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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 resource and mineral reserve 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 (in particular) 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; potential positive or negative implications of change in government; 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 the ongoing uncertainties and effects in respect of 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 multinational 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 full capacity commercial production at the Project.
- The Company's ability to obtain financing on satisfactory terms to develop the Project, if required.
- 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.

In addition, Forward Looking Information with respect to the potential outlook and future financial results contained in this AIF is based on assumptions noted above and about future events, including economic conditions and proposed courses of action, based on management's assessment of the relevant information available as at the date of such information. Readers are cautioned that any such information should not be used for purposes other than for which it is disclosed.

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:

- There can be no assurance that market prices for lithium 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.
- 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.



- Phases 2 and 3 of the Project are at development stage and the Company's ability to succeed in progressing through development of such phases 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.
- Inflation in Brazil, along with Brazilian government measures to combat inflation, may have a significant negative effect on the Brazilian economy and, as a result, the Company's financial condition and results of operations.
- Violations of anti-corruption, anti-bribery, anti-money laundering or economic sanctions laws and regulations could materially adversely affect the Company's business, reputation, results of any future operations and financial condition.
- Corruption and fraud in Brazil, whether relating to ownership of real estate or otherwise, could materially adversely affect the Company's business, reputation, results of any future operations and financial conditions.
- 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, or its ability to sustain, 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 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 (including 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 (including 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, property interests and exploration and exploitation rights.
- 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 or the ability of its subsidiaries to distribute up cash otherwise available for distributions.



- Pandemics 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 (including its ability to repay the Synergy Financing, in respect of which significantly all of the Company's consolidated assets have been secured).
- The Company is subject to liquidity risk and therefore may in the future 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.
- Western governmental actions in respect of critical minerals may affect the Company's business.
- 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 has 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 is required to devote further substantial time to United States public company compliance efforts.
- If the Company does not maintain implement and 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 continue to report material weakness and continue to 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 would result in diversion of management's attention and may have a material adverse effect on its business financial condition and prospects, irrespective of the merits or outcome.
- 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 analysts, industry analysts or activist short sellers publish research or other reports about the Company's business, prospects or value, which questions or downgrades the value of the Company, 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 44.5% 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 many 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 be 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 and on EDGAR at www.sec.gov.

CAUTIONARY NOTE REGARDING MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES

Technical disclosure included in this AIF regarding the Company's properties, 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.

NI 43-101 is a rule developed by the Canadian Securities Administrators that establishes standards for all public disclosure an issuer makes of scientific and technical information concerning mineral projects. NI 43-101 differs significantly from the disclosure requirements of the SEC generally applicable to U.S. companies. Accordingly, information contained in this AIF is not comparable to similar information made public by U.S. companies reporting pursuant to SEC disclosure requirements.

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, referred to herein as "Cdn\$". United States dollars are referred to herein as "US\$". Brazilian Reais are referred to herein 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 FactSet:

	2022	2021
High	Cdn\$1.39/R\$5.70	Cdn\$1.30/R\$5.81
Low	Cdn\$1.24/R\$4.61	Cdn\$1.20/R\$4.93
Rate at end of period	Cdn\$1.35/R\$5.28	Cdn\$1.26/R\$5.57
Average rate for period	Cdn\$1.30/R\$5.16	Cdn\$1.25/R\$5.40



On June 9, 2023, the rate for Canadian dollars (as quoted by FactSet) and Brazilian Reais in terms of the United States dollar was US\$1.00 = Cdn\$1.3317/R\$4.8777.

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 Restated Technical Report incorporated by reference herein contain 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 June 12, 2023.



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" or "SMSA"). On completion of the reverse take-over transaction, the Company implemented a share consolidation and changed its name to "Sigma Lithium Resources Corporation". On July 5, 2021, the Company changed its name 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 and its subsidiaries (each of which is wholly owned), and their relative jurisdictions of incorporation are set out in the following chart:





GENERAL DEVELOPMENT OF THE BUSINESS

Overview

Sigma is a Canadian-incorporated lithium company, focused on constructing what is expected to be one of the largest hard rock lithium operations in the Americas, with an environmental sustainability directed strategy. Sigma's Grota do Cirilo Project in Brazil will supply the rapidly expanding lithium-ion battery supply chain for EVs with sustainable Green Lithium.

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 fiscal years (and its current fiscal year to date).

2023 to Date

The Company is currently managing three interconnected workstreams aimed at developing the Project in a phased approach:

- Completing Phase 1 production ramp-up to nameplate capacity, which is expected to be achieved in Q3-2023, after completing Greentech Plant commissioning and achieving first Green Lithium production in April 2023.
- Completing a feasibility study and detailed engineering to FEL-3 stage precision for the potential production expansion that would source feedstock ore from the Barreiro deposit and Nezinho do Chicão deposit, which was investigated in the preliminary feasibility study included in the Restated Technical Report filed on June 12, 2023.
- Continued exploration and expansion of the Project's estimated mineral resources, with the objective of increasing the Project's expected mine life. Exploration activity is currently focused on the area south of the Murial deposit and north of the Lavra do Meio deposit, as well as several regional exploration targets which appear prospective.

Additionally, the Company's mission statement and key focus has been guided by making business decisions in a manner consistent with furthering the United Nations Sustainable Development Goals ("UN SDGs") and adhering to the highest level of ESG practices. Specifically, the Company is focused on the following three pillars: (i) sustainable development; (ii) minimizing the environmental impact of our operations; and (iii) improving the lives of those in and around the region where we operate. Further, the Company remains focused on global leadership to increase awareness of our "green battery metals" approach.

For further information on Phase 1 and Phase 2 & 3, please refer to "<u>Description of the Business – Current Status of the Project</u>". For further information on Sigma's ESG and sustainability programs, please refer to the most recent MD&A of the Company.

In the first half of 2023, activity has been focused on commissioning of the Phase 1 Greentech Plant, with the Company successfully initiating production in April 2023. On this workstream, the Company commenced commissioning of the Greentech Plant's dense medium separation circuit ahead of schedule in January 2023 and completed the commissioning of the crushing circuit commissioning on schedule in February 2023.

On June 12, 2023, the Company filed the Restated Technical Report on SEDAR and EDGAR, which includes all of the study results and resource and reserve estimates which were included in the Updated Technical Report, and which includes updated information on the licensing and regulatory approval status of the Project and the Murial drilling program. The Restated Technical Report was prepared by independent mining consultancies and the



professional services firms Primero Group Ltd ("Primero"), SGS Canada Inc. ("SGS"), and GE21 Consultoria Mineral ("GE21"). Please refer to "<u>Description of the Business – Current Status of the Project</u>" and "<u>Summary of the Restated Technical Report</u>".

On January 23, 2023, Independent Director Gary Litwack was appointed as Non-Executive Co-Chair of the Board and Rodrigo Menck was appointed as Chief Financial Officer, with Ana Cabral-Gardner remaining as Chief Executive Officer and Co-Chair of the Board, Calvyn Gardner remaining as a Director and Felipe Peres remaining as a Senior Financial Advisor of the Company.

2022

In 2022, activity was primarily focused on the construction of the Phase 1 Greentech Plant and pre-mining activities to establish operational readiness ahead of first production. Construction activity progressed throughout the year on schedule, with the Company employing a workforce of more than 1,000 by the fourth quarter of 2022 (approximately 40% comprised of Jequitinhonha Valley region community members, where the Project is located) and crushing circuit commissioning commencing as planned in December 2022.

On December 4, 2022, the Company announced the results of the Phase 2 & 3 PFS, highlighting a combined Project net present value and internal rate of return of US\$15.3 billion and 1,273%, respectively, along with a maiden Phase 3 proven and probable mineral reserve estimate of 21.2 Mt grading at 1.45% Li₂O, comprised of 2.2 Mt of proven mineral reserves grading at 1.53% Li₂O and 19.0 Mt of probable mineral reserves grading at 1.44% Li₂O. The Company later filed the associated Updated Technical Report on SEDAR and EDGAR on January 16, 2023. The Updated Technical Report was prepared by an independent mining consultancies and the professional services firms Primero, SGS, and GE21. 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 potential customers and solidifying its unique market position as a future supplier of high purity 5.5% battery grade lithium concentrate ("Green 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 within the lithium supply chain.

Additionally, on December 4, 2022, the Company announced that it had secured a US\$100,000,000 pre-export financing agreement with Synergy Capital, one of Sigma's current shareholders based in the United Arab Emirates (the "Synergy Financing"). The Synergy Financing is a senior secured facility available by way of a multi-draw term loan that contemplates a 48-month term and a borrowing rate of twelve-month BSBY plus 6.95% per annum.

In November 2022, the Company actively participated with its entire ESG leadership team at COP-27 in Egypt. The team collectively participated in more than 25 events, panels, and workshops. Ana Cabral-Gardner was invited by UN-DESA to host a workshop at the SDG Pavilion at COP-27 where it presented a framework to apply UN-SDGs to mining projects globally, in order to measure sustainability and overall economic and social impact. Additionally, Ms. Cabral-Gardner made the keynote presentation on "circular economy" at COP Investments (hosted by the World Climate Fund), presenting the Company strategy to become the first "Zero Tailings" lithium producer by upcycling 100% its hazardous chemicals free" tailings from the Greentech Plant. Ms. Cabral-Gardner also participated at the "Acceleration to Net Zero Series" of McKinsey & Co. at COP-27 with leading sustainability professionals across fields.

On November 17, 2022, the Company reported that, to preserve maximum commercial optionality for sales of the Project's Green Lithium, it had terminated the heads of agreement that was previously entered into with Mitsui & Co. Ltd. ("Mitsui") on March 26, 2019 (the "Mitsui HOA").

On September 13, 2022, Dana M. Perlman was appointed as an independent Director, bringing the Board's level of independence and female / LGBTQ representation to 50%.



The Company's management team was further strengthened with the appointments of Brian Talbot as Chief Operating Officer and Reinaldo Brandão Gomes as Head of Mining Operations in August 2022; Rodrigo Roso as Chief Legal Officer and Marina Bernardini as Chief Commercial Officer in June 2022; and Jamie Flegg as Chief Development Officer and James Neal-Ellis as Vice President, Corporate Development & Investor Relations in March 2022.

On June 22, 2022, the Company announced a maiden Phase 3 mineral resource estimate of 23.3 Mt of measured and indicated resources grading at 1.49% Li₂O and 3.5 Mt of inferred resources grading at 1.48% Li₂O. The Company later filed the associated technical report on SEDAR and EDGAR on August 4, 2022.

On May 25, 2022, the Company filed a technical report associated with an updated Phase 1 feasibility study (the "Phase 1 FS"), a maiden Phase 2 proven and probable mineral reserve estimate of 21.8 Mt grading at 1.37% Li₂O, comprised of 16.9 Mt of proven mineral reserves grading at 1.38% Li₂O and 4.8 Mt of probable mineral reserves grading at 1.29% Li₂O and a Phase 2 preliminary feasibility study (the "Phase 2 PFS") on SEDAR and EDGAR.

2021

On December 23, 2021, the Company completed 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 upsized twice, 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 of approximately Cdn\$51.4 million. Concurrently, 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 of approximately Cdn\$12.8 million.

In December 2021, the Company began issuing letters of intent ("LOIs") for long lead items for the construction of the Phase 1 Greentech Plant as the December 2021 Offering was completed, the front-end engineering and design ("FEED") was finalized and the final capital expenditure ("CAPEX") budget with a project execution plan ("PEP") was completed. Following the successful conclusion of the first phase of FEED, Promon and Primero remained engaged by the Company and continued to focus on negotiating and securing long lead items for the construction of the Phase 1 Greentech Plant. Promon and Primero also led the detailed engineering, procurement and construction management ("EPCM") for the Phase 1 Greentech Plant construction.

On December 2, 2021, the Company filed an amended and restated technical report associated with a Phase 1 feasibility study and a Phase 2 preliminary economic analysis on SEDAR and EDGAR, which made amendments to the technical report previously filed on July 15, 2021.

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 Green Lithium to LG Energy Solution, Ltd ("LGES"), one of the world's largest manufacturers of advanced lithium-ion batteries for EVs. The six-year LGES Offtake for Green 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 annually negotiate, an additional optional supply of Green Lithium, not otherwise committed in other Sigma offtake arrangements. The purchase price for the Green Lithium under the LGES Offtake will be linked to market prices for 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, then 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 then Co-CEOs.

On February 12, 2021, the Company completed 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.

2020

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 completed 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.

DESCRIPTION OF THE BUSINESS

Overview

Sigma is a Canadian-incorporated lithium company focused on constructing, with an environmental sustainability directed strategy, which is expected to be one of the largest hard rock lithium projects in the Americas – the 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 under the symbol SGML on the TSXV and Nasdaq.

Lithium Properties

The Project comprises four properties: Grota do Cirilo (the area of the Project where Phase 1 and Phase 2 & 3 are located), and the Sao Jose, Genipapo and Santa Clara properties. The Project consists of 29 mineral rights (which include mining concessions, applications for mining concessions, exploration authorizations, applications for mineral exploration authorizations) spread over 185 km².

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 500 km 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 is vertically-integrated, with the Company's mining operations supplying spodumene bearing material to its Greentech Plant. The Greentech Plant is designed to process Green Lithium, engineered to the specifications of the Company's customers in the rapidly expanding lithium-ion battery supply chain for Evs, in an environmentally friendly way through a fully automated and digital DMS technology process. The Greentech Plant was built after the completion of engineering to the level of FEL-3 stage precision by Primero and extensive testing at the Company's on-site demonstration pilot plant, which has been in operation since late 2018.

As the Company's mission statement has been guided by adhering to the highest level of ESG practices since inception in 2012, the Project is being developed in a sustainable way. Additionally, the Company is focused on social programs promoting sustainable development, inclusion (including on the Company's Board), and upskilling local people in the region where we operate. As a result, the Company has committed to the strategies outlined in Table 1 below, to advance the development of the Project in a responsible and sustainable way. Over the long term, Sigma plans to build upon its ESG commitments with the goal of dry stacking or upcycling its tailings and achieving net zero carbon emissions by the end of 2024 through the introduction of biofuels in its trucking fleet and carbon credit "in-setting".

Table 1: Summary of Sigma's ESG-Driven Decisions & Strategies

Governance & Diversity	Sustainable Development	Greentech Plant
CEO / Co-Chairpersons: 100% / 50% female	Phase 1 built as two pits to	Minimal water impact
Board Independence: 50%	preserve seasonal stream	No hazardous chemicals
Board Committees Chair Independence: 60%	Social programs / commitment to	Tailings 100% dry stacked
Board Diversity: 50% female / LGBTQ representation	local hiring and training	100% green hydro power

Sigma is building the Project in a phased approach and is currently on commissioning Phase 1 of the Project since December 2022 (with construction having been completed in 2023), and with production successfully initiated in April 2023. Table 2 below highlights the results of the Phase 1 FS and Phase 2 & 3 PFS included in the Restated Technical Report. Phase 1 production of Green Lithium is anticipated to position the Company as a globally relevant Tier 1 lithium producer with Phase 2 & 3 potentially tripling production (if a production decision is made by the Company following the completion of a feasibility study). The Greentech Plant is planned to potentially have two separate production lines, one for Phase 1 and one for Phase 2 & 3, which will have similar DMS processing flowsheets and will share certain common plant infrastructure.

Table 2: Highlights of the Phase 1 FS and Phase 2 & 3 PFS Included in the Restated Technical Report

Highlights @ 5.5% Lithium Oxide Concentration	Units	Phase 1	Phase 2 & 3	Phase 1, 2 & 3
Operating Life	(years)	8	12	13
Run-Rate Green Lithium Production	(tpa)	270,000	496,000	766,000
Run-Rate Lithium Carbonate Equivalent Production	(tpa)	36,700	67,400	104,200
Total Cash Cost Excluding Royalties (@ Mine Gate)	(US\$/tonne)	\$281	\$292	\$289
All-In Sustaining Cost (CIF China)	(US\$/tonne)	\$541	\$516	\$523
After-Tax Net Present Value (@ 8% Discount Rate)	(US\$ Bn)	\$5.7	\$9.6	\$15.3
After-Tax Internal Rate of Return	(%)	1,282%	1,207%	1,273%
Payback Period	(months)	1.0	1.1	1.2

The Phase 1 of the Project will also produce low grade, high-purity, zero chemicals, approximately 1.3% lithium oxide (Li2O), hypofine by-products with material market value, which Sigma plans to sell to strength its ESG-centric approach with a pioneering "zero tailings" environmental sustainability strategy, eliminating the environmental footprint of tailings with a positive ecosystem impact, while also generates an additional revenue stream to the company.

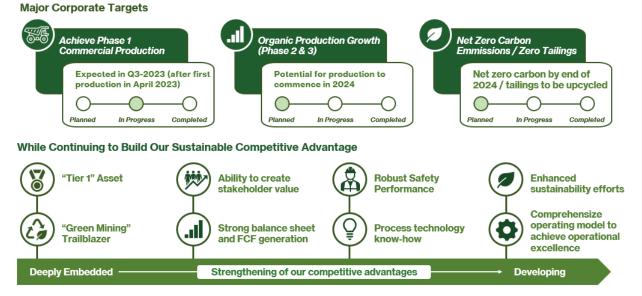


Going forward, Sigma plans to continue evaluating the Phase 2 & 3 expansion, with any formal production decision being subject to and following the completion of a feasibility study (including FEL-3 level estimates) and Phase 1 production ramp-up. Additionally, Sigma plans to continue all stages of exploration programs, focused on further increasing its mineral resource base and extending the Project's operating life.

Figure 1: General View of the Phase 1 Greentech Plant Construction



Figure 2: Sigma's Corporate Targets of Creating Value in a Sustainable Way





Phase 1 Greentech Plant Construction & Commissioning Progress

General Overview of Progress

Sigma made significant progress in the construction of the Phase 1 Greentech Plant during 2022, commencing the commissioning of its Phase 1 Greentech Plant in December 2022 and achieving initial production in April 2023. Sigma was able to achieve initial production on schedule as a result of activity continuing to accelerate in the fourth quarter of 2022, with the construction workforce increasing to more than 1,000.

As of the date of this AIF, the Company has achieved the following significant milestones:

- Completed the coarse and fines DMS circuits commissioning and initial production on schedule in April 2023;
- Completed the electromechanical assembly of the raw water supply piping and the installation of equipment, including water tanks in February 2023;
- Completed crushing circuit commissioning on schedule in February 2023; and
- Completed Phase 1 Greentech Plant detailed engineering (done concurrently with construction) in December 2022.

Going forward, the Company intends to remain focused on completing the following key workstream in 2023:

- Completing the ramp-up of production, with commercial production to nameplate capacity expected to be achieved in Q3-2023;
- Continue evaluating Phase 2 & 3; and
- Exploration of greenfield targets.

Refer to Figures 3 to 8 for a visualization of Phase 1 Greentech Plant construction progress as of the date of this AIF.

Figure 3: Crushing Circuit



Figure 4: Ore Crushing





Figure 5: Crushed Ore Bin Area



Figure 7: DMS Circuit Commissioning



Figure 6: DMS Circuit Commissioning



Figure 8: Power Substation Commissioning



Health & Safety

Health and safety remains one of Sigma's primary focuses at the construction site, and the Company is proud to report the following achievements as of the date of this AIF:

- Substantial Covid-19 suppression, with no cases reported during the fourth quarter of 2022 and only 36 cases reported during the first three quarters of 2022 (four cases reported in July 2022 during the third quarter of 2022).
 - 100% of the operational workforce vaccinated for Covid-19.
- Zero lost time due to injury since construction commenced (approximately 1,000,000 of cumulative total person hours).

Detailed Engineering & Procurement Progress

The Company completed detailed engineering of the Phase 1 Greentech Plant in December 2022. Detailed engineering, procurement and construction management ("EPCM") for the Phase 1 Greentech Plant is led by Promon Engenharia Ltda. ("Promon").

Additionally, during the second half of 2022, Sigma increased its 'site management team' with the addition of seven experienced engineers who were fully engaged with our EPCM providers (Primero, Promon and construction suppliers) to ensure the successful completion and commissioning of the Phase 1 Greentech Plant.

Detailed engineering (incremental to the FEL-3 level engineering completed for the Phase 1 FS) was completed



concurrent with the construction of the Phase 1 Greentech Plant, as the Company continued to fine tune designs with Primero and Promon as it progresses towards completing construction.

Phase 1 Greentech Plant Commissioning & Commercial Production

The Company successfully achieved initial production on schedule in April 2023, with full commercial production expected to be achieved in Q3-2023. Commissioning and start-up management is led by the Company's operational team and Chief Operating Officer Brian Talbot with the support of Promon.

The Company is deploying the following strategies to ensure an efficient ramp-up to commercial production:

- Monitoring commissioning tests and analyzing their respective issued reports during commissioning;
- Identifying, registering and flagging non-conformities related to commissioning and test procedures; and
- Coordinating interfaces between contractors and expediting (with contractors) the sending of data-books available for the pre-operational phase.

Phase 1 Mining Progress

Sigma continued to advance pre-production mining activities in the fourth quarter of 2022, as the Company works towards establishing operational readiness to ensure an efficient ramp-up towards Phase 1 commercial production.

As of the date of this AIF, the Company has achieved the following significant milestones:

- Bridge over the Piaui "seasonal stream" that divides the Phase 1 north and south pits to improve transportation efficiency completed in March 2023;
- Completed the seeding of vegetation cover for the initial waste pile slopes (where non-mineralized material will be dry stacked) in February 2023;
- Phase 1 south pit pre-stripping completed in February 2023, as the Company plans to simultaneously source feedstock ore from both the north and south pits;
- First ore blast made at the Phase 1 north pit in early November, run of mine pad was finalized in Q1-23;
- Completed the construction of mine haul roads linking the Phase 1 north pit and Phase 1 south pit to the Greentech Plant and waste pile locations;
- Phase 1 north pit pre-stripping completed in October 2022, with sufficient ore exposed and accessible to enable mining to commence; and
- Hiring key mining team personnel in preparation for full-scale mining (including senior mining engineer Reinaldo Brandão Gomes as Head of Mining Operations).

Refer to Figures 9 to 12 below for a visualization of Phase 1 mining activities and progress as of the date of this AIF. Note that the area marked in red in Figures 9 and 10 highlight exposed ore.

Going forward, the Company intends to remain focused on the following workstreams:

- Continuing to transport stockpiled ore to the run of mine pad;
- Ramping-up full-scale mining; and



Implementing grade control systems to optimize mine and processing recovery during production ramp-up.

Sigma will employ contract mining, with Fagundes engaged as the Company's primary mining contractor.

Figure 9: Phase 1 North Pit Mining







Note: Red circles in Figures 9 and 10 highlight exposed ore.

Figure 11: Piaui Bridge



Figure 12: Ore Stockpiling



Phase 2 & 3 Development Progress

Throughout 2022, the Company continued to advance development work for a potential Phase 2 & 3 production expansion, announcing the results of the Phase 2 & 3 PFS in December 2022. An illustration of the potential production sequencing in the Phase 2 & 3 PFS is highlighted in Figures 13 and 14 below.

The Phase 2 & 3 PFS investigated the opportunity to fast-track Phase 3 production and to build a dual plant which could process both Phase 2 and Phase 3 ore feed simultaneously to deliver a greater production increase in 2024 (if warranted by feasibility study) versus the sole Phase 2 expansion originally envisioned in the Phase 2 preliminary feasibility study completed in May 2022. Refer to Figure 13 below for the 3D rendering of the potential Phase 2 & 3 expansion as designed by Primero.

Sigma expects to complete a feasibility study for the potential Phase 2 & 3 expansion in the second quarter of 2023 ahead of making a formal production decision to proceed with Phase 2 & 3. Sigma has appointed DRA Global Limited ("DRA") to work alongside Promon on the design and potential construction of the Phase 2 & 3 expansion. DRA has been selected for its international experience in advanced mineral processing, specifically with lithium DMS plant design, and its construction management experience.



Figure 13: 3D Rendering of the Phase 1 and Phase 2 & 3 Greentech Plant Designed by Primero



Figure 14: Planned Expansion of Phase 2 & 3





Licensing Updates

Phase 1 Updates

Sigma received an operational license ("LO") for the Phase 1 north pit and Greentech Plant on March 31, 2023, and for the Phase 1 south pit on April 30, 2023, both with an unanimous vote of approval including all the non-governmental organizations involved. This follows the Company filing its request for the LO for the Phase 1 north pit and Greentech Plant on November 16, 2022 and the Phase 1 south pit on January 23, 2023. The receipt of the LO was the last licensing step required for Sigma to produce Green Lithium.

On June 29, 2022, the Grant of Right to Use Water Resources ("Outorga de Direito de Uso de Recursos Hídricos") was approved, allowing the Company to use pit seepage water for dust suppression and other mining activities.

On June 27, 2022, the Company obtained the requested extension of its current environmental licenses for construction, installation and commissioning from the environmental authority of the State of Minas Gerais, the Council of Environmental Policy in Brazil. The extension allows for the simultaneous mining of the Phase 1 north pit and south pit and also allows for the Company to increase the area utilized for the dry stacking of the tailings of the Greentech Plant.

On June 23, 2022, the State Institute of Historic and Artistic Heritage of Minas Gerais ("Instituto Estadual do Patrimônio Histórico e Artístico de Minas Gerais" or "IEPHA") approved the Preliminary Cultural Impact Study, which assesses the possibility of impacts of the project on protected cultural assets.

On April 26, 2022, the State Environmental Policy Council ("COPAM"), through its Biodiversity Protection Chamber ("CPB"), approved the environmental compensation proposal presented by Sigma for the vegetation suppression to be carried out. According to the proposal, Sigma will compensate for twice the area to be suppressed, through the land regularization of the Mata Escura Biological Reserve, an integral protection conservation unit located in the same hydrographic basin as the Project.

In January 2022, SUPPRI (the "Priority Projects Superintendence of Minas Gerais") issued the final request for complementary information ("Complementary Information Request"). In March 2022, the Company fully responded ("Complementary Information Reply") to the Complementary Information Request. The Complementary Information Reply included the submission to SUPPRI of the following environmental studies: 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 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 Vegetaçao (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); and Pontos de Monitoramento da Herpetofauna (monitoring points of reptile animals of the region).

Phase 2 Updates

On August 17, 2022, the Company filed at SUPPRI the environmental studies, including, among others, the environmental impact study and environmental mitigation plan (the "Phase 2 EIA/RIMA") for a preliminary and installation license ("LP/LI") for Phase 2 and its piles. Once the EIA/RIMA is approved by the environmental authorities, the Company will be authorized to commence the construction and installation of Phase 2, if a formal production decision to proceed with Phase 2 & 3 is made. Operation permits from environmental authorities will also be required.



The Company conducted detailed environmental impact studies for the fauna and the flora in the area of Phase 2 where the pit and waste piles will be located. These studies started in the dry season of the second quarter of 2021 and continued throughout the wet season during the third and fourth quarters of 2021.

The design proposed by the Company in the environmental impact study and environmental mitigation plan 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 Greentech Plant.

Exploration Progress

During 2022, the Company made significant exploration progress, with activities focused on Phase 2 and Phase 3.

As of the date of this AIF, the Company has achieved the following significant milestones:

- Announced a maiden Phase 3 mineral resource estimate in June 2022, which was later updated and announced in December 2022 as 26.7 Mt of measured and indicated mineral resources grading at 1.49% Li₂O, comprised of 2.4 Mt of measured mineral resources grading at 1.56% Li₂O and 24.3 Mt of indicated mineral resources grading at 1.48% Li₂O;
- Announced a maiden Phase 3 mineral reserve estimate of 21.2 Mt grading at 1.45% Li₂O of proven and probable mineral reserves, comprised of 2.2 Mt of proven mineral reserves grading at 1.53% Li₂O and 19.0 Mt of probable mineral reserves grading at 1.44% Li₂O in December 2022; and
- Increased the Project's consolidated mineral reserve and mineral resource estimates to 54.8 Mt grading at 1.44% Li₂O of proven and probable mineral reserves, comprised of 27.4 Mt of proven mineral reserves grading at 1.44% Li₂O and 27.3 Mt of probable mineral reserves grading at 1.43% Li₂O, 77.0 Mt grading at 1.43% Li₂O of measured and indicated mineral resources, comprised of 37.1 Mt of measured mineral resources grading at 1.43% Li₂O and 39.9 Mt of indicated mineral resources grading at 1.43% Li₂O, and 8.6 Mt grading at 1.43% Li₂O of inferred mineral resources at a 0.5% Li₂O cut-off.
- The current exploration program focus is targeted to complete an initial Phase 4 mineral resource estimate. Phase 4 is located in close proximity to Phase 2 and Phase 3 and would be mined as an additional open pit, if warranted and economically viable based on a feasibility study.

Note: All mineral resource estimates referenced in this AIF are inclusive of mineral reserve estimates.

The Company plans to drill approximately 17,000 meters in 2023, with the goal of further increasing the Project's estimated mineral resources. The Company expects that any additional mineral resource growth achieved will be utilized as feedstock material to extend the Project's operating life, if warranted after completing and analyzing a preliminary economic assessment, pre-feasibility study and feasibility study.

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 net smelter return 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 Green Lithium; and

an NSR Royalty 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.

Surface Rights and Other Permitting

Certain surface rights in the Phase 1 area, the current primary focus of the Company's activity, are held by Arqueana Empreendimentos e Participações S.A. ("Arqueana") and Miazga Participações S.A. ("Miazga"), two companies owned by the CEO of the Company Ana Cabral and Director Calvyn Gardner. 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, Greentech 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 Phase 1 (ANM Process No. 824.692/1971).

The Company also obtained a key approval for the 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 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.

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, 2022, the Company had 165 employees and 31 part time and/or consultants working at various locations. Additionally, the Company has a construction workforce of more than 1,000 (approximately 40% comprised of Jequitinhonha Valley region community members where the Project is located).

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.

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 during 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 Green 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 2023, 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.



SUMMARY OF THE RESTATED TECHNICAL REPORT

Set out below is an extract from the Restated Technical Report dated June 12, 2023, with an effective date of October 31, 2022, prepared by Homero Delboni Jr, B.E., M.Eng.Sc., Ph.D., Marc-Antoine Laporte, P. Geo, Jarrett Quinn, P.Eng., Porfirio Cabaleiro Rodriguez, Meng., and Noel O'Brien, B.E., MBA (the "TR Qualified Persons"). Reference should be made to the full text of the Restated Technical Report, which is the current technical report on the Project, is available on the Company's website at www.sigmalithium.ca or at the Company's profile on SEDAR at www.sec.gov 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 Restated Technical Report.

Property Description and Location

The Project is located in the Northeastern Minas Gerais State, in the municipalities of Araçuaí and Itinga, approximately 25 km east of the town of Araçuaí and 600 km northeast of Belo Horizonte.

The Project is comprised of four properties owned by SMSA 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 29 mineral rights, which include mining concessions, applications for mining concessions, exploration permits and applications for mineral explorations authorizations, spread over 185 km², and includes nine past producing lithium mines and 11 first-priority exploration targets. Granted mining concessions are in good standing with the Brazilian authorities.

Certain surface rights in the Phase 1 area, the current primary focus of activity, are held by two companies, Arqueana and Miazga. SMSA has entered into two right-of-way agreements with these companies to support Sigma's exploration and development activities within the Grota do Cirilo property, as well as with third-party surface owners in the Project area.

SMSA 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 Xuxa deposit and processing plant (ANM Process No. 824.692/1971).

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. However, Sigma intends to exercise its option to repurchase one of the 1.0% NSRs for US\$3.8 million in its first year of commercial production at the Project.

To the extent known to the TR 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 Restated Technical Report.

Accessibility, Climate, Local Resources, Infrastructure and Physiography

The Project is easily accessible from federal paved road BR-367, which runs through the northern part of the Project. Within the Project area, accessibility is provided by municipal roads. A municipal airport services the town of Araçuaí for private flights. The closest major domestic airports are located at the municipality of Vitória da Conquista, 273 km east of the Project and at the municipality of Montes Claros, 329 km west of the Project.

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 towns of Araçuaí and Itinga can supply certain services. Other services may 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 Sigma's project interest were conducted by Companhia Estanifera do Brazil (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 SMSA. SMSA 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 Sigma purchased a dense media separation (DMS) unit to produce a 6% Li₂O spodumene concentrate. Sigma 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. Sigma 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, Sigma 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 (EBP) that encompasses a very large region of about 150,000 km², stretching from the state of Bahia to Rio de Janeiro state.

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:



- Phase 1: 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. Phase 1 remains open to the west, east, and at depth.
- Phase 2: 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. Barreiro remains open to the northeast and at depth.
- Phase 3: The pegmatite body strikes nearly north-south (020°) and dips at 40-75° to the southeast. The dike is about 1,600 m long, 200 m down-dip and 20-30 m thick. It remains open to the north, south and at depth. The NDC pegmatite is a high-grade mix of spodumene and petalite with a variable ratio depending on the thickness of the zone.
- 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 norther 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 development of the Project started in the second quarter of 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 Li_2O and Ta_2O_5 grade was established.

Within the more prospective areas, Sigma concentrated its activities on detailed geological and mineralogical mapping of historically mined pegmatites, and in particular, on the larger pegmatites, Phase 1 and Phase 2. These dikes were channel sampled and subsequently assessed for their lithium, tantalum and cassiterite potential. This work was followed by bulk sampling, drilling and metallurgical test work. In the southern complex area, Sigma 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 SMSA across the Project area consists of 458 core holes totalling 82,455 m. To date, this drilling has concentrated on the Grota do Cirilo pegmatites. Drilling was completed using 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 Sigma personnel using the Reflex EZ-Track and Reflex Gyro instruments. Calibrations of tools were completed every year since 2017.

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.



SMSA conducted HQ drilling programs in 2014, 2017, 2018, 2020, 2021 and 2022 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 and Mineral Reserve (MRMR) estimates for the Phase 1 FS and the Phase 2 & 3 PFS update.

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 SMSA during the 2014–2022 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 and 2020-2022 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 SMSA and Sigma and provide services to SMSA 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 μ m) 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). The 2020-2022 samples were assayed by SGS Geosol with a 31-element analytical package using sodium peroxide fusion followed by both Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES) and ICP-MS finish (SGS code ICP90A) For Li, the lower limit of detection is 10 ppm, and the upper limit of detection is 15,000 ppm (1.5% Li).

Sample preparation at ALS Vespasiano comprised drying, crushing to 70% passing 2 mm using jaw crushers, and pulverizing to 85% passing 200 mesh (75 μ m) 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, SMSA developed an internal QA/QC protocol for the Xuxa 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 and 2021, Sigma also sent pulps from selected mineralized intersections to ALS Chemex for reanalysis. No pulp reanalysis was performed by Sigma in 2013 and 2014. A total of 729 pulp samples from the 2017, 2018, 2020 and 2021 Phase 1, Phase 2, Murial and Lavra do Meio drilling programs were sent to ALS Vespasiano for third-party verification.

SMSA inserted standards in sample batches during the 2014, 2017–2018 and 2020-2022 sampling programs. The 2017–2018 campaign used seven certified standards from African Mineral Standards (AMIS), an international supplier of certified reference materials while the 2020-2022 campaign used four certified AMIS standards. A total



of 88 standards were inserted during the 2017 campaign and 315 were inserted during the 2018 campaign, with a further 73 standards submitted in the 2021 campaign and 210 samples submitted in 2021-2022. Results were considered acceptable, and no material accuracy issues were noted.

During the 2017–2018 and 2020-2022 campaigns SMSA 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 SMSA geologist and subsequently sent to SGS Geosol. The same procedure was used by SMSA for the 2014 drilling campaign. A total of 939 analytical blanks were analysed during the 2014, 2017–2018 and 2020-2022 exploration programs. Results were considered acceptable, and no material contamination issues were noted.

SMSA inserted coarse 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 Phase 1, Phase 2, Murial, Lavra do Meio and Phase 3 deposits.

A total of 219 measurements were made on Phase 1 core from 2017–2021. Of the 219 measurements, 26 were made on albite-altered pegmatite, 69 on schist, and 121 on lithium-bearing pegmatite. For Phase 2, a total of 471 measurements were made on core from the 2018 and 2021 drill programs. Of the 471 measurements, 94 were made on albite-altered pegmatite, 206 on schist, and 164 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. For Phase 3, a total of 292 lithium-bearing samples had density measurements calculated, comprising 196 spodumene samples and 96 petalite samples.

In 2017, SGS validated the exploration processes and core sampling procedures used by SMSA 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 SMSA 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.

Sigma sent 65 samples from the 2021 Phase 2 drilling campaign to ALS Chemex for check sample analysis using the ALS Chemex protocol ME-ICP82b with sodium peroxide fusion.

The average lithium concentration for the original samples was 6,518.0 ppm Li and the duplicates averaged 6,559.7 ppm Li, with an average difference of 41.7 ppm or 0.6%. The correlation coefficient R² of 0.9854 suggests a strong correlation and a high similarity between the two sets of samples.

Sigma sent 304 samples from the 2021-2022 Phase 3 drilling campaign to ALS Chemex for check sample analysis using the ALS Chemex protocol ME-ICP82b with sodium peroxide fusion.

The average lithium grade for the original samples was 1.38% Li₂O and the duplicates averaged 1.39% Li₂O. The correlation coefficient R² of 0.98 suggests a strong correlation and a high similarity between the two sets of samples.



A total of 216 coarse duplicates and 216 pulp duplicates from Phase 3 were submitted for analysis from the 2021 and 2022 drill programs. For the coarse duplicates, the average of the original samples was 1.44% Li_2O , while the duplicates averaged 1.42% Li_2O , while the original pulp samples averaged 1.43% Li_2O , with the pulp duplicates also averaging 1.43% Li_2O .

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, from September 18 to 23, 2018, from October 18 to 21, 2021 and from May 30 to June 1, 2022. These visits enabled the TR QP to become familiar with the exploration methods used by SMSA, 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 transmitted to SGS by Sigma as comma separated values (csv) files and regularly updated by Sigma geologists. The database contains data for: collar locations; downhole surveys; lithologies and lithium assays. Upon importation of the data into the SGS proprietary modelling and mineral resources estimation software (Genesis©), SGS conducted a second phase of data validation where any discrepancies were identified and removed from the database, after consultation and verification with Sigma geologists. Finally, SGS conducted random checks on approximately 5% of the assay certificates, to validate the assay values entered in the database.

Witness sampling was undertaken in 2017 on previously sampled mineralized intervals, with the remaining half core cut to quarter core, and the samples submitted to the SGS Lakefield lab for analysis. 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 % Li₂O while the average for the control samples is 1.59 % Li₂O. 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 TR QP is of the opinion that the sample preparation, analysis and QA/QC protocol used by SMSA for the Project follow generally accepted industry standards and that the Project data is of a sufficient quality.

Mineral Processing and Metallurgical Testing

Phase 1

Drill core samples from the Phase 1 deposit were processed at the SGS Lakefield facility in 2018 and 2022, samples from the Phase 2 deposit were tested between November 2020 and May 2021, and samples from the Phase 3 deposit in 2022. Work conducted on the Phase 1 deposit samples included comminution, heavy liquid separation (HLS), REFLUX™ classifier, dense media separation (DMS) and magnetic separation. The Phase 2 deposit test work program included sample characterization, grindability testing, HLS and DMS metallurgical test work. The Phase 3 deposit test work program included sample characterization, mineralogical analyses, HLS, DMS, and magnetic separation.

Drill core samples were selected and combined into six variability (Var) samples for a test work program comprising of mineralogical analyses, grindability, HLS, REFLUX $^{\text{TM}}$ classifier, DMS, and magnetic separation testing. Flowsheets for lithium beneficiation were developed in conjunction with the test work. The goal was to produce spodumene concentrate grading a minimum 6% Li₂O and maximum 1% Fe₂O₃ 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 resulted 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 mm/+6.3 mm), fines (-6.3 mm/+1.7 mm), ultrafines (-1.7 mm/+0.5 mm) and hypofines (-0.5 mm). The coarse, fines and ultrafines fractions of each variability sample were processed separately for lithium beneficiation. The



REFLUX™ classifier (RC) 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, fines and ultrafines RC underflow streams of each variability sample were processed separately through DMS. The DMS concentrate from each fraction underwent dry magnetic separation 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 pass at a higher SG cut-point (ca. ~2.90) to generate spodumene concentrate. The coarse DMS middlings were re-crushed to -3.3 mm and a two stage HLS test was conducted. The ultrafines DMS test work flowsheet included both a single pass and a double pass DMS circuit at a high SG cut-point (~2.90) to generate spodumene concentrate.

The DMS test results demonstrated the ability to produce spodumene concentrate with >6% Li₂O in most of the tests. Based on the test work results, a lithium recovery of 60.4% was selected for plant design.

Phase 2

Four variability and one composite sample were tested for Phase 2, with the goal of the program to provide preliminary process information on the metallurgical performance of mineralized material from the Phase 2 deposit. The test work program was developed based on the flowsheet developed for the Phase 1 deposit. 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).

Pilot-scale DMS test work was operated on the composite sample. Dry magnetic separation was undertaken on the DMS feed. DMS test work results showed combined spodumene concentrate grade of 6.11% Li₂O and stage recovery of 59.5% for a global recovery of 50.9%.

Phase 3

Three variability samples and one composite sample were tested for Phase 3, with the goal of the program to provide process information on the metallurgical performance of mineralized material from the Phase 3 deposit. The test work program was developed based on the flowsheet developed for the Phase 2 deposit. The aim of the test work program was to produce chemical grade spodumene concentrate (>5.5% Li₂O) with low iron content (<1% Fe₂O₃), while maximizing lithium recovery.

HLS tests were undertaken across four different crush sizes (i.e., top size of 15.9 mm, 12.5 mm, 9.5 mm, and 6.3 mm) to determine the optimum crush size, for each ore (high grade, medium grade and low grade). 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 -9.5mm was determined to be optimal and variability HLS testing was undertaken at this crush size. Interpolated stage recoveries (5.5% Li₂O concentrate) for the three variability samples ranged from 58.7% to 61.4%, and the master composite a nominal 57.8%, for the 9.5mm crushed process step 1.54% Li₂O head grade.



Pilot-scale DMS test work was operated on the composite sample. Dry magnetic separation was undertaken on the DMS feed. DMS test work results showed combined spodumene concentrate grade with petalite 5.50% Li₂O and stage recovery of 58.7% for a global recovery of 50.6%.

Mineral Resource Estimates

Mineral Resources for the Project 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 Phase 1, Murial, Lavra do Meio and Phase 3 models used a 5 m x 3 m x 5 m block size and the Phase 2 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 Phase 2.

Variography was undertaken for Phase 1, Phase 2, Lavra do Meio and Phase 3, and the projection and Z-axis rescaling were done according to the mineralization orientation.

The grade interpolation for the Phase 1, Phase 2, Lavra do Meio, and Phase 3 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:

- Phase 1: 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.
- Phase 2: 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.
- Phase 3: search ellipsoid distance of 75 m (long axis) by 75 m (intermediate axis) and 25 m (short axis) with an orientation of 18° azimuth and -50° dip to the east; 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:

- Phase 1: twice the search distance of the first pass; minimum of seven composites, a maximum of 15 composites and a minimum of three drill holes.
- Phase 2: 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.
- Phase 3: twice the search distance of the first pass; 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:

- Phase 1: 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.
- Phase 2: 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.
- Phase 3: 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.
- 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

- Phase 1: 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.
- Phase 2, 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.
- Phase 3: the search ellipsoid used was 75 m (strike) by 75 m (dip) by 25 m with a minimum of seven 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.

Conceptual economic parameters were used to assess the 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 SMSA. 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 the Project are reported in Table 1-1 to Table 1-5 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 Phase 1, Murial and Lavra do Meio estimates have an effective date of January 10, 2019, the Phase 2 estimate has an effective date of February 10, 2022, and the Phase 3 estimate has an effective date of October 31, 2022. The TR QP for the estimates is Mr. Marc-Antoine Laporte, P.Geo., an SGS employee.



Table 1-1 - Phase 3 Mineral Resource Estimate

CUT-OFF GRADE Ll₂O (%)	CATEGORY	TONNAGE (MT)	AVERAGE GRADE LI₂O (%)	CONTAINED LCE (KT)
0.5	Measured	2.4	1.56	93
0.5	Indicated	24.3	1.48	889
0.5	Measured + Indicated	26.7	1.49	984

Notes to accompany Table 1-1 Phase 3 Mineral Resource Estimate:

- 1. Mineral Resources have an effective date of October 31, 2022 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.
- All Resources are presented undiluted and in situ, constrained by continuous 3D wireframe models, and are considered to have reasonable prospects for eventual economic extraction.
- Mineral Resources are reported assuming open pit mining methods, and the following assumptions: lithium concentrate (6% Li₂O) price of US\$1,500/t, mining costs of US\$2.2/t for mineralization and waste, crushing and processing costs of US\$10/t, general and administrative (G&A) costs of US\$4/t, concentrate recovery of 60%, 2% royalty payment, pit slope angles of 52-55°, and an overall cut-off grade of 0.5% Li₂O.
- 4. Tonnages and grades have been rounded in accordance with reporting guidelines. Totals may not sum due to rounding.
- 5. Mineral resources which are not mineral reserves do not have demonstrated economic viability. An Inferred Mineral Resource has a lower level of confidence than that applying to a Measured and 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.
- 6. The results from the pit optimization are used solely for the purpose of testing the "reasonable prospects for economic extraction" by an open pit and do not represent an attempt to estimate mineral reserves. There are no mineral reserves on the Property. The results are used as a guide to assist in the preparation of a Mineral Resource statement and to select an appropriate resource reporting cut-off grade.
- The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.

Table 1-2 – Phase 1 Mineral Resource Estimate

CUT-OFF GRADE Ll ₂ O (%)	CATEGORY	TONNAGE (MT)	AVERAGE GRADE LI ₂ O (%)	CONTAINED LCE (KT)
0.5	Measured	10.2	1.59	401
0.5	Indicated	7.2	1.49	266
0.5	Measured + Indicated	17.4	1.55	667
0.5	Inferred	3.8	1.58	149

Notes to accompany Table 1-2 Phase 1 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.
- 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.



Table 1-3 – Phase 2 Mineral Resource Estimate

CUT-OFF GRADE LI₂O (%)	CATEGORY	TONNAGE (MT)	AVERAGE GRADE LI ₂ O (%)	CONTAINED LCE (KT)
0.5	Measured	18.7	1.41	654
0.5	Indicated	6.3	1.30	204
0.5	Measured + Indicated	25.1	1.38	857
0.5	Inferred	3.8	1.39	132

Notes to accompany Table 1-3 Phase 2 Mineral Resource Estimate:

- 1. Mineral Resources have an effective date of February 11, 2022 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. All Resources are presented undiluted and in situ, constrained by continuous 3D wireframe models, and are considered to have reasonable prospects for eventual economic extraction.
- 3. Mineral Resources are reported assuming open pit mining methods, and the following assumptions: lithium concentrate (6% Li₂O) price of US\$1,500/t, mining costs of US\$2.2/t for mineralization and waste, crushing and processing costs of US\$10/t, general and administrative (G&A) costs of US\$4/t, concentrate recovery of 60.7%, 2% royalty payment, pit slope angles of 52-55°, and an overall cut-off grade of 0.5% Li2O.
- 4. Tonnages and grades have been rounded in accordance with reporting guidelines. Totals may not sum due to rounding.
- 5. Mineral resources which are not mineral reserves do not have demonstrated economic viability. An Inferred Mineral Resource has a lower level of confidence than that applying to a Measured and 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.
- 6. The results from the pit optimization are used solely for the purpose of testing the "reasonable prospects for economic extraction" by an open pit and do not represent an attempt to estimate mineral reserves. There are no mineral reserves on the Property. The results are used as a guide to assist in the preparation of a Mineral Resource statement and to select an appropriate resource reporting cut-off grade.
- 7. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.

Table 1-4 – Murial Mineral Resource Estimate

CUT-OFF GRADE Ll₂O (%)	CATEGORY	TONNAGE (MT)	AVERAGE GRADE LI₂O (%)	CONTAINED LCE (KT)
0.5	Measured	4.2	1.17	121
0.5	Indicated	1.4	1.04	36
0.5	Measured + Indicated	5.6	1.14	157
0.5	Inferred	0.7	1.06	18

Notes to accompany Table 1-4 Murial 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.
- 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\$1/2/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.



Table 1-5 – Lavra do Meio Mineral Resource Estimate

CUT-OFF GRADE LI₂O (%)	CATEGORY	TONNAGE (MT)	AVERAGE GRADE Ll₂O (%)	CONTAINED LCE (KT)
0.5	Measured	1.6	1.16	45
0.5	Indicated	0.6	0.93	15
0.5	Measured + Indicated	2.3	1.09	60
0.5	Inferred	0.3	0.87	6

Notes to accompany Table 1-5 Lavra do Meio 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.
- 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.

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, and 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

Phase 1

Phase 1 mineral reserve estimates have an effective date of 26th of June 2021 and have been converted from Measured and Indicated Mineral Resources. The key parameters upon which the 26th of June 2021 Mineral Reserve estimates were defined are summarized in Table 1-6.

Table 1-6 – Parameters Used in Phase 1 Pit Optimization

ITEM			UNIT	VALUE
		Sales Price	US\$/t conc.*	\$1,500
)	Density	g/cm³	fixed in model
Revenue		Grade	% Li ₂ O	fixed in model
Revenue		Mine Recovering	%	fixed in model
	Mining	Dilution	70	fixed in model
	Block Model	Block Dimensions	Unit	value



	Dimensions	XxYxZ	m	5 x 3 x 5
		Soil		34
	Conord Angle	Saprolite	o	37.5
	General Angle	Fresh Rock	, and the second	Sector 1 – 72° Sector 2 – 50°
		Metallurgical Recovery**	%	60.7
	Processing	Mass Recovery***	%	Calculated in block
		Concentrated Grade	% Li ₂ O	6.0
		Cut-off	% Li ₂ O	0.5
		Mining	US\$/t mined	\$2.20
	Canta	Processing	LICC/A area	\$10.70
	Costs	G&A (Adjusted for OPEX)	US\$/t ore	\$4.00
		Sale (2% cost of sale)	LICC/t product	\$14.66
		Royalties (CFEM 2%)	US\$/t product	\$14.66

Notes: * conc. = concentrate, ** based on DMS Tests, *** Including 15% fines losses – FOB Mine.

Proven and Probable Mineral Reserves are as presented in Table 1-7.

Table 1-7 - Phase 1 Mineral Reserves

5 X 3 X 5 (M) BLOCK DIMENSIONS 97% MINE RECOVERY, 3.75% DILUTION (EFFECTIVE DATE: 6/26/2021)					
Category Tonnage Average Grade Contained LCE (mt) Li ₂ O (%) (kT)					
Proven	8.3	1.55	320		
Probable 3.5 1.54 132					
Proven + Probable	11.8	1.55	452		

Notes to accompany Mineral Reserves table:

- 1. Mineral Reserves were estimated using Geovia Whittle 4.3 software and following the economic parameters listed below:
- 2. Sale price for Lithium concentrate at 6% Li2O = US\$1,500/t concentrate FOB Mine
- 3. Exchange rate US\$1.00 = R\$5.00.
- 4. Mining costs: US\$2.20/t mined.
- 5. Processing costs: US\$10.7/t ore milled.
- 6. G&A: US\$4.00/t ROM (run of mine).
- 7. Mineral Reserves are the economic portion of the Measured and Indicated Mineral Resources.
- 8. 97% Mining Recovery and 3.75% Mining Dilution
- 9. Final slope angle: 34° to 72° based on Geotechnical Document presented in Section 16.





- 10. Inferred Mineral Resources with the Final Operational Pit is 0.68 Mt grading at 1.52% Li2O. The Inferred Mineral Resources are not included in the Mineral Reserves.
- 11. Strip Ratio = 16.6 t/t (waste+Inferred mineral resources)/mineral reserves.
- 12. The Qualified Person for the estimate is Porfírio Cabaleiro Rodriguez, BSc. (Meng), FAIG, an employee of GE21.

Phase 2

The Phase 2 Mineral Reserve estimates have an effective date of February 24th, 2022 and have been converted from Measured and Indicated Mineral Resources. The key parameters upon which the February 24th, 2022 Mineral Reserve estimates were defined are summarized in Table 1-8.

Table 1-8 – Parameters Used in Phase 2 Pit Optimization

	Item			Value
	Sales Price		US\$/t conc.*	\$1,500
		Density	g/cm³	Block model
	Ore	Grade	% Li ₂ O	Block model
•		Mine Recovering	24	Block model
	Mining	Dilution	- %	Block model
	Block Model	Block Dimensions	Unit	value
	Dimensions	XxYxZ	m	5 x 5 x 5
Revenue		Overburden	0	Sector 1 – 35° Sector 2 – 37°
	General Angle	Fresh Rock	Ü	Sector 1 – 55° Sector 2 – 52°
		Metallurgical Recovery**	%	60.0
	Processing	Mass Recovery***	%	Calculated in block
	Frocessing	Concentrated Grade	% Li ₂ O	6.0
		Cut-off	% Li ₂ O	0.5
Costs		Mining	US\$/t mined	\$2.19 (Ore)/\$1.88 (Waste)
		Processing	LICC/A and	\$10.70
		G&A (Adjusted for OPEX)	US\$/t ore	\$4.00
		Sale (2% cost of sale)	LICO/A manada.cat	\$14.66
		Royalties (CFEM 2%)	US\$/t product	\$14.66

Notes: * conc. = concentrate, ** based on DMS Tests, *** Including 15% fines losses – FOB Mine.

Proven and Probable Mineral Reserves are as presented in Table 1-9.



Table 1-9 - Phase 2 Mineral Reserves

5 X 5 X 5 (M) BLOCK DIMENSIONS 97% MINE RECOVERY, 3.00% DILUTION (EFFECTIVE DATE: 2/24/2022)					
CATEGORY TONNAGE AVERAGE GRADE CONTAINED LCE (MT) LI2O (%) (KT)					
Proven	16.9	1.38	577		
Probable 4.8 1.29 153					
Proven + Probable	21.8	1.36	730		

Notes to accompany Mineral Reserves table:

- 1. Mineral Reserves were estimated using Geovia Whittle 4.3 software and following the economic parameters listed below:
- 2. Sale price for Lithium concentrate at 6% Li2O = US\$1,500/t concentrate FOB Mine.
- 3. Exchange rate US\$1.00 = R\$5.00.
- 4. Mining costs: US\$2.19/t mined.
- 5. Processing costs: US\$10.7/t ore milled.
- 6. G&A: US\$4.00/t ROM (run of mine).
- 7. Mineral Reserves are the economic portion of the Measured and Indicated Mineral Resources.
- 8. 97% Mine Recovery and 3% Mine Dilution
- 9. Final slope angle: 35° to 55° based on Geotechnical Document presented in Section 16.
- 10. Inferred Mineral Resources with the Final Operational Pit is 0.59 Mt grading at 1.32% Li2O. The Inferred Mineral Resources are not included in the Mineral Reserves.
- 11. Strip Ratio = 12.5 t/t (waste+Inferred mineral resource)/mineral reserve.
- 12. The Qualified Person for the estimate is Porfírio Cabaleiro Rodriguez, BSc. (Meng), FAIG, an employee of GE21.

Phase 3

Phase 3 Mineral Reserve estimates have an effective date of 31st, October 2022 and have been converted from Measured and Indicated Mineral Resources, as prepared by SGS Geological Services (SGS Canada). The key parameters upon which the Mineral Reserve estimates were defined are summarized in Table 1-10.

Table 1-10 – Parameters Used in Phase 3 Pit Optimization

Item		Unit	Value	
	Financial Parameters	Sales Price	US\$/t conc	\$3,500
		Discount rate	%	10
	ROM	Density	g/cm³	model
		Grades	% Li ₂ O	model
Revenue	nue Mining	Mining Recovery	%	model
Revende	iviiriirig	Dilution		model
		Block dimensions	Unit	Value
	Block Model	X		5
		Y	m	3
		Z		5



Overall Clans Angle	Overburden	o	35
Overall Slope Angle	Fresh Rock	Ū	52
	Metallurgical Recovery DMS**	%	60.7
	Mass Recovery	%	Calculated for each block
Processing	Concentrate Grade	% Li₂O	6
	Cut-off Grade (fixed by program)	% Li₂O	0.5
	Mining	US\$/t mined	2.43
	Processing	LICCA DOM	10.7
Costs	G&A	US\$/t ROM	4
		LICC/t product	14.66
	Royalties (CFEM 2%)	US\$/t product	14.66

Notes: * conc. = concentrate, ** based on DMS Tests, *** Including 15% fines losses – FOB Mine.

Proven and Probable Mineral Reserves are as presented in Table 1-11.

Table 1-11 - Phase 3 Mineral Reserves

5 X 3 X 5 (M) BLOCK DIMENSIONS 94% MINE RECOVERY, 3.00% DILUTION (EFFECTIVE DATE: 10/30/2022)						
CATEGORY	TONNAGE (MT)	AVERAGE GRADE LI2O (%)	CONTAINED LCE (KT)			
Proven	2.2	1.53	82			
Probable 19.0 1.44 677						
Proven + Probable	Proven + Probable 21.2 1.45 759					

Notes to accompany Mineral Reserves table:

- 1. Mineral Reserves were estimated using Geovia Whittle 4.3 software and following the economic parameters listed below:
- 2. Sale price for Lithium concentrate at 6% Li2O = US\$3,500/t concentrate FOB Mine.
- 3. Mining costs: US\$2.43/t mined.
- 4. Processing costs: US\$10.7/t ore milled.
- 5. G&A: US\$4.00/t ROM (run of mine).
- 6. Exchange rate US\$1.00 = R\$5.30.
- 7. Mineral Reserves are the economic portion of the Measured and Indicated Mineral Resources.
- 8. 94% Mine Recovery and 3% Mine Dilution
- 9. Final slope angle: 35° to 52° based on Geotechnical Study conducted by Itaaçu.
- 10. Strip Ratio = 16.01 t/t (waste)/mineral reserve.
- 11. The Competent Person for the estimate is Porfírio Cabaleiro Rodriguez, BSc. (Meng), FAIG, an employee of GE21.



Mining Methods

Sigma has undertaken a program of resource drilling for the Phase 1, Phase 2 and Phase 3 deposits. Most 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.

Phase 1

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

- Two independent open pits areas: Pit 1 in the north (Xuxa Pit #1) and Pit 2 in the south (Xuxa Pit #2);
- 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;
- Pit-wall pre-splitting to reduce mine dilution; and
- Elevated inter-ramp angles for the waste to reduce strip ratio.

The basis for the scheduling includes:

- Six months of pre-stripping to expose and access ore;
- Pit 1 and Pit 2 will be mined in concurrently from Year 1 to Year 8 to reduce the drop-down rate and to facilitate a 1.5 Mtpa production rate;
- The planned open pit mine life is about eight years; and
- The mining fleet is based on road trucks operated by a mining contractor.

Phase 2

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

- A single open pit on the Phase 2 pegmatite;
- Low height mineralized material benches to reduce mine dilution and maximize mine recovery;
- Pit wall pre-splitting to reduce mine dilution; and
- Elevated inter-ramp angles for the waste to reduce strip ratio.

The basis for the scheduling includes:

- Pit wall pre-stripping the pit to liberate mineralized material;
- Pit cut-backs in years 4 and 6 to expand and deepen pit;
- Mining at a rate of 1.8 Mtpa;
- The planned open pit mine life is 12 years; and
- The mining fleet is based on road trucks operated by a mining contractor.

Phase 3

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

The basis for the scheduling includes:

- Mining at a rate of 1.8 Mtpa;
- The planned open pit mine life is 12 years; and
- The mining fleet is based on road trucks operated by a mine contractor.





Recovery Methods

The processing plant was designed to produce a target 6.0% Li₂O spodumene concentrate from an ore grade of 1.46% Li₂O (diluted).

A second DMS concentrator plant would be constructed to process Phase 2 ore. This plant would produce a minimum 6.0% Li₂O spodumene concentrate from an ore grade of 1.39% Li₂O (diluted).

With the integration and proposed new development of Phase 3, the wholistic mining strategy and operational strategy will be designed around a combined Phase 2 & 3 process facility.

Compared to Phase 1 and Phase 2 ores, the Phase 3 ore does not respond as well due to different lithium deportment and mineralogy, so when processed the target concentrate grade drops to a nominal 5.5% contained lithium concentrate as spodumene and petalite from an ore grade of 1.44% Li₂O (diluted).

Processing Plant Description

The throughput capacity for the Phase 1 processing plant is based on 1.7 Mtpa (dry) of ore fed to the crushing circuit, while the proposed expansion for the Phase 2 & 3 plant is based on a nominal capacity of 3.9 Mtpa.

The processing plants are designed based on a proven DMS circuit and includes conventional three-stage crushing and screen circuit, up-flow classification for mica removal, two-stage coarse DMS circuit, two-stage fines DMS circuit, two-stage ultrafines circuit, as well as magnetic separation on the fines and ultrafines DMS concentrate final product streams.

When Phase 3 ore is treated through the extension of the processing plant, a third DMS circuit is proposed, to recover additional lithium units as petalite from the spodumene DMS float stream. The sinks from this circuit reports to the tailings, while the floats (petalite) report to the spodumene stockpile.

Front-End Engineering Design (FEED) was completed for the processing plant. The Phase 1 design data is based on feasibility-level metallurgical test work conducted at SGS Canada Inc. in Lakefield, Ontario. The mass balance, process design criteria and process flow diagrams were developed based on these test work data.

Design of the combined Phase 2 & 3 concentrator is based on PFS-level test work conducted by SGS Canada Inc. in Lakefield, Ontario.

Design Criteria and Utilities Requirements

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

The Phase 1 raw water consumption for process water is nominal a 35 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 Phase 1 project infrastructure has been 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 Phase 2 & 3 project will utilise the same infrastructure developed for Phase 1.



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

Access to the processing plant will be by municipal roads linking to the federal road BR367. The current municipal road will be suitable for truck traffic. Sigma constructed a new section of the municipal road to bypass the plant, duly authorized by the municipality of Itinga.

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 Phase 1, waste rock will be stored in five waste piles in the vicinity of the Phase 1 pits. Geotechnical studies determined an optimal bench height of 20 m, with a face angle of 38°. The access ramps will be 12 m wide, with a maximum gradient of 10%.

Table 1-12 shows the capacities of the Phase 1 waste piles.

Table 1-12 – Phase 1 Waste Pile Storage

Designed Pile	Volume (Mm³)	Area (ha)
Pile 1	16.2	35.9
Pile 2	15.1	34.1
Pile 3	1.8	8.7
Pile 4	35.9	55.8
Pile 5	2.4	8.3
TOTAL	71.4	142.8

The Phase 2 waste will be stored in a single waste pile close to the Phase 2 pit. The waste pile parameters are the same as the Phase 1 parameters – a 20 m bench height, 38° face angle, 12 m access ramp and a maximum gradient of 10%.

Table 1-13 shows the capacity of the Phase 2 waste pile.

Table 1-13 – Phase 2 Waste Pile Storage

Waste Pile	
Volume (Mm³)	110.9
Area (ha)	122.7



Maximum height (m)	220
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The Phase 3 waste will be stored in a single waste stockpile adjacent to the Phase 3 pit. The waste pile parameters are the same as those for Phase 1 and Phase 2, namely a 20 m bench height, 38° face angle, 12 m access ramp and a maximum gradient of 10%.

Table 1-14 shows the capacity of the Phase 3 waste pile.

Table 1-14 - Phase 3 Waste Pile Storage

Waste Pile	
Volume (Mm³)	162.5
Area (ha)	158.8
Maximum height (m)	225

The tailings stockpile will be fed by a radial stacker from the process plant. The tailings will then be loaded into mine trucks by front end loaders and transported to a tailings pile for storage.

Control Systems and Communication

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

The telecommunications network will consist of the telecommunications network, access control system and radio frequency identification (RFID).

Market Studies and Contracts

The key information contained in the market study regarding lithium demand, supply and price forecasts are summarized from Benchmark Mineral Intelligence (2022).¹

Demand and Consumption

Lithium's demand growth profile increased dramatically in 2022, driven by structural changes in the automotive industry with manufactures increasingly transitioning towards EVs. Benchmark Mineral Intelligence estimates that 2022 will end in a deficit position with total base-case battery demand expected to end the year at 591 GWh, translating to 475 kt of LCE demand, up from 348kt LCE in 2022. Total lithium demand in 2022 is expected to be 613 kt of LCE vs 482 kt in 2021.

Benchmark Mineral Intelligence estimates that the supply-demand balance will tighten further going forward, with 2023 forecasted to have a base case demand from battery end-use of 630 kt LCE, a 33% increase from 2022. This deficit position is expected to continue to increase, reaching a net deficit position of 159 kt LCE by 2030 and 2,580 kt LCE by 2040.

¹ Lithium Forecast | Q3 2022. Sources include: rho motion.



Benchmark Mineral Intelligence estimates global EV penetration will reach 12.4% in 2022, up from 8.0% in 2021, as global EV sales continue to accelerate, particularly from Europe and China. This figure is expected to increase to 21% by 2025 and reach 74% by 2040.

Supply

Benchmark Mineral Intelligence expects lithium supply to increase over the 634 kt LCE of total supply estimated in 2022, given the robust commodity price outlook for lithium.

In the longer term, Benchmark Mineral Intelligence forecasts that the total lithium supply will reach 2.1 Mt LCE by 2030 and 3.0Mt LCE by 2040. Benchmark Mineral Intelligence's supply forecast includes expansions from existing mines as well as new entrants developing pre-production projects.

Price Forecast

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\$55,900/t and US\$5,100/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.

Operational Contracts

In June, 2022, Sigma entered into a Letter of Intent with Fagundes Construção e Mineração S.A. ("Fagundes") to provide mining services to Sigma for its pre-stripping phase, as well as its operational phase, including the supply of all equipment for such works. In August 2022, Sigma entered into a Letter of Intent with IBQ Indústrias Químicas S.A. ("Enaex") for the supply of explosives and the handling of such explosives for Sigma's mining works. Sigma is currently negotiating the definitive agreements with Fagundes and Enaex, who shall be the ultimate service providers and suppliers for all mining activities of Sigma.

Sigma has no other contracts in place in support of operations, but is in negotiations with respect to a number of contracts pertaining to road transport, port handling and power.

Any future contracts are likely to be negotiated and renewed on an annual or bi-annual basis. Contract terms are expected to be typical of similar contracts in Minas Gerais State.

Construction Contracts

Sigma has signed an agreement for the EPCM of the Production Plant and associated infrastructure with engineering firm Promon. The detail engineering is progressing according to priority and both companies started issuing construction drawings according to the schedule baseline. Procurement services according to the Procurement Plan defined in the FEED. Construction Management includes general scheduling, managing all items, generating weekly dash boards, preparing presentations with critical points, preventive and corrective actions in order to reach the project deadlines.

In April 2022, Sigma signed an agreement for the civil construction of the Phase 1 Greentech Plant with engineering firm Tucumann Engenharia e Empreendimentos Ltda. The scope of work includes all civil construction works and services for the implementation of the Project, including the supply of materials, commissioning, provision of documentation, topographic survey services, excavations, shallow foundations, concrete structures, buildings, paving, streets, urbanization and landscaping and rainwater drainage and spare parts.

In March 2022, Sigma signed an agreement for the construction of a substation and the displacement of an existing transmission line with Tecnova Engenharia Ltda. The scope of work includes all civil construction,



electromechanical and electrical assembly works and services for the implementation of the including, the civil project, the electrical project, the electromechanical project, the supply and installation of materials, structures and equipment, as well as commissioning, supply of documentation as built of the civil, electromechanical and electrical works, considering all the technical information informed by CEMIG.

In July 2022, Sigma signed an agreement for the construction of a laboratory with SGS Geosol. The scope of work includes all work for the management of the assembly of the Sigma's internal laboratory and implementation, including the electrical project, the electromechanical project (including, but not limited to, the drawings, layouts, technical specifications, bills of materials, calculation memorials and documents), hydraulic design, supply and installation of materials, structures and equipment, as well as commissioning, start-up, supply of "as built" documentation of the projects, electromechanical, hydraulic and electrical, and all other services necessary for the execution of the scope of work.

In July 2022, Sigma signed an agreement for the electromechanical assembly of the Phase 1 Greentech Plant with PAREX Engenharia S.A. The scope of work includes all assembly of the Phase 1 Greentech Plant, and the supply of materials for such scope of works.

For more information in respect of additional contracts entered into after the date of the Restated Technical Report, see "General Development of the Business – Three Year History – Corporate".

Environmental Studies, Permitting and Social or Community Impact

Conselho Estadual de Politica Ambiental ("COPAM") granted an Operation ("LO") to SMSA for commercial production and sale in April 2023.

On August 17, 2022, Sigma applied for the permitting of the environmental license for the Phase 2 mine and waste piles. The environmental license for the subsequent phases will solely contemplate the license of the deposits and of its waste piles.

SMSA holds approved economic mining plans ("Plano de Aproveitamento Econômico" or "PAE") over the Phase 1, Phase 2, Lavra do Meio, Murial, Maxixe and Phase 3 deposits within the Project. The PAE for Phase 1 was updated and approved in August 2018, while the PAE for Phase 2 was updated and approved in July 2022.

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 SMSA personnel and external consultants in conjunction with the governing regulatory agencies.

Sigma has held regular meetings and consultation sessions with local stakeholders regularly over the last five years. The further development of SMSA 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 ("EIS"), followed by an Environmental Impact Report ("EIR"), which supports the technical and environmental feasibility stage of the project and the granting of a Preliminary Licence (LP) and/or a concurrent Preliminary and Installation License (LP + LI).



Phase 1 Project Environmental Permitting Status

SMSA has a definitive water license for the uptake of 150 m³/hr of water from the Jequitinhonha River approved by the Agencia Nacional das Águas ("ANA") in February 2019. The water usage licence is valid for 10 years, which is expected to be sufficient for the life-of-mine (LOM) requirements for mining and product processing for Phase 1.

The LP + LI for the first phase of the project, consisting of the Xuxa Pit #1, waste piles #1 and #2 and the construction of the processing plant was submitted on December 20, 2018 followed by the EIS, the EIR and the other mandatory documents. The EIS and Plano de Controle Ambiental – PCA dated December 2018 were prepared by NEO Soluções Ambientais and ATTO GEO Geologia e Engenharia. The LP + LI for Xuxa Pit #1, Piles #1 and #2 and the processing plant was obtained on June 3, 2019.

A second EIS covering Xuxa Pit #2 and waste piles #3, #4 and #5 was formally approved in July 2022. On November 16, 2022, SMSA filed its request for the permitting of the operational licence (LO) for Xuxa Pit #1 and areas and processing plant, which was obtained in March 2023; and, on January 23, 2023, SMSA filed its request for the permitting of Xuxa Pit #2 areas, which was obtained in April 2023.

On August 17, 2022, Sigma applied for the environmental licences for the Phase 2 mine and waste piles.

Authorizations

SMSA is the owner of the following mining rights:

Table 1-15 – Mineral Rights Description

ID	Number	Year	Туре	Expiry Date	Area (ha)	Associated Property
1	802.401	1972	Mining concession (*)	Life of mine	1,796.5	Genipapo
2	802.400	1972	Mining concession (*)	Life of mine	969.13	Genipapo
3	4.134	1953	Mining concession (*)	Life of mine	494.69	Grota do Cirilo
4	831.891	2017	Exploration Permit	17/07/2023 (**)	10.57	Genipapo
5	830.039	1981	Mining Application	Life of mine	715.24	Grota do Cirilo
6	824.692	1971	Mining concession	Life of mine	756.21	Grota do Cirilo
7	810.345	1968	Mining concession (*)	Life of mine	125.54	Grota do Cirilo
8	9.135	1967	Mining concession (*)	Life of mine	312	Grota do Cirilo
9	5.804	1953	Mining concession (*)	Life of mine	9.33	Grota do Cirilo
10	804.541	1971	Mining Application	Life of mine	44.89	Grota do Cirilo
11	824.695	1971	Mining concession (*)	Life of mine	1,069.2	Grota do Cirilo
12	805.799	1970	Mining concession (*)	Life of mine	8.29	Grota do Cirilo
13	801.312	1972	Mining concession (*)	Life of mine	2,505.22	Grota do Cirilo
14	831.975	2017	Exploration Permit	19/03/2023 (**)	4.03	Grota do Cirilo
15	2.998	1953	Mining concession (*)	Life of mine	327.84	Santa Clara
16	801.870	1978	Mining concession	Life of mine	544.9	Santa Clara
17	801.316	1972	Mining concession (*)	Life of mine	3,727.9	Santa Clara



18	801.315	1972	Mining concession (*)	Life of mine	991.71	Santa Clara
19	813.413	1973	Mining concession (*)	Life of mine	379.31	Santa Clara
20	832.889	2013	Extension Exploration Permit	02/12/2022 (**)	810.23	São José
				` /		
21	806.856	1972	Mining concession (*)	Life of mine	1,920.4	São José
22	808.869	1971	Mining concession (*)	Life of mine	29	São José
23	804.088	1975	Mining concession	Life of mine	29.22	São José
24	801.875	1978	Mining concession	Life of mine	281.51	São José
25	830.580	1979	Exploration Permit	N/A***	686.89	São José
26	832.244	2021	Exploration Permit	04/02/2025	1.53	Grota do Cirilo
27	832.245	2021	Exploration Requirement	N/A***	0.25	Grota do Cirilo
28	832.246	2021	Exploration Permit	04/02/2025	2.16	Grota do Cirilo
29	830.081	2022	Exploration Permit	18/04/2025	1.16	Grota do Cirilo

^{*} Mining rights covered by the Mining Group 931.021/83.

Furthermore, Sigma holds approved economic mining plans ("Plano de Aproveitamento Econômico" or "PAE") over the Phase 1, Phase 2, Lavra do Meio, Murial, Maxixe and Phase 3 deposits within the Grota do Cirilo property. The PAE for Phase 1 was updated and approved in August 2018, while the PAE for Phase 2 was updated and approved in July 2022.

With the granted LP + LI for Phase 1, the Company must now install the project within five years, comply with the environmental conditions established in the LP + LI certificate. Sigma has also applied for the Operational License for Phase 1, which is a condition for Sigma to begin operational activities.

Land Access

Sigma entered into right-of-way agreements with Miazga, a related party to the Company, and third-party surface rights owners of the Project, 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.

SMSA 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 Xuxa deposit (ANM Process No. 824.692/1971).

Social License Considerations

Sigma 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.

^{**}Deadline for submission to the ANM of the final research report

^{***} The Final Research Report was submitted in due time and is pending analysis. There is no provision for an administrative decision.



The Jequitinhonha valley is considered one of the poorest regions in Minas Gerais which is plighted by poverty and is in the lowest quartile the Human Development Index (HDI). Sigma is one of the largest investors and operators in the area and the project will be transformational to the local communities. The largest direct economic benefit is that Sigma is subject to a 2% CFEM 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 an important source of funding for local Government and Sigma is the largest direct contributor in the region. Sigma will be by far the largest employer in the region with an estimated 500 direct jobs being created with three to four times this number being indirect.

Farming in the area is small-scale subsistence type as the area is semi-arid. Studies identified that there is minimal impact on the neighbouring farms of Grota do Cirilo properties. Sigma 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.

Sigma has targeted and continues to consult and engage with numerous stakeholders in support of project development of the Project and has hosted visits from representatives of government departments and local academic institutions to enhance stakeholder relations.

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.

Phase 2 Environmental Work to Date

On August 17, 2022, the Company filed at SUPPRI (the Priority Projects Superintendence of Minas Gerais) the environmental studies, including, among others, the EIS and EIR (Barreiro EIS/EIR) for the permitting of the LP+LI for the Phase 2 deposit and its waste piles. Once the EIS/EIR is approved by the environmental authorities, SMSA will be authorized to commence the construction and installation of the Phase 2 deposit. Operation permits from environmental authorities will also be required.

Phase 3 Environmental Work to Date

The EIS and EIR for the Phase 3 deposit, jointly with other mandatory documents, will be submitted to – SUPPRI for the permitting of the LP+LI.

The environmental licensing process began in December 2022 and will be formalized with the presentation of such technical studies for the production of 1,700,000 t/year for open pit mining and 182.2 ha for waste piles.



Capital and Operating Costs

Capital Cost Estimate

The capital cost estimate ("CAPEX") was developed to provide substantiated costs for the FEED study of Phase 1 and the PFS-level study of Phase 2 & 3 processing plant and to provide Sigma with an overall risk and opportunity profile to enable a Phase 1 production decision and to advance off-take agreements and project financing.

The total CAPEX for Phase 1 including the Estimated Vat Tax Incentive is US\$130.6 M.

The total Capex for Phase 2 & 3 is US\$154.9 M (this is including the Owner's cost, working capital, contingency and excluding the Sustaining Capital).

The CAPEX estimate has an accuracy of ±25% and is summarized in Table 1-16 (Phase 1) and Table 1-17 (Phase 2 & 3).

Table 1-16 – Phase 1 Capital Cost Estimate Summary

AREA	TOTALS (USD)			
	DIRECTS + INDIRECTS	CONTINGENCY	TOTAL	
001 MINE	7,856,938	605,014	8,461,952	
002 PLANT	64,841,255	4,992,777	69,834,032	
002.003 AUTOMATION/DIGITALIZATION	3,852,981	296,680	4,149,661	
003 ENVIRONMENTAL	14,418,492	1,121,428	15,539,921	
004 EPCM & ENGINEERING SERVICES	17,867,543	1,375,801	19,243,344	
005 SUBSTATION & UTILITY POWER SUPPLY	6,888,863	530,442	7,419,305	
TOTAL CONSTRUCTION CAPITAL COST	111,873,091	8,625,462	120,498,553	
006 OWNERS PROJECT COSTS	8,901,677	890,168	9,791,844	
007.001 WORKING CAPITAL AND SPARES	6,137,293	_	6,137,293	
TOTAL CONSTRUCTION CAPITAL COST (EX VAT TAX INCENTIVE)	126,912,061	9,515,630	136,427,691	
009 ESTIMATED VAT TAX INCENTIVE	(5,859,000)		(5,859,000)	
TOTAL CONSTRUCTION CAPITAL COST	121,053,061	9,515,630	130,568,691	
008 SUSTAINING AND DEFERRED CAPITAL	3,200,000	246,400	3,446,400	

Table 1-17 – Phase 2 & 3 Capital Cost Estimate Summary

AREA	TOTALS (USD)		
MEGA PLANT	DIRECTS + CONTINGENCY TOTAL (Exc INDIRECTS recoveral		
000 MEGA (Excluding Sustaining Capital)	144,429,471	44,429,471 10,473,002 154,90	
000 MEGA (Including Sustaining Capital)	157,499,471 11,479,392 168,9		168,978,863
001 MINE	2,096,208	161,408	2,257,616
002 PLANT	89,536,397	6,718,807	96,255,204



003 ENVIRONMENTAL	15,252,504	1,174,443	16,426,946
004 EPCM & ENGINEERING SERVICES	21,672,011	1,668,745	23,340,755
005 SUBSTATION & UTILITY POWER SUPPLY	663,829	51,115	714,943
006 OWNERS PROJECT COSTS	9,071,230	698,485	9,769,715
007 WORKING CAPITAL & SPARES	6,137,293	0	6,137,293
008 SUSTAINING & DEFERRED CAPITAL	13,070,000	1,006,390	14,076,390

Note: the Phase 2 & 3 substation costs are included in the Phase 1 CAPEX.

Operating Costs Estimate

The processing plant operating cost estimate includes the operation of a three-stage crushing and screening circuit and DMS circuits (two stages for coarse, fine and ultra fines material classes).

The processing operating costs ("OPEX") includes operating and maintenance labour, power, fuel and indirect charges associated with the processing plant. Based on these cost assumptions, inclusions and exclusions, it is estimated that the variable OPEX for the Phase 1 concentrator will be \$5.3/t of ore feed and US\$7.5M of fixed OPEX. The estimated variable OPEX for the Phase 2 & 3 concentrator is \$4.8/t of ore feed and US\$6.7M of fixed OPEX.

Operating cost estimates are summarized in Table 1-18 (Phase 1) and Table 1-19 (Phase 2 & 3).

Table 1-18 – Phase 1 Operating Cost Estimate Summary

DESCRIPTION	OPEX (US\$)
Mining (US\$/t material mined)	\$2.1
Process (US\$/t ore feed)	\$10.4
G&A (US\$/t ore feed)	\$5.3
Shipping (US\$/t SC)	\$120

Table 1-19 – Phase 2 & 3 Operating Cost Estimate Summary

DESCRIPTION	OPEX (US\$)
Phase 2 Mining (US\$/t material mined)	\$2.68
Phase 3 Mining (US\$/t material mined)	\$1.98
Phase 2 & 3 Process (US\$/t ore feed)	\$7.1
Phase 2 & 3 G&A (US\$/t ore feed)	\$2.7
Shipping (US\$/t SC)	\$120



Economic Analysis

Economic Assumptions

Three levels of economic analyses were undertaken for the Project, contemplating the mining of the Mineral Reserves of: (i) Phase 1; (ii) Phase 2 & 3; and (iii) both Phase 1 and Phase 2 & 3 (Phase 1, 2 & 3).

The Phase 1, 2 & 3 analysis has been selected as the best growth and integrated plan for the Grota Do Cirilo Project.

The economic analyses contemplate the production of spodumene concentrate ("SC") at grades of 5.5% Li₂O, in line with the current lithium market conditions.

The base case scenario after-tax net present value ("NPV") results are detailed in Table 1-20 below. The discount rate assumed for the after-tax NPVs is 8%.

A sensitivity analysis reveals that the Project's viability will not be significantly vulnerable to variations in capital expenditures, within the margins of error associated with the DFS and study estimates for Phase 1 and Phase 2 & 3, respectively. In contrast, the Project's economic returns remain most sensitive to changes in spodumene prices, feedstock grades and recovery rates.

Table 1-20 – Base Case After-Tax NPVs

MODELLED CASE	UNIT	@ 5.5% SC		
Phase 1	US\$ M	\$5,699		
Phase 2 & 3	US\$ M	\$9,587		
Phase 1, 2 & 3	US\$ M	\$15,289		

Phase 1, Phase 2 & 3 and Phase 1, 2 & 3 were evaluated on a pre- and after-tax basis. It must be noted that there are many potential complex factors that affect the taxation of a mining project. The taxes, depletion, and depreciation calculations in the economic analyses are simplified and only intended to give a general indication of the potential tax implications at the project level.

Sudene is a government agency tasked with stimulating economic development in specific geographies of Brazil. The project is to be installed in a Sudene-covered geographic 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). For Phase 2 & 3, the Sudene tax incentive is expected to be renewed after the 10th anniversary of achieving at least 20% of their production capacities.

The Project is expected to be exempt from all importation taxes for products which have 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 will 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 of Brazil (12%), State Government of Minas Gerais (23%), and Municipal Government of Araçuaí (65%).



- A 1.0% NSR royalty with permissible deductions from gross spodumene revenue including the CFEM royalty, any commercial discounts, transportation costs and taxes paid.
- A 1.0% NSR royalty with permissible deductions including all of the costs associated with production; however, this royalty has a buyback provision for US\$3.8 million which is assumed to be exercised upon achieving commercial production in the Phase 1, Phase 2 & 3 and Phase 1, 2 & 3 analyses.

Phase 1 FS Economic Analysis

The Phase 1 economic analysis is based on an eight-year operation sourcing feedstock ore from the Phase 1 deposit's Mineral Reserve of 11.8 Mt grading at 1.55% Li₂O. Phase 1 is expected to generate run-rate production of 270 ktpa of lithium concentrate, delivering US\$990 million of annual free cash flow, at a 5.5% SC grade.

The base case scenario results are detailed in Table 1-21 below.

Table 1-21 – Phase 1 Base Case Scenario Results

ITEM	UNIT	@ 5.5% SC
After-Tax NPV @ 8%	US\$ M	\$5,699
After-Tax IRR	%	1,282%
After-Tax Payback Period	Years	0.1

The key technical assumptions used in the base case are highlighted below in Table 1-22.

Table 1-22 – Key Phase 1 Technical Assumptions

ITEM	UNIT	@ 5.5% SC		
Total Ore Processed (ROM)	Mt	11.8		
Annual ROM Ore Processed	Mt	1.5		
Run-Rate SC Production	ktpa	270		
Run-Rate LCE Production (Note 1)	ktpa	37		
Strip Ratio	Ratio	16.4: 1		
Average Li ₂ O Grade	%	1.55%		
Spodumene Recovery Rate	%	65.0%		
Spodumene Concentrate Grade	% Li ₂ O	5.5%		
Operating Life	Years	8		
Total Cash Cost Ex. Royalties (@ Mine Gate)	US\$/t SC	\$288		
Total Cash Cost Incl. Royalties (@ Mine Gate)	US\$/t SC	\$419		
Transportation Costs (CIF China)	US\$/t SC	\$120		
Total Cash Cost (CIF China)	US\$/t SC	\$539		
AISC (CIF China)	US\$/t SC	\$541		
Mining Costs	US\$/t Material Mined	\$2.06		



ITEM	UNIT	@ 5.5% SC		
Processing Costs	US\$/t ROM	\$10.38		
G&A Costs	US\$/t ROM	\$5.29		

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

The total gross revenue derived from the sale of spodumene concentrate is estimated at US\$10.6 billion, an average revenue of US\$4,909/t 5.5% SC with total operating costs (including royalty payments and commercial discounts) of US\$1.3 billion at an average cost of US\$581/t 5.5% SC. The resulting after-tax earnings margin (gross revenue less realization, operating costs and taxes) was estimated at US\$7.9 billion.

A sensitivity analysis for Phase 1 was carried out with the base case as the midpoint. An interval of ±20% versus base case values was considered with increments of 10%.

Phase 1 after-tax NPV is not significantly vulnerable to changes in BRL to US\$ exchange rate, CAPEX, OPEX, or discount rate considered. In contrast, Phase 1 after-tax NPV is more sensitive to variation in spodumene price, lithium grade, and spodumene recovery rates.

Phase 1 after-tax IRR is not significantly vulnerable to changes in OPEX. In contrast, Phase 1 after-tax IRR is more sensitive to variation in spodumene price, lithium grade, spodumene recovery rates, BRL to US\$ exchange rate and CAPEX. Note that the Phase 1 after-tax IRR is independent of the discount rate considered.

Phase 2 & 3 PFS Economic Analysis

The Phase 2 & 3 PFS economic analysis is based on a twelve-year operation sourcing feedstock ore from the Phase 2 deposit's Mineral Reserve of 21.8 Mt grading at 1.37% Li₂O and the Phase 3 deposit's Mineral Reserve of 21.2 Mt grading at 1.45% Li₂O. Phase 2 & 3 is expected to generate run-rate production of 496 ktpa of lithium concentrate, delivering US\$1,179 M of annual free cash flow, at a 5.5% SC grade.

The base case scenario results are detailed in Table 1-23 below.

Table 1-23 - Phase 2 & 3 Base Case Scenario Results

ITEM	UNIT	@ 5.5% SC
After-Tax NPV @ 8%	US\$ M	\$9,587
After-Tax IRR	%	1,207%
After-Tax Payback Period	Years	0.1

The key technical assumptions used in the base case are highlighted below in Table 1-24.

Table 1-24 – Key Phase 2 & 3 Technical Assumptions

ITEM	UNIT	@ 5.5% SC
Total Ore Processed (ROM)	Mt	42.9
Annual ROM Ore Processed	Mt	3.3
Run-Rate SC Production	ktpa	496



ITEM	UNIT	@ 5.5% SC		
Run-Rate LCE Production (Note 1)	ktpa	67		
Phase 2 Strip Ratio	Ratio	12.5: 1		
Phase 3 Strip Ratio	Ratio	16.0: 1		
Phase 2 Average Li ₂ O Grade	%	1.36%		
Phase 3 Average Li ₂ O Grade	%	1.45%		
Phase 2 Spodumene Recovery Rate	%	57.9%		
Phase 3 Spodumene Recovery Rate	%	50.6%		
Spodumene Concentrate Grade	% Li ₂ O	5.5%		
Operating Life	Years	12		
Total Cash Cost ex. Royalties (@ Mine Gate)	US\$/t SC	\$292		
Total Cash Cost incl. Royalties (@ Mine Gate)	US\$/t SC	\$394		
Transportation Costs (CIF China)	US\$/t SC	\$120		
Total Cash Cost (CIF China)	US\$/t SC	\$514		
AISC (CIF China)	US\$/t SC	\$516		
Mining Costs	US\$/t Material Mined	\$2.25		
Processing Costs	US\$/t ROM	\$7.06		
G&A Costs	US\$/t ROM	\$2.68		

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

The total gross revenue derived from the sale of spodumene concentrate is estimated at US\$21.5 billion, an average revenue of US\$3,610/t 5.5% SC with total operating costs (including royalty payments and commercial discounts) of US\$3.4 billion at an average cost of US\$569/t 5.5% SC. The resulting after-tax earnings margin (gross revenue less realization, operating costs and taxes) was estimated at US\$15.3 billion.

A sensitivity analysis for Phase 2 & 3 was carried out with the base case as described above as the midpoint. An interval of ±20% versus base case values was considered with increments of 10%.

Phase 2 & 3 after-tax NPV is not significantly vulnerable to changes in BRL to US\$ exchange rate, CAPEX, OPEX, or discount rate considered. In contrast, Phase 2 & 3 after-tax NPV is more sensitive to variation in spodumene price, lithium grade, and spodumene recovery rates.

Phase 2 & 3 after-tax IRR is not significantly vulnerable to changes in OPEX. In contrast, Phase 2 & 3 after-tax IRR is more sensitive to variation in spodumene price, lithium grade, spodumene recovery rates, BRL to US\$ exchange rate and Capex. Note that the Phase 2 & 3 after-tax IRR is independent of the discount rate considered.

Phase 1, 2 & 3 Economic Analysis

The Phase 1, 2 & 3 economic analysis is based on a thirteen-year operation sourcing feedstock ore from the Phase 1 deposit's Mineral Reserve of 11.8 Mt grading at 1.55% Li_2O , Phase 2 deposit's Mineral Reserve of 21.8 Mt grading at 1.37% Li_2O and the Phase 3 deposit's Mineral Reserve of 21.2 Mt grading at 1.45% Li_2O . Phase 1, 2 & 3 is expected to generate run-rate production of up to 766 ktpa of lithium concentrate, delivering US\$1,788 million of annual free cash flow, at a 5.5% SC grade.



The base case scenario results are detailed in Table 1-25 below.

Table 1-25 - Phase 1, 2 & 3 Base Case Scenario Results

ITEM	UNIT	@ 5.5% SC
After-Tax NPV @ 8%	US\$ M	\$15,289
After-Tax IRR	%	1,273%
After-Tax Payback Period	Years	0.1

The key technical assumptions used in the base case are highlighted below in Table 1-26.

Table 1-26 – Key Phase 1, 2 & 3 Technical Assumptions

ITEM	UNIT	@ 5.5% SC		
Total Ore Processed (ROM)	Mt	54.7		
Annual ROM Ore Processed	Mt	4.2		
Run-Rate SC Production	ktpa	766		
Run-Rate LCE Production (Note 1)	ktpa	104		
Phase 1 Strip Ratio	ratio	16.4: 1		
Phase 2 Strip Ratio	ratio	12.5: 1		
Phase 3 Strip Ratio	ratio	16.0: 1		
Phase 1 Average Li₂O Grade	%	1.55%		
Phase 2 Average Li ₂ O Grade	%	1.36%		
Phase 3 Average Li₂O Grade	%	1.45%		
Phase 1 Spodumene Recovery Rate	%	65.0%		
Phase 2 Spodumene Recovery Rate	%	57.9%		
Phase 3 Spodumene Recovery Rate	%	50.6%		
Spodumene Concentrate Grade	% Li ₂ O	5.5%		
Operating Life	years	13		
Total Cash Cost ex. Royalties (@ Mine Gate)	US\$/t SC	\$289		
Total Cash Cost incl. Royalties (@ Mine Gate)	US\$/t SC	\$401		
Transportation Costs (CIF China)	US\$/t SC	\$120		
Total Cash Cost (CIF China)	US\$/t SC	\$521		
AISC (CIF China)	US\$/t SC	\$523		
Mining Costs	US\$/t Material Mined	\$2.20		
Processing Costs	US\$/t ROM	\$7.78		
G&A Costs	US\$/t ROM	\$3.24		



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

The total gross revenue derived from the sale of spodumene concentrate is estimated at US\$32.1 billion, an average revenue of US\$3,956/t 5.5% SC with total operating costs (including royalty payments and commercial discounts) of US\$4.6 billion at an average cost of US\$572/t 5.5% SC. The resulting after-tax earnings margin (gross revenue less realization, operating costs and taxes) was estimated at US\$23.3 billion.

A sensitivity analysis for Phase 1, 2 & 3 was carried out with the base case as described above as the midpoint. An interval of ±20% versus base case values was considered with increments of 10%.

Phase 1, 2 & 3 after-tax NPV is not significantly vulnerable to changes in BRL to US\$ exchange rate, CAPEX, OPEX, or discount rate considered. In contrast, Phase 1, 2 & 3 after-tax NPV is more sensitive to variation in spodumene price, lithium grade, and spodumene recovery rates.

Phase 1, 2 & 3 after-tax IRR is not significantly vulnerable to changes in OPEX. In contrast, Phase 1, 2 & 3 aftertax IRR is more sensitive to variation in spodumene price, lithium grade, spodumene recovery rates, BRL to US\$ exchange rate and Capex. Note that the Phase 1, 2 & 3 after-tax IRR is independent of the discount rate considered.

Phase 2 & 3 after-tax IRR is not significantly vulnerable to changes in OPEX. In contrast, Phase 2 & 3 after-tax IRR is more sensitive to variation in spodumene price, lithium grade, spodumene recovery rates, BRL to US\$ exchange rate and Capex. Note that the Phase 2 & 3 after-tax IRR is independent of the discount rate considered.

Interpretation and Conclusions

Mineral Resources are reported for five pegmatite bodies, Phase 1, Phase 2, Murial, Lavra do Meio and Phase 3. Mineral Reserves are reported for the Phase 1, Phase 2 and Phase 3 deposits.

Risk Assessment

Risk assessment sessions were conducted individually and collectively by all parties.

Most aspects of the project are well defined. The risks are grouped by licensing, cost (CAPEX and OPEX), schedule, operations, markets, and social/environmental categories. One of the most significant risks identified for the Project is related to lithium markets.

The following risks are highlighted for the project:

- Lithium market sale price and demand (commercial trends);
- Delay in obtaining the license for Phase 2 Pit;
- Fluctuations in the exchange rate and inflation;
- Labour strikes at the Port and at site (construction and operation);
- Tax exemptions and import not confirmed;
- Increased demands from the local community once in operation;
- More fines generated from mining and crushing: potential negative impact on recovery;
- The production rate and size of the pit may impose challenges for operations; and
- Waste generation: the continuous geotechnical monitoring system to be implemented during mining operation can indicate local changes to geotechnical parameters, and potential increase of waste.

Opportunities

The following opportunities are identified for the Grota do Cirilo Project:

- Recovery of Li₂O from hypofines with a flotation circuit;
- Sales of hypofines as DSO;





- Recovery of Li₂O from petalite;
- Sale of plant rejects to the ceramics industry;
- Potential upgrading of some or all of the Inferred Mineral Resources to higher-confidence categories and eventually conversion to Mineral Reserves;
- Potential for future underground mining at both Phase 1 and Phase 2 projects; and
- Exchange rate may work in the Project's favour.

Recommendations

The following summarizes the recommendations from this report.

Engineering

Based on the results of the Phase 2 & 3 PFS, the TR QPs recommend::

- The Company proceed to completing a feasibility study (FS) in respect of the Phase 3 deposit. Estimated cost US\$ 1,000,000; and
- Complete studies relating to mine and waste heap geotechnics and hydrogeology considering geotechnical borehole completion, borehole geotechnical logging and a bore hole televiewer program.

Geology and Resources

The TR QPs recommend that additional exploration drilling be conducted across the Phase 1, Phase 2, Phase 3 and Murial deposits to update existing and potentially increase mineral resources. The overall cost for the drill program is estimated to be US\$12.4 M.

Recovery and Infrastructure

The following are the recommendations form the TR QPs for recovery and infrastructure:

- Undertake a petalite recovery study on Phase 2 ore; and
- Review the infrastructure requirements for Phase 2 & 3.

Economic Analysis

The TR QPs recommend undertaking a Front-End Engineering Design (FEED) on Phase 2 & 3.

Competitive Conditions and Anticipated Trends

Lithium Prices

	UNIT	4Q22	3Q22	2Q22	1Q22	4Q21	4Q22 VS. 4Q21	FY22	FY21	FY22 VS. FY21
Lithium Carbonate	US\$/kg	\$79.8	\$73.3	\$74.3	\$57.6	\$31.1	157%	\$71.2	\$20.4	249%
Lithium Hydroxide	US\$/kg	83.2	76.0	78.6	54.1	30.2	175%	72.9	20.7	252%
SC6	US\$/t	7,979	6,800	6,038	3,786	2,292	248%	6,085	1,453	319%
Lithium Hydroxide to SC6 Ratio	%	9.6%	8.9%	7.7%	7.0%	7.6%	2.0%	8.3%	7.0%	1.3%

Source: Fastmarkets. Note: "Lithium Carbonate" refers to Lithium Carbonate spot prices CIF China, Japan & Korea, \$/kg; "Lithium Hydroxide" refers to Lithium Hydroxide monohydrate spot prices CIF China, Japan & Korea, \$/kg; and "SC6" refers to Spodumene min 6% Li₂O, Asia \$/t.





In 2022, the Fastmarkets 6.0% Li₂O spodumene concentrate price averaged US\$6,085/t, up 319% compared to 2021. Spodumene concentrate prices increased throughout the year, increasing from US\$3,786/t in the first quarter of 2022 to US\$7,979/t in the fourth quarter of 2022.

The primary driver of this rapid price appreciation was the significant demand growth caused by structural changes in the automotive industry, with manufacturers increasingly transitioning towards focusing on producing EVs, which outpaced supply growth in 2022.

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. Ana Cabral-Gardner, Co-Chair and the Chief Executive Officer of the Company, is a Brazilian national and has substantial business operating experience in Brazil. Brian Talbot, Chief Operating Officer, is an Australian national and has held senior management positions in lithium production companies. 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 two board members, 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, including the 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 Chief Executive Officer 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 Chief Executive Officer and Chief Financial Officer in a timely manner. In previous reporting periods, management of the Company has reported material weaknesses in the Company's internal controls. Please refer to the Company's annual MD&A for the year ended December 31, 2022 and "Risk Factors" for a more detailed discussion on this matter.

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

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

The Project is at commissioning stage and will require a substantial increase in skilled personnel and operational support as the Project transitions to an operating stage. The Company's ability to succeed in progressing towards 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 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.

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. Furthermore, the outcome of the 2022 presidential election in Brazil may lead to a change in regulation that could negatively affect the Project or the Company. However, the Company notes that it does not believe that there is any intention to change the current policies and regulations in this sense.

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.

Inflation in Brazil, along with Brazilian governmental measures to combat inflation, may have a significant negative effect on the Brazilian economy and, as a result, on the Company's financial condition and results of operations.

In the past, high levels of inflation have adversely affected the economies and financial markets of Brazil, and the ability of its government to create conditions that stimulate or maintain economic growth. Moreover, the governmental measures to curb inflation and speculation about possible future governmental measures have contributed to the negative economic impact of inflation in Brazil and have created general economic uncertainty. As part of these measures, the Brazilian government has at times maintained a restrictive monetary policy and high interest-rates that have limited the availability of credit and economic growth. Brazil may experience high levels of inflation in the future. Inflationary pressures may weaken investor confidence in Brazil and lead to further government intervention in the economy, including interest rate increases, restrictions on tariff adjustments to offset inflation, intervention in foreign exchange markets and actions to adjust or fix currency values, which may trigger or



exacerbate increases in inflation, and consequently, have an adverse impact on the Company. In an inflationary environment, the value of uncollected accounts receivable, as well as unpaid accounts payable, declines rapidly. If Brazil experiences high levels of inflation in the future and price controls are imposed, this could adversely affect the Company's results of operations or financial conditions.

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.

Corruption and fraud in Brazil relating to ownership of real estate could materially adversely affect the Company's business, reputation, results of any future operations and financial condition.

Under Brazilian law, real property ownership is normally transferred by means of a transfer deed and subsequently registered at the appropriate real estate registry office under the corresponding real property record. There are uncertainties, corruption and fraud relating to title ownership of real estate in Brazil, mostly in rural areas. In certain cases, a real estate registry office may register deeds with errors, including duplicate and/or fraudulent entries, and, therefore, deed challenges frequently occur, leading to judicial actions. Property disputes over title ownership are frequent in Brazil, and, as a result, there is a risk that errors, fraud or challenges could adversely affect the Company's ability to operate, although ownership of mining rights are separate from ownership of land.

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 (ii) 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 then 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 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 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, property interests and exploration and exploitation rights.

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 Phase 1, as described above, there can be no assurance that the Company will obtain such rights for Phase 2 & 3 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. 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 Company has not yet made a production decision in respect of the potential Phase 2 & 3 expansion. The Company expects that it will assess the results of a feasibility study before making a production decision in respect of the Phase 2 & 3 expansion.

The Company's operations and the development of the Project 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; (v) the Company's lenders; and (vi) offtakers. 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 or to the ability of its subsidiaries to distribute up cash otherwise available for distributions.

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

Pandemics 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, including but not limited to in respect of COVID-19, which could significantly disrupt the Company's operations and may materially and adversely affect its business, operations, and financial condition. The full extent to which any pandemics may impact the Company's business, including its operations and the market for its securities, will depend on numerous highly uncertain factors that the Company may not be able to accurately predict or assess, including, but not limited to, the duration and severity of any pandemics, the availability of approved vaccines and remedial medications, the timing for completion of related distribution programs around the globe, and the governmental, business and individual actions taken in response to any pandemics.



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, 2022. 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 RSUs, 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.

The Company has entered into the Synergy Financing and may rely on future 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.

Western governmental actions in respect of critical minerals may affect the Company's business.

As a result of increased concerns around global supply chains, the lithium industry has become subject to increasing political involvement. This reflects the critical role of lithium as an input in the development of batteries for the burgeoning transition to electric vehicles in the automotive industry, combined with worldwide supply constraints for lithium production and geopolitical tensions between Western countries such as the United States and Canada on the one hand and China on the other, arising from the dominant role of China in the production of inputs for the battery industry. The resulting political involvement appears to be evolving into a form of industrial policy by several governments, including those of Canada and the U.S., in which they employ steps to encourage the development of domestic supply such as tax incentives and low-interest loans to domestic and other Western actors, as well as undertake steps to discourage the involvement of actors from certain non-Western countries, including the expansion of legal oversight and an expansion of the scope of discretionary authority under laws and regulations to impose restrictions on ownership, influence and investment. These factors are of particular relevance to the Company in Canada with its incorporation under the CBCA and stock exchange listing on the TSXV, and in the U.S. through its stock exchange listing on the NASDAQ. The Company is also connected to Canada and the U.S. by way of its board composition. This evolving industrial policy is resulting in benefits to the Company as a result of its connection to Canada and the U.S., including the prospect of tax incentives. However, the Company may also have to manage the more restrictive aspects of this increased government involvement, including the New ICA Policy, which may result in limitations on the extent to which the Company will be able to undertake business operations with certain non-Western parties and limitations on ownership and influence of certain non-Western parties in its business. Most recently, the Government of Canada has made certain divestiture orders relating foreign investments, both within and outside of Canada, by State owned enterprises in Canadian lithium companies. The Company had and intends to continue to fully comply with legislation and policies in all jurisdictions where it operates. At this time, the Company does not believe that any of these steps will result in a substantive adverse change to its business or operations, but does expect that over time they may potentially constrain its ability to undertake business opportunities with actors from certain non-Western countries.

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, including the Synergy Financing, 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.



A substantial portion of the Company's assets (including the Company's interests over the Grota do Cirilo Project) are subject to security granted under the Synergy Financing. Unremedied failure of Sigma Brazil to comply with its obligations under the Synergy Financing could lead to the foreclosure and loss of such assets.

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 incurs 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 is required to furnish a report by its management on its internal control over financial reporting ("ICFR"), which, must be accompanied by an attestation report on ICFR issued by the Company's independent registered public accounting firm. In previous reporting periods, Management of the Company has reported material weaknesses in the Company's internal controls. Further, as noted in the Company's annual MD&A for the year ended December 31, 2022, material weaknesses in its internal control over financial reporting were determined to exist at December 31, 2022. The Company's management, including its chief executive officer and chief financial officer, concluded that the Company's internal control over financial reporting was not effective as of December 31, 2022 due to the presence of these material weaknesses. Although the Company is actively taking steps to remediate these weaknesses, there remains a risk that these material weaknesses create a reasonable possibility that a material misstatement of the Company's annual or interim financial statements will not be prevented or detected on a timely basis. Please refer to the Company's annual MD&A for the year ended December 31, 2022 for a more detailed discussion on this matter.

In the event that the Company is not able to remediate the material weaknesses or is otherwise 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, the Company could be subjected to litigation or investigations requiring Management resources and payment of legal and other expenses and 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 implement and 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 continue 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. Management of the Company has identified material weaknesses in Company's internal controls over the last 4 reporting periods. Although the Company is actively taking steps to remediate these weaknesses, there remains a risk that these material weaknesses create a reasonable possibility that a material misstatement of the Company's annual or interim financial statements will not be prevented or detected on a timely basis. Please refer to the Company's annual MD&A for the year ended December 31, 2022 for a more detailed discussion on this matter.

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 of 1933, as amended, and is permitted, under a multijurisdictional disclosure system adopted by the United States and Canada, to prepare its disclosure documents filed under the U.S. Securities Exchange Act of 1934, as amended (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. Additionally, the CEO and certain directors are actively involved with A10 Fund, being a significant shareholder of the Company, which may give rise to conflicts of interest. Any perceived or actual conflicts of interest may result in adverse consequences for the Company and the value of its securities.

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 analysts, industry analysts or activist short sellers publish research or other reports about the Company's business, prospects or value, which questions or downgrades the value of the Company, 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. In addition, activist short sellers may publish misleading "short reports", which may also negatively impact the price of the Common Shares and may influence negative disclosure in social media or other online platforms.

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 44.5% 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, A10 Fund holds approximately 44.5% of the outstanding Common Shares. For as long as it directly or indirectly maintains a significant interest in the Company, 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 many 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 2022 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, 107,210,042 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 June 9, 2023, the closing price of the Common Shares on the TSXV was Cdn\$ 55.91 and on the Nasdaq was US\$ 41.78.

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, 2022.



Month	High (Cdn\$) Low (Cdn\$)		Volume	
January 2022	15.25	10.72	766,186	
February 2022	14.00	11.25	794,771	
March 2022	18.78	12.85	926,852	
April 2022	24.51	17.50	993,493	
May 2022	25.05	16.61	1,213,402	
June 2022	23.18	17.88	532,247	
July 2022	22.84	17.35	260,935	
August 2022	33.01	22.66	848,094	
September 2022	38.84	26.61	1,025,473	
October 2022	54.23	37.02	1,071,080	
November 2022	ember 2022 49.30 37.45 893,01		893,014	
December 2022	er 2022 51.89		597,612	

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, 2022.

Month	High (US\$)	Low (US\$)	Volume	
January 2022	12.30	8.40	1,159,048	
February 2022	11.10	8.80	741,130	
March 2022	15.20	10.04	1,436,287	
April 2022	19.42	13.98	2,300,460	
May 2022	19.99	12.75	2,170,648	
June 2022	18.19	14.06	3,395,112	
July 2022	17.92	13.28	1,299,903	
August 2022	25.59	17.55	2,992,515	
September 2022	29.49	20.16	5,720,649	
October 2022	39.85	26.49	5,153,636	
November 2022	November 2022 37.20		3,558,116	
December 2022	December 2022 38.08		3,686,597	

PRIOR SALES

The Company did not issue any unlisted securities during the financial year ended December 31, 2022, other than a total of 2,382,332 restricted share units of the Company ("RSUs") which, upon vesting in accordance with their



terms, entitle the holders thereof to acquire one Common Share for each RSU held, subject to adjustment in certain circumstances.

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:

Ana Cristina Cabral- Gardner	Position(s) Held at the Company
São Paulo, Brazil	Co-Chair, Chief Executive Officer, and Chair of the ESG Committee, and also a member of the Finance and Technical Committees of the Board.
52 years	
Director Since: June 2018	Principal Occupation for the Past Five Years
	Former 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
	2,500,000
	RSUs Granted
	500,000

Note:

^{(2) 500,000} RSUs granted will vest upon successful execution of a plan to achieve a net zero carbon target.

Gary Litwack Toronto, Canada	Position(s) Held at the Company		
62 years	Non-Executive Co-Chair, Chair of the Audit Committee of the Board, and also a member of the Corporate Governance, Nomination and Compensation Committee of the Board.		
Director Since: May 2018	Principal Occupation for the Past Five Years		
	Counsel at McCarthy Tétrault LLP ("McCarthy").		
	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 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.		

⁽¹⁾ Ms. Cabral is a quota holder in A10 Fund. A10 Investimentos, which is the portfolio manager of A10 Fund, has the sole and independent voting decision regarding the holdings of the A10 Fund.



Litwack has been an Adjunct Professor of Advanced Securities Law at Osgoode Hall Law School.

Common Shares Held

226,500

RSUs Granted

400,000

Frederico Marques Toronto, Canada 49 vears

Director Since: June 2018

Position(s) Held at the Company

Director, Chair of the Corporate Governance, Nomination and Compensation Committee and also a member of the Audit Committee of the Board.

Principal Occupation for the Past Five Years

Founder and Director of 4B Mining Corp ("4B Mining"); former Head Canada's Office of Cescon, Barrieu, Flesch e Barreto Advogados; Partner at S4G – Strategy for Growth since September 2020; prior thereto, Partner and foreign legal consultant at McCarthy 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, Mr. Marques was involved in over US\$30 Billion in M&A, financings, joint ventures and other sophisticated transactions. Mr. Marques is a Founding Partner and a director of 4B Mining and a Director and former Chairman of the BOD of the Brazil-Canada Chamber. Mr. Marques 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. Mr. Marques is a lawyer with LLM and PhD degrees in International Law.

Common Shares Held

339,400

RSUs Granted

203.500

Marcelo Paiva São Paulo, Brazil

49 years

Director Since: January 2019

Position(s) Held at the Company

Director, and also member of the Corporate Governance, Nomination and Compensation and Finance 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 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

1.883.110



RSUs Granted

Nil

Note:

(i) 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 it's 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.

Dana M. Perlman New York City, United States 42 years

Director Since: September 2022

Position(s) Held at the Company

Director, Chair of the Finance Committee and also a member of the Audit and ESG Committees of the Board.

Principal Occupation for the Past Five Years

Director of O'Reilly Automotive Inc. ("O'Reilly Automotive"); Former Chief Strategy Officer and Treasurer of PVH Corp. ("PVH"); Former Treasurer, Business Development & Investor Relations, SVP at PVH.

Biography

Dana M. Perlman has over 20 years of experience in strategy, finance, investment banking, business development, acquisitions, risk management, corporate and employer branding, investor communications and environmental, sustainability and governance communication. Ms. Perlman is currently a director of O'Reilly Automotive and previously worked at PVH since 2011 where she most recently served as Chief Strategy Officer and Treasurer, where she was a key partner to the Chief Executive Officer and member of Executive Leadership, responsible for leading PVH's global strategy, transformation and business development, including defining, activating and managing PVH's strategic vision and priorities to deliver key targets, spearheading mergers and acquisitions, integrations, strategic partnerships and value-enhancing projects across PVH. Prior to joining PVH, Ms. Perlman served as Director of Retail Investment Banking at Barclays Capital and held positions with Lehman Brothers and Credit Suisse First Boston.

Common Shares Held

Nil

RSUs Granted

Nil



Calvyn Gardner São Paulo, Brazil 59 years

Director Since:

May 2018

Director.

Principal Occupation for the Past Five Years

Position(s) Held at the Company

Co-Chair and Chief Executive Officer of the Company from May 1, 2018 to January 23, 2023; 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 cofounder 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

2,000,000

RSUs Granted

Nil

Note:

(1) Mr. Gardner is a quota holder in A10 Fund. A10 Investimentos, which is the portfolio manager of A10 Fund, has the sole and independent voting decision regarding the holdings of A10 Fund.

Rodrigo Menck São Paulo, Brazil	Position(s) Held at the Company
48 years	Chief Financial Officer
Officer Since: January 2023	Principal Occupation for the Past Five Years
	SVP Finance & Group CFO at Nexa Resources SA ("Nexa Resources").
	Biography
	Mr. Menck has roughly 30 years of experience in finance and capital markets. Mr. Menck has spent the last 15 years leading finance functions for large corporations, including most recently with Nexa Resources, the mining company of the Votorantim group in Brazil. Prior to his corporate experience, Mr. Menck spent close to 15 years in global financial institutions such as BankBoston, Itaú, WestLB, Citi and BNP Paribas. Mr. Menck holds an MBA in economics from the University of Sao Paulo and is a Certified CFO by the Brazilian Institute of Financial Executives. 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 54,290,978 Common Shares, representing approximately 50.6% 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, <i>Chair</i>	
	Frederico Marques	
	Dana M. Perlman	
Corporate Governance, Nomination and	Frederico Marques, Chair	
Compensation Committee	Marcelo Paiva	
	Gary Litwack	
Management Technical Committee	Vicente Lobo, Co-Chair	
	Wes Roberts, Co-Chair	
	Ana Cristina Cabral-Gardner	
	Brian Talbot	
Finance Committee	Dana M. Perlman, <i>Chair</i>	
	Ana Cristina Cabral-Gardner	
	Marcelo Paiva	
ESG Committee	Ana Cristina Cabral-Gardner, Chair	
	Dana M. Perlman	
	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 herein and 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: (i) 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; and (ii) certain officers and directors are actively involved with A10 Investimentos, being a significant shareholder of the Company, which may rise to conflicts of interest. See above disclosure under the heading "Risk Factors" herein.

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 the Company's website at www.sigmalithium.ca and on the Company's profile 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 <u>Schedule "A"</u> 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
Dana M. Perlman	YES

Notes:

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 30 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

⁽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 and has no other material relationship (as defined in Schedule "B") with the Company.



Chamber of Commerce and is a member of its executive committee and head of its mining committee.

Ms. Perlman has more than 20 years of experience and expertise in the areas of strategy, finance, investment banking, business development, acquisitions, risk management, corporate and employer branding, investor communications and environmental, sustainability and governance communication. She has extensive experience in capital markets and is currently a director of the board of O'Reilly Automotive, an industry leader in the auto parts sector.

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).

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
2022	\$1,937,922	\$-	\$38,349	\$-
2021	\$726,925	\$-	\$26,884	\$-

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, other than the US\$100,000,000 Pre-Export Financing Agreement dated December 3, 2022 in respect of the Synergy Financing.

INTERESTS OF EXPERTS

As at the date of this AIF, each of the TR 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 June 12, 2023 in respect of the Company's consolidated financial statements as at December 31, 2022. 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 June 1st, 2022 for the annual and special meeting of the Company held on June 30, 2022, 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, 2022 and 2021, which are available on SEDAR and on EDGAR.



SCHEDULE "A" Audit Committee Charter

8 September 2021

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



the Board, reasonably interfere with the exercise of his or her requirements set forth by the Board in its mandate, independent judgment. Notwithstanding the foregoing, a reflecting the following: director will be deemed to have a "material relationship" with the Corporation (and therefore be considered as not independent) if heor 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 breadthand 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 vacancywithin six months or by the following annual shareholders' meeting if sooner.

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:

- 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.

AUDIT COMMITTEE RESPONSIBILITIES (GENERAL)

Corporation or any of its subsidiaries which could,in the view of This Charter outlines how the Committee will satisfy the

- 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.

Operating Principles

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

Committee Values

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

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.

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.

Financial Literacy (iv)

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.

Annual Committee Work Plan

The Committee, in consultation with management and the external auditors, shalldevelop 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 theexternal 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 ofmeeting dates.

(viii) Access to Committee

Representatives of the external auditor and management of the Corporation shallhave 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 suchmeeting.

(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 theshareholders, 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 appointan 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).



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 flowthrough expenditures and the qualification ofsuch 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 riskand gain reasonable assurance that financial risk is being effectivelymanaged 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 mannerin 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 onall significant deviations or indications/detection of fraud and thecorrective 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 policiesand procedures used to asses 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
- 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, theCommittee can establish a threshold amount for fees for non-audit services to be provided by the external auditors without advance approvalof 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 theCommittee 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 theCommittee 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 March30, 2004; or (b) he or she had a relationship identified above by virtue of such relationship beingwith 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 whoseinterest 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 wayon 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 positionswho, 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 otherincorporated 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.

"Restated Technical

means the technical report titled "Grota do Cirilo Lithium Project, Araçuaí and Itinga Regions, Minas

Report"

Gerais, Brazil, NI 43-101 Amended & Restated Technical Report" dated June 12, 2023, with an

effective date of October 31, 2022.

means A10 Investimentos Fundo de Investimento de Ações - Investimento no Exterior. "A10 Fund"

"A10 Investimentos"

Means A10 Investimentos Ltda.

"Board"

means the board of directors of the Company.

"CAPEX"

means the capital expenditure defined in the Restated Technical Report.

"CBCA"

means the Canada Business Corporations Act.

"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

means Sigma Lithium Corporation (formerly named Sigma Lithium Resources Corporation) and, as

"Sigma"

the context requires, its subsidiaries. means dense medium separation.

"DMS" "EDGAR"

means the Electronic Data Gathering, Analysis, and Retrieval developed for the United States

Securities Administrators (www.edgar.com).

"GAAP"

means Generally Accepted Accounting Principles.

"Greentech Plant"

means the commercial production plant as described in the Restated Technical Report.

"IFRS" means International Financial Reporting Standards.

"ka"

means kilograms.

"km"

means kilometers.

"km2"

means square kilometers.

"Kv"

means kilovolts.

"LCE"

means lithium carbonate equivalent. Lithium is converted to lithium carbonate (Li2CO3) by multiplying

lithium metal mass by 5.323.

"Li₂O"

means lithium oxide.

"m"

means meters.

"m³"

means cubic meters.

"MD&A"

means management discussion and analysis.

"mm"

means millimeters.

"ma/L"

means milligrams per liter.

"NI 43-101"

means National Instrument 43-101 Standards of Disclosure for Mineral Projects of the Canadian

Securities Administrators.

"NI 52-110"

means National Instrument 52-110 Audit Committees of the Canadian Securities Administrators.

"Phase 1"

means the Xuxa deposit located in the Project.

"Phase 1 FS"

means the updated feasibility study for Phase 1 included in the Restated Technical Report.

"Phase 2"

means the Barreiro deposit located in the Project.



"Phase 3" means the Nezinho do Chicão deposit located in the Project.

"Phase 2 & 3" means the combination of Phase 2 and Phase 3 located in the Project.

"Phase 1 & 2 PFS" means the preliminary feasibility study for Phase 2 & 3 included in the Restated Technical Report.

"ppm" means parts per million.

"Qualified Person" means a qualified person for purposes of NI 43-101. "SEC" means the U.S. Securities and Exchange Commission.

"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. has the meaning given under "General Development of the Business – Three Year History – 2022". "Synergy Financing"

means tonnes.

"TR Qualified has the meaning given under "Description of the Business - Summary of the Restated Technical

Persons" Report".

"TSXV" means the TSX Venture Exchange.

"Updated Technical Report"

means the technical report titled "Grota do Cirilo Lithium Project, Araçuaí and Itinga Regions, Minas Gerais, Brazil, NI 43-101 Updated Technical Report" dated January 16, 2023, with an effective date

of October 31, 2022.

"Var" means variability.

Certain Other Definitions

"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, (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;
- 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
- 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"

"control"

"executive officer"

"issuer" "person"

"subsidiary entity"

any corporation, incorporated association, incorporated syndicate or other incorporated organization.

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.

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.

includes a subsidiary entity of the issuer and a parent of the issuer.

an individual, partnership, unincorporated association, unincorporated syndicate, unincorporated organization, trust, trustee, executor, administrator, or other legal representative.

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.