



**SIGMA LITHIUM CORPORATION**

MANAGEMENT'S DISCUSSION AND ANALYSIS  
FOR THE YEAR ENDED DECEMBER 31, 2022

## INTRODUCTION & BACKGROUND

This management's discussion and analysis dated as of June 12, 2023 (this "MD&A") of the financial condition and results of operations of Sigma Lithium Corporation ("**Sigma**" or the "**Company**") constitutes management's review of the factors that affected the Company's financial and operating performance for the years ended December 31, 2022 and 2021. This MD&A should be read in conjunction with the audited annual financial statements of the Company for the years ended December 31, 2022 and 2021 together with the notes thereto. Results are reported in Canadian dollars, unless otherwise noted.

The Company's financial statements and the financial information contained in this MD&A are prepared in accordance with International Financial Reporting Standards ("**IFRS**") as issued by the International Accounting Standards Board and interpretations of the IFRS Interpretations Committee. In the opinion of management, all adjustments (which consist only of normal recurring adjustments) considered necessary for a fair presentation have been included. Information contained herein is presented as of June 12, 2023, unless otherwise indicated.

Unless inconsistent with the context, references in this MD&A to the "Company" or "Sigma" are references to the Company and its subsidiaries.

The Company's registered office is Suite 2200, 885 West Georgia Street, Vancouver, British Columbia, Canada, V6C 3E8. The Company's common shares ("**Common Shares**") trade under the symbol "SGML" in the United States on Nasdaq and in Canada on the TSX Venture Exchange ("**TSXV**").

Further information about the Company and its operations, including the financial statements referred to above and the Company's annual information form, is available on the Company's website at [www.sigmalithium.ca](http://www.sigmalithium.ca), at [www.sedar.com](http://www.sedar.com) (SEDAR) and at [www.sec.gov](http://www.sec.gov) (EDGAR).

The information herein should be read in conjunction with the technical report titled "Grotta do Cirilo Lithium Project Araçuaí and Itinga Regions, Minas Gerais, Brazil, Amended & Restated Technical Report dated June 12, 2023, and with an effective date of October 31, 2022 for the resource and reserve estimates in such report (the "**Restated Technical Report**").

The Restated Technical Report includes information about the Company's wholly-owned Grotta do Cirilo lithium project (the "**Project**") in Brazil, such as: (i) the mineral reserve and resource estimates for the Xuxa deposit ("**Phase 1**"), the Barreiro deposit ("**Phase 2**") and the Nezinho do Chicão deposit ("**Phase 3**") and together with Phase 2, "**Phase 2 & 3**"; (ii) the results of the updated feasibility study on Phase 1 (the "**Phase 1 FS**"); and (iii) the results of the preliminary feasibility study on Phase 2 & 3 (the "**Phase 2 & 3 PFS**").

Readers should note that the Company has not yet reported or announced a production decision in respect of Phase 2 & 3. The Company expects that it will assess the results of a feasibility study for Phase 2 & 3 before making such production decision. All statements regarding mine development or production in respect of Phase 2 & 3 in this MD&A are expressly qualified by this statement.

Readers should refer to and carefully consider the sections below titled "Risk Factors", "Cautionary Note Regarding Forward-Looking Information" and "Cautionary Note Regarding Mineral Reserve and Mineral Resource Estimates".

## OUR BUSINESS

Sigma is a Canadian-incorporated lithium company focused on commencing commercial production for Phase 1 and evaluating the construction of Phase 2 & 3 of the Project. The Project is what is expected to be one of the largest hard rock lithium operation in the Americas, located in the municipalities of Araçuaí and Itinga in the northeastern part of the state of Minas Gerais, Brazil. The Company owns 100% of the Project indirectly through its wholly-owned subsidiary Sigma Mineração S.A. ("**Sigma Brazil**"). The Project area is comprised of 29 mineral rights (which include mining concessions, applications for mining concessions, exploration authorizations, applications for mineral exploration authorizations) spread over 185 km<sup>2</sup>, which is located within the broader 19,000-hectare land package held by Sigma Brazil (containing the Grotta do Cirilo, Sao Jose, Genipapo and Santa Clara properties).

The Project is vertically integrated, with the Company's mining operations supplying spodumene bearing material to its lithium production and processing plant (the "**Greentech Plant**"). The Greentech Plant is designed to process 5.5% to 6.0% battery grade high purity lithium concentrate ("**Green Lithium**"), engineered to the specifications of the Company's customers in the rapidly expanding lithium-ion battery supply chain for electric vehicles ("**EVs**"), in an environmentally friendly way through a fully automated and digital dense medium separation ("**DMS**") technology process. The Greentech Plant was built after the completion of engineering to the level of FEL-3 stage precision by Primero Group Ltd. ("**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 environmental, social and governance ("**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 of Directors (the "**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 preserve seasonal stream	Minimal water impact
Board Independence: 50%	Social programs / commitment to local hiring and training	No hazardous chemicals
Board Committees Chair Independence: 60%		Tailings 100% dry stacked
Board Diversity: 50% female / LGBTQ representation		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	(ktpa)	37	67	104
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 (Li<sub>2</sub>O), 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.

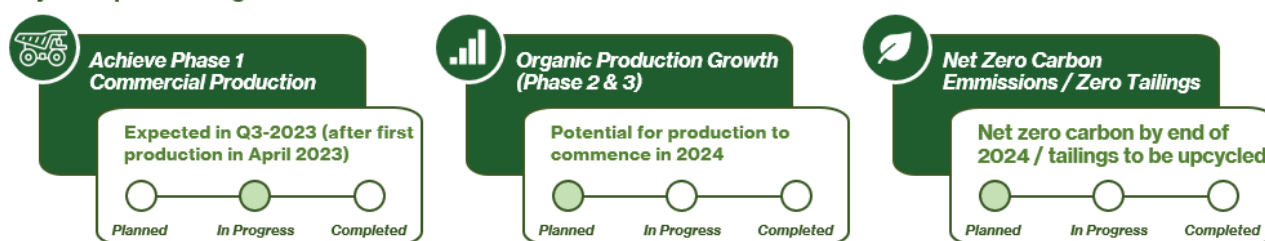
Going forward, Sigma plans to continue evaluating the Phase 2 & 3 expansion, with any formal production decision being subject to and following the completion of a feasibility study (including FEL-3 level estimates) and Phase 1 production ramp-up. Additionally, Sigma plans to continue all stages of exploration 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**

**Major Corporate Targets**



**While Continuing to Build Our Sustainable Competitive Advantage**



## PROJECT HIGHLIGHTS

- Phase 1 production was successfully initiated in April 2023, after receiving the required operating license on March 31, 2023.
  - Crushing circuit commissioning completed on schedule in February 2023 after commencing in December 2022.
  - Operational DMS circuit achieved on schedule in April 2023 after commissioning commenced ahead of schedule in January 2023.
- Construction workforce increased to more than 1,000 (approximately 40% comprised of Jequitinhonha Valley region community members where the Project is located), as activity accelerated during the fourth quarter of 2022.
- Phase 1 north pit and Phase 1 south pit pre-stripping completed in October 2022 and February 2023, respectively, ahead of initial production.
- Project's estimated proven & probable mineral reserves increased to 54.8 Mt grading at 1.44% Li<sub>2</sub>O, comprised of 27.4 Mt of proven mineral reserves grading at 1.44% Li<sub>2</sub>O and 27.3 Mt of probable mineral reserves grading at 1.43% Li<sub>2</sub>O, measured & indicated mineral resources to 77.0 Mt grading at 1.43% Li<sub>2</sub>O, comprised of 37.1 Mt of measured mineral resources grading at 1.43% Li<sub>2</sub>O and 39.9 Mt of indicated mineral resources grading at 1.43% Li<sub>2</sub>O, and inferred resources to 8.6 Mt grading at 1.43% Li<sub>2</sub>O through multiple updates during 2022.
- Exploration work remains underway, targeting a further increase in the Company's total mineral resource estimate expected in the second half of 2023.
- Phase 2 & 3 PFS announced in December 2022, investigating the potential to triple run-rate annual production of Green Lithium to approximately 766,000 tonnes per year.

## CORPORATE HIGHLIGHTS

- Announced Board and management updates in January 2023 with Independent Director Gary Litwack appointed as Non-Executive Co-Chairperson of the Board and Rodrigo Menck appointed as Chief Financial Officer, with Ana Cabral-Gardner remaining as Chief Executive Officer and Co-Chairperson of the Board.
- Secured a US\$100 million pre-export financing with Synergy Capital, one of Sigma's current shareholders based in the United Arab Emirates, on December 4, 2022 (the "**Synergy Financing**").

## ESG HIGHLIGHTS

- During an event focused on the women of the region on March 23, 2023, which was attended by the Governor of the State of Minas Gerais and his senior leadership team, the Company announced several updates to its ongoing social inclusion programs:
  - Microcredit For Female Entrepreneurs:** The Company announced the intention to expand its landmark microcredit program launched for female entrepreneurs of the Jequitinhonha Valley region where the Company operates. There are currently 730 female entrepreneurs enrolled in the program, with R\$2,000 to be loaned per person, and the goal is to achieve a total enrollment of 10,000 women with an additional investment of up to R\$20 million.
  - Zero Drought for Small Holder Farmers:** The Company is leading an ongoing project to construct up to 2,000 small basins for water collection in disadvantaged communities of the Jequitinhonha Valley, which will provide relief for the effects of dry season on plantations and livestock in such communities. As of the date of this MD&A, 200 water capture basins have been built in the Araçuaí municipality and 33 in the Itinga municipality.

(Expressed in thousands of Canadian dollars, except per share amounts or unless stated otherwise)

- **Water For All:** Additionally, to further combat the impacts of water scarcity in the Jequitinhonha Valley region, the Company committed to donating up to 3,000 water tanks to residents located in the surrounding areas of the Greentech Plant.
- **Combating Violence Against Women Program:** The Company announced its plans to introduce a program, in partnership with the Justice Court of the state of Minas Gerais, targeting domestic abuse against women in the Jequitinhonha Valley region. This program advances the goals of United Nations Sustainable Development Goals (“UN SDGs”) #5 (Gender Equality) and #11 (Sustainable Cities and Communities).
- The Company is continuing its ongoing support for local employment with the continuation of the Homecoming Employment Program and Education Program for Mining Technicians. Approximately 40% of its 1,000+ person construction workforce is local to the region.
- The Company continues to support local communities with the ongoing Zero Hunger Action, providing approximately 3.6 million meals for those in need since initiation in 2021 (cumulative program total of up to 21,000 food baskets expected to be delivered through 2023).
- The Company remains committed to the environmentally responsible development of the Project which uses 100% dry stacking and clean energy usage in the form of hydroelectricity, water treatment & recycling.
- The Company advanced its environmental programs in 2022 with 520 people from four different communities participating in environmental education programs, the Company’s environmental management and supervision plan for responsible consumption and production being completed in the fourth quarter of 2022, and planting and vegetation monitoring program to preserve and nurture local flora and fauna (15,000 native seedlings acquired to date).

### **The Road to Net Zero**

- Sigma had a leading role at the following globally relevant conferences as an ongoing case study in “impact investing in the mining business” and “green battery metals”:
  - Panelist and participant at the Future Minerals Forum in Riyadh in January 2023 (invited by the Kingdom of Saudi Arabia); and
  - Referenced as a case study at multiple panels and an active participant in the 2022 United Nations Climate Change Conference in Egypt in November 2022 (“**COP27**”) (Sigma has been featured year after year since 2019 at COP25 in Madrid for the actions that have been implemented since inception). Multiple members of the senior management team hosted workshops on “Impact Investing in Mining.” CEO and Co-Chairperson Ana Cabral-Gardner was featured as a keynote speaker.
    - Ana Cabral-Gardner was invited by UN-DESA to host a workshop at the SDG Pavilion at COP-27 where she presented a framework on how 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’s strategy to become the first “Zero Tailings” lithium producer by upcycling 100% of its “hazardous chemicals free” tailings from the Greentech Plant.
    - Ms. Cabral-Gardner also participated in the “Acceleration to Net Zero Series” hosted by McKinsey & Co. with leading sustainability professionals across fields.

### **Global Case Study in Environmental Sustainability in the Battery Materials Supply Chain**

- Sigma was:
  - a participant in two panels at the Brazil-Canada Conference at the 2023 Prospectors & Developers Association of Canada (PDAC) Convention in Toronto in March 2023;

- a presenter in the Brazilian Mining Day at PDAC 2023 organized by the Agency for the Development and Innovation of the Brazilian Mining Sector (ADIMB) in March 2023; and
- a participant on “Pathways to Decarbonize Hard to Abate Sectors” panel at the Brazil Climate Summit at Columbia Business School in September 2022.

## **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 the fourth quarter of 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 quarter, with the construction workforce increasing to more than 1,000.

As of the date of this MD&A, 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 workstreams in 2023:

- Completing the ramp-up of production, with commercial production reaching nameplate capacity;
- Continue evaluating Phase 2 & 3; and
- Exploration of greenfield targets.

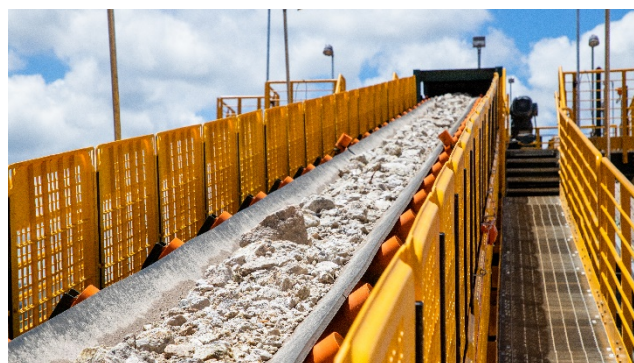
Refer to Figures 3 to 8 for a visualization of Phase 1 Greentech Plant construction progress as of the date of this MD&A.

**Figure 3:** Crushing Circuit



**Figure 5:** Crushed Ore Bin Area

**Figure 4:** Ore Crushing



**Figure 6:** DMS Circuit Commissioning



**Figure 7: 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 MD&A:

- 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**

Sigma 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 MD&A, 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 April 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 MD&A. 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 Construção e Mineração S.A ("**Fagundes**") engaged as the Company's mining contractor.

**Figure 9:** Phase 1 North Pit Mining



**Figure 10:** Phase 1 South Pit Mining & Ore Stockpiling



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

**Figure 11:** Piaui Bridge



**Figure 12:** Ore Stockpiling



## **PHASE 2 & 3 DEVELOPMENT PROGRESS**

During the fourth quarter of 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 and 3



## 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 MD&A, the Company has achieved the following significant milestones:

(Expressed in thousands of Canadian dollars, except per share amounts or unless stated otherwise)

- 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% Li<sub>2</sub>O, comprised of 2.4 Mt of measured mineral resources grading at 1.56% Li<sub>2</sub>O and 24.3 Mt of indicated mineral resources grading at 1.48% Li<sub>2</sub>O;
- Announced a maiden Phase 3 mineral reserve estimate of 21.2 Mt grading at 1.45% Li<sub>2</sub>O of proven and probable mineral reserves, comprised of 2.2 Mt of proven mineral reserves grading at 1.53% Li<sub>2</sub>O and 19.0 Mt of probable mineral reserves grading at 1.44% Li<sub>2</sub>O in December 2022;
- Increased the Project's consolidated mineral reserve and mineral resource estimates to 54.8 Mt grading at 1.44% Li<sub>2</sub>O of proven and probable mineral reserves, comprised of 27.4 Mt of proven mineral reserves grading at 1.44% Li<sub>2</sub>O and 27.3 Mt of probable mineral reserves grading at 1.43% Li<sub>2</sub>O, 77.0 Mt grading at 1.43% Li<sub>2</sub>O of measured and indicated mineral resources, comprised of 37.1 Mt of measured mineral resources grading at 1.43% Li<sub>2</sub>O and 39.9 Mt of indicated mineral resources grading at 1.43% Li<sub>2</sub>O, and 8.6 Mt grading at 1.43% Li<sub>2</sub>O of inferred mineral resources at a 0.5% Li<sub>2</sub>O cut-off; and
- 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 MD&A 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 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.

## **ESG & SUSTAINABILITY PROGRESS**

Sigma's mission statement and key focus has been guided by making business decisions in a manner consistent with furthering the UN SDGs and adhering to the highest level of ESG practices.

Specifically, Sigma 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.

Sigma is proud to report the progress made during the fourth quarter of 2022 to advance its social and environmental programs, which have been developed to ensure the sustainable construction of the Project and development of the Jequitinhonha Valley region, including social advancement of its population, where we operate.

### **Social Programs Updates**

Sigma's activities during 2022 and early 2023 related to its social programs are summarized below and visualized in Figures 17 to 22 below.

- **Microcredit Program:** During the third quarter, Sigma established the largest microcredit program in Brazil, which has been targeted for female entrepreneurs in the Jequitinhonha Valley region. Through this program, the Company encourages sustainable development by providing microcredit loans of R\$2,000 per person and providing mentorship programs. The Company is proud to report that as of the date of this MD&A, 730 female entrepreneurs have enrolled in the program, 456 videoconferences have been held, 367 of the female entrepreneurs enrolled have been in dialogue with their business advisors and 446 participants have already received the microcredit. This program advances the goals of UN SDGs #8 (Decent Work and Economic Growth) and #10 (Reduced Inequalities).
- **Zero Drought for Small Holder Farmers:** In 2023, the Company announced the "Zero Drought for Small Holder Farmers" program consisting of the construction of 1,000 small rainwater capture structures in the municipality of Itinga and another 1,000 in the municipality of Araçuaí, totaling 2,000 structures in the mid

Jequitinhonha Valley region. These water capture basins are dug into the ground and located at strategic points to prevent soil erosion during the heavy rainfall season, store water for irrigation of small crops during the dry periods and contribute to increasing the volume of water that will feed the region's aquifers. Total investment by the Company is expected to be up to R\$4,000,000 (R\$2,000 per structure), all of which is to be spent in 2023. The Company will donate to the municipalities structures which will be built via third-party contractors to support the need. The municipalities completed the geolocation studies for the allocation of the structures. As of the date of this MD&A, 200 rainwater capture basins have been built in the municipality of Itinga and 33 in the municipality of Araçuaí.

- **Water For All:** Additionally, to further combat the impacts of water scarcity in the Jequitinhonha Valley region, the Company committed to donating in 2023 up to 3,000 water tanks to residents located in the surrounding areas of the Greentech Plant.
- **Combating Violence Against Women Program:** the Company announced its plans to introduce a program, in partnership with the Justice Court of the state of Minas Gerais, targeting domestic abuse against women in the Jequitinhonha Valley region. This program advances the goals of UN SDGs #5 (Gender Equality) and #11 (Sustainable Cities and Communities).
- **Homecoming Employment Program:** Sigma remains committed to prioritizing employing persons local to the Jequitinhonha Valley region. The Company is proud to report that it continued to make progress on this initiative during the fourth quarter of 2022, with approximately 40% of its >1,000-person construction workforce being comprised of locals to the region. This program advances the goals of UN SDGs #8 (Decent Work and Economic Growth) and #10 (Reduced Inequalities).
- **Education Program for Mining Technicians:** In order to support the Homecoming Employment Program, Sigma established a partnership between the Federal University of Vales do Jequitinhonha e Mucuri (Campus Janauba) and the Federal Institute of Education of Araçuaí in January 2022, establishing the first program to train mining technicians in the region. The educational program will be taught by ten teachers over a three-year period with a workload of approximately 1,200 hours. Sigma is proud to announce that as of the date of this MD&A, 40 persons local to the Jequitinhonha Valley region have enrolled in the program and are expected to graduate in 2024, after which the Company hopes they will join our operational team at the Project. Select courses covered in the program include: loader operation (theory and practice); operation of tractors (theory and practice); basic instrumentation and programmable logic controller operation; processing plant operation; industrial mechanical maintenance; industrial electrician; qualification in welding process; safety, health and environment; personal protection equipment; occupational risk management; safety at work (machines and equipment); control measures and preventative safety systems; silviculture (native seedling nursery); railings (barbed and smooth wire); operations and maintenance of chainsaws and log splitting; operations and maintenance of brush cutters; forestry (recovery of degraded and altered areas). This program advances the goals of UN SDGs #4 (Quality Education) and # 17 (Partnership for the Goals).
- **Zero Hunger Action:** The Company remained dedicated to humanitarian relief action, continuing to deliver the previously pledged 7,200 food baskets per year, being 600 per month, commitment done during 2021 at the height of the Covid-19 pandemic for the vulnerable families in the Vale do Jequitinhonha region. During 2022, the Company delivered such 7,200 food baskets. For 2023, the Company aims to continue delivering 600 food baskets per month. This program advances the goals of UN SDGs #1 (No Poverty), #2 (Zero Hunger) and # 17 (Partnership for the Goals).

**Figure 15: Microcredit Program Expansion Event**



**Figure 17: Homecoming Employment Program**



**Figure 19: Zero Hunger Action**



**Figure 16: Homecoming Employment Program**



**Figure 18: Education Program for Mining Technicians**



**Figure 20: Zero Drought for Small Holder Farmers**



**Environmental Programs Updates**

Sigma's activities during 2022 pertaining to its environmental programs are summarized below.

- **Environmental Education Program:** More than 520 people from four different communities participated in environmental education programs held by Sigma. Topics covered included water education, where participants were educated about conservation, purification and proper use. Going forward, the Company plans to foster a strong community dialogue through this program with the following objectives: (i) raising awareness of the Project's operations (including the socio-economic and environmental impacts of the Project); (ii) identifying community concerns; (iii) strengthening the relationship with the local community; and

(Expressed in thousands of Canadian dollars, except per share amounts or unless stated otherwise)

(iv) raising awareness of environmental control and monitoring programs. This program advances the goals of UN SDGs #11 (Sustainable Cities and Communities) and #15 (Life on Land).

- **Environmental Management & Supervision Plan:** During the quarter, Sigma continued the development of an Integrated Management System (the “IMS”) to implement procedures and standards related to environmental management. The Company completed the IMS in the fourth quarter of 2022 (in advance of initiating production at the Project), which focuses on the key pillars summarized below. This program advances the goals of UN SDGs #12 (Responsible Consumption and Production) and #15 (Life on Land).
  - **Treatment of Domestic Effluents:** A sewage treatment station is to be installed and maintained as necessary.
  - **Rainwater Drainage System and Containment of Erosion:** A drainage system was installed in the fourth quarter of 2022 as part of the Phase 1 Greentech Plant construction, which will capture rainwater and pump it back to the Phase 1 Greentech Plant to be used in the process. The Company also began monitoring regional erosion and the effectiveness of the drainage system and will continue to do so going forward.
  - **Controlling Atmospheric Emissions and Noise / Vibration Impacts:** The Company carries out road wetting (one of the most effective techniques for controlling dust emissions) to ensure that the impacts of dust generation are minimized in the areas surrounding the Project. Vehicles and equipment are also routinely inspected and tuned in order to minimize gas emissions, noise and fuel consumption. Vibrations and noise are controlled and minimized by the periodic lubrication and maintenance of machines and equipment. Rubber pads that absorb vibrations have also been installed. Sigma regularly monitors the levels of noise, vibration, air quality and water quality through accredited laboratories. This data is sent to regulatory agencies.
  - **Waste Management:** The Company has implemented a set of procedures and guidelines for the prevention, mitigation and correction of environmental impacts arising from the handling, storage and disposal of waste. This monitoring system is focused on tracking and ensuring the environmentally correct disposal of waste generated in the construction of the Project.
  - **Tailings Recycling Plan:** The Company plans on pursuing a strategy of selling tailings generated from the crushing and dry screening process during production at the Project. This plan will enable the Company to further reduce the environmental impact of the Project while providing another source of lithium supply in a tight lithium market.
- **Planting and Vegetation Monitoring Program:** During the fourth quarter, the Company acquired 5,000 native seedlings to further advance this program (to date 15,000 native seedlings have been acquired). The Company is committed to helping preserve and nurture the vegetation and fauna local to the region and closely monitors the areas where it plants seedlings. This program advances the goals of UN SDGs #12 (Responsible Consumption and Production) and #15 (Life on Land).

### Corporate Governance Updates

During the first quarter of 2023 and during 2022 Sigma took steps to further strengthen both its Board and management, which are summarized below.

- On January 23, 2023, Independent Director Gary Litwack was appointed as Non-Executive Co-Chairperson of the Board and Rodrigo Menck was appointed as Chief Financial Officer, with Ana Cabral-Gardner remaining as Chief Executive Officer and Co-Chairperson of the Board, Calvyn Gardner remaining as a Director and Felipe Peres as Senior Financial Advisor to the Company.
- The Company’s internal committees are as follows:
  - **Audit Committee:** comprised of Gary Litwack (Chairperson), Frederico Marques and Dana Perlman, so as to be comprised entirely of independent directors.

(Expressed in thousands of Canadian dollars, except per share amounts or unless stated otherwise)

- **Corporate Governance, Nomination and Compensation Committee:** comprised of Frederico Marques (Chairperson), Gary Litwack and Marcelo Paiva.
- **ESG Committee:** comprised of Ana Cabral-Gardner (Chairperson), Dana M. Perlman and Maria José Salum.
- **Finance Committee:** comprised of Dana M. Perlman (Chairperson), Ana Cabral-Gardner and Marcelo Paiva.
- **Management Technical Committee:** comprised of Wes Roberts (Co-Chairperson), Vicente Lobo (Co-Chairperson), Ana Cabral-Gardner and Brian Talbot.

### **Global Sustainability Leadership Updates**

Sigma has continued its mission of catalyzing positive global change, enrolling or participating in the following important conferences as a case study in “green battery metals”:

- Panelist and participant at the Future Minerals Forum in Riyadh in January 2023 (invited by the Kingdom of Saudi Arabia); and
- COP27 in Egypt in November 2022 (Ana Cabral-Gardner was a keynote speaker and Sigma presented at two workshops, including UN-DESA, on applying SDGs and best ESG practices in the industry).

### **REGULATORY & LICENSING UPDATES**

#### **Regulatory Updates**

Key regulatory changes that are relevant to the Company and/or the lithium industry that occurred in the second half of 2022 are highlighted below.

- On September 16, 2022, Brazilian Federal Decree No. 11,197/2022 was enacted to include penalties to those who fail to comply with the obligations arising from mining concessions, including the possibility of an administrative process for the expiry of the mining title, and establishing the fine that may reach up to R\$1 billion (approximately C\$260 million).
- On August 7, 2022, the United States Senate passed the US\$750 billion Inflation Reduction Act, which earmarked US\$369 billion to fight climate change. The Inflation Reduction Act bill also includes tax breaks to encourage consumers to buy EVs and to entice utilities to use renewable energy sources such as wind or solar power.
- On July 11, 2022, the Incentives for Medium and Heavy-Duty Zero-Emission Vehicles Program (“iMHZEV”) was launched in Canada (for medium and heavy-duty vehicles), which will see the Government of Canada invest approximately C\$550 million over four years. This is further to the expanded Incentives for Zero-Emission Vehicles Program (“iZEV”) that came into effect in Canada on April 25, 2022 (for light duty and passenger vehicles), which will see the Government of Canada invest approximately C\$1.7 billion through March 2025. The iZEV and iMHZEV are the two primary incentive programs created by the Government of Canada to promote businesses and communities across Canada make the switch to zero-emission vehicles.
- On July 5, 2022, the Federal Government of Brazil published Decree n° 11,120 (the “New Lithium Decree”), fully revoking both presidential decree number 2.413 of December 4, 1997, as well as presidential decree number 10.577 of December 14, 2020. The New Lithium Decree, which allows for unrestricted trade of any products containing lithium: (i) eliminates the requirement for quotas and authorizations by the nuclear authority for foreign trade activities, positively deregulating the lithium sector; (ii) significantly increases the competitiveness of Brazil for global investments in the lithium supply chain; and (iii) includes chemicals and products containing lithium chemicals and refined lithium chemicals, such as cathode precursors and cathode paste.

#### **Licensing Updates**



Sigma received an operational license (“LO”) for the Phase 1 north pit and the Greentech Plant on March 31, and for the Phase 1 south pit on April 30, 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 August 17, 2022, the Company submitted the application for Preliminary and Installation Licenses for Phase 2 to the environmental authority of the state of Minas Gerais, the State Council for Environmental Policy (COPAM) in Brazil.

Following the receipt of the Preliminary and Installation Licenses for Phase 2, the next license to be received in advance of operations commencement is the Operating License which constitutes an administrative inspection when construction is completed.

## SELECTED FINANCIAL INFORMATION

### Quarterly Information

Selected consolidated financial information is as follows:

Quarterly Information (in C\$ millions)	2022				2021			
	Q4	Q3R*	Q2R*	Q1R*	Q4R*	Q3R*	Q2R*	Q1R*
Total Assets	\$308.9	\$197.7	\$198.1	\$198.9	\$195.6	\$68.6	\$69.2	\$69.8
Property, Plant & Equipment	158.6	89.3	57.5	44.2	32.7	27.8	24.7	1.6
Working Capital	77.1	76.4	114.2	140.0	150.5	33.3	38.4	43.4
Total Liabilities	125.8	15.2	18.0	9.7	10.7	9.1	8.2	9.1
Net Revenue	-	-	-	-	-	-	-	-
Expenses	(73.1)	(20.3)	(21.5)	(12.2)	(15.8)	(10.9)	(1.0)	(6.4)
Net (Loss) / Income for the Period	(73.1)	(20.3)	(21.5)	(12.2)	(15.8)	(10.9)	(1.0)	(6.4)
Basic (Loss) / Income per Common Share	(0.72)	(0.20)	(0.21)	(0.12)	(0.18)	(0.12)	(0.01)	(0.08)

Note: working capital is the difference between current assets and current liabilities (refer to section “Use of Non-GAAP measures”).  
 \*R means restated in relation to the same period presented.

Changes in the Company’s total assets, working capital, liabilities and results were mainly driven by financings and expenses incurred in the period.

In Q4-2022, total assets increased primarily due to a \$69.3 million increase in property, plant and equipment; \$16.9 million increase in prepaid expenses and other assets and due from related parties; \$13.9 million increase in exploration and evaluation assets; and \$11.2 million increase in cash, following the Company closing the Synergy Financing. Total liabilities increased primarily due to the \$77.4 million drawn under the Synergy Financing; a \$23.1 million increase in accounts payable; a \$4.4 million increase in the Company’s asset retirement obligations; a \$3.4 million increase in the Company’s lease liability; and a \$2.6 million increase in payroll and other taxes.

In Q3-2022, total assets increased primarily due to a \$5.5 million foreign exchange gain partially offset by a \$4.0 million cash outflow to return the deposit paid by Mitsui under the Mitsui agreement and to terminate the Mitsui agreement and expenses incurred in the period, including \$3.3 million of general and administrative expenses and a \$1.0 million loss associated with the termination of the Mitsui HOA. Total liabilities decreased primarily due to the elimination of the Company’s \$4.0 million deferred revenue liability as a result of the termination of the Mitsui HOA.

In Q2-2022, total assets decreased primarily due to the expenses in the period (including \$3.6 million of general and administrative expenses). Total liabilities increased primarily due to the introduction of a \$4.9 million royalty agreement call option liability in the period (the “**Royalty Agreement Call Option**”). This liability is associated with the Company’s opportunity to repurchase a 1.0% net smelter return royalty on the Project for US\$3.8 million. As

a subsequent event, the Company exercised the Royalty agreement call option on April 13<sup>th</sup>, 2023 and made the associated cash payment.

In Q1-2022, total assets increased primarily due to amounts capitalized in the period (property, plant & equipment and exploration & evaluation assets increased by \$8.4 million and \$4.1 million, respectively). Total liabilities decreased primarily due to a \$2.5 million decrease in accounts payable.

In Q4-2021, total assets increased primarily due to a \$118.8 million increase in cash, following the Company closing a private placement on December 23, 2021 for gross proceeds of \$136.7 million (the “**December 2021 Equity Financing**”), partially offset by expenses in the period (including \$3.1 million of general and administrative expenses). Total liabilities increased primarily due to a \$3.9 million increase in accounts payable.

In Q3-2021, total assets decreased primarily due to \$11.1 million of general and administrative expenses incurred in the period. Total liabilities increased primarily due to a \$1.7 million increase in accounts payable.

In Q2-2021, total assets decreased primarily due to \$0.9 million of general and administrative expenses incurred in the period. Total liabilities decreased primarily due to a \$2.7 million decrease in other liabilities, partially offset by a \$1.4 million increase in the Company's lease liability.

In Q4-2022, the Company, while reviewing the calculation of its lease contracts, identified several contracts which were not previously accounted for under IFRS 16. The Company has restated the 2021 Financial Statements and the Q3-2022, Q2-2022, Q1-2022, Q3-2021, Q2-2021 and Q1-2021 consolidated interim financial information was re-stated in the quarterly information table to account for the contracts which were not previously capitalized, recognizing right-of-use assets and lease liabilities.

Please note Q3-2022, Q2-2022 and Q1-2022 consolidated interim financial information was re-stated in the quarterly information table as they contained an error related to the accounting for stock-based compensation expense. The Company has adjusted its stock compensation expense to account for restricted share units (“RSUs”) which were not previously accounted for.

## **Results of Operations – Net Loss Analysis**

### **Three Months Ended December 31, 2022 versus Three Months Ended December 31, 2021**

The following table summarizes the items that resulted in an increase in the net loss for the three months ended December 31, 2022 versus the three months ended December 31, 2021, as well as certain offsetting items:

<b>Financial Results</b> <i>(in C\$ 000s)</i>	<b>Three Months Ended December 31,</b>		<b>Change</b>
	<b>2022</b>	<b>2021</b>	<b>2022 vs. 2021</b>
General and Administrative Expenses	(\$8,235)	(\$3,099)	(\$5,136)
Stock-Based Compensation	(65,588)	(10,793)	(54,795)
Financial Income / (Expenses)	722	(1,863)	2,585
Depreciation	(29)	(16)	(13)
<b>Net Income / (Loss)</b>	<b>(\$73,130)</b>	<b>(\$15,771)</b>	<b>(\$57,359)</b>

The higher net loss during the three months ended December 31, 2022 is primarily attributable to:

- a \$54.8 million increase in expenses associated with stock-based compensation; and
- a \$5.1 million increase in general and administrative expenses.

The higher net loss during the three months ended December 31, 2022 was partially offset by a gain of \$0.7 million versus a loss of \$1.9 million from financial income. Refer to the table below for a summary of the Company's net financial results during the quarters.

(Expressed in thousands of Canadian dollars, except per share amounts or unless stated otherwise)

<i>Financial income and expenses</i> <i>(in C\$ 000s)</i>	<b>Three Months Ended December 31,</b>		<b>Change</b>
	<b>2022</b>	<b>2021</b>	<b>2022 vs. 2021</b>
Accretion and Interest on Note Payable	\$-	(\$6)	\$6
Interest expense – including Leasing IFRS 16	\$ (329)	(182)	(58)
Bank expenses	(64)	-	(64)
Foreign Exchange (Loss) / Gain	563	(1,675)	2,248
Financial Income	463	-	463
<b>Net Financial Result</b>	<b>\$633</b>	<b>(\$1,863)</b>	<b>\$2,595</b>

## Expenses

General and administrative expenses for the three months ended December 31, 2022 of \$8.2 million (versus \$3.1 million in Q4-2021) are comprised of expenses associated with: (i) salaries and benefits (\$1.8 million); (ii) legal services (\$0.7 million); (iii) travel (\$0.7 million); (iv) business development and investor relations (\$0.1 million); (v) accounting and auditing services (\$0.8 million); (vi) insurance (\$0.5 million); (vii) fines on late tax payments (\$1.1 million) and (viii) other general corporate expenses (\$2.4 million). The increase in the Company's general and administrative expenses during the three months ended December 31, 2022 is mostly due to the Company adding key personnel in anticipation of commencing commissioning of the Phase 1 Greentech Plant by the end of 2022 and increasing investor relations activity.

Stock-based compensation for the three months ended December 31, 2022 of \$65.6 million (versus \$10.8 million in Q4-2021) is a non-cash expense associated with the fair market value of restricted share units ("RSUs") vested during the period.

## Other Items

Gain on foreign exchange was a result of the impact that the appreciation of the United States dollar had on cash held in United States dollars during the period.

### Twelve Months Ended December 31, 2022 versus Twelve Months Ended December 31, 2021

The following table summarizes the items that resulted in an increase in the net loss for the twelve months ended December 31, 2022 versus the twelve months ended December 31, 2021, as well as certain offsetting items:

<i>Financial Results</i> <i>(in C\$ 000s)</i>	<b>Twelve Months Ended December 31,</b>		<b>Change</b>
	<b>2022</b>	<b>2021</b>	<b>2022 vs. 2021</b>
General and Administrative Expenses	(\$16,504)	(\$5,600)	(\$10,904)
Stock-Based Compensation	(111,580)	(26,389)	(85,191)
Loss on Heads of Agreement Termination	(1,048)	-	(1,048)
Royalty Agreement Call Option	(4,892)	-	(4,892)
Financial Income / (Expenses)	6,916	(2,028)	8,944
Depreciation	(102)	(58)	(44)
<b>Net Income / (Loss)</b>	<b>(\$127,210)</b>	<b>(\$34,075)</b>	<b>(\$93,135)</b>

The higher net loss during the twelve months ended December 31, 2022 is primarily attributable to:

- a \$85.2 million increase in expenses associated with stock-based compensation;
- a \$10.9 million increase in general and administrative expenses;
- a \$4.9 million charge associated with the Royalty Agreement Call Option being recognized in the Company's statement of financial position; and

- a \$1.0 million loss associated with the termination of the Mitsui HOA.

The higher net loss during the twelve months ended December 31, 2022 was partially offset by a gain of \$6.9 million versus a loss of \$2million loss from financial income. Refer to the table below for a summary of the Company's net financial results during the years.

<i>Financial income and expenses</i> <i>(in C\$ 000s)</i>	Twelve Months Ended December 31,		Change
	2022	2021	2022 vs. 2021
Accretion and Interest on Note Payable	(\$15)	(\$55)	\$40
Interest expense - including Leasing IFRS 16	(329)	(327)R	(2)
Bank expenses	(82)	-	(82)
Foreign Exchange (Loss) / Gain	6,879	(1,646)	8,525
Financial Income / (Fees)	463	-	463
Net Financial Result	\$6,916	(\$2,028)	\$8,944

### Expenses

General and administrative expenses for the twelve months ended December 31, 2022 of \$16.5 million (versus \$5.6 million in the same period in 2021) are comprised of expenses associated with: (i) salaries and benefits (\$4 million); (ii) legal services (\$2.1 million); (iii) travel (\$1.4 million); (iv) business development and investor relations (\$1.4 million); (v) accounting and auditing services (\$1.3 million); (vi) insurance (\$1.5 million); (vii) tax expenses (\$1.1 million) and (viii) other general corporate expenses (\$3.7 million). The increase in the Company's general and administrative expenses during the twelve months ended December 31, 2022 is mostly due to the Company adding key personnel in anticipation of commencing commissioning of the Phase 1 Greentech Plant by the end of 2022 and increasing investor relations activity.

Stock-based compensation for the twelve months ended December 31, 2022 of \$111.6 million (versus \$26.4 million in the same period as 2021) is a non-cash expense associated with the fair market value of RSUs vested during the period. The increase in stock-based compensation expense for the Company during the twelve months ended December 31, 2022 is mainly a result of the accrual of 0.7 million RSUs issued to Directors of the Company on September 3, 2021 and 5.0 million RSUs issued to the Chief Executive Officer ("CEO") of the Company and Calvyn Gardner on September 8, 2021.

### Other Items

Gain on foreign exchange was a result of the impact that the appreciation of the United States dollar had on cash held in United States dollars during the period.

The Company and Mitsui mutually agreed to terminate the Mitsui HOA on August 22, 2022. Accordingly, the Company paid US\$3.9 million to repay the initial deposit received from Mitsui under the Mitsui agreement and certain incidental expenses, and no longer has any remaining obligations or commitments associated with the Mitsui agreement. The termination of the Mitsui agreement preserves maximum commercial optionality for sales of the Project's Green Lithium.

### Liquidity and Capital Resources

<i>Cash Flow Highlights</i> <i>(in C\$ 000s)</i>	Three Months Ended Dec. 31,		Twelve Months Ended Dec. 31,	
	2022	2021	2022	2021
Cash (used in) / provided by Operating Activities	\$10,195	(\$1,142)	(\$5,443)	(\$4,228)R
Cash (used in) / provided by Investing Activities	(72,852)	(8,288)	(132,529)	(18,348)
Cash (used in) / provided by Financing Activities	77,702	130,005	79,787	164,867
Effect of Foreign Exchange on Cash	(3,877)	(1,757)	234	(1,529)

(Expressed in thousands of Canadian dollars, except per share amounts or unless stated otherwise)

Change in Cash and Cash Equivalents	11,168	118,818	(57,951)	140,762
Cash & Cash Equivalents – Beginning of the Period	85,186	35,487	154,305	13,543
Cash & Cash Equivalents – End of the Period	\$96,354	\$154,305	\$96,354	\$154,305

As at December 31, 2022, the Company had cash and cash equivalents of \$96.4 million and working capital of positive \$77.1 million, compared to cash and cash equivalents of \$154.3 million and working capital of \$150.5 million as at December 31, 2021. Additionally, the Company had total debt outstanding of \$77.4 million after closing the Synergy Financing on December 10, 2022. As of the date of this MD&A, the Company has fully drawn the US\$100 million of debt associated with the Synergy Financing.

### Liquidity Outlook

Sigma's use of cash is currently, and is expected to continue to be, focused on funding the final phase of commissioning of the Phase 1 Greentech Plant, developing the Project's growth opportunities (including Phase 2 & 3) and for general corporate expenditures. The Company continuously monitors its cash outflows and seeks opportunities to minimize all costs, to the extent possible, especially general and administrative expenses.

As of December 31, 2022, the Company had \$96.4 million in cash and cash equivalents, which compares to the \$154.3 million at December 31, 2021. The cash reduction of \$57.9 million is mainly related to cash used in operating activities of \$5.4 million, cash used in investing activities of \$132.5 million, cash provided by financing activities of \$79.8 million and the effect of foreign exchange on cash of \$0.2 million.

Additionally, as of the date of this MD&A, the Company has used all of the proceeds raised from the December 2021 Equity Financing and all of the \$42.0 million of proceeds raised from the private placement completed on February 12, 2021 (the "**February 2021 Equity Financing**").

### Operating Activities

Cash generated in operating activities during the three months ended December 31, 2022 was \$10.2 million, which compares to \$1.1 million used during the three months ended December 31, 2021. Additionally, cash used in operating activities during the twelve months ended December 31, 2022 was \$5.4 million, which compares to \$4.3 million during the twelve months ended December 31, 2021.

The significant components of operating activities are discussed in the Results of Operations section above.

### Investing Activities

Cash used in investing activities during the three months ended December 31, 2022 was \$72.8 million, which compares to \$8.3 million during the three months ended December 31, 2021. Additionally, cash used in investing activities during the twelve months ended December 31, 2022 was \$ 132.5 million, which compares to \$18.3 million during the twelve months ended December 31, 2021.

The significant components of investing activities are associated with the construction of the Phase 1 Greentech Plant.

### Financing Activities

Cash provided by financing activities during the three months ended December 31, 2022 was \$77.7 million, which compares to \$130.3 million during the three months ended December 31, 2021. Additionally, cash provided by financing activities during the twelve months ended December 31, 2022 was \$79.8 million, which compares to \$164.8 million during the twelve months ended December 31, 2021.

The sources of cash during the three and twelve months ended December 31, 2022 was primarily driven by the \$78.3 million of proceeds from the Synergy Financing completed in December 2022. The sources of cash during the three and twelve months ended December 31, 2021 was primarily by the Company completing the December 2021 Equity Financing and February 2021 Equity Financing during the periods.

Sigma's outstanding construction costs for the Phase 1 Greentech Plant as of December 31, 2022 are summarized

below.

**Capital Expenditures to Commercial Production**

<i>Capital Expenditures (in US\$ million)</i>	<i>Phase 1 (Year 1)</i>	<i>Phase 2 &amp; 3 (Year 2)</i>
Process Plant	\$69.8	\$96.3
Engineering Services	19.2	23.3
Environmental Equipment (Water & Dry Stacking)	15.8	16.4
Operational & ESG Expenses During Construction	9.8	9.8
Mine	9.2	2.3
Substation & Utility Power Supply	7.4	0.7
Working Capital During Plant Commissioning	6.1	6.1
Tax Incentives (Savings)	(2.6)	-
Capital Expenditures Disbursed During Construction	(74.2)	-
<b>Total Capital Expenditures to Commercial Production</b>	<b>\$60.5</b>	<b>\$154.9</b>

**CURRENT SHARE DATA**

Issued and outstanding securities of the Company as at the date of this MD&A were as follows:

<b>Common Shares Issued and Outstanding</b>	101.02 million
<b>RSUs</b>	6.09 million
<b>Stock Options</b>	0.11 million
<b>Fully Diluted Number of Common Shares</b>	109.8 million

There are RSUs for 6.09 million Common Shares outstanding (of which an aggregate 0.5 million RSUs to the CEO of the Company and 0.5 million RSUs to Calvyn Gardner will vest upon successful execution of a net-zero plan). There are stock options exercisable for 110,000 Common Shares outstanding, of which 100,000 have an average exercise price of \$14.65 and expire in April 2027, and 10,000 have an average exercise price of \$2.23 and expire in August 2028.

**DISCLOSURE, CONTROLS & PROCEDURES**

The CEO and the Chief Financial Officer (“CFO”) of the Company are responsible for establishing and maintaining disclosure controls and procedures (“DC&P”) for the Company as defined under National Instrument 52-109 (NI 52-109) issued by the Canadian Securities Administrators and in Rule 13a-15(e) under the U.S. Securities Exchange Act of 1934, as amended (the “Exchange Act”). The DC&P is to provide reasonable assurance that information required to be disclosed by the Company in its annual filings, interim filings or other reports filed or submitted by it under securities legislation is recorded, processed, summarized and reported within the time periods specified in the securities legislation and include controls and procedures designed to ensure that information required to be disclosed by an issuer in its annual filings, interim filings or other reports filed or submitted under securities legislation is accumulated and communicated to the Company’s management, including its certifying officers, as appropriate to allow timely decisions regarding required disclosure. The Company has mapped the DC&P deficiencies and taken the following remediating actions: (i) established a Disclosure Committee led by the CFO that includes senior representatives of all business areas; (ii) held an inaugural meeting of the Disclosure Committee to define roles and responsibilities of the members and the review process; (iii) adopted an annual meeting plan to review the quarterly and annual filings; (iv) adopted a checklist to be used by the members to identify and communicate matters and events to the attention of the Chair of the Disclosure Committee. The Company is following the designed procedures in the review of its annual filings for the year ended December 31, 2022. However, as at December 31, 2022 given the failure to meet reporting deadlines, the lack of time to evidence the operation and test the DC&P, and given that the Internal Controls Over

Financial Reporting (“**ICFR**”) continue to show material weaknesses, the CEO and CFO evaluated that there is a material weakness in the design and operation of the Company’s DC&P, which are deemed as ineffective.

Notwithstanding these material weaknesses, Management has concluded that the consolidated financial statements for the year ended December 31, 2022 present fairly, in all material respects, the financial position of the Company.

## **INTERNAL CONTROL OVER FINANCIAL REPORTING**

Management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in NI 52-109 and Rule 13a-15(f) of the Exchange Act, to provide reasonable assurance regarding the reliability of the Company’s financial reporting and the preparation of its consolidated financial statements in accordance with IFRS. Under the supervision and with the participation of our Management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting based upon criteria established in *Internal Control – Integrated Framework* (2013) by the Committee of Sponsoring Organizations of the Treadway Commission. Based on that evaluation, our Management concluded that our internal control over financial reporting was ineffective as of December 31, 2022 due to the material weaknesses described below.

A material weakness is a deficiency, or a combination of deficiencies, financial reporting, such that there is 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.

Management has identified the following material weaknesses:

- An ineffective control environment resulting from the failure to disseminate a translated Code of Ethics and relevant training, an insufficient number of trained financial reporting and accounting personnel with the appropriate skills and knowledge and with appropriate assigned authorities, responsibilities and accountability related to the design, implementation and operating effectiveness of financial reporting, as well as insufficient board oversight over the development and performance of internal controls;
- The insufficient number of personnel described above contributed to an ineffective risk assessment process necessary to identify all relevant risks of material misstatement, including fraud risks, and to evaluate changes that could impact the system of quality control around processes, as well as the implications of relevant risks on the achievement of objectives, including financial reporting objectives;
- An ineffective internal and external information and communication process to ensure the relevance, timeliness and quality of information used in control activities, particularly with respect to documentation of activities and internal communication between Legal and Accounting for new employment (and consulting) contracts entered into by the Company as well as ensuring the communication of the Company’s whistleblower policy;
- An ineffective monitoring process to ensure controls are periodically evaluated, results of testing are communicated to senior management and the board of directors and the control deficiencies are tracked for remediation on a timely basis; and
- Ineffective control activities due to the (i) failure to deploy general control activities over information technology (ii) failure to document policies and procedures and (iii) failure to document control activities to mitigate risks.

These material weaknesses have had a pervasive impact on the Company’s internal control over financial reporting and resulted in both material and immaterial misstatements to the preliminary consolidated financial statements that were corrected in the audited consolidated financial statements prior to the release of our annual report on Form 40-F. During the third quarter of 2022, it was identified that there were a number of share-based compensation awards within contracts which the Company’s controls failed to detect and account for appropriately in a timely manner. The lack of appropriate controls over the timing of recognition of share-based compensation resulted in the need to restate the interim periods financial statements for the quarters ended June 30, 2022 and March 31, 2022. In addition, during the fourth quarter of 2022, it was identified that several lease contracts were not previously accounted for under IFRS 16. The lack of appropriate controls over complex accounting practices

caused the Company to restate the 2021 Financial Statements through a restatement note included in the 2022 Financial Statements to account for the contracts which were not previously capitalized, properly recognizing right-of-use assets and lease liabilities impact on the financials.

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.

## **ATTESTATION REPORT OF THE REGISTERED PUBLIC ACCOUNTING FIRM**

The Company engaged KPMG LLP to perform an "integrated audit" which encompassed an opinion on the fairness of presentation of the Company's audited annual consolidated financial statements for the financial year ended December 31, 2022, as well as an opinion on the effectiveness of the Company's ICFR. KPMG LLP, the Company's independent registered public accounting firm, has audited the Company's consolidated financial statements and has issued an adverse report on the effectiveness of ICFR. KPMG LLP's attestation report on the Company's ICFR is incorporated by reference into the Company's annual report on Form 40-F under the Exchange Act for the year ended December 31, 2022.

## **CHANGES IN INTERNAL CONTROL OVER FINANCIAL REPORTING AND REMEDIATION**

In addition to identification of the material weaknesses noted above, the following changes in internal control have the potential to materially affect our ongoing internal control financial reporting.

During the third quarter of 2022, the Company engaged external consultants to assist Management in assessing its internal control over financial reporting, mapping all existing control deficiencies and defining remediation plans.

During the fourth quarter of 2022, the Company attracted and retained a senior experienced CFO who subsequently selected a financial Controller during the first quarter of 2023 with the appropriate skills and technical knowledge. While the Company continues to improve management oversight of its financial and accounting activities, it is still in the process of staffing and further strengthening its accounting and financial team.

Since the internal control remediation process remains underway, documentation and testing have not been completed at all levels, Management has concluded that as of December 31, 2022 there are material weakness in its internal controls over financial reporting, which were determined to be not effective by Management.

The Company is developing, and has started implementing, remediation plans to address the material weaknesses identified during the December 31, 2022 year end. The Company will continue to assess and update its remediation plan during fiscal 2023, with the goal of remediating all material weaknesses by December 31, 2023. The following are certain items which the Company has currently started with.

- **Budget process:** The Company prepared an annual budget submitted to the Board for approval, and due to discussions intended to fine tune its scope, comprising the investments, expenses and other accounts, it was subsequently approved in the first quarter of 2023.
- **IT Investment:** During the fourth quarter of 2022, the Company approved the IT plan which encompasses investments in equipment and software, additional headcount, training the users, engaging user support providers, as well as establishing policies and procedures for the IT organization structure, including controls over the definition, acquisition, installation, configuration, integration, and maintenance of the IT infrastructure. The Company plans to address training with material in development with our third-party provider. The Company has developed a Data Security Policy and the Access Control Policy that once approved will be implemented in 2023, together with training designed to the users (under development with our third party provider) to operate in the enhanced IT environment with the view to ensure the ITGC controls are effective.
- **Code of ethics:** Sigma is committed to operate with integrity. The Company is in the process of strengthening the Code of Ethics at all levels and jurisdictions. The Code of Ethics has been translated into Portuguese, and will be disseminated to all employees, with training sessions to be rolled out, aimed to reach all employees across all jurisdictions during 2023, as part of the process of building a culture of controls compliance.



- **Financial statements closing schedule:** The Company will develop with the assistance of external providers a detailed financial statements closing schedule identifying all activities, owners, and reviewers to control the preparation, completion and quality of its quarterly and annual financial statements closing processes.

The financial and accounting team will work with external specialists to bring in expertise and expedite the remediation of control deficiencies at the process level during 2023 with a focus on the implementation of absent controls identified at the risks and controls matrix for process underlying all significant accounts and disclosures. The external specialists with expertise in internal controls implementation are assisting with the development and documentation of the following workstreams related to the internal controls over financial reporting needed to be in compliance with SOX: (i) prepare and review the risks and controls matrix; (ii) establish a Project Management Office to manage the control deficiencies and remediation; (iii) develop and document structured policies and procedures; (iv) test the design, implementation and operating effectiveness of the internal controls after remediation to support the CEO and CFO certifications; and (v) support training content development and conducting training sessions across the Company.

The Company has retained the services of Information Technology consulting help and plans to hire an Information Technology officer during 2023 to manage the Information Technology Environment and the Information Technology General Controls.

Other than the above, there were no changes in the Company's internal control over financial reporting during the period beginning on September 30, 2022, and ending on December 31, 2022, that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

Management will continue to review and make necessary changes to the overall design and operation of the Company's internal control environment, as well as the policies and procedures to improve the overall effectiveness of internal control over financial reporting. The material weaknesses will not be considered remediated, until the applicable controls operate for a sufficient period of time and management has concluded, through testing, that these controls are operating effectively. The Company is taking steps toward remediation during the 2023 fiscal year.

## RELATED PARTY TRANSACTIONS

The Company's related parties include:

Related Party	Nature of Relationship
<b>A10 Group</b>	A10 Group is composed of A10 Serviços Especializados de Avaliação de Empresas Ltda. (" <b>A10 Advisory</b> ") and A10 Investimentos Ltda. (" <b>A10 Investimentos</b> ") The companies are controlled and indirectly controlled, respectively, by the director of the Company, Marcelo Paiva. The CEO, Ana Cabral-Gardner (Co-CEO on December 31, 2022), has a minority stake at A10 Advisory and A10 Investimentos.
<b>Miazga</b>	Miazga Participações S.A is a land administration company in which the CEO of the Company (Co-CEO on December 31, 2022), Ana Cabral-Gardner, and a director of the Company, Calvyn Gardner, who was Co-CEO on December 31, 2022, have an indirect economic interest.
<b>R-Tek</b>	R-Tek Group Pty Ltd. (" <b>R-Tek</b> ") is a corporation in which the Chief Operating Officer of the Company, Brian Talbot, is a controlling shareholder.
<b>Arqueana</b>	Arqueana Empreendimentos e Participações S.A. is a land administration company in which the CEO of the Company (Co-CEO on December 31, 2022), Ana Cabral-Gardner, and director of the Company, Calvyn Gardner, who was Co-CEO on December 31, 2022, have an indirect economic interest.

### **Transactions with Related Parties**

The related party transactions are recorded at the exchange amount transacted as agreed between the Company and the related party. All the related party transactions have been reviewed and approved by the independent directors of the Company. The financial impact on the Company of the transactions below is not material to the Company.

- **Cost sharing agreement (“CSA”):** The Company has a CSA with A10 Advisory where A10 Advisory is reimbursed for secondment staff 100% allocated to the Company, comprising administrative personnel. Many of these positions have now been filled by full-time employees of the Company except for a remaining few that are in the process of being phased out.
- **Leasing Agreements:** The Company has right-of-way agreements with Miazga and Arqueana relating to access to the Project.
- **Note Payable:** The Company fully repaid the final installment of \$0.3 million to Arqueana in March 2022. The note payable to Arqueana was related to the share exchange agreement dated December 12, 2017, entered by the Company with Arqueana.
- **Loan Agreement:** The Company's subsidiary, Sigma Mineração S.A. (“**SMSA**”) entered into a loan agreement dated September 21, 2022 (as amended) with Miazga to fund Miazga's purchase of property located in the area of interest of the Project, which is to be further transferred to environmental authorities for environmental compensation purposes. The loan agreement provides for the loan of an amount up to R\$0.9 million, which is the exact amount spent on the purchase of the property. The purchase agreement and loan are divided into two installments, whereas the first installment was paid, and the second instalment will be paid by the Company to Miazga within 90 days after the payment of the first installment.
- **Independent Consultant Service Agreement (“ICSA”):** The Company has an ICSA with R-Tek where R-Tek's Principal, Brian Talbot, provides direct and personal services related to the management of Sigma's overall process operations, with the roles, responsibilities and obligations equivalent of a Chief Operating Officer.
- **Commission fees:** The Company had an agreement with A10 Advisory for acting as the financial advisor to locate equity investors in non-brokered private placements, conducted as part of a consortium of financial advisors. The Company paid finders' fee of 7% of the gross proceeds received from these investors.
- **Amounts due from related party:** The Company paid for drilling services provided by a third-party that were performed on Arqueana's land. These amounts are unsecured and are non-interest bearing. Subsequent to December 31, 2022, the amounts were repaid.

### **Outstanding Balances and Expenses with Related Parties:**

<i>Outstanding Balances and Expenses (in C\$ 000s)</i>	As at December 31, 2022		Three Months Ended Dec. 31, 2022	As at December 31, 2021		Twelve Months Ended Dec. 31, 2021
	Pre-Payments / Receivables	Accounts Payable/ Debt	Expenses / Payments	Pre-Payments	Accounts Payable/ Debt	Expenses / Payments
<b><u>A10 Advisory</u></b>						
CSA	\$-	\$-	\$122	\$-	\$-	\$189
Revolving Credit Facility <sup>(1)</sup>	-	-	-	-	-	2,756
Commission Fees <sup>(2)</sup>	-	-	-	-	-	8,317

(Expressed in thousands of Canadian dollars, except per share amounts or unless stated otherwise)

Warrants <sup>(3)</sup>	-	-	-	-	-	827
<b>Miazga</b>						
Lease Agreements	\$-	\$42	\$7	\$-	\$38	\$50
Prepaid Land Lease Offset	103	13	51	104	-	12
Loan Agreement <sup>(4)</sup>	113	-	-	-	-	-
<b>R-Tek</b>						
Service provided	\$-	\$242	\$1,142	\$-	\$-	\$-
<b>Arqueana</b>						
Lease Agreements	\$-	\$225	\$43	\$-	\$216	\$32
Due from related party	4,881					
Note Payable	-	-	326	-	270	1,934

<sup>(1)</sup> There were no payments made by the Company related to the Revolving Credit Facility in 2022. The last transaction happened in 2021.

<sup>(2)</sup> There were no payments made by the Company related to the Commission fees agreed between the Company and A10 Advisory in 2022.

<sup>(3)</sup> There were no payments made by the Company in 2022 related to the purchase warrants issued by the Company in connection with the February 2021 Equity Financing. The warrants were exercised on February 11, 2022.

<sup>(4)</sup> As of December 31, 2022, 50% of the total loan was drawn.

## 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 below described risks are not exhaustive description of all risk. For additional risk factors faced by Sigma, please refer to its Annual Information Form for the year ended December 31, 2022 in the section titled "Risk Factors" filed on the Company's profile on SEDAR at [www.sedar.com](http://www.sedar.com) and EDGAR at [www.sec.gov](http://www.sec.gov), as revised or supplemented as follows:

### **Risks Related to Resource Development**

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

- **Risks relating to changes in technology:** 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.
- **Competition in the lithium markets:** 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.
- **Achieving and managing growth:** The Project is at development stage and will require a substantial increase in skilled personnel and operational support as the Project transitions to a more advanced development and then operating stage. The Company's ability to succeed in progressing through development to commercial operations will depend on a number of factors, including management's ability to manage this transition, the availability of working capital, and the ability to recruit and train additional qualified personnel (and, where appropriate, to engage third party contractors with qualified personnel).
- **Risks relating to operating 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: (i) currency depreciations and other exchange rate movements; (ii) monetary policies; (iii) inflation rate fluctuations; (iv) economic and social instability; (v) environmental regulation; (vi) energy shortages or changes in energy prices; (vii) interest rates; (viii) disasters at third party mineral projects; (ix) corruption or

political scandal; (x) exchange rate controls and restrictions on remittances abroad; (xi) liquidity of the domestic capital and lending markets; (xii) tax policy, including international tax treaties; and (xiii) 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 labor 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.
- **Corruption in Brazil and anti-corruption, anti-bribery and anti-money laundering laws:** 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 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:** 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.
- **Governmental and regulatory requirements:** Government approvals and permits are required in connection with the Company's activities. Any instances where such approvals are required and have not been obtained, the Company may be restricted or prohibited from proceeding with planned exploration, development or operational activities. Failure to comply with applicable laws, regulations and permitting requirements may result in enforcement actions thereunder, including orders issued by regulatory or judicial authorities causing development or operations to cease or be curtailed, and may include corrective measures requiring capital expenditures, installation of additional equipment, or other remedial actions. Parties engaged in mining operations may be required to compensate those suffering loss or damage by reason of the mining activities and may be liable for civil or criminal fines or penalties imposed for violations of applicable laws or regulations. Amendments to current laws, regulations and permitting requirements, or a more stringent application of existing laws, could have a material adverse impact on the Company and cause increases in capital expenditures or production costs, reductions in the levels of production at producing properties or require abandonment or delays in the development of the Project.

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

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

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

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

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

- **Environmental regulation:** 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.

- **Climate change considerations:** 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.
- **No production experience:** 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.
- **Uncertainty relating to future production estimates:** 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 ore mined varying from estimates of grade, tonnage, dilution and metallurgical and other characteristics; revisions to mine plans; unusual or unexpected orebody 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.

- **Delays and construction cost overruns:** 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.
- **Capital and operating cost estimates:** 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.
- **Operational risks:** 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 risks:** In the course of exploration, development and production of mineral properties, certain risks (in particular, risks related to operational and environmental incidents) may occur. Although the Company maintains insurance to protect against certain risks associated with its business, 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.
- **Mineral tenure:** 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.

- **Highly competitive 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.
- **Health and safety risks:** 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.
- **Mineral resource and mineral reserve estimates:** 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 riskier. 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 Phase 2 & 3. The economic viability of the Mineral Resources of Phase 2 & 3 has not been demonstrated. The Company expects that it will assess the results of a feasibility study before making a production decision in respect of Phase 2 & 3.

- **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. While the Company is committed to operating in a socially responsible manner, there can be no assurance that its efforts in this respect 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.

- **Counterparty risks:** 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 Company seeks to limit counterparty risk by entering into business arrangements with high credit-quality counterparties, limiting the amount of exposure to each counterparty, and generally monitoring the financial condition of counterparties. 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.
- **Foreign subsidiary:** 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 or the ability of its subsidiaries to distribute up cash otherwise available for distributions. Any such limitations, or the perception that such limitations may exist now or in the future, could hurt the Company's valuation and stock price.
- **Dependence on the expertise of consultants:** The Company has relied on and is expected to continue to rely on, consultants and others for mineral exploration and exploitation expertise. The Company believes that those consultants are competent and that they have carried out their work by internationally recognized industry standards. However, 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**

- **Public health crises:** 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.

- **Current military conflict in Ukraine:** 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.
- **Risk of achieving profitability and generating positive cash flows:** 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.
- **Risks of future losses and going concern:** The Company's ability to continue as a going concern is dependent upon the ability to ultimately generate future profitable operations and 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 years ended December 31, 2022 and 2021. The Company had a cash balance of \$96.4 million as of December 31, 2022 and believes this is enough to continue as a going concern at least for the next twelve months. 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 obtaining additional debt financing to fund long-term expenditures related to the construction of the Phase 1 Greentech Plant. The Company expects to continue to sustain operating losses in the future until it generates revenue from commercial production of its mineral properties. There is no guarantee that the Company will ever be profitable.
- **Dilution of existing shareholders from equity financings or increased financial risk through debt issuance:** 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 than outstanding. In addition, the Company may issue or grant convertible securities (such as RSUs, warrants or stock options) in the future under 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.

- **Governmental actions:** 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.
- **Indebtedness:** 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.

- **No history of dividends:** The Company has not paid dividends since incorporation and cannot presently 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.

- **Obligations as a publicly traded company in Canada and in the United States:** 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 for the year ended December 31, 2022. The Company's management, including its CEO and CFO, 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 section titled Internal Control Over Financial Reporting of the MD&A 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 subject 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.

- **Maintenance of adequate and appropriate internal controls:** 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.
- **Risks as a foreign private issuer:** 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 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.

- **Dependence on key individuals:** 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 concerning any of its directors, officers, or key employees and has no current plans to do so.
- **Fluctuations in exchange rates; potential government intervention:** 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 Brazilian currency. Certain costs associated with imported equipment and international supplies and consultants and sales prices for the 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.

- **Legal proceedings:** 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 the 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 concerning 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.

- **Conflict of interest for Directors and Officers:** 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. By 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 Investimentos Fundo de Investimento de Ações – Investimento no Exterior (the “**A10 Fund**”), 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.
- **Share price volatility:** 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 is 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.
- **Use of proceeds from securities offerings:** 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.
- **Risks relating to a holding of Common Shares:** 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.
- **Significant shareholder influence:** 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, 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. 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 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 (including conflicts of interests that result from certain officers and directors being involved with the A10 Fund). 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 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.

- **Enforcement of judgements:** The Company is incorporated under the laws of Canada and headquartered in British Columbia, 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.

- **Canada Business Corporations Act:** The Company is governed by the Canada Business Corporations Act ("CBCA") 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.
- **Cyber-security risks:** 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 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.



- **Risks as a passive foreign investment company:** 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.

## CRITICAL ACCOUNTING ESTIMATES

Significant assumptions about the future and other sources of estimation uncertainty that management has made at the financial position reporting date, that could result in a material adjustment to the carrying amounts of assets and liabilities, relate to, but are not limited to, the following:

### *Valuation of share-based payment transactions*

The valuation of the Company's share-based payment transactions requires the use of estimates and valuation techniques. Measurement of the Company's RSUs that contain market-based conditions is based on a Monte Carlo pricing model which uses various inputs and assumptions. Changes in these assumptions result in changes in the fair value of these instruments and a corresponding change in the amount recognized in profit or loss. Judgement is also required in determining grant date and in estimating when non-market performance conditions are expected to be met.

### *Mineral reserves and mineral resources*

Proven and probable mineral reserves are the economically mineable parts of the Company's measured and indicated mineral resources demonstrated by at least a preliminary feasibility study. The Company estimates its proven and probable mineral reserves and measured and indicated and inferred mineral resources based on information compiled by appropriately qualified persons. The estimation of future cash flows related to proven and probable mineral reserves is based upon factors such as estimates of commodity prices, foreign exchange rates, future capital requirements and production costs along with geological assumptions and judgments made in estimating the size and grade of the mineral ore body. Changes in the proven and probable mineral reserves or measured and indicated and inferred mineral resources estimates may impact the carrying value of the property, plant and equipment, asset retirement obligations, recognition of deferred tax amounts and depreciation, depletion, and amortization.

### *Depreciation and amortization*

Mobile and other equipment is generally depreciated, net of residual value, on a straight-line basis, over the useful life of the equipment but does not exceed the estimated life of mine based on proven and probable reserves. Changes in estimates can be the result of actual future production differing from current forecasts of future production and/or expansion of mineral reserves through exploration activities.

### *Valuation of long-lived assets*

The assessment of fair values, including those of the CGUs for purposes of testing long-lived assets for potential impairment or reversal of impairment, require the use of assumptions and estimates for recoverable production, future capital requirements and operating performance, as contained in the Company's technical reports, as well as future and long term commodity prices, discount rates, and foreign exchange rates. Changes in any of the assumptions or estimates used in determining the fair value of long-lived assets could impact the impairment analysis.

### *Provision for restoration, rehabilitation, and environmental remediation*

The Company assesses its provision for restoration, rehabilitation, and environmental remediation on an annual basis or when new material information becomes available. Mining and exploration activities are subject to various laws and regulations governing the protection of the environment. In general, these laws and regulations are continually changing and the Company has made, and intends to make in the future, expenditures to comply with such laws and regulations. Accounting or restoration, rehabilitation, and environmental remediation obligations requires management to make estimates of the future costs the Company will incur to complete the restoration, rehabilitation, and environmental remediation work required to comply with existing laws and regulations at each mining operation. Actual costs incurred may differ from those amounts estimated. Also, future changes to environmental laws and regulations could increase the extent of restoration, rehabilitation, and environmental remediation work required to be performed by the Company. Increase in future costs could materially impact the amounts charged to operations for restoration, rehabilitation, and environmental remediation. The provision represents management's best estimate of the present value of the future restoration, rehabilitation, and environmental remediation obligation. The actual future expenditures may differ from the amounts currently provided.

## **OFF-BALANCE-SHEET ARRANGEMENTS**

As of the date of this MD&A, the Company does not have any off-balance-sheet arrangements that have, or are reasonably likely to have, a current or future effect on the financial performance or financial condition of the Company, including, and without limitation, such considerations as liquidity and capital resources.

## **CAPITAL MANAGEMENT**

The Company manages its capital with the following objectives:

- To ensure sufficient financial flexibility to achieve its ongoing business objectives, namely funding the construction of the Phase 1 Greentech Plant and future growth opportunities (including potential production expansions through the development of the Project's Phase 2 and Phase 3 deposits); and
- To maximize shareholder returns through enhancing its share value.

The Company monitors its capital structure and adjusts according to market conditions to meet its objectives, given the current outlook of the business and industry in general. The Company may manage its capital structure by issuing new shares, raising debt, repurchasing outstanding shares, adjusting capital spending, or disposing of assets. The capital structure is reviewed by management and the Board on an ongoing basis.

The Company considers its capital to be equity, comprising share capital, contributed surplus, accumulated other comprehensive loss and deficit, which on December 31, 2022, totaled \$183.1 million (December 31, 2021: \$184.9 million). The Company's capital management objectives, policies, and processes remained unchanged during the three and twelve months ended December 31, 2022.

The Company manages capital through its financial and operational forecasting processes. The Company reviews its operating expenditures, and other investing and financing initiatives based on activities related to the Project.

## **FINANCIAL RISK FACTORS**

The Company's activities expose it to a variety of financial risks: credit risk, liquidity risk, and market risk (including interest rate risk, foreign currency risk, and price risk).

The fair values of cash and cash equivalents, accounts payable, export prepayment agreement, due from related party and note payable approximate their carrying values due to the short term to maturity of these financial instruments.

### **Credit Risk**

Credit risk is the risk of loss associated with a counterparty's inability to fulfill its payment obligations. The Company's credit risk is primarily attributable to cash and cash equivalents. The Company's cash and cash equivalents are held with established institutions for which management believes the risk of loss to be remote.

### **Liquidity Risk**

Liquidity risk is the risk that the Company will not be able to meet its financial obligations as they fall due. The Company's approach to managing liquidity is to ensure it will have sufficient liquidity to meet liabilities when due. To the extent the Company does not believe it has sufficient liquidity to meet obligations, it will actively manage its expenses along with capital expenditures, while it seeks additional equity or debt funding.

As of December 31, 2022, the carrying amount of the financial liabilities, measured using the amortized cost method are described below. Their corresponding maturities are evidenced below:

<b>Contractual Obligations</b>	<b>Up to 1 Year</b>	<b>2-3 Years</b>	<b>4-5 Years</b>	<b>&gt;5 Years</b>	<b>Total</b>
Accounts payable and accrued liabilities	\$28,202	\$-	\$-	\$-	\$28,202
Export prepayment agreement	\$-	\$81,839	\$-	\$-	\$81,389
Lease liabilities	\$680	\$722	\$799	\$1,468	\$3,669

### **Market Risk**

Market risk is the risk of loss that may arise from changes in market factors such as interest rates and foreign exchange rates.

#### **Interest Rate Risk**

The Company has cash and cash equivalent balances. The Company's current policy is to invest surplus cash balances with high rated banks in the jurisdictions it has a presence in, such as Canada and Brazil. As of December 31, 2022, the Company had \$96.4 million of cash. The Company's exposure to risk of changes in market interest rates prelates primarily to interest earned on its cash balances.

Additionally, on December 31, 2022, the Company entered into an export prepayment agreement exposed to interest BSBY + 6.95%, as disclosed in the Financial Statements.

- Sensitivity to a plus or minus 10% change in the interest rate of the export prepayment agreement would affect the Company's consolidated statements of net loss and comprehensive Loss by approximately \$1,008.

#### **Foreign Currency Risk**

The Company's functional and presentation currency is the Canadian dollar and certain purchases, and salaries are transacted in Canadian dollars. The Company also has significant balances in Brazilian Reais and United States dollars that are subject to foreign currency risk.

The Company had the following balances in the prescribed currencies:

<b>(in \$ 000s)</b>	<b>As at December 31, 2022</b>	<b>As at December 31, 2021</b>
<b><u>Brazilian Reais</u></b>		
Current Assets	\$291,915	\$4,279
Current Liabilities	(116,874)	(11,692) R
<b><u>United States Dollar</u></b>		
Cash in Banks	28,704	67,088
Current Liabilities	(3,800)	-
Non-Current Liabilities	(60,114)	-

R means restated in relation to the same period presented

(Expressed in thousands of Canadian dollars, except per share amounts or unless stated otherwise)

Cash in Foreign Currencies (in \$ 000s)	As at December 31, 2022		As at December 31, 2021	
	Amount in Currency Shown	Equivalent in Canadian Dollars	Amount in Currency Shown	Equivalent in Canadian Dollars
Deposits in Brazilian Reais	\$223,635	\$57,325	\$3,051	\$699
Deposits in United States Dollars	28,704	38,886	67,088	84,760
Total Cash		\$96,211		\$85,459

The Company is exposed to foreign currency risk on fluctuations related to cash and cash equivalents, receivables, export prepayment agreement, accounts payable, accrued liabilities and other liabilities denominated in Brazilian Reais and United States dollars.

- Sensitivity to a plus or minus 10% change in the foreign exchange rate of the Brazilian Reais compared to the Canadian dollar would affect the Company's consolidated statements of net loss and comprehensive loss by approximately \$4.0 million with all other variables held constant.
- Sensitivity to a plus or minus 10% change in the foreign exchange rate of the United States dollar compared to the Canadian dollar would affect the Company's consolidated statements of net loss and comprehensive loss by approximately (\$4.8) million with all other variables held constant.

## QUALIFIED PERSON

Mr. Wes Roberts, P.Eng., the Co-Chair of the technical committee of the Company, is the "qualified person" under National Instrument 43-101 ("NI 43-101") who reviewed and approved the technical information disclosed in this MD&A.

## CAUTIONARY NOTE REGARDING FORWARD-LOOKING INFORMATION

Certain information and statements in this MD&A 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 the mineralization that would be realized by development). When used in this MD&A, 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 MD&A. 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 MD&A contains Forward Looking Information with respect to the following matters: statements regarding anticipated decision making with respect to the Project; capital expenditure programs; estimates of mineral resources and mineral reserves; development of mineral resources and mineral reserves; government regulation of mining operations and treatment under governmental and taxation regimes; the future price of commodities, including lithium; the realization of mineral resource and mineral reserve estimates, including whether mineral resources will ever be developed into mineral reserves; the timing and amount of future production; currency exchange and interest rates; expected outcome and timing of environmental surveys and permit applications and other environmental matters; 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 several risks and uncertainties, many of which are beyond the Company's control, that could cause actual results to differ materially from those disclosed in or implied by such Forward-Looking Information. With respect to the Forward-Looking Information, the Company has made assumptions regarding, among other things:

- General economic and political conditions (including but not limited to the impact of the continuance or escalation of the military conflict between Russia and Ukraine, and economic sanctions in relation thereto).
- Stable and supportive legislative, regulatory and community environment in the jurisdictions where the Company operates.
- Stability and inflation of the Brazilian Real, including any foreign exchange or capital controls which may be enacted in respect thereof, and the effect of current or any additional regulations on the Company's operations.
- Anticipated trends and effects in respect of the COVID-19 pandemic and post-pandemic.
- Demand for lithium, including that such demand is supported by growth in the 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 MD&A 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 MD&A. 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 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.
- 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.
- 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.
- The Company is subject to regulatory frameworks applicable to the Brazilian mining industry which could be subject to further change, as well as government approval and permitting requirements, which may result in limitations on the Company's business and activities.
- The Company's operations are subject to numerous environmental laws and regulations and expose the Company to environmental compliance risks, which may result in significant costs and have the potential to reduce the profitability of operations.
- Physical climate change events and the trend toward more stringent regulations aimed at reducing the effects of climate change could have an adverse effect on the Company's business and future operations.
- As the Company does not have any experience in the operation of a mine, processing plants and related infrastructure, it is more difficult to evaluate the Company's prospects, and the Company's future success is more uncertain than if it had a more proven history of developing a mine.
- The Company's future production estimates are based on existing mine plans and other assumptions which change from time to time. No assurance can be given that such estimates will be achieved.
- The Company may experience unexpected costs and cost overruns, problems and delays during construction, development, mine start-up and operations for reasons outside of the Company's control, which

(Expressed in thousands of Canadian dollars, except per share amounts or unless stated otherwise)

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have the potential to materially affect its ability to fully fund required expenditures and/or production or, alternatively, may require the Company to consider less attractive financing solutions.

- The Company's capital and operating cost estimates may vary from actual costs and revenues for reasons outside of the Company's control.
- The Company's operations are subject to the high degree of risk normally incidental to the exploration for, and the development and operation of, mineral properties.
- Insurance may not be available to insure against all such risks, or the costs of such insurance may be uneconomic. Losses from uninsured and underinsured losses have the potential to materially affect the Company's financial position and prospects.
- The Company is subject to risks associated with securing title, 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 cash otherwise available for distributions.
- The Company is subject to risks associated with its reliance on consultants and others for mineral exploration and exploitation expertise.
- Pandemics could have a material adverse effect on the Company's business, operations, financial conditions 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, substantially 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.

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- 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, 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 a material weakness and disclose that the Company has not maintained appropriate internal controls over financial reporting.
- As a foreign private issuer, the Company is subject to different U.S. securities laws and rules than a domestic U.S. issuer, which may limit the information publicly available to its shareholders.
- Failure to retain key officers, consultants and employees or to attract and, if attracted, retain additional key individuals with necessary skills could have a materially adverse impact upon the Company's success.
- The Company is subject to currency fluctuation risks.
- From time to time, the Company may become involved in litigation, which may have a material adverse effect on its business financial condition and prospects.
- Certain directors and officers of the Company are, or may become, associated with other natural resource companies which may give rise to conflicts of interest.
- The market price for the Company's shares may be volatile and subject to wide fluctuations in response to numerous factors beyond its control, and the Company may be subject to securities litigation as a result.
- If securities or 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 have been obtained in Canadian or U.S. courts or initiate court action outside Canada or the U.S. against the Company and its directors and officers in respect of an alleged breach of securities laws or otherwise. Similarly, it may be difficult for U.S. shareholders to effect service on the Company to realize on judgments obtained in the United States.
- The Company is governed by the Canada Business Corporations Act and by the securities laws of the province of Ontario, which in some cases have a different effect on shareholders than U.S. corporate laws and U.S. securities laws.
- The Company is subject to risks associated with its information technology systems and cyber-security.
- The Company may be a Passive Foreign Investment Company, which may result in adverse U.S. federal income tax consequences for U.S. holders of Common Shares.



Readers are cautioned that the foregoing lists of assumptions and risks are not exhaustive. The Forward-Looking Information contained in this MD&A is expressly qualified by these cautionary statements. All Forward-Looking Information in this MD&A speaks as of the date of this MD&A. 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 and annual information form, which are available on SEDAR at [www.sedar.com](http://www.sedar.com).

### **CAUTIONARY NOTE REGARDING MINERAL RESERVE & MINERAL RESOURCE ESTIMATES**

Technical disclosure regarding the Company's properties included in this document 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 MD&A is not comparable to similar information made public by U.S. companies reporting pursuant to SEC disclosure requirements.