



(the “Company”)

**FORM 51-102F1  
MANAGEMENT’S DISCUSSION AND ANALYSIS  
FOR THE THREE AND NINE MONTHS ENDED SEPTEMBER 30, 2024 AND 2023**

**Introduction**

This Management’s Discussion and Analysis (“MD&A”) of South Star Battery Metals Corp. is the responsibility of management and covers the period ended September 30, 2024. The MD&A takes into account information available up to and including November 29, 2024 and should be read together with the unaudited condensed consolidated interim financial statements for the three and nine months ended September 30, 2024 and 2023, which are available on the SEDAR+ website at [www.sedarplus.ca](http://www.sedarplus.ca). All financial information in this document is prepared in accordance with IFRS Accounting Standards (“IFRS”) and is presented in Canadian dollars unless otherwise indicated.

Throughout this document the terms *we*, *us*, *our*, *the Company* and *South Star* refer to South Star Battery Metals Corp.

Additional information related to the Company is available for view on SEDAR+ ([www.sedarplus.ca](http://www.sedarplus.ca)).

This document contains forward-looking statements. Please refer to “Note Regarding Forward-Looking Statements.”

The Company trades on the TSX Venture Exchange (“TSXV”) under the symbol STS and on the OTCQB under the symbol STSBF.

**Description of Business**

The Company is a Canadian battery metals project developer focused on the selective acquisition and development of near-term production projects in the Americas. The Company’s primary focus is the Santa Cruz Graphite Mine in Southern Bahia, Brazil. The Company is also advancing its option on the BamaStar Graphite Project in Alabama, USA.

**Q3 2024 BUSINESS HIGHLIGHTS**

**Santa Cruz Project Highlights**

*Phase 1 Construction*

The Company is working to ramp-up Phase 1 facilities for commercial production at approximately 1,000t/month capacity.

Main work programs for Q3 2024 included:

- Mine prestrip, preliminary dump foundations and ramps are complete and approximately 23,000 tonnes of ore was placed on the ore pad followed by commissioning and initial operations.
- The following plant areas are complete, commissioning of the equipment is complete, and ramp-up of commercial production is underway:
  - Primary and secondary crushing circuit
  - Flotation/grinding/screening plant

- Tailings thickener and filter press facilities
  - Concentrate dewatering, drying, screening and bagging systems
- Internal power distribution, laboratory, support services and other appurtenant installations are complete and ready for operations.
- The mainline powerline is complete, and the regional energy company COELBA completed the installation of the energy meter and final connection of the installations to the grid power.
- Commissioning is underway, after which the plant should be ready for the start of commercial production and fulfillment of initial sales in Q4 2024.

Santa Cruz completed commissioning of the Phase 1 plant in October 2024 and that the first product has been placed in the one tonne bag. South Star plans to fulfill initial graphite purchase orders in Q4 2024. The infill drilling and short-term mine plan/sequence for the first quarters of the mine sequence are complete. Prestrip is finalized and approximately 23,000 tonnes of ore has been placed on the ore pad through September 2024. The mine plan confirms simple, open pit mining of oxide ore with at-surface mineralization and a low 6-month strip ratio of approximately 0.5(W):1(O).

Commissioning is complete and ramp-up of commercial production is underway. First shipments of natural flake graphite concentrates are expected to begin in Q4 2024. The Phase 1 mine and process plant construction and commissioning was completed as the Santa Cruz team completed approximately 286,488 manhours and 678 days without a loss-time accident.

As-builts engineering drawings of the constructed Phase 1 process plant detailing the electrical, mechanical, structural, foundations and earthworks as well as a bottleneck/process optimization study are underway to explore the potential to upgrade the Phase 1 processing plant capacity. In order to avoid special orders or custom parts, much of the installed equipment is the smallest, off-the-shelf, stock production units. Installed equipment is oversized compared to Phase 1 throughput, and the bottleneck/process optimization study will determine what would have to be upgraded in the Phase 1 plant to reach the Phase 2 estimated throughput. An operational mass and water balance as well as the as-builts will serve as the basis for a production optimization and bottleneck analysis. The study is expected by December 2024.

### *Sales*

South Star's immediate go-to-market commercial strategy is to produce high-quality graphite concentrates for various industrial applications and sectors.

The Company entered into initial binding sales agreements with US-based customers for the initial purchases of 240 tonnes of the Company's graphite concentrate from its Santa Cruz Graphite Mine. The Company continues to develop customer relationships. South Star has made significant progress qualifying its Santa Cruz graphite concentrate with other major graphite end-users worldwide, who have undertaken extensive product testing as part of their due diligence process for offtake agreements. The Company looks forward to updating the market on the progress of developments with other potential customers when details are finalized.

### *Permitting and licensing*

On January 24, 2023, the Planned Economic Analyses ("PAEs") and request for the final mining license for all 13 exploration claims were submitted to the Brazilian Mining Authority ("ANM") and had been in technical evaluation at the regional superintendent's office in Salvador. In addition, seven new exploration claims totaling approximately 7,000 additional hectares have been applied for by the Company.

The PAE doubled the Santa Cruz production capacity presented in the previously released Prefeasibility Study ("PFS") (March 2020) and incorporates a third phase of project development.

The planned production schedule is as follows:

- 2 years with 12,000 tonnes per year ("tpy") of concentrates (Phase 1);
- 2 years with 25,000 tpy of concentrates (Phase 2); and
- Life of mine ("LOM") with 50,000 tpy of concentrates (Phase 3).

The approval of the PAE and mining license is the final step in securing the LOM mining license for each of the 13 exploration claims and converting them to mining concessions.

Phases 1, 2 and 3 definitive mining license (“Concessão de Lavra”) are approved as well as the Environmental Licenses for the Concessions in the county of Itabela. The Company has paid the municipal building permit for construction of the Phase 1 plant, mine and infrastructure and which was received in the year ended December 31, 2022.

The Company submitted the consolidated Phases 1, 2 & 3 environmental reports and documentation in April 2023 with the objective of obtaining both the mining and environmental permits and licenses required for Phases 2 & 3. In February 2024, the Company received its environmental permits for Phases 2 & 3 for 8 of its mining claims, including all the main claims currently planned for near-term production. The Phases 2 and 3 environmental permits were approved with conditions generally in line with the Phase 1 permit and are consistent with the current environmental and community engagement programs already underway. The Environmental Permit is reviewed and renewed every four years.

In June 2024, the Company completed the land purchase required for the construction of the Phase 1 mine and plant facilities. The farm totals approximately 325 hectares and is where all the plant facilities, mine and infrastructure installations are required for the first three years of operations at its Santa Cruz Graphite Project in Bahia, Brazil.

### *Exploration*

The Company mobilized a geophysics contractor in Q4 2024 to perform approximately 15 linear kilometers of geophysics to test the limits of the priority drilling targets at the Santa Cruz Project for a 2024 exploration program which will include 3000-4000m of drilling in 2025 to expand current resources and reserves to extend mine life.

### *Value-Add Products*

In 2022, the Company confirmed the process flowsheet for Santa Cruz concentrates. The Company also generated and shipped 100g samples of various product samples to potential clients.

In March 2024, the contracts for a value-add process study have been finalized as part of the National Instrument 43-101 (“NI 43-101”) Preliminary Economic Assessment (“PEA”) for BamaStar, and the study was completed and details were presented on October 10, 2024 and is discussed below. The Study’s techno-economic analysis presents a scenario with concentrates from both BamaStar and Santa Cruz providing feedstocks for the secondary processed, specialty-graphite products. The Study has outlined the strategic production/commercial plan for South Star’s planned downstream transformation plant for the manufacturing of battery-graphite and other specialty-graphite commercial products, in the southeastern USA.

### BamaStar Graphite Project, Alabama Highlights

#### *Value-Add Product Testwork & Updated Mineral Resource Estimate and PEA Overview*

In August 2024 the Company announced that BamaStar natural flake graphite concentrate was successfully upgraded to 99.95% fixed carbon, which is suitable for lithium-ion batteries and a variety of other value-add applications. South Star is advancing a process flowsheet for producing coated, spheronized, purified graphite (“CSPG”) using commercially available equipment and industry standard, proven technology with no special products or proprietary intellectual property. The purification test results have been incorporated into the NI 43-101 PEA, which was announced on October 10, 2024. Technical product-development programs are continuing to advance the Company’s vertically integrated midstream and downstream product suite for value-added applications using graphite concentrates from both Santa Cruz and BamaStar, with commercial sales planned by Q4 2026. Please see the August 22, 2024 press release for further details.

On October 10, 2024, the Company announced the NI 43-101 PEA results and Mineral Resource Estimate on the BamaStar Graphite Project. This second resource estimate includes 1,080,000 tonnes of contained graphite with an open pit-constrained mineral resource estimate of 52.2M tonnes of inferred resources at an average grade of 2.07% (Cg), based on a 0.9% cut-off grade for oxide and transition material and 1.37% cut-off grade for fresh material. The mineral resource estimate confirms the significant potential of this historical mine with graphite mineralization open at depth and in both directions (NE & SW). Further, the mineral resource estimate and initial open pit optimization confirms the deposit is amenable to open pit mining operations with at-surface mineralization and low strip ratios.

A summary of the technical information with respect to the BamaStar Graphite Project and the NI 43-101 PEA results are discussed below and in the following Corporate Highlights section.

On October 10, 2024 the Company announced a positive NI 43-101 PEA for the BamaStar Mine and Concentrator Plant in Coosa County, AL and a value-add upgrading plant in Mobile, AL. The natural flake graphite concentrate precursor material for the value-add plant will come from South Star's BamaStar and Santa Cruz Mines, where the latter is now in Phase 1 operations in Brazil. First production for BamaStar is planned by 2027. The Project has a Pre-Tax Net Present Value ("NPV8%") of US\$2.4B with an Internal Rate of Return ("IRR") of 35% and an After-Tax NPV8% US\$1.6B with an IRR of 27%. The Life of mine ("LOM") gross revenue is US\$9.9B whereas the Pre-Tax and Post-Tax undiscounted free cashflow is US\$6.0B and US\$4.3B, respectively. The Project has a 19-Year open-pit mine life with an average concentration production of 47,147 tonne per year ("tpy"). The updated resource estimate increased by 2.4x increase compared to the 2023 maiden resource. Overall the resource estimate contains over 1Mt of contained graphite. The BamaStar Mine and Concentrator Plant is developed in a modular, phased approach using a simple proven flowsheet resulting in an average recovery of 90% and concentrate grades ranging from 94% graphitic carbon ("Cg") for hard rock mill feed to >98% Cg for oxide mill feed. Each of the planned two phases of the Concentrator Plant would produce approximately 25,000 tpy for a combined total of 50,000 tpy of natural flake graphite concentrate. The value-add plant is designed using chemical purification technology and standard, commercially available equipment with no intellectual property that can purify to battery grade (> 99.95% Cg). The Mobile, AL Plant is also developed in a phased, modular approach with each of the planned three phases producing 20,600 tpy of upgraded graphite for a total of 61,800 tpy of upgraded products. This amount includes approximately 38,000 tpy of coated, purified, spheronized graphite ("CSPG"). 1 Kg of purified graphite was transformed into purified and micronized graphite, as well as CSPG using standard, commercially available, non-proprietary technologies. The CSPG material was used to make both CR2032 coin and pouch cells. The successful preliminary electrochemical testing results demonstrated capacity and first-cycle loss performance that is comparable to Tier-1 commercial CSPG products, including potential fast-charge capabilities with stable cycling. The PEA results have been delivered to the US Department of Defense Title III program managers for review and comment in anticipation of the previously announced grant for funding US\$3.2M for the upcoming feasibility study ("FS"). The schedule is to complete the FS within 18 months after the start of drilling program to support the study.

The Company filed the NI 43-101 PEA for the BamaStar Mine and Concentrator Plant and a value-add upgrading plant on November 13, 2024.

#### *Grant from United States Department of Defense*

In the year ended December 31, 2023, the Company announced that it has received a US\$3.2 million grant (equaling approximately CA\$4.4 million) from the Department of Defense ("DoD") under the Defense Production Act ("DPA") Title III authorities utilizing funds appropriated by the Inflation Reduction Act, to advance a National Instrument 43-101 Feasibility Study ("FS") for the BamaStar Graphite Project. The FS will also incorporate a vertically integrated lithium-ion ("Li-ion") battery-graphite anode manufacturing facility in the southeast corridor of the United States. The FS will cover all aspects of the planned BamaStar graphite mine from upstream mining operations to the downstream manufacturing of finished commercial battery-ready graphite products, while detailing all important and essential related information, including operational, financial, commercial graphite product performance data, and environmental, social and governance criteria. South Star's planned battery-graphite products will include a broad range of products from coated spherical purified graphite ("CSPG") active anode materials for Li-ion battery applications to conductivity-enhancement products for use in all major primary (i.e., non-rechargeable) and secondary (i.e., rechargeable) battery chemistries.

South Star is committed to developing BamaStar's downstream commercial battery-graphite manufacturing facility in the southeast corridor of the U.S. Given the global demand for Li-ion battery-graphite anode materials and due to the complete lack of U.S. manufacturing capacity, the Company's management believes in the criticality of addressing the United States' urgent need to have integrated, safe-sourced, domestic graphite production capability at commercial scale in the most efficient, cost-effective and shortest timeframe possible. The Company views the present challenging macroeconomic and geopolitical environments as a significant and increasing risk to the U.S. and its allies, in terms of both national and energy security.

While the BamaStar graphite mine is being developed, South Star intends to initially commence commercial operations at the Company's planned U.S. downstream battery-graphite manufacturing facility utilizing premium graphite concentrate supplied from its own Santa Cruz Graphite Mine. In addition to the assurance of security of

supply of graphite concentrate to feed the U.S. downstream plant, the strategic and enduring competitive advantages of this integrated approach mitigates the risks of probable long-term supply/demand imbalance and probable price increases globally for graphite concentrate beginning in the near future. This integrated approach of a diversified portfolio of scalable facilities allows for an accelerated U.S. downstream production of critical battery grade anode materials, while BamaStar is developed and built in parallel. South Star intends for the Company's U.S. downstream facilities to scale over time and be ready to process the entirety of the BamaStar graphite mine's concentrate feedstock.

The DoD will contribute funding to the BamaStar FS on a cost-share basis. As part of the agreement, the DoD will provide US\$3,179,999 and South Star will contribute US\$3,772,499 in matching funding on a cost-share basis over a period of 18 months, and after the successful delivery by the Company of a NI 43-101 PEA. A non-NI 43-101 compliant interim report on the results of the PEA was provided to the DoD in August 2024 and subsequently the NI 43-101 compliant PEA was provided to the DoD in November 2024.

Graphite is classified by the U.S. Department of Energy as critical and high risk in both the short and medium term. It is an essential material for many applications, including transportation, communications, defense, microprocessors, high-tech, graphene, etc. The U.S. currently produces no graphite concentrates or downstream battery-grade anode materials.

#### *Value-Add Products*

Company representatives have engaged and met with numerous senior economic-development representatives for states in the region, including Alabama and Louisiana. The team commenced a site-selection process to determine the most advantageous location for siting South Star's planned downstream transformation plant to produce coated spherical purified graphite ("CSPG") for lithium-ion ("Li-ion") battery applications, in addition to conductivity-enhancement products suited for numerous battery chemistries, and other unique and innovative products. As detailed in the PEA, a site near Mobile, Alabama was selected for the PEA but remains subject to on-going discussions and negotiations with other sites in the region. Now that the PEA has been completed, the Company plans to continue directly with the BamaStar FS which is scheduled for completion in 2026.

## **PROJECTS**

### **Santa Cruz Graphite Mine Project**

South Star Battery Metals Corp. owns 100% of the Santa Cruz Graphite Mine through its wholly owned subsidiaries Brasil Graphite Corp. ("BGC") and Brasil Graphite Mineracao Ltda. ("BGM"). The Santa Cruz Project is located in the state of Bahia, Brazil and consists of 13 approved licenses covering 13,316 hectares. The Company issued a Prefeasibility Study ("PFS") technical report prepared in accordance with NI 43-101 guidelines with an effective date of March 18, 2020, as filed on Sedarplus.ca.

Phase 1 pilot plant operations are fully licensed, permitted and is ramping-up commercial production in Q4 2024. The purpose of the Phase 1 operations is to start production and cash flow, generate large scale samples for material qualification processes and solidify long-term commercial relationships for securing purchase agreements for the Phase 2 production. The Company will continue to develop the project with additional drilling, environmental studies, independent metallurgical studies, mine planning, process plant engineering, and equipment sourcing for the Phase 2 operations, including advanced purification processing technology to upgrade concentrates for value-add applications. This includes the lithium-ion battery market, alkaline battery markets, dispersions and coatings, expandable graphites & fire retardants and other newly emerging graphite technologies.

In 2022, the Company closed on Phase 1 of a Stream Agreement with Sprott Private Resource Streaming and Royalty (B) Corp. for US\$10,000,000 as outlined in the accompanying unaudited condensed consolidated interim financial statements for the period ended September 30, 2024.

### **BamaStar Graphite Project, Alabama**

The Company has entered into an Earn-in and Option Agreement ("BamaStar Agreement") on the BamaStar Graphite Project in Alabama with Hexagon Energy Materials Limited ("Hexagon") (ASX: HXG) and U.S. Critical Minerals LLC, a privately held exploration company incorporated in the United States. The BamaStar Agreement allows South Star to earn-in up to 75% of the BamaStar Graphite Project.

Currently, Hexagon owns 80% of the BamaStar Graphite Project, and USCM with a small group of individuals owning the remaining 20% of the BamaStar Graphite Project. The BamaStar Graphite Project is located on the northeast end of the Alabama Graphite Belt and covers approximately 660 acres in Coosa County, Alabama. The BamaStar Graphite Project is a historic mine active during World Wars I & II. The BamaStar Graphite mine historically targeted friable outcropping graphite mineralization, averaging approximately 3%-5% graphitic carbon. Mineralization is at surface, and the graphitic host rock was mined historically with shovels and excavators with no drilling and blasting required.

#### *BamaStar Agreement Terms*

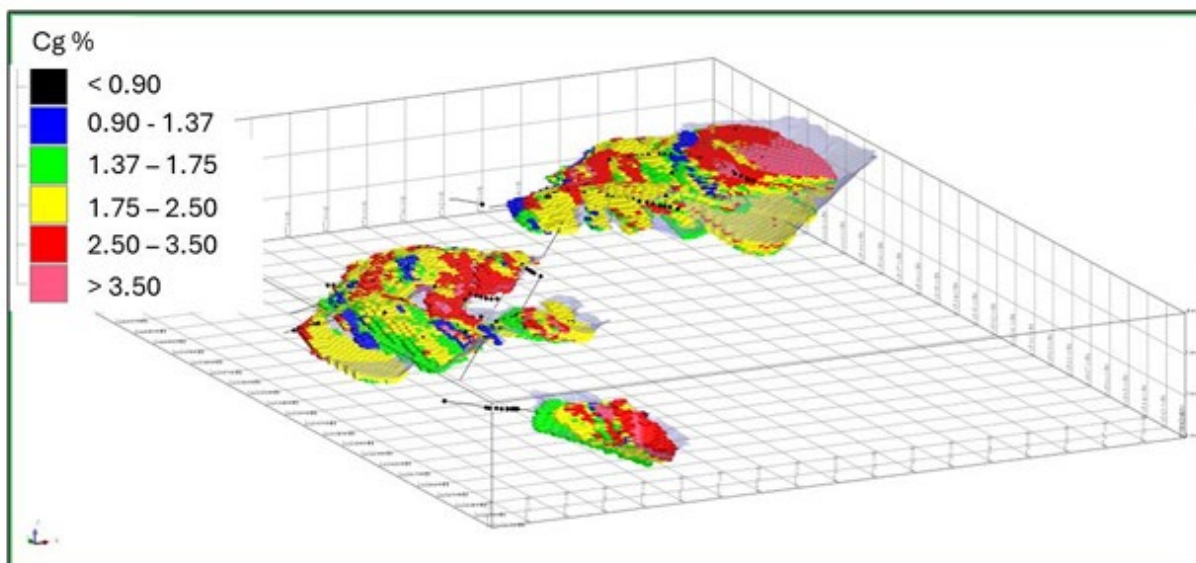
The following is a summary of the key terms of the Earn-in and Option:

- South Star to complete drilling, resource estimation, and analysis needed to prepare a NI 43-101 compliant Preliminary Economic Assessment (PEA) within three years from the signing of the final agreements ("Earn-in Period" (completed)).
- South Star to fund an annual minimum expenditure of CAD\$250,000 (CAD\$750,000 total minimum (completed)) during the Earn-in Period to earn 75% of the BamaStar Graphite Project.
- South Star extended or renew, as needed, and as part of the earn-in expenditure, the existing mineral leases and surface agreements on the BamaStar Graphite Project to ensure they are valid for a period of a minimum of 12 months beyond the Earn-in Period (completed).
- Upon satisfaction of the first three items listed above, South Star shall have the right, but not the obligation, exercisable within an agreed period, to acquire 75% of the BamaStar Graphite Project, following which (subject to the put option described below) the parties would operate the BamaStar Graphite Project as a joint venture.
- For a period of six months following the exercise of the 75% earn-in option ("Option Period"), Hexagon and USCM individually have the right, but not the obligation, to sell their remaining 25% interest in the BamaStar Graphite Project for an aggregate payment of CAD\$250,000 in South Star shares ("Put Option").
- During the Option Period, any expenditures will be shared pro rata. Failure by any party to pay their share shall result in a proportional dilution of interest in the BamaStar Graphite Project.
- Should South Star's interest in the BamaStar Graphite Project increase to 90% or greater, South Star shall have the right, but not the obligation, to purchase the entire remaining interest not owned or under its control on a basis proportional to the Put Option.
- Within six months of the BamaStar Graphite Project achieving commercial production, South Star shall make a payment of CAD\$250,000 in South Star shares ("Production Bonus"). The Production Bonus shall be proportionately reduced to reflect any reduction in the remaining 25% interest held by the parties.

#### *Updated NI 43-101 Mineral Resource Estimate & Preliminary Economic Assessment Results*

##### *Mineral Resource Estimate*

The updated Mineral Resource estimate resulted in an increase to 52.2Mt from 22Mt of Inferred pit-constrained Mineral Resources from the [previous maiden Mineral Resource estimate](#) and includes a significant new deeper fresh rock zone that was previously undiscovered. The deposit is open at depth as well as along strike.



Source: Mercator, 2024

**Figure 1: BamaStar NI 43-101 Inferred and Potential Mineral Resource Estimate**

**Table 1: BamaStar Graphite Deposit Mineral Resource Estimate – Effective Date: July 24, 2024\***

Type	Redox State	Cut-off Cg %	Category	Tonnes Mt	Cg %	Contained Graphite (Mt)
Open Pit	Oxide	0.90	Inferred	15.1	2.24	0.338
	Transition	0.90	Inferred	8.3	2.16	0.179
	Fresh	1.37	Inferred	28.8	1.96	0.564
	Combined	0.90 / 0.90 / 1.37	Inferred	52.2	2.07	1.08

*Mineral Resource Estimate Notes to Table 1:\**

1. Mineral Resources were prepared in accordance with the CIM Definition Standards (2014) and the CIM MRMR Best Practice Guidelines (2019).
2. Graphitic carbon (Cg %) grade was estimated from 1.5 m downhole assay composites using Inverse Distance Squared. No grade capping was applied. Model block size is 15 m (x) by 15 m (y) by 5 m (z). Block volume was assigned on a partial percentage basis.
3. A redox state geological model was developed from verified drill hole and trenching data and used to estimate oxide, transition, and fresh material in the block model.
4. A weathering intensity geological model was developed from verified drill hole and trenching data and used to estimate weathering intensity as strong, moderate, weak, and unweathered in the block model.
5. Bulk density was applied based on weathering intensity and reflects average bulk density determinations of 2.52 g/cm<sup>3</sup>, 2.57 g/cm<sup>3</sup>, 2.73 g/cm<sup>3</sup>, and 2.81 g/cm<sup>3</sup> for strong, moderate, weak, and unweathered respectively. The average bulk density for the Mineral Resource is 2.72 g/cm<sup>3</sup>.
6. Open Pit Mineral Resources are defined within an optimized pit shell with a pit slope angle of 46° and includes a 100 m offset from the highway for mining and 500 m offsets from the highway for oxide and transition-fresh zones respectively where blasting may be required. The pit has an overall 1:1.5 strip ratio (waste: mineralized material).
7. All prices are in US\$ currency.
8. Graphite product pricing parameters used in pit optimization include: \$980/t bulk concentrate (94.4% to 98.4% total carbon), \$3,500/t purified flake/99.95% (micronized, 8 um), \$9,500/t CSPG (18 um), and \$11,500/t CSPG (8 um). Revenue assumptions

- are based on assumed sales of 3% bulk concentrate, 19% purified flake (micronized, 8 um), 63% CSPG (18 um), and 15% CSPG (8 um).
9. Costs used in pit optimization vary based on redox state and location and include: waste mining at \$2.23/t to \$3.10/t moved plus an incremental mining cost of \$0.06/t to \$0.07/t below the base elevation (250 or 270 masl) and \$2.20/t to \$3.25/t for mineralized material processing plus an incremental mining costs of \$0.03/t to \$0.07/t below the base elevation (250 or 270 masl). The processing cost varied by redox state with processing at \$11/t to \$18.15/t processed, and G&A at \$1.74/t processed.
  10. Combined graphite recoveries (mill feed to final product) of 84.98% oxide, 84.98% transition, and 86.10% fresh material were applied. Upgrading of the bulk concentrate to finished products used a 94% recovery.
  11. Open Pit Mineral Resources are reported at a cut-off grade of 0.90 % Cg for oxide and transition material and 1.37 % Cg for fresh material within the optimized pit shell. The cut-off grade reflects the marginal cut-off grade to define reasonable prospects for eventual economic extraction by open pit mining methods.
  12. Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, sociopolitical, marketing, or other relevant issues.
  13. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. Mineral Resource tonnages are rounded to the nearest 100,000.

The 2023 drilling program was completed in August 2023 and the results were incorporated into the Q4 2024 PEA described below. The PEA presents the vertically integrated strategic production plan of concentrates from both Santa Cruz and BamaStar mines feeding a centrally located, value-add plant in the southeast United States and producing active anode material for electric vehicles, as well as purified/micronized and expandable graphite products.

#### *Preliminary Economic Assessment Results*

**Open Pit Mining with At-Surface Mineralization:** Open pit mining is the proposed mining method with the initial 6 years focused on oxide material. As time passes, the mining will extend into transition and fresh rock materials. The mine schedule consists of 42.3 Mt of mill feed grading 2.11% Cg (diluted) over a processing life of 19 years. Open pit waste tonnage totals 66.5 Mt and will be placed into various waste storage areas together with filtered tailings. The overall open pit strip ratio is 1.6:1 of waste: mill feed. The mine schedule utilizes open pit mining areas to supply mill feed up to a maximum of 1.3 Mtpy for Phase 1 and 2.6 Mtpy for Phase 2 to the mill facility.

**Excellent Existing Infrastructure in Mining District:** The BamaStar Concentrator Plant is located near the open pit mine and US HWY 280. To reduce initial capital cost and operating cost estimates, the phased, modular plant is designed to produce 25,000 tpy of NFG concentrate processing oxide material during Phase 1 and an additional 25,000 tpy in Phase 2 processing the more compact material. Phase 2 has a similar design flowsheet to Phase 1, but with additional grind capacity to process the more compact materials coming from the mine.

**Simple, Proven Flowsheet with Excellent Recoveries:** A metallurgical process development culminated in a flowsheet producing an average recovery of 90% and concentrate grades ranging from 94% graphitic carbon ("Cg") for hard rock mill feed to >98% Cg for oxide mill feed. The BamaStar Mine and Concentrator Plant was developed in a modular, phased approach using a simple flowsheet with established and proven mineral processing technologies.

The simplified testwork flowsheet for Phase I and Phase II plant is presented in the October 10, 2024 and November 13, 2024 Press Releases.

**Value-Add Plant (Mobile, AL):** Dorfner Anzaplan GmbH ("ANZAPLAN"), a firm specializing in testing and designing facilities for converting NFG into value-add products, such as battery anode material, received 4 kg (8.8 lb) of NFG derived from BamaStar and successfully purified 2 kg using Hydrofluoric and Hydrochloric Acid to a Fixed Carbon ("FC") content of ≥99.95% from the NFG concentrate, which had a FC content of 93.47%, thereby confirming the suitability of the graphite from BamaStar for achieving battery-grade anode purity.

Subsequently, 1 kg of the purified NFG was micronized, spheronized and coated with a standard commercial carbon pitch at a US independent laboratory, and the resulting CSPG was transported to a US battery design laboratory for slurry design, as well as coin cell and pouch cell performance testing. The BamaStar CSPG was thoroughly characterized, investigating the active anode material's rheological, mechanical and electrochemical properties for performance testing. All downstream transformational work and associated electrochemical testing were performed by an independent battery laboratory service provider in North America, under the direct supervision of South Star and the technical consultants.



The following outlines the industry-indicative process workflow utilized to transform the purified BamaStar NFG into battery-ready CSPG:

- **Micronization:** sizing of the purified BamaStar NFG was achieved via an industry-standard conventional air-milling process;
- **Shaping and Classification:** The screened material was then fed into a commercial spheronizer, in order to shape the material into potato-shaped ovoids resulting in spheronized graphite ("SPG"). The unspheronized purified graphite was segregated from the SPG resulting in the purified, micronized, graphite byproduct;
- **Coating:** The BamaStar SPG was then pitch (carbon) coated (or "surface treated") to produce the finished, battery-ready CSPG. The thin layer of petroleum based commercially available pitch coating was achieved through the application of soft-carbon precursor, resulting in the curing and polymerization of the exterior coating on the surface of the SPG. This CSPG is the battery-ready anode material suitable for electrochemical performance testing in Li-ion battery cells.

Phase 1 will process 21,300 tpy NFG from Santa Cruz and BamaStar. Subsequently Phases 2 and 3 will each process 21,300 tpy NFG from BamaStar Mine and Concentrator. All midstream and downstream transformational technologies and processes, including all associated equipment and consumables (including reagents) for the proposed value-add plant are state-of-the-art and well-established industry standards utilized by global leaders in commercial graphite processing and active anode materials manufacturing. South Star is proposing to only incorporate off-the-shelf equipment and technologies that are commercially available, accepted and expected by all major potential battery clients. No new, unproven or proprietary technologies and/or processes are being proposed, nor is there any new IP relating any aspect of the value-add plant as presented in the PEA.

Each phase or module of the value-add plant is designed to produce 12,600 tpy of CSPG, comprising Medium CSPG and Fine CSPG products, with a FC content of  $\geq 99.95\%$ . In addition, the Anode Plant will produce an uncoated SPG fines by-product at 8,000 tpy. The nominal design of the Anode Plant is based on a NFG feed rate of 21,300 tpy per expansion phase, containing an FC content of  $\geq 95.0\%$ . The NFG is purified in the Purification Plant to produce 20,000 tpy of purified NFG with a FC content of  $\geq 99.95\%$ . This is fed to the Spheronization Plant where the NFG is first micronized followed by spheronization. The spheronization consists of two stages to yield 10,000 tpy of Medium SPG and 2,000 tpy of Fine SPG. The purified spheroidized product is fed to the coating plant, which after adding pitch tar, yields 12,600 tpy of battery-grade, active anode, CSPG product with a FC content of  $\geq 99.95\%$ .

The simplified mass balance and simplified process flowsheet for the Value-Add Plant Module is presented in the October 10, 2024 and November 13, 2024 Press Releases.

### **Electrochemical Testing Results:**

The battery-ready BamaStar CSPG produced at the US Process Lab was delivered to US Battery Labs, an independent laboratory located in the US, which specializes in battery materials characterization, building Li-ion battery cells (both coin and pouch-cell formats) and battery testing to assess battery electrochemical performance. The BamaStar CSPG was subject to rheological studies and electrochemical performance test work in both coin-cell and pouch-cell Li-ion battery formats.

**Tested Both Coin and Pouch Cells:** The initial characterization of the BamaStar CSPG included the mixing and casting of graphite anode slurries to produce electrodes (specifically, anodes) to commence half-cell testing in order to determine basic material electrochemical performance metrics, e.g., irreversible capacity loss (ICL or first-cycle loss), reversible capacity, resistance, and Coulombic efficiency. Ultimately the purpose of building and testing Li-ion batteries with BamaStar CSPG is to determine the CSPG's initial electrochemical performance, in comparison to a commercial reference material.

**Good Rheological Design and Application to Substrata:** In terms of rheology, the BamaStar CSPG mixed perfectly in a conventional commercial anode slurry recipe, using industry-standard conductive additives, binders and solvents. The initial electrochemical performance test results of BamaStar CSPG demonstrate capacity and first-cycle loss that meets or exceeds the performance of Tier-1 commercial NFG-based comparable battery-ready CSPG products.

**Positive Electrochemical Performance:** The BamaStar CSPG performed well as battery anode materials and experienced a first-cycle loss of 7% and an average reversible gravimetric capacity of 361 mAh/g (approaching the theoretical maximum of 372 mAh/g for natural graphite). In pouch-cell testing, the BamaStar CSPG showed

significant potential capabilities for fast-charging Li-ion battery applications, with stable cycling up to 3C. These are excellent initial test results, given that this preliminary performance testing program was non-optimized and is currently ongoing.

**No Proprietary Equipment/Technology or IP Proposed to be Utilized:** No aspect of the BamaStar materials characterization, rheological studies, battery construction and electrochemical performance testing is proprietary or confidential. Further, all technical work conducted on the BamaStar CSPG is indicative of the evaluation and qualification test work that any potential commercial Li-ion battery customer would undertake to assess a CSPG.

The electrochemical results for charging and discharging is presented in the October 10, 2024 and November 13, 2024 Press Releases.

### **Environmental Permitting/Licensing Strategy**

South Star has initiated an environmental geochemistry testing program to assess if BamaStar has water quality risks, including a series of static and kinetic tests on waste rock, mineralized materials and tailings. The testing program has determined that the waste rock is potentially acid consuming ("PAC") or non-acid generating ("NAG"), while it also determined that the tailings product is potentially acid generating ("PAG") due to the presence of sulfide minerals (primarily pyrite). However, the acid-consuming potential of the waste rock exceeds the acid-generating potential of the tailings by over three times, and the studies have determined that the best solution to mitigate acid rock drainage ("ARD") and metal leaching ("ML") risk is to co-dispose PAC waste rock with PAG tailings. This "waste blending" mitigation strategy is a widely applied best practice for mitigating geochemical risk.

Similarly, metals leaching potential was also tested on a representative range of rock types encountered at BamaStar as well as on tailings samples. Geochemical tests confirm that the waste rock at site has little metal leaching risk. Mine tailings showed a potential for metal leaching, which requires further study and sampling. Once again, based on the existing data set, it appears that co-disposal is a cost-effective and viable solution to mitigate the risk of metals leaching. Following best-practice, long-duration kinetic testing to determine the ARD and ML risk is ongoing.

The mine and concentrator are on private land and private mining claims. The PEA will be used as the basis for upcoming permitting efforts for both the mine and concentrator, as well as the value-add plant. In summary, the mine and concentrator will need various state and federal permits, potentially including the National Pollution Discharge Elimination System ("NPDES") permit for site-wide excess water discharge, and the US Army Corp of Engineers ("USACOE") 404 permits for impacts to waters of the state and/or wetlands.

The value-add plant is proposed to be constructed in phases on an existing industrial site that is already zoned for heavy industrial and has excellent existing infrastructure, utilities and is sited near the Port of Mobile and the Intermodal Transportation facility. Similarly, the environmental permitting process for the value-add plant in accordance with Alabama environmental regulations and laws will commence in earnest, based on the results of the PEA and ongoing negotiations with the State of Alabama and local counties. Generally, it is anticipated that all permits can be secured with the proposed approach and within the BamaStar development timeline.

The BamaStar Project requires a closure bond administered by the State of Alabama. A reclamation plan and a closure cost estimate are included in the PEA.

A permitting matrix and schedule is presented in the October 10, 2024 and November 13, 2024 Press Releases.

### **CAPEX**

This section provides an overview of the Capex estimates for open pit mining of the BamaStar deposit, as well as the construction of a process plant, waste storage facilities, which includes co-disposal, and associated infrastructure. According to the PEA design, it is expected that each phase of the process plant would have an average capacity of 1.3 Mtpy for the initial phase, producing 25,000 tpy of NFG concentrate, and Phase 2 will have a similar throughput to double the production capacity to 50,000 tpy of NFG concentrate. The mine will have an estimated life of 19 years. Phase 1 mine and concentrator are scheduled to be online and producing in 2027, and Phase 2 is constructed in 2030 and producing in 2031. The mine, process plant and associated infrastructure Capex estimate are based on an Association for the Advancement of Cost Estimation ("AACE") Class 5 estimate has an accuracy range of +50%/-35%. Total initial Capex for the Phase 1 and 2 of the mine and concentrator will be US\$96.9M and US\$57.2M,

respectively. Sustaining capital during the 19-year mine life is estimated to be US\$32.7M. The Capex estimates for the value-add plant are based on an Association for the Advancement of Cost Estimation ("AACE") Class 5 estimate, with an accuracy range of -20 % to -50 % (low) and +30 % to +100 % (high). Each module of the value-add plant is estimated to cost US\$269.0M.

Below is initial and sustaining capex for Phase I and Phase II for the mine & concentrator and each phase of the value-add plant.

**Table 2: BamaStar Initial & Sustaining Capex**

Area	Phase 1 Capex (US\$ M)	Phase 2 CAPEX (US\$ M)	Phase 3 CAPEX (US\$ M)	Sustaining Capital (US\$ M)	Total (US\$ M)
Mining & Concentrator	96.9	57.2		32.7	186.8
Value-Add Plant	269.0	269.0	269.0	84.7	891.7
<b>Total Capital Costs</b>	<b>365.9</b>	<b>326.2</b>	<b>269.0</b>	<b>117.4</b>	<b>1,078.5</b>

### OPEX

Average LOM Mining OPEX is US\$23.84/tonne of mill feed, and average LOM for purified micronized graphite ("PMG") is US\$1,013/t of PMG No 1. and US\$2,341/tonne of CSPG. The average LOM total cost of value-add product is US\$2,278/tonne of product.

Below is operating cost for the mine and concentrator, as well as the Value-Add Plant.

**Table 3: BamaStar Opex**

Mine and Processing Plant	Unit	Value
Mining – Open Pit Operating Cost	(US\$/t moved)	4.07
Mining – Open Pit Operating Cost	(US\$/t mill feed)	10.46
Process Plant	(US\$/t mill feed)	9.78
General and Administration (G&A)	(US\$/t mill feed)	2.19
Concentrate Trucking, Port, Shipping	(US\$/t mill feed)	1.41
<b>Total Operating Operational Cost Mine and Concentrator</b>	<b>(US\$/t mill feed)</b>	<b>23.84</b>
<b>Value-Add Plant</b>		
PMG	(US\$/t of product)	1,013
CSPG	(US\$/t of product)	2,341
<b>Weighted Average LOM Total Operational Cost</b>	<b>(US\$/t of value-add product)</b>	<b>2,278</b>

### ECONOMICS

Below are the results of the PEA for the combined mine, concentrator, and Value-Add Plant.

**Table 4: BamaStar PEA Economic Summary & Highlights**

<b>Description</b>	<b>Unit</b>	<b>LOM</b>
Preproduction Capex + Contingency	US\$M	365.9
Subsequent Capex + Contingency	US\$M	595.2
Sustaining and Closure + Contingency	US\$M	117.3
Average Gross Revenue	US\$M/yr	518.8
Total Gross Revenue	US\$M	9,857.2
Total Operating Costs	US\$M	2,471.7
Average LOM Operating Margin	%	72.3
Pretax Total Cashflow	US\$M	5,985.8
Total Taxes	US\$M	1,657.9
After-Tax Total Cashflow	US\$M	4,276.9
Average LOM Cashflow Margin	%	43.4
Pre-tax NPV 8%	US\$M	2,368.8
Pre-tax IRR	%	34.8
After-tax NPV 8%	US\$M	1,598.3
After-tax IRR	%	27.4

A Pre-Tax Cashflow Summary graphic and Sensitivity Analysis is presented in the October 10, 2024 and November 13, 2024 Press Releases.

### **Outlook**

Santa Cruz Phase 1 (12,000 tpy concentrates) is ramping up to commercial production scheduled for Q4 2024. In 2024, work is planned to begin on an updated NI 43-101 Feasibility Study to expand resources and reserves, update costs/pricing assumptions, revise capital and operating forecasts, and incorporate Phase 3 expansion to 50,000 tpa of concentrates. The Phases 2 & 3 environmental permits were approved in February 2024. The approval of the final mining license for five of the main claims, including the areas required for all the near-term production, were received in Q2 2024. Three additional claims are in final evaluation at MME, and the Company expects approval in 2024. The Santa Cruz FS is expected to take approximately 12 months, once the drilling and analytics are complete. Once the FS is completed and all the permits are in hand, an investment decision can be weighed regarding future expansions.

The BamaStar Graphite Project is ahead of the original 3-year development program as outlined in the earn-in Agreement. The NI 43-101 Mineral Resource Estimate and Technical report was filed in April 2023. In 2023, approximately 1,900 meters were drilled and a resource estimate update was completed to support a NI 43-101 PEA. An updated NI 43-101 and PEA was completed in Q4 2024. The PEA's techno-economic analysis presents a scenario with concentrates from both BamaStar and Santa Cruz providing feedstocks for the secondary processed, specialty-graphite products. The Study outlines the strategic production/commercial plan for South Star's planned downstream transformation plant for the manufacturing of battery-graphite and other specialty-graphite commercial products, in the southeastern USA. Now that the PEA has been completed, the Company intends to continue with field work and drilling programs required for the BamaStar FS, which is expected to be completed in 2026.

***Richard L. Pearce, a Director of South Star Battery Metals Corp., is a Qualified Person as defined by National Instrument 43-101 and was responsible for verifying the scientific and technical information herein and has read and approved this MD&A.***

## Summary Quarterly Results

The following table summarizes the quarterly results for each of the three-month periods ended:

In Canadian dollars	September 30, 2024	June 30, 2024	March 31, 2024	December 31, 2023
Total assets	\$ 29,171,951	\$ 30,630,367	\$ 34,361,422	\$ 29,224,344
Long-term liabilities	15,080,625	13,003,913	13,602,170	14,397,340
Working capital	872,976	1,626,247	6,157,923	3,779,431
Net loss	(2,292,748)	(2,037,778)	(1,510,409)	(1,325,614)
Basic and diluted loss per share	(0.04)	(0.04)	(0.03)	(0.03)

In Canadian dollars	September 30, 2023	June 30, 2023	March 31, 2023	December 31, 2022
Total assets	\$ 30,696,096	\$ 26,811,613	\$ 27,119,052	\$ 26,471,888
Long-term liabilities	14,906,819	14,197,633	14,680,087	14,257,266
Working capital	8,384,663	8,585,931	1,460,770	16,318,359
Net loss	(1,516,702)	(1,311,110)	(858,009)	(2,244,065)
Basic and diluted loss per share	(0.04)	(0.04)	(0.03)	(0.08)

Over fiscal 2022, the Company worked to finance the Phase 1 operations of the Santa Cruz Graphite Project through equity financings and the Stream Agreement culminating in the Phase 1 Stream closing in Q4 2022 resulting in a bump to total assets and long-term liabilities in the three months ended December 31, 2022. Additionally, the Company completed its first drill program on the BamaStar Graphite Project. The year ended December 31, 2023 reflects the development of the Santa Cruz Graphite Project. Additionally, the Company published a maiden NI 43-101 technical report on to the BamaStar project which included a maiden resource estimate as disclosed above. In the three months ended March 31, 2024 and June 30, 2024, the Company continued its work into the development through to substantial completion of the construction of the Santa Cruz plant. The loss for the three months ended June 30, 2024 and September 30, 2024 has increased over prior periods due to the expansion of the team at all levels of the organization, and as a result of an overall higher level of activity as the Company invests in its two main projects.

## Results of Operations

### *Results for the three months ended September 30, 2024, and 2023*

During the three months ended September 30, 2024, the Company incurred a net loss of \$2,298,748 as compared to a net loss of \$1,516,702 for the three months ended September 30, 2023. Significant items making up the loss include:

- Consulting and management fees of \$264,139 (2023 - \$192,469) which captures the costs of the CEO, CFO and supporting accounting staff as well as additional support in the current period with respect to the BamaStar operations. The increase from prior period relates to the addition of corporate secretarial support, support for the Alabama operations and the Company's Vice President of Operations.
- Exploration and evaluation expenditures of \$665,137 (2023 - \$704,410) related to expenditures on the BamaStar Graphite Project in Alabama, U.S. Expenditures vary with exploration projects in progress. In the current period expenditures relate to the PEA study in progress and completed shortly after period end. In the prior period, the Company completed its maiden technical report.
- Investor services expense of \$19,852 (2023 - \$58,453) reflected marketing programs and resources during the respective periods. Expenditures have decreased overall as the Company ended its contract with the main investor relations provider in the first quarter of fiscal 2024.
- Professional fees of \$138,013 (2023 - \$9,813) include legal, tax and audit fees. In the current period, the Company incurred costs with respect to interim audit procedures, and general legal support.
- Security and site operating costs of \$177,170 (2023 - \$nil) relate to on site operating costs at the Santa Cruz Mine.

- Share-based payments expense of \$61,462 (2023 - \$34,391) relates to the value on vesting restricted share units in the period as a non-cash expense.
- Travel, vehicle and transportation costs of \$71,136 (2023 - \$110,354) has include activity in Brazil, and attendance at industry events.
- Wages and support staff of \$359,045 (2023 - \$180,079) relates to costs for staff in Brazil to support operations. The team has expanded to support the increased level of activity and needed support systems for the Santa Cruz Graphite Project.
- Finance expense of \$413,225 (2023 - \$406,349) materially relates to the recognition of a non-cash financing expense on the deferred revenue of the stream pursuant to accounting standards.
- The Company earned interest income of \$46,959 (2023 - \$150,278) in the three months ended September 30, 2024. The Company has had lower cash balances in the current fiscal period resulting in lower interest income.

*Results for the nine months ended September 30, 2024, and 2023*

During the nine months ended September 30, 2024, the Company incurred a net loss of \$5,846,935 as compared to a net loss of \$3,685,822 for the nine months ended September 30, 2023. Significant items making up the loss include:

- Business development costs of \$101,406 (2023 - \$72,317) include market studies and graphite market support.
- Consulting and management fees of \$802,212 (2023 - \$454,690) which captures the costs of the CEO, CFO, VP Operations and supporting accounting staff as well as additional support in the current period with respect to the BamaStar operations. The increase from prior period relates to the addition of corporate secretarial support, support for the Alabama operations and VP Operations.
- Exploration and evaluation expenditures of \$1,406,151 (2023 - \$1,432,011) related to expenditures on the BamaStar Graphite Project in Alabama, U.S. Expenditures vary with exploration projects in progress. In the current period expenditures materially related to the PEA filed in October 2024. In the prior period, the Company completed its maiden technical report.
- Information technology costs of \$131,274 (2023 - \$60,789) include support services to implement enhanced systems at Santa Cruz and ongoing computer and service costs.
- Investor services expense of \$120,586 (2023 - \$274,100) reflected marketing programs and resources during the respective periods. Expenditures have decreased overall with the lapse of the contract with the Company's main investor relations contract.
- Professional fees of \$484,793 (2023 - \$144,957) include ongoing legal and audit fees. In the current period, the Company completed its annual audit and compliance tax filings under an increased level of activity. Legal fees were with respect to guidance around contracts as well as extending underlying lease agreements at the BamaStar Graphite Project.
- Security and site operating costs of \$177,170 (2023 - \$nil) relate to on site operating costs at the Santa Cruz Mine.
- Share-based payments expense of \$226,787 (2023 - \$58,315) relates to the value on vesting restricted share units in the period as a non-cash expense.
- Travel, vehicle and transportation costs of \$269,553 (2023 - \$180,237) has increased due to increased activity in Brazil, and attendance at industry events.
- Wages and support staff of \$949,062 (2023 - \$429,899) relates to costs for staff in Brazil to support operations. The team in Brazil expanded through September 30, 2024 as the Company hired to meet staffing levels for commercial operations.
- Finance expense of \$1,225,966 (2023 - \$1,209,895) materially relates to the recognition of a non-cash financing expense on the deferred revenue of the stream pursuant to accounting standards.
- The Company earned interest income of \$190,160 (2023 - \$619,535) in the nine months ended September 30, 2024. The Company had lower cash balances at the beginning of the current fiscal year resulting in lower interest income and endeavours to obtain a return on cash and cash equivalents.

Additionally, the Company incurred a non-recurring recovery of \$137,573 in the nine months ended September 30, 2023 by issuing RSUs vesting through April 2024 to the CEO in settlement of a bonus accrued as of December 31, 2022.

**Liquidity**

The Company's mineral exploration and development activities do not currently provide a source of income and we therefore have a history of losses, and an accumulated deficit. However, given the nature of our business, the results of operations as reflected in the net losses and losses per share do not provide a complete interpretation of our valuation.

As of September 30, 2024, the Company had working capital of \$872,976. This balance included a cash and cash equivalents balance of \$3,226,442 (December 31, 2023 - \$6,451,034) to settle current liabilities of \$3,017,917 (December 31, 2023, - \$2,784,962). Included in short-term liabilities is \$1,433,713 (December 31, 2023 - \$585,363) in deferred revenue related to the estimated deliveries of graphite under the Stream Agreement over the next twelve month period.

With the exception of the Phase 1 Stream, the Company has financed its operations primarily through the issuance of common shares and convertible debentures. As needed, the Company will continue to seek capital to fund its business objectives which include exploration and engineering studies related to both the Santa Cruz and the BamaStar Graphite Projects. The Company will require additional capital to execute its business objectives.

**Operating Activities:** The Company does not yet generate cash from active operating activities. The Company used net cash for operating activities for the period ended September 30, 2024, of \$4,281,389 (2023 - \$2,651,024). The operating Company does not generate revenue at this time and operating activities reflect cash consumed in its regular development, exploration, and corporate activities.

**Investing Activities:** Net cash used by the Company for investing activities for the period ended September 30, 2024, was \$5,512,518 (2023 - \$8,447,882). The Company invested \$6,357,817 (2023 - \$6,876,641) into construction of assets and mine development costs at the Santa Cruz Graphite Mine Project. Additionally, the Company made payments, net of applied amounts, of \$1,487,573 (2023 - \$901,291) toward the purchase of machinery and equipment. In the nine months ended September 30, 2024, the Company spent \$642,274 (2023 - \$669,950) to complete its land purchase obligation pursuant to the contractual payment plan to acquire land at the Santa Cruz site, inclusive of transfer taxes to register title.

**Financing Activities:** For the nine months ended September 30, 2024, cash generated from financing activities was \$6,776,114 (2023 - \$4,478,843). The Company received \$6,697,103 (2023 - \$4,590,748) from issuance of shares and paid \$228,835 (2023 - \$96,176) in share issuance costs. Additionally, the Company received \$318,000 (2023 - \$nil) from the exercise of warrants.

The financial statements have been prepared on a going concern basis which assumes that the Company will be able to realize its assets and discharge its liabilities in the normal course of business for the foreseeable future. The Company's continuing operations rely on the ability of the Company to continue to raise capital until it achieves profitable operations.

**Capital Resources**

The Company entered into the Stream Agreement with the Phase 1 Stream closing in November 2022. Consequently, the Company recognized a deferred revenue obligation of US\$10 million which is presented as liability on the Statement of Financial Position.

The Company will continue to seek capital to advance its business objectives as defined above in "Outlook". In the past the Company has raised capital in the public markets by issuing common shares pursuant to private placements and through loans payable. The Company does not presently utilize any quantitative measures to monitor its capital and is not subject to externally imposed capital requirements.

**Off-Balance Sheet Arrangements**

As September 30, 2024, the Company had no material off-balance sheet arrangements such as guarantee contracts, contingent interest in assets transferred to an entity, derivative instruments obligations or any obligations that trigger financing, liquidity, market, or credit risk to the Company.

**Related Party Transactions**

Key management personnel consist of the officers of the Company and the Company's Board of Directors. During the period ended September 30, 2024, the Company:

- a) Paid or accrued management and consulting fees of \$90,448 (2023 - \$82,178) to Red Fern Consulting Ltd., a company in which the Chief Financial Officer ("CFO") is a significant shareholder, for services provided by the CFO and accounting team;
- b) Paid or accrued management and consulting fees of \$214,074 (2023 - \$185,642) to the Chief Executive Officer of the Company and employment benefits of \$12,347 (2023 - \$7,868) to the CEO of the Company; and
- c) Paid or accrued management and consulting fees of \$107,977 (2023 - \$nil) to a consulting company owned by the Vice President of Operations of the Company.

Included in accounts payable and accrued liabilities as at September 30, 2024, is \$98,117 (December 31, 2023 - \$126,915) due to officers, directors or companies with a director in common for cash advances, unpaid consulting fees and unpaid expenses. The amounts due to related parties are unsecured, non-interest bearing and due on demand.

During the year ended December 31, 2023, the Company granted 257,436 RSUs to the CEO in settlement of a compensation bonus in the amount of US\$101,068 recorded as of December 31, 2022. The RSUs vest over the period of one year and has been exercised during the nine months period ended September 30, 2024. Consequently, the Company recorded a recovery of \$nil (2023 - \$137,573) during the period ended September 30, 2024, for the amount previously recorded to accounts payable for management bonus compensation in the year ended December 31, 2023.

During the period ended September 30, 2024, the Company recorded share-based payments of \$226,787 (2023 - \$58,315) for RSUs issued to key management personnel.

**Proposed Transactions**

There are no proposed transactions, defined as a proposed asset or business combination or disposition, under consideration.

**Changes in Accounting Policies including Initial Adoption**

The Company's accounting policies are described in Note 4 of its annual audited financial statements for the year ended December 31, 2023. In the nine months ended September 30, 2024, the Company adopted an accounting policy to address the recognition of consumables inventory:

*Inventory*

Inventory includes stockpiled graphite ore and materials and supplies. Cost of stockpiled graphite ore includes all direct costs incurred in production including direct labor and materials, contracted services, and related overhead costs. All inventories are valued at the lower of average cost or net realizable value, with net realizable value determined with reference to estimated sales prices, less estimated future production costs to convert inventories into graphite concentrate. If the carrying value exceeds the net realizable value, a write-down is recognized. The write-down may be reversed in a subsequent period if the circumstances which caused the write-down no longer exist.

**Financial Instruments and Risk Management**

Financial assets and financial liabilities are measured on an ongoing basis at fair value or amortized cost. The disclosures in the notes to these financial statements describe how the categories of financial instruments are measured and how income and expenses, including fair value gains and losses, are recognized.



As at September 30, 2024, the carrying value and fair values of the Company's financial instruments, with comparative figures for December 31, 2023 are shown in the table below:

	September 30, 2024		December 31, 2023	
	Fair Value	Carrying Value	Fair Value	Carrying Value
<b>Financial assets</b>				
Cash and cash equivalents	\$ 3,226,442	\$ 3,226,442	\$ 6,451,034	\$ 6,451,034
<b>Financial liabilities</b>				
Accounts payable	1,584,204	1,584,204	1,563,302	1,563,302
Land purchase liability	-	-	654,701	625,962

### Financial risk factors

The Company's risk exposures and the impact on the Company's financial instruments are summarized below:

#### *Credit risk*

Credit risk is the risk of potential loss to the Company if the counterparty to a financial instrument fails to meet its contractual obligations. The Company's credit risk is primarily attributable to its liquid financial assets including cash and receivables. The Company limits exposure to credit risk on liquid financial assets through maintaining its cash with high-credit quality financial institutions.

#### *Liquidity risk*

The Company's approach to managing liquidity risk is to try and have sufficient liquidity to meet liabilities when due. As at September 30, 2024, the Company had a cash and cash equivalents balance of \$3,226,442 (December 31, 2023 - \$6,451,034) to settle current liabilities of \$3,017,917 (December 31, 2023 - \$2,784,962). All of the Company's accounts payable and accrued liabilities have contractual maturities of 30 days or due on demand and are subject to normal trade terms. Deferred revenue included in short-term liabilities is an estimate of value for graphite deliveries under the Stream Agreement for the next twelve months.

#### *Market risk*

Market risk is the risk of loss that may arise from changes in market factors such as interest rates, foreign exchange rates, and commodity and equity prices. The Company does not have a practice of trading derivatives.

#### *Currency risk*

The Company's main project is in Brazil with local operations. As such, the Company is exposed to foreign currency risk. Fluctuations in the exchange rate between the Canadian dollar, United States dollar and the Brazilian real (R\$) may have an adverse effect on the Company's business. The Company does not enter into any foreign exchange hedging contracts. As at September 30, 2024, the Company held net financial instruments liabilities in Brazil of R\$39,344 (CAD\$9,700). A 10% movement in the foreign exchange rate would have impacted other comprehensive loss by approximately \$970 as the Brazilian real is the functional currency of that entity. Foreign currency risk will have an impact the Company's net loss and net financial instruments.

#### *Interest rate risk*

The Company's financial assets exposed to interest rate risk consist of cash balances. The Company's current policy is to invest excess cash in high-interest bank accounts and investment-grade short-term deposit certificates issued by its banking institutions. The Company periodically monitors the investments it makes and is satisfied with the credit ratings of its banks. As at September 30, 2024, the Company had deposits of \$781,581 (R\$3,157,903) in interest-bearing cash equivalents in Brazil. As at September 30, 2024, the Company did not have any interest-bearing debt.

*Price risk*

The Company is exposed to price risk with respect to commodity and equity prices. The Company closely monitors commodity prices, individual equity movements, and the stock market to determine the appropriate course of action to be taken by the Company.

**Outstanding Share Data**

As at the date of this report, the Company had 52,640,227 common shares issued and outstanding. The Company has 334,035 restricted share units (RSUs) outstanding and vesting on January 5, 2025.

The following incentive stock options and share purchase warrants were outstanding at the date of this report:

	Number	Exercise price	Expiry date
<b>Stock options</b>			
	100,000	\$ 0.62	December 7, 2024
	462,000	0.275	August 4, 2025
	835,000	0.41	August 24, 2027
	208,000	0.74	December 21, 2028
	1,605,000		
<hr/>			
	Number	Exercise price	Expiry date
<b>Share purchase warrants</b>			
	1,200,000	\$ 0.72	November 22, 2025 <sup>(2)</sup>
	3,468,890	1.25	June 23, 2027 <sup>(1)</sup>
	4,365,096	1.25	November 3, 2027 <sup>(1)</sup>
	69,194	0.53	November 3, 2027 <sup>(1)</sup>
	4,390,000	1.25	November 15, 2027 <sup>(1)</sup>
	73,300	0.53	November 15, 2027 <sup>(1)</sup>
	434,277	1.25	January 12, 2028 <sup>(1)</sup>
	8,685	0.53	January 12, 2028 <sup>(1)</sup>
	127,925	1.25	May 23, 2028 <sup>(1)</sup>
	1,159,981	1.25	July 15, 2028 <sup>(1)</sup>
	7,373,884	1.25	August 11, 2028 <sup>(1)</sup>
	22,671,232		

Outstanding warrants are subject to acceleration clause: If during a period of ten consecutive trading days between the date that is four (4) months following the issuance and the expiry of the Warrants the daily volume weighted average trading price of the common shares of the Company on the TSXV (or such other stock exchange where the majority of the trading volume occurs) exceeds

<sup>(1)</sup> C\$2.50, or

<sup>(2)</sup> C\$1.80,

respectively, on each of those ten consecutive days, the Company may, within 30 days of such an occurrence, give written notice to the holders of the Warrants that the Warrants will expire at 4:00 p.m. (Vancouver time) on the 30th day following the giving of notice unless exercised by the holders prior to such date. Upon receipt of such notice, the holders of the Warrants will have 30 days to exercise their Warrants. Any Warrants which remain unexercised at 4:00 p.m. (Vancouver time) on the 30th day following the giving of such notice will expire at that time.

## RISK FACTORS

The securities of the Company should be considered a highly speculative investment and investors should carefully consider all of the information disclosed in this MD&A and the Company's profile on the SEDAR+ website at [www.sedarplus.ca](http://www.sedarplus.ca) prior to making an investment in our securities. In addition to the other information presented in this MD&A, the following risk factors should be given special consideration when evaluating an investment in any of our securities.

There is no assurance that risk management steps taken will avoid future loss due to the occurrence of the risks described below (or incorporated by reference herein) or other unforeseen risks. If any of the risks described below actually occur, then the Company's business, financial condition and operating results could be adversely affected.

The risks and uncertainties described or incorporated by reference herein are not the only ones the Company faces. Additional risks and uncertainties, including those that the Company is unaware of or that are currently deemed immaterial, may also adversely affect the Company and its business. Investors should consult with their professional advisors to assess any investment in the Company.

### Market Disruption and Geopolitical Risks

Market disruption can be caused by economic, financial, or political events and factors, including but not limited to, international wars or conflicts (including Russia's military invasion of Ukraine), geopolitical developments (including trading and tariff arrangements, sanctions and cybersecurity attacks), instability in regions such as Asia, Eastern Europe and the Middle East, terrorism, natural disasters and public health epidemics.

The extent and duration of such events and resulting market disruptions cannot be predicted but could be substantial and could magnify the impact of other risks to the Company. These and other similar events could adversely affect the U.S. and foreign financial markets and lead to increased market volatility, reduced liquidity in the securities markets, significant negative impacts on issuers and the markets for certain securities and commodities and/or government intervention. They may also cause short- or long-term economic uncertainties in the United States and worldwide. Further, due to closures of certain markets and restrictions on trading certain securities, the value of securities of the Company could be significantly impacted, which could lead to such securities being valued at zero.

### Negative Operating Cash Flow

The Company reported negative operating cash flow for the financial period ended September 30, 2024. As a result of the expenses to be incurred by the Company in connection with its business objectives for the development of the Santa Cruz Graphite Project, the Company anticipates that negative operating cash flows will continue until profitable commercial operations are achieved. Accordingly, the Company will be using substantial additional capital in order to fund its future exploration and development activities for its Santa Cruz Graphite Project. Full funding has been arranged through the Streaming Agreement with SRSR to fund Phase 1 and partial funding for Phase 2 of the Company's mine construction on the Santa Cruz Graphite Project. To date, however, the Company has received US\$10,000,000 pursuant to the terms of Phase 1 of the Streaming Agreement. Payment of Phase 2 proceeds by SRSR is subject to certain additional conditions, including achieving commercial operations under Phase 1. There is no guarantee that these conditions will be met or that the Company will receive the Phase 2 proceeds from SRSR. There is no guarantee that alternative funding sources for mine construction will be available to the Company. Any failure to obtain additional financing or failure to achieve profitability and positive operating cash flows will have a material adverse effect on its financial condition and results of operations.

### Phase 2 Closing

The Stream Agreement provides that the Phase 2 closing and the receipt by the Company of a minimum of an additional US\$9.0 million and a maximum US\$18.0 million is conditional upon the satisfaction by the Company of certain conditions precedent which include without limitation, completion of a Phase 2 study, receipt by the Company of sufficient available cash (together with the Phase 2 deposit and any committed financing) to complete the development of the Santa Cruz Graphite Project; receipt by the Company of binding quotations from vendors representing quotations for all material equipment required for the Phase 2 commencement of commercial production in accordance with the Phase 2 study; receipt of a cost to complete certificate in respect of the Santa Cruz Graphite Project; and the production and sale of at least 500 tonnes of graphite products which meet or exceed the stated

minimum graphite specifications per month for a period of four consecutive months; as well as satisfactory due diligence by SRSR and receipt of the approval of the investment committee of SRSR. There is no guarantee the Company will be able to achieve the fulfilment of the conditions precedent.

### **Expropriation Event**

The Stream Agreement provides that if there is an expropriation event and the Company or any of its affiliates receives compensation the net proceeds received are to be shared with SRSR in proportion to their respective interests.

### **Stream Agreement Share Pledges**

The Stream Agreement provides that upon the occurrence of certain events of default which include, among other things, failure to make delivery of graphite products as required under the Stream Agreement, failure to make payments to SRSR as its sales agent for such graphite products and a breach of the Company's covenants, subject to customary cure periods (where applicable) will result in the right of SRSR to, among other things, terminate the Stream Agreement and demand damages for its losses. The obligations of the Company and certain of its affiliates under the Stream Agreement and related documents are secured by the Stream Agreement Share Pledges. As a result if the Company or such affiliates are in default of such obligations the Company may lose its interest in and rights over its affiliates which own the Santa Cruz Graphite Project, among other interests/rights.

### **Additional Financing**

The continued development of the Company will require additional financing. There is no guarantee that the Company will be able to achieve its current business strategy. The Company intends to fund its business objectives by way of additional offerings of equity and/or debt financing as well as through anticipated positive cash flow from operations in the future. The failure to raise or procure such additional funds or the failure to achieve positive cash flow could result in the delay or indefinite postponement of current business objectives. There can be no assurance that additional capital or other types of financing will be available if needed or that, if available, will be on terms acceptable to the Company. If additional funds are raised by offering equity securities, existing shareholders could suffer significant dilution. The Company will require additional financing to fund its operations until positive cash flow is achieved.

As noted above under the heading "*Negative Operating Cash Flow*", funding has been arranged through the Streaming Agreement to fund mine construction on the Santa Cruz Graphite Project, but there is no guarantee that conditions applicable to delivery of proceeds under the Streaming Agreement will be met or that the Company will receive the Phase 2 proceeds from SRSR. There is no guarantee that alternative funding sources for mine construction will be available if the Company does not receive the proceeds under the Streaming Agreement.

### **Foreign Operations Risks**

Political and related legal and economic uncertainty may exist in the countries where the Company operates or may operate in the future. The Company's mineral exploration, development and mining activities may be adversely affected by political instability and changes to government regulation relating to the mining industry. Inherent risks with conducting foreign operations include, but are not limited to: renegotiation, cancellation or forced modification of existing contracts; expropriation or nationalization of property; changes in laws or policies or increasing legal and regulatory requirements of particular countries including those relating to taxation, royalties, imports, exports, duties, currency, or other claims by government entities, including retroactive claims and/or changes in the administration of laws, policies and practices; uncertain political and economic environments; war, terrorism, sabotage and civil disturbances; delays in obtaining or the inability to obtain or maintain necessary governmental permits or to operate in accordance with such permits or regulatory requirements; currency fluctuations; import and export regulations, including restrictions on the export of graphite or other minerals; limitations on the repatriation of earnings; and increased financing costs.

The Company operates in Brazil and has projects in Brazil and the United States. The Company cannot guarantee that changes will not be made in the government or laws of the jurisdictions in which the Company's operations are located or changes in the regulatory environment for mining companies in general or companies not domiciled in these countries, which could adversely and materially affect the Company.

## Government Regulations, Consents and Approvals

Exploration, development and mining activities are subject to laws and regulations governing health and work safety, employment standards, environmental matters, mine development, prospecting, mineral production, exports, taxes, labour standards, reclamation obligations and other matters. It is possible that future changes in applicable laws, regulations, agreements or changes in their enforcement or regulatory interpretation could result in changes in legal requirements or in the terms of permits and agreements applicable to the Company or its properties which could have a material adverse impact on the Company's operations and exploration programs and future development projects.

## Mineral Titles

Although the Company has legal ownership on key mining rights, there is no guarantee that title to such mineral property interests will not be contested or challenged. The Company's mineral property interests may be subject to prior unregistered agreements or transfers and ownership may be affected by undetected irregularities. Mining rights may be contested and, if such contest is successful, the development of the Company's assets and/or operations may be adversely affected.

## Exploration and Development

Mineral exploration and development of mineral properties involves a high degree of risk, and few properties which are explored are ultimately developed into producing mines. There is no assurance that the Company's exploration and development activities will result in any discoveries of commercial bodies of minerals. The long-term profitability of the Company's operations will be in part directly related to the cost and success of its exploration programs, which may be affected by a number of factors. Unusual or unexpected formations, formation pressures, fires, power outages, labour disruptions, flooding, explosions, tailings impoundment failures, cave-ins, landslides and the inability to obtain adequate machinery, equipment or labour are some of the risks involved in mineral exploration and exploitation activities.

Substantial expenditures are required to establish mineral reserves and resources through drilling, to develop metallurgical processes to extract the resources and, in the case of new properties, to develop the extraction and processing facilities and infrastructure at any site chosen for mining. Although substantial benefits may be derived from the discovery of a major deposit, no assurance can be given that resources will be discovered in sufficient quantities to justify commercial operations or that the funds required for development can be obtained on a timely basis. The commercial viability of a mineral deposit once discovered is also dependent on a number of factors, some of which are the particular attributes of the deposit, such as size, grade and proximity to infrastructure, as well as metal prices. Most of the above factors are beyond the control of the Company. There can be no assurance that the Company's mineral exploration activities will be successful. In the event that such commercial viability is never attained, the Company may seek to transfer its property interests or otherwise realize value or may even be required to abandon its business and fail as a "going concern".

## Permits & Licenses

The operations of the Company may require licenses and permits from various governmental authorities to carry out exploration, development and operations at its projects. Obtaining permits can be a complex and time-consuming process. There can be no assurances that the Company will be able to obtain all necessary licenses and permits that may be required to carry out exploration, development and mining operations at its projects, in a timely manner or at all. Failure to obtain such licenses and permits may adversely affect the Company's business as the Company would be unable to legally conduct its intended exploration work, which may result in it losing its interest in the subject property. Any failure to comply with permits and applicable laws and regulations, even if inadvertent, could result in the interruption or closure of operations or material fines, penalties or other liabilities. In addition, the requirements applicable to sustain existing permits and licenses may change or become more stringent over time and there is no assurance that the Company will have the resources or expertise to meet its obligations under such licenses and permits.

Phases 1, 2 and 3 definitive mining license ("Concessão de Lavra") are approved as well as the Environmental Licenses for the Concessions in the county of Itabela. The Company has paid the municipal building permit for construction of the Phase 1 plant, mine and infrastructure and which was received in the year ended December 31, 2022.

The Company submitted the consolidated Phases 1, 2 & 3 environmental reports and documentation in April 2023 with the objective of obtaining both the mining and environmental permits and licenses required for Phases 2 & 3. In February 2024, the Company received its environmental permits for Phases 2 & 3 for five of its mining claims, including all the main claims currently planned for near-term production. The Phases 2 and 3 environmental permits were approved with conditions generally in line with the Phase 1 permit and are consistent with the current environmental and community engagement programs already underway. The Environmental Permit is reviewed and renewed every four years.

Over the course of its life of mine, the Company will have to obtain additional environmental permits and mining licenses to expand operations. The Company will have to apply for water rights relative to its land access. Environmental and mineral resource legislation are evolving in a manner that may, in the future, require stricter standards and enforcement, 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.

### **Production**

There would be significant risks associated with the commencement of mining operations at the Company's Santa Cruz Graphite Project. The Company does not have a history of producing graphite from the Santa Cruz Graphite Project and there is no guarantee that the Company will be able to develop a profitable mining operation on the Santa Cruz Graphite Project. Advancing the Santa Cruz Graphite Project to the production stage will involve additional capital and time. The Company is subject to risks associated with developing and establishing a mining operation on the Santa Cruz Graphite Project, including:

- the availability and cost of mining and processing equipment and other supplies;
- the timing and cost of the construction of mining and processing facilities;
- the availability and cost of hiring management and administrative personnel and skilled labour required to run a mining operation on the Santa Cruz Graphite Project;
- increases in projected costs due to differences in grade of mineralized material, metallurgical performance, revisions to mine plans or results from reprocessing heap material;
- increases in the costs of labour, fuel, electricity, and other materials and supplies;
- the availability of funds to finance construction and development activities;
- the ability to extract sufficient graphite from resources to support a profitable mining operation on the Santa Cruz Graphite Project;
- potential opposition from non-governmental organizations, local groups or local inhabitants that may delay or prevent development activities; and
- compliance with environmental and other governmental approval and permit requirements for the Santa Cruz Graphite Project.

It is common for mine development programs to experience unexpected problems and delays prior to commencement of commercial operations. In addition, the Company's management and workforce will need to be expanded, and support systems for the Company's workforce will have to be established. This could result in delays in the commencement of mineral production and increased costs of production. As a result, the Company may not be successful in establishing a mining operation or profitably producing graphite from the Santa Cruz Graphite Project.

## Technical Estimates

Mineral resource and reserve estimates and the economic analysis contained in the Santa Cruz Graphite Report are based on interpretation and assumptions. Unless otherwise indicated, mineral resource and reserve estimates and economic analysis presented are based upon estimates made by independent consulting geologists.

Estimates can be imprecise and depend upon geological interpretation and statistical inferences drawn from drilling and sampling, which may prove to be unreliable. We cannot assure you that the estimates are accurate or that mineralized materials from the Santa Cruz Graphite or BamaStar Projects can be mined or processed profitably.

Any material changes in mineral resource and reserve estimates and grades may affect the economic viability of placing the Santa Cruz Graphite Project into production and the Santa Cruz Graphite Property's return on capital.

As the Company has not commenced actual production from the Santa Cruz Graphite Project, mineral resources may require adjustments or revisions. In addition, the grade of mineralized material ultimately mined, if any, may differ from that indicated by our Santa Cruz Graphite Project. Graphite recovered in small scale tests may not be duplicated on a production scale.

The mineral resource and reserve estimates the Santa Cruz Graphite Project have been determined and valued based on assumed future prices for graphite, cut-off grades and operating costs that may prove to be inaccurate. Extended declines in prices for graphite may render our estimates uneconomic and result in reduced reported mineralization or adversely affect our determinations of commercial viability. Any material reductions in estimates of mineralization, or of our ability to profitably extract graphite from our resources, could have a material adverse effect on our share price and the value of the Santa Cruz Graphite Project.

## Title to Assets

Although the Company has or will receive title for any concessions in which it has or will acquire a material interest, there is no guarantee that title to such concessions will be not challenged. The Company can never be certain that it or its option partners will have valid title to its mineral properties. Mineral properties sometimes contain claims or transfer histories that examiners cannot verify, and transfers under foreign law are often complex. The Company may or may not carry title insurance on its properties. In some countries, the system for recording title to the rights to explore, develop and mine natural resources is such that a title provides only minimal comfort that the holder has title. Also, in many countries, claims have been made and new claims are being made by aboriginal peoples that call into question the rights granted by the governments of those countries. A successful claim that the Company does not have title to a property could cause the Company to lose its right to that property, perhaps without compensation for its prior expenditures relating to the property.

## Surface Rights and Access

Although the Company acquires the rights to some or all of the minerals in the ground subject to the mineral tenures that it acquires, or has a right to acquire, in most cases it does not thereby acquire any rights to, or ownership of, the surface to the areas covered by its mineral tenures. In such cases, applicable mining laws usually provide for rights of access to the surface for the purpose of carrying on mining activities, however, the enforcement of such rights through the courts can be costly and time consuming. It is necessary to negotiate surface access or to purchase the surface rights if long-term access is required. There can be no guarantee that, despite having the right at law to access the surface and carry on mining activities, the Company will be able to negotiate satisfactory agreements with any such existing landowners/occupiers for such access or purchase of such surface rights, and therefore it may be unable to carry out planned mining activities. In addition, in circumstances where such access is denied, or no agreement can be reached, the Company may need to rely on the assistance of local officials or the courts in such jurisdiction the outcomes of which cannot be predicted with any certainty. The inability of the Company to secure surface access or purchase required surface rights could materially and adversely affect the timing, cost or overall ability of the Company to develop the Santa Cruz Graphite Project.

In February 2022, the Company negotiated the land package acquisition on the Santa Cruz Graphite Project required for the Phase 1 operations. The acquisition agreement calls for a series of payments to be made over a period of 2 to 3 years. Title to the land package will transfer upon completion of the required payments, but the Company has access

and complete use of the property for operations and exploration. The Company will engage in additional negotiations over the life of mine of the Santa Cruz Graphite Project which may or may not be successful.

### **Requirement for New Capital**

The Company will raise, by way of debt or equity financing or other means, considerable funds to meet its capital needs in the future to expand production. There is no assurance that sufficient funding will be available to the Company for further exploration and development of the Santa Cruz Graphite Project or the Company's other property interests or to fulfill the Company's obligations under applicable agreements. There can be no assurance that the Company will be able to obtain adequate financing in the future or that the terms of such financing will be favorable. Failure to obtain such additional financing could result in delay or indefinite postponement of further exploration and development of the Santa Cruz Graphite Project and the Company's other projects. It is possible such additional capital will be raised through the issuance of additional equity which will result in dilution to the Company's shareholders.

As noted above under the heading "*Negative Operating Cash Flow*", funding has been arranged through the Streaming Agreement to fund mine construction on the Santa Cruz Graphite Project, but there is no guarantee that conditions applicable to delivery of proceeds under the Streaming Agreement will be met or that the Company will receive the proceeds from SRSR. There is no guarantee that alternative funding sources for mine construction will be available if the Company does not receive the proceeds under the Streaming Agreement.

### **Dilution**

The Company will require additional financing in the future. The Company may issue securities on less than favourable terms to raise sufficient capital to fund its business plan. Any transaction involving the issuance of equity securities or securities convertible into Common Shares would result in dilution, possibly substantial, to present and prospective holders of Common Shares.

### **Operating Hazards and Risks**

Exploration for natural resources involves many risks which even a combination of experience, knowledge and careful evaluation may not be able to overcome. Operations in which the Company has a direct or indirect interest will be subject to all the hazards and risks normally incidental to exploration, development and production of resources, any of which could result in work stoppages, damage to persons or property and possible environmental damage. Although the Company has or may obtain liability insurance in an amount which it considers adequate, the nature of these risks is such that liabilities might exceed policy limits, the liabilities and hazards might not be insurable against, or the Company might not elect to insure itself against such liabilities due to high premium costs or other reasons, in which event the Company could incur significant costs that could have a material adverse effect upon its financial condition.

### **Fluctuating Commodity Prices**

The Company's future revenues, if any, are expected to be in large part derived from the extraction and sale of graphite and other metals or interests related thereto. The price of those commodities has fluctuated widely, particularly in recent years, and is affected by numerous factors beyond the Company's control including international, economic and political trends, expectations of inflation, currency exchange fluctuations, interest rates, global or regional consumptive patterns, speculative activities and increased production due to new extraction developments and improved extraction and production methods. Current and future price declines could cause commercial production to be impracticable. The Company's revenues and earnings could also be affected by the prices of other commodities. The effect of these factors on the price of graphite, and therefore the economic viability of any of the Company's exploration projects, cannot accurately be predicted.



## **Development of Mineral Projects into Commercially Viable Mines**

Development projects require significant expenditures during the development phase before production is possible. Development projects are subject to the completion of successful feasibility studies and environmental assessments, issuance of necessary governmental permits and availability of adequate financing. The economic feasibility of development projects is based on many factors such as: estimation of Mineral Reserves, anticipated metallurgical recoveries, environmental considerations and permitting, future mineral prices, and anticipated capital and operating costs of these projects. The Santa Cruz Graphite Project has no operating history upon which to base estimates of future production and cash operating costs. Particularly for development projects, estimates of proven and probable mineral reserves and cash operating costs are, to a large extent, based upon the interpretation of geologic data obtained from drill holes and other sampling techniques, and economic studies that derive estimates of cash operating costs based upon anticipated tonnage and grades of ore to be mined and processed, the configuration of the ore body, expected recovery rates from the ore, estimated operating costs, anticipated climatic conditions and other factors. As a result, it is possible that actual capital and operating costs and economic returns will differ significantly from those currently estimated for a project prior to production.

## **Taxation**

The Company has operations and conducts business in multiple jurisdictions and it is subject to the taxation laws of each such jurisdiction. These taxation laws are complicated and subject to change. The Company may also be subject to review, audit and assessment in the ordinary course. Any such changes in taxation law or reviews and assessments could result in higher taxes being payable or require payment of taxes due from previous years, which could adversely affect the Company's profitability. Taxes may also adversely affect the Company's ability to repatriate earnings and otherwise deploy its assets.

## **Environmental Factors**

The Company's operations are subject to environmental regulations promulgated by government agencies from time to time. Environmental legislation provides for restrictions and prohibitions of spills, release or emission of various substances produced in association with certain mining industry operations, such as seepage from tailing disposal areas, which could result in environmental pollution. Failure to comply with such legislation may result in imposition of fines and penalties. In addition, certain types of operations require submissions to and approval of environmental impact assessments. Environmental legislation is evolving in a manner which means stricter standards and enforcement. These laws and regulations will require the Company to acquire permits and other authorizations for certain activities. There can be no assurance that the Company will be able to acquire such necessary permits or authorizations on a timely basis, if at all. Fines and penalties for non-compliance are also more stringent. Environmental assessments of proposed projects carry a heightened degree of responsibility for companies and directors, officers and employees. The cost of compliance with changes in governmental regulations has a potential to reduce the profitability of operations. The Company intends to fully comply with all environmental regulations.

## **Reclamation Costs**

Land reclamation requirements are generally imposed on mineral exploration companies (as well as companies with mining operations) in order to minimize long term effects of land disturbance, and the Company is subject to such requirements at its mineral properties. Decommissioning liabilities include requirements to control dispersion of potentially deleterious effluents and reasonably re-establish pre-disturbance land forms and vegetation.

In order to carry out reclamation obligations arising from exploration and potential development activities, the Company may be required to allocate financial resources that might otherwise be spent on further exploration and development programs. Reclamation costs are uncertain and planned expenditures may differ from the actual expenditures required. If the Company is required to carry out unanticipated reclamation work, its financial position could be adversely affected.

## **Competition**

The resource industry is intensely competitive in all its phases, and the Company competes with many other companies possessing greater financial resources and technical facilities than it has. Competition could adversely affect the Company's ability to acquire suitable properties for exploration in the future.

## Global Financial Conditions

Market events and conditions, including disruptions in the Canadian, United States and international credit markets and other financial systems, whether due to the COVID 19 pandemic, the current conflict in Ukraine or other factors, and the continued volatility of the Canadian, United States and global economic conditions, could, among other things, impede access to capital or increase the cost of capital, which would have an adverse effect on the Company's ability to fund its working capital and other capital requirements. Notwithstanding various actions by the United States and foreign governments, concerns about the general condition of the capital markets, financial instruments, banks, investment banks, insurers and other financial institutions continue to be volatile and unpredictable. In addition, general economic indicators have deteriorated, including low levels of consumer sentiment and limited economic growth on a global basis. These disruptions in the current credit and financial markets have had, and could continue to have a material adverse impact on a number of financial institutions and have limited access to capital and credit for many companies, particularly junior resource enterprises such as the Company. These disruptions could, among other things, make it more difficult for the Company to obtain, or increase its cost of obtaining, capital and financing for its operations. The Company's access to additional capital may not be available on terms acceptable to the Company or at all.

## Political and Economic Instability

The Company may acquire properties located in countries where mineral exploration activities may be affected by varying degrees of political instability and haphazard changes in government regulations such as tax laws, business laws and mining laws. Any changes in regulations or shifts in political conditions would be beyond the control of the Company and may adversely affect its business. Operations may be affected in varying degrees by government regulations with respect to restrictions on production, price control, export controls, income taxes, and expropriation of property, environmental legislation, and mine safety.

The Company may also be affected by possible economic instability. The risks include, but are not limited to, terrorism, military repression, extreme fluctuations in currency exchange rates and high rates of inflation. Changes in resource development or investment policies or shifts in political attitude in certain countries may adversely affect the Company's business. Operations may be affected in varying degrees by government regulations with respect to restrictions on production, price controls, export controls, income taxes, expropriation of property, maintenance of claims, environmental legislation, land use, land claims of local people, water use and mine safety. The effect of these factors cannot be accurately predicted.

## Anti-Bribery Laws

The Canadian Corruption of Foreign Public Officials Act and the U.S. Foreign Corrupt Practices Act and anti-bribery laws in other jurisdictions, prohibit companies and their intermediaries from making improper payments for the purposes of obtaining or retaining business or other commercial advantage. The Company's policies mandate compliance with these anti-bribery laws, which often carry substantial penalties. The Company operates in jurisdictions that have experienced governmental and private sector corruption to some degree, and, in certain circumstances, strict compliance with anti-bribery laws may conflict with certain local customs and practices. There can be no assurances that the Company's internal control policies and procedures will always protect it from reckless or other inappropriate acts committed by the Company's affiliates, employees or agents. Violations of these laws, or allegations of such violations, could have a material adverse effect on the Company's business, financial position and results of operations.

## Foreign Exchange Rate Risk

The Company reports its consolidated financial statements in Canadian dollars but its operations are currently in Brazil and United States. Consequently, the financial results of the Company's operations as reported in Canadian dollars are subject to changes in the value of the Canadian dollar relative to the Brazilian Real and United States Dollar. Exploration activities in Brazil are funded through the Company's Brazilian subsidiary and are recorded in Brazilian Real and translated into Canadian dollars on the consolidated financial statements date. Exploration activities in Alabama are funded through the Company's Alabama subsidiary and are recorded in United States Dollar and translated into Canadian dollars on the consolidated financial statements date. As a result, the Company can be exposed to significant fluctuations in the exchange rate between the Brazilian Real, United States Dollar and the Canadian dollar. The Company does not currently enter into any foreign exchange hedges to limit exposure to

exchange rate fluctuations. The Board of Directors continually assesses the Company's strategy toward its foreign exchange rate risk, depending on market conditions.

### **Litigation Risk**

The Company may be subject to claims (including class action claims and claims from government regulatory bodies) based on allegations of negligence, breach of statutory duty, breach of contract, public nuisance or private nuisance or otherwise in connection with its business or operations. Liability resulting from any such claim in the future may have a materially adverse effect on the Company's financial condition or operations.

### **Government Regulation**

Any exploration, development or mining operations carried on by the Company will be subject to government legislation, policies and controls relating to prospecting, development, production, environmental and wildlife protection, mining taxes and labour standards. The Company cannot predict whether or not such legislation, policies or controls, as presently in effect, will remain so, and any changes therein (for example, significant new royalties or taxes), which are completely outside the control of the Company, may materially adversely affect the ability of the Company to continue its planned business within any such jurisdictions.

### **Management and Dependence on Key Personnel**

The Company is dependent upon the personal efforts and commitment of its management, which is responsible for the development of future business. To the extent that management's services would be unavailable for any reason, a disruption to the operations of the Company could result, and other persons would be required to manage and operate the Company. The Company is dependent on a relatively small number of key officers, consultants and employees, the loss of any of whom could have an adverse effect on the Company. Failure to retain key individuals or to attract or retain additional key individuals with necessary skills could have a materially adverse impact upon the Company's success.

### **Conflicts of Interest**

Certain of the directors and officers of the Company may also serve as directors, officers and/or advisors of and to other companies involved in natural resource mining, exploration and development. Consequently, there exists the possibility for such directors and officers to be in a position of conflict. The Company expects that any decision made by any of such directors and officers involving the Company will be made in accordance with their duties and obligations to deal fairly and in good faith with a view to the best interests of the Company and its shareholders, but there can be no assurance in this regard. In addition, each of the directors is required to declare and refrain from voting on any matter in which such directors may have a conflict of interest or which are governed by the procedures set forth in the BCBCA and any other applicable law.

### **Note Regarding Forward-Looking Statements**

Except for historical information, this MD&A may contain forward-looking statements. These statements involve known and unknown risks, uncertainties, and other factors that may cause the Company's actual results, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievement expressed or implied by these forward-looking statements.

The factors that could cause actual results to differ materially include, but are not limited to, the following: The Company has no assurance that the licenses will be issued nor if issued, that they will be issued in a timely manner, general economic conditions; changes in financial markets; the impact of exchange rates; political conditions and developments in countries in which the Company operates; changes in the supply, demand and pricing of the metal commodities which the Company hopes to find and successfully mine; changes in regulatory requirements impacting the Company's operations; the sufficiency of current working capital and the estimated cost and availability of funding for the continued exploration and development of the Company's exploration properties.

This list is not exhaustive and these and other factors should be considered carefully, and readers should not place undue reliance on the Company's forward-looking statements. As a result of the foregoing and other factors, no

assurance can be given as to any such future results, levels of activity or achievements and neither the Company nor any other person assumes responsibility for the accuracy and completeness of these forward-looking statements.

This MD&A contains certain forward-looking statements inclusive of, but not limited to the production arrangements and the timing of the mine development, mill construction and ore production. Although forward-looking statements and information contained in this MD&A are based on the beliefs of the Company's management, which we consider to be reasonable, as well as assumptions made by and information currently available to the Company's management, there is no assurance that the forward-looking statement or information will prove to be accurate. The assumptions made include assumptions about the Company's ability to move forward with the arrangements as set out in the Agreement. The forward-looking statements and information contained in this MD&A are subject to current risks, uncertainties and assumptions related to certain factors including, without limitations, obtaining all necessary approvals, feasibility of mine and plant development, exploration and development risks, expenditure and financing requirements, title matters, operating hazards, metal prices, political and economic factors, competitive factors, general economic conditions, relationships with vendors and strategic partners, governmental regulation and supervision, seasonality, technological change, industry practices, and one-time events as well as risks, uncertainties and other factors discussed in our quarterly and annual and interim management's discussion and analysis. Should any one or more of these risks or uncertainties materialize or change, or should any underlying assumptions prove incorrect, actual results and forward-looking statements and information may vary materially from those described herein. Accordingly, readers should not place undue reliance on forward-looking statements and information contained in this MD&A. We undertake no obligation to update forward-looking statements or information except as required by law.

**South Star Battery Metals Corp.**

*"Samantha Shorter"*

Chief Financial Officer  
November 29, 2024