



Annual Information Form

For the year ended December 31, 2021

April 1, 2022



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INTERPRETATION

Definitions

For a description of defined terms and other reference information used in this Annual Information Form (this “AIF”), please refer to Schedule “B”.

CIM Definition Standards

The disclosure included in this AIF uses mineral resources and mineral reserves classification terms that comply with reporting standards in Canada. All mineral resource and mineral reserve estimates are made in accordance with the CIM Definition Standards and NI 43-101, which is a set of rules developed by the Canadian Securities Administrators that establishes standards for all public disclosure an issuer makes of scientific and technical information concerning mineral projects and operations. The following definitions are reproduced from the CIM Definition Standards:

A mineral resource is a concentration or occurrence of solid material of economic interest in or on the Earth’s crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade or quality, continuity and other geological characteristics of a mineral resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling. Mineral resources are sub-divided, in order of increasing geological confidence, into inferred, indicated and measured categories, which are defined as follows:

- An inferred mineral resource is that part of a mineral resource for which quantity, grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity. An inferred mineral resource has a lower level of confidence than that applying to an indicated mineral resource and must not be converted to a mineral reserve. It is reasonably expected that the majority of inferred mineral resources could be upgraded to indicated mineral resources with continued exploration.
- An indicated mineral resource is that part of a mineral resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of modifying factors (as defined below) in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation. An indicated mineral resource has a lower level of confidence than that applying to a measured mineral resource and may only be converted to a probable mineral reserve.
- A measured mineral resource is that part of a mineral resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of modifying factors to support detailed mine planning and final evaluation of the economic viability of the deposit. Geological evidence is derived from detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and grade or quality continuity between points of observation. A measured mineral resource has a higher level of confidence than that applying to either an indicated mineral resource or an inferred mineral resource. It may be converted to a proven mineral reserve or to a probable mineral reserve.

“Modifying factors” are considerations used to convert mineral resources to mineral reserves. These include, but are not restricted to, mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social and governmental factors.

A mineral reserve is the economically mineable part of a measured and/or indicated mineral resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at pre-feasibility or feasibility level as appropriate that include application of modifying factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified. Mineral reserves are sub-divided, in order of increasing geological confidence, into probable and proven categories, which are defined as follows:

- A probable mineral reserve is the economically mineable part of an indicated, and in some circumstances, a measured mineral resource. The confidence in the modifying factors applying to a probable mineral reserve is lower than that applying to a proven mineral reserve.
- A proven mineral reserve is the economically mineable part of a measured mineral resource. A proven mineral reserve implies a high degree of confidence in the modifying factors.

CAUTIONARY NOTE REGARDING FORWARD LOOKING INFORMATION

Certain information and statements in this AIF may constitute “forward looking information” within the meaning of Canadian securities legislation and “forward looking statements” within the meaning of U.S. securities legislation (collectively, “Forward Looking Information”), which involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Company, or industry results, to be materially different from any future results, performance or achievements expressed or implied by such Forward Looking Information. All statements, other than statements of historical fact, may be Forward Looking Information, including, but not limited to, mineral resource or mineral reserve estimates (which reflect a prediction of mineralization that would be realized by development). When used in this AIF, such statements generally use words such as “may”, “would”, “could”, “will”, “intend”, “expect”, “believe”, “plan”, “anticipate”, “estimate” and other similar terminology. These statements reflect management’s current expectations regarding future events and operating performance and speak only as of the date of this AIF. Forward Looking Information involves significant risks and uncertainties, should not be read as guarantees of future performance or results, and does not necessarily provide accurate indications of whether or not such results will be achieved. A number of factors could cause actual results to differ materially from the results discussed in the Forward Looking Information, which is based upon what management believes are reasonable assumptions, and there can be no assurance that actual results will be consistent with the Forward Looking Information.

In particular (but without limitation), this AIF contains Forward Looking Information with respect to the following matters: statements regarding anticipated decision making with respect to the Project; capital expenditure programs; estimates of mineral resources and mineral reserves; development of mineral resources and mineral reserves; government regulation of mining operations and treatment under governmental and taxation regimes; the future price of commodities, including lithium; the realization of mineral resource and mineral reserve estimates, including whether mineral resources will ever be developed into mineral reserves; the timing and amount of future production; currency exchange and interest rates; expected outcome and timing of environmental surveys and permit applications and other environmental matters; the Company’s ability to raise capital and obtain project financing; expected expenditures to be made by the Company on its properties; successful operations and the timing, cost, quantity, capacity and quality of production; capital costs, operating costs and sustaining capital requirements, including the cost of construction of the processing plant for the Project; and competitive conditions and anticipated trends post-COVID-19 pandemic and the ongoing uncertainties and effects in respect of the COVID-19 pandemic and the military conflict in Ukraine.

Forward Looking Information does not take into account the effect of transactions or other items announced or occurring after the statements are made. Forward Looking Information is based upon a number of expectations and assumptions and is subject to a number of risks and uncertainties, many of which are beyond the Company’s control, that could cause actual results to differ materially from those disclosed in or implied by such Forward

Looking Information. With respect to the Forward Looking Information, the Company has made assumptions regarding, among other things:

- General economic and political conditions (including but not limited to the impact of the continuance or escalation of the military conflict between Russia and Ukraine, and economic sanctions in relation thereto).
- Stable and supportive legislative, regulatory and community environment in the jurisdictions where the Company operates.
- Stability and inflation of the Brazilian Real, including any foreign exchange or capital controls which may be enacted in respect thereof, and the effect of current or any additional regulations on the Company's operations.
- Anticipated trends and effects in respect of the COVID-19 pandemic and post-pandemic.
- Demand for lithium, including that such demand is supported by growth in the electric vehicle ("EV") market.
- Estimates of, and changes to, the market prices for lithium.
- The impact of increasing competition in the lithium business and the Company's competitive position in the industry.
- The Company's market position and future financial and operating performance.
- The Company's estimates of mineral resources and mineral reserves, including whether mineral resources will ever be developed into mineral reserves.
- Anticipated timing and results of exploration, development and construction activities.
- Reliability of technical data.
- The Company's ability to develop and achieve production at the Project.
- The Company's ability to obtain financing on satisfactory terms to develop the Project.
- The Company's ability to obtain and maintain mining, exploration, environmental and other permits, authorizations and approvals for the Project.
- The timing and outcome of regulatory and permitting matters for the Project.
- The exploration, development, construction and operational costs for the Project.
- The accuracy of budget, construction and operations estimates for the Project.
- Successful negotiation of definitive commercial agreements, including off-take agreements for the Project.
- The Company's ability to operate in a safe and effective manner.

Although management believes that the assumptions and expectations reflected in such Forward Looking Information are reasonable, there can be no assurance that these assumptions and expectations will prove to be correct. Since Forward Looking Information inherently involves risks and uncertainties, undue reliance should not be placed on such information.

The Company's actual results could differ materially from those anticipated in any Forward Looking Information as a result of various known and unknown risk factors, including (but not limited to) the risk factors referred to under the heading "Risk Factors" in this AIF. Such risks relate to, but are not limited to, the following:

- The Company may not develop the Project into a commercial mining operation.
- There can be no assurance that market prices for lithium will remain at current levels or that such prices will improve.
- The market for electric vehicles ("EVs") and other large format batteries currently has limited market share and no assurances can be given for the rate at which this market will develop, if at all, which could affect the success of the Company and its ability to develop lithium operations.
- Changes in technology or other developments could result in preferences for substitute products.
- New production of lithium hydroxide or lithium carbonate from current or new competitors in the lithium markets could adversely affect prices.
- The Project is at development stage and the Company's ability to succeed in progressing through development to commercial operations will depend on a number of factors, some of which are outside its control.



- The Company's financial condition, operations and results of any future operations are subject to political, economic, social, regulatory and geographic risks of doing business in Brazil.
- Violations of anti-corruption, anti-bribery, anti-money laundering and economic sanctions laws and regulations could materially adversely affect the Company's business, reputation, results of any future operations and financial condition.
- The Company is subject to regulatory frameworks applicable to the Brazilian mining industry which could be subject to further change, as well as government approval and permitting requirements, which may result in limitations on the Company's business and activities.
- The Company's operations are subject to numerous environmental laws and regulations and expose the Company to environmental compliance risks, which may result in significant costs and have the potential to reduce the profitability of operations.
- Physical climate change events and the trend toward more stringent regulations aimed at reducing the effects of climate change could have an adverse effect on the Company's business and future operations.
- As the Company does not have any experience in the construction and operation of a mine, processing plants and related infrastructure, it is more difficult to evaluate the Company's prospects, and the Company's future success is more uncertain than if it had a more proven history of developing a mine.
- The Company's future production estimates are based on existing mine plans and other assumptions which change from time to time. No assurance can be given that such estimates will be achieved.
- The Company may experience unexpected costs and cost overruns, problems and delays during construction, development, mine start-up and operations for reasons outside of the Company's control, which have the potential to materially affect its ability to fully fund required expenditures and/or production or, alternatively, may require the Company to consider less attractive financing solutions.
- The Company's capital and operating cost estimates may vary from actual costs and revenues for reasons outside of the Company's control.
- The Company's operations are subject to the high degree of risk normally incidental to the exploration for, and the development and operation of, mineral properties.
- Insurance may not be available to insure against all such risks, or the costs of such insurance may be uneconomic. Losses from uninsured and underinsured losses have the potential to materially affect the Company's financial position and prospects.
- The Company is subject to risks associated with securing title and property interests.
- The Company is subject to strong competition in Brazil and in the global mining industry.
- The Company may become subject to government orders, investigations, inquiries or other proceedings (including civil claims) relating to health and safety matters, which could result in consequences material to its business and operations.
- The Company's mineral resource and mineral reserve estimates are estimates only and no assurance can be given that any particular level of recovery of minerals will in fact be realized or that identified mineral resources or mineral reserves will ever qualify as a commercially mineable (or viable) deposit.
- The Company's operations and the development of its projects may be adversely affected if it is unable to maintain positive community relations.
- The Company is exposed to risks associated with doing business with counterparties, which may impact the Company's operations and financial condition.
- Any limitation on the transfer of cash or other assets between the Company and the Company's subsidiaries, or among such entities, could restrict the Company's ability to fund its operations efficiently.
- The Company is subject to risks associated with its reliance on consultants and others for mineral exploration and exploitation expertise.
- The current COVID-19 pandemic could have a material adverse effect on the Company's business, operations, financial condition and stock price.
- The current military conflict in Ukraine and the economic or other sanctions imposed may impact global markets in such a manner as to have a material adverse effect on the Company's business, operations, financial condition and stock price.

- If the Company is unable to ultimately generate sufficient revenues to become profitable and have positive cash flows, it could have a material adverse effect on its prospects, business, financial condition, results of operations or overall viability as an operating business.
- The Company is subject to liquidity risk and therefore may have to include a “going concern” note in its financial statements.
- The Company may not be able to obtain sufficient financing in the future on acceptable terms, which could have a material adverse effect on the Company’s business, results of operations and financial condition. In order to obtain additional financing, the Company may conduct additional (and possibly dilutive) equity offerings or debt issuances in the future.
- The Company may be unable to achieve cash flow from operating activities sufficient to permit it to pay the principal, premium, if any, and interest on the Company’s indebtedness, or maintain its debt covenants.
- The Company has not declared or paid dividends in the past and may not declare or pay dividends in the future.
- The Company will incur increased costs as a result of being a public company both in Canada listed on the TSXV and in the United States listed on the Nasdaq Capital Market (“Nasdaq”), and its management will be required to devote further substantial time to United States public company compliance efforts.
- If the Company does not maintain adequate and appropriate internal controls over financial reporting as outlined in accordance with NI 52-109 or the Rules and Regulations of the SEC, the Company will have to report a material weakness and disclose that the Company has not maintained appropriate internal controls over financial reporting.
- As a foreign private issuer, the Company is subject to different U.S. securities laws and rules than a domestic U.S. issuer, which may limit the information publicly available to its shareholders.
- Failure to retain key officers, consultants and employees or to attract and, if attracted, retain additional key individuals with necessary skills could have a materially adverse impact upon the Company’s success.
- The Company is subject to currency fluctuation risks.
- From time to time, the Company may become involved in litigation, which may have a material adverse effect on its business financial condition and prospects.
- Certain directors and officers of the Company are, or may become, associated with other natural resource companies which may give rise to conflicts of interest.
- The market price for the Company’s shares may be volatile and subject to wide fluctuations in response to numerous factors beyond its control, and the Company may be subject to securities litigation as a result.
- If securities or industry analysts do not publish research or reports about the Company’s business, or if they downgrade the Common Shares, the price of the Common Shares could decline.
- The Company will have broad discretion over the use of the net proceeds from offerings of its securities.
- There is no guarantee that the Common Shares will earn any positive return in the short term or long term.
- The Company has a major shareholder which owns 47.2% of the outstanding Common Shares and, as such, for as long as such shareholder directly or indirectly maintains a significant interest in the Company, it may be in a position to affect the Company’s governance, operations and the market price of the Common Shares.
- As the Company is a Canadian corporation but most of its directors and officers are not citizens or residents of Canada or the U.S., it may be difficult or impossible for an investor to enforce judgements against the Company and its directors and officers outside of Canada and the U.S. which may have been obtained in Canadian or U.S. courts or initiate court action outside Canada or the U.S. against the Company and its directors and officers in respect of an alleged breach of securities laws or otherwise. Similarly, it may be difficult for U.S. shareholders to effect service on the Company to realize on judgments obtained in the United States.
- The Company is governed by the *Canada Business Corporations Act* and by the securities laws of the province of Ontario, which in some cases have a different effect on shareholders than U.S. corporate laws and U.S. securities laws.
- The Company is subject to risks associated with its information technology systems and cyber-security.
- The Company may be a Passive Foreign Investment Company, which may result in adverse U.S. federal income tax consequences for U.S. holders of Common Shares.

Readers are cautioned that the foregoing lists of assumptions and risks is not exhaustive. The Forward Looking Information contained in this AIF is expressly qualified by these cautionary statements. All Forward Looking Information in this AIF speaks as of the date of this AIF. The Company does not undertake any obligation to update or revise any Forward Looking Information, whether as a result of new information, future events or otherwise, except as required by applicable securities law. Additional information about these assumptions, risks and uncertainties is contained in the Company’s filings with securities regulators, including the Company’s most recent annual and interim MD&A, which are available on SEDAR at www.sedar.com.

CAUTIONARY NOTE REGARDING MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES

Technical disclosure regarding the Company’s properties included in this AIF, and in the documents incorporated herein by reference has not been prepared in accordance with the requirements of U.S. securities laws. Without limiting the foregoing, such technical disclosure uses terms that comply with reporting standards in Canada and estimates are made in accordance with NI 43-101. Unless otherwise indicated, all mineral reserve and mineral resource estimates contained in the technical disclosure have been prepared in accordance with NI 43-101 and the CIM Definition Standards.

Under the SEC rules regarding disclosure of technical information, the definitions of “proven mineral reserves” and “probable mineral reserves” are substantially similar to the corresponding CIM Definition Standards, and the SEC recognizes “measured mineral resources”, “indicated mineral resources” and “inferred mineral resources” which are also substantially similar to the corresponding CIM Definition Standards. However, there are still differences in the definitions and standards under the SEC rules and the CIM Definition Standards. Therefore, the Company’s mineral resources and reserves as determined in accordance with NI 43-101 may be significantly different than if they had been determined in accordance with the SEC rules.

OTHER INFORMATION

Currency

This AIF contains references to United States dollars, Canadian dollars and Brazilian Reais. All dollar amounts referenced, unless otherwise indicated, are expressed in Canadian dollars “Cdn\$”. United States dollars are referred to as “US\$”. Brazilian Reais are referred to as “R\$”.

The following table sets forth the high and low, average and period-end exchange rates for one US dollar expressed in Canadian dollars and Brazilian Reais for each period indicated, based upon the daily exchange rates provided by the Bank of Canada and FactSet:

	2021	2020
High	Cdn\$1.29/R\$5.81	Cdn\$1.45/R\$5.93
Low	Cdn\$1.20/R\$4.92	Cdn\$1.27/R\$4.02
Rate at end of period	Cdn\$1.27/R\$5.57	Cdn\$1.27/R\$5.19
Average rate for period	Cdn\$1.25/R\$5.40	Cdn\$1.34/R\$5.15

On April 1, 2022, the rate for Canadian dollars (as quoted by the Bank of Canada) and Brazilian Reais in terms of the United States dollar was US\$1.00 = Cdn\$1.25/R\$4.66.

Third Party Information

This AIF includes market, industry and economic data and projections obtained from various publicly available sources and other sources believed by the Company to be true. Although the Company believes these to be reliable, it has not independently verified the information from third party sources, or analyzed or verified the underlying reports relied upon or referred to by the third parties, or ascertained the underlying economic and other assumptions relied upon by the third parties. The Company believes that the market, industry and economic data and projections are accurate and that the estimates and assumptions are reasonable, but there can be no assurance as to their accuracy or completeness. The accuracy and completeness of the market, industry and economic data and projections in this AIF are not guaranteed and the Company does not make any representation as to the accuracy or completeness of such information.

Non-GAAP Measures

This AIF and the Updated Feasibility Study Report incorporated by reference herein contains certain non-GAAP measures. The non-GAAP measures do not have any standardized meaning within IFRS and therefore may not be comparable to similar measures presented by other companies. These measures provide information that is customary in the mining industry and that is useful in evaluating the Project. This data should not be considered as a substitute for measures of performance prepared in accordance with IFRS.

Qualified Person

Mr. Wes Roberts, P.Eng., a member of the technical committee of the Company, is the “qualified person” under NI 43-101 who reviewed and approved the technical information disclosed in this AIF and the documents incorporated by reference herein.

Date of Information

Except as otherwise indicated, all information disclosed in this AIF is as of April 1, 2022.



STRUCTURE OF THE COMPANY

Name, Address and Incorporation

Sigma Lithium Corporation (the “Company” or “Sigma”) is domiciled in Canada and was incorporated under the *Canada Business Corporations Act* on June 8, 2011 originally under the name Margaux Red Capital Inc. The current business of Sigma was acquired through a reverse take-over transaction on April 30, 2018 pursuant to which the Company acquired Sigma Lithium Resources Inc (“Sigma Holdings”) which held (and continues to hold) the Grota do Cirilo Project, located in the state of Minas Gerais in Brazil (the “Project”) through a Brazilian wholly-owned subsidiary, Sigma Mineração S.A. (“Sigma Brazil”). On completion of the reverse take-over transaction, the Company implemented a share consolidation. On July 5, 2021, the Company changed its name from “Sigma Lithium Resources Corporation” to “Sigma Lithium Corporation”.

The registered office of the Company is at Suite 2200, HSBC Building, 885 West Georgia St. Vancouver, BC V6C 3E8 Canada and the head office of the Company is Avenida Nove de Julho 4939, 9th Floor, Torre Europa, Itaim, Sao Paulo, Sao Paulo, 01407-200. The Company’s web site is www.sigmalithium.ca.

Intercorporate Relationships

The corporate structure of the Company, its subsidiaries, the jurisdiction of incorporation of such corporations and the percentage of equity ownership are set out in the following chart:



GENERAL DEVELOPMENT OF THE BUSINESS

Overview

Sigma is a Canadian mineral processing and development company, focused on advancing, with an environmental sustainability directed strategy, one of the largest hardrock lithium projects in the Americas - its wholly-owned Grota do Cirilo Project in Brazil, with the goal of participating in the rapidly expanding lithium-ion battery supply chain for EVs. For further information on the business of the Company, please refer to "[Description of the Business](#)".

Three Year History

The following is a summary of the key developments that have generally influenced the development of the Company's business and projects over the last three years.

Operations

The Company continues to advance toward initiating commercial production in 2023. On December 6, 2021, the Company announced the commencement of construction on site to build the foundation and infrastructure installation for its greentech DMS Production Plant, which was completed at the end of the first quarter of 2022. This stage comprised the earthworks necessary for installation of the Production Plant and infrastructure foundations. Approximately one million cubic meters of soil/subsoils was moved, employing a workforce of approximately 300 personnel.

The Company successfully completed several workstreams involved in the pre-construction of the Production Plant within its schedule and budget parameters. In 2021, the Company reached major milestones towards engineering and construction, despite challenging circumstances created by the COVID-19 pandemic.

The Company is managing three interconnected workstreams aimed to develop the Project as a whole:

- the completion of Front-End Engineering and Design ("FEED") and commencement of execution and management of construction activities for Production Phase 1 and the Production Plant;
- the completion of the pre-feasibility study of Production Phase 2, aimed at a potential production expansion; and
- the continued exploration and expansion of the Project's estimated mineral resources, with the objective of increasing the Project's mine life and/or a potential Production Phase 3 expansion scenario.

For further information on Production Phase 1, Production Phase 2 and Production Phase 3, please refer to "[Description of the Business – Current Status of the Project](#)".

In relation to the Production Phase 1 workstream, the FEED was finalized in December 2021. The final capital expenditure ("CAPEX") budget with a Project Execution Plan ("PEP") was also completed in December 2021. The Company issued letters of intent ("LOIs") for long lead items to vendors in order to start vendor design and detailed design by Primero Group Ltd ("Primero") and Promon Engenharia Ltda. ("Promon").

Following the successful conclusion of the first phase of FEED, Promon and Primero will remain engaged by the Company and continue to focus on negotiating and securing long lead items for the construction of the Production Plant. The Company is currently negotiating an agreement for the engineering, procurement, and construction management ("EPCM") of the Production Plant and associated infrastructure with both engineering firms. The Company is also in negotiations with two finalist mining contractors to build and operate the First Mine.

The Company continued to demonstrate the unique extent and high-purity quality of its hard rock lithium mineralization for the Project and its commercial and market relevance by having significantly advanced its strategic goals on three fronts: short term production scheduled for 2023, the viability of a near-term production expansion

contemplated for 2024, and the determination of the ultimate extent of mineral resources at the Project, all while maintaining its strategic leadership in ESG in the lithium supply chain.

For further information on the Project, please refer to [“Description of the Business – Current Status of the Project”](#).

On December 1, 2021, the Company filed on SEDAR the Updated Feasibility Study Report in respect of its preliminary economic assessment on Production Phase 2 of the Project. The Updated Feasibility Study Report was prepared by leading mining consultancies and the professional services firms Primero, SGS Canada Lakefield (“SGS”), and GE21 Consultoria Mineral (“GE21”). Please refer to [“Description of the Business – Current Status of the Project”](#) and [“Summary of Updated Feasibility Study Report”](#). This approach was the result of a thorough review of the Company’s strategic priorities, with the objective of potentially responding to a significant increase in demand from its customers and solidifying its unique market position as a future supplier of high purity 6% battery grade lithium concentrate (“Battery Grade Green and Sustainable Lithium”). It also aims to significantly increase both the scale of the Project and its commercial and market importance on three fronts: (i) future production, (ii) scale of mineral reserves and (iii) scale of mineral resources, all while maintaining its battery grade green lithium products and the Company’s strategic leadership in ESG in the lithium supply chain.

The Company (prior to the severe second wave of COVID-19) revised its strategy regarding certain international third-party engineering service providers and replaced them with Brazil-based specialists, anticipating the severely restrictive global travel bans that followed in the fourth quarter of 2020 as a result of the second wave. This pre-emptive change enabled the Company to successfully complete all field activities on time and on budget, and to continue to execute engineering activities during the rest of 2021.

In that regard, the Company has also made significant progress in further strengthening its project team, aligning and defining scope requirements as well as advancing the Project’s execution strategy. The Company has added several senior professionals as part of its project implementation team. Key Project consultants include a mix of experienced Brazilian and international engineers actively engaged on or off site to work alongside its existing team of GE21, MDGeo Hidrogeologia e Meio Ambiente (“MDGEO”), APL Engenharia (“APL”), Primero, SGS, Metso-Outotec (“Metso”) and SRK Consulting Inc (“SRK”).

The Company added two senior project management professionals to lead the Project Management Office (“PMO”): a senior mineral processing engineer and a senior geotechnical geologist. They report to Calvyn Gardner, one of the Company’s co-CEOs, who has primary responsibility for all technical workstreams and has been based full time at the Project since August 2020. This core team has been providing valuable oversight on project delivery, while interfacing with the detailed engineering team, construction contractors, equipment vendors and other stakeholders, aligning them to the Project objectives. The PMO has established standard management processes and strategies regarding project execution, contract management, project delivery and document controls.

In addition, following the listing on the Nasdaq, the corporate finance and business development teams were also strengthened with the addition of two senior professionals: the company appointed a new CFO and a Director of Business Development and Investor Relations.

Overall, although working under a strict COVID-19 Protocol (the “Protocol”), the Company made significant progress in 2021. The Protocol was developed in conjunction with Brazilian health advisors, who are consulted on a regular basis to refine and adapt the Protocol to respond to the evolving COVID-19 situation in Brazil. An average of 86 people worked at the Project site, of which only 20 tested positive for COVID-19. They received prompt medical assistance and have fully recovered. Since the implementation of the Protocol, the Company has not reported any new cases on site. Nevertheless, the COVID-19 situation in Brazil remains challenging. The Company has been actively monitoring any additional impacts on pre-construction activities and the pre-construction schedule. Mandatory mask wearing on site and premises, physical distancing requirements and additional sanitary measures, along with testing measures for workers accessing the site, have brought delays to the previously expected timing to commence production of the fourth quarter of 2022. In addition, the Company continues to support the municipalities of Itinga and Araçuaí in their ongoing response to the pandemic (please refer to [“Environmental Social](#)

[and Governance](#)”).

Further to the information referenced above regarding Production Phase 1, based on the design considered by the Updated Feasibility Study Report, the Production Plant will have the capacity to process 1.5 million metric tonnes of mineralized spodumene material per year from the Project. The Production Plant design is projected to produce 220,000 tonnes of Battery Grade Green and Sustainable Lithium per annum, with one of the lowest reported levels of impurities in the world. The Updated Feasibility Study Report assumes: (i) conventional open-pit mining operation; (ii) a low risk approach, building a commercial production plant utilizing conventional lithium Dense Media Separation (“DMS”) and attributing a conservative recovery rate of 60%, (iii) average annual production of 220,000 tonnes of Battery Grade Green and Sustainable Lithium, (iv) a mine life of 9.2 years, (v) projected cash operating costs of US\$238 per tonne of Battery Grade Green and Sustainable Lithium (cash cost CIF China of US\$ 342 per tonne of Battery Grade Green and Sustainable Lithium), among the lowest reported costs globally. The Updated Feasibility Study Report estimates were prepared using a cut-off grade of 0.5% Li₂O and include: (i) a Mineral Reserves estimate of 10.27 million tonnes of proven reserves with average 1.45% Li₂O content and 3.52 million tonnes of probable reserves with 1.47% Li₂O content, and (ii) a Mineral Resources estimate of 26.34 million tonnes of measured resources with average 1.39% Li₂O content, 19.44 million tonnes of indicated resources with average 1.37% Li₂O content and 6.6 million tonnes of inferred resources (representing approximately 1,560,919 tonnes of LCE in the measured and indicated categories, with a further 220,070 tonnes LCE in the inferred category).

The positive economics reflected in the Updated Feasibility Study Report provides a strong platform to continue developing the Company’s extensive mineral properties at the Project, which includes nine past-producing lithium mines.

On November 6, 2019, the Company filed the Feasibility Study Report on Production Phase 1 and the Production Plant.

Since the fourth quarter of 2018, the Company has been producing low carbon high purity lithium concentrate at an on-site demonstration pilot plant and has shipped samples to potential customers for product certification and testing (the “Demonstration Plant”). The production from the Demonstration Plant has been an important part of the Company’s successful commercial strategy for its Battery Grade Green and Sustainable Lithium.

On March 23, 2018, Sigma Holdings published a technical report relating to the Project titled “Technical Report, Northern and Southern Complexes Project, Araçuaí and Itinga, Brazil” with an effective date of January 29, 2018 and prepared by Marc-Antoine Laporte, P. Geo, of SGS.

Environmental, Social and Governance

In March 2022, Ana Cabral-Gardner, the co-CEO of the Company, presented at the Bank of America Securities 2022 Global Agriculture and Materials Conference and at the BMO 31st Global Metals & Mining Conference on the growing demand for lithium and how projects such as the Project can play a key role in the energy transition and future of clean mobility.

In November 2021, Ana Cabral-Gardner was nominated by a national focal point (“NFP”) as a representative to the United Nations (“UN”) Convention on Climate Change. She actively participated in the event as a speaker, including a panel on the theme “Circular Economy and the 21st Century City: Unlocking the Social & Environmental Benefits of the Sustainable City,” presenting the Company’s project to recycle tailings from its greentech plant and the ensuing economic development impact for the region. Ana also spoke at the main event/Blue Zone regarding “The Future of ESG Investing: Enabling the Energy Transition to a Net Zero World.”

In September 2021, the Company announced the constitution of an environmental sustainability and social impact committee (the “ESG Committee”), created to assist the Board with its ESG centric strategy. Ana Cabral-Gardner and Marcelo Paiva were appointed as co-Chairs of the ESG Committee. Maria Salum, Chief Sustainability Officer will act as senior advisor to the ESG Committee. The purpose of the committee is to advise and support co-CEOs

Ana Cabral-Gardner and Calvyn Gardner in determining and implementing the Company's wide range environmental and social sustainability initiatives, based on the selected sustainable development goals (the "Mission Critical SDGs") for each of the two aspects of ESG: "E" environmental and "S" social. There are two key initiatives that will be the focus of the Committee: (i) establishing the Investment Agency which encompasses the coordination of the social programs of the Company; and (ii) overseeing strategy and coordinating with Board's Technical Committee to drive the Company to its ambitious net zero 2024 targets (measured as emissions minus carbon credits), within this Decade of Action and 26 years ahead of United Nations' 2050 targets.

In September 2021, Ana Cabral-Gardner, co-CEO, was invited to the UN High-Level Dialogue on Energy Transition that took place in tandem with the UN General Assembly in New York. The Company demonstrated its alignment with the Paris Climate Accord and submitted an Energy Compact proposal committing to supply the production levels of lithium materials to enable energy transition. The Company targeted to reach net zero carbon emissions after its second year of production in 2024 (26 years ahead of UN targets for net zero emissions in 2050 and six years ahead of UN Decade of Action targets outlined at 2030 Agenda for Sustainable Development and the Paris Agreement on climate change).

Earlier in 2021, the Company commissioned two assessments of its net carbon footprint. It conducted an independent ISO 14000 compliant audit of its life cycle analysis, and is in process to complete an independent expert validation of its carbon credits generated by its internal preservation, reforestation, and compensation forestry programs.

Following the principles of the United Nations Sustainable Development Goals ("UN-SDGs"), in particular UN-SDG #11 (*sustainable cities*) and UN-SDG #8 (*decent work and economic growth*), the Company is leading the creation, structuring and operations of an independent agency to promote private investment and economic diversification of the Vale do Jequitinhonha region, where the Project is located (the "Investment Agency"). The Investment Agency aims to transform the region with organized activities to stimulate development, contributing to the diversification of the business environment through the attraction of investments to the two municipalities of Araçuaí and Itinga in Brazil.

The Company has successfully obtained institutional support for the Investment Agency from the government of Minas Gerais and the Secretary of Special Development Projects ("INDI") and from the mayors of Araçuaí and Itinga, following the principles of UN-SDG #17 (*partnership for the goals*). The Company engaged TSX Advisors Ltda ("TSX Advisors"), a specialist consulting firm, to lead the project to structure and implement the Investment Agency. TSX Advisors has a successful track record of executing similar projects for Brazil's largest mining companies. At a ceremony presided over by the Vice Governor of Minas Gerais, the Investment Agency was launched in September 2021, during the week celebrating the 150 years of establishment of the town of Araçuaí.

In 2021, consistent with the Company's ESG-centric strategy and commitment to the social objective UN-SDG #8 of "*decent work and economic growth*", the Company was actively engaged through multiple ESG initiatives in supporting the communities where the Project is located in the Vale do Jequitinhonha, in Brazil, one of the poorest areas in the world. The Company is committed to strengthening of the regional socioeconomic environment for the two municipalities. The Company has a strong working relationship with the municipalities of Itinga and Araçuaí and conducts regular and meaningful engagement and consultation with them.

The Company is contributing to the sustainable development of the region as it advances the construction of the Production Plant towards commercial production. The Company has been executing the following ESG initiatives:

- **Zero Hunger Action:** The Company has extended humanitarian relief action for an additional 10-months, pledging 7,000 more food baskets, which is expected to enable approximately 2.4 million meals. This is in addition to the 7,000 food baskets already delivered over the last 10 months at the height of the COVID-19 pandemic for the vulnerable families in the Vale do Jequitinhonha region.

- Homecoming Employment Program (Volta Ao Lar): Over 300 people are currently employed on site, with approximately 72% coming from the Vale do Jequitinhonha region, setting the stage for significant social economic impact in a destitute region. The Company is reuniting families through its “Homecoming Program” (Volta Ao Lar)”, bringing back home qualified workers that had migrated out of the region, due to lack of employment opportunities.
- Education Program for Mining Technicians: The Company’s Chief Sustainability Officer organized an educational partnership between the UFVJM (Campus Janauba) and the Federal Institute of Education of Araçuaí, creating the first program to prepare mining technicians in the region.
- OMICRON COVID-19 Prevention Program: The Company has also expanded its “OMICRON COVID-19 Prevention Program” in the Vale do Jequitinhonha region delivering an additional 6,000 liters of sodium hypochlorite and 3,225 liters of gel alcohol, together with the Company’s COVID-19 prevention education booklet. In aggregate, the program provided necessary supplies for sixteen institutions, administering over 20,000 medical appointments per month (over 240,000 appointments per year). Additionally, the Company also provided sodium hypochlorite for disinfection of six public places essential to the local community, such as the municipal food market.
- Re-Opening of Childcare Centers Initiative: The Company sponsored an initiative to support the re-opening of two childcare centers serving 560 children in the municipalities where the Company operates. The Company launched a program for the sponsorship of two-day childcare facilities, one in each of the municipalities where the Project is located. The objective of the program is to assist 560 children in need over a year. The campaign totaled 217 liters of liquid soap, 543 liters of shampoo, 490 toothbrushes, 29,700 diapers and 62,600 napkins.
- Disaster Relief During Floods: The Company has provided first response disaster relief supplying food and water for 400 victims who lost their homes as a result of the floods in the Vale do Jequitinhonha region during the unusually rainy season throughout New Year holidays and the month of January. Since the fourth quarter of 2021, the Company distributed over 11,000 liters of potable water to serve the distressed towns of Araçuaí and Itinga due to the unusual floods in the region. This action helped 5,000 families (more than 20,000 people) who did not have, or had only partial, access to potable water.

Also, following the principles of UN-SDG #17 “*partnership for the goals*”, the Company inaugurated the independent agency for private investment promotion and economic diversification of the region (the “Sustainability Council”) in partnership with the towns of Itinga and Araçuaí, on the week of the 150th anniversary of the town of Araçuaí.

The Sustainability Council aims to transform the territory with organized activities to stimulate development, contributing to the diversification of the business environment through the attraction of investments to the two municipalities.

The Company has successfully obtained institutional support for this initiative from the State of Minas Gerais and its various development bodies, including the secretary of special development (“SEDE”), the State investment agency (formerly “INDI”, renamed “Invest Minas”). Since May 2021, the Company has been working with TSX Advisors, a specialist consulting firm, to lead the project to structure and implement the Sustainability Council. The consultant has a successful track record of executing similar projects for Brazil’s largest mining companies.

Methodological challenges to address socio-economic impact matters in a way that converges with the Company’s strategy and core business will be addressed by applying the methodology proposed by the World Bank for similar Sustainability Council globally, with the Company acting as broader development catalyst (not as principal). This workstream was approached as follows

- Definition of the framework for the Sustainability Council, including: (i) mapping and approaching stakeholders; (ii) evaluation of the region’s “maturity” and “economic engagement” indices; (iii) definition of the Agency Model

for the region; (iv) consolidation of governance and management models; (v) modulation of the economic sustainability plan; and (vi) defining priority sustainability areas to receive investments.

- Workstreams (i), (ii), and (iii) have been completed and the remaining ones are expected by early 2022
- Workstream (v) has been achieved with the participation of the towns of Aracuai and Itinga at COP26 in person in Glasgow. Each town appointed a technical external representative to join the Company in Glasgow and participate in the Investment COP (sponsored by the World Climate Summit), amongst other various ESG educational seminars around the COP26
 - Considering that both towns will have representatives on the Sustainability Council's board of directors, their participation was considered critical in order to be exposed to the latest developments in climate change as they will participate in the agency's planning on a sustainable basis
- Workstream (vi) is intended to be completed by first half of 2022, once all members of the Sustainability Council has been appointed.

In line with UN-SDG #3 (Good Health and Well Being), the Company continues to follow strict COVID-19 protocols, as previously disclosed, and no new cases were reported at the Project site during the fourth quarter of 2021.

In addition to the initiatives described above, the Company has ongoing comprehensive environmental and social programs in process, consistent with its leadership role in ESG in the lithium mining sector and its commitment to sustainable mining.

The mitigating social and environmental programs already initiated or to commence during the construction phase aim to establish actions to proactively mitigate, prevent, control and compensate for the environmental impacts that could be caused by mining and processing activities to be carried out by the Company once it commences production. These programs and actions, which are described below, are also based on the UN-SDGs:

- Programs and actions commenced in the fourth quarter of 2021: the Company expects to complete a program for the implementation and maintenance of rain drainage systems and containment of erosion processes; noise and vibration levels control and monitoring program; and a monitoring program for domestic and industrial effluents.
- Programs and actions initiated in the second half of 2021: air emissions control and air quality monitoring programs and surface water quality monitoring program.
- Programs and actions initiated in the first half of 2021: program to rescue and drive away the local fauna from industrial site; program to rescue threatened and endemic flora; and a fauna monitoring program.
- Programs and Actions initiated in 2020: solid waste management program; waste reuse plan; environmental education program; program for the prioritization and professional training of local suppliers; accident prevention and public health program; social communication program; maintenance and conservation program for permanent preservation areas and legal reserves; environmental management and supervision plan; monitoring program for vegetation planted; program for visual monitoring of environmental impacts and mitigating measures; and specific conservation and monitoring programs for endangered species.

On November 8, 2019, Ana Cabral-Gardner addressed the World Climate Summit during the UN Climate Change Conference COP-25 in Madrid and presented a case study for the Company as an ESG “green mining” company and the role played by its investors in providing the capital and leadership to drive the implementation of environmental and social best practices in developing the Project.

Corporate

On December 23, 2021, the Company announced the closing of a non-brokered private placement (the “December 2021 Offering”) of 11,634,137 Common Shares at a price of Cdn\$11.75 per Common Share for aggregate gross proceeds of Cdn\$136.7 million (approximately US\$106 million). Given the strong investor interest, the December 2021 Offering was twice-upsize, first by approximately 42% and then subsequently by an incremental 60%. As part of the December 2021 Offering, funds and accounts managed by BlackRock purchased 4,372,766 Common Shares for an aggregate subscription price of approximately Cdn\$51.4 million. Additionally, BlackRock purchased 1,093,191 Common Shares at the same offering price on a secondary basis from the largest shareholder of the Company, A10 Fund, for an aggregate purchase price to the A10 Fund of approximately Cdn\$12.8 million.

On December 2, 2021, the Company filed a short form base shelf prospectus (the “Canadian Base Shelf”) to qualify the distribution, from time to time over a 25-month period, of up to US\$250 million in Common Shares, debt securities, subscription receipts, or warrants, in amounts, at prices, and on terms to be determined based on market conditions at the time of sale and set forth in an accompanying prospectus supplement. The Canadian Base Shelf was filed in each province and territory of Canada, other than the Province of Quebec. The Company also filed a corresponding shelf registration statement on Form F-10 (the “U.S. Base Shelf”) with the U.S. Securities and Exchange Commission (the “SEC”) under the Multijurisdictional Disclosure System.

On October 5, 2021, the Company announced the signing of a binding term sheet (the “LGES Term Sheet”) for offtake arrangements on a “take or pay” basis (the “LGES Offtake”) for the sale of Battery Grade Green and Sustainable Lithium to LG Energy Solution, Ltd (“LGES”), one of the world’s largest manufacturers of advanced lithium-ion batteries for electric vehicles. The six-year LGES Offtake for Battery Grade Green and Sustainable Lithium is to scale from 60,000 tonnes per year in 2023 to 100,000 tonnes per year from 2024 to 2027 subject to the Company and LGES executing mutually acceptable definitive documentation to implement the LGES Offtake. The Company and LGES also agreed to negotiate each year, an additional optional supply of Battery Grade Green and Sustainable Lithium, not otherwise committed in other Sigma Lithium offtake arrangements. The purchase price for the Battery Grade Green and Sustainable Lithium under the LGES Offtake will be linked to market prices for the high purity lithium hydroxide during the term.

On September 13, 2021, the Company completed its dual-listing process and the Common Shares began trading in the U.S. on the Nasdaq. The Company is pleased to report that its corporate governance policies and the make up of the Board are compliant with required Nasdaq and SEC governance standards, including Nasdaq’s diversity requirement for a company’s board to have at least one female director and at least one additional diverse director.

On September 8, 2021, the Company announced the appointment of Ana Cabral-Gardner as Co-CEO, joining Calvyn Gardner, who was previously CEO and also became Co-CEO as well as the new management appointment of Felipe Peres as Chief Financial Officer. The Company also announced the constitution of an ESG Board Committee resulting from the program intended to achieve net zero emissions by 2024 and the issuance of performance-based RSUs to the Co-CEOs.

On June 29, 2021, the Company held the annual and special meeting of the Company’s shareholders. At such meeting, the Company’s shareholders approved: (i) the election of Gary Litwack (independent), Frederico Marques (independent), Calvyn Gardner, Marcelo Paiva, and Ana Cabral-Gardner as the directors of the Company; (ii) the re-appointment of KPMG LLP as the auditors of the Company for the financial year ended December 31, 2021; (iii) a special resolution authorizing and approving the amendment to the Company’s articles to effect the change of the Company’s name from “Sigma Lithium Resources Corporation” to “Sigma Lithium Corporation”; (iv) an ordinary resolution approving the repeal and replacement of the existing by-laws of the Company with a new By-Law No. 1; and (v) a special resolution approving the amendment to the articles of the Company to effect a consolidation of the Common Shares on the basis of one (1) post-consolidation common share for up to ten (10) pre-consolidation common shares, as determined by the Board at its sole discretion (no further action has been taken to date related to such share consolidation).

On February 12, 2021, the Company announced the closing of a non-brokered private placement (the “February 2021 Offering”) of 9,545,455 Common Shares at a price of Cdn\$4.40 per Common Share for aggregate gross

proceeds of Cdn\$42.0 million. The size of the February 2021 Offering reflected a significant upsizing due to strong institutional investor demand.

On December 7, 2020, the Company announced that it received a binding commitment for a Cdn\$18,750,000 (R\$75,000,000) credit line (“Development Credit Line”) from Banco de Desenvolvimento de Minas Gerais. The closing of the Development Credit Line is subject to the negotiation of definitive documentation and other customary closing conditions, followed by final credit approval for draw-downs.

On September 25, 2020, the Company announced a management appointment and updates to the Board. The Company appointed Maria Jose Salum as its Chief Sustainability Officer. The Company also announced the constitution of a Technical Board Committee with Wes Roberts and Vicente Lobo as the Co-Chairs. Ana Cabral-Gardner was appointed as Co-Chairman of the Board, joining Calvyn Gardner, who was previously Chairman and also became Co-Chairman of the Board.

On August 13, 2020, the Company announced the closing of a non-brokered private placement (the “2020 Offering”) of 8,250,200 Common Shares at a price of Cdn\$2.15 per Common Share for aggregate gross proceeds of US\$13.3 million (approximately Cdn\$17.8 million). The size of the 2020 Offering reflected an upsizing by one-third from the original intended amount announced on July 27, 2020, due to strong institutional investor demand.

On June 29, 2020, the Company announced the signing of a term sheet for a US\$45 million senior secured project finance facility (the “Bank Project Finance Facility”) to be led by Societe Generale. The consummation of the Bank Project Finance Facility remains subject to completion of due diligence, credit approval, the negotiation of definitive documentation and other customary closing conditions.

A10 Group has supported the Company’s liquidity needs without additional equity incentives on two occasions, both in connection with then challenging capital markets conditions:

- 1) On November 29, 2019, in order to fund its working capital, the Company entered into an agreement with the A10 Group providing for a Cdn\$6.6 million (US\$5.0 million) revolving credit facility (the “Unsecured Credit Facility Agreement”), bearing interest at 11% per annum, calculated from the day funds were drawn. The Unsecured Credit Facility Agreement did not include any warrants or other incentives. It had a one-year term, which was the maturity for all funds drawn, and allowed funding for lender-approved expenses. Its term was extended twice by A10 Group, for both principal and accrued interest, without any penalties or additional charges until September 2021, when it was repaid in full.
- 2) During March of 2018, A10 Group, provided several bridge loans to the Company in the aggregate amount of R\$1,747,600 (US\$595,932) with interest calculated pursuant to the CDI (Brazilian Interbank Rate) plus a 4% per year spread, accrued from the date of each disbursement. The bridge loans had due dates on April 30 and May 30, 2018 and were automatically renewable on a rolling basis. On July 18, 2018, the loans were repaid in full.

On April 5, 2019, the Company announced the execution of a binding heads of agreement (the “Mitsui HOA”) with Mitsui & Co. Ltd. (“Mitsui”). In accordance with the Mitsui HOA, Mitsui would prepay the Company the amount of US\$30,000,000 for Battery Grade Green and Sustainable Lithium supply of up to 80,000 tonnes annually over six years, extendable for another five years at the option of Mitsui. The initial tranche payment of US\$3,000,000 was received by the Company on April 4, 2019 and recorded as deferred revenue. The consummation of the transactions contemplated by the Mitsui HOA remain subject to the negotiation of definitive documentation (for either the prepayment arrangement of another mutually acceptable role for Mitsui, depending upon whether Sigma ultimately determines to accept the balance of the prepayment) and other customary conditions.

On January 9, 2019, the Company announced an increase in mineral resource at the Project, and certain other updates to the Board and management of the Company.

On April 30, 2018, the Sigma Merger Transaction was completed. In connection with the Sigma Merger Transaction, Sigma Holdings completed a \$20,040,000 private placement offering of subscription receipts, which were exchanged for pre-consolidation Common Shares upon the implementation of the Sigma Merger Transaction.

DESCRIPTION OF THE BUSINESS

Overview

Sigma is a Canadian mineral processing and development company, focused on advancing, with an environmental sustainability directed strategy, one of the largest hardrock lithium projects in the Americas – its wholly-owned Grota do Cirilo Project, located in Minas Gerais in Brazil – with the goal of participating in the rapidly expanding lithium-ion battery supply chain for EVs.

In order to secure a leading position supplying environmentally sustainable lithium for the next generation of EV supply chains, the Company has adhered consistently to the highest principles and standards of ESG practices, which were established as part of its core purpose at inception in 2012. As a result, the Company has undertaken an ESG-centric management strategy, whereby its environmental and social sustainability purposes determine its strategic steps.

Sigma's Common Shares are listed and trade on the TSXV and Nasdaq under the symbol *SGML*.

Lithium Properties

The Project comprises four properties owned by Sigma Brazil: Grota do Cirilo (the area of the Project where the First Mine and Second Mine are located), and the Sao Jose, Genipapo and Santa Clara properties. The Project consists of 27 mineral rights (which include mining concessions, applications for mining concessions, exploration authorizations and applications for mineral exploration authorizations) spread over 191 km². Within the Project area there are nine past producing lithium mines and 11 first-priority development targets.

The Project is located in the northeastern part of the state of Minas Gerais, in the municipalities of Araçuaí and Itinga, approximately 25 km east of the town of Araçuaí and 600 km northeast of Belo Horizonte, the state capital. The Project is approximately 500km from the Port of Ilheus, from where samples have been shipped for product certification and testing and from where future produced concentrates are planned to be shipped.

Current Status of the Project

The Project will be vertically integrated, as the Company's own mining operations will supply mineralized spodumene material with exceptional mineralogy to its lithium production and processing plant (the "Production Plant"). The Production Plant is designed to be environmentally friendly, fully automated and digitally controlled. It will separate, purify and concentrate the spodumene in an environmentally friendly process to produce Battery Grade Green and Sustainable Lithium, engineered to the specifications of the Company's customers in the rapidly expanding lithium-ion battery supply chain for EVs.

The Production Plant is planned to have two separate production lines with similar processing flowsheets, which are projected to share certain elements of a common plant infrastructure. The first phase of production for the Project ("Production Phase 1") is the subject of the feasibility study analysis included in the Updated Feasibility Study Report. It will initially utilize feedstock spodumene from the Project's Xuxa deposit (the "First Mine"), mining an average of 1.50 million tonnes per year during approximately 9.2 years of projected mine life. Its detailed design has been completed and the capital expenditures have been confirmed with quotes by each respective supplier to reach FEL-3 stage of precision. Based on the Updated Feasibility Study Report, the Company plans to produce 220,000 tonnes per year of Battery Grade Green and Sustainable Lithium, equivalent to 33,000 tonnes per year of lithium carbonate equivalent ("LCE"), in Production Phase 1 and expects to be amongst the world's lowest cost producers.

The next production phase of the Project ("Production Phase 2") has been the subject of the preliminary economic

assessment (the “PEA”) included in the Updated Feasibility Study Report, and could potentially increase production utilizing feedstock from the Project’s Barreiro deposit (the “Second Mine”). GE21, based on the Mineral Resource, prepared the PEA for the Second Mine. The Company completed the PEA with the objective of potentially responding to a significant increase in demand from its customers and solidifying its unique market position as a future supplier of Battery Grade Green and Sustainable Lithium. As reflected in the Updated Feasibility Study Report, the PEA projects significant economies of scale for Production Phase 2 (if warranted, following completion of the ongoing pre-feasibility study and a feasibility study), resulting from the low capital expenditure (“CAPEX”) of adding a second environmentally-friendly lithium processing line and vertically integrating it to the Project, mining an average of 1.68 million tonnes (“Mt”) per year during approximately 12.7 years of projected mine life.

The PEA is preliminary in nature and includes inferred mineral resources that are too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the PEA will be realized. It is noted that the Company has not yet made a production decision in respect of the Second Mine. The Company expects that it will assess the results of a pre-feasibility study and a feasibility study before making a production decision in respect of the Second Mine. All statements regarding mine development or production in respect of the Second Mine in this AIF are expressly qualified by this statement.

The Company also commenced a further pre-feasibility study for Production Phase 2 contemplating the addition of a second processing line with similar capacity of 220,000 tonnes per year of Battery Grade Green and Sustainable Lithium from Production Phase 1 (once onstream in 2023), therefore potentially doubling the Project total capacity to 440,000 tonnes per year (66,000 tonnes per year of LCE) of Battery Grade Green and Sustainable Lithium. Production Phase 2 is expected to benefit from economies of scale by utilizing most of the Production Plant infrastructure established for Production Phase 1.

This approach is the result of a thorough review of the Company’s strategic priorities in light of the significant change in lithium market conditions and aims to significantly increase both the scale of the Project and its commercial and market importance on three fronts: future production, scale of mineral resources and of mineral reserves, all the while maintaining Battery Grade Green and Sustainable Lithium products and the Company’s strategic leadership in environmental, social and governance (“ESG”) in the lithium supply chain.

The Company is accelerating its site exploration activities for the Project with the goal of increasing the Project mine life or potentially increasing production by either expanding production levels in Production Phase 2, if warranted after completing the ongoing pre-feasibility study (and feasibility study) or studying the potential of a third production expansion phase (“Production Phase 3”).

The Production Plant has a lithium processing design that includes DMS technology which does not utilize hazardous chemicals in the separation and purification of the lithium. The Company will apply a customized algorithm developed to contemplate the specificities of the mineralogy in each of the Company’s mines to digitally control the dense media levels in the Production Plant.

In addition, the Production Plant will be 100% powered by clean energy and it will use water efficiently, while preserving land ecosystems. As a result of state-of-the-art recirculation and tailings management circuits:

- the tailings will be dry stacked (and therefore will not create an earth-fill embankment tailings dam). Because the DMS technology of the Production Plant does not utilize hazardous chemicals, the dry-stacked tailings materials could also be entirely recyclable as feed for ancillary industries, such as ceramics; and
- the water utilized in the production process is 100% recirculated to the Production Plant. Approximately 10% of the water is either lost or evaporates, with 90% of water consumed in the production process reutilized back into the Production Plant, achieving a high level of water efficiency.

Since the fourth quarter of 2018, Sigma Brazil has been producing low carbon high purity lithium concentrate at an on-site Demonstration Plant and has shipped samples to potential customers for product certification and testing. This demonstration production has been an important part of the successful commercial strategy of the Company

for its Battery Grade Green and Sustainable Lithium.

The Company expects to submit a net zero execution plan to achieve its emission reduction targets after its first year of full operations, expected to be in 2024, partly as a result of its strategic decision to decrease emissions through the introduction of biofuels for haulage trucks and other heavy equipment of the mining fleet starting in the second year of production. The Company also plans to pursue generation of carbon credits through “in-setting” strategies such as preserving water streams and developing the agroforestry systems within its regional ecosystem. As part of that strategy, the Company is studying future partnerships with generators of renewable power for self-generation of the electricity required to power the Production Plant.

In order to secure a leading position supplying Battery Grade Green and Sustainable Lithium for the next generation of EV supply chains, the Company has adhered consistently to the highest principles and standards of ESG practices, which were established as part of its core purpose at inception in 2012. As a result, the Company has undertaken an ESG-centric management strategy, whereby its environmental and social sustainability purposes determine its strategic steps.

The Company commissioned an assessment of its net carbon footprint, conducting an independent ISO 14000 compliant audit of its life cycle analysis together with an independent expert validation of its carbon credits generated by its internal preservation, reforestation, and compensation forestry programs as well as its renewables generation plans. The Company expects to complete this workstream during 2022.

Operations Overview

Highlights of Project Development and Operations

The Company is pleased to report significant advancement on construction of the Production Plant, establishing operational readiness, and supporting ongoing operations:

- Completed earthworks necessary for construction of the foundations for the Production Plant on budget and on schedule.
- Commissioning forecasted to begin at the end of 2022.

On December 6, 2021, the Company announced the commencement of construction on site to build the foundation and infrastructure installation for its greentech DMS Production Plant. The strategy adopted for the construction phase of the Production Plant was to divide the scope into the following workstreams, all currently in progress:

- Sitewide bulk earthworks encompassing site leveling, protective drainage, preparation of access roads, paving, fencing and gating for all of the site’s installations;
- Civil works involving direct foundations for equipment, structures, and buildings;
- Relocation of a 138kV transmission line that overlays the north pit of the Project;
- Construction of a high voltage substation to provide the Project site with connection to the CEMIG (the relevant Brazilian power authority) grid.
- Electromechanical assembly of raw water supply piping and installations and equipment builds including tanks assembled at this site and installation of electrical equipment and instrumentation; and
- Commissioning activities and pre-operation to support the Production Plant operation start-up.

The earthworks for construction of the foundations for the Production Plant are complete. The construction team is currently focused on the construction of the First Mine protective drainage (channels and pipes) and construction of the bypass of the municipal road around the Project site. These two workstreams are expected to be concluded as planned on schedule and budget.

The ROM pad construction is expected to commence in April 2022, and it will be followed by the construction of the haul road linking the First Mine to the Production Plant and widening of the municipal access road.

There are currently a total of 73 heavy construction units on site, including: mobile concrete mixer trucks, hydraulic excavators, backhoe loaders, track and tire tractors, crawler tractors, road rollers, dump trucks, water trucks, pickup trucks and utility and ambulance vehicles.

Detailed engineering of the EPCM for the Production Plant (including civil works) has been led by Primero and has been progressing as indicated in the two tables below. The Company prioritized the engineering completion of the following aspects of the Production Plant: process design, mechanical, structural/foundations and concrete. This sequencing had two main objectives:

- further refining the flowsheet of the DMS circuit; and
- conducting trade-off analysis for critical equipment, such as the DMS ultrafines circuits, the environmental dry-stacking, and water recirculation circuits.

Detailed Engineering Progress Summary

Discipline	Progress
Concrete	36%
Process Design	71%
Mechanical	52%
Structural	34%
Electrical & Instruments	27%
Platework	20%
Piping	5%
Controls	2%

Detailed Engineering Progress Across Key Disciplines

Key Discipline	Detailed Progress Activities
<i>Mechanical (52% complete)</i>	<ul style="list-style-type: none"> • Progressed cast in vault chutes ready • Continued with general platework 2D drawings across all areas • Coarse Ore Bin platework 2D drawing progressed • Coarse Ore Bin Discharge Chute drawing progressed • Scalping screening 2D platework drawings progressed • Secondary and Tertiary Crusher 2D platework drawings progressed • Feedbox calculations • ROM Bin calculations • Line sizing and P&ID mark-ups • Wet plant area platework drawings (DMS Sizing Area, Primary DMS)
<i>Process (71% complete)</i>	<ul style="list-style-type: none"> • Continued Process Control and Process Control Tables • HAZOP Actions • Thickener test complete on a 25m diameter unit • Belt filter test work complete choosing a 25m² unit • Dry plant (Area 200) P&IDs • Wet plant area P&IDs
<i>Electrical / Instrumentation / Controls (27% complete)</i>	<ul style="list-style-type: none"> • Remote IO panel • Crushing Switchroom Equipment & Cables List • DMS Switchroom Equipment & Cables List • DMS MCC 2 Schematics AFC



Civil / Structural (36% complete)	<ul style="list-style-type: none"> • ROM Wall concrete design • Secondary and Tertiary Crusher Vault drawings • Primary Crusher steelwork and vault 2D drawings • Scalping Screening concrete 2D drawings • Engineering continued for the dynamic analysis of the Secondary and Tertiary Crusher steelwork • Continue feed bin preparation area structural engineering and foundation design confirmation • Continued stacker concrete design • Started Primary DMS footing design
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Production Plant EPCM

A detailed outline of the engineering and design work breakdown between Promon and Primero during the project execution phase is outlined below.

The work breakdown outlining the division of engineering and design between Promon and Primero during the project execution stage is to be as follows:

DIVISION OF RESPONSIBILITIES			
WBS* ITEM	AREA	DESCRIPTION	DETAIL ENGINEERING
100	SITE WIDE	Bulk Earthworks	PROMON
200	CRUSHNG	Civil/Concrete	PRIMERO
		Structural Steel	PRIMERO
		Mechanical Equipment	PRIMERO
		Piping	PRIMERO
		Platework	PRIMERO
		Elect, Instr & Control	PRIMERO
		Communications	PROMON
300	WET PLANT	Civil/Concrete	PRIMERO
		Structural Steel	PRIMERO
		Mechanical Equipment	PRIMERO
		Piping	PRIMERO
		Platework	PRIMERO
		Elect, Instr & Control	PRIMERO
		Communications	PROMON
600	INFRASTRUCTURE	Power/Water/Buildings/Etc.	PROMON
700	MINING	Mining General	MINING CONTRACTOR
		Mining Facilities	MINING CONTRACTOR

**Work Breakdown Structure*

Detailed engineering is completed in collaboration of Promon and Primero. The detailed engineering is progressing according to priority and both companies started issuing construction drawings according to the schedule baseline.

Procurement services considered under the EPCM contractor's scope encompass the phases of supplier list definition (together with the Company): request for quotation, tabulation of commercial proposals, commercial negotiations and issuance of purchase recommendation, kick-off meeting with the chosen supplier, expediting of supplier documentation during the project period and management of the company contracted by the Company expediting and inspecting the supplies and receiving on the field, as detailed in the activities below.

The following items describe the activities to be developed by the Company, in conjunction with Promon's construction and safety management team, throughout the execution of construction:

- manage the execution and certify the quality of the execution of the project;
- analyze, critique and propose containment, prevention and correction measures, continuously and proactively, for the management of the entire implementation of the project (covering all aspects of health & safety, environment, quality, schedule, costs and scope);
- manage the expediting of supply processes, to be executed by a specialized company to be hired by the Company;
- manage the quality of project implementation;
- coordination of commissioning activities, together with assembly contractors and equipment and systems suppliers, testing and delivery of the project; and
- manage, supervise and enforce labor, social security and tax standards and the Company's and contractor's specific corporate standards including: occupational safety and health – health & safety, environmental, technical, and other standards.

Commissioning and Startup

Primero's scope includes the project's future commissioning and startup management, with the support of the Company's operational team, equipment suppliers and assembler, which will include the following activities:

- preparation of commissioning and testing procedures of the implemented facilities and systems;
- monitoring of commissioning tests and analysis of the respective issued reports;
- identification, registration and communication of non-conformities related to commissioning and tests procedures;
- monitoring and updating the backlog;
- control of commissioning test reports issuance;
- expediting, together with the contractors, the sending of the data-books, available for the pre-operational phase; and
- coordination of interfaces between contractors.

Promon will assist in the commissioning of the Production Plant.

Capex Estimation (IPA Front End Loading FEL-3)

Promon has concluded a comprehensive CAPEX estimation at FEL-3 level of confidence for the Production Plant (with FEED documentation), including overall planning of the project, 3D models, the bulk site earthworks and site layouts. As part of this process, Promon developed the following items: (i) ROM pad, including retaining wall structures; (ii) settlement ponds; (iii) site wide bulk earthworks, including the following areas: greentech process circuits and infrastructure and water intake; and (iv) general site drainage.

Mining

The responsibility for the development of detailed engineering of mining related infrastructure will be divided between the mining engineering subconsultant and mining contractor, who will also be responsible for haul roads design.

Promon is to complement this scope, developing the engineering and design of: (i) mining general - access roads; (ii) mining infrastructure and services - fire hydrants; and (iii) fuels storage and distribution.

Pre-Construction Outlook for the First Mine (Production Phase 1)

The First Mine will supply 100% of the feedstock for the Production Plant during Production Phase 1, creating a fully integrated and low-cost operation. The Company and GE21 have completed a final ultimate pit mine design for the First Mine to supply the Production Plant for approximately nine years, potentially integrating with an eventual Second Mine (should a feasibility study so warrant) as the feedstock for the production of Battery Grade Green and Sustainable Lithium.

The Company has successfully completed several critical workstreams involved in the pre-construction of the First Mine within the scheduled and budgeted parameters. This includes all activities required for the geotechnical validation at detailed engineering level, as well as critical hydrogeological analysis and validation (including the installation of 12 piezometers for ongoing monitoring).

The Company has finalized the mining plan with two pit layouts (North and South Xuxa pits) including preparation of detailed mine production sequencing.

These validations at detailed engineering confidence levels were initiated as a result of the Company's ESG-centered strategy. A key element of the environmental strategy for Production Phase 1, as detailed in the Updated Feasibility Study Report, was the decision to open the First Mine as two separate pits to preserve the Piauí river's seasonal "stream" and its surrounding ecosystems (collectively, the "Piauí"). This decision was a result of the Piauí's pivotal role in providing the only source of freshwater for the surrounding communities for four to five months of the year during the rainy season (the Project is located within a semi-arid region with extended dry season).

The following workstreams of the pre-construction for the First Mine have been completed:

- Completed 100% of geotechnical workstreams and refined North and South pit designs and pit wall slopes of the First Mine. Completed 100% of geotechnical modeling and analysis. All planned additional geotechnical holes were successfully drilled with core orientations targeting all wall orientations (i.e. hanging wall, end walls, and footwall).
- The Company, GE21 and MDGEO completed 100% of hydrogeological workstreams. The Company decided to conduct a hydrogeology detailed assessment and complete a model of groundwater pathways to increase confidence that, in the scenario of climate change substantially altering rainfall patterns in the region (increasing seasonal water flows at the Piauí), the Company would be equipped with information to determine the most suitable pit dewatering methodology. Piezometers were installed for ongoing analysis of data for subsequent geo-hydrogeological modelling during the first year.
- The Company and GE21 have completed a final and ultimate mine design for the First Mine. It has the benefit of enhancing the life cycle analysis of the Project by substantially decreasing its carbon footprint by: (i) decreasing the vegetation suppression of trees in the construction of the pit to less than 50 hectares; and (ii) the segregation of mine waste piles and processed tailings with the goal of future recycling as feed for ancillary industries, promoting a circular economy.

The following pre-construction activities have been concluded for the First Mine:

- Completed the strategic monthly mining sequencing plan for the first three years of the life of mine, then quarterly for year four and annually for the remaining years.
- Completed the design of final pit (with final operating parameters: berm, ramp, ultimate wall slope angles).

- Developed a comprehensive grade control program utilizing geostatistical methods to ensure feed grades are maintained within the expected range. The proposed grade control system will be designed to minimize schist waste rock dilution with the pegmatite ore recovery in pit.
- Finalized the waste piles design.
- Designed the ROM pad for Production Phase 1 together with Promon.

Ongoing discussions regarding mine operation costs (including capital and operational expenditures) with potential suppliers that have submitted proposals are ongoing and suppliers should be selected in the coming months.

Preliminary Economic Assessment, Pre-Feasibility and Feasibility Studies for Increased Scale in Production Phase 2

The Company continues to advance multiple Project workstreams in geology, geotechnical, metallurgical, environmental and regulatory permitting with the objective of preparing for Production Phase 2 after 2023. The Company completed the PEA for the Second Mine and Production Phase 2, filing the Updated Feasibility Study Report on November 22, 2021. The PEA contemplated utilizing the spodumene feed from the Second Mine with the objective of significantly increasing production.

The Company has engaged SGS, Primero and GE21 to build on the results of the PEA and conduct pre-feasibility and feasibility studies for Production Phase 2, adding to the Production Plant a second similar DMS processing line with capacity of 220,000 tonnes per year (33,000 LCE) of Battery Grade Green and Sustainable Lithium. The results of the various workstreams are planned to be completed in stages. Following the PEA, the pre-feasibility study is to be completed in the second quarter of 2022.

The PEA demonstrated the significant cost benefit of vertically integrating a second production line and utilizing spodumene feed from the Second Mine, potentially mining an average of 1.68Mt per year during a 12.7 year mine life.

- The Second Mine is believed to be one of the Project's largest deposits. It is a high-purity, high-grade lithium deposit, with estimated 19.58Mt of measured and indicated mineral resources at 1.43% Li₂O and 1.76Mt of inferred mineral resources at 1.45% Li₂O suitable for open pit mining.
- Additional drilling continues, seeking to both increase the mineral resource and to strengthen the geological data for the mineral resource model.

GE21, based on the mineral resource, prepared the PEA for the Second Mine. The PEA is preliminary in nature and includes inferred mineral resources that are too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the PEA will be realized. It is noted that the Company has not yet made a production decision in respect of the Second Mine. The Company expects that it will assess the results of a pre-feasibility study and a feasibility study before making a production decision in respect of the Second Mine. All statements regarding mine development or production in respect of the Second Mine in this AIF are expressly qualified by this statement.

The Company and Primero completed all the metallurgical and variability test work at SGS laboratories with the aim of customizing a flowsheet for the processing line of Production Phase 2 with the Second Mine.

- Completed pilot scale DMS metallurgical testing, which achieved approximately 60% Li₂O recovery producing a battery grade concentrate of 6.11% Li₂O.
- The processing and metallurgy tests achieved good lithium recoveries in an environmentally friendly DMS plant, with similar flowsheet (and capital costs) to the first production line, without requiring a more capital-intensive and less environmentally friendly flotation process.
- These DMS recoveries are a result of the Second Mine having a similar exceptional mineralization to the First Mine.

The Company completed all field work for the preparation of a Second Mine pre-feasibility study, including geotechnical drilling and hydrogeology test work. Following the completion of the additional drilling program, GE21 will complete the mining plan, geotechnical program and modelling of the Second Mine. The field work required for the hydrogeological section of the pre-feasibility study has been completed, as all groundwater level measurements have been completed.

The following further workstreams have been completed:

- further drilling campaigns and review of the block model developed by SGS;
- revision of the final pit based on the new block model;
- review of mine sequencing based on the new pit;
- fleet sizing review based on new sequencing;
- review of sterile pile in a location closer to the pit, reducing the average transport distance and costs; and
- mine operational expenditures review based on sequencing, fleet and waste pile.

Environmental Impact Study for Production Phase 2

The Company conducted detailed environmental impact studies for the fauna and the flora in the area of the Second Mine where the pit and waste piles will be located. These studies started in the dry season of the second quarter of 2020 and continued throughout the wet season during the third and fourth quarters of 2020. The environmental impact studies as well as a comprehensive environmental and social impact assessment report (“EIA/RIMA”) are ongoing by the Company.

The design proposed by the Company in the EIA/RIMA for the area directly impacted by the Project (the “Project Impacted Area”) has followed the Company’s ESG-centric approach to minimize distances by combining the minimization of greenhouse gas emissions of diesel in mining trucks with a minimization of semi-arid bush and vegetation suppression. Therefore, the Company contemplated the location of its processing tailings dry stacking piles in the vicinity of the Production Plant. As a result, the life cycle analysis of the Company is substantially enhanced, decreasing environmental and carbon footprints.

Once the EIA/RIMA is approved by regulators, a permit for the construction and installation of the Second Mine (LP/LI) as well as operation permits from environmental authorities will be required.

Exploration & Development of Other Deposits in the Project Area

The Company is accelerating its site exploration activities for the Project with the goal of potentially increasing the Project mine life at the expanded production levels of 440,000 tonnes of Battery Grade Green and Sustainable Lithium per year when including Production Phase 2 or potentially increasing production output through Production Phase 3 should EV penetration growth continue to accelerate, and lithium demand forecasts continue to demonstrate strength. The objective of the exploration program is to increase estimated mineral resources during the second quarter of 2022.

The Company’s dedicated geological teams and SGS Canada are carrying out an exploration program to determine the ultimate extent of the property mineralization and more rapidly increase the scale of estimated mineral resources, while demonstrating the uniqueness of the high-purity quality of its hard rock lithium mineralization.

- The Company has continued to conduct a campaign to diamond drill the remaining 10,000 meters (in a campaign targeting 20,000 meters) to further define current mineralized structures validated in the Updated Feasibility Study Report, increasing the scale of known deposits
- In addition, it has focused on five other targets, previously identified by historical mining and surface trenching

This geology workstream did not impact the Production Phase 1 pre-construction workstreams as it is managed by a separate geological team.

- Additionally, the Company's geological teams continued to evaluate the potential of known deposits that were not included in the mineral resource estimate in the Updated Feasibility Study Report. Two deposits with significant potential were targeted with diamond drilling campaigns
- The Company's focus for the 2021/2022 drilling campaign is an area with pegmatite surface exposure that returned promising results in the 2018-2019 drilling program. This regional exploration program, of drilling designed to test the target object was very positive, totaling 21,116m in 129 positive holes. An additional 10,000m of drilling will be made, totaling 31,116m by the end of 2022.
- During the campaign carried out on the Second Mine target to close the sections and confirm pegmatitic zones, 42 holes were drilled, totaling 6,750m and all holes were used for new mine sequencing studies and operating costs for the pre-feasibility study.
- Concurrent with the detailing work, the technical team carried out work to survey new pegmatite bodies through trenches, totaling 350m of trenches and 180m of intercepted pegmatite, opening two new bodies for future reverse circulation drilling.
- The NDC target (Nezinho do Chicão) target was the main objective of the drilling to date with approximately 1.5 km, so far 96 holes have been positive. The pegmatite remains open to the south, where it will be the result of future prospecting throughout 2022. The expectation is to start modeling and measuring the volume and average content of the body in the coming months.
- For the coming months, the detailing of another target called Murial is also planned. A total of 6,550m and a total of 44 holes to the north of the known pegmatite are planned.

Additional operational and business updates in respect of the Company and the Project are provided in the Company's most recently filed MD&A.

Royalties

The Brazilian government levies a royalty on mineral production: *Compensação Financeira pela Exploração de Recursos Minerais* ("CFEM"). Lithium production is subject to a 2% CFEM royalty, payable on the gross income from sales. The Project is also subject to two third-party royalties:

- an NSR royalty ("NSR Royalty") of 1% over the gross revenues of the Company from sales of minerals extracted from the Project less all taxes and costs incurred in the process of extraction, production, processing, treatment, transportation and commercialization of the products sold. The NSR Royalty can be "put by the owner" and "called by the Company" for US\$ 3.8 million, once the Company reaches commercial production of 40,000 tonnes of lithium concentrate
- another one that provides to the holder (currently LRC LP I) a royalty of 1% over the gross revenues of the Company from sales of minerals extracted from the Project, less taxes, returns and sale commissions ("Net Revenue Royalty")

Life Cycle Analysis and Net Zero Strategy

The Company has engaged Minviro Ltd. for the preparation of an independent ISO 14000 compliant life cycle assessment ("LCA"). The Company has engaged BeZero Carbon Ltd for the assessment of the Company's internal carbon offsetting projects ("in-setting projects") and advice on a portfolio of carbon additional in-setting projects and initiatives which the company may undertake in order to deliver its plans to make a robust net zero declaration by 2024.

The objectives of both workstreams are to understand the greenhouse gas emissions associated with the positive activities of carbon sequestering undertaken by the Company, link the results to the overall carbon footprint of existing and planned operations, create an in-setting and offsetting plan for residual emissions and provide an evidence-based assessment for the Company's net zero targets. The Company will take responsibility for all of its expected scope 1, 2, and 3 emissions, as is the expectation in today's international carbon accounting environment for maximizing the robustness and defensibility of the Company's strategy. Net zero targets will be undertaken in

two phases: (i) net zero by 2023: incorporating scope 3 emissions from mine to port of shipment in Brazil; and (ii) deliver its plans to make a robust net zero declaration by 2024: incorporating scope 3 emissions at port of delivery.

The study and the audit are contemplating its production route of Battery Grade Green and Sustainable Lithium with spodumene mining and lithium purification and concentration production in Brazil. The final ISO 14000 audit report is ongoing and will include: (i) a cradle to grave life cycle inventory and impact assessment to generate impact data for climate change, water consumption, land use, waste management and certain impact categories selected by the Company; and (ii) a complete contribution analysis outlining the major inputs contributing to the impact categories.

The Company expects to publish results from the LCA in the second quarter of 2022, including its carbon insetting and off-setting strategies. The Company plans to adapt to the most up to date norms in the industry, as this is an important pillar of the Company's plans to develop and maintain a net zero strategy, while the expectations and norms for offsetting and emissions reporting continue to evolve.

Environmental Licensing and Permitting

In August 2020, the Company filed at SUPPRI (the "Priority Projects Superintendence of Minas Gerais") a complementary environmental impact study and environmental mitigation plan (the "Supplementary EIA/RIMA") to the Company's current LP/LI Environmental License. The objective was to increase the scope area (*Area Diretamente Afetada*) of its current construction and installation license to include the south pit of the First Mine.

The Supplementary EIA/RIMA contemplates the simultaneous mining of both north and south pits of the First Mine, potentially also supplying the mineralized spodumene material for the first few years of Production Phase 2. Additionally, the Supplementary EIA/RIMA also includes a dry stacking tailings plan that separates rock waste and tailings piles in order to allow for the potential recycling of 100% of the tailings to ancillary industries, such as ceramics.

Subsequently, in May 2021, the Company filed at SUPPRI an update of the Supplementary EIA/RIMA. In November 2021, SUPPRI conducted the environmental site visit for the Supplementary EIA/RIMA. In January 2022, SUPPRI issued the final request for complementary information ("**Complementary Information Request**") which was fully responded to by the Company ("**Complementary Information Reply**") within the allotted period in March 2022.

The Complementary Information Reply included the submission to SUPPRI of the following environmental studies:

- Estudo Sismográfico (seismic study)
- Projeto de Drenagem de todo o sistema de lavra (drainage project for mining pit, when and if necessary)
- Medidas Drenagem Cava (measurement of the potential quantity of water to be drained in the mining pit, when and if necessary)
- Balanço Hídrico (water balance)
- Estudo Hidrogeológico (hydrogeology study)
- Programa de Educação Ambiental Cava Norte (program of environmental education – North Pit)
- Plano de Tráfego (updated traffic plan)
- Mapa Desvio Estrada Municipal (map and plan for deviation of municipal road)
- Relatório Campanhas de Monitoramento (monitoring campaigns report)
- Relação de Comunidades (itemization and description of each community affected)
- Programa de Monitoramento das Águas Superficiais (surface water monitoring program)
- Programa de Monitoramento das Águas Subterrâneas (underground water monitoring program)
- Informações Não Contempladas no PCA (additional information non-contemplated at PCA)
- Caracterização Hidrológica do Córrego Taquaral (hydrogeology study of Taquaral seasonal stream)
- Prospecção Espeleológica (report of any existing caves in the area)
- Plano de Reaproveitamento do Rejeito (tailings recycling plan)
- Drenagem Pilhas de Disposição de Rejeito/Estéril (drainage plan for tailings piles)
- Implicações Inventário Vegetação (vegetation inventory)

- Programa de Resgate de Espécies da Flora Ameaçadas e Endêmicas (program for rescue of eventual endangered species of vegetation)
- Licença de Pesca Científica (license for scientific fishing)
- Pontos de Monitoramento da Herpetofauna (monitoring points of reptile animals of the region)

The south pit of the First Mine is being designed to have the lowest possible environmental impact and greatest socioeconomic return. The simultaneous mining of the north pit and the south pit by the Company to feed the Production Plant will allow the municipality of Araçuaí (where the south pit is located) to receive royalties from mining (“CFEM”), previously restricted to the municipality of Itinga, where the north pit is located, spreading financial prosperity to both municipalities, meeting SDG # 16 (Peace, Justice and Strong Institutions).

The LP/LI Environmental License is required for construction and installation (which comprises pre-operation and commissioning of the production plant, including pre-stripping and all mining required for commissioning). An operating license (“LO”) is required for the commercial operations, when external sales of the products are conducted. The LO is can be granted once the construction and installation of the Project is completed as it follows a final inspection by SUPPRI of both First Mine and Commercial Plant. Therefore, as the Project is in construction the Company does not yet have an LO.

The Company obtained the required environmental licenses for both construction (“LP”) and installation and commissioning (“LI”) of the Production Plant from the environmental authority of the State of Minas Gerais (the “LP/LI Environmental License”), the Council of Environmental Policy (Conselho Estadual de Política Ambiental or “COPAM”) in Brazil. COPAM issued a dual LP and LI Certificate in June 2019 for a period of six years expiring on May 31, 2025. The LP/LI Environmental License permits the Company to build the First Mine and Production Plant and to install the plant, conduct trial mining, and testing and commissioning of the DMS beneficiation process of mineralized spodumene material into Battery Grade Green and Sustainable Lithium building a reserve stockpile for future sale.

The Company's mining easement request (“Servidão Mineral”) was published in the Official Gazette of the Federal Government on July 29, 2020. This is an important step towards obtaining the operational license (*Licença Operacional*, LO) required after commissioning for the Project to enter full scale Production Phase 1. It contemplates the mining and processing activities of the First Mine.

The Company has a definitive water usage license for the construction of the Production Plant, which was granted by ANA (Agência Nacional de Águas), the Federal Government’s water agency, in February 2019. The water usage license is valid for 10 years, which is expected to be sufficient for the life-of mine (LOM) requirements for mining and product processing from Production Phase 1, as currently planned by the Company. The water usage license received should also be sufficient to process lithium mineralized material at the planned rate of production of an expected 440,000 tonnes of Battery Grade Green and Sustainable Lithium as well as additional production phases contemplated, subject to confirmation by feasibility studies.

Surface Rights and Other Permitting

Certain surface rights in the Production Phase 1 area, the current primary focus of the Company’s activity, are held by two companies owned by the co-CEOs of the Company, Arqueana Empreendimentos e Participações S.A. (“Arqueana”) and Miazga Participações S.A. (“Miazga”). The Company has entered into right-of-way agreements with these companies to support its exploration and development activities within the Grota do Cirilo property, as well as with third-party surface owners in the Project area.

The Company has a mining easement (Servidão Mineral) with a total of 413.3 hectares and aims to cover the areas of waste and tailings piles, Production Plant, all access roads (internal), electrical substation, installation of fueling station and support structures. The Servidão Mineral was published in the Official Gazette of the Federal Government. It contemplates the mining and processing activities of the First Mine (ANM Process No. 824.692/1971).

The Company also obtained a key approval for Production Phase 2 plan with the Agência Nacional de Mineração (the “ANM”) approving its economic feasibility study (“Plano Econômico de Avaliação” - PAE). This approval advanced the Production Phase 2 permitting process to the mining concession request stage (“Requerimento de Concessão de Lavra”).

The Company holds approved economic mining plans (Plano de Aproveitamento Econômico or PAE) over the Xuxa, Barreiro, Lavra do Meio, Murial, and Maxixe deposits within the Grota do Cirilo property. The Brazilian government levies a royalty on mineral production: Compensação Financeira pela Exploração de Recursos Minerais (CFEM). Lithium production is subject to a 2.0% CFEM royalty, payable on the gross income from sales. The Xuxa Project is also subject to two third-party royalties, one on the net income from sales and the other on a net smelter return (NSR), of 1% each.

Specialized Skills and Knowledge

All aspects of the Company’s business require specialized skills and knowledge. Such skills and knowledge include the areas of geology, drilling, logistics planning and implementation of exploration programs as well as regulatory, finance and accounting. To date, the Company has been able to locate and retain such professionals from Australia, Brazil, Canada, Russia, South Africa and the UK, and believes it will be able to continue to do so. The Company relies upon its management, employees and various consultants for such expertise.

Mineral Price and Economic Cycles

The mining business is subject to mineral price cycles. The marketability of minerals and mineral concentrates is also affected by worldwide economic cycles. Lithium markets are affected by demands for lithium batteries and global economic conditions. Fluctuations in supply and demand in various regions throughout the world are common.

Economic Dependence

The Company’s business is dependent on the exploration, development and operation of lithium properties and the EV market. The Company does not expect to be dependent on any sole contract to sell the major part of the Company’s products or services or to purchase the major part of the Company’s requirements for goods, services or raw materials.

Bankruptcy and Similar Procedures

There are no bankruptcies, receivership or similar proceedings against the Company, nor is the Company aware of any such pending or threatened proceedings. The Company has not commenced any bankruptcy, receivership or similar proceedings during the Company’s history.

Reorganizations

There have been no corporate reorganizations of the Company within the three most recently completed financial years.

Foreign Operations

The Project exposes the Company to various degrees of political, economic and other risks and uncertainties. See [“Emerging Market Disclosure”](#) and [“Risk Factors”](#) below.

Employees

As at December 31, 2021, the Company had 126 employees and 127 part time and/or consultants working at various locations.

Environmental Protection

The current and future operations of the Company, including exploration and development activities, are subject to extensive laws and regulations governing environmental protection, employee health and safety, exploration, development, tenure, production, taxes, labour standards, occupational health, waste disposal, protection and

remediation of environment, reclamation, mine safety, toxic substances and other matters. Compliance with such laws and regulations can increase the costs of, and potentially delay planning, designing, drilling and developing the Company's mineral properties, including the Project.

Social and Environmental Policies

The Company aims to minimize the impact of its operations on both local communities and the environment. The Company is committed to developing the Project in a responsible and sustainable manner. The Company takes its responsibilities seriously to protect the environment, to conduct business based on high ethical standards (including a commitment to not engaging in business with any persons or entities subject to multinational sanction) and to make a positive difference in the communities in which it operates.

SUMMARY OF UPDATED FEASIBILITY STUDY REPORT

Set out below is an extract from the Updated Feasibility Study Report dated November 22, 2021, with an effective date of June 2, 2021, prepared by by Homero Delboni Jr, B.E., M.Eng.Sc., Ph.D., Guilherme Gomides Ferreira (MEng) MAIG, Marc-Antoine Laporte, P. Geo, Stephane Normandin, P. Eng., Jacques Parent, P.Eng., Jarrett Quinn, P.Eng., Porifrio Cabaleiro Rodriguez, MEng., and Jacqueline Wang, P.Eng. (the "FS Qualified Persons"). Reference should be made to the full text of the Updated Feasibility Study Report, which is the current technical report on the Project, is available on the Company's website at www.sigmalithium.ca or at www.sedar.com and is incorporated by reference into this AIF, for the detailed disclosure in respect of the Project. **All statements in the summary below are as of the effective date of the Updated Feasibility Study Report.**

PROPERTY DESCRIPTION AND LOCATION

The Project is located in Northeastern Minas Gerais State, in the municipalities of Araçuaí and Itinga, approximately 25 km east of the town of Araçuaí and 450 km northeast of Belo Horizonte.

The Project comprises four properties owned by Sigma Brazil and is divided into the Northern Complex (the Grota do Cirilo, Genipapo and Santa Clara properties) and the Southern Complex (the São José property).

The Project consists of 27 mineral rights, which include mining concessions, applications for mining concessions and exploration permits, spread over 191 km², which include nine past producing lithium mines and 11 first-priority exploration targets. Granted mining concessions are in good standing with the Brazilian authorities.

The surface rights in the Grota do Cirilo area, the current primary focus of activity, are held by two companies, Arqueana Minérios e Metais (Arqueana) and Miazga Participações S.A. (Miazga). Sigma Brazil has entered into two right-of-way agreements with these companies to support the Company's exploration and development activities within the Grota do Cirilo property, as well as third-party surface owners.

The Company has been granted a flow of 150 m³/h from the Jequitinhonha River for all months of the year for a period of 10 years, which is sufficient for life-of mine (LOM) requirements.

The Brazilian Government levies a Compensação Financeira pela Exploração de Recursos Minerais (CFEM) royalty on mineral production. Lithium production is subject to a 2.0% CFEM royalty, payable on the gross income from sales. The Project is subject to two third-party net smelter return (NSR) royalties of 1% each.

To the extent known to the FS Qualified Persons, there are no other significant factors and risks that may affect access, title, or the right or ability to perform work on the Project that have not been discussed in the Updated Feasibility Study Report.

ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

The Project is easily accessible from regional paved road BR-367, which runs through the northern part of the Project. Within the Project area, accessibility is provided by a network of maintained arterial and back country

service roads. A municipal airport services the town of Araçuaí. The closest major domestic airport is located at Montes Claros, 327 km west of Araçuaí.

The Eastern Brazil region is characterized by a dry, semi-arid and hot climate. It is expected that future mining operations could be conducted year-round. Exploration activities are year-round but can be interrupted by short-term rainfall events.

Mining operations have been previously conducted in the Project area. Existing infrastructure includes power supply and substation, an extensive office block equipped with internet and telephones, accommodation for 40 persons on site, dining hall and kitchen, workshop, on-site laboratory and sample storage building, warehouse and a large store, a fuel storage facility with pumping equipment, and a water pumping facility from the Jequitinhonha river with its reservoir. The main 138 kV transmission line from the Irape hydro power station runs through the northern part of the Project area. The town of Araçuaí can supply basic services. Other services must be sourced from Belo Horizonte or São Paulo.

The topography consists of gently rolling hills with less than 100 m difference in elevation. The Project area typically hosts thorn scrub and savannah. Much of the area has been cleared for agriculture. The primary source of water for this project is the Jequitinhonha River.

HISTORY

Exploration and mining activities prior to the Company's project interest were conducted by Companhia Estanífera do Brasil (CEBRAS), Arqueana Minérios e Metais (Arqueana), Tanex Resources plc (Tanex; a subsidiary of Sons of Gwalia Ltd (Sons of Gwalia)), and RI-X Mineração S.A. (RI-X). CEBRAS produced a tin/tantalite concentrate from open pit mines from 1957 to the 1980s. Arqueana operated small open pit mines from the 1980s to the 2000s, exploiting pegmatite and alluvial gravel material for tin and tantalite. Tanex Resources obtained a project interest from Arqueana, and undertook channel sampling, air-track, and reverse circulation (RC) drilling. The Project was subsequently returned to Arqueana. In 2012, RI-X obtained a controlling interest in Arqueana, and formed a new subsidiary company to Arqueana called Araçuaí Mineração whose name was later changed to Sigma Brazil. Sigma Brazil completed mapping, data compilation, a ground magnetic survey, channel sampling, and HQ core drilling. A heavy mineral separation (HMS) pilot plant was built during 2014–2015. Lithium-specific mining activities were conducted over at least five deposits in the Northern Complex, and four deposits in the Southern Complex.

In 2017, the Company purchased a DMS unit to produce a 6% Li₂O spodumene concentrate. The Company has completed ground reconnaissance, satellite image interpretation, geological mapping, channel and chip sampling, trenching, core drilling, Mineral Resource and Mineral Reserve estimation, and a feasibility study. The Company initially focused on a geological assessment of available field data to prioritize the 200 known pegmatites that occur on the various properties for future evaluation. A ranking table that highlighted pegmatite volume, mineralogy and Li₂O and Ta₂O₅ grade was established. Within the more prospective areas, the Company concentrated its activities on detailed geological and mineralogical mapping of historically mined pegmatites, in particular, on the larger pegmatites.

GEOLOGICAL SETTING AND MINERALIZATION

The pegmatites in the Project area are classified as lithium–cesium–tantalum or LCT types. The Project area lies in the Eastern Brazilian Pegmatite Province that encompasses a very large region of about 150,000 km², stretching from the state of Bahia to the state of Rio de Janeiro.

The pegmatite swarm is associated with the Neoproterozoic Araçuaí orogeny and has been divided into two main types: anatectic (directly formed from the partial melting of the country rock) or residual pegmatite (fluid rich silicate melts resulting from the fractional crystallization of a parent magma). The pegmatites in the Project area are interpreted to be residual pegmatites and are further classified as LCT types.

Pegmatite bodies are typically hosted in a grey biotite–quartz schist and form bodies that are generally concordant with the schist foliation but can also cross-cut foliation. The dikes are sub-horizontal to shallow-dipping sheeted tabular bodies, typically ranging in thickness from a few metres up to 40 m or more, and display a discontinuous,

thin, fine-grained chilled margin. Typical pegmatite mineralogy consists of microcline, quartz, spodumene, albite and muscovite. Spodumene typically comprises about 28–30% of the dike, microcline and albite around 30–35%, and white micas about 5–7%. Locally, feldspar and spodumenes crystals can reach as much as 10–20 cm in length. Tantalite, columbite and cassiterite can occur in association with albite and quartz. The primary lithium-bearing minerals are spodumene and petalite. Spodumene can theoretically contain as much as 3.73% Li, equivalent to 8.03% Li₂O, whereas petalite, can contain as much as 2.09% lithium, equivalent to 4.50% Li₂O.

Features of the pegmatites where mineral resources have been estimated include:

First Mine: foliation concordant, strikes northwest–southeast, dips to the southeast at 40° to 45°, and is not zoned. The strike length is 1,700 m, averages 12–13 m in thickness and has been drill tested to 259 m in depth. First Mine remains open to the west, east, and at depth

Second Mine: foliation discordant, strikes northeast–southwest, dips to the southeast at 30° to 35°, and is slightly zoned with a distinct spodumene zone as well as an albite zone. The pegmatite is about 600 m long (strike), 30–35 m wide, and 800 m along the dip direction. Second Mine remains open to the northeast and at depth

Murial: foliation discordant, strikes north–south, and has a variable westerly dip, ranging from 25° to 75°. The strike length is about 750 m, with a thickness of 15–20 m, and the down-dip dimension is 200 m. The pegmatite is zoned with a spodumene-rich intermediate zone and a central zone that contains both spodumene and petalite. The southern section of the pegmatite has lower lithium tenors than the northern portion of the dike. Murial remains open to the north, south, and at depth

Lavra do Meio: foliation concordant, strikes north–south, dips 75°–80° to the east. The strike length is 300 m with an average thickness of 12–15 m and a down-dip distance of 250 m. The pegmatite is zoned and contains both spodumene and petalite and remains open at depth.

EXPLORATION

The Company began working on the Project in June 2012, focusing on a geological assessment of available field data to prioritize the 200 known pegmatites that occur on the various properties for future evaluation. A ranking table that highlighted pegmatite volume, mineralogy and Li₂O and Ta₂O₅ grade was established.

Within the more prospective areas, the Company concentrated its activities on detailed geological and mineralogical mapping of historically mined pegmatites, in particular, on the larger pegmatites, First Mine and Second Mine. These dikes were channel sampled and subsequently assessed for their lithium, tantalum and cassiterite potential. This work was followed by bulk sampling and drilling. In the southern complex area, the Company's geologists have visited sites of historical workings, and undertaken reconnaissance mapping and sampling activities. The Lavra Grande, Samambaia, Ananias, Lavra do Ramom and Lavra Antiga pegmatites were mined for spodumene and heavy minerals, and in some cases gem-quality crystals were targeted. These pegmatites are considered to warrant additional work.

DRILLING

Drilling completed by the Company across the Project area consists of 255 core holes totalling 42,959.76 m. As at the date of the Updated Feasibility Study Report, this drilling has concentrated on the Grota do Cirilo pegmatites. Drilling was at HQ core size (63.5 mm core diameter) in order to recover enough material for metallurgical testing. Drill spacing is variable by pegmatite, but typically was at 50 m with wider spacing at the edges of the drill pattern. Drill orientations were tailored as practicable to the strike and dip of the individual pegmatites. The drill hole intercepts range in thickness from approximately 85–95% of true width to near true width of the mineralization.

All core was photographed. Drill hole collars were picked up in the field using a Real Time Kinematic (RTK) global positioning system (GPS) instrument with an average accuracy of 0.01 cm. All drill holes were down-hole surveyed by the Company's personnel using the Reflex EZ-Track and Reflex Gyro instruments. Calibrations of tools were completed in 2017 and 2018.

Sampling intervals were determined by the geologist, marked and tagged based on lithology and mineralization observations. The typical sampling length was 1 m but varied according to lithological contacts between the mineralized pegmatite and the host rock. In general, 1-2 m host rock samples were collected from each side that contacts the pegmatite.

The Company conducted HQ drilling programs in 2014, 2017, and 2018 on selected pegmatite targets. The drill programs have used industry-standard protocols that include core logging, core photography, core recovery measurements, and collar and downhole survey measurements. There are no drilling, sampling or recovery factors that could materially impact the accuracy and reliability of the results in any of the drill campaigns. Drill results from Grota do Cirilo property support the Mineral Resource estimates and the feasibility study.

SAMPLE PREPARATION, ANALYSES AND SECURITY

Sampling intervals were determined by the geologist, marked and tagged based on lithology and mineralization observations. The typical sampling length was 1 m but varied according to lithological contacts between the mineralized pegmatite and the host rock. In general, 1 m host rock samples were collected from each side that contacts the pegmatite.

All samples collected by Sigma Brazil during the course of the 2012–2018 exploration programs were sent to the SGS Geosol laboratory (SGS Geosol) located in the city of Belo Horizonte, Brazil. A portion of the 2017–2018 sample pulps were prepared by ALS Brazil Ltda. in Vespasiano, Brazil (ALS Vespasiano) and shipped to ALS Canada Inc. Chemex Laboratory (ALS Chemex) in North Vancouver, BC, Canada for cross check validation. A portion of the 2014 samples were resampled by the QP and sent for validation to the SGS Lakefield Laboratory (SGS Lakefield) in Lakefield Canada. All laboratories, including ALS Chemex, ALS Vespasiano, SGS Lakefield and SGS Geosol are ISO/IEC 17025 accredited. The SGS Geosol laboratory is ISO 14001 and 17025 accredited by the Standards Council. All laboratories used for the technical report are independent from Sigma Brazil and the Company and provide services to Sigma Brazil pursuant to arm's length service contracts.

Sample preparation conducted at SGS Geosol consisted of drying, crushing to 75% passing 3 mm using jaw crushers, and pulverizing to 95% passing 150 mesh (106 μm) using a ring and puck mill or a single component ring mill. In 2017, SGS Geosol performed 55-element analysis using sodium peroxide fusion followed by both inductively coupled plasma optical emission spectrometry (ICP-OES) and inductively coupled plasma mass spectrometry (ICP-MS) finish (SGS code ICM90A). This method uses 10 g of the pulp material and returns different detection limits for each element and includes a 10 ppm lower limit detection for Li and a 10,000 ppm upper limit detection for Li. In 2018, SGS Geosol used a 31-element analytical package using sodium peroxide fusion followed by both Inductively Coupled Plasma Atomic Emission Spectrometry (ICP-AES) and ICP-MS finish (SGS code ICP90A).

Sample preparation at ALS Vespasiano comprised drying, crushing to 70% passing 2 mm using jaw crushers, and pulverizing to 85% passing 200 mesh (75 μm) using a ring and puck mill or a single component ring mill. Lithium and boron were determined by sodium peroxide fusion followed by ICP-AES analysis (ALS Chemex method ME-ICP82b).

The 2017 witness samples collected on the 2014 drill core were analyzed at SGS Lakefield using sodium peroxide fusion followed by both ICP-OES and ICP-MS finish (SGS code ICM90A).

In addition to the laboratory quality assurance quality control (QA/QC) routinely implemented by SGS Geosol and ALS Chemex using pulp duplicate analysis, Sigma Brazil developed an internal QA/QC protocol for the First Mine drilling, which consisted of the insertion of analytical standard reference materials (standards), blanks and core duplicates on a systematic basis with the samples shipped to the analytical laboratories. In 2017, the Company also sent pulps from selected mineralized intersections to ALS Chemex for reanalysis. No pulp reanalysis was performed by the Company in 2013 and 2014. A total of 664 pulp samples from the 2017 First Mine drilling program were sent to ALS Vespasiano for third-party verification.

Sigma Brazil inserted standards in sample batches during the 2014 and 2017–2018 sampling programs. During the 2014 campaign, the standard used was made of locally sourced and prepared pegmatite and was not certified. Sigma Brazil inserted an uncertified standard into the sample stream for every 25 samples for a total of five

uncertified standards inserted. The 2017–2018 campaign used seven certified standards from African Mineral Standards (AMIS), an international supplier of certified reference materials. A total of 88 standards were inserted during the 2017 campaign and 315 were inserted during the 2018 campaign. Results were considered acceptable and no material accuracy issues were noted.

During the 2017–2018 campaign Sigma Brazil included insertion of analytical blanks in the sample series as part of their internal QA/QC protocol. The blank samples, which are made of fine silica powder provided by AMIS, are inserted an average of one for every 20 samples by the Sigma Brazil geologist and subsequently sent to SGS Geosol. The same procedure was used by Sigma Brazil for the 2014 drilling campaign. A total of 647 analytical blanks were analysed during the 2014 and 2017–2018 exploration programs. Results were considered acceptable and no material contamination issues were noted.

Sigma Brazil inserted core duplicates every 20th sample in the sample series as part of their internal QA/QC protocol. The sample duplicates correspond to a quarter HQ core from the sample left behind for reference, or a representative channel sample from the secondary channel cut parallel to the main channel. Assay results were considered acceptable between the two sample sets.

Bulk densities of the lithologies were measured by SGS Geosol by pycnometer measurement. Measurements were by lithology with special attention to the lithium bearing pegmatite. Separate measurements were made for the First Mine and Second Mine.

A total of 188 measurements were made on Xuxa core from 2017–2018. Of the 188 measurements, 24 were made on albite-altered pegmatite, 54 on schist, and 110 on lithium-bearing pegmatite. For Second Mine, a total of 401 measurements were made on core from the 2018 drill program. Of the 401 measurements, 82 were made on albite-altered pegmatite, 177 on schist, and 142 on lithium-bearing pegmatite. For Murial, a total of 134 measurements were made by the same method on core from the 2018 drill program. Of the 134 measurements, 32 were made on the albite-altered pegmatite, 58 on the schist and 44 on the lithium bearing pegmatite. For Lavra do Meio, a total of 51 measurement were made by the same method on core from the 2018 drill program. Of the 51 measurements, nine were made on the albite altered pegmatite, 22 on the schist and 20 on the lithium bearing pegmatite.

In 2017, SGS validated the exploration processes and core sampling procedures used by Sigma Brazil as part of an independent verification program. The QP concluded that the drill core handling, logging and sampling protocols are at conventional industry standard and conform to generally accept best practices. The chain of custody was followed by Sigma Brazil employees and the sample security procedure showed no flaws. The QP considers that the sample quality is good and that the samples are generally representative.

As additional QAQC, SMSA sent 664 samples from the 2017-2018 Grota do Cirillo drilling campaign to ALS Chemex for analysis using the protocol ME-ICP82b with sodium peroxide fusion. Preparation was done by ALS Vespasiano and the samples were subsequently shipped to Vancouver. The average Li concentration for the original was 6,411.4 ppm Li while the duplicate average was 6,475.9 ppm Li. This indicates a slight bias of the ALS Chemex duplicates which is well within the accepted margin of error.

Overall, the QP is confident that the system is appropriate for the collection of data suitable for a Mineral Resource estimate and can support Mineral Reserve estimates and mine planning.

DATA VERIFICATION

Visits to the Project site were conducted by Marc-Antoine Laporte, P.Geo., M.Sc. from September 11 to September 15, 2017, from July 11 to July 17, 2018 and from September 18 to 23, 2018. These visits enabled the QP to become familiar with the exploration methods used by Sigma Brazil, the field conditions, the position of the drill hole collars, the core storage and logging facilities and the different exploration targets.

The database for the Project was first transmitted to SGS by the Company on September 15, 2017 and was regularly updated by the Company's geologists. The database contains data for: collar locations; downhole surveys; lithologies and lithium assays. Upon importation of the data into the modelling and mineral resources estimation software (Genesis©), SGS conducted a second phase of data validation where all the major discrepancies were

removed from the database. Finally, SGS conducted random checks on approximately 5% of the assay certificates, to validate the assay values entered in the database.

Witness samples were taken from previously sampled intervals and the half cores were cut to quarter cores. A total of nine mineralized intervals were sampled to compare the average grade for the two different laboratories. The average for the original samples is 1.61 % Li_2O while the average for the control samples is 1.59 % Li_2O . The average grade difference is 0.02% which makes a relative difference of 1.28% between the original and the control samples.

Following the data verification process and QA/QC review, the QP is of the opinion that the sample preparation, analysis and QA/QC protocol used by Sigma Brazil for the Project follow generally accepted industry standards and that the Project data is of a sufficient quality. However, more attention should be put into the blank material selection in the future in order improve the similarity between the batches.

MINERAL PROCESSING AND METALLURGICAL TESTING

Drill core samples from the First Mine were processed at the SGS Lakefield facility in October 2018, while samples from Barreiro were tested between November 2020 and May 2021. Work conducted on the Xuxa samples included comminution, heavy liquid separation (HLS), REFLUX™ classifier, DMS and magnetic separation, while the Barreiro test work program included sample characterization, grindability testing and heavy liquid separation (HLS).

First Mine

Drill core samples were selected and combined into six variability (Var) samples for a test work program comprising of mineralogical analyses, grindability, HLS, REFLUX™ classifier, DMS, and magnetic separation testing. Flowsheets for lithium beneficiation were developed in conjunction with the testwork. The goal was to produce spodumene concentrate grading a minimum 6% Li_2O and maximum 1% Fe_2O_3 while maximizing lithium recovery.

Four HLS tests, at four crush sizes (15.9 mm, 12.5 mm, 9.5 mm, and 6.3 mm) were carried out on each of the six variability samples to evaluate the recovery. The 9.5 mm crush size was selected as the optimum crush size for DMS test work, as it results in the highest lithium recovery with minimal fines generation.

The DMS variability samples were each crushed to -9.5 mm and screened into four size fractions: coarse (-9.5/+6.3 mm), fines (-6.3/+1.7 mm), ultrafines (-1.7/+0.5 mm) and hypofines (-0.5 mm). The coarse, fines and ultrafines fractions of each variability sample were then processed separately for lithium beneficiation. The REFLUX™ classifier test work was carried out with a RC-100 unit for mica rejection from the fines and ultrafines fractions only. This test work was conducted at FLSmidth's Minerals Testing and Research Center in Utah, USA.

The coarse and fines REFLUX™ classifier underflow and ultrafines RC underflow of each variability sample were processed separately through DMS. The DMS concentrate from each of these fractions underwent a magnetic separation step at 10,000 Gauss.

The DMS test work flowsheet for the coarse and fines fractions included two passes through the DMS; the first at a lower specific gravity (SG) cut-point (~2.65) to reject silicate gangue and the second at a higher specific gravity (SG) cut-point (~2.90) to generate spodumene concentrate. The coarse DMS middlings were re-crushed to -3.3 mm and a two stage HLS test conducted. The ultrafines DMS test work flowsheet included only a single pass through the DMS circuit at a high SG cut-point (~2.90) to generate spodumene concentrate.

The DMS test results demonstrated that DMS was able to produce spodumene concentrate with >6% Li_2O in most of the tests, for an average recovery of 60.4%.

The Var 3 and Var 4 samples were determined to best represent the deposit.

Second Mine

Four variability and one composite sample were tested for Second Mine, with the goals of the program to provide preliminary process information on the metallurgical performance of mineralized material samples from the Second Mine. The test work program was developed based on previous test work and flowsheet developed for the First Mine. The aim of the test work program was to produce chemical grade spodumene concentrate (>6% Li₂O) with low iron content (<1% Fe₂O₃), while maximizing lithium recovery.

Two sets of HLS tests were undertaken. The first set was conducted using the Composite to test optimal crush size (i.e., top size of 15.9 mm, 12.5 mm, 10.0 mm, and 6.3 mm). HLS tests were then performed on each variability sample at the optimum crush size. The fine fraction (i.e., -0.5 mm) was screened out from each sub-sample and the oversize fraction was submitted for HLS testing. A crush size of -10 mm was determined to be optimal and variability HLS testing was undertaken at this crush size. Interpolated stage recoveries (6% Li₂O concentrate) for the four variability samples ranged from 56.0% to 77.3%.

In all four variability samples, HLS tests produced >6% Li₂O spodumene concentrate with low iron content (<1.0% Fe₂O₃).

MINERAL RESOURCE ESTIMATES

Mineral Resources for the Grota do Cirilo pegmatite were estimated using a computerised resource block model. Three-dimensional wireframe solids of the mineralisation were defined using drill hole Li₂O analytical data.

Data were composited to 1 m composite lengths, based on the north–south width of the block size defined for the resource block model. Compositing starts at the schist-pegmatite contact. No capping was applied on the analytical composite data. The First Mine models used a 6 m x 3 m x 5 m block size. Murial and Lavra do Meio models used a 5 m x 3 m x 5 m block size and the Second Mine model used a 5 m x 5 m x 5 m block. Average densities were applied to blocks, which varied by pegmatite, from 2.65 t/m³ at Lavra do Meio to 2.71 t/m³ at the Second Mine.

Variography was undertaken for First Mine, Second Mine and Lavra do Meio and the projection and Z-axis rescaling were done according to the mineralization orientation.

The grade interpolation for the First Mine, Second Mine and Lavra do Meio resource block models were completed using ordinary kriging (OK). The Murial model was estimated using an inverse distance weighting to the second power (ID2) methodology. The interpolation process was conducted using three successive passes with more inclusive search conditions from the first pass to the next until most blocks were interpolated, as follows:

Pass 1:

First Mine: search ellipsoid distance of 75 m (long axis) by 75 m (intermediate axis) and 25 m (short axis) with an orientation of 130° azimuth and -50° dip to the southeast; minimum of seven composites, a maximum of 15 composites and a minimum of three drill holes

Second Mine: search ellipsoid distance of 55 m (long axis) by 55 m (intermediate axis) and 25 m (short axis) with an orientation of 155° azimuth and -35° dip to the southeast; a minimum of seven composites, a maximum of 15 composites and a minimum of three drill holes

Murial: 75 m (long axis) by 75 m (intermediate axis) and 35 m (short axis) with an orientation of 95° azimuth and -80° dip to the west; minimum of seven composites, a maximum of 15 composites and a minimum of three drill holes

Lavra do Meio: 50 m (long axis) by 50 m (intermediate axis) and 25 m (short axis) with an orientation of 280° azimuth and -75° dip to the east; minimum of five composites, a maximum of 15 composites and a minimum of three drill holes

Pass 2:

First Mine: twice the search distance of the first pass; minimum of seven composites, a maximum of 15 composites and a minimum of three drill holes



Second Mine: twice the search distance of the first pass; a minimum of seven composites, a maximum of 15 composites and a minimum of three drill holes

Murial: twice the search distance of the first pass; minimum of seven composites, a maximum of 15 composites and a minimum of three drill holes

Lavra do Meio: twice the search distance of the first pass; minimum of five composites, a maximum of 15 composites and a minimum of three drill holes

Pass 3:

First Mine: 300 m (long axis) by 300 m (intermediate axis) by 100 m (short axis) with a minimum of seven composites, a maximum of 25 composites and a minimum of three drill holes

Second Mine: 250 m (long axis) by 250 m (intermediate axis) by 100 m (short axis) with a minimum of seven composites, a maximum of 25 composites and no minimum number of drill holes

Murial: 200 m (long axis) by 200 m (intermediate axis) by 100 m (short axis) with a minimum of seven composites, a maximum of 20 composites and no minimum number of drill holes

Lavra do Meio: 125 m (long axis) by 125 m (intermediate axis) by 75 m (short axis) with a minimum of five composites, a maximum of 15 composites and no minimum composites required per drill hole.

The estimates and models were validated by statistically comparing block model grades to the assay and composite grades, and by comparing block values to the composite values located inside the interpolated blocks. The estimates were considered reasonable.

Mineral Resources are classified into Measured, Indicated and Inferred categories. The Mineral Resource classification is based on the density of analytical information, the grade variability and spatial continuity of mineralization. The Mineral Resources were classified in two successive stages: automated classification, followed by manual editing of final classification results. Classifications were based on the following:

Measured Mineral Resources

First Mine: the search ellipsoid used was 50 m (strike) by 50 m (dip) by 25 m with a minimum of seven composites in at least three different drill holes

Second Mine, Murial, and Lavra do Meio: the search ellipsoid was 55 m (strike) by 55 m (dip) by 35 m with a minimum of five composites in at least three different drill holes

Indicated Mineral Resources

In all deposits, the search ellipsoid was twice the size of the Measured category ellipsoid using the same composites selection criteria

Inferred Mineral Resources

In all deposits, all remaining blocks.

The conceptual economic parameters were used to assess reasonable prospects of eventual economic extraction. A series of economic parameters were estimated to represent the production cost and economic prospectivity of an open pit mining operation in Brazil and came either from SGS Canada or Sigma Brazil. These parameters are believed to be sufficient to include all block models in future open pit mine planning, due mostly to the relatively low mining costs in Brazil.

The Mineral Resource estimates for Grota do Cirilo are reported in Table 0-1 to Table 0-4 using a 0.5% Li₂O cut-off. The Mineral Resource estimates are constrained by the topography and are based on the conceptual economic parameters. The estimate has an effective date of January 10, 2019. The QP for the estimate is Mr. Marc-Antoine Laporte, P.Geo., an SGS employee.

Table 0-1 – First Mine Deposit Mineral Resource Estimate

CUT-OFF GRADE Li ₂ O (%)	CATEGORY	TONNAGE (T)	AVERAGE GRADE Li ₂ O (%)
0.5	Measured	10,193,000	1.59

CUT-OFF GRADE Li ₂ O (%)	CATEGORY	TONNAGE (T)	AVERAGE GRADE Li ₂ O (%)
0.5	Indicated	7,221,000	1.49
0.5	Measured + Indicated	17,414,000	1.55
0.5	Inferred	3,802,000	1.58

Notes to accompany Table 0-1 First Mine Deposit Mineral Resource Estimate:

1. Mineral Resources have an effective date of January 10, 2019 and have been classified using the 2014 CIM Definition Standards. The Qualified Person for the estimate is Mr. Marc-Antoine Laporte, P.Geo., an SGS employee.
2. Mineral Resources are reported assuming open pit mining methods, and the following assumptions: lithium concentrate (6% Li₂O) price of US\$1,000/t, mining costs of US\$2/t for mineralization and waste, US\$1.2/t for overburden, crushing and processing costs of US\$12/t, general and administrative (G&A) costs of US\$4/t, concentrate recovery of 85%, 2% royalty payment, pit slope angles of 55°, and an overall cut-off grade of 0.5% Li₂O.
3. Tonnages and grades have been rounded in accordance with reporting guidelines. Totals may not sum due to rounding.
4. Mineral Resources are reported inclusive of those Mineral Resources converted to Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
5. Long-term lithium concentrate price of \$1,000/t assumes processing cost of US\$12/t and metallurgical recovery of 85%.

Table 0-2 – Second Mine Deposit Mineral Resource Estimate

CUT-OFF GRADE Li ₂ O (%)	CATEGORY	TONNAGE (T)	AVERAGE GRADE Li ₂ O (%)
0.5	Measured	10,313,000	1.4
0.5	Indicated	10,172,000	1.46
0.5	Measured + Indicated	20,485,000	1.43
0.5	Inferred	1,909,000	1.44

Notes to accompany Table 0-2 Second Mine Deposit Mineral Resource Estimate

1. Mineral Resources have an effective date of January 10, 2019 and have been classified using the 2014 CIM Definition Standards. The Qualified Person for the estimate is Mr. Marc-Antoine Laporte, P.Geo., an SGS employee.
2. Mineral Resources are reported assuming open pit mining methods, and the following assumptions: lithium concentrate (6% Li₂O) price of US\$1,000/t, mining costs of US\$2/t for mineralization and waste, US\$1.2/t for overburden, crushing and processing costs of US\$12/t, general and administrative (G&A) costs of US\$4/t, concentrate recovery of 85%, 2% royalty payment, pit slope angles of 55°, and an overall cut-off grade of 0.5% Li₂O.
3. Tonnages and grades have been rounded in accordance with reporting guidelines. Totals may not sum due to rounding.
4. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
5. Long-term lithium concentrate price of \$1,000/t assumes processing cost of US\$12/t and metallurgical recovery of 85%.

Table 0-3 – Murial Deposit Mineral Resource Estimate

CUT-OFF GRADE Li ₂ O (%)	CATEGORY	TONNAGE (T)	AVERAGE GRADE Li ₂ O (%)
0.5	Measured	4,175,000	1.17
0.5	Indicated	1,389,000	1.04

CUT-OFF GRADE Li ₂ O (%)	CATEGORY	TONNAGE (T)	AVERAGE GRADE Li ₂ O (%)
0.5	Measured + Indicated	5,564,000	1.14
0.5	Inferred	669,000	1.06

Notes to accompany Table 0-3 Murial Deposit Mineral Resource Estimate

1. Mineral Resources have an effective date of January 10, 2019 and have been classified using the 2014 CIM Definition Standards. The Qualified Person for the estimate is Mr. Marc-Antoine Laporte, P.Geo., an SGS employee.
2. Mineral Resources are reported assuming open pit mining methods, and the following assumptions: lithium concentrate (6% Li₂O) price of US\$1,000/t, mining costs of US\$2/t for mineralization and waste, US\$1.2/t for overburden, crushing and processing costs of US\$12/t, general and administrative (G&A) costs of US\$4/t, concentrate recovery of 85%, 2% royalty payment, pit slope angles of 55°, and an overall cut-off grade of 0.5% Li₂O.
3. Tonnages and grades have been rounded in accordance with reporting guidelines. Totals may not sum due to rounding.
4. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability
5. Long-term lithium concentrate price of \$1,000/t assumes processing cost of US\$12/t and metallurgical recovery of 85%.

Table 0-4 – Lavra do Meio Deposit Mineral Resource Estimate

CUT-OFF GRADE Li ₂ O (%)	CATEGORY	TONNAGE (T)	AVERAGE GRADE Li ₂ O (%)
0.5	Measured	1,626,000	1.16
0.5	Indicated	649,000	0.93
0.5	Measured + Indicated	2,275,000	1.09
0.5	Inferred	261,000	0.87

Notes to accompany Table 0-4 Lavra do Meio Deposit Mineral Resource Estimate

1. Mineral Resources have an effective date of January 10, 2019 and have been classified using the 2014 CIM Definition Standards. The Qualified Person for the estimate is Mr. Marc-Antoine Laporte, P.Geo., an SGS employee.
2. Mineral Resources are reported assuming open pit mining methods, and the following assumptions: lithium concentrate (6% Li₂O) price of US\$1,000/t, mining costs of US\$2/t for mineralization and waste, US\$1.2/t for overburden, crushing and processing costs of US\$12/t, general and administrative (G&A) costs of US\$4/t, concentrate recovery of 85%, 2% royalty payment, pit slope angles of 55°, and an overall cut-off grade of 0.5% Li₂O.
3. Tonnages and grades have been rounded in accordance with reporting guidelines. Totals may not sum due to rounding.
4. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
5. Long-term lithium concentrate price of \$1,000/t assumes processing cost of US\$12/t and metallurgical recovery of 85%.

Factors that can affect Grota do Cirilo Mineral Resource estimates include but are not limited to:

- Changes to the modelling method or approach
- Changes to geotechnical assumptions, in particular, the pit slope angles
- Metallurgical recovery assumption that are based on preliminary test results
- Changes to any of the social, political, economic, permitting, and environmental assumptions considered when evaluating reasonable prospects for eventual economic extraction.

Mineral Resource estimates can also be affected by the market value of lithium and lithium compounds.

MINERAL RESERVE ESTIMATES

First Mine Mineral Reserve estimates have an effective date of 5 June 2019 and have been converted from Measured and Indicated Mineral Resources. The key parameters upon which the 5 June 2019 Mineral Reserve estimates were defined are summarized in Table 0-5.

Table 0-5 – Parameters Used in First Mine Pit Optimization

PARAMETER	VALUE
Lithium concentrate price	US\$700/t concentrate
Royalties (CFEM)	2% of revenue
Exchange rate	3.7 BRL/ US\$
Costs	
Mining	US\$2.15/t mined
Processing	US\$10.51 /t ore
G&A	US\$3,809,106/ year
Logistics	US\$82/t concentrate wet
Plant recovery	60.4%
Concentrate grade	6%
Mining recovery	100%
Dilution	9.3%
Overall Pit slopes	33.6° – 53°

Note: CFEM is the Brazilian government royalty

The total Proven and Probable Mineral Reserves are as presented in Table 0-6.

Table 0-6 – First Mine Mineral Reserves

RESERVE	TONNAGE (T)	Li ₂ O (%)
Proven	10,270,000	1.45
Probable	3,520,000	1.47
TOTAL	13,790,000	1.46

Note to accompany Mineral Reserves table:

1. Mineral Reserves have an effective date of 5 June 2019. The Qualified Person for the estimate is Porfirio Cabaleiro Rodriguez, FAIG, an employee of GE21.
2. Mineral Reserves are confined within an optimized pit shell that uses the following parameters: lithium concentrate price: US\$700/t concentrate; mining costs: US\$2.15/t mined; processing costs: US\$10.51/t processed; general and



administrative costs: US\$3.8 M/a; logistics costs: US\$82/t wet concentrate; process recovery of 60.4%; mining dilution of 9%; pit inter-ramp angles that range from 40.5 – 74.8°.

3. Tonnages and grades have been rounded in accordance with reporting guidelines. Totals may not sum due to rounding.

The existing high voltage transmission line at Pit 1 will need to be relocated in Year 2 so as not to interfere with the mining of the pit's northern part. The Company has been given the legal authority to relocate the line by 150 m.

The Company has not purchased the surface rights for Pit 2 but has applied to the ANM (Brazilian mining regulatory agency) for the granting of authority to mine the area. Pit 2 will come into operation 1.5 years after plant start-up.

MINING METHODS

First Mine

The Company has undertaken a program of resource drilling for the First Mine deposit. Most of these drill holes have been geotechnically logged for structural data. The geotechnical data logged from these holes has been analyzed to provide estimates of slope stability, using industry standard empirical techniques.

The mine layout and operation are based on the following criteria:

- Two independent open pits areas: Pit 1 in the north and Pit 2 in the south
- Single access from both pits to the mine infrastructure pad and the processing plant
- Low height ore benches to reduce mine dilution and maximize mine recovery
- Pre-splitting of the ore zone to reduce mine dilution
- Elevated inter-ramp angles for the waste to reduce strip ratio.

The basis for the scheduling includes:

- Six months of pre-stripping to liberate the ore
- Mining of Pit 1 first as this is closer to the processing plant and is also included in the current environmental license process
- Disposal of the waste rock at the start of operation at pile 1 (close to processing plant) and pile 2
- Commence disposal of waste rock at pile 3 after one year and three months from the start of the operation
- Commence mining of Pit 2 from Year 3 onwards
- Mine both pits in conjunction from Year 3 to Year 6 to reduce the drop-down rate and to facilitate the 1.5 Mtpa production rate
- The planned open pit mine life is nine years and three months
- The mining fleet is based on off-highway trucks for the waste movement and road trucks for the ore to be operated by a mining contractor.

Second Mine

GE21, based on the Mineral Resource, prepared the PEA for the Second Mine.

The PEA is preliminary in nature and includes inferred mineral resources that are too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the PEA will be realized.

It is noted that the Company has not yet made a production decision in respect of the Second Mine. The Company expects that it will assess the results of a pre-feasibility study and a feasibility study before making a production decision in respect of the Second Mine. All statements regarding mine development or production in respect of the Second Mine in this AIF are expressly qualified by this statement.

The mine layout and operation are based on the following criteria:

- A single open pit on the Second Mine pegmatite



- Low height mineralized material benches to reduce mine dilution and maximize mine recovery
- Pre-splitting of the mineralized material to reduce mine dilution
- Elevated inter-ramp angles for the waste to reduce strip ratio

The basis for the scheduling includes:

- Pre-stripping the pit to liberate mineralized material
- Pit cut-backs in years 5 and 6 to expand and deepen pit
- Mining at a rate of 1.68 Mtpa
- The planned open pit mine life is 12 years and eight months
- The mining fleet is based on off-highway trucks for the waste movement and road trucks for the mineralized material to be operated by a mining contractor

RECOVERY METHODS

The First Mine concentrator plant is designed to produce a minimum 6.0% Li₂O spodumene concentrate from an ore grade of 1.46% Li₂O (diluted) with an average iron content of 0.97%, using DMS.

If a positive production decision is made for the Second Mine, a second DMS concentrator plant would be constructed to process the Second Mine mineralized material. This plant would produce a minimum 6.0% Li₂O spodumene concentrate from a mineralized material grade of 1.44% Li₂O (diluted) with an average iron content of 0.97%.

Processing Plant Description

The First Mine plant throughput capacity is based on 1.5 Mtpa (dry) of ore fed to the crushing circuit. The in-house crushing circuit is sized for 3.0 Mtpa, which will accommodate the additional mineralized material from Second Mine, if developed. The First Mine wet plant (DMS) is sized for 1.5 Mtpa throughput capacity, while the possible Second Mine DMS is based on a 1.68 Mtpa throughput capacity.

The concentrator plants are designed based on a proven DMS circuit and include three-stage conventional crushing and screen circuit, up-flow classification for mica removal, two-stage coarse DMS circuit, two-stage fines DMS circuit, single-stage ultrafines circuit, as well as magnetic separation and optical sorting on the final product stream.

Design Criteria and Utilities Requirements

The data for the feasibility study engineering and design were sourced from metallurgical test-work conducted at SGS Lakefield. Recovery data are based on results from variability samples #3 and #4. The mass balance, process design criteria and process flow diagrams were developed based on these test work data.

The utilities consumption requirements are approximately 6.7 MW for the process plant and 1.5 MW for non-process infrastructure at the process plant.

The raw water consumption for process water is nominal at 23 m³/hr (make-up raw water requirement).

The process water will be recycled within the plant using a thickener, where all fines slurry streams will be directed and recovered. This water will be pumped to the process water tank and recycled to the circuits.

Consumables will include reagents and operational consumables for the crushing circuit and the DMS plant.

PROJECT INFRASTRUCTURE

The First Mine project infrastructure will be constructed on earthworks pads for the mineral processing plant, the mine operation support units, the open pits of the mines and the areas of waste rock and tailings disposal.

If developed, the Second Mine will utilize the infrastructure developed for the First Mine.

Buildings, Roads, Fuel Storage, Power Supply and Water Supply

Access to the processing plant will be by municipal road linking BR367 within the communities of Poço D’antas and Taquaril Seco. The current road will be suitable for truck traffic; however, construction of a new section of the road will be necessary to bypass the plant.

The plant and mine services areas will have administrative buildings such as offices, changeroom, cafeteria, concierge, clinic, fire emergency services and operation support facilities such as workshops and warehouses.

Fuel will be stored and dispensed from a fuel facility located at the mine services area.

Power will be supplied from the existing power grid line. Two main sub-stations (CEMIG and plant) will be installed to supply power to the plant, the mine services area and associated infrastructure.

Raw water will be supplied from the Jequitinhonha River, treated as necessary and reticulated within the plant for process, potable and firewater needs.

Waste Rock and Tailings Disposal and Stockpiles

At the First Mine, waste rock and tailings will be stored in two piles in the initial years of operation. Waste pile 1 will be located near the process area (both in the Olimpio area) and will be used for co-disposal of waste rock and tailings generated from the plant.

Waste pile 2 will be located to the south, in the Gilson area.

Both piles will have 25m wide access ramps with maximum gradients of 10%.

Waste piles 3 and 4 will be located adjacent to the north and south pits respectively. Table 0-7 provides the projected storage requirements.

Table 0-7 – Waste Pile Storage

	WASTE ROCK M³	TAILINGS M³	WASTE & TAILINGS TOTAL MT	YEARS - STORAGE
Waste pile #1	7,845,000	567,400	17 (Note 1)	1.3
Waste pile #2	456,731 (Note 2)	39,879	1.0	1.3
Waste pile #3	17,399,267	8,582,001	88.26	4.5
Waste pile #4	26,776,556	-	101.14	5.2

Note 1: approximately 6.0 Mt of mine pre-stripping (first 2 quarters of mine production) will be disposed of at waste pile 1

Note 2: 314,072 m³ will be clear and grub from the process area and mine services area and 142,659 m³ from the earthworks cut material.

Control Systems and Communication

A process control system (PCS) including a main plant SCADA system will be installed for monitoring and control purposes.

The telecommunications network will consist of the telecommunications network, access control system and RFID.

MARKET STUDIES AND CONTRACTS

The key information contained in the market study was prepared by Roskill Consulting Group Ltd (Roskill).

Demand and Consumption

The short-, medium- and long-term outlook for lithium consumption appears strong, with overall consumption growth forecast at 15.2% per annum, and demand growth 14.5% per annum, to 2033 in the base-case scenario. Growth will be higher in the shorter-term, at 22.7% per annum to 2023, and then slow to 14.0% per annum from 2023 to 2028, and 9% per annum from 2028 to 2033, as the market matures.

There are, however, considerable upside and downside risks to the outlook for growth in consumption of lithium to 2028, dependant on the global economic growth and the demand of Li-ion battery-powered hybrid and electric vehicles (xEVs).

Supply

At end-2018, global nameplate production capacity for mining lithium totalled 588,540 tpa lithium carbonate equivalent (LCE). Based on announced capacity expansions and new project schedules, lithium mine production capacity is forecast to increase to almost 1.0 Mtpa LCE by 2022. The largest additions to mine capacity are in Australia for mineral-based production and Chile for brine-based production. Additional mine capacity will be required from the mid/late-2020s.

Contracts

The Company has entered into the Mitsui HOA for a strategic offtake and funding partnership with Mitsui for a significant portion of the funding required for the capital expenditures and project construction.

Pursuant to Mitsui HOA, Mitsui and the Company have agreed terms on:

- Production pre-payment to the Company of US\$30,000,000 for battery-grade lithium concentrate supply of up to 55,000 t annually over six years, extendable for five years plus an off-take agreement supplementary 25,000 t of product annually
- Advancement of deposit for long-lead items for the project
- Strategic collaboration to leverage Mitsui's considerable global logistics and battery materials marketing expertise as well as an agreement to continue discussions regarding additional funding for further exploration and development of the Company's mineral properties
- Mitsui's right to participate in the Company's future capital for production expansion with other deposits conditional to concluding a feasibility study and Mineral Reserves estimates
- Sales prices are set quarterly based on the published price of nominal arms-length chemical-spodumene concentrate above 6% Li₂O (SC6).

For more information in respect of additional contracts entered into after the date of the Updated Feasibility Study Report, see "[General Development of the Business – Three Year History - Corporate](#)".

The Company has no contracts in place in support of operations. Any future contracts are likely to be negotiated and renewed on an annual or biannual basis. Contract terms are expected to be typical of similar contracts in Minas Gerais State.

Price Forecast

The Company is using the 10-year Roskill forecast for the average spodumene concentrate nominal arms-length sales price of US\$750 US (cost, insurance and freight (CIF) delivered to Port of Shanghai, China) in the economic assessment.

ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

Conselho Estadual de Política Ambiental (COPAM) granted an Operation License in support of certain Sigma Brazil mining concessions on the Grota do Cirilo property on August 25, 1994. The licence was renewed on August 14, 2008 but has subsequently been allowed to lapse as it was not suitable for the new level of mining contemplated by the Company. The Company applied and was issued the first phase of the Preliminary License (Licença Prévia or LP) and an Installation License (Licença de Instalação or LI) to commence construction at the First Mine. Mining licenses are for life of mine and environmental licences are timely renewed when due.

The Company holds approved economic mining plans (Plano de Aproveitamento Econômico or PAE) over the Xuxa, Barreiro, Lavra do Meio, Murial, and Maxixe deposits within the Grota do Cirilo property. The PAE for the First Mine was updated and approved in August 2018.

Reclamation plans (referred to as degraded area plans or PRADs) have been developed and implemented for certain past-producing areas within the Grota do Cirilo property. The successful recovery of these areas is managed by Sigma Brazil personnel and external consultants in conjunction with the governing regulatory agencies.

The Company has held regular meetings and consultation sessions with local stakeholders regularly over the last five years. The further development of Sigma Brazil mining activities in the Jequitinhonha Valley is viewed by both communities as an important regional economic driver.

Applicable Legal Requirements for Project Environmental Permitting

CONAMA Resolution N° 237 (1997) defines environmental licensing as an administrative procedure by which the competent environmental agency permits the locating, installation, expansion and operation of enterprises and activities that use environmental resources in a manner considered to be effectively or potentially polluting.

The licensing process in Minas Gerais has been developed in accordance with COPAM Regulatory Deliberation N° 217, dated December 6, 2017 and establishes classification criteria based on scale and polluting potential, as well as the locational criteria used to define the modalities of environmental licensing of ventures and activities that use environmental resources in the state of Minas Gerais.

In compliance with CONAMA Resolution 09/90, the environmental licensing of mining projects is always subject to an Environmental Impact Assessment ("EIA"), followed by an Environmental Impact Report ("RIMA"), which supports the technical and environmental feasibility stage of the project and the granting of a LP and/or a concurrent LP + LI.

Current Project Environmental Permitting Status

A Concurrent Environmental Licensing Type CEL 2 (LP + LI) will be required in support of operations.

The water license for the uptake of 150 m³/h of water from the Jequitinhonha River was approved by the Agencia Nacional das Águas (ANA) in February 2019.

The CEL 2 (LP + LI) for the initial project phase, consisting of the north pit (Pit #1), waste piles 1 and 2 and the plant area was submitted on December 20, 2018 and was followed by the complete presentation of the EIS, the EIR and the Environmental Control Plan (ECP) as well the other documents listed in Basic Guidance Form (BGF). The EIS (Estudo e Relatório de Impacto Ambiental – EIA-RIMA dated 30 October 2018) and Plano de Controle

Ambiental – PCA dated December 2018 were prepared and issued for submittal to the authorities by NEO Soluções Ambientais and ATTO GEO Geologia e Engenharia. Approval was obtained on June 3, 2019.

A second EIS covering Pit #2 and waste piles #3 and #4 was formally submitted for approval in March 2020 in line with the prescribed permitting timing requirements. for the process plant coming online with Pit #1.

Authorizations

Sigma Brazil is the owner of the mining rights registered under DNPM N° 824.692/1971, and the holder of Mining Concession Ordinance N° 1.366, published on October 19, 1984. In 2018 a new Economic Development Plan (EDP) was registered with the National Mining Agency (ANM), which was approved on November 16, 2018.

The approval of the EDP and environmental study involves the technical and legal analysis and formal approval of the proposed project. With the granted LP + LI, the company must now install the project within 5 years, comply with the environmental conditions established in the LP + LI certificate and finally, apply for the Operation License after installation in order to begin operational activities.

The formalization of the environmental licensing process also included requesting and granting of the EIA. This allows for environmental intervention in an approximately 64 ha area.

Land Access

The Company has a lease agreement with Miazga Participações S.A., owner of the Poço Danta-Paiuí, Poço Danta and Poço Dantas Farms, to carry out mining activities on its properties. These farms include Legal Reserves (LR) which are preserved and registered in the National Rural Environmental Registration System (NRERS), in accordance with Law N° 12.651, dated May 25, 2012.

Social License Considerations

The Company understands and accepts the importance of proactive community relations as an overriding principle in its day-to-day operations as well as future development planning. The company therefore structures its community relations activities to consider the concerns of the local people and endeavors to communicate and demonstrate its commitment in terms that can be best appreciated and understood to maintain the social license to operate.

The Jequitinhonha Valley is the poorest region in Minas Gerais which is plighted by poverty and is in the lowest quartile of the Human Development Index (HDI). The Company is the largest investment and operation in the area by a factor of ten and the project will be transformational to the local communities. The largest direct economic benefit is that the Company is subject to a 2% royalty on revenue which is divided between the Federal Government, State Government and Local Government. Secondly a portion of the taxes on local procurement of goods and services is shared with the Local Government. These incomes from the royalty and tax are a most important source of funding for local Government and the Company is the largest direct contributor in the region. The Company will be by far the largest employer in the region with an estimated 500 direct jobs being created with 3 to 4 times this number being indirect.

Farming in the area is small-scale subsistence type as the area is semi-arid. There is minimal impact on the neighbouring farms of Grota do Cirilo properties. The Company and contractor workforce will live in the cities of Araçuaí and Itinga and strict environmental management plans are in place to minimize the environmental footprint of the project. An example is 90% of the process water is re-circulated and there is zero run-off water from the site except during the wet season, when excess water from the pond will be discharged in an overflow channel. The process uses dry stacking technology and no slimes dam will be built. Regular environmental monitoring will be conducted, and results will be shared with the local communities.

The Company has targeted and continues with consultations/engagements with numerous stakeholders in support of project development of the Project and has hosted visits from representatives of government departments and local academic institutions.

Rehabilitation, Closure Planning and Post-Closure Monitoring

The closure plan for the Grota do Cirilo property encompasses the following: dismantling of building and infrastructure, removal of heavy mobile and surface equipment, restoration by reconstituting vegetal cover of the soil and the establishment of the native vegetation, grading and capping with vegetation suppression layer and revegetation of the waste rock and overburden stockpiles, removal of suppressed vegetation along with slope cover and surface drainage for water management, fencing of site, environmental liability assessment studies where there may have been spillages and soil and water contamination and safe disposal, revegetation of the open pit berm areas and fencing around the open pits.

In the post-closure phase, a socioenvironmental and geotechnical monitoring program will be carried out, to support ecosystem restoration or preparation for the proposed future use.

The monitoring program will collect soil and diversity of species on an annual basis, continuing for a five-year period after mine closure.

Second Mine Environmental Work to Date

The Environmental Impact Study - EIA and its respective Environmental Impact Report - RIMA will be submitted to the regulatory agency, Bureau of Priority Projects - SUPPRI, as a supporting document to obtain a Preliminary License - LP and an Installation License - LI for Grota do Cirilo Project - Second Mine Pegmatite.

Considering the parameters defined by the current laws and regulations, CONAMA Resolution 09/90, the environmental licensing of mining projects is conditioned to EIA/RIMA submission, and these studies are the main technical resources to assess project feasibility.

The environmental licensing process started in October 2020 and will be formalized with the submission of the technical studies requested through the Environmental Licensing System - SLA, request No.: 2020.10.01.003.0003780 for the production of: 1,500,000 t/year for open pit mining and 251.89 ha for waste heaps.

CAPITAL AND OPERATING COSTS

Capital Costs First Mine

The Production Phase 1 capital cost (CAPEX) estimate includes the process plant, site infrastructure, mining and Owner's costs. Pre-production, working capital, sustaining and deferred capital costs were also included.

Equipment costs were obtained with firm price quotations for six long lead mechanical equipment and with budgetary quotations for the remaining equipment packages. In-country (Brazil) quotations were obtained for the installation unit rates and to the extent feasible for equipment supply. Brazilian fabricators were selected for structural steel and platework supply and fabrication.

Material take-offs (MTOs) were generated from the feasibility study designs with the unit rate costs applied per commodity. The CAPEX estimate has an accuracy of $\pm 15\%$ and is summarized in Table 0-8.



Table 0-8 – Capital Cost Estimate Summary First Mine

DESCRIPTION	CAPITAL COST US\$ (MILLION)
Processing plant	32.8
Site infrastructure	32.2
Owner's cost	4.6
Contingency	7.5
Recoverable taxes	-6.0
SUBTOTAL CAPITAL COST	71.1
Pre-production and working capital	27.3
Sustaining and deferred capital	15.2

Operating Costs First Mine

The Production Phase 1 operating cost (OPEX) estimate is based on contract mining, build-own-operate (BOO) high-voltage electrical sub-stations and non-process infrastructure substations and contract crushing, as per the Company's preferred commercial strategy.

The concentrate transport cost has been estimated to be US\$22.90M per annum or US\$15.30/t of ore per the Company input based on preliminary quotations. This includes all the transport costs from the site to the Port of Ilhéus, Brazil, port storage and handling fees and CIF shipment to the port of Shanghai, China.

General and administration costs have been estimated to be US\$2.64M per annum or US\$1.76/t of ore.

Operating cost estimates are summarized in Table 0-9.

Table 0-9 – Operating Cost Estimate Summary First Mine

DESCRIPTION	OPEX US\$/T
Mining cost per tonne of ore mined	21.91
Process cost per tonne of ROM	10.69
G&A cost per tonne of ROM	1.76
Shipping per tonne of ROM	15.30
NPI (included in Process and G&A)	-
TOTAL	49.66



The OPEX costs are inclusive of taxes. The OPEX accuracy is $\pm 15\%$.

Plant CAPEX and OPEX Second Mine

GE21, based on the Mineral Resource, prepared the PEA for the Second Mine.

The PEA is preliminary in nature and includes inferred mineral resources that are too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the PEA will be realized.

The Production Phase 2 plant and infrastructure CAPEX is estimated at US\$38.0 million.

The Production Phase 2 plant and infrastructure OPEX is as per operating costs estimated for the First Mine.

Mining Capital Costs Second Mine

GE21, based on the Mineral Resource, prepared the PEA for the Second Mine.

The PEA is preliminary in nature and includes inferred mineral resources that are too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the PEA will be realized.

Total Production Phase 2 pre-production capex were estimated at about US\$1.62 million.

Table 0-10 – CAPEX Summary Second Mine

DESCRIPTION		INVESTMENT (USDx1,000)
Mining Equipment		NA (contractor fleet)
Owner's Cost		1,252.9
Sub-total 1		1,252.9
Contingency	30%	375.9
TOTAL CAPEX		1,623.6

Mining Operating Costs Second Mine

GE21, based on the Mineral Resource, prepared the PEA for the Second Mine.

The PEA is preliminary in nature and includes inferred mineral resources that are too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the PEA will be realized.

The Production Phase 2 mining operating costs were based on the estimated operating costs for the neighbouring First Mine which is currently in a detailed engineering stage of development and construction. Table 0-11 shows the summary OPEX costs and assumptions.

Table 0-11: OPEX Summary Second Mine

DESCRIPTION	TOTAL
Total Operating Cost LOM \$US M	605.82
Total Mined Mt	263.04
Operating Cost \$US/t	2.30

ECONOMIC ANALYSIS

Production Phase 1

The Production Phase 1 economic analysis was developed using the discounted cash flow method and based on the data and assumptions for capital and operating costs detailed in this report for the First Mine project mining, processing and associated infrastructure. An exchange rate of 3.85 BRL per US\$ was used to convert particular components of the cost estimates into US\$. No provision was made for the effects of inflation and the base currency was considered on a constant 2019 US\$ basis. The evaluation was undertaken on a 100% equity basis. Exploration costs are deemed outside of the project and any additional project study costs have not been included in the analysis.

Production Phase 1 base case scenario results are presented in Table 0-12.

Table 0-12 – Base Case Economic Analysis Results First Mine

ITEM	UNIT	VALUE
Pre-tax NPV @ 8%	US\$	299,074,000
After-tax NPV @ 8%	US\$	248,507,000
Pre-tax IRR	%	47.6
After-tax IRR	%	43.2
Pre-tax payback period	Years	2.9
After-tax payback period	Years	3.1

Note: NPV = net present value, IRR = internal rate of return.

The main economic assumptions/input parameters used for the base case are shown in Table 0-13.

Table 0-13 – Main Macroeconomic Assumptions First Mine

ITEM	UNIT	VALUE
Spodumene price @ 6.00% Li ₂ O (CIF China) (Note 1)	US\$/t	733
Spodumene price @ 6.00% Li ₂ O (FOB Ilhéus Port) (Note 2)	US\$/t	629
Exchange rate (Note 3)	BRL/US\$	3.85

ITEM	UNIT	VALUE
Discount rate	%	8.0

Note 1: Roskill forecast of average nominal arms-length selling price

Note 2: China spodumene price minus budgetary estimate shipping cost.

Note 3: An exchange rate of 4.10 BRL/US\$ was used for update of the CAPEX. OPEX was based on 3.85 BRL/US\$.

The main technical assumptions for the base case are shown in Table 0-14.

Table 0-14 – Technical Assumptions (base case) First Mine

ITEM	UNIT	VALUE
Total Mineral Reserves (P&P)	t	13,784,000
Annual ROM ore processed	t	1,496,000
Annual Spodumene Concentrate Production	t	220,000
Lithium carbonate equivalent (LCE) production (Note 1)	t	33,000
Strip ratio	ratio	9.6: 1
Average Li ₂ O grade of the Mineral Reserve	%	1.46
Spodumene recovery rate	%	60.4
Concentrate grade	% Li ₂ O	6.00
Mine life	years	9.25
Cost of spodumene concentrate ex-works	US\$/t	238
Transportation costs (CIF China)	US\$/t	104
Total cash cost (CIF China)	US\$/t	342
Processing costs per tonne ROM	US\$/t	11.03
Mining costs per waste + ore mined	US\$/t mined	2.07

Note 1: tonnage based on direct conversion to LCE excluding conversion rate

In the analysis, a 10-year average Roskill forecast of an average nominal arms-length selling price of US\$733 (CIF Shanghai) for the spodumene concentrate has been assumed.

Figure 0-1 illustrates the after-tax cash flow and cumulative cash flow profiles of the project under the base case scenario.

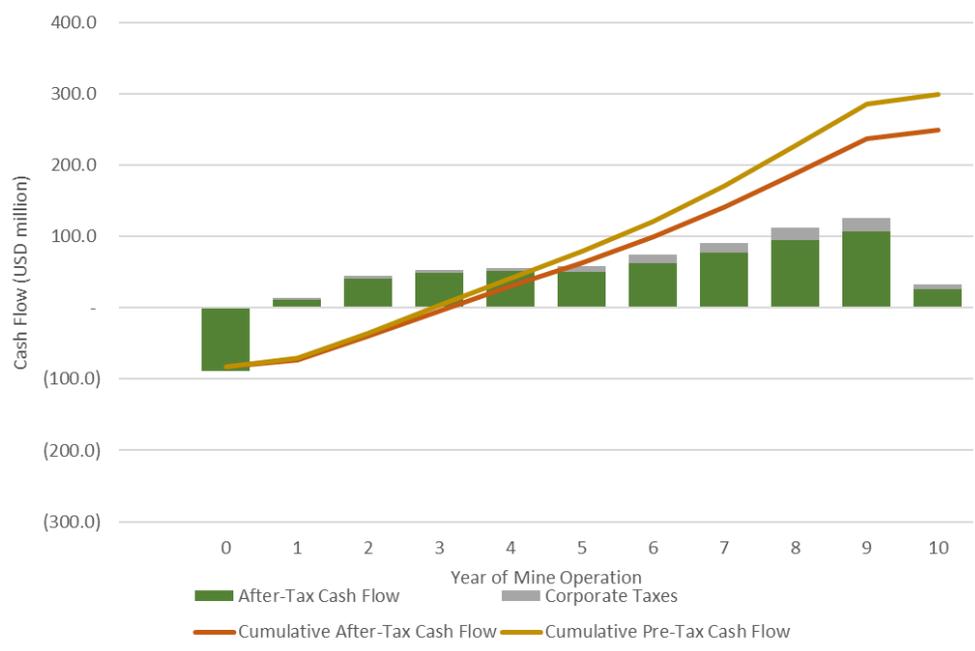


Figure 0-1 – After-Tax Cash Flow and Cumulative Cash Flow First Mine

The First Mine project has been evaluated on pre- and after-tax basis.

Sudene is a government agency tasked with simulating economic development in specific geographies of Brazil. The project will be installed in a Sudene-covered area, where a tax incentive granted to the project indicates a 75% reduction of income tax for 10 years, after achieving at least 20% of its production capacity. The considered Brazilian income tax rate is assumed to be 15.25%, which represents the Sudene tax benefit applied to the Brazilian maximum corporate tax of 34% on taxable income (25% income tax plus 9% social contribution).

The project is expected to benefit from RECAP (IN SRF 605/2006 – a special tax regime for fixed assets acquisition for exporting companies) which grants PIS (Social Integration Program) and COFINS (Social Security Contribution) exemptions on federal sales taxes charged on gross revenues. The economic analysis assumes that the project is granted this exemption.

The project is expected to be exempt from all importation taxes for products for which there is no similar item produced in Brazil (*Ex-Tarifário*). Assembled equipment where some but not all individual components are produced in Brazil can be considered exempt from import taxes under these terms. The Project royalties include:

- A 2.0% CFEM royalty on gross spodumene revenue, paid to the Brazilian Government. The CFEM royalty amount is split between: the Federal Government Entities (10%), State Government of Minas Gerais (15%), and Municipal Government of Araçuaí (60%), for the Federal District and Municipalities, when affected by mining activity and production does not occur in their territories (15%)
- Two 1% NSR royalties

A sensitivity analysis was carried out with the base case (including closure costs) as described above as the midpoint. An interval of ±20% versus base case values was considered using 10% increments. Results are shown in

Figure 0-2 to Figure 0-3 for commodity price, exchange rate, initial CAPEX, OPEX, discount rate, and lithium grade. A further sensitivity analysis was conducted on a case excluding closure costs.

The Project's NPV (and IRR) are not significantly vulnerable to changes in the pre-production initial capital expenditure nor discount rate considered, as shown by the smoother curves associated with these variables. Note that the Project IRR is independent of the discount rate considered.

The Project's NPV (and IRR) are most sensitive to variation in CIF spodumene price, lithium grade and BRL per US\$ exchange rate as shown by the steeper curves associated with these variables. The Project's NPV is significantly positive at the lower limit of the price interval and the examined exchange rate interval. The NPV is also significantly positive at the upper limit of the operating expenses interval.

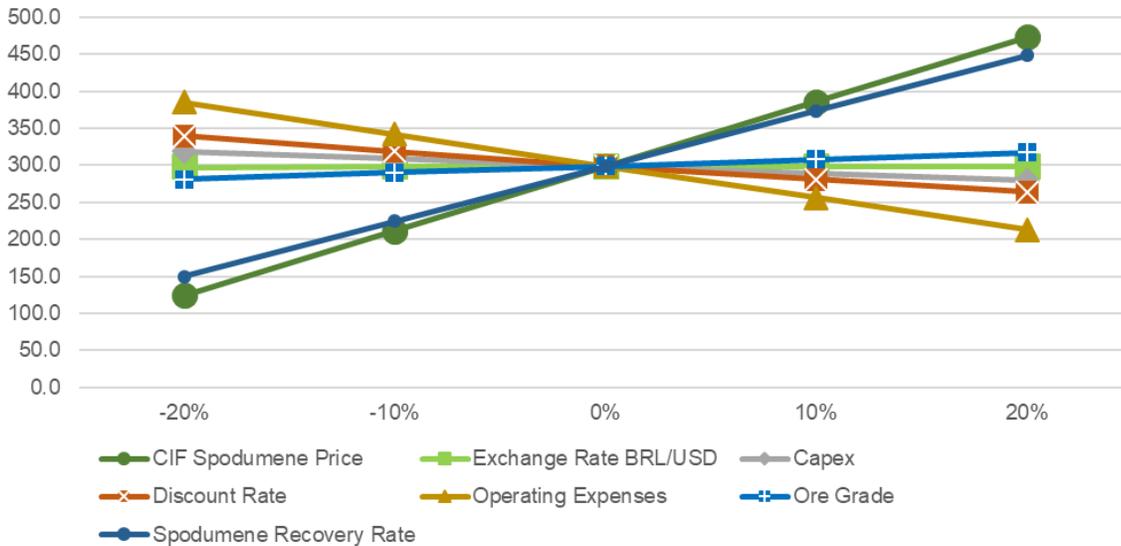


Figure 0-2 – Pre-tax NPV (US\$ million) First Mine

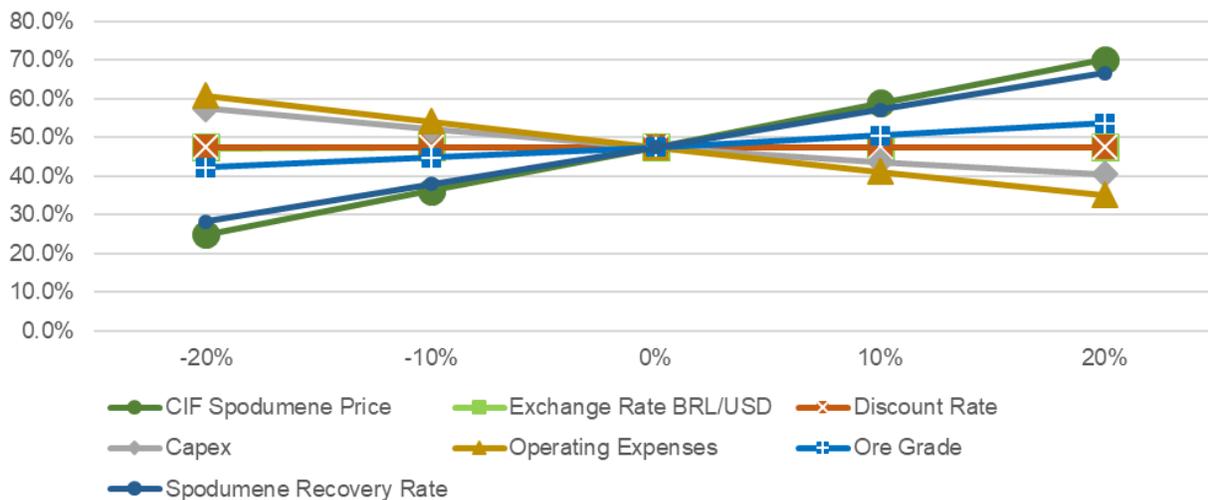


Figure 0-3 – After-tax NPV (US\$ million) First Mine

Production Phase 2

GE21, based on the Mineral Resource, prepared the PEA for the Second Mine.

The PEA is preliminary in nature and includes inferred mineral resources that are too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the PEA will be realized.

It is noted that the Company has not yet made a production decision in respect of the Second Mine. The Company expects that it will assess the results of a pre-feasibility study and a feasibility study before making a production decision in respect of the Second Mine. All statements regarding mine development or production in respect of the Second Mine in this AIF are expressly qualified by this statement.

The Production Phase 2 base case scenario results are presented in Table 0-15.

Table 0-15 – Base Case Economic Analysis Results Second Mine

ITEM	UNIT	VALUE
Pre-tax NPV @ 8%	US\$ M	449
After-tax IRR	%	208
After-tax payback period	Years	0.4

The main economic assumptions/input parameters used for the Production Phase 2 base case are shown in Table 0-16.

Table 0-16 – Main Macroeconomic Assumptions Second Mine

ITEM	UNIT	VALUE
Spodumene price @ 6.00% Li ₂ O (CIF China) (Note 1)	US\$/t	750
Spodumene price @ 6.00% Li ₂ O (FOB Ilhéus Port) (Note 2)	US\$/t	646
Exchange rate	BRL/US\$	5.20
Discount rate	%	8.0

Note 1: Roskill forecast of average nominal arms-length selling price

Note 2: China spodumene price minus budgetary estimate shipping cost.

The main technical assumptions for the Production Phase 2 base case are shown in Table 0-17.

Table 0-17 – Technical Assumptions (base case) Second Mine

ITEM	UNIT	VALUE
Total Quantity Milled (LOM)	Mt	21.3
Annual ROM feed processed	Mt	1.68
Annual Spodumene Concentrate Production	t	220,000



ITEM	UNIT	VALUE
Lithium carbonate equivalent (LCE) production (Note 1)	t	33,000
Strip ratio	ratio	11.6: 1
Average Li ₂ O grade of the Mineral Resource	%	1.44
Spodumene recovery rate	%	66
Concentrate grade	% Li ₂ O	6.00
Mine life	years	12.7
Cost of spodumene concentrate ex-works	US\$/t	256
Transportation costs (CIF China)	US\$/t	104
Total cash cost (CIF China)	US\$/t	360
Processing costs per tonne ROM	US\$/t	8.6
Mining costs per waste + mineralized material mined	US\$/t mined	2.3

Note 1: Tonnage based on direct conversion to LCE excluding conversion rate

Note 2: Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

In the analysis, a 10-year average Roskill forecast of an average nominal arms-length selling price of US\$750.00 (CIF Shanghai) for the spodumene concentrate has been assumed.

The Second Mine project is subject to the same royalties as Production Phase 1.

Table 0-18 analyses the impact on NPV when spodumene pricing and recovery percentages fluctuate.

The Project NPV is most sensitive to movements in the price of spodumene, metallurgical recovery rate of the lithium at the Second Plant. Foreign exchange fluctuations impact operating cash costs (mostly derived from Brazilian Real) and development capital (approximately 70% derived from Brazilian Real prices).

Table 0-18: Sensitivity Analysis on NPV with Different Recovery and Pricing Second Mine

Sensitivity Matrix	After-Tax NPV (US\$ M)	
	Recovery (%)	
	60.4%	66.0%
Spodumene Price (CIF China) (US\$/t)		
\$ 650	\$ 260 M	\$ 320 M
700	319	384
750	378	449
800	437	513
850	496	578

INTERPRETATION AND CONCLUSIONS

Mineral Resources are reported for four pegmatite bodies, Xuxa, Barreiro, Murial and Lavra do Meio. Mineral Reserves are reported for the First Mine.

A PEA which is the subject of the Updated Feasibility Study Report, has been conducted on the Second Mine.

The extraction plan in the PEA assumes development of one open pit and construction of a process plant to process 1,680,000 dry tonnes of feed per year for a mine life of 12 years and eight months.

Under the assumptions presented in the PEA, the mine and process plans are feasible, and the project shows positive economics.

It is noted that the Company has not yet made a production decision in respect of the Second Mine. The Company expects that it will assess the results of a pre-feasibility study and a feasibility study before making a production decision in respect of the Second Mine. All statements regarding mine development or production in respect of the Second Mine in this AIF are expressly qualified by this statement.

Risk Assessment

The PEA is preliminary in nature and includes inferred mineral resources that are too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the PEA will be realized.

Risk assessment sessions were conducted individually and collectively by all parties. These are summarized in the sections below.

Most aspects of the Project are well defined. The key residual risks are summarized below. One of the most significant risks identified for the Project are related to lithium markets.

The following risks are highlighted for the project:

- Lithium market sale price and demand (commercial trends)
- Fluctuations in the exchange rate and inflation
- Delay in obtaining financing: impact to NTP
- Delay in obtaining the license for the Second Mine
- More fines generated from mining and crushing: potential negative impact on recovery
- Ongoing geotechnical monitoring system can change some final pit slope parameters: potential increase in strip ratio.

Further details on the risk assessment are provided in Section 25.2 of the Updated Feasibility Study Report.

Opportunities

The PEA is preliminary in nature and includes inferred mineral resources that are too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the PEA will be realized.

The following opportunities are identified for the Second Mine:

- Recovery of Li_2O from hypofines with a flotation circuit
- Potential upgrading of some or all of the Inferred Mineral Resources to higher-confidence categories and eventually conversion to Mineral Reserves.
- Recovery of Li_2O from petalite



- Potential for future underground mining of the First Mine and Second Mine pegmatites if a trade-off study supports the concept
- Exchange rate may work in the Project's favour.

RECOMMENDATIONS

The following summarizes the recommendations from the First Mine feasibility study and Second Mine PEA in the Updated Feasibility Study Report. A phased work program is planned, which consists of continued exploration over the known pegmatites in the Grota do Cirilo area, together with the implementation of the recommendations of First Mine feasibility study and the Second Mine PEA recommendations.

It is important to note that the recommendations for the different projects can be conducted concurrently.

Geology and Resources

The FS Qualified Persons recommend that additional exploration drilling be conducted across the property to update existing resources and potentially discover new resources. The overall cost for the drill program is estimated at US\$6.1M and consists of a 36,000 m drill program to test the Xuxa, Barreiro, Nezinho do Chicao, Murial and Bee areas.

First Mine Recommendations

The recommendations for the First Mine will be implemented in the project execution phase, prior to commencement of operations, and are estimated to be a total of US\$1,275,000, consisting of:

- Process plant (testing for wet magnetic separation equipment, a middlings recrushing recovery trade-off study): US\$60,000
- Mine design (finalize topographic survey; complete density, moisture and blasted swell effect analyses for ore and waste; implement a reconciliation system and grade control program; evaluate underground mining potential for below the open pit levels of the mine, conduct a reserve study for underground mining; implement geotechnical monitoring system): US\$345,000
- Geotechnical (supplementary geotechnical and hydrogeological investigations of planned infrastructure sites including at waste pile areas; supplementary geochemical tests (ARD); large-scale waste rock and tailings co-disposal stockpile field test): US\$870,000. (Note: further details of the proposed geotechnical, hydrogeological and geochemical program are provided in Section 26.3 of the Updated Feasibility Study Report)

Second Mine Project Recommendations

The PEA is preliminary in nature and includes inferred mineral resources that are too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the PEA will be realized.

Based on the results of the Second Mine PEA, the FS Qualified Persons recommend that the Company proceed to completing a pre-feasibility study (PFS), and thereafter (based on the results of the PFS) conduct a feasibility study (FS) in respect of the Second Mine.

The 24 m wide accesses significantly affect the overall slope angle of the final pit. If the same access width is maintained in the details of the study, it is recommended to estimate the impact of the ramps in the overall slope angle, so that this value is used in the optimization process. Thus the optimization result will be more adherent with the designed operational pit.

Due to the depth of the pit it is necessary to remove a large amount of waste to maintain the 24 m access roads in the final pit. This impact is even more relevant in the annual pits in which it is sought to minimize the stripping ratio in the first years for a better cash flow. It is recommended to evaluate the feasibility of working only with road trucks, thus maintaining all access roads 10 or 12 m wide.

If it is not feasible to operate only with road trucks (due to large amounts of mineralized material/waste), it is recommended to evaluate the use of off-road trucks only in the pre stripping operation. The pre-stripping mining fronts are usually separated from the mining fronts, so that temporary 24-metre accesses would be created only in these regions. In addition, it is possible that the details of the mining plan indicate the option of a new pre stripping around year 9.

In detailing the sequential mining plan it is important to assess the amount of mineralization released by the end of each period because it is often necessary to make a large pushback of waste to access the mineralization. Therefore, it is necessary to plan so that there is no shortage of mineralized fronts released during the period in question.

It is also recommended to implement the hydrological and hydrogeological studies for the next phases of the Project.

Competitive Conditions and Anticipated Trends

Lithium Industry Trends

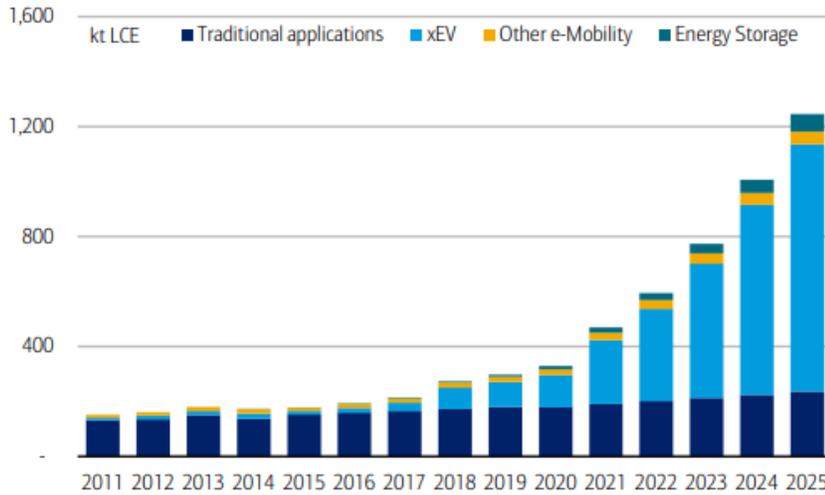
Supply-Demand Outlook

Lithium's demand growth profile increased dramatically in 2021, driven by the structural changes in the automotive industry with manufactures increasingly transitioning towards EVs. Recent examples of this shift include Tesla, Inc.'s continued execution (delivering 936,172 vehicles in 2021 vs. 499,500 in 2020) and Ford Motor Company announcing its intention to split into electric and gas divisions in March 2022 and spend \$50 billion on EVs between 2022 and 2026 (up from \$30 billion). Subsequently, lithium's end-use demand is now primarily comprised of rechargeable lithium-ion batteries used in EVs where demand is influenced by a combination of factors including macroeconomics, EV policy targets, emissions mandates and alignment with international treaties on climate change (vs. 'traditional' end-uses such as ceramics and greases which are tied to GDP growth).

Lithium's demand outlook is expected to remain robust with Bank of America Research forecasting lithium demand growth of 27% in 2022 and 30% in 2023 with total LCE demand reaching 1.25 Mt by 2025. This strong growth is expected to be driven by Bank of America Research's forecast of a 28% compound annual growth rate from of EV-related lithium demand from 2021-2025, with EV sales reaching 20 million vehicles by 2025.



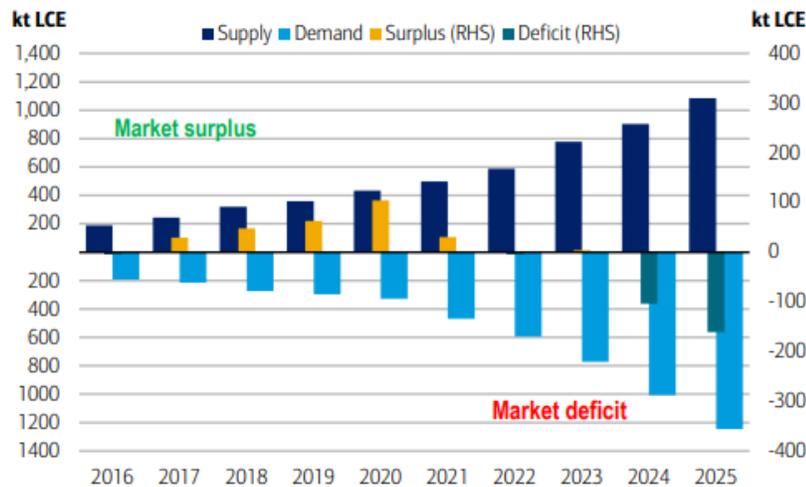
Lithium Demand Forecast



Source: Bank of America Research, February 2022

The supply-demand conditions for lithium remains tight with limited supply forecasted to meet strong demand growth. Bank of America Research forecasts that the lithium market will be in a deficit by 2024 and by 2030, the cumulative demand will amount to >60% of the currently known reserves of lithium. The forecasted undersupply of lithium reflects a lack of historic investment resulting from a weaker lithium price environment in 2018 to 2020 driven by delays in EV adoption combined with a number of large lithium projects coming onstream.

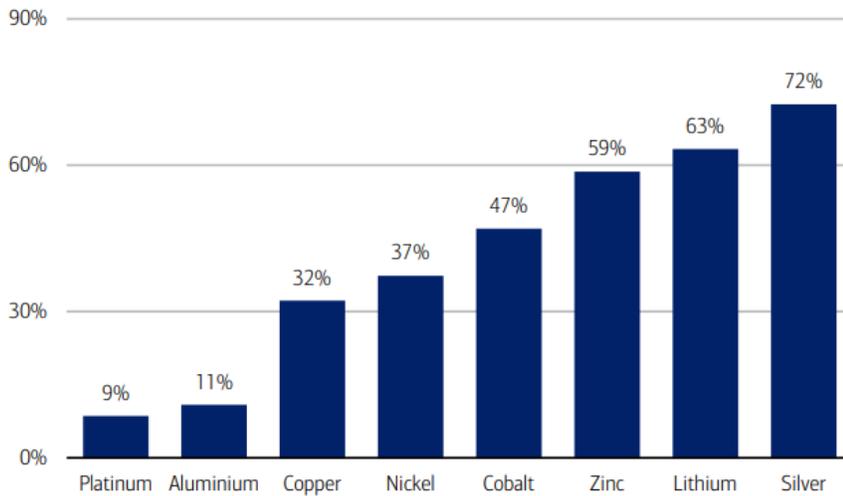
Lithium Supply-Demand Forecast



Source: Bank of America Research, February 2022



Percentage of Known Reserves Exhausted by 2030



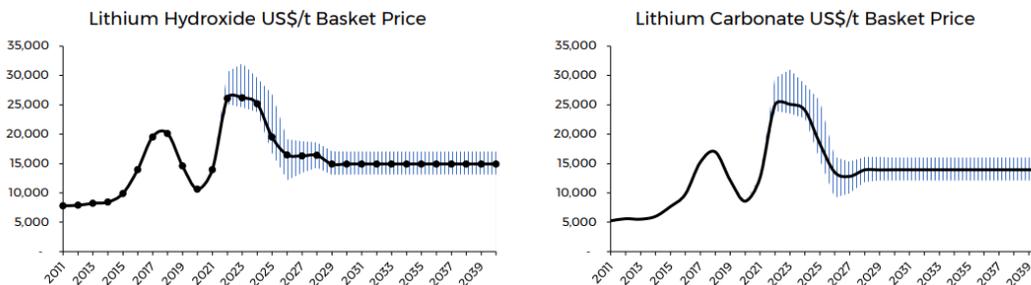
Source: Bank of America Research, February 2022

Price Outlook

Tight market supply combined with rapidly improving demand for lithium chemicals is expected to put continued strong upward pressure on prices. Benchmark Mineral Intelligence’s base case forecast expects prices to continue to rise through 2023 as demand outstrips supply with real lithium hydroxide and spodumene 6% prices hitting US\$26,200/t and US\$1,750/t in 2023, respectively. Benchmark Mineral Intelligence then expects prices to stabilize at higher levels in 2024 and begin to decline to more stable levels in a balanced supply-demand market in 2025. However, this balanced market forecast would require substantial new supply, including new projects coming onstream (which are subject to delays and in some cases do not yet have production targets).

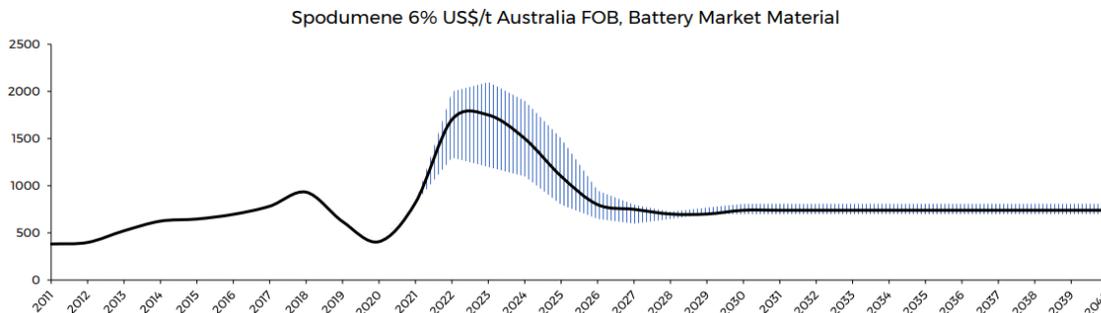
Lithium Chemical Price Forecast

Lithium Chemicals BG Price Forecast, Real 2021 (US\$/MT)





Spodumene Price Forecast, Real 2021 (US\$/MT)



Source: Benchmark Mineral Intelligence Lithium Forecast, Q4-2021

Note: Shading indicates the area between bullish and conservative cases

Emerging Market Disclosure

The Project is located in Brazil, an emerging market, and the Company’s interest in the Project is held indirectly through Sigma Brazil, a Brazilian corporation. Operating in an emerging market exposes the Company to risks and uncertainties that do not exist, or are significantly less likely to occur, in jurisdictions such as the United States or Canada. In order to manage and mitigate these risks, the Company has designed a system of corporate governance for itself and its subsidiaries that include internal controls over financial reporting and disclosure controls. These systems are coordinated by the Company’s senior management and overseen by the Board in order to monitor the Company’s operating subsidiaries. See “Risk Factors” below.

Board and Management Experience and Oversight

Key members of the Company’s management team have experience running business operations in emerging markets, including Brazil. Calvyn Gardner, Co-Chair and the Co-Chief Executive Officer of the Company, is a British national and Brazilian resident and has held senior positions in large, multinational corporations operating throughout South America. Ana Cabral-Gardner, Co-Chair and the Co-Chief Executive Officer of the Company, is a Brazilian national and has substantial business operating experience in Brazil. Vicente Lobo, Co-Chair of the Company’s Technical Committee, is a Brazilian national and has held executive roles at major Brazilian natural resources companies and has served as the Secretary of Geology, Mining and Mineral Transformation at Brazil’s Ministry of Mines and Energy. Maria José Salum, Chief Sustainability Officer, is a Brazilian national and a prominent environmental & social responsibility professional who has held a number of roles such as Director of Sustainable Development in Mining at the Ministry of Mines and Energy and Senior Representative for the Ministry at the National Council for the Environment (CONAMA).

The Board, through its corporate governance practices, regularly receives management and technical updates, risk assessments and progress reports in connection with the Company’s operations in Brazil. Through these updates, assessments and reports, the Board gains familiarity with the operations, laws and risks associated with operations in Brazil. Several members of the Board (a) are familiar with the laws, business culture and standard practices of Brazil; (b) have Portuguese language proficiency; (c) are experienced in working in Brazil and in dealing with Brazilian government authorities; and (d) have experience and knowledge of the local banking systems and treasury requirements of Brazil.

Communication

The Company maintains open communication with its operations in Brazil through management team members who are fluent in Portuguese and are proficient in English, removing language barriers between management and the Board. The primary language used in Board meetings is English and material documents relating to the Company’s operations that are provided to the Board are in English. Material documents relating to the Company’s material operations in Brazil are either in English or, where in Portuguese, are translated into or summarized in English. With the exception of one board member, all others are fluent in Portuguese.

Controls Relating to Corporate Structure Risk

The Company has implemented a system of corporate governance, internal controls over financial reporting and disclosure controls and procedures that apply to the Company and its subsidiaries. These systems are overseen by the Board and implemented by the Company's senior management. The relevant features of these systems include:

- *The Company's Control Over Subsidiaries.* The Company's corporate structure has been designed to ensure that the Company has direct oversight over the operations of its subsidiaries, including that senior management of its subsidiaries includes individuals that are senior management of the Company (and members of the Board), and such individuals are also the directors of the subsidiaries. In addition, such individuals review and approve programs, budgets and other key decisions. The Company reviews its subsidiaries' financial reporting as part of preparing its consolidated financial reporting. The Company has adopted a simple structure for its Brazilian business operations, with the Company wholly-owning Sigma Holdings, and Sigma Holdings in turn wholly-owning Sigma Brazil.
- *Signing Officers for Foreign Subsidiary Bank Accounts.* The establishment of any new banking relationships and/or new bank accounts requires approval from the Company. Monetary authorization limits are established by the Company and put in place with the respective banking institutions. Signatories and authorization limits for bank accounts are reviewed and revised as necessary, with changes being communicated to the appropriate banking institutions. Each payment requires approvals from two authorized signatories.
- *Strategic Direction.* The Board is responsible for the overall stewardship of the Company and, as such, supervises the management of the business and affairs of the Company. More specifically, the Board is responsible for reviewing the strategic business plans and corporate objectives, and approving acquisitions, dispositions, investments, capital expenditures and other transactions and matters that are material to the Company, including those of its subsidiaries.
- *Internal Control Over Financial Reporting.* The Company prepares its consolidated financial statements, on a quarterly and annual basis, using IFRS. The Company implements internal controls over the preparation of its financial statements and other financial disclosures (including its MD&A) to provide reasonable assurance that its financial reporting is reliable, that the quarterly and annual financial statements are being prepared in accordance with IFRS and that other financial disclosures (including its MD&A) are being prepared in accordance with relevant securities legislation. These systems of internal control over financial reporting require that any payments are reviewed and approved by two board members, being at least one co-CEO, and are designed to ensure that, among other things, the Company has access to material information about its subsidiaries.
- *Disclosure Controls and Procedures.* The Company has a disclosure policy that establishes the protocol for the preparation, review and dissemination of information about the Company. This policy provides for multiple points of contact in the review of important disclosure matters, which includes input from key members of management located in Brazil.
- *CEO and CFO Certifications.* In order for the Company's Co-Chief Executive Officers and Chief Financial Officer to be in a position to attest to the matters addressed in the quarterly and annual certifications required by Canadian securities laws, and for the Company's management to be in a position to furnish the report on the Company's internal control over financial reporting required by the U.S. Sarbanes-Oxley Act (as defined below), the Company has developed internal procedures and responsibilities throughout the organization for its regular periodic and special situation reporting in order to provide assurances that information that may constitute material information will reach the appropriate individuals who review public documents, and that statements relating to the Company and its subsidiaries containing material information is prepared with input from the responsible officers and employees and is available for review by the Co-Chief Executive Officers and Chief Financial Officer in a timely manner.

Intercompany Fund Transfers

Differences in banking systems and controls between Canada and Brazil are addressed by having stringent controls over cash kept in the jurisdiction, especially with respect to access to cash, cash disbursements, appropriate authorization levels, performing and reviewing bank reconciliations on at least a monthly basis and the segregation of duties. In executing certain normal course monetary transactions, funds are transferred between the Company and its subsidiaries by way of wire transfer. These transactions would typically include the payment of applicable fees for services; reimbursement of costs incurred by the Company on behalf of the subsidiaries; advances in the form of intercompany loans or equity contributions to subsidiaries; repayment of interest and/or principal on intercompany loans; and the return of capital or payment of dividends from subsidiaries. Capital structure and funding arrangements are established between the Company and the subsidiaries, and intercompany loan agreements are established with defined terms and conditions. Where regulatory conditions exist in the form of exchange controls, all necessary approvals are obtained in advance of the proposed transactions.

Managing Cultural Differences

Differences in cultures and practices between Canada and Brazil are addressed by employing competent staff in Canada and Brazil who are familiar with the local laws, business culture and standard practices, have local language proficiency, are experienced in working in that jurisdiction and in dealing with the relevant government authorities and have experience and knowledge of the local banking systems and treasury requirements.

Records Management of the Company's Subsidiaries

The original minute books and corporate records of each of the Company's subsidiaries are kept at the Sigma Brazil office. Company management and the Board have complete access to these records.

RISK FACTORS

Risk Factors

The Company is subject to numerous risk factors at any given time (many of which are beyond its control) which could materially adversely impact upon its business, financial condition, results of operations, cash flows, ability to obtain financing and prospects and, as a result, the trading price of the Common Shares. The following are risk factors that the Company's management believes are most important. The below described risks are not an exhaustive description of all risks. See also "[Cautionary Note Regarding Forward Looking Information](#)" above.

Risks Related to Resource Development

The Company may not develop the Project into a commercial mining operation.

The Company's business strategy depends in large part on developing the Project into a commercially viable mining operation. Whether a mineral deposit will be commercially viable depends on numerous factors, including: (i) the particular attributes of the deposit, such as size, grade and proximity to infrastructure; (ii) commodity prices, which are highly volatile; and (iii) government regulations, including regulations relating to prices, taxes, royalties, land tenure, land use, importing and exporting of minerals, environmental protection and capital and operating cost requirements. The development of the Project is subject to the Company securing the necessary funding and other resources and is also subject to numerous development and operational risks. Accordingly, there can be no assurance that the Company will ever develop the Project into a commercial mining operation.

There can be no assurance that market prices for lithium will remain at current levels or that such prices will improve.

Lithium is not a traded commodity like base and precious metals. Sales agreements are negotiated on an individual and private basis with end-users or intermediaries. In addition, there are a limited number of producers of lithium compounds, and it is possible that these existing producers will try to prevent newcomers from entering the chain of supply by increasing their production capacity and lowering sales prices. Other factors, such as supply and demand of lithium-based end-products (such as lithium hydroxide), pricing characteristics of alternative sources of energy, industrial disruption and actual lithium market sale prices, could have an adverse impact on the market

price of lithium and as such render the Project uneconomic. There can be no assurance that such prices will remain at current levels or that such prices will improve.

The market for EVs and other large format batteries currently has limited market share and no assurances can be given for the rate at which this market will develop, if at all, which could affect the success of the Company and its ability to develop lithium operations.

The success of the Company and its ability to develop lithium operations is largely dependent on the adoption of lithium-ion batteries for EV and other large format batteries. The market for EV and other large format batteries currently has limited market share and no assurance can be given that it will develop further (or at what rate this market will develop, if at all). To the extent that such markets do not develop in the manner or according to the timeline contemplated by the Company, the long-term growth in the market for lithium products will be adversely affected, which would inhibit the potential for development of the Project and its potential commercial viability.

Changes in technology or other developments could result in preferences for substitute products.

Lithium and its derivatives are preferred raw materials for certain industrial applications, such as rechargeable batteries and liquid crystal displays (LCDs). Many materials and technologies are being researched and developed with the goal of making batteries lighter, more efficient, faster charging and less expensive. Some of these technologies could be successful and could adversely affect demand for lithium batteries in personal electronics, electric and hybrid vehicles and other applications. The Company cannot predict which new technologies may ultimately prove to be commercially viable and on what time horizon. In addition, alternatives to such products may become more economically attractive as global commodity prices shift. Any of these events could adversely affect demand for and market prices of lithium, thereby resulting in a material adverse effect on the economic feasibility of extracting any mineralization the Company discovers and reducing or eliminating any reserves it identifies.

New production of lithium hydroxide or lithium carbonate from current or new competitors in the lithium markets could adversely affect prices.

In recent years, new and existing competitors have increased the supply of lithium hydroxide and lithium carbonate, which has affected its price. Further production increases could negatively affect prices. There is limited information on the status of new lithium hydroxide production capacity expansion projects being developed by current and potential competitors and, as such, the Company cannot make accurate projections regarding the capacities of possible new entrants into the market and the dates on which they could become operational. If these potential projects are completed in the short term, they could adversely affect market lithium prices, thereby resulting in a material adverse effect on the economic feasibility of extracting any mineralization the Company discovers and reducing or eliminating any reserves it identifies.

The Project is at development stage and the Company's ability to succeed in progressing through development to commercial operations will depend on a number of factors, some of which are outside its control.

The Project is at development stage and will require a substantial increase in skilled personnel and operational support as the Project transitions to a more advanced development and then operating stage. The Company's ability to succeed in progressing through development to commercial operations will depend on a number of factors, including management's ability to manage this transition, the availability of working capital, and the ability to recruit and train additional qualified personnel (and, where appropriate, to engage third party contractors with qualified personnel).

The Company's financial condition, operations and results of any future operations are subject to political, economic, social, regulatory and geographic risks of doing business in Brazil.

Investments in emerging markets like Brazil generally pose a greater degree of risk than investments in more mature market economies because the economies in the developing world are more susceptible to destabilization resulting from domestic and international developments and exposes the Company to heightened risks related to prevailing and changing political and socioeconomic conditions. Changes in mining, investment or other applicable policies or shifts in political attitude in Brazil may adversely affect the Company's operations or profitability and may affect the Company's ability to fund its ongoing expenditures. Regardless of the economic viability of the Company's



properties, such as political changes, which are beyond the Company's control, could have a substantive impact and prevent or restrict (or adversely impact the financial results of) mining of some or all of any deposits on the Project.

The Brazilian economy has been characterized by frequent, and occasionally material, intervention by the Brazilian federal government, which has often modified monetary, credit and other policies intending to influence Brazil's economy. The Brazilian government's actions to control inflation and effect other policy changes have involved wage and price controls, changes in existing, or the implementation of new, taxes and fluctuations of base interest rates. Actions taken by the Brazilian federal government concerning the economy may have important effects on Brazilian companies or companies with Brazilian assets and on market conditions and the competitiveness of Brazilian products abroad. In addition, actions taken by the Brazilian state and local governments with respect to labor and other laws affecting operations may have an effect on the Company.

The Company's financial condition and results of any future operations may also be materially adversely affected by any of the following, and the Brazilian federal government's actions, or failure to act, in response to them:

- currency depreciations and other exchange rate movements;
- monetary policies
- inflation rate fluctuations
- economic, political and social instability
- environmental regulation
- energy shortages or changes in energy prices
- interest rates
- disasters at third party mineral projects
- corruption or political scandal
- exchange rate controls and restrictions on remittances abroad
- liquidity of the domestic capital and lending markets
- tax policy, including international tax treaties
- other political, diplomatic, social and economic policies or developments in or affecting Brazil

Uncertainty over whether the Brazilian federal government will implement changes in policy or regulation affecting these or other factors in the future may contribute to economic uncertainty in Brazil and to heightened volatility in the market value of securities issued by Brazilian companies or companies with Brazilian assets. Furthermore, the next presidential election in Brazil is in 2022, which creates the possibility of nearer term policy or regulatory change.

The Brazilian government has frequently implemented changes to tax laws, tax treaties and other regulations, including modifications to tax rates. Any such changes, as well as changes in the interpretation of such tax laws and regulations, may result in increases to the Company's overall tax burden, which would negatively affect its profitability.

Political instability or changes in government policy (which may be arbitrary) may result in changes to laws affecting the ownership of assets, mining activities, taxation, rates of exchange, environmental regulations and labour relations. This may affect both the Company's ability to undertake exploration and development activities in respect of present and future properties in the manner currently contemplated, as well as its ability to continue to explore, develop and operate those properties in which it has an interest or in respect of which it has obtained exploration and development rights to date. The possibility that a future government may adopt substantially different policies cannot be ruled out.

Brazil's long-term foreign and local currency debt is rated sub-investment grade. Brazil's ratings or outlooks may be downgraded further or placed on watch by the various rating agencies in the future. Downgrades of Brazil's sovereign credit ratings could limit access to funding and/or raise the cost of funding for the Company. Downgrades of Brazil's sovereign credit ratings could also heighten investors' perception of the risk of having operations in Brazil.

These and other future developments in the Brazilian economy and governmental policies may materially adversely affect the Company.

Violations of anti-corruption, anti-bribery, anti-money laundering and economic sanctions laws and regulations could materially adversely affect the Company's business, reputation, results of any future operations and financial condition.

Brazilian markets have historically experienced heightened volatility due to the uncertainties generated by corruption and bribery allegations and investigations of certain senior politicians, including congressmen and officers and directors of some of the major state-owned and private companies in Brazil. In addition, certain media posts and reports of corruption, or allegations of corruption, in Brazil may have an adverse effect on the public perception and reputation of Brazilian companies and may adversely affect the trading price of the Common Shares. The Company's value and share price could also be adversely affected by illegal activities by others, corruption or by claims, even if groundless, implicating the Company in illegal activities.

The Company is subject to anti-corruption, anti-bribery and anti-money laundering laws and regulations in various jurisdictions, including Canada, U.S. and Brazil. In addition, it is subject to economic sanctions regulations that restrict dealings with certain sanctioned countries, individuals and entities. There can be no assurances that the internal policies of the Company will be sufficient to prevent or detect all inappropriate practices, fraud or violations of such laws, regulations and requirements by its employees, directors, officers, partners, agents and service providers or that any such persons will not take actions in violation of its policies and procedures. Any violations of anti-bribery and anti-corruption laws or sanctions regulations could have a material adverse effect on the Company's business, reputation, results of any future operations and financial condition.

The Company has not purchased any "political risk" insurance coverage and currently has no plans to do so.

The Company is subject to regulatory frameworks applicable to the Brazilian mining industry which could be subject to further change, as well as government approval and permitting requirements, which may result in limitations on the Company's business and activities.

Government approvals and permits are required in connection with the Company's activities. Any instances where such approvals are required and have not been obtained, the Company may be restricted or prohibited from proceeding with planned exploration, development or operational activities. Failure to comply with applicable laws, regulations and permitting requirements may result in enforcement actions thereunder, including orders issued by regulatory or judicial authorities causing development or operations to cease or be curtailed, and may include corrective measures requiring capital expenditures, installation of additional equipment, or other remedial actions. Parties engaged in mining operations may be required to compensate those suffering loss or damage by reason of the mining activities and may be liable for civil or criminal fines or penalties imposed for violations of applicable laws or regulations. Amendments to current laws, regulations and permitting requirements, or a more stringent application of existing laws, could have a material adverse impact on the Company and cause increases in capital expenditures or production costs, reductions in the levels of production at producing properties or require abandonment or delays in the development of the Project.

In Brazil, the ANM regulates the conduct of exploration, development and mining operations. The ANM requires: (i) certain fee payments for exploration authorizations (known as the Annual Fee per Hectare), (ii) certain royalty payments to be made to the federal government for the mining concessions (known as Financial Compensation for the Exploitation of Mineral Resources - "CFEM") and (iii) royalty payments to be made to the landowner if the surface rights are not held by the holder of the mineral rights. There is also a monthly inspection fee related to the transfer and commercialization of certain minerals in some Brazilian states. Royalties, taxes and fees related to the exploration authorizations and mining concessions may change or increase substantially in the future.

In Brazil, failure to demonstrate the existence of technical and economically viable mineral deposits covered by an exploration authorization for a period of at least one year may lead to the authorization being required to be returned to the federal government. The federal government may then grant the exploration authorization to other parties that may conduct other mineral prospecting activities at said area. In addition, mining concessions and exploration authorizations may not be granted due to changes in laws and regulations governing mineral rights. Accordingly, retrocession requirements, loss of mineral rights, or the inability to renew concessions, authorizations, permits and licenses may materially adversely affect the Company.

Tailings dam failures involving other mining companies in Brazil, and the resultant loss of life and damage, have resulted in (and could in the future result in further) increased requirements, delays in licensing and other material consequences to all mining companies, even if the circumstances of the Project or the Company's development and operational methodologies are significantly different than such other companies and projects.

The regulatory framework applicable to the Brazilian mining industry could be subject to further change, which may result in limitations on the Company's business and activities, including in connection with some existing mineral rights, and an increase in expenses, particularly mining royalties, taxes and fees.

The Company's operations are also subject to Brazilian regulations pertaining to the use and development of mineral properties and the acquisition or use of rural properties by foreign investors or Brazilian companies under foreign control, and various other Brazilian regulatory frameworks.

The Company's operations are subject to numerous environmental laws and regulations and expose the Company to environmental compliance risks, which may result in significant costs and have the potential to reduce the profitability of operations.

All phases of operations are subject to numerous environmental laws and regulations in Brazil on the federal, state and municipal levels, including laws and regulations relating to specially protected areas, air emissions, wastewater discharge and the use, manufacture, handling, transportation, storage, disposal, remediation of waste and hazardous substances. Environmental hazards may exist which are unknown to the Company at present which may have been caused by previous owners or operators of the Project. In the event of an accident or exposure to hazardous materials, environmental damages may occur and trigger the obligation to remediate the environmental conditions, which may result in significant costs. The victim of such damages or whoever the law so authorizes (such as public attorneys' office, foundations, state agencies, state-owned companies and associations engaged in environmental protection) is not compelled to sue all polluting agents in the same proceeding, but rather the aggrieved party may choose to sue only one of the polluting agents to redress damages.

Environmental liability may be litigated in civil, administrative and criminal courts, with the application of administrative, civil and criminal sanctions, in addition to the obligation to redress the damages caused. The lack of a conviction or a finding of liability in one proceeding does not necessarily preclude the finding of liability in other proceedings. Accordingly, in respect of environmental compliance matters, there could be unexpected interruptions to operations, fines, or penalties as well as third-party claims for property damage or personal injury or remedial or other costs, which may have a material adverse effect on the Company's operations. Municipal, state and federal governments may revise and impose stricter environmental regulations in the future. There can be no assurance that environmental regulation will not adversely affect development or operations, with increased fines and penalties for non-compliance, more stringent environmental assessments of proposed projects and a heightened degree of responsibility for companies and their officers, directors and employees. The cost of compliance with changes in governmental regulations has the potential to reduce the profitability of operations.

Physical climate change events and the trend toward more stringent regulations aimed at reducing the effects of climate change could have an adverse effect on the Company's business and future operations.

Climate change is increasingly perceived as a broad societal and community concern. Stakeholders may increase demands for emissions reductions and call upon mining companies to better manage their consumption of climate-relevant resources. Physical climate change events, and the trend toward more stringent regulations aimed at reducing the effects of climate change, could impact the Company's decisions to pursue future opportunities, or maintain existing operations, which could have an adverse effect on its business and future operations. The Company can provide no assurance that efforts to mitigate the risks of climate changes will be effective and that the physical risks of climate change will not have an adverse effect on its operations and profitability.

As the Company does not have any experience in the construction and operation of a mine, processing plants and related infrastructure, it is more difficult to evaluate the Company's prospects, and the Company's future success is more uncertain than if it had a more proven history of developing a mine.

The Company does not have any experience in the construction and operation of a mine, processing plants and related infrastructure, as it has not previously been involved in the development of a mining project. Although certain of its officers, directors and consultants have such experience, the Company itself does not have any experience

in taking a mining project to production. As a result, it is more difficult to evaluate the Company's prospects, and the Company's future success is more uncertain than if it had a more proven history of developing a mine.

The Company's future production estimates are based on existing mine plans and other assumptions which change from time to time. No assurance can be given that such estimates will be achieved.

The Company has prepared estimates and projections of future production for the Project. Any such information is forward-looking and no assurance can be given that such estimates will be achieved. These estimates are based on existing mine plans and other assumptions which change from time to time. The Company's actual production may vary from estimates for a variety of reasons, including: actual mineralized material mined varying from estimates of grade, tonnage, dilution and metallurgical and other characteristics; revisions to mine plans; unusual or unexpected deposit formations; risks and hazards associated with mining; natural phenomena, such as inclement weather conditions, water availability, floods, and seismic activity; and unexpected labour shortages, strikes, local community opposition or blockades. The economic analysis for the Project is based in part on achieving at least the contemplated minimum operating and production levels.

The Company may experience unexpected costs and cost overruns, problems and delays during construction, development, mine start-up and operations for reasons outside of the Company's control, which have the potential to materially affect its ability to fully fund required expenditures and/or production, or, alternatively, may require the Company to consider less attractive financing solutions.

It is common in new mining operations to experience unexpected costs and cost overruns, problems and delays during construction, development and mine start-up. A number of factors could cause such delays or cost overruns, including (among others) permitting delays, construction pricing escalation, changing engineering and design requirements, the performance of contractors, labour disruptions, adverse weather conditions and challenges in obtaining financing. Even if commercial production is achieved, equipment and facilities may not operate as planned due to design or manufacturing flaws, which may not all be covered by warranty. Mechanical breakdown could occur in equipment after the period of warranty has expired, resulting in loss of production as well as the cost of repair. Any delay, or cost overrun, may adversely impact the Company's ability to fully fund required expenditures, or alternatively, may require the Company to consider less attractive financing solutions. Accordingly, the Company's activities may not result in profitable mining operations at its mineral properties, including the Project.

The Company's capital and operating cost estimates may vary from actual costs and revenues for reasons outside of the Company's control.

Capital costs, operating costs, production and economic returns and other estimates may differ significantly from those anticipated by current estimates, and there can be no assurance that the actual capital, operating and other costs will not be higher than currently anticipated. Actual costs and revenues may vary from estimates for a variety of reasons, including (among others): lack of availability of resources or necessary equipment; unexpected construction or operating problems; lower realized lithium prices; revisions to construction plans; risks and hazards associated with mineral production; natural phenomena; floods; unexpected labour shortages or strikes; general inflationary pressures; and interest and currency exchange rates.

The Company's operations are subject to the high degree of risk normally incidental to the exploration for, and the development and operation of, mineral properties.

The Company's operations are subject to all of the risks normally incidental to the exploration for, and the development and operation of, mineral properties. Mineral exploration and exploitation involves a high degree of risk. Operations can be affected by such factors as permitting regulations and requirements, weather, environmental factors, unforeseen technical difficulties, unusual or unexpected geological formations, work interruptions, fires, power outages, shutdowns due to equipment breakdown or failure, unexpected maintenance and replacement expenditures, human error, labour disputes, flooding, explosions, releases of hazardous materials, tailings impoundment failures, cave-ins, landslides, earthquakes and the inability to obtain or properly maintain adequate machinery, equipment or labour. The Company expects to rely on third-party owned infrastructure in order to develop and operate its projects, such as power, utility and transportation infrastructure. Any failure of this infrastructure without adequate replacement or alternatives may have a material impact on the Company.

Insurance may not be available to insure against all such risks, or the costs of such insurance may be uneconomic. Losses from uninsured and underinsured losses have the potential to materially affect the Company's financial position and prospects.

In the course of exploration, development and production of mineral properties, certain risks (in particular, risks related to operational and environmental incidents) may occur. Insurance may not be available to insure against all such risks, or the costs of such insurance may be uneconomic. The Company may also elect not to obtain insurance for other reasons. Should such liabilities arise, they could reduce or eliminate any future profitability and result in increasing costs and a decline in the value of the Company. The Company maintains liability insurance in accordance with industry standards, however, the nature of these types of risks is such that liabilities could exceed policy limits and the Company could incur significant costs that could have a material adverse effect on its business, results of operations and financial condition. Losses from uninsured and underinsured liabilities have the potential to materially affect the Company's financial position and prospects.

The Company is subject to risks associated with securing title and property interests.

There can be no assurance the Company's property mineral tenure interests, or that such title interests will ultimately be secured. No assurance can be given that applicable governments will not revoke or significantly alter the conditions of the applicable exploration and mining authorizations nor that such exploration and mining authorizations will not be challenged or impugned by third parties. The Company's property interests may also be subject to prior unregistered agreements or transfers or other land claims, and title may be affected by undetected defects and adverse laws and regulations.

The Company cannot guarantee that title to its properties will not be challenged. A successful challenge to the precise area and location of the Company's mineral claims could result in the Company being unable to develop its mineral properties or being unable to enforce its rights with respect to its mineral properties.

While the Company has the surface rights, Servidão Mineral, for Production Phase 1, as described above, there can be no assurance that the Company will obtain such rights for Production Phase 2 or thereafter.

The Company is subject to strong competition in Brazil and in the global mining industry.

The mining industry is competitive in all of its phases and requires significant capital, as well as technical and operational resources. Competition is also intense for mining equipment, supplies and qualified service providers, particularly in Brazil where mining personnel are in high demand and short supply. If qualified expertise cannot be sourced and at cost effective rates within Brazil, the Company may need to procure those services outside of Brazil, which could result in additional delays and higher costs to obtain work permits, particularly during the COVID-19 pandemic. Because of the high costs associated with exploration, the expertise required to analyze a project's potential and the capital required to develop a mine, larger companies with significant resources may have a competitive advantage over the Company. The Company faces strong competition from other mining companies, some with greater financial resources, operational experience and technical capabilities. As a result of this competition, the Company may be unable to maintain or acquire financing, personnel, technical resources or attractive mining properties on terms it considers acceptable.

The Company may become subject to government orders, investigations, inquiries or other proceedings (including civil claims) relating to health and safety matters, which could result in consequences material to its business and operations.

The mineral exploration, development and production business carries inherent risk of liability related to worker and surrounding population health and safety, including the risk of government-imposed orders to remedy unsafe conditions, potential penalties for contravention of health and safety laws, licenses, permits and other approvals, and potential civil liability. Compliance with health and safety laws (and any future changes) and the requirements of licenses, permits and other approvals remain material to the Company's business, and will continue to remain material at all stages of the development and operation of the Project. The Company may become subject to government orders, investigations, inquiries or other proceedings (including civil claims) relating to health and safety matters. Mining, like many other extractive natural resource industries, is subject to potential risks and liabilities due to accidents that could result in serious injury or death. The impact of such accidents could affect the profitability of the operations, potentially result in fines, penalties or other prosecutions, cause an interruption to operations, lead

to a loss of licenses, affect the reputation of the Company and its ability to obtain further licenses, damage community relations and reduce the perceived appeal of the Company as an employer. The occurrence of any of these events or any changes, additions to or more rigorous enforcement of health and safety laws, licenses, permits or other approvals could have a significant impact on development or operations and result in additional material expenditures. As a consequence, no assurances can be given that additional workers' health and safety issues relating to presently known or unknown matters will not require unanticipated expenditures, or result in fines, penalties or other consequences (including changes to operations) material to its business and operations.

The Company's mineral resource and mineral reserve estimates are estimates only and no assurance can be given that any particular level of recovery of minerals will in fact be realized or that identified mineral resources or mineral reserves will ever qualify as a commercially mineable (or viable) deposit.

The Company's Mineral Resource and Mineral Reserve estimates are estimates only. No assurance can be given that any particular level of recovery of minerals will in fact be realized or that identified mineral resources or mineral reserves will ever be mined or processed profitably. In addition, the grade of mineralization which may ultimately be mined may differ from that indicated by drilling results and such differences could be material. By their nature, mineral resource and mineral reserve estimates are imprecise and depend, to a certain extent, on analyses of drilling results and statistical inferences that may ultimately prove to be inaccurate. These estimated mineral resources and mineral reserves should not be interpreted as assurances of certain commercial viability or of the profitability of any future operations. Investors are cautioned not to place undue reliance on these estimates.

Mineral Resources are not Mineral Reserves and have a greater degree of uncertainty as to their feasibility and prospects for economic extraction. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. Mineral Resources that are in the Inferred category are even more risky. An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity. An Inferred Mineral Resource has a lower level of confidence than that applying to any other category of Mineral Resource. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration. However, the estimate of Inferred Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.

The PEA relating to the Second Mine is preliminary in nature, and includes inferred mineral resources that are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the PEA will be realized. The Company has not yet made a production decision in respect of the Barreiro deposit. The economic viability of the Mineral Resources of the Second Mine has not been demonstrated. The Company expects that it will assess the results of a preliminary feasibility study and a feasibility study before making a production decision in respect of the Second Mine.

The Company's operations and the development of its projects may be adversely affected if it is unable to maintain positive community relations.

The Company's relationships with host communities are critical to ensure the success of its existing operations and the construction and development of new operations. There is an increasing level of public concern relating to the perceived effects of mining activities on the environment and on host communities due to events that happened with other companies in the recent past. The evolving expectations related to human rights, indigenous rights, and environmental protection may result in opposition to the Company's current and future operations or further development of the Project. Such opposition may be directed through legal or administrative proceedings or expressed in public opposition such as protests, roadblocks or other forms of expression against the Company's activities, and may have a negative impact on the Company's reputation and operations.

Opposition by any of the aforementioned groups to the Company's operations may require modification of, or preclude the operation or development of, the Company's projects or may require the Company to enter into agreements with such groups or local governments with respect to the Company's projects, in some cases causing increased cost and considerable delays to the advancement of the Company's projects. Further, publicity adverse

to the Company, its operations or extractive industries generally could have an adverse effect on the Company and may impact relationships with the communities in which the Company operates and other stakeholders. There can be no assurance that its efforts to operate in a socially responsible manner will mitigate this potential risk.

The Project may also be impacted by relations with various community stakeholders, and the Company's ability to develop related mining assets may still be affected by unforeseen outcomes from such community relations.

The Company is exposed to risks associated with doing business with counterparties, which may impact the Company's operations and financial condition.

The Company is exposed to various counterparty risks including, but not limited to: (i) financial institutions that hold the Company's cash and short-term investments; (ii) companies that are expected to have payables to the Company; (iii) third party contractors engaged for the development of the Project; (iv) the Company's insurance providers; and (v) the Company's lenders. The risks associated with doing business with several counterparties, including any defaults or other breaches of any agreements entered into by the Company with such counterparties, may impact the Company's operations and financial condition.

Any limitation on the transfer of cash or other assets between the Company and the Company's subsidiaries, or among such entities, could restrict the Company's ability to fund its operations efficiently.

The Company conducts operations through subsidiaries, including a foreign subsidiary located in Brazil. Accordingly, any limitation on the transfer of cash or other assets between the parent corporation and such entities, or among such entities, could restrict the Company's ability to fund its operations efficiently. Any such limitations, or the perception that such limitations may exist now or in the future, could have an adverse impact on the Company's valuation and stock price.

The Company is subject to risks associated with its reliance on consultants and others for mineral exploration and exploitation expertise.

The Company has relied on, and is expected to continue to rely on, consultants and others for mineral exploration and exploitation expertise. If the work conducted by those consultants is ultimately found to be incorrect or inadequate in any material respect, the Company may experience delays or increased costs in developing its properties.

Risks Related to the Company's Business and Securities

The current COVID-19 pandemic could have a material adverse effect on the Company's business, operations, financial condition and stock price.

The Company faces risks related to pandemics and epidemics, such as the outbreak of COVID-19 that surfaced in December 2019 and has spread around the world, including Canada, the United States and Brazil, which could significantly disrupt the Company's operations and may materially and adversely affect its business and financial condition. The full extent to which COVID-19 impacts the Company's business, including its operations and the market for its securities, will depend on future developments that are highly uncertain and will depend on numerous evolving factors that the Company may not be able to accurately predict or assess, including, but not limited to, the duration, severity, the availability of approved vaccines and remedial medications and the timing for completion of related distribution programs around the globe, and the continued governmental, business and individual actions taken in response to the pandemic. Moreover, the actual and threatened continue or spread of COVID-19, especially in Brazil, could materially and adversely impact the Company's business, including without limitation on the regional economies in which the Company operates, employee health, workforce productivity, increased insurance premiums and medical costs, restrictions on travel by the Company's personnel and by the personnel of the Company's various service providers, quarantine, the availability of industry experts and personnel, and other factors that will depend on future developments beyond the Company's control, all or some of which may have a material adverse effect on the Company's business, financial condition and stock price.

Government efforts to curtail the spread of COVID-19 may also result in temporary or long-term suspensions or shut-downs of the Company's operations. Given the unforeseen conditions resulting from the ongoing evolution of the COVID-19 pandemic and its global impact, there can be no assurance that the Company's future response and business continuity plans will continue to be effective in managing the pandemic and changing conditions could

result in a material adverse effect on the Company's business, financial condition and/or results of operations. Travel restrictions to and from Brazil, currently implemented by governments, as well as quarantine, isolation and physical distancing requirements during this period, may have a negative impact on workforce mobility. Further, the protective measures implemented by the Company may cause higher operating costs, combined with a decrease in workforce productivity, lower production outputs and in some cases, temporary cessation of mining development, could have a material adverse effect on the Company's business and financial conditions.

In addition, the outbreak has caused a worldwide health crisis that has adversely affected economies and financial markets resulting in a global economic downturn that has impacted lithium markets and, therefore, been negative for lithium mining companies.

The current military conflict in Ukraine and the economic or other sanctions imposed may impact global markets in such a manner as to have a material adverse effect on the Company's business, operations, financial condition and stock price.

The military conflict in Ukraine could lead to heightened volatility in the global markets, increased inflation, and turbulence in commodities markets. More recently, in response to Russian military actions in Ukraine, several countries (including Canada, the United States and certain allies) have imposed economic sanctions and export control measures, and may impose additional sanctions or export control measures in the future, which have and could in the future result in, among other things, severe or complete restrictions on exports and other commerce and business dealings involving Russia, certain regions of Ukraine, and/or particular entities and individuals. While the Company does not have any direct exposure or connection to Russia or Ukraine, as the military conflict is a rapidly developing situation, it is uncertain as to how such events and any related economic sanctions could impact the global economy and commodities markets. Any negative developments in respect thereof could have a material adverse effect on the Company's business, operations or financial condition.

If the Company is unable to ultimately generate sufficient revenues to become profitable and have positive cash flows, it could have a material adverse effect on its prospects, business, financial condition, results of operations or overall viability as an operating business.

The Company has a history of operating losses and it can be expected to generate continued operating losses and negative cash flows in the future while the Company carries out its current business plan to further develop and expand its business. The Company has made significant up-front investments in order to rapidly develop and expand its business. The Company is currently incurring expenditures related to its operations that have generated negative operating cash flows from operations. The successful development and commercialization of these operations will depend on a number of significant financial, logistical, technical, marketing, legal, regulatory, competitive, economic and other factors, the outcome of which cannot be predicted. There is no guarantee that such operations will become profitable or produce positive cash flow or that the Company will be successful in generating significant revenues in the future or at all. The Company's inability to ultimately generate sufficient revenues to become profitable and have positive cash flows could have a material adverse effect on its prospects, business, financial condition, results of operations or overall viability as an operating business.

The Company is subject to liquidity risk and therefore may have to include a "going concern" note in its financial statements.

The Company's ability to continue as a going concern is dependent upon the ability to ultimately generate future profitable operations and to obtain the necessary financing to meet its obligations and repay its liabilities arising from normal business operations when they come due. The Company has reported net losses and comprehensive losses for the year ended December 31, 2021. The Company's business does not currently operate on a self-sustaining basis and until it is successfully able to fund its expenditures from its revenues, its ability to continue as a going concern is dependent on raising additional funds. The Company expects to continue to sustain operating losses in the future until it generates revenue from the commercial production of its mineral properties. There is no guarantee that the Company will ever be profitable.

The Company may not be able to obtain sufficient financing in the future on acceptable terms, which could have a material adverse effect on the Company's business, results of operations and financial condition. In order to obtain

additional financing, the Company may conduct additional (and possibly dilutive) equity offerings or debt issuances in the future.

There is no assurance that the Company will be able to obtain sufficient financing in the future on terms acceptable to meet the Company's capital requirements. The ability of the Company to arrange additional financing in the future will depend, in part, on prevailing capital market conditions as well as the business performance of the Company. Failure to obtain additional financing on a timely basis may cause the Company to postpone, abandon, reduce or terminate its operations and could have a material adverse effect on the Company's business, results of operations and financial condition. A likely source of future financing is the sale of additional Common Shares, which would mean that each existing shareholder would own a smaller percentage of the Common Shares then outstanding. In addition, the Company may issue or grant convertible securities (such as warrants or stock options) in the future pursuant to which additional Common Shares may be issued. The exercise of such securities would result in dilution of equity ownership to the Company's existing shareholders.

Alternatively, the Company may rely on debt financing and assume debt obligations that require it to make substantial interest and principal payments and which may be secured against the Company's assets, including the Project. Failure to meet debt obligations as they become due may result in loss of the Project. The Company may also sell additional royalties on the Project, which would mean that the Company's share of returns from the Project would decrease.

The Company may be unable to achieve cash flow from operating activities sufficient to permit it to pay the principal, premium, if any, and interest on the Company's indebtedness, or maintain its debt covenants.

The Company's ability to make scheduled payments on or refinance its debt obligations (if necessary) depends on its financial condition and operating performance, which are subject to prevailing economic and competitive conditions and to certain financial, business, legislative, regulatory and other factors beyond the Company's control, including the market prices of lithium. The Company may be unable to achieve cash flow from operating activities sufficient to permit it to pay the principal, premium, if any, and interest on the Company's indebtedness, or maintain its debt covenants. If the Company's cash flows and capital resources are insufficient to fund its debt service obligations, or there is a contravention of its debt covenants, the Company could face substantial liquidity problems and could be forced to reduce or delay investments and capital expenditures or to dispose of material assets or operations, seek additional debt or equity capital or restructure or refinance its indebtedness. The Company may not be able to affect any such alternative measures, if necessary, on commercially reasonable terms or at all and, even if successful, those alternative actions may not allow it to meet its scheduled debt service obligations. The Company's inability to generate sufficient cash flows to satisfy its debt obligations, or to refinance its indebtedness on commercially reasonable terms or at all, would materially and adversely affect its financial position and results of operations and its ability to satisfy its obligations.

The Company has not declared or paid dividends in the past and may not declare or pay dividends in the future.

The Company has not paid dividends since incorporation and presently has no ability to generate earnings as its mineral properties are in the exploration and development stage. If the Project is successfully developed, the Company anticipates that it will retain future earnings and other cash resources for the future operation and development of its business. The Company does not intend to declare or pay any cash dividends in the foreseeable future. Payment of any future dividends is solely at the discretion of the Board, which will take into account many factors, including the Company's operating results, financial condition and anticipated cash needs. The Company may never pay dividends.

The Company will incur increased costs as a result of being a public company both in Canada listed on the TSXV and in the United States listed on the Nasdaq, and its management will be required to devote substantial further time to United States public company compliance efforts.

As a public company in the United States, the Company will incur additional legal, accounting, Nasdaq, reporting and other expenses. The additional demands associated with being a U.S. public company may disrupt regular operations of the Company's business by diverting the attention of some of its senior management team away from revenue-producing activities to additional management and administrative oversight, adversely affecting the Company's ability to attract and complete business opportunities and increasing the difficulty in both retaining

professionals and managing and growing its business. Any of these effects could harm the Company's business, results of operations and financial condition.

If the Company's efforts to comply with new United States laws, regulations and standards differ from the activities intended by regulatory or governing bodies, such regulatory bodies or third parties may initiate legal proceedings against the Company and its business may be adversely affected. As a public company in the United States, it is more expensive for the Company to obtain director and officer liability insurance, and it will be required to accept reduced coverage or incur substantially higher costs to continue its coverage. These factors could also make it more difficult for the Company to attract and retain qualified directors.

In addition to the Canadian securities laws requirements to which the Company has already been subject, U.S. Sarbanes-Oxley Act 2002, as amended (the "U.S. Sarbanes-Oxley Act") requires that the Company maintain effective disclosure controls and procedures and internal control over financial reporting. Pursuant to Section 404 of the U.S. Sarbanes-Oxley Act ("Section 404"), the Company will be required to furnish a report by its management on its internal control over financial reporting ("ICFR"), which, if or when the Company is no longer an emerging growth company, must be accompanied by an attestation report on ICFR issued by the Company's independent registered public accounting firm.

To achieve compliance with Section 404 within the prescribed period, the Company will document and evaluate its ICFR, which is both costly and challenging. In this regard, the Company will need to continue to dedicate internal resources, potentially engage outside consultants and adopt a detailed work plan to assess and document the adequacy of its ICFR, continue steps to improve control processes as appropriate, validate through testing that controls are functioning as documented and implement a continuous reporting and improvement process for ICFR. Despite the Company's efforts, there is a risk that neither the Company nor its independent registered public accounting firm will be able to conclude within the prescribed timeframe that the Company's ICFR is effective as required by Section 404. This could result in a determination that there are one or more material weaknesses in the Company's ICFR, which could cause an adverse reaction in the financial markets due to a loss of confidence in the reliability of the Company's consolidated financial statements. In addition, in the event that the Company is not able to demonstrate compliance with the Sarbanes-Oxley Act, that its internal control over financial reporting is perceived as inadequate, or that it is unable to produce timely or accurate financial statements, investors may lose confidence in the Company's operating results and the price of its Common Shares may decline. In addition, if the Company is unable to continue to meet these requirements, it may not be able to remain listed on the Nasdaq.

If the Company does not maintain adequate and appropriate internal controls over financial reporting as outlined in accordance with NI 52-109 or the Rules and Regulations of the SEC, the Company will have to report a material weakness and disclose that the Company has not maintained appropriate internal controls over financial reporting.

Internal controls over financial reporting are procedures designed to provide reasonable assurance that transactions are properly authorized, recorded and reported and assets are safeguarded against unauthorized or improper use. A control system, no matter how well designed and operated, can provide only reasonable, and not absolute, assurance with respect to the reliability of financial reporting and financial statement preparation.

As a foreign private issuer, the Company is subject to different U.S. securities laws and rules than a domestic U.S. issuer, which may limit the information publicly available to its shareholders.

The Company is a "foreign private issuer" as such term is defined in Rule 405 under the U.S. Securities Act, and is permitted, under a multijurisdictional disclosure system adopted by the United States and Canada, to prepare its disclosure documents filed under the Exchange Act in accordance with Canadian disclosure requirements. Under the Exchange Act, the Company is subject to reporting obligations that, in certain respects, are less detailed and less frequent than those of U.S. domestic reporting companies. As a result, the Company will not file the same reports that a U.S. domestic issuer would file with the SEC, although it will be required to file or furnish to the SEC the continuous disclosure documents that it is required to file in Canada under Canadian securities laws. In addition, the Company's officers, directors, and principal shareholders are exempt from the reporting and "short swing" profit recovery provisions of Section 16 of the Exchange Act. Therefore, the Company's shareholders may not know on as timely a basis when its officers, directors and principal shareholders purchase or sell shares, as the reporting deadlines under the corresponding Canadian insider reporting requirements are longer.

As a foreign private issuer, the Company is exempt from the rules and regulations under the Exchange Act related to the furnishing and content of proxy statements. The Company is also exempt from Regulation FD, which prohibits issuers from making selective disclosures of material non-public information. While the Company expects to comply with the corresponding requirements relating to proxy statements and disclosure of material non-public information under Canadian securities laws, these requirements differ from those under the Exchange Act and Regulation FD and shareholders should not expect to receive in every case the same information at the same time as such information is provided by U.S. domestic companies.

In addition, as a foreign private issuer, the Company has the option to follow certain Canadian corporate governance practices, except to the extent that such laws would be contrary to U.S. securities laws, and provided that the Company discloses the requirements the Company is not following and describe the Canadian practices it follows instead. As a result, the Company's shareholders may not have the same protections afforded to shareholders of U.S. domestic companies that are subject to all U.S. corporate governance requirements. If the Company ceases to qualify as a foreign private issuer, it will be subject to the same reporting requirements and corporate governance requirements as a U.S. domestic issuer which may increase its costs of being a public company in the United States.

Failure to retain key officers, consultants and employees or to attract, and, if attracted, retain additional key individuals with necessary skills could have a materially adverse impact upon the Company's success.

The success of the Company will be largely dependent upon the performance of its key officers, consultants and employees. Failure to retain key individuals or to attract, and, if attracted, retain additional key individuals with necessary skills could have a materially adverse impact upon the Company's success. The Company has not purchased any "key-man" insurance with respect to any of its directors, officers or key employees and has no current plans to do so.

The Company is subject to currency fluctuation risks.

Business is transacted by the Company primarily in Brazilian, U.S. and Canadian currencies. The majority of the Project's operating costs are denominated in the Brazilian currency. Certain costs associated with imported equipment and international supplies and consultants and sales prices for product are denominated in U.S. dollars. Fluctuations in exchange rates may have a significant effect on the cash flows of the Company. Future changes in exchange rates could materially affect the Company's results in either a positive or negative direction. The Company has not hedged its exposure to any exchange rate fluctuations applicable to its business and is therefore exposed to currency fluctuation risks.

Currently, the Brazilian Real is permitted to float against the US Dollar and allows the purchase and sale of foreign currency and the international transfer of Reais There can be no assurance that the Brazilian Central Bank or the Brazilian government will continue to permit the Real to float freely and not intervene in the exchange rate market through the return of a currency band system or otherwise.

From time to time, the Company may become involved in litigation, which may have a material adverse effect on its business, financial condition, and prospects.

Due to the nature of the Company's business and status as a publicly traded entity, it may be subject to a variety of regulatory investigations, claims, lawsuits and other proceedings in the ordinary course of its business. The results of these legal proceedings cannot be predicted with certainty due to the uncertainty inherent in litigation, including the effects of discovery of new evidence or advancement of new legal theories, the difficulty of predicting decisions of judges and juries and the possibility that decisions may be reversed on appeal. Defense and settlement costs of legal claims can be substantial, even with respect to claims that have no merit.

Litigation may be costly and time-consuming and can divert the attention of management and key personnel from business operations. If the Company is unsuccessful in its defense of claims or unable to settle claims in a manner satisfactory to it, it may be faced with significant monetary damages or injunctive relief against it that could have a material adverse effect on its business and financial condition. To the extent the Company is involved in any active litigation, the outcome of such matters may not be currently determinable nor is it possible to accurately predict the outcome or quantum of any such proceedings at this time.

Certain directors and officers of the Company are, or may become, associated with other natural resource companies which may give rise to conflicts of interest.

Certain directors and officers of the Company are, or may become, associated with other natural resource companies which may give rise to conflicts of interest. In accordance with the *Canada Business Corporations Act*, directors who have a material interest in any person who is a party to a material contract, or a proposed material contract, with the Company are required, subject to certain exceptions, to disclose that interest and generally abstain from voting on any resolution to approve the contract.

The market price for the Company's shares may be volatile and subject to wide fluctuations in response to numerous factors beyond its control and the Company may be subject to securities litigation as a result.

The market price of publicly traded shares, especially of a resource issuer such as the Company, is affected by many variables outside of the Company's control and are not necessarily related to exploration or operational successes or failures of the Company. Factors such as general market conditions for resource issuers, the strength of the economy generally, the availability and attractiveness of alternative investments, and analysts' recommendations may all contribute to volatility in the price of the Company's shares, which are not necessarily related to the operating performance, underlying asset values or prospects of the Company. Investors could suffer significant losses if the Common Shares are depressed or illiquid when an investor seeks liquidity. Securities class action litigation has often been brought against companies following periods of volatility in the market price of their securities. The Company may be the target of similar litigation in the future. Securities litigation could result in substantial costs and damages and divert management's attention and resources.

If securities or industry analysts do not publish research or reports about the Company's business, or if they downgrade the Common Shares, the price of the Common Shares could decline.

The trading market for the Company's Common Shares depends, in part, on the research and reports that securities or industry analysts publish about the Company or its business. The Company does not have any control over these analysts. If one or more of the analysts who cover the Company downgrade its stock or publish inaccurate or unfavorable research about its business, the price of the Company's Common Shares would likely decline. In addition, if the Company's results of operations fail to meet the forecast of analysts, the price of its Common Shares would likely decline. If one or more of these analysts cease coverage of the Company or fail to publish reports on the Company regularly, demand for Common Shares could decrease, which might cause the price and trading volume of Common Shares to decline.

The Company will have broad discretion over the use of the net proceeds from offerings of securities.

While information regarding the use of proceeds from the sale of Common Shares or other securities will be described in the applicable prospectus supplement, the Company will have broad discretion over the use of the net proceeds from offerings of its securities. Because of the number and variability of factors that will determine the use of such proceeds, the Company's ultimate use might vary substantially from its planned use. Purchasers may not agree with how the Company allocates or spends the proceeds from an offering of its securities. The Company may pursue acquisitions, collaborations or other opportunities that do not result in an increase in the market value of the Common Shares, including the market value of the Common Shares, and that may increase losses.

There is no guarantee that the Common Shares will earn any positive return in the short term or long term.

A holding of Common Shares is speculative and involves a high degree of risk and should be undertaken only by holders whose financial resources are sufficient to enable them to assume such risks and who have no need for immediate liquidity in their investment. A holding of Common Shares is appropriate only for holders who have the capacity to absorb a loss of some or all of their holdings.

The Company has a major shareholder which owns 47.2% of the outstanding Common Shares and, as such, for as long as such shareholder directly or indirectly maintains a significant interest in the Company, it may be in a position to affect the Company's governance, operations and the market price of the Common Shares.

To the Company's knowledge, as of the date hereof, the A10 Fund holds approximately 47.2% of the outstanding Common Shares. For as long as it directly or indirectly maintains a significant interest in the Company, the A10 Fund may be in a position to affect the Company's governance and operations. As a result of its shareholdings, the

A10 Fund has the ability, among other things, to approve significant corporate transactions and delay or prevent a change of control of the Company that could otherwise be beneficial to minority shareholders. The A10 Fund generally will have the ability to control the outcome of any matter submitted for the vote or consent of the Company's shareholders. In some cases, the interests of the A10 Fund may not be the same as those of the other minority shareholders, and conflicts of interest may arise from time to time that may be resolved in a manner detrimental to the Company or minority shareholders. The effect of this influence may be to limit the price that investors are willing to pay for Common Shares.

In addition, the potential that the A10 Fund may sell Common Shares in the public market or in private transactions, as well as any actual sales of Common Shares in the public market or in private transactions, could adversely affect the market price of the Common Shares.

As the Company is a Canadian corporation but most of its directors and officers are not citizens or residents of Canada or the U.S., it may be difficult or impossible for an investor to enforce judgements against the Company and its directors and officers outside of Canada and the U.S. which may have been obtained in Canadian or U.S. courts or initiate court action outside Canada or the U.S. against the Company and its directors and officers in respect of an alleged breach of securities laws or otherwise. Similarly, it may be difficult for U.S. shareholders to effect service on the Company to realize on judgments obtained in the United States.

The Company is incorporated under the laws of Canada, but a majority of its directors and officers are not citizens or residents of Canada. In addition, a substantial part of the Company's assets is located outside Canada. As a result, it may be difficult or impossible for an investor to (i) enforce judgments against the Company and its directors and officers outside of Canada which may have been obtained in Canadian courts or (ii) initiate court action outside Canada against the Company and its directors and officers in respect of an alleged breach of securities laws or otherwise.

The majority of the Company's assets and all or a substantial portion of the assets of its directors and officers may be located outside the United States. Consequently, it may be difficult for investors who reside in the United States to effect service of process in the United States upon the Company or upon such persons who are not residents of the United States, or to realize upon judgments of courts of the United States predicated upon the civil liability provisions of the U.S. federal securities laws. A judgment of a U.S. court predicated solely upon such civil liabilities may be enforceable in Canada by a Canadian court if the U.S. court in which the judgment was obtained had jurisdiction, as determined by the Canadian court, in the matter. Investors should not assume that Canadian courts: (i) would enforce judgments of U.S. courts obtained in actions against the Company or such persons predicated upon the civil liability provisions of the U.S. federal securities laws or the securities or blue sky laws of any state within the United States, or (ii) would enforce, in original actions, liabilities against the Company or such persons predicated upon the U.S. federal securities laws or any such state securities or blue sky laws.

In addition, in the event of a dispute involving the foreign operations of the Company, the Company may be subject to the exclusive jurisdiction of foreign courts. The Company's ability to enforce its rights in Canada or locally of judgments from foreign courts could have an adverse effect on its future cash flows, earnings, results of operations and financial condition.

The Company is governed by the Canada Business Corporations Act and by the securities laws of the province of Ontario, which in some cases have a different effect on shareholders than the U.S. corporate laws and U.S. securities laws.

The Company is governed by the *Canada Business Corporations Act* and other relevant laws, which may affect the rights of shareholders differently than those of a company governed by the laws of a U.S. jurisdiction, and may, together with the Company's constating documents, have the effect of delaying, deferring or discouraging another party from acquiring control of the Company by means of a tender offer, a proxy contest or otherwise, or may affect the price an acquiring party would be willing to offer in such an instance. For example, the material differences between the CBCA and the Delaware General Corporation Law (the "DGCL"), the applicable statutory regime for many U.S. companies, that may have the greatest such effect include, but are not limited to, the following: (i) for material corporate transactions (such as mergers and amalgamations, other extraordinary corporate transactions or amendments to the Company's articles) the CBCA generally requires a two-thirds majority vote by shareholders, whereas the DGCL generally requires only a majority vote; and (ii) under the CBCA, holders of 5% or more of the

Company's shares that carry the right to vote at a meeting of shareholders can requisition a special meeting of shareholders, whereas such right does not exist under the DGCL.

The Company is subject to risks associated with its information technology systems and cyber-security.

Threats to information technology systems associated with cyber-security risks and cyber incidents or attacks continue to grow. It is possible that the business, financial and other systems of the Company or other companies with which it does business could be compromised, which might not be noticed for some period of time. Risks associated with these threats include, among other things, loss of intellectual property, disruption of business operations and safety procedures, loss or damage to worksite data delivery systems, and increased costs to prevent, respond to or mitigate cyber-security events.

The Company may be a Passive Foreign Investment Company, which may result in adverse U.S. federal income tax consequences for U.S. holders of Common Shares.

Generally, if for any taxable year 75% or more of the Company's gross income is passive income, or at least 50% of the average quarterly value of the Company's assets are held for the production of, or produce, passive income, the Company would be characterized as a passive foreign investment company ("**PFIC**") for U.S. federal income tax purposes. Based on the current profile of the Company's gross income, gross assets, the nature of its business, and its anticipated market capitalization, the Company believes that it was likely a PFIC for the 2020 taxable year. While it has not made a determination of expected PFIC status for the current taxable year, there is a risk that it may be a PFIC in the current taxable year and in the foreseeable future. Because PFIC status is determined on an annual basis and generally cannot be determined until the end of the taxable year, there can be no assurance that the Company will not be a PFIC for the current or future taxable years. If the Company is characterized as a PFIC, the Company's shareholders who are U.S. holders may suffer adverse tax consequences, including the treatment of gains realized on the sale of the Common Shares as ordinary income, rather than as capital gain.

DESCRIPTION OF CAPITAL STRUCTURE

Common Shares

The Company is authorized to issue an unlimited number of Common Shares without par value of which, as of the date of this AIF, 100,446,542 Common Shares are issued and outstanding. All rights and restrictions in respect of the Common Shares are set out in the Company's articles and the CBCA and its regulations. The Common Shares have no pre-emptive, redemption, purchase or conversion rights. Neither the CBCA nor the constating documents of the Company impose restrictions on the transfer of Common Shares on the register of the Company, provided that the Company receives the certificate(s) representing the Common Shares to be transferred together with a duly endorsed instrument of transfer and payment of any fees and taxes which may be prescribed by the Board from time to time. There are no sinking fund provisions in relation to the Common Shares and they are not liable to further calls or assessment by the Company. The CBCA and the Company's articles provides that the rights and restrictions attached to any class of shares may not be modified, amended or varied unless consented to by special resolution passed by not less than two-thirds of the votes cast in person or by proxy by holders of shares of that class.

The Common Shares entitle the holders to: (i) notice of and to attend any meetings of shareholders and one vote per Common Share at any meeting of shareholders; (ii) dividends, if as and when declared by the Board; and (iii) upon liquidation, dissolution or winding up of the Company, on a *pro rata* basis, the net assets of the Company after payment of debts and other liabilities.

DIVIDENDS AND DISTRIBUTIONS

The Company has no fixed dividend policy and the Company has not declared any dividends on its Common Shares since its incorporation. The Company anticipates that all available funds will be used to undertake exploration and development programs on its mineral properties as well as for the acquisition of additional mineral properties. The payment of dividends in the future will depend, among other things, upon the Company's earnings, capital requirements and operating and financial condition. Generally, dividends can only be paid if a corporation has

retained earnings. There can be no assurance that the Company will generate sufficient earnings to allow it to pay dividends.

MARKET FOR SECURITIES

Market

The Common Shares are traded on the TSXV and the Nasdaq under the symbol "SGML". On April 1, 2022, the closing price of the Common Shares on the TSXV was Cdn\$19.29 and on the Nasdaq was US\$15.53.

Trading Prices and Volumes

The table below sets forth the high and low market prices and the volume of the Common Shares traded on the TSXV during the financial year ended December 31, 2021.

Month	High (Cdn\$)	Low (Cdn\$)	Volume
January 2021	4.290	3.110	566,408
February 2021	5.520	4.110	912,145
March 2021	5.200	4.500	1,409,996
April 2021	5.300	4.800	699,825
May 2021	7.050	5.000	1,009,920
June 2021	6.750	5.600	765,806
July 2021	6.700	6.360	35,346
August 2021	10.640	7.540	1,575,937
September 2021	10.950	8.810	740,700
October 2021	12.050	9.810	876,570
November 2021	12.980	9.980	932,522
December 2021	14.000	10.900	520,951

The Common Shares were listed and began trading on the Nasdaq on September 13, 2021. The table below sets forth the high and low market prices and the volume of the Common Shares traded on the Nasdaq during the financial year ended December 31, 2021.

Month	High (US\$)	Low (US\$)	Volume
September 2021	8.93	7.00	91,870
October 2021	9.90	8.00	540,865
November 2021	10.27	8.10	529,241
December 2021	10.67	8.52	555,132

PRIOR SALES

The Company did not issue any unlisted securities during the financial year ended December 31, 2021.

DIRECTORS AND OFFICERS

Name and Occupation

The name, province or state of residence, position with and principal occupation within the five preceding years for each of the directors and executive officers of the Company as at the date hereof are set out in the following table:

<p>Calvyn Gardner São Paulo, Brazil 58 years</p> <p>Director Since: May 2018</p>	Position(s) Held at the Company
	Co-Chair, Co-Chief Executive Officer and also a member of the Technical Committee of the Board.
	Principal Occupation for the Past Five Years
	Chief Executive Officer of the Company since May 1, 2018; Chief Executive Officer of Sigma Holdings since June 2017
	Biography
	For nearly 20 years, Mr. Gardner has held executive positions at global and junior mining companies such as Anglo American Group and Trans Hex Group. Mr. Gardner also was a co-founder and managing partner of Hardac Investments, a private equity firm focused on investing in junior mining companies in Africa. Hardac's major co-investors included Lazare Kaplan International in New York (one of DeBeers' largest customers in the US) and Mvelaphanda Holdings (South Africa's largest Black Economic Empowerment Group) in Johannesburg. Mr. Gardner's extensive global career also includes positions such as General Manager of Operations at Highveld Steel and CEO at Trans Hex Group. Mr. Gardner has an MBA from the University of South Africa as well as a Bachelor of Science Degree in Electrical Engineering from the University of the Witwatersrand.
	Common Shares Held
Nil ⁽¹⁾	
RSUs Granted ⁽²⁾	
3,000,000	

<p>Ana Cristina Cabral-Gardner São Paulo, Brazil 51 years</p> <p>Director Since: June 2018</p>	Position(s) Held at the Company
	Co-Chair, Co-Chief Executive Officer, and Chair of the ESG Committee, and also a member of the Finance and Corporate Governance, Nomination and Compensation Committees of the Board.
	Principal Occupation for the Past Five Years
	Managing Partner at A10 Investimentos
	Biography
	Mrs. Cabral-Gardner has over 20 years of experience as a senior banker at global investment banks in New York, London and São Paulo. Mrs. Cabral-Gardner is a former Head of Lat. Am. Capital Markets at Goldman Sachs in New York and a former Managing Director at the firm. Mrs. Cabral-Gardner has been involved in a large number of transactions over her career, totaling more than US\$100 billion, five of which won the prestigious IFR "Deal of the Year" award, including the privatization of Vale in 1996 and the acquisition of Inco by Vale in 2006. Mrs. Cabral-Gardner has an MBA degree from Columbia Business School and a Master in Finance degree from London Business School. Mrs. Cabral-Gardner serves on the Advisory Board of Columbia University Global Centers and is a CCEC board member of The American School of São Paulo.
	Common Shares Held
Nil ⁽¹⁾	
RSUs Granted ⁽²⁾	

3,000,000

Note:

(1) Mr. Gardner and Ms. Cabral are quota holders in the A10 Fund. A10 Investimentos Ltda., which is the portfolio manager of the A10 Fund, has the sole and independent voting decision regarding the holdings of the A10 Fund.

(2) Out of the total 3,000,000 RSUs granted to each co-CEO, 2,500,000 RSUs will vest in four tranches upon the achievement of specified market capitalization targets as follows:

Tranche	No.RSUs	Marketing Condition Vesting Milestone
I	1,000,000	Increase of market cap to C\$ 1.3 billion
II	1,000,000	Increase of market cap to C\$ 1.55 billion
III	1,000,000	Increase of market cap to C\$ 1.8 billion
IV	2,000,000	Increase of market cap to C\$ 2 billion
	5,000,000	

The remaining aggregate 1,000,000 RSUs granted (500,000 RSUs per Co-CEO) will vest upon successful execution of a plan to achieve a net zero carbon target.

<p>Gary Litwack Toronto, Canada 61 years Director Since: May 2018</p>	Position(s) Held at the Company
	Director (Lead Independent Director) and also the chairman of the Audit Committee of the Board.
	Principal Occupation for the Past Five Years
	Counsel at McCarthy Tétrault LLP.
	Biography
	Gary Litwack has over 30 years of experience advising public and private companies on financing, mergers & acquisitions, governance and commercial matters, with a focus on the mining industry. Mr. Litwack is a Canadian lawyer, Counsel at McCarthy Tétrault LLP in Toronto, Canada. Mr. Litwack received his LL.B. from the University of Ottawa, his LL.M. (International Business Transactions) from Osgoode Hall Law School in 1992, and was called to the Ontario bar in 1990. Mr. Litwack is a member of the Canadian Bar Association and the Law Society of Ontario. Mr. Litwack has been an Adjunct Professor of Advanced Securities Law at Osgoode Hall Law School.
	Common Shares Held
	50,000
RSUs Granted	
400,000	

<p>Frederico Marques Toronto, Canada 48 years Director Since: June 2018</p>	Position(s) Held at the Company
	Director, Chair of the Corporate Governance, Nomination and Compensation Committee and also a member of the Audit and Finance Committees of the Board.
	Principal Occupation for the Past Five Years
	Founder and Director of 4B Mining Corp; Head Canada's Office of Cescon, Barriau, Flesch e Barreto Advogados; Partner at S4G – Strategy for Growth since September 2020; prior thereto, Partner and foreign legal consultant at McCarthy Tétrault LLP from February 2014 until August 2020.
	Biography



	Frederico Marques has over 25 years of experience in structuring and implementing international transactions, including going public transactions, international joint ventures and strategic alliances, public and private M&A transactions, debt and equity capital raisings. Throughout his career, Frederico was involved in over US\$30 Billion in M&A, financings, joint ventures and other sophisticated transactions. Frederico is a Founding Partner and a director of 4B Mining Corp. and a Director and former Chairman of the BOD of the Brazil-Canada Chamber. Frederico combines 15 years of professional experience in Brazil, working for some of the leading and largest Brazilian companies, with 15+ years of experience working in Canada, including as a Partner of two of the largest Canadian law firms, leading their Latin America practice. Frederico is a lawyer with LLM and PhD degrees in International Law.
	Common Shares Held
	203,500
	RSUs Granted
	203,500

<p>Marcelo Paiva São Paulo, Brazil 48 years Director Since: January 2019</p>	Position(s) Held at the Company
	Director, Chair of the Finance Committee, and also member of the Audit, ESG and the Corporate Governance, Nomination and Compensation Committees of the Board.
	Principal Occupation for the Past Five Years
	Managing Partner at A10 Investimentos.
	Biography
	Mr. Paiva is the Managing Partner and Co-Founder of A10 Investimentos. He is the portfolio manager of the A10 Fund, the Company's largest shareholder. Mr. Paiva has over 20 years of experience in asset management and investment banking in New York, London and São Paulo. Prior to A10 Investimentos, Mr. Paiva was a Portfolio Manager at the Mittal Family Office in São Paulo. Previously, he was a Vice-President at the U.K. asset manager Millennium Global in London, which, at the time, had over US\$15 billion in assets under management and was one of the largest hedge funds in Europe. Mr. Paiva also held investment banking positions at Credit Suisse in London and UBS in New York. He has a Master in Business Administration from INSEAD in France and is a CFA Charterholder.
	Common Shares Held
406,550 ⁽¹⁾	
	RSUs Granted
	670,500

Note:

⁽¹⁾ The Company has entered into an agreement with the A10 Serviços Especializados de Avaliação de Empresas Ltda. ("A10 Advisory") to provide services in respect of the February 2021 Offering. The arrangements with A10 Advisory were considered and unanimously approved by each of the directors of the Company unrelated to A10 Advisory, which was entitled to (i) cash fees of up to 6% of the proceeds and (ii) such number of warrants as is equal to up to 6% of the Common Shares purchased by such introduced subscribers (each such warrant entitling the finder to acquire one Common Share at an exercise price of C\$4.40 per Common Share and exercisable for one year after the closing of the February 2021 Offering). On February 10, 2022, A10 Advisory exercised its subscription right purchasing 532,860 Common Shares for the total amount of Cnd\$2,344,584. Mr. Paiva, as shareholder of A10 Advisory, indirectly held 532,860 Common Shares of the Company.

<p>Felipe Peres Morges, Switzerland 46 years Officer Since: September 2021</p>	Position(s) Held at the Company
	Chief Financial Officer
	Principal Occupation for the Past Five Years
	Internal Controls & Accounting at Sigma Lithium Corporation; prior to thereto, Budgeting & Accounting Manager at Vale
	Biography



Mr. Peres has over twenty-four years of experience working in corporate positions and large multinational companies in the oil, steel, and mining sectors, in a global environment in Brazil and Switzerland. Mr. Peres is a former leader of consolidation and reporting at Vale, where he worked for fourteen years and participated in the IFRS adoption of this company. Prior to Vale, Mr. Peres worked for Shell and CSN being in both companies in USGAAP reporting key positions. His main areas of expertise are USA and International accounting, finance performance management, internal controls, process design, and systems design and implementation. Mr. Peres graduated in accounting with honors from Universidade Federal do Rio de Janeiro and has specializations in merger and acquisitions from Chicago Booth University and analytics for business from IMD – Switzerland. Mr. Peres serves as an advisor to the board of the Brazil-Switzerland Chamber of Commerce.

Common Shares Held

Nil

Each director’s term of office expires at the next annual general meeting of the Company.

Shareholdings of Directors and Officers

As of the date of this AIF, the directors and executive officers of the Company, as a group, beneficially owned, directly or indirectly, or exercised control or direction over an aggregate of 48,824,233 Common Shares, representing approximately 48.6% of the issued and outstanding Common Shares (on a non-diluted basis).

Cease Trade Orders, Bankruptcies, Penalties or Sanctions

No director or executive officer of the Company is, as at the date of this AIF, or was, within ten years before the date of this AIF, a director, chief executive officer or chief financial officer of any company (including the Company), that (a) was subject to a cease trade or similar order or an order that denied the relevant company access to any exemption under the securities legislation, for a period of more than 30 consecutive days, or (b) was subject to an order that was issued after the director or executive officer ceased to be a director, chief executive officer or chief financial officer and which resulted from an event that occurred while that person was acting in the capacity as director, chief executive officer or chief financial officer.

No director or executive officer of the Company, or a shareholder holding a sufficient number of securities of the Company to affect materially the control of the Company (a) is, as at the date of this AIF, or has been within the 10 years before the date of this AIF, a director or executive officer of any company (including the Company) that, while that person was acting in that capacity, or within a year of that person ceasing to act in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold its assets, or (b) has, within the 10 years before the date of this AIF, become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or become subject to or instituted any proceedings, arrangement or compromise with creditors, or had a receiver, receiver manager or trustee appointed to hold the assets of the director, executive officer or shareholder.

No director, or executive officer of the Company, or a shareholder holding a sufficient number of securities of the Company to affect materially the control of the Company, has been subject to (a) any penalties or sanctions imposed by a court relating to securities legislation or by a securities regulatory authority or has entered into a settlement agreement with a securities regulatory authority; or (b) any other penalties or sanctions imposed by a court or regulatory body that would likely be considered important to a reasonable investor in making an investment decision.

Committees of the Board

Audit Committee

Gary Litwack, *Chair*

Frederico Marques



	Marcelo Paiva
Corporate Governance, Nomination and Compensation Committee	Frederico Marques, <i>Chair</i> Marcelo Paiva Ana Cristina Cabral-Gardner
Technical Committee	Vicente Lobo, <i>Co-Chair</i> Wes Roberts, <i>Co-Chair</i> Calvyn Gardner
Finance Committee	Marcelo Paiva, <i>Chair</i> Ana Cristina Cabral-Gardner Frederico Marques
ESG Committee	Ana Cristina Cabral-Gardner, <i>Chair</i> Marcelo Paiva Maria José Gazzi Salum, Senior Advisor

Information concerning the Audit Committee is provided under “[Audit Committee Information](#)” below.

Conflicts of Interest

To the best of the Company’s knowledge, except as otherwise noted in the Company’s public disclosure documents, there are no existing or potential conflicts of interest among the Company, its directors, officers, or other members of management of the Company except that certain of the directors, officers and other members of management serve as directors, officers and members of management of other public companies and therefore it is possible that a conflict may arise between their duties as a director, officer or member of management of such other companies and their duties as a director, officer or member of management of the Company.

The directors and officers of the Company are aware of the existence of laws governing accountability of directors and officers for corporate opportunity and requiring disclosure by directors of conflicts of interest. The Company relies upon its directors and officers to disclose any such conflicts or other aspects of accountability in accordance with the CBCA.

The Company has adopted a Code of Business Conduct and Ethics that applies to all directors, officers, employees and consultants of the Company and its subsidiaries. A copy of the Company’s Code of Business Conduct and Ethics may be found on SEDAR at www.sedar.com.

AUDIT COMMITTEE INFORMATION

Audit Committee Charter

The Company must, pursuant to NI 52-110, have a written charter which sets out the duties and responsibilities of its Audit Committee. The terms of reference of the Audit Committee are substantially reproduced at [Schedule “A”](#) hereto.

Composition of the Audit Committee

As of the date hereof, the Audit Committee is comprised of:

Name of Director	Independent (Yes/No)
Gary Litwack	YES



Frederico Marques	YES
Marcelo Freire de Paiva	NO

Notes:

⁽¹⁾ Pursuant to Section 6.1.1. of NI 52-110, independence for the purposes of the Audit Committee means the director is not an executive officer, employee or control person of the Company or an affiliate of the Company.

Relevant Education and Experience

Collectively, the Audit Committee has the education and experience to fulfill the responsibilities outlined in the Audit Committee Charter.

Mr. Litwack has more than 25 years of experience advising boards and management of public companies on their financial and other reporting obligations, and has worked extensively in reviewing and assisting in the preparation of MD&A and other financial reporting. He has extensive experience with both commercial industry and capital markets arrangements entered into by resource companies.

Mr. Marques has more than 25 years of experience on global transactions, particularly in the natural resources, renewable energy, agribusiness, and construction sectors. He has previously worked as an in-house counsel for some of the leading and largest Brazilian public companies and was a former Chairman of the Brazil-Canada Chamber of Commerce and is a member of its executive committee and head of its mining committee.

Mr. Paiva has more than 20 years of experience in asset management and investment banking at leading global institutions. His education includes an MBA and a Masters in International Securities, Investment and Banking, and he is a CFA Charterholder.

Each member of the Audit Committee has:

- (a) an understanding of the accounting principles used by the Company to prepare its financial statements;
- (b) the ability to assess the general application of those principles in connection with the estimates, accruals and reserves;
- (c) experience in preparing, auditing, analyzing or evaluating financial statements that present a breadth and level of complexity of accounting issues that are generally comparable to the breadth and complexity of issues that can reasonably be expected to be raised by the issuer's financial statements, or experience actively supervising individuals engaged in such activities; and
- (d) an understanding of internal controls and procedures for financial reporting.

Audit Committee Oversight

Since the commencement of the Company's most recently completed financial year, the Audit Committee has not made any recommendations to nominate or compensate an external auditor which were not adopted by the Board.

Reliance on Certain Exemptions

At no time since the commencement of the Company's most recently completed financial year has it relied on an exemption from NI 52-110, in whole or in part, granted under Part 8 of NI 52 110 (securities regulatory authority exemption).

The Company is relying on the exemption in Section 6.1 of NI 52-110 from the requirements of Part 3 (*Composition of the Audit Committee*) although in any event a majority of the members of the Audit Committee are independent.

Pre-Approval Policies and Procedures

The Audit Committee is authorized by the Board to review the performance of the Company's external auditors, and approve in advance the provision of services other than audit services and to consider the independence of the external auditors, including reviewing the range of services provided in the context of all consulting services bought by the Company. The Audit Committee is authorized to approve any non-audit services or additional work, which the Chairman of the Audit Committee deems as necessary.



Audit Fees

The fees for auditor services billed by the Company’s external auditors for the last two fiscal years are as follows:

Financial Year ⁽¹⁾ ⁽²⁾	Audit Fees	Audit-related Fees	Tax Fees	All Other Fees
2021	\$926,708	\$-	\$117,698	\$-
2020	\$199,070	\$-	\$16,240	\$-

LEGAL PROCEEDINGS AND REGULATORY ACTIONS

The Company is not a party to, nor are any of the Company’s properties subject to, any pending legal proceedings or regulatory actions the outcome of which would have a material adverse effect on the Company. Management of the Company is not aware of any material legal proceedings or regulatory actions in which the Company may be a party which are contemplated by governmental authorities or otherwise.

INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS

Other than as disclosed in documents filed by the Company on SEDAR, management of the Company is not aware of any material interest, direct or indirect, of any insider of the Company, or any associate or affiliate of any such person, in any transaction within the Company’s three most recently completed financial years, or during the current financial year that has materially affected or is reasonably expected to materially affect the Company.

TRANSFER AGENT AND REGISTRAR

The Company’s registrar and transfer agent of the Common Shares is Computershare Investor Services Inc. located at its principal offices in Toronto, Ontario.

MATERIAL CONTRACTS

Other than contracts entered into in the ordinary course of business, and except as noted below (the material terms of which are further described herein), the Company has not entered into any material contracts within the most recently completed financial year or previous to the most recently completed financial year, that are still in effect.

1. Amilcar Royalty Agreement dated December 11, 2017
2. Share Exchange Agreement dated December 22, 2017
3. Amended and Restated Royalty dated February 11, 2019

INTERESTS OF EXPERTS

As at the date of this AIF, each of the FS Qualified Persons holds less than one percent of the Company’s outstanding securities of the Company or of any of the Company’s associates or affiliates.

The Company’s auditors are KPMG LLP, Chartered Professional Accountants, who have prepared an independent auditor’s report dated March 31, 2022 in respect of the Company’s consolidated financial statements as at December 31, 2021. KPMG LLP has advised that they are independent with respect to the Company within the meaning of the Chartered Professional Accountants of Ontario Code of Professional Conduct.



ADDITIONAL INFORMATION

Additional information including corporate governance policies of the Company, directors' and officers' remuneration and indebtedness, principal holders of the Company's securities and options to purchase Common Shares, and securities authorized for issuance under equity compensation plans is contained in the management proxy circular dated May 28th, 2021 for the annual and special meeting of the Company held on June 29th, 2021, which is available on SEDAR. Additional financial information is contained in the Company's comparative financial statements and MD&A as at and for the years ended December 31, 2021 and 2020, which are available on SEDAR.

SCHEDULE "A"
Audit Committee Charter

8 September 2021

1. THE BOARD OF DIRECTORS' MANDATE FOR THE AUDIT COMMITTEE

The Board of Directors (the "Board") has responsibility for the stewardship of Sigma Lithium Corporation (together with its subsidiaries, as applicable, the "Corporation"). To discharge that responsibility, the Board is obligated by the *Canada Business Corporations Act* to supervise the management of the business and affairs of the Corporation. The Board's supervisory function involves Board oversight or monitoring of all significant aspects of the management of the Corporation's business and affairs.

Public financial reporting and disclosure by the Corporation are fundamental to the Corporation's business and affairs. The objective of the Board's monitoring of the Corporation's financial reporting and disclosure is to gain reasonable assurance of the following:

- (a) that the Corporation complies with all applicable laws, regulations, rules, policies and other requirement of governments, regulatory agencies and stock exchanges, if applicable, relating to financial reporting and disclosure;
- (b) that the accounting principles, significant judgements and disclosures which underlie or are incorporated in the Corporation's financial statements are appropriate in the prevailing circumstances;
- (c) that the Corporation's quarterly and annual financial statements are accurate within a reasonable level of materiality and present fairly the Corporation's financial position and performance in accordance with generally accepted accounting principles; and
- (d) that appropriate information concerning the financial position and performance of the Corporation is disseminated to the public, to the extent required by applicable securities laws, in a timely manner in accordance with corporate and securities law and with stock exchange regulations, if applicable.

The Board is of the view that monitoring of the Corporation's financial reporting and disclosure policies and procedures cannot be reliably met unless the following activities (the "Fundamental Activities") are, in all material respects, conducted effectively:

- (a) the Corporation's accounting functions are performed in accordance with a system of internal financial controls designed to capture and record properly and accurately all of the Corporation's

financial transactions and consistent with internal financial controls implemented by companies of similar size and peer group as the Corporation;

- (b) the internal financial controls are regularly assessed for effectiveness and efficiency consistent with assessments performed by company's of similar size and peer group as the Corporation;
- (c) the Corporation's quarterly and annual financial statements are properly prepared by management to comply with International Financial Reporting Standards ("IFRS"); and
- (d) the Corporation's annual financial statements (and, if determined necessary by the Board, its quarterly financial statements) are reported on by an external auditor appointed by the shareholders of the Corporation.

To assist the Board in its monitoring of the Corporation's financial reporting and disclosure, and to conform to applicable corporate and securities law, the Board has established the Audit Committee (the "Committee") of the Board.

The role of the Committee is to assist the Board in its oversight of the integrity of the financial and related information of the Corporation, including its consolidated financial statements, the internal controls and procedures for financial reporting and the processes for monitoring compliance with legal and regulatory requirements and to review the independence, qualifications and performance of the external auditor of the Corporation. Management is responsible for establishing and maintaining those controls, procedures and processes and the Committee is appointed by the Board to review and monitor them.

2. COMPOSITION OF COMMITTEE

The Committee shall be appointed annually by the Board and consist of at least three members from among the directors of the Corporation, at least a majority of whom (or, if required by applicable law or stock exchange rules, each of whom) shall be an independent director, subject to applicable grace periods provided by The Nasdaq Stock Market, and must not have participated in the preparation of the financial statements of the Corporation or any current subsidiary of the Corporation at any time during the past three years. Officers of the Corporation who are also directors may not serve as members of the Committee. In accordance with National Instrument 58-101, a director is considered "independent" to the Corporation if he or she has no direct or indirect "material relationship" with the



Corporation or any of its subsidiaries which could, in the view of the Board, reasonably interfere with the exercise of his or her independent judgment. Notwithstanding the foregoing, a director will be deemed to have a “material relationship” with the Corporation (and therefore be considered as not independent) if he or she falls in one of the categories listed in Schedule “A” attached hereto. All members of the Committee must also be “financially literate” (meaning that he or she has the ability to read and understand a set of financial statements that present a breadth and level of complexity of accounting issues that are generally comparable to the breadth and complexity of the issues that can reasonably be expected and be raised by the Corporation’s financial statements).

The Board shall designate a chairperson of the Committee (the “Chair”).

In the event of a vacancy arising in the Committee or a loss of independence of any member (if previously independent and as a result the composition of the Committee no longer meets applicable independence requirements), the Committee will fill the vacancy within six months or by the following annual shareholders’ meeting if sooner.

3. RELIANCE ON EXPERTS

In contributing to the Committee’s discharging of its duties under this Charter, each member of the Committee shall be entitled to rely in good faith upon:

- (a) financial statements of the Corporation represented to him by an officer of the Corporation or in a written report of the external auditors to present fairly the financial position of the Corporation in accordance with generally accepted accounting principles; and
- (b) any report of a lawyer, accountant, engineer, appraiser or other person whose profession lends credibility to a statement made by any such person.

4. LIMITATIONS ON COMMITTEE’S DUTIES

In contributing to the Committee’s discharging of its duties under this Charter, each member of the Committee shall be obliged only to exercise the care, diligence and skill that a reasonably prudent person would exercise in comparable circumstances. Nothing in this Charter is intended, or may be construed, to impose on any member of the Committee a standard of care or diligence that is in any way more onerous or extensive than the standard to which all Board members are subject. The essence of the Committee’s duties is monitoring and reviewing to endeavor to gain reasonable assurance (but not to ensure) that the Fundamental Activities are being conducted effectively and that the objectives of the Corporation’s financial reporting are being met and to enable the Committee to report thereon to the Board.

5. AUDIT COMMITTEE RESPONSIBILITIES (GENERAL)

This Charter outlines how the Committee will satisfy the requirements set forth by the Board in its mandate, reflecting the following:

- Operating principles;
- Operating procedures; and
- Specific responsibilities and duties.

While the Committee has the responsibilities set forth in this Charter, it is not the duty of the Committee to prepare the financial statements, plan or conduct audits or to determine that the Corporation’s financial statements and disclosures are complete and accurate and are in accordance with IFRS and applicable rules and regulations. Primary responsibility for the financial reporting, information systems, risk management, and disclosure controls and internal controls of the Corporation is vested in management.

(a) Operating Principles

The Committee shall fulfill its responsibilities within the context of the following principles:

(i) *Committee Values*

The Committee expects management of the Corporation to operate in compliance with corporate policies; reflecting laws and regulations governing the Corporation; and to maintain strong financial reporting and control processes.

(ii) *Communications*

The Committee, and its members, expect to have direct, open and frank communications throughout the year with management, other committee chairs, the external auditors, and other key Committee advisors or Corporation staff members, as applicable.

(iii) *Delegation*

The Committee may delegate from time to time to any person or committee of persons any of the Committee’s responsibilities that may be lawfully delegated.

(iv) *Financial Literacy*

All Committee members should be sufficiently versed in financial matters to read and understand the Corporation’s financial statements and also to understand the Corporation’s accounting practices and policies and the major judgements involved in preparing the financial statements.

(v) *Annual Committee Work Plan*

The Committee, in consultation with management and the external auditors, shall develop an annual Committee work plan responsive to the Committee’s responsibilities as set out in this Charter. In addition, the Committee, in consultation with management and the external auditors, shall participate in a process for review of important financial topics that have the potential to impact the Corporation’s financial disclosure.

The work plan will be focused primarily on the annual and interim financial statements of the Corporation; however, the Committee may at its sole discretion, or the discretion of the Board, review such other matters as may be necessary to satisfy the obligations set out in this Charter.

(vi) *Meeting Agenda*

Committee meeting agendas shall be the responsibility of the Chair of the Committee in consultation with other Committee members, senior management and the external auditors.

(vii) *Committee Expectations and Information Needs*

The Committee shall communicate its expectations to management and the external auditors with respect to the nature, timing and extent of its information needs. The Committee expects that written materials will be received from management and the external auditors at a reasonable time in advance of meeting dates.

(viii) *Access to Committee*

Representatives of the external auditor and management of the Corporation shall have access to the Committee each in the absence of the other.

(ix) *External Resources*

To assist the Committee in discharging its responsibilities, the Committee may at its discretion, in addition to the external auditors, at the expense of the Corporation, retain one or more persons having special expertise, including independent counsel.

(x) *In Camera Meetings*

At the discretion of the Committee, the members of the Committee shall meet in private session with the external auditors. In addition, at the discretion of the Committee, the members of the Committee shall meet in private with management of the Corporation, without the auditors being present at such meeting.

(xi) *Reporting to the Board*

The Committee, through its Chair, shall report after each Committee meeting to the Board at the Board's next regular meeting.

(xii) *The External Auditors*

The Committee expects that, in discharging their responsibilities to the shareholders, the external auditors shall report directly to and be accountable to the Committee. The external auditors shall report all material issues or potentially material issues, either specific to the Corporation or to the financial reporting environment in general, to the Committee.

(xiii) *Funding*

The Corporation shall provide for appropriate funding, as determined by the Committee, in its capacity as a committee of the board of directors, for payment of:

- (A) Compensation to any registered public accounting firm engaged for the purpose of preparing or issuing an audit report or performing other audit, review or attest services for the listed issuer;
- (B) Compensation to any advisers employed by the Committee; and
- (C) Ordinary administrative expenses of the Committee that are necessary or appropriate in carrying out its duties.

(b) *Operating Procedures*

- (i) The Committee shall meet at least four times annually, or more frequently as circumstances dictate. Meetings shall be held at the call of the Chair, upon the request of two members of the Committee or at the request of the external auditors.
- (ii) A quorum shall be a majority of the members.
- (iii) Unless the Committee otherwise specifies, the Corporate Secretary (or her or his deputy) of the Corporation shall act as Corporate Secretary of all meetings of the Committee.
- (iv) In the absence of the Chair of the Committee, the members shall appoint an acting Chair.
- (v) A copy of the minutes of each meeting of the Committee shall be provided to each member of the Committee and to each director of the Corporation in a timely fashion.
- (vi) Notice of the time and place of every meeting shall be given in writing by any means of transmitted or recorded communication, including facsimile, email or other electronic means that produces a written copy, to each member of the Committee at least 24 hours prior to the time fixed for such meeting; provided, however, that a member of the Committee may in any manner waive a notice of the meeting. Attendance of a member of the Committee at a meeting constitutes waiver of notice of the meeting, except where the member attends the meeting for the express purpose of objecting to the transaction of any business on the grounds that the meeting has not been lawfully called.
- (vii) Subject to any law or the articles and by-laws of the Corporation, the Committee shall fix its own procedures at meetings, keep records of its proceedings and report to the Board when the Committee may deem appropriate (but not later than the next regularly scheduled meeting of the Board).

6. SPECIFIC RESPONSIBILITIES AND DUTIES OF AUDIT COMMITTEE

To fulfill its responsibilities and duties, the Committee shall:

(a) Financial Reporting

- (i) Review, prior to public release, the Corporation's annual and quarterly financial statements with management and the external auditors (with respect to quarterly financial statements, if they are to be reviewed by the external auditors) with a view to gaining reasonable assurance that the statements (A) are accurate within reasonable levels of materiality, (B) complete, and (C) represent fairly the Corporation's financial position and performance in accordance with IFRS. The Committee shall report thereon to the Board before such financial statements are approved by the Board (with respect to quarterly financial statements, if they are to be prepared and approved by the Board, and not just the Committee).
- (ii) Receive from the external auditors reports of their review of the annual and quarterly financial statements (with respect to quarterly financial statements, if they are to be reviewed by the external auditors) and any management letters issued to the management of the Corporation.
- (iii) Receive from management a copy of any representation letter provided to the external auditors and receive from management any additional representations required by the Committee.
- (iv) Review, prior to public release, to the extent required pursuant to applicable securities laws, and, if appropriate, recommend approval to the Board, of news releases, to the extent required pursuant to applicable securities laws, and reports to shareholders issued by the Corporation with respect to the Corporation's annual and quarterly financial statements.
- (v) Review and, if appropriate, recommend approval to the Board of financial statements included in prospectuses, material change disclosures of a financial nature, management discussion and analysis, annual information forms and similar components of disclosure documents that may be issued by the Corporation.
- (vi) Establish procedures for the receipt, retention and treatment of complaints received by the Corporation from any party regarding accounting, auditing or internal controls and the confidential, anonymous submission by employees of the Corporation of concerns regarding questionable accounting or auditing matters. For greater certainty, the Committee's responsibilities in this

area will not include complaints about minor operational issues. Examples of minor operational issues include late payment of invoices, minor disputes over accounts owing or receivable, revenue and expense allocations and other similar items characteristic of the normal daily operations of the accounting department of a mining company.

(b) Accounting Policies

- (i) Review with management and the external auditors the appropriateness of the Corporation's accounting policies, disclosures, reserves, key estimates and judgements, including changes or variations thereto.
- (ii) Obtain reasonable assurance that they are in compliance with IFRS from management and external auditors and report thereon to the Board.
- (iii) Review with management and the external auditors the degree of conservatism of the Corporation's underlying accounting policies, key estimates and judgements and provisions along with quality of financial reporting.
- (iv) Participate, if requested, in the resolution of disagreements, between management and the external auditors.
- (v) If applicable, review with management the policies and procedures used for the categorization of flow-through expenditures and the qualification of such expenditures to satisfy the Corporation's existing obligations.

(c) Risk and Uncertainty

- (i) Acknowledging that it is the responsibility of the Board, in consultation with management, to identify the principal business risks facing the Corporation, determine the Corporation's tolerance for risk and approve risk management policies. The Committee shall focus on financial risk and gain reasonable assurance that financial risk is being effectively managed or controlled by:
 - (A) reviewing with management the Corporation's tolerance for financial risks;
 - (B) reviewing with management its assessment of the significant financial risks facing the Corporation;
 - (C) reviewing with management the Corporation's policies and any proposed changes thereto for managing those significant financial risks; and
 - (D) reviewing with management its plans, processes and programs to manage and control such risks.
- (ii) Review policies and compliance therewith that require significant actual or potential liabilities,



contingent or otherwise, to be reported to the Board in a timely fashion.

- (iii) Review foreign currency, interest rate and commodity price risk mitigation strategies, including the use of derivative financial instruments.
- (iv) Review the adequacy of insurance coverages maintained by the Corporation.
- (v) Review regularly with management, the external auditors and the Corporation's legal counsel, any legal claims or other contingencies, including tax assessments, that could have a material effect upon the financial position or operating results of the Corporation and the manner in which these matters have been disclosed in the financial statements.

(d) Financial Controls and Control Deviations

- (i) Review the plans of the external auditors to gain reasonable assurance that the evaluation and testing of applicable internal financial controls is comprehensive, coordinated and cost-effective.
- (ii) Receive regular reports from management and the external auditors on all significant deviations or indications/detection of fraud and the corrective activity undertaken in respect thereof.
- (iii) Institute a procedure that will permit any employee of the Corporation, including management employees, to bring to the attention of the Chair, under conditions of confidentiality, concerns relating to financial controls and reporting which are material in scope and which cannot be addressed, in the employee's judgement, through existing reporting structures in the Corporation.
- (iv) Receive and periodically assess reports from management on the policies and procedures used to assess and ensure the adequacy of controls over financial information disclosed to the public, which is extracted or derived from the Corporation's financial statements.

(e) Compliance with Laws and Regulations

- (i) Review regular reports from management and others (e.g. external auditors) with respect to the Corporation's compliance with laws and regulations having a material impact on the financial statements including:
 - (A) tax and financial reporting laws and regulations;
 - (B) legal withholding requirements; and
 - (C) other laws and regulations which expose directors to liability.
- (ii) Review the filing status of the Corporation's tax

returns, (if applicable) flow-through share renunciation filings and those of its subsidiaries.

(f) Relationship with External Auditors

- (i) Be directly responsible for the appointment and retention any external auditors engaged.
- (ii) Approve the remuneration and the terms of engagement of the external auditors as set forth in the relevant engagement letter. The Chair has the authority to pre-approve non-audit services which may be required from time to time.
- (iii) Review the performance of the external auditors annually or more frequently as required (including resolution of disagreements between management and the auditors regarding financial reporting).
- (iv) Receive annually from the external auditors an acknowledgement in writing that the shareholders, as represented by the Board and the Committee, are their primary client.
- (v) Receive a report annually from the external auditors with respect to their independence, such report to include a disclosure of all engagements (and fees related thereto) for non-audit services by the Corporation.
- (vi) Review with the external auditors the scope of the audit, the areas of special emphasis to be addressed in the audit, and the materiality levels which the external auditors propose to employ.
- (vii) Meet with the external auditors in the absence of management to determine, inter alia, that no management restrictions have been placed on the scope and extent of the audit examinations by the external auditors or the reporting of their findings to the Committee.
- (viii) Establish effective communication processes with management and the Corporation's external auditors to assist the Committee to monitor objectively the quality and effectiveness of the relationship among the external auditors, management and the Committee.
- (ix) Establish a reporting relationship between the external auditors and the Committee such that the external auditors can bring directly to the Committee matters that, in the judgement of the external auditors, merit the Committee's attention. In particular, the external auditors will advise the Committee as to disagreements between management and the external auditors regarding financial reporting and how such disagreements were resolved.
- (x) Receive a formal written statement delineating all relationships between the external auditors and the Corporation, actively engage in a dialogue with

the external auditors with respect to any disclosed services or relationships that might impact their objectivity and independence, and as needed, take or recommend the Board take appropriate action to oversee the independence of the external auditors.

(g) Other Responsibilities

- (i) After consultation with the Chief Financial Officer and the external auditors, consider at least annually, the quality and sufficiency of the Corporation's accounting and financial personnel and other resources.
- (ii) Approve in advance non-audit services, including tax advisory and compliance services, provided by the external auditors. However, the Committee can establish a threshold amount for fees for non-audit services to be provided by the external auditors without advance approval of the Committee. The nature of such services and the associated cost will be provided to the Committee at the next following meeting.
- (iii) Investigate any matters that, in the Committee's discretion, fall within the Committee's duties.
- (iv) Perform such other functions as may from time to time be assigned to the Committee by the Board.
- (v) Review this Charter on a regular basis and prepare any appropriate updates for approval by the Board.
- (vi) Review disclosures regarding the organization and duties of the Committee to be included in any public document, including quarterly and annual reports to shareholders, information circulars and annual information forms.
- (vii) Review and reassess the adequacy of this Charter on an annual basis.
- (viii) Conduct an appropriate review and oversight of all related party transactions for potential conflict of interest situations on an ongoing basis.

EXHIBIT "A" TO THE AUDIT COMMITTEE CHARTER

Meaning of "material relationship"

A "material relationship" is a relationship that could, in the view of the issuer's board of directors, be reasonably expected to interfere with the exercise of a member's independent judgment.

The following individuals are considered to have a material relationship with the issuer:

- (A) an individual who is, or has been within the last three years, an employee or executive officer of the issuer;

- (B) an individual whose immediate family member is, or has been within the last three years, an executive officer of the issuer;
- (C) an individual who: (i) is a partner of a firm that is the issuer's internal or external auditor,
- (D) (ii) is an employee of that firm, or (iii) was within the last three years a partner or employee of that firm and personally worked on the issuer's audit within that time;
- (E) an individual whose spouse, minor child or stepchild, or child or stepchild who shares a home with the individual: (i) is a partner of a firm that is the issuer's internal or external auditor; (ii) is an employee of that firm and participates in its audit, assurance or tax compliance (but not tax planning) practice, or (iii) was within the last three years a partner or employee of that firm and personally worked on the issuer's audit within that time;
- (F) an individual who, or whose immediate family member, is or has been within the last three years, an executive officer of an entity if any of the issuer's current executive officers serves or served at that same time on the entity's compensation committee; and
- (G) an individual who received, or whose immediate family member who is employed as an executive officer of the issuer received, more than \$75,000 in direct compensation from the issuer during any 12 month period within the last three years.

An individual will not be considered to have a material relationship with the issuer solely because (a) he or she had a relationship identified above if that relationship ended before March 30, 2004; or (b) he or she had a relationship identified above by virtue of such relationship being with a subsidiary entity or a parent of that issuer, if that relationship ended before June 30, 2005.

An individual will not be considered to have a material relationship with the issuer solely because the individual or his or her immediate family member (a) has previously acted as an interim chief executive officer of the issuer, or (b) acts, or has previously acted, as a chair or vice-chair of the board of directors or of any board committee of the issuer on a part-time basis.

For the purposes of "C" and "D" above, a partner does not include a fixed income partner whose interest in the firm that is the internal or external auditor is limited to the receipt of fixed amounts of compensation (including deferred compensation) for prior service with that firm if the compensation is not contingent in any way on continued service.

For the purposes of "F" above, direct compensation does not include: (a) remuneration for acting as a member of the board of directors or of any board committee of the issuer, and (b) the receipt of fixed amounts of compensation under



a retirement plan (including deferred compensation) for prior service with the issuer if the compensation is not contingent in any way on continued service.

Despite any determination made whether an individual has a material relationship with an issuer, an individual who (a) accepts directly or indirectly, any consulting, advisory or other compensatory fee from the issuer or any subsidiary entity of the issuer, other than as remuneration for acting in his or her capacity as a member of the board of directors or any board committee, or as a part-time chair or vice-chair of the board or any board committee; or (b) is an affiliated entity of the issuer or any of its subsidiary entities, is considered to have a material relationship with the issuer. The indirect acceptance by an individual of any such consulting, advisory or other compensatory fee includes acceptance of a fee by (a) an individual's spouse, minor child or stepchild, or a child or stepchild who shares the individual's home; or (b) an entity in which such individual is a partner, member, an officer such as a managing director occupying a comparable position or executive officer, or occupies a similar position (except limited partners, non-managing members and those occupying similar positions who, in each case, have no active role in providing services to the entity) and which provides accounting, consulting, legal, investment banking or financial advisory services to the issuer or any subsidiary entity of the issuer. Compensatory fees do not include the receipt of fixed amounts of compensation under a retirement plan (including deferred compensation) for prior service with the issuer if the compensation is not contingent in any way on continued service.

"company" - any corporation, incorporated association, incorporated syndicate or other incorporated organization;

"control" - the direct or indirect power to direct or cause the direction of the management and policies of a person or company, whether through ownership of voting securities or otherwise;

"executive officer" of an entity – means an individual who is (a) a chair of the entity; (b) a vice-chair of the entity; (c) the president of the entity; (d) a vice-president of the entity in charge of a principal business unit, division or function including sales, finance or production; (e) an officer of the entity or any of its subsidiary entities who performs a policy-making function in respect of the entity; or (f) any other individual who performs a policy-making function in respect of the entity;

"issuer" includes a subsidiary entity of the issuer and a parent of the issuer;

"person" - an individual partnership, unincorporated association, unincorporated syndicate, unincorporated organization, trust, trustee, executor, administrator, or other legal representative; and

"subsidiary entity" - a person or company is considered to be a subsidiary entity of another person or company if (a) it is controlled by (i) that other, or (ii) that other and one or more persons or companies each of which is controlled by that other, or (iii) two or more persons or companies, each of which is controlled by that other; or (b) it is a subsidiary entity of a person or company that is the other's subsidiary entity.

Approved by the Board on September 8, 2021

SCHEDULE "B"
DEFINITIONS

The following is a glossary of certain defined terms used in this AIF. Where the context requires, (i) words importing the singular include the plural and *vice versa* and (ii) words importing any gender include all genders.

"A10 Fund"	means A10 Investimentos Fundo de Investimento de Ações – Investimento no Exterior.
"A10 Group"	means a group of companies owned by certain directors of the Company
"Board"	means the board of directors of the Company.
"Capex"	means the capital expenditure defined in the Updated Feasibility Study Report.
"CBCA"	means the <i>Canada Business Corporations Act</i> .
"CIM Definition Standards"	means the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves.
"cm"	means centimeters.
"Common Shares"	means common shares in the capital of the Company.
"Company" or "Sigma"	means Sigma Lithium Corporation (formerly named Sigma Lithium Resources Corporation) and, as the context requires, its subsidiaries.
"DMS"	means dense media separation.
"Feasibility Study Report"	means the technical report titled "Grota do Cirilo Lithium Project, Araçuaí and Itinga Regions, Minas Gerais, Brazil, NI 43-101 Technical Report on Feasibility Study, Final Report" dated October 18, 2019, with an effective date of September 16, 2019.
"First Mine"	means the Xuxa deposit located in the Project.
"FS Qualified Persons"	has the meaning given under "Description of the Business - Summary of Updated Feasibility Study Report".
"GAAP"	means Generally Accepted Accounting Principles.
"IFRS"	means International Financial Reporting Standards.
"kg"	means kilograms.
"km"	means kilometers.
"km ² "	means square kilometers.
"Kv"	means kilovolts.
"LCE"	means lithium carbonate equivalent. Lithium is converted to lithium carbonate (Li ₂ CO ₃) by multiplying lithium metal mass by 5.323.
"Li ₂ O"	means lithium oxide.
"m"	means meters.
"m ³ "	means cubic meters.
"MD&A"	means management discussion and analysis.
"mm"	means millimeters.
"mg/L"	means milligrams per liter.
"NI 43-101"	means National Instrument 43-101 <i>Standards of Disclosure for Mineral Projects</i> of the Canadian Securities Administrators.
"NI 52-110"	means National Instrument 52-110 <i>Audit Committees</i> of the Canadian Securities Administrators.
"ppm"	means parts per million.
"Production Phase 1"	means the first phase of production that will produce 220,000 tonnes per year of Battery Grade Green and Sustainable Lithium (33,000 tonnes per year of LCE) in the First Mine

“Production Phase 2”	means the second phase of production that, if warranted after the ongoing feasibility study, will increase production to 440,000 tonnes per year of Battery Grade Green and Sustainable Lithium (66,000 tonnes per year of LCE) in the Second Mine
“Production Plant”	means the commercial production plant as described in the Updated Feasibility Study Report.
“Qualified Person”	means a qualified person for purposes of NI 43-101.
“SEC”	means the U.S. Securities and Exchange Commission.
“Second Mine”	means the Barreiro deposit located in the Project.
“SEDAR”	means the System for Electronic Document Analysis and Retrieval developed for the Canadian Securities Administrators (www.sedar.com).
“Sigma Holdings”	means Sigma Lithium Resources Inc., the wholly-owned British Columbia subsidiary of the Company through which Sigma Brazil is held.
“Sigma Brazil”	means Sigma Mineração S.A., the indirect wholly-owned Brazilian subsidiary of the Company.
“t”	means tonnes.
“TSXV”	means the TSX Venture Exchange.
“Updated Feasibility Study Report”	means the technical report titled “Grotta do Cirilo Lithium Project Araçuaí and Itinga Regions, Minas Gerais, Brazil, Amended and Restated Phase 2 (Barreiro) Update of the NI 43-101 Technical Report on Feasibility Study”, dated November 22, 2021, and with an effective date of June 2, 2021, prepared by the FS Qualified Persons.
“Var”	means variability.

Certain Other Definitions

“material relationship”	<p>A “material relationship” is a relationship that could, in the view of the issuer’s board of directors, be reasonably expected to interfere with the exercise of a member’s independent judgment. The following individuals are considered to have a material relationship with the issuer:</p> <ul style="list-style-type: none"> A. an individual who is, or has been within the last three years, an employee or executive officer of the issuer; B. an individual whose immediate family member is, or has been within the last three years, an executive officer of the issuer; C. an individual who: (i) is a partner of a firm that is the issuer’s internal or external auditor, (ii) is an employee of that firm, or (iii) was within the last three years a partner or employee of that firm and personally worked on the issuer’s audit within that time; D. an individual whose spouse, minor child or stepchild, or child or stepchild who shares a home with the individual: (i) is a partner of a firm that is the issuer’s internal or external auditor; (ii) is an employee of that firm and participates in its audit, assurance or tax compliance (but not tax planning) practice, or (iii) was within the last three years a partner or employee of that firm and personally worked on the issuer’s audit within that time; E. an individual who, or whose immediate family member, is or has been within the last three years, an executive officer of an entity if any of the issuer’s current executive officers serves or served at that same time on the entity’s compensation committee; and F. an individual who received, or whose immediate family member who is employed as an executive officer of the issuer received, more than \$75,000 in direct compensation from the issuer during any 12-month period within the last three years.
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An individual will not be considered to have a material relationship with the issuer solely because (a) he or she had a relationship identified above if that relationship ended before March 30, 2004; or (b) he or she had a relationship identified above by virtue of such relationship being with a subsidiary entity or a parent of that issuer, if that relationship ended before June 30, 2005.

An individual will not be considered to have a material relationship with the issuer solely because the individual or his or her immediate family member (a) has previously acted as an interim chief executive officer of the issuer, or (b) acts, or has previously acted, as a chair or vice-chair of the board of directors or of any board committee of the issuer on a part-time basis.



For the purposes of “C” and “D” above, a partner does not include a fixed income partner whose interest in the firm that is the internal or external auditor is limited to the receipt of fixed amounts of compensation (including deferred compensation) for prior service with that firm if the compensation is not contingent in any way on continued service.

For the purposes of “F” above, direct compensation does not include: (a) remuneration for acting as a member of the board of directors or of any board committee of the issuer, and (b) the receipt of fixed amounts of compensation under a retirement plan (including deferred compensation) for prior service with the issuer if the compensation is not contingent in any way on continued service.

Despite any determination made whether an individual has a material relationship with an issuer, an individual who (a) accepts directly or indirectly, any consulting, advisory or other compensatory fee from the issuer or any subsidiary entity of the issuer, other than as remuneration for acting in his or her capacity as a member of the board of directors or any board committee, or as a part-time chair or vice-chair of the board or any board committee; or (b) is an affiliated entity of the issuer or any of its subsidiary entities, is considered to have a material relationship with the issuer. The indirect acceptance by an individual of any such consulting, advisory or other compensatory fee includes acceptance of a fee by (a) an individual's spouse, minor child or stepchild, or a child or stepchild who shares the individual's home; or (b) an entity in which such individual is a partner, member, an officer such as a managing director occupying a comparable position or executive officer, or occupies a similar position (except limited partners, non-managing members and those occupying similar positions who, in each case, have no active role in providing services to the entity) and which provides accounting, consulting, legal, investment banking or financial advisory services to the issuer or any subsidiary entity of the issuer. Compensatory fees do not include the receipt of fixed amounts of compensation under a retirement plan (including deferred compensation) for prior service with the issuer if the compensation is not contingent in any way on continued service.

“company”	any corporation, incorporated association, incorporated syndicate or other incorporated organization.
“control”	the direct or indirect power to direct or cause the direction of the management and policies of a person or company, whether through ownership of voting securities or otherwise.
“executive officer”	of an entity – means an individual who is (a) a chair of the entity; (b) a vice-chair of the entity; (c) the president of the entity; (d) a vice-president of the entity in charge of a principal business unit, division or function including sales, finance or production; (e) an officer of the entity or any of its subsidiary entities who performs a policy-making function in respect of the entity; or (f) any other individual who performs a policy-making function in respect of the entity.
“issuer”	includes a subsidiary entity of the issuer and a parent of the issuer.
“person”	an individual, partnership, unincorporated association, unincorporated syndicate, unincorporated organization, trust, trustee, executor, administrator, or other legal representative.
“subsidiary entity”	a person or company is considered to be a subsidiary entity of another person or company if (a) it is controlled by (i) that other, or (ii) that other and one or more persons or companies each of which is controlled by that other, or (iii) two or more persons or companies, each of which is controlled by that other; or (b) it is a subsidiary entity of a person or company that is the other's subsidiary entity.