 m with more than 93% of the samples being 1 m or less. ▪ In the 2016 drill program, the sample interval was 1m with more than 59% of the sample being 1 m or less. ▪ In the 2019 drill program, the sample interval was 1m with more than 42% of the sample being 1 m or less.
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*	▪ Historic information from a NI 43-101 prepared for a previous owner and discussion with NAL staff. ▪ Core samples were sawn in half, with one half of the sample interval submitted for lithium analysis and the remainder kept for future testing and/or reference. ▪ Sampling protocol generally followed the procedures below: ▪ Sample labels are placed at the start of each sample interval and the limits of these are clearly

Criteria	JORC Code explanation	Commentary
	representivity of samples. ▪ *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* ▪ *Whether sample sizes are appropriate to the grain size of the material being sampled.*	indicated by the geologist using coloured arrows red only. The footage should also be shown next to the red lines. From samples to determine their lithium (Li) + 28 other elements are collected systematically during the campaign. ▪ To create representative samples and homogeneous, sampling must respect lithological contacts, i.e. no sample must not cross a major lithological limit, alteration limit or limit of mineralisation. ▪ Samples are numbered in consecutive order using label booklets samples containing digital sequences of 50 durable sample labels in three pre-labelled copies (three labels per sheet). The first of the labels (part left) must remain in the label booklet and include the drillhole number and the interval. The second label should be stapled at the start of the sample directly on the core box to indicate the position of the sample in the box, for reference. She must indicate the limits of the interval. And the third tag should be inserted inside the bag samples and contain no information except the sample number already indicated.
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.*	▪ Historic information from a NI 43-101 prepared for a previous owner and discussion with NAL staff. ▪ From 2009-2011 and 2016, a primary and a check laboratory were used for analyses. ▪ In 2009, the core samples were prepared and analysed either in Lakefield or at the Toronto, Ontario, laboratories using a sodium peroxide fusion with atomic absorption spectrometry, method 9-8-40, to determine the %Li content. ▪ For 2009, Check samples were prepared for selected samples from a split from the pulps remaining after primary analysis. The samples were packaged by SGS Lakefield and sent by couriers to the ALS Vancouver laboratory. ▪ In 2010-11, The primary laboratory was ALS and the check laboratory was AGAT Laboratories Ltd. The sample were prepared at ALS Val d'Or and analysed in Vancouver using four-acid digestion with ICP-AES finish, method Li-OG63, to determine the %Li content of the pulverised core sample. ▪ In 2016, the primary analysis was Techni-Lab. The samples were prepared and analysed using a four-acid digestion with ICP-AES finish, method ICP-OES, to determine the %Li content of the pulverised core samples. ▪ The check laboratory for 2016 was ALS Vancouver. ▪ The quality of the assay was monitored using internal pulp duplicates, blanks, and standards for every batch. QA/QC protocols included the insertion of standards and blanks, i.e. silica sand, directly into the sample sequence. CLQ created customised lithium standards, i.e. ST-L (low grade) and ST-H (high grade), by the dilution of spodumene concentrate from the Tanco pegmatite mine in Manitoba with pulverised quartz. The spodumene concentrate was sent to

Criteria	JORC Code explanation	Commentary
		Geoscience Laboratories for dilution, pulverisation to < 200 mesh and homogenisation. Additionally, several pulps were sent to a secondary laboratory as a check. ▪ In 2016, three standards were created mine material with pulps from the 2013 and 2014 NAL production drillholes. ▪ In 2019, a mobile SGS lab was set-up directly on site. The sample were prepared at SGS on site lab and analysed at SGS on site lab to determine the %Li content of the pulverised core sample.
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.*	▪ Historic information from a NI 43-101 prepared for a previous owner and discussions with NAL staff. ▪ In 2016, the firm InnovExplo were retained to perform a due diligence review of the drilling, core handling, sampling and QA/QC protocols elaborated by NAL. ▪ The 2009-2010 twinning program showed that due to logistics issues, some of the holes were not being true twins. ▪ BBA acknowledged InnovExplo findings and further investigated NAL's QA/QC protocol and data produced as part of the QP's due diligence review and documented the 2016 control charts. ▪ Insertion of sterile mine material labelled as "blank" in the sample stream to control contamination and sample handling errors. ▪ Insertion into the sample stream customised reference materials labelled as standards A, B and C, representing low grade (0.336% Li_2O, about cut off grade (0.878% Li_2O) and high grade (1.567% Li_2O) material, respectively. These were sent to the primary laboratory alternatively to cover a range of values and material representative of the mineralisation at the mine. ▪ Each sample batch included one blank insertion and the insertion of standards (A, B and C), with QA/QC sample inserts accounting for 5 to 10% of the total material submitted. ▪ The results of the analyses were received by email in the form of signed certificates(.pdf) by the chemist and as Excel files, facilitating data capture. The latter were then easily imported into the Geotic Log database and then processed. ▪ The QA/QC reference data is converted in terms of %Li_2O, rather than % Li. ▪ As a conclusion, the sample preparation, security, analytical procedures, and results appear reasonable, diligently executed and in keeping with the industry accepted practices.
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.*	▪ Historic information from a NI 43-101 prepared for a previous owner and discussion with NAL staff. ▪ 2016 and 2019 holes were first positioned and oriented by NAL personnel using a Trimble TSC3 precision GPS instrument, and collars were precisely surveyed by J.L Corriveau, a local surveying contractor. ▪ Drillhole deviation was punctually measured by the

Criteria	JORC Code explanation	Commentary
	▪	drill operator, approximatively every 15 m using a Flexit testing instrument, while multishot tests were recorded every 3 m along the hole upon closure. ▪ GPS coordinates of all collar locations were recorded and tied into the exploration grid.
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.*	▪ Historic information from a NI 43-101 prepared for a previous owner and discussion with NAL staff. ▪ The combination of all drilling from 2009 to 2019 results in a drill spacing of approximately 50m x 50m in the area of the deposit which constitutes the Pit Resources. However, the underground workings of the mine in the years 1955-65 made it difficult to respect this pattern. ▪ In this type of mineralisation, a 50m x 50m drilling pattern allows to clearly define the geological continuity of lithiniferous pegmatites, as much geometrical as by grade.
▪ ***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.* ▪	▪ Historic information from a NI 43-101 prepared for a previous owner and discussion with NAL staff. ▪ From the 2009 drilling program, the holes drilled on eight sections intersecting spodumene pegmatite dykes, approximately perpendicular to their strike; overall NW-SE, hole bearing were typically 18 or 45 degrees. The dykes generally dip 70 to 75 degrees toward the south or southwest. Holes were angled typically at 45 or 60 degrees to cut the interpreted true width of the dyke in a close to normal intersection. ▪ From the 2010 drilling program, the composite body extends more than 1.5 km in approximately a NW-SE direction over a width of approximately 500m. There appears to be one main persistent set of dykes that strikes obliquely to this main orientation. ▪ The majority of holes from 2009 to 2019 were drilled with an azimuth of N045, which is perpendicular to the mineralisation contained in the pegmatite dykes. The dip of the dykes at 70 degrees to the southwest was intersected by surface drilling with a dip of -45 to -65 in general, which optimises the intersection of the mineralised structures. ▪ Thus, the orientation and the dip of the drillholes make the unbiased sampling of the core.
▪ ***Sample security***	▪ *The measures taken to ensure sample security.*	▪ Historic information from a NI 43-101 prepared for a previous owner and discussions with NAL staff. ▪ In 2009, 2010 and 2011, the drilling core were laid in wooden core boxes at the drill site, sealed with a lid and strapped with plastic bindings. Core samples were packed and sealed into labelled plastic bags and tied with a plastic cable tie. The core was transported either by the drill contractor or CLQ personnel to CLQ's core facility in Val d'Or. ▪ In the 2016 campaign, the drilling core were placed in wooden boxes, respecting the drilling sequence, with wooden markers indicating depth. Once filled, lids were sealed on the boxes, which the contractors the delivered to NAL personnel for transportation to the core shack located at Amos. ▪ Upon delivery to the core shack, the drill core is

Criteria	JORC Code explanation	Commentary
		taken care of by the company's team of technicians and geologists. The technicians measure the boxes and take pictures of the core. Geologists describe the geology and mineralisation is well identified to be sampled. Under the supervision of the geologist, the sawing team split the core in half and each sample is well numbered. The samples are clearly identified in their respective bags without risk of contamination. Transport to the laboratory is carried out by a technician from the company.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Section 1, 2 and 3 of the JORC Code Table 1 are documented in the 2022 NAL Mineral Resource estimate report (BBA 2022).

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.*	▪ Historic information from a NI 43-101 prepared for a previous owner and discussion with NAL staff. ▪ The North American lithium Project is in the municipality of La Corne, Québec. ▪ The project was built as an open pit hard rock mine and exploited lithium-bearing pegmatite dyke, with mineral processing and lithium carbonate production facilities. ▪ The 19 claims are all map designated since the dates of their registration during 2008 and as such, their boundaries don't have to be physically identified in the field. The claims have since been renewed. ▪ The Mining Lease was granted to the QLI on May 29, 2012, on the basis of a pre-feasibility study (PFS) pit field at the time in support of the application to be granted for such a lease. ▪ The Mining Lease has an initial term of 20 years, expiring on 28 May 2032. ▪ The MERN website concerning the identity of the holder of the claims is consistent with the 2016 acquisition of the property by NAL. ▪ There are no royalties applicable to any mineral substances that may eventually be extracted from the lands subject to the aforementioned mining titles. ▪ NAL received approval for the reconnection of the public access road deviation and its commissioning in January 2017. The company has obtained approval for deforestation of the future development of the current pit to the east. ▪ There are no known significant issues that are believed to materially impact the mine's ability to operate.
Exploration done by other parties	▪ *Acknowledgment and appraisal of exploration by other parties.*	▪ Historic information from a NI 43-101 prepared for a previous owner ▪ Exploration and production done, starting in 1942 by Sullivan Mining Group, Quebec Lithium Corporation, Cambrior Inc., Canada Lithium Corp. which merged later with Sirocco Mining Inc to form RB Energy Inc.

Criteria	JORC Code explanation	Commentary
		▪ Between 2008 and 2012, Canada Lithium Corp. carry out exploration work on the property. This work consisted of geological compilation, surface mapping, outcrop channel sample, diamond drilling and metallurgical tests. All this work is detailed in the first NI 43-101 report of 2012. ▪ In 2016, NAL carried out a surface drilling campaign to the east of the pit. ▪ In 2019, during the Companies' Creditors Arrangement Act, NAL carried out a surface drilling campaign, surface stripping and mapping.
Geology	▪ *Deposit type, geological setting and style of mineralisation.*	▪ Historic information from a NI 43-101 prepared for a previous owner and discussion with NAL staff. ▪ The project is located in the region of The Archean Preissac-Lavorne which is a syn- to post-tectonic intrusion that was emplaced in the southern Volcanic Zone of the Abitibi Greenstone Belt of the Superior Province of Québec. ▪ The spodumene pegmatites on the property are very poorly exposed. ▪ The rocks are split between granodiorite of the Lacorne batholith, volcanics and some biotite shists, as well as the pegmatites dykes that mainly intrude the granodiorite and the volcanics. ▪ Volcanic rocks on the property are represented by dark green mafic metavolcanics and medium grey silicified intermediate volcanics. The mafic rocks are medium grey to dark grey-green colour and cryptocrystalline to very fine grained. ▪ Both mafic and intermediate volcanic rocks are affected by moderate to strong pervasive silicification, minor chloritisation and patchy to pervasive lithium alteration. There is alteration of the green hornblende in proximity to the spodumene pegmatite. There are also amphibolites that are fine grained, weakly foliated and dark green. ▪ The granodiorite is medium grey to greenish grey, massive coarse grained to porphyritic, and exhibits a salt-pepper appearance. The main mineral constituents of granodiorites are light grey to greenish white plagioclase (40-45 vol%), dark green to black amphibole, most likely hornblende (15-20 vol%), mica(20 vol%), represented by biotite and muscovite, grey quartz (10-15%vol) and minor epidote, chlorite and disseminated sulphide. ▪ Three different types of facies of pegmatites dykes have been identified based on mineralogy and textures: PEG1, PEG2 and PEG3. The main differences between the three types of pegmatite dykes are the amount of spodumene in the dyke, the feldspar and the quarts content, the texture of the pegmatite and the presence of zoning.

SAYONA MINING LIMITED

Criteria	JORC Code explanation	Commentary
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.*	- From the period of 2008 to 2019, a total of 519 holes were drilled for a total of 76,721m. - In the 2009-19 drilling, the holes were roughly perpendicular to the direction of the pegmatites which are oriented in the whole NW-SE. Holes were angled typically at -45 to -60 degrees to cut the interpreted true width of the dyke. - Down hole survey was conducted at approximatively 50m intervals. - The same drilling pattern was done in 2019.
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.*	- In the exploration work of the property, there is no metal equivalent values. -
Relationship between mineralization 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').*	- The geometry of the mineralisation with respect to the drill hole angle is known. - The holes were drilled on bearings of 45 degrees and approximately perpendicular to the general strike and dip of the mineralised dyke bodies.
Diagrams	- *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	- Maps and geological as well as plan views with drill hole collar locations are included in the main body of this report.

Criteria	JORC Code explanation	Commentary
Balanced reporting	▪ *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced avoiding misleading reporting of Exploration Results.*	▪ Exploration results are presented in the next Criteria (Other substantive exploration data)
Other substantive exploration data	▪ *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	▪ After its restart in 2017, the North American Lithium mine was in operation until March 2019. During this time, the mine extracted 1.7Mt of mineralised material to produce 165 000 tonnes of spodumene concentrate at 5.5% Li_2O. ▪ The NI 43-101 Technical Report prepared in 2017 for a previous owner included a Mineral Resource and Ore Reserve Statement. The previous report's statements are not considered valid.
Further work	▪ *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* ▪ *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	Sayona recommended to complete the following work: ▪ Continued resource definition drilling to upgrade the classification of resource material. ▪ Exploration drilling on the property to expand the resource in the lateral extensions of the pit and potential underground extraction. ▪ Collect additional bulk density samples of the pegmatite, granodiorite, and metavolcanics to accurately estimate the tonnage of future mining. - Continuously sample and assay the intervals between the main pegmatite dyke to collect the grades of the dilution

NAL JORC Study JORC Table 1

JORC Code, 2012 Edition – Table 1 - Section 3 Estimation and Reporting of Mineral Resources
(Criteria in this section apply to all succeeding sections.)

Section 1, 2 and 3 of the JORC Code Table 1 are documented in the 2022 NAL Mineral Resource estimate report (BBA 2022).

Criteria	JORC Code explanation	Commentary
Database integrity	▪ *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* ▪ *Data validation procedures used.*	▪ The digital drill hole database was audited by the CP using validation tools for: collar location, azimuth, dip, hole length, survey data and analytical values. There were no relevant errors or discrepancies noted during the validation.
Site visits	▪ *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* ▪ *If no site visits have been undertaken indicate why this is the case.*	▪ For the NAL new MRE, the CP conducted a site visit from 2-3 November 2021. ▪ The CP inspected drill hole collars, diamond core, geology within the open pit and reviewed geological maps and sections with NAL site geological staff. ▪ General logging and sampling procedures, analytical procedures were reviewed.
Geological interpretation	▪ *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* ▪ *Nature of the data used and of any*	▪ The confidence in the geological interpretation of the pegmatites at NAL deposit is good and is based on the open pit mapping, historical underground mapping and diamond drilling. The mineralisation is related to multi-

Criteria	JORC Code explanation	Commentary
	assumptions made. ▪ *The effect, if any, of alternative interpretations on Mineral Resource estimation.* ▪ *The use of geology in guiding and controlling Mineral Resource estimation.* ▪ *The factors affecting continuity both of grade and geology.*	phase pegmatite intrusive within metavolcanics and granodiorite ▪ The pegmatite dykes contain various amounts spodumene associated with elevated lithium content. ▪ Pegmatite dykes contain intercalated units of granodiorite and metavolcanics as "internal: dilution.
Dimensions	▪ *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	▪ The NAL Mineral Resource includes 32 pegmatites striking approximately northwest and have variable dips from subvertical to 50 degree to the southwest. ▪ The NAL pegmatite dykes have been delineated over a strike length of approximately 1,800 m and to a depth of approximately 400m vertical. Dyke have variable widths from 2.5m to 90m.
Estimation and modelling techniques	▪ *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* ▪ *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* ▪ *The assumptions made regarding recovery of by-products.* ▪ *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* ▪ *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* ▪ *Any assumptions behind modelling of selective mining units.* ▪ *Any assumptions about correlation between variables.* ▪ *Description of how the geological interpretation was used to control the resource estimates.* ▪ *Discussion of basis for using or not using grade cutting or capping.* ▪ *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	▪ The Resource Estimate was based on an Ordinary kriging (OK) interpolation using Datamine Studio RM, 2 m composite analytical data no top-cut. ▪ Three-dimensional mineralisation wireframes were modelled based on a pegmatite geology over a minimum drill hole interval length of 2.5 metres as guideline to define the width of mineralised interpretations. ▪ Based on the statistical analysis there is no need for grade capping. ▪ Three orientated 'ellipsoid' search was used to select data and was based on the observed lens geometry. The search ellipsoid was orientated to the average strike and dip of pegmatite dykes. ▪ Variable search ellipse orientations (dynamic anisotrppy) were used to interpolate the blocks. The general dip direction and strike of the mineralised pegmatite were modeled on each section and then interpolated in each block. During the interpolation process, the search ellipse was orientated following the interpolation direction (azimuth-dip (dip direction) and spin (strike direction) of each block, hence better representing the dip and orientation of the mineralisation. ▪ The parent block model has 5 x 5 x 5 m blocks with up to 2 sub-blocks (1.25 x 1.25 x 1.25 m). ▪ The block model is rotated -50 degrees around the Z axis. ▪ Lithium and iron values were modelled into blocks using a multi-pass estimation with a search criteria of a minimum, maximum, and maximum composite per drillhole. ▪ The mineral resources include the resource blocks located within the pit shell above the cut-off grade of 0.60% Li_2O and the contiguous resource blocks amenable to underground mining located below the pit shell above the cut-off grade of 0.80% Li_2O.
Moisture	▪ *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	▪ Tonnages and grades were estimated on a dry in situ basis

Criteria	JORC Code explanation	Commentary
Cut-off parameters	▪ *The basis of the adopted cut-off grade(s) or quality parameters applied.*	▪ The Mineral Resource has been reported at a 0.60% Li_2O cut-off for the open pit material and 0.80% Li_2O for the underground material. ▪ Cut-off based on a spodumene concentrate prices of US$970/tonne for a 6% Li_2O concentrate and an exchange rate of 1.32 C$/US$. ▪ Appropriate mining costs, processing costs, metallurgical recoveries, and inter ramp pit slope angles were used by to generate the pit shell.
Mining factors or assumptions	▪ *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	▪ The geometry and the depth of the mineralised dykes is amenable to be mined using open-pit mining methods. ▪ Appropriate dilution or ore loss factors have been considered to generate the pit shell to constrain the JORC mineral resource statement. ▪ JORC mineral resource statement is reported as in-situ.
Metallurgical factors or assumptions	▪ *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	▪ Significant metallurgical test work has been conducted on the mineralisation. ▪ The NAL project has an existing mineral processing plant on site designed to process the material feed from an open pit.
Environmental factors or assumptions	▪ *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	▪ The NAL project has existing environmental permits for mining operations including the disposal of waste rock, storage of tailing, drawing water for process and the release of treated water to the environment. ▪ The mineral resource has been constrained to not encroach on the lake located northeast of the pit.
Bulk density	▪ *Whether assumed or determined. If*	▪ Bulk density measurements were collected on diamond

Criteria	JORC Code explanation	Commentary
	assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples. ▪ *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* ▪ *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	drill core using the wet immersion method. ▪ The median value of 2.71 g/cm³ was assigned to all pegmatite dykes.
Classification	▪ *The basis for the classification of the Mineral Resources into varying confidence categories.* ▪ *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* ▪ *Whether the result appropriately reflects the Competent Person's view of the deposit.*	▪ The NAL resource classification is in accordance with the CIM Definition Standards on Mineral Resources and Reserves (2014). ▪ The NAL MRE was classified as Measured for blocks within 20 m of the existing open pit. ▪ The NAL MRE was classified as Indicated for blocks estimated in the first of second pass with 8 or more composites used to estimate the block. ▪ the NAL MRE was classified as Inferred for all remaining estimated blocks not classified as measured or indicted. ▪ The Mineral Resource estimates appropriately reflect the view of the Competent Person.
Audits or reviews	▪ *The results of any audits or reviews of Mineral Resource estimates.*	▪ An internal audit has been conducted on the current NAL mineral resource identifying opportunities to improve the resource model, including areas requiring additional drilling, the collection of surface channel samples, the use of downhole optical televiewer to understand dyke geometry and areas where geological solids could be adjusted to reduce dilution. ▪ No external audit has been undertaken on the current NAL mineral resource estimate.
Discussion of relative accuracy/ confidence	▪ *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* ▪ *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.*	▪ The pegmatite geometry and continuity has been adequately interpreted to reflect the applied level of Measured, Indicated and Inferred Mineral Resource. The data quality is good, and the drill holes have detailed logs produced by qualified geologists. All diamond core used in the estimate is properly stored, and mineralised intervals can be reviewed when required. Recognised laboratories have been used for all analyses. ▪ The Mineral Resource statement relates to global estimates of tonnes and grade constrained with a pit shell and contiguous minable shapes.

Criteria	JORC Code explanation	Commentary
	- *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	

NAL JORC Study JORC Table 1

JORC Code, 2012 Edition – Table 1 - Section 4 Estimation and Reporting of Ore Reserves

This section has been developed based on information compiled by BBA inc. and reviewed by Mélissa Jarry who is a Professional Engineer registered with the Ordre des Ingénieurs du Québec (OIQ). Ms Jarry is a mining engineer in the mining and geology department at BBA Inc., a consulting firm based in Montréal, Canada.
Ms Jarry has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity she is undertaking to qualify as a Competent Person as defined in the JORC Code (2012).

The Competent Person relies on other professionals for all manner of things related to the Modifying Factors. These professionals are signatories of the PFS report submitted to Sayona with an effective date of 22 April 2022.

Criteria	Code explanation	Commentary
Mineral Resource Estimate for conversion to Ore Reserves	- Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve. - Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.	- The Mineral Resource for the North American Lithium Project was prepared by BBA. Details of this mineral resource are presented in the above sections. - Ore Reserves are estimated on the basis of detailed design and scheduling of the North American Lithium open pit. - The Mineral Resources are reported inclusive of the Ore Reserves. - Mineral Resources that are not Ore Reserves have not demonstrated economic viability.
Site visits	- Comment on any site visits undertaken by the Competent Person and the outcome of those visits. - If no site visits have been undertaken indicate why this is the case.	- A site visit was completed by the competent person from 9-11 August 2021. A thorough understanding of the available infrastructures and general arrangements was achieved. Meetings and pit tours with the mine operation and engineering department took place. - The Competent Person performed several site visit during the previous mining operations (2017-2018).
Study status	- The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves. - The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying	- The North American Lithium Project was evaluated at a Pre-feasibility Study level. The reported Ore Reserves are reported based on the work completed in the Pre-feasibility Study (PFS). - The Ore Reserves are reported for the first time under the JORC Code. In 2012, a NI 43-101 Feasibility Study was published for the project.

Criteria	Code explanation	Commentary
	Factors have been considered.	
Cut-off parameters	▪ The basis of the cut-off grade(s) or quality parameters applied.	▪ The breakeven cut-off grade (COG) is calculated considering costs for processing, G&A, and other costs related to concentrate production and transport. Based on a lithium concentrate selling price of US$850 per tonne, the COG would be 0.26% Li_2O. However, due to metallurgical recovery limitations, a metallurgical COG of 0.60% Li_2O was selected based on iterative analysis
Mining factors or assumptions	▪ The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design). ▪ The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc. ▪ The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc.), grade control and pre-production drilling. ▪ The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate) ▪ The mining dilution factors used. ▪ The mining recovery factors used. ▪ Any minimum mining widths used. ▪ The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion. ▪ The infrastructure requirements of the selected mining methods.	▪ The ore body is mined using open pit mining techniques with excavators and mining trucks. ▪ Mining activities will be conducted by a specialized mining contractor for the first four years of operation and then by the owner's operations team. ▪ Optimised shapes were developed to identify the portion of the mineral resource that could be mined before performing pit shell optimisations. These shapes determined the amount of dilution and ore losses applied to the project. Four scenarios of varied dilution skins were generated and a dilution skin of 0.7m was retained. The final pit solid was interrogated with the mining block model. The mining ore losses are approximately 4.3% and the mining dilution is approximately 14.4% dilution. ▪ The open pit limits were optimised using the Deswik mining software using the Pseudoflow algorithm. The optimisation was performed considering only the Measured and Indicated resource blocks as mineralised. The Inferred resource was treated as waste. A series of pit shells were generated by varying the base selling price using revenue factors ranging from 0.3 to 1.0. The selected pit shell (serving as a guide for open pit design) uses a revenue factor of 0.60. ▪ The pit optimisation parameters used for the base case pit shell are described as follows: - Overall metallurgical recovery, including ore sorting: 65.8% - Concentrate grade: 6.0% - Concentrate price: US$850/tonne of concentrate for revenue factor 1. - Exchange rate: 0.76 US$/C$ - Concentrate transportation cost: C$59.69/tonne of concentrate. - Processing and G&A cost: C$23.92/tonne ore - Mining dilution and ore losses are evaluated using optimised stope shapes. - Within a 10m envelope of the old underground workings, the mining costs were inflated by 30% for the pit optimisation. - Physically limited by the lake Lortie (60m offset) and the mining lease. ▪ The selected pit shell served as a guide to design the open pit inclusive of ramps and other pit slope design criteria. A double bench configuration with a 20 m final bench height is proposed. Double lane

<table>
<tr><th>Criteria</th><th>Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>
ramps are designed at 26 m wide with single lane ramps reduced to 18.5m.

The open pit design is based on the pit slope recommendations provided by Golder Assoc. (now part of WSP Global) with some adjustments by BBA approved by Golder, which consist of the following design criteria :
<table>
<tr><th>Criteria</th><th>Bench configuration height (m)</th><th>Bench face angle (°)</th><th>Berm width (m)</th><th>Inter-ramp angle (°)</th></tr>
<tr><td>South Sector</td><td>Double bench, 20m</td><td>70</td><td>12</td><td>46</td></tr>
<tr><td>North-East Sector</td><td>Double bench, 20m</td><td>70</td><td>10</td><td>49</td></tr>
<tr><td>N, SE, SW and NW Sectors</td><td>Double bench, 20m</td><td>70</td><td>8</td><td>53</td></tr>
</table>

Overburden is sloped at 26° (Bench face angle), with an 8 m setback at the bedrock contact.
All Inferred resources have been treated as waste material in the production schedules and the project economics.
The following are the actual and future infrastructure for the Project.

Waste (one actual and one future), overburden and topsoil piles.
An existing tailings storage facility and a future dry stack tailings storage facility. The dykes around this future dry stack tailings facility will be constructed with waste material from the pit.
Crusher and concentrator as well as a filter plant for tailings
Ditches and retention basins for water management, as well as a water treatment plant
Industrial pad including concentrator and crusher buildings, administrative offices, fuel storage and distribution, and area for a garage and mining contractor offices, and parking
Electrical infrastructure
Ore rehandling area near crusher
Explosive storage area
Roads connecting the pit and various infrastructure

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<tr><td>Metallurgical factors or assumptions</td><td>

The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.
Whether the metallurgical process is well-tested technology or novel in nature.
The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.

</td><td>

The flotation flowsheet tested is conventional and used in industry to treat lithium-bearing pegmatite ores.
Extensive metallurgical testing has been conducted on samples from the NAL deposit between 2008 and 2022.
The NAL concentrator operated twice between 2013-2014 and 2017-2019. Historical testwork and operating data were used to estimate plant performance.
Previous commercial operation (2018-19) at the NAL concentrator produced concentrate typically ranging from 5.4% to 6% Li_2O with lithium recovery ranging from 53% to 69% (monthly averages).
Multiple laboratory- and pilot-scale testwork programs have been undertaken on samples from the project.

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</table>

Criteria	Code explanation	Commentary
	▪ Any assumptions or allowances made for deleterious elements. ▪ The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole. ▪ For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?	▪ Testwork has been undertaken to examine the impact of type and quantity of host rock dilution on concentrate quality (specifically iron content). Blended ore samples have also been tested. ▪ The flowsheet includes ore sorting and wet high-intensity magnetic separation for iron control. ▪ Metallurgical testwork has produced 6% Li_2O chemical-grade spodumene concentrate (industry standard specification). ▪ A mass balance was produced based on the NAL re-start flowsheet (2022) feeding a blended ore consisting of 36% Authier ore and 64% NAL ore at the rod mill. Lithium recovery was estimated at 67.7% for this blend based on historical operational data and testwork results
Environmental	▪ The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.	▪ Sayona plans to restart the North American Lithium mining and ore treatment operations which are already authorised by provincial and federal authorities. ▪ The concentrator is authorised for throughput of 3,800 tonnes per day. Approval for 4,200 tpd production will be sought during 2022. ▪ Due to federal regulation changes, request for approval by the Department of Fisheries and Oceans of Canada (DFO) is currently under examination and approval is expected before August 2022. Any changes to the project that could impact fish habitat will require a modification to existing DFO approval. ▪ Permitting process is ongoing for additional waste rock and tailings storage facilities which are required to support the project development. Permits related to the additional tailings storage facilities (TSF) are not required before 2022 and the final approval is expected for 2023. ▪ Permit for the new waste rock storage facility is expected to be released in 2022.
Infrastructure	▪ The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.	▪ The current infrastructure on site includes but is not limited to the administration building, tailings storage facility, waste stockpiles, wastewater treatment plant, pump stations, warehouse, maintenance facility, offices, main gate, wash bay, fuel and lube storage, crusher and concentrator, power lines and site access road. ▪ Power is delivered to the NAL site through a 120 kV transmission line and is stepped down to 13.8 kV in the main NAL substation for distribution to the various load centres. The distribution voltage is further stepped down to 4.16 kV and 600 V, used to feed the process equipment. ▪ The expansion of the open pit requires that an existing public aerial line (25 kV + telecom on wooden poles) be relocated. This work will be executed by the Utilities owning this line. ▪ No camp accommodation is required since the project is centred in a well-developed mining region with associated resource industry support facilities and services.

Criteria	Code explanation	Commentary
Costs	▪ The derivation of, or assumptions made, regarding projected capital costs in the study. ▪ The methodology used to estimate operating costs. ▪ Allowances made for the content of deleterious elements. ▪ The source of exchange rates used in the study. ▪ Derivation of transportation charges. ▪ The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc. The allowances made for royalties payable, both Government and private.	▪ Capital and Sustaining costs have been estimated by BBA and Primero. The estimate addresses the engineering, procurement, construction and commissioning of improvements to the crusher and concentrator required to increase the production capacity from 3,800 to 4,200 tpd ▪ CAPEX also includes expenditures for the construction of a tailings filtration plant and a dry stack tailings management facility, modifications to the site water management infrastructure, mine mobile equipment and adjustment to the electrical distribution. ▪ The initial and sustaining CAPEX for the additional major process equipment as well as major mine mobile equipment was developed from budgetary quotes from vendors as part of the Pre-feasibility study and in-house data for lesser equipment. ▪ The initial CAPEX for civil, concrete and structural steel works is based on engineering material take-offs quantified from the 3D Model developed during the Pre-feasibility study and prices benchmarked against similar projects. ▪ The Initial CAPEX for piping, HVAC and electrical distribution works is partially based on engineering material take-offs from P&ID's and single line diagrams combined with layouts developed from the 3D Model prepared during the Pre-feasibility study and prices benchmarked against similar projects. ▪ The initial CAPEX qualifies as Class 4 – Pre-feasibility Study Estimate – per AACE recommended practice R.P.47R-11. The accuracy of this CAPEX estimate has been assessed at ±30%. The CAPEX estimate includes all the direct and indirect project costs, complete with the associated contingency. ▪ The mining operating expenditures ("OPEX") are estimated based on contract mining costs obtained from various mining contractors for the first four years of operations. The remaining LOM mining operating expenditures were estimated on suppliers quotes and internal database. ▪ The CAPEX and OPEX are expressed in constant dollars dated April 2022. No allowance has been made for escalation. ▪ No allowances for deleterious elements are expected to be necessary. ▪ A long-term diesel price of C$1.10/litre has been used. A long-term electricity cost of C$0.053/kwh has been used. ▪ Provincial mining tax, federal and provincial income tax payable to the government is based on the profits are excluded from the financial analysis. ▪ An exchange rate of 0.76 US$/C$ has been used where applicable. All calculations are in Canadian dollars.

Criteria	Code explanation	Commentary
Revenue factors	▪ The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc. ▪ The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.	▪ A memorandum of understanding (MOU) was developed between the Authier site and NAL in which NAL has agreed to buy 100% of the Authier ore material at a selling price of C$105/tonne of ore, delivered to NAL ore pad area. ▪ The MOU was developed based on a Li_2O grade of 0.85% to 1.1%.
Market assessment	▪ The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future. ▪ A customer and competitor analysis along with the identification of likely market windows for the product. ▪ Price and volume forecasts and the basis for these forecasts. ▪ For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.	▪ A Lithium Market Study was prepared by PWC, a Canadian based research and consultancy group, to assess the market trends for global supply and demand, projected demand and production and freight rate analysis. ▪ Benchmark Mineral intelligence and Wood Mackenzie both forecast demand for lithium to increase rapidly, fuelled mainly by the rapid growth of the demand for electric vehicle batteries. In the near term, they project that the supply of lithium will grow less rapidly than its demand, creating a supply deficit. This context is projected to be sustained for a number of years, which is reflected in higher near-term spot and contract lithium spodumene prices, carbonate and hydroxide prices. Over time, Benchmark Mineral Intelligence and Wood Mackenzie forecast lithium demand and supply to converge, with lithium pricing projected to follow the required long-term incentive price to justify bringing new lithium production capacity to market. ▪ Sayona Quebec's La Corne concentrator is projected to produce a 6% spodumene concentrate, the industry standard for spodumene concentrate. Given the rapid growth of lithium demand and supply, and the likely supply-demand deficit in North America in the near-term, the product is projected to be in high demand. As such, Sayona's 6% lithium spodumene concentrate product could naturally serve the North American and European markets due to its physical proximity to both markets from its ports along the St-Lawrence river. ▪ Sayona Québec currently has an offtake agreement with Piedmont Lithium for up to 60,000 tonnes or 50% of La Corne's concentrate produced, based upon market based pricing, for the life of the facility, with a minimum price of US$500 per tonne and maximum price of US$900 per tonne, excluding any quality true-up to the standard specification of goods. The balance of the production volumes not allocated to Piedmont Lithium can be sold in the market to any third party. Third party demand for Sayona Quebec's lithium spodumene concentrate is projected to be healthy, as a number of battery makers have announced the investment in production facilities in North America and Europe.

Criteria	Code explanation	Commentary
		▪ Sayona Quebec's offtake agreement with Piedmont Lithium contains a volume waiver should Sayona Quebec pursue the transformation of the lithium spodumene concentrate into lithium carbonate or hydroxide, either through the restart of La Corne's lithium carbonate plant, or the construction of a new lithium chemical production capacity at the Facility or at another location. In that operating scenario, the lithium spodumene would be allocated in priority to Sayona Quebec's transformation plant, then to Piedmont Lithium for the contracted volume, then to third parties. ▪ Sayona Quebec is currently studying the option of restarting La Corne's lithium carbonate plant. ▪ For volumes contracted with Piedmont Lithium, the forecasted prices are in excess of the maximum contracted price of US$900 per tonne, therefore it has used US$900 per tonne for the contracted volumes. ▪ Sales from 2023 and 2024 are based on 50% of the concentrate sales at average benchmarked spodumene market prices and the remaining 50% of concentrate sales at the Piedmont Lithium contract price. Average benchmarked spodumene market prices are used for 2025-2026. From 2027 onwards, the spodumene concentrate price used the Wood Mackenzie Q1 2022 real contract price forecast. ▪ Sayona Quebec expects its product to meet typical lithium spodumene concentrate market specifications. ▪ For the volumes contracted with Piedmont Lithium, the lithium spodumene concentrate is targeted to contain 6.0% Li_2O grade (dry basis) with less than 1.5% Fe_2O_3 content (dry basis) and less than 12.0% total moisture. ▪ For third party sales, Sayona Quebec expects that similar customer specifications would be required. ▪ Sayona Quebec will provide its customer with small volumes of lithium spodumene concentrate for them to process with their internal testing and user acceptance procedures prior to engaging in a supply contract.
Economic	▪ The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc. ▪ NPV ranges and sensitivity to variations in the significant assumptions and inputs.	▪ The key results and assumptions for the financial analysis are listed below: - Net Present Value at 8% discount of C$952M at a LOM average selling price of C$1,242/tonne of 6.0% Li_2O concentrate - Pre-Tax Internal Rate of Return of 140%; post-tax IRR of 139% - Payback Period of 2 years (pre-tax); 2.1 years post-tax - Total Initial Capex of C$91M - All-in Sustaining Cost of C$657/t of 6.0% Li_2O concentrate ▪ All operating and capital costs as well as revenue streams were included in the financial model. This process has demonstrated that the Ore Reserves can be processed yielding a positive net present value (NPV).

Criteria	Code explanation	Commentary
		▪ Sensitivity was conducted on feed grade, spodumene concentrate prices, foreign exchange rate, capital costs, operating costs and sustaining capital costs. The project is most sensitive to spodumene concentrate prices, exchange rate and operating costs and less sensitive to capital and sustaining capital costs.
Social	▪ The status of agreements with key stakeholders and matters leading to social licence to operate.	▪ A monitoring committee is in place, in accordance with the Mining Act. The frequency of meetings is 4 per year. ▪ Discussions are underway for the establishment of an Impact Benefit Agreement (IBA)with Abitibiwinni (Pikogan) and Lac Simon Firsts Nations. ▪ Sayona has concern for the expectations of the communities of Amos, La Corne, Barraute and Saint-Marc-de Figuery. Several initiatives to be undertaken to have socioeconomic benefits for all stakeholders. ▪ Structuring projects regarding the pedestrian paths of Mont Vidéo ▪ "Open Doors" tour to come in August for all neighbouring municipalities ▪ Initiative on social media platforms to encourage local employability and looking for local candidates
Other	▪ To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves: ▪ Any identified material naturally occurring risks. ▪ The status of material legal agreements and marketing arrangements. ▪ The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.	▪ Risks: - The PFS considers the Authier ore supply. Therefore, the current Ore Reserves and project economics rely on the Authier prospect to advance to production. - The iron content of the ore must stay under specific limit in order to produce a sellable concentrate. Lack of metallurgical testing on blended feed containing basalt host rock. - The lithium losses to magnetic concentrates could be higher than expected - Schedule delays due to the current supply chain (COVID situation) - Worldwide crisis in freight forwarding - Human resources shortage ▪ See Revenue Factors and Market Assessment criteria for signed agreement with Authier and Piedmont ▪ See agreements in Environmental criteria
Classification	▪ The basis for the classification of the Ore Reserves into varying confidence categories. ▪ Whether the result appropriately reflects the Competent Person's view of the deposit.	▪ The Ore Reserves was classified in accordance with the JORC Code and the NI 43-101 Standard. ▪ The methods used are considered by the competent persons to be appropriate for the style and nature of the deposit.

Criteria	Code explanation	Commentary
	▪ The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).	▪ Probable Ore Reserves derive from indicated mineral resources and Proved Ore Reserves derive from measured mineral resources.
Audits or reviews	▪ The results of any audits or reviews of Ore Reserve estimates	▪ No Audits have been undertaken on the North American Lithium Project Ore Reserves.
Discussion of relative accuracy/ confidence	▪ Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate. ▪ The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. ▪ Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage. ▪ It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	▪ The competent person is of the opinion that the Mineral Reserves for the North American Lithium Project appropriately consider modifying factors and have been estimated using industry best practices. ▪ The accuracy of the estimates within this Ore Reserve is mostly determined by the order of accuracy associated with the Mineral Resource model, metallurgical input, and long-term cost and revenue factors. ▪ Factors that can affect the Ore Reserves estimates are: - Dilution and recovery factors are based on assumptions that will be reviewed after mining experiences and adjusted on reconciliations with the NAL concentrator. - The approval of the Authier project - As always, changes in commodity price and exchange rate assumptions will have an impact optimal size of the open pit - Changes in current environmental or legal regulations may affect the operational parameters (cost, mitigation measures). - The Ore Reserve estimate is a global estimate of the North American Lithium Project and is supported by a Pre-Feasibility Study report completed April 2022. ▪ The Competent Person is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, or political factors that could materially influence the Ore Reserves other than the modifying factors already described in this section of the report.