

# NORTHERN GRAPHITE CORPORATION

# MANAGEMENT DISCUSSION AND ANALYSIS

For the Year ended December 31, 2023

(Information as at April 29, 2024 unless otherwise noted)

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# MANAGEMENT'S DISCUSSION AND ANALYSIS

For Year ended December 31, 2023

(Information as at April 29, 2024 unless otherwise noted)

The following provides management's discussion and analysis ("MD&A") of results of operations and financial condition of Northern Graphite Corporation ("Northern" or the "Company") for the years ended December 31, 2023 and 2022. This MD&A was prepared by the Company's management and approved by its Board of Directors on April 29, 2024.

This MD&A should be read in conjunction with the Company's audited consolidated financial statements for the years ended December 31, 2023 and 2022 which have been prepared in accordance with International Financial Reporting Standards ("IFRS") for annual financial statements. All figures are presented in Canadian dollars unless otherwise indicated. This MD&A is prepared in conformity with National Instrument 51-102F1.

#### CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This MD&A contains "forward-looking statements" which reflect management's expectations regarding the Company's future growth, results of operations, performance and business prospects and opportunities. Such forward-looking statements may include, but are not limited to, statements with respect to the future financial or operating performance of the Company and its projects, the future price of graphite or other metal and mineral prices, the estimation of mineral resources, the timing and amount of estimated future production, costs of production, capital, operating and exploration expenditures, costs and timing of the development of deposits, costs and timing of future exploration, requirements for additional capital, government regulation of mining operations, environmental risks, reclamation expenses, title disputes or claims, limitations of insurance coverage and the timing and possible outcome of regulatory matters. Often, but not always, forward-looking statements can be identified by the use of words such as "plans", "expects", "is expected", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates", or "believes" or variations (including negative variations) of such words and phrases, or statements that certain actions, events or results "may", "could", "would", "might" or "will" be taken, occur or be achieved.

Forward-looking statements involve known and unknown risks, uncertainties, assumptions and other factors that may cause the actual results, performance or achievements of the Company to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Such factors include, among others: general business, economic, competitive, political and social uncertainties; the actual results of current exploration, development and production activities; conclusions of economic evaluations; changes in project parameters as plans continue to be refined; changes in labor costs or other costs of production; future prices of graphite or other industrial minerals; possible variations of mineral grade or recovery rates; failure of plant, equipment or processes to operate as anticipated; accidents, labor disputes and other risks of the mining industry, including but not limited to environmental hazards, cave-ins, pit-wall failures, flooding, rock bursts and other acts of God or unfavorable operating conditions and losses; delays in obtaining governmental approvals or financing or in the completion of development or construction activities; fluctuations in currency exchange rates; actual results of reclamation activities, and the factors discussed in the section entitled "Risk Factors" in MD&A. Although the Company has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward-looking statements, there may be other factors that cause actions, events or results to differ from those anticipated, estimated or intended. Forward-looking statements contained herein are made as of the date of this MD&A and the Company disclaims any obligation to update any forward-looking statements, whether as a result of new information, future events or results or otherwise, except as may be required by applicable securities laws. There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward-looking statements.

#### 1. Introduction

Northern is a mineral resource exploration, development and production company engaged in the acquisition, exploration, development and production of graphite and other battery mineral properties. The Company's material mineral projects consist of: (i) the operating Lac-des-Iles graphite mine located in Québec (the "LDI Project"); (ii) the Okanjande graphite mine currently on care and maintenance located in Namibia (the "Okanjande Project"), which the Company plans to restart in 2025, subject to financing; and (iii) the Bissett Creek graphite development project located in Ontario (the "Bissett Creek Project"), which the Company intends to bring into production in late 2026, subject to financing. The Company also owns the Mousseau graphite exploration project located in Québec in proximity to its LDI Project (the "Mousseau Project"), which has the potential to further extend the life of and expand operations at the LDI Project by shipping material there for processing. Northern is North America's only natural graphite producer. With the resumption of production at the Okanjande Project, Northern would become one of the world's largest non-Chinese natural graphite producers.

The Company has adopted a mine-to-market strategy of becoming a vertically integrated supplier to traditional downstream customers and to the emerging market for battery anode material ("BAM"). The Company is focused on becoming a world leader in producing natural graphite and upgrading it into high value products critical to the green economy, including anode material for lithium-ion batteries ("LiBs"), electric vehicles ("EVs"), fuel cells and graphene, as well as advanced industrial technologies. The Company's strategy is to expand production at the LDI Project, resume and expand production at the Okanjande Project and advance the Bissett Creek Project and the Mousseau Project towards development, while also developing downstream capacity to produce anode material for use in LiBs and EVs in North America and Europe and to upgrade graphite mine concentrate into value added industrial products. To speed up such downstream development and to leverage the most advanced technologies, Northern is partnering with leading technology companies with the goal of building North America's largest BAM plant. In addition, the Company has recently formed the NGC Battery Materials Group to bridge the gap between the mining sector and the upstream battery market sector with the intent to offer innovative new solutions to meet the growing demands of the battery market and provide tailored solutions to Northern's customers. The NGC Battery Materials Group will specialize in advanced material analytics and electrochemical characterization techniques for carbon and battery materials as well as providing in-depth expertise in the field of high-temperature processing, scale-up, and carbon design. This will enable Northern to provide tailored solutions to EV battery makers and original equipment manufacturers to satisfy their various unique battery requirements.

#### 2. 2023 Year and Fourth Quarter Summary

# Summary of Results for Year ended December 31, 2023:

- Revenue of \$17.1 million based on 8,592 tonnes of graphite concentrate sold at an average realized sales price of \$1,990 per tonne (US\$1,474 per tonne).
- Cash costs of \$1,429 (US\$1,059) per tonne of graphite concentrate sold;.
- Income from mine operations of \$1.9 million.
- An operating loss of \$9.5 million which included \$3.3 million in non-cash charges relating to depletion and depreciation and share-based compensation.
- After a slowdown in sales during the first half of 2023 due to market conditions, Northern's sales volumes increased by 24% in the second half of 2023 compared to the first half, and were also higher by 19% compared to the second half of 2022. In particular, record sales volumes were achieved during the third quarter of 2023, and the fourth quarter sales volumes remained strong, at 2,176 tonnes, 19% higher compared to previous year; This favorable trend is forecasted to continue in the first half of 2024.
- In the year ended December 31, 2023, an impairment loss of \$2,683,000 was incurred relating to the following items:
  - A write-off of \$1,139,000 on the South Okak property following unsuccessful discussions to renegotiate
    the join venture agreement;
  - During the fourth quarter of 2023, as a result of lower realized prices on sale of concentrate and higher
    per tonne processing costs due to higher operating costs and lower production volumes on restart of the
    LDI plant, the Company recorded a net realizable value impairment of \$987,000 on its stockpile inventory;

- During the fourth quarter of 2023, following annual inventory surveys and counts of its LDI stockpile and concentrate inventories, the company recorded impairments of \$234,000 and \$114,000, and
- During the first quarter of 2023, as a result of finalizing an agreement with the leaseholder of the Okorusu property, the Company recorded an impairment loss of \$209,000.
- Moving costs of \$587,000 were incurred in the year ended December 31, 2023 as a result of the Company's
  decision to move the Namibian processing facilities from Okorosu to Okanjande.
- The LDI mine and plant were temporarily placed in care and maintenance for the second, third and part of the fourth quarters of 2023 while the Company sold excess inventory which it acquired with LDI. The plant restarted on October 30, 2023, in order to meet increased customer demand. Since there was no mining or production during the second, third and part of the fourth quarter, costs incurred of \$5,548,000 were recorded in the income statement as Care and Maintenance.
- During the third quarter of 2023, Northern put most of Okanjande on care and maintenance (except for engineering and activities relating to moving the plant from its site at Okorusu to Okanjande). This resulted in a care and maintenance expense of \$930,000.
- A net loss of \$23.6 million (\$0.18 per share) which included significant non-cash charges relating to depletion and depreciation, share-based compensation, capitalized finance expenses, impairment expenses and drawdown of inventories. The cash used in operating activities was \$4.7 million. The Company is planning to move to a seven-days-per week operation in the second quarter of 2024, targeting nameplate capacity of 25,000 tpy, in order to increase operating income and at the same time plans to reduce overhead costs
- Cash and equivalents of \$3.1 million as at December 31, 2023; compared to \$5.1 million as of December 31, 2022. The net decrease in cash and cash equivalents resulted from the following elements:
  - A cash flow loss from operating activities of \$4.7 million. To partially offset the unfavorable impact from operating cash flow losses, the Company implemented strong working capital measures during the year including reducing on inventories and optimizing accounts receivable and accounts payable balances:
  - Net cash used in investing activities of \$4.5 million, which mainly consisted of capital expenditures and exploration costs;
  - o Net cash from financing activities of \$7.3 million driven by
    - The sale of an additional 0.5% gross revenue royalty ("GRR") on Bissett Creek for cash proceeds of \$950,000;
    - Additional financing of US\$3 million from Sprott Private Resource and Streaming in the form of:
      - An increase in the amount of the Company's senior secured loan by US\$1 million (from US\$12 million to US\$13 million), and
      - An increase in the amount of the Company's royalty financing by US\$2 million (from US\$4 million to US\$6 million) through an additional 4% graphite sales revenue royalty on LDI reducing to 0.25% once the additional royalty has been paid on 45,000 tonnes of sales.
    - A non-brokered private placement financing of 3,000,000 units issued on a charity flow-through basis at a price of \$0.75 per unit for proceeds of \$2,250,000, and
    - Exercise of warrants and options for a total of \$ 2.5 million.
- Working capital of \$10.1 million as at December 31, 2023, including current inventory of \$17.1 million at cost (there is an additional \$1.9 million of non-current finished goods inventory). Inventories of finished goods have decreased by 4,384 tonnes to 4,417 tons as of December 31, 2023, as a result of increased sales combined with the shutdown of LDI for part of the year.
- Subsequent to December 31, 2023, 31,147,800 of the Company's share purchase warrants expired, leaving Northern with 1,680,000 warrants outstanding with an exercise price of \$0.75 at April 29, 2024.

#### Summary of Results for the 3 month period ended December 31, 2023:

- Revenue of \$4.2 million generated based on 2,176 tonnes of graphite concentrate sold at an average realized sales price of \$1,935 /tonne (US\$1,420 /tonne).
- Sales volumes increased in the fourth quarter of 2023 by 19% to 1,828 tonnes compared to the fourth quarter of 2022. Following a record third quarter 2023 (2,587 tonnes), the fourth quarter continued on the same trend, however being impacted by usual December seasonality of sales with sales volumes being 16% below the previous quarter.
- Cash costs of \$1,493 (US\$1,096) per tonne of graphite concentrate sold.

- Income from mine operations of \$161,000.
- An operating loss of \$3.0 million.
- An impairment loss of \$2,474,000 was incurred relating to the following items:
  - A write-off of \$1,139,000 on the South Okak property following unsuccessful discussions to renegotiate
    the joint venture agreement;
  - As a result of lower realized prices on sale of concentrate and higher per tonne processing costs due to higher operating costs and lower production volumes on restart of the LDI plant, the Company recorded a net realizable value impairment of \$987,000 on its stockpile inventory, and
  - Following annual inventory surveys and counts of its LDI stockpile and concentrate inventories, the Company recorded impairments of \$234,000 and \$114,000, respectively.
- The LDI mine and plant were temporarily placed in care and maintenance for the second, third and part of the fourth quarters of 2023 while the Company sold excess inventory which it acquired with LDI. The plant restarted on October 30, 2023, but the mine continued on care and maintenance. Since there was no mining during the fourth quarter and the plant was only in production for part of the quarter, costs incurred during the periods of closure of \$862,000 were recorded in the income statement as Care and Maintenance.
- During the third quarter of 2023, Northern put most of Okanjande on care and maintenance (except for engineering and activities relating to moving the plant from its site at Okorusu to Okanjande). This resulted in a care and maintenance expense of \$520,000 during the fourth quarter. The timing of the restart is subject to the availability of project financing.
- A net loss of \$8.0 million (\$0.06 per share) which included significant non-cash charges relating to depletion and depreciation, share-based compensation, impairment expenses and drawdown of inventories. The cash used in operating activities was \$1.2 million.
- On November 29, 2023, the Company obtained additional financing of US\$3 million from Sprott Private Resource and Streaming in the form of:
  - An increase in the amount of the Company's senior secured loan by US\$1 million (from US\$12 million to US\$13 million), and
  - An increase in the amount of the Company's royalty financing by US\$2 million (from US\$4 million to US\$6 million) through an additional 4% graphite sales revenue royalty on LDI reducing to 0.25% once the additional royalty has been paid on 45,000 tonnes of sales.

#### Operational Summary for the Year ended December 31, 2023:

# • Graphite Market Update

- o After a slow first half of 2023, graphite sales volumes rose during the second half of 2023:
  - In late 2022 the Chinese Government removed EV sales incentives for 2023 which led to excess production capacity of LiBs and related minerals including graphite.
  - Outside of the EV industry, overall graphite demand worldwide in the first half of 2023 was less than anticipated due to a recession in the steel and electronics industry.
  - Both factors led to excess Chinese graphite capacity available for export at lower prices during the first half of 2023 and negatively impacted sales. In addition, Northern suffered from a destocking effect as customers ended 2022 with higher than expected inventory levels
  - In June 2023, due to the drop in demand for EVs, the Chinese government reinstated EV incentives and extended them to 2027.
  - Sales have been steadily improving month-after-month during the course of the third quarter, and sales volumes amounted to 2,587 tonnes in total, 28% above the second quarter. Fourth quarter sales volumes amounted to 2,176 tonnes, improving by 19% compared to fourth quarter of 2022 sales volumes.
- On October 20, 2023 China's Commerce Ministry announced that China would start imposing controls on certain graphite exports for battery making as of December 1, 2023 by requiring export permits for certain graphite products in a move, "conducive to ensuring the security and stability of the global supply chain and industrial chain, and conducive to better safeguarding national security interests." China is the world's largest producer of graphite, a key component of batteries for EVs and also widely used in traditional industrial markets.
- The US Department of Energy has proposed guidance for what constitutes a "Foreign Entity of Concern under the electric vehicle tax credits under the US Inflation Reduction Act (the "IRA"), which provide up to \$7,500

of relief for each vehicle sold to consumers. Northern's mines in Canada and Namibia met IRA criteria for eligibility for these tax credits.

#### Lac-des-Iles

- The LDI mine and plant were temporarily placed on care and maintenance for the second and third quarters of 2023 amid challenging markets and reduced prices for its graphite products, and the Company supplied customers from stockpiled inventories. Finished goods have been reduced to 4,417 tonnes as at December 31, 2023. To meet increasing customer demand, operations were resumed on October 30, 2023.
- Several initiatives confirming the potential to extend the life of LDI were conducted:
  - After a detailed review of historical studies, mine plans and the completion of an airborne geophysical survey, the Company launched a new drill program at LDI during the second and third quarters, as well as part of the fourth quarter of 2023 that was designed to explore previously untested areas of the property with the objective of extending the life of the mine. The program consisted of 88 holes for 7,890 meters of drilling and was financed from the proceeds of the Company's \$2.3 million charity flow-through private placement completed on April 27, 2023;
  - Subsequent to December 31, on January 17, 2024, the Company announced an updated mineral resource estimate for the LDI Project. The updated mineral resource estimate creates potential to extend the life of the LDI Project by approximatively eight years, which will be confirmed and quantified through an updated mineral reserve estimate and life-of-mine plan that will be available later in 2024. Indicated Mineral Resources now total approximately 3.29 million tonnes ("Mt") at an average grade of 6.4% graphitic carbon ("CG"), containing approximately 213,000 tonnes of Cg. Inferred Mineral Resources total approximately 1.43 Mt at an average grade of 7.4% Cg, containing approximately 106,000 tonnes of Cg. Existing stockpiles at the mine site are not included in the updated mineral resource estimate. The new mineral resource estimate supports the Company's intention to meet rising demand by moving to a seven-days-per week operation in the second quarter of 2024, targeting annual nameplate capacity of 25,000 tonnes per year ("tpy"), and
  - On October 12, 2023 the Company announced a mineral resource estimate on the Mousseau Project. The estimate consists of 2,821,041 tonnes of Measured and Indicated Mineral Resources with an average grade of 7.9% which added 223,079 tonnes of contained Cg to the Company's portfolio. Material from the Mousseau deposit is expected to be transported to LDI in support of Northern's long-term growth strategy of leveraging its permitted LDI processing plant. In addition, there are an estimated 331,884 tonnes of Inferred Mineral Resources with an average grade of 9.264%with 30,714 tonnes of contained Cg.

# Namibia

- o In August 2023, the Company announced the results of a new preliminary economic assessment ("PEA") that confirmed the economics of the relocation of its processing plant to the Okanjande mine site in Namibia. The PEA, dated July 31, 2023, was prepared by CREO Engineering Solutions and confirms the viability of moving milling operations directly to the Okanjande mine site, eliminating the need to truck mineralized material to the Okoruso processing site 70 kilometers away, thus reducing operating costs and allowing for a more sustainable operation that includes the use of solar power and reduced water consumption. Key results include an average annual production of 31,315 tonnes of graphite concentrate, production costs of US\$666 per tonne, a Post Tax IRR of 36%, a Post Tax NPV of US\$70 million and a payback of under four years which were based on a 10-year mine life and a weighted average graphite price of US\$1,550/tonne. A technical report in respect of the PEA prepared in accordance with National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101") was filed under the Company's profile on SEDAR+ (www.sedarplus.ca) on August 28, 2023.
- O The Company is evaluating options to fund the Okanjande Project through the use of a royalty/stream/debt structure and equity contributed by a strategic partner without having to go to the market at current share prices. During the third quarter of 2023, Northern placed Okanjande on care and maintenance (except for engineering and activities relating to moving the plant from its site at Okorusu to Okanjande). The timing of the restart is subject to the availability of project financing.

#### Mine-to-Market Strategy

 With the growth of the EV market, the Company is moving to integrate downstream by further processing its graphite for use in LiBs by adding shaping, purification and coating technologies to produce BAM. This is expected to be done in partnership with companies that are industry leaders in these technologies, and in modular phases as demand for BAM increases. On June 29, 2023, the Company announced that it had signed a letter of Intent ("LOI") with the city of Baie-Comeau to purchase land for a 200,000 tonnes per year BAM plant. The LOI, which is subject to financing and receipt of regulatory approvals, gives Northern the right to purchase, for US\$1.2 million, a 1.2 million m² property of approximately 300 acres in the Baie-Comeau port industrial zone which has access to municipal services and infrastructure. A first phase for the BAM plant, expected to cost in the range of \$500 million, is targeted for completion in 2027, subject to financing, regulatory approvals and certain other conditions, and is eligible for potential assistance under programs offered by the province of Québec, the Canadian and U.S. governments, as well as other assistance by the Manicouagan region and potential Plan Nord incentives.

- On October 19, 2023, Northern announced results of testing that verified graphite samples from LDI
  are suitable for the production of BAM, a key component in LiBs; results also indicated higher
  capacity and potential for longer life than commercially available BAM.
- The Company has been actively involved in discussions and negotiations with technology and original equipment manufacturer ("OEM") partners in both the US and Europe who want to collaborate with a quality supplier of graphite that has current production, immediately available inventory and the capacity to support future growth. These discussions center on volume requirements and the timing thereof, and plans for downstream conversion facilities in both North America and Europe. Discussions are also being held with various government organizations at both the federal and provincial level to gain support to speed up the development of the battery anode supply chain, with a particular focus on Ontario and Québec.
- On January 31, 2024, the Company announced the launch of the NGC Battery Materials Group to spearhead its mine-to-battery strategy, which would make Northern one of the sole integrated developers, producers, and processors of natural graphite outside of China. NGC Battery Materials Group was formed through the acquisition of the assets and R&D team of the battery division of Germany's Heraeus Group, and includes a fully operational, state-of-the-art laboratory in Frankfurt. Northern has also licensed intellectual property from Heraeus Group to develop, produce, and sell Porocarb®, a high-performance porous hard carbon material developed over the last 10 years and patented by Heraeus Group to enhance the efficiency and speed of energy storage mechanisms.
  - NGC Battery Materials Group will lead the development of Northern's planned 200,000 tpy Baie-Comeau Battery Anode Material facility, with construction anticipated to commence in 2026, subject to financing. Northern plans to build Baie-Comeau in modules tailored to the specific needs of OEMs and EV battery makers, including proper milling, shaping, and classification of graphite flakes, followed by purification and coating.
  - NGC Battery Materials Group will specialize in advanced material analytics and electrochemical characterization techniques for carbon and battery materials as well as providing in-depth expertise in the field of high temperature processing, scale-up and carbon design. This will enable Northern to provide tailored solutions to EV battery makers and OEMsto satisfy their various unique battery requirements.

#### South Okak

On June 7, 2023, the South Okak Option Agreement was terminated under its terms. The Company subsequently entered into negotiations with the South Okak owners to acquire the South Okak project on alternate terms but could not reach an agreement with them.

#### 3. Corporate

On January 20, 2023, Gregory Bowes was appointed Chairman of the Board effective January 1, 2023. He was previously Executive Chairman. Frank O'Brien-Bernini was named Chair of the Environment, Social, Governance (ESG) and Nominating Committee.

On March 22, 2023, the Company appointed Kirsty Liddicoat as Chief Operating Officer, and Dave Marsh as Chief Technical Officer. On April 11, 2023, the Company appointed Pav Jordan as Vice-President of Communications.

On January 20, 2023, the Board of Directors approved a grant of stock options to directors to purchase a total of 1,100,000 common shares of the Company at a price of \$0.55 per share, vesting immediately, for a period of five years.

Following the Board of Directors approval to issue 1.3 million restricted share units ("RSU's") to certain executives of the Company in the fourth quarter of 2022, the Company announced on February 12, 2023 a modification to the original vesting schedule for tax reasons specific to the award of RSUs. Northern also granted stock options to an officer of the Company to purchase a total of 200,000 common shares of the Company, vesting immediately, for a period of five years. The options have an exercise price of \$0.55 per share and have been granted in accordance with the Company's amended and restated stock option plan.

In the quarter ended March 31, 2023, 4,652,500 warrants with a strike price of \$0.45 were exercised for gross proceeds of \$2,093,000 in exchange for 4,652,500 common shares of the Company.

On May 4, 2023, the Board of Directors approved a grant of stock options to purchase a total of 390,000 common shares of the Company at a price of \$0.55 per share, vesting one quarter after each of years one and two and one half after year three, and which are exercisable for a period of five years. In addition, the Board of Directors approved a grant of 490,000 RSUs to certain new officers and employees with a vesting period of one quarter after each of years one and two, and one half after year three.

On April 27, 2023, Northern closed a non-brokered private placement financing of 3,000,000 units issued on a charity flow-through basis at a price of \$0.75 per unit for proceeds of \$2,250,000. Each unit consisted of one common share and one-half of one common share purchase warrant with each whole warrant entitling the holder to purchase one common share at an exercise price of \$0.75 for a period of two years.

On September 27, 2023, the Company closed the sale of an additional 0.5% GRR on the Bissett Creek Project for \$950,000 in cash proceeds.

On October 11, 2023, Northern engaged Senergy Communications Capital Inc. ("Senergy") and Outside The Box Capital Inc. ("Outside The Box") to provide investor relations and marketing services to the Company. Senergy has been retained for an initial period of 4 months for a fee of \$25,000. Outside The Box has been retained for a total period of 12 months. The Company granted Outside The Box 615,384 stock options, each exercisable to acquire one common share of Northern at an exercise price of \$0.325 per share for a period of two years from the date of grant (the "Options"). The Options will vest in 4 equal tranches of 153,846 Options on each of the dates which are respectively 3, 6, 9 and 12 months from the date of the grant. In the event that the Outside The Box agreement is terminated in accordance with its terms, all Options which have not yet vested will expire and be terminated as of the date of the termination of the agreement. The Company will also pay Outside The Box a fee of \$50,000 per quarter during the term of the agreement.

On November 29, 2023, the Company obtained additional financing of US\$3 million from Sprott Private Resource and Streaming in the form of an increase in the amount of the Company's senior secured loan by US\$1 million (from US\$12 million to US\$13 million), and an increase in the amount of the Company's royalty financing by US\$2 million (from US\$4 million to US\$6 million) through an additional 4% graphite sales revenue royalty on LDI reducing to 0.25% once the additional royalty has been paid on 45,000 tonnes of sales.

On January 11, 2024, the Company announced the appointment of Samantha Espley as a director of the Company. In connection with her appointment, the Company granted Ms. Espley a total of 400,000 stock options under the Company's amended and restated stock option plan, which have an exercise price of \$0.55 per share, an exercise period of five years and which vested immediately upon grant.

#### 4. Business Lines and Strategy

The Company plans to become one of the largest producers and processors of natural graphite outside of China. To achieve this goal, Northern has embarked on a three-pronged strategy:

- 1) Building graphite capacity to produce BAM: Following the acquisition of LDI in April 2022, the Company is the only North American graphite producing company and expects to become one of the world's largest non-Chinese producers when its Namibian operations restart. The Company has substantial near-term production with the LDI Project and the planned restart of operations in Namibia (approximately 50,000 tpy by mid 2025), and two large-scale development projects with the Okanjande and Bissett Creek projects. The Mousseau Project has the potential to extend and expand production from LDI. These projects provide the Company with the opportunity to significantly expand production to meet growing demand from the EV/LiB markets. All projects have high quality "battery grade" mineralization and are located close to infrastructure in politically stable countries. On October 19, 2023 Northern published results of testing performed by Heraeus Battery Technology in Germany on graphite samples from LDI confirming that LDI graphite is suitable for the production of BAM. Those results demonstrated potential to perform at or above the standards of commercially available reference materials.
- Mine-to-market strategy: With the growth of the EV market, the Company is moving downstream in order to further process its graphite for use in LiBs with shaping, purification and coating technologies. Led by its newly created NGC Battery Materials Group formed in January 2024, this strategy is expected to be implemented in partnership with companies that are industry leaders in these technologies. Northern would provide a secure supply of graphite concentrate and its technology partners would license and/or contribute their technology, plans and expertise for building and operating processing plants. On June 29, 2023, the Company signed the LOI with the city of Baie-Comeau to purchase land for a 200,000 tonne per year BAM plant. The LOI, which is subject to financing and receipt of regulatory approvals, gives Northern the right to purchase a 1.2 million m<sup>2</sup> property of approximately 300 acres in the Baie-Comeau port industrial zone, with access to municipal services and infrastructure, for US\$1.2 million. The Baie-Comeau BAM plant will be one of the world's largest such conversion facilities and will process concentrates from Northern's mines as well as from other producers that will be coming online. The plant will have a low CO<sub>2</sub> footprint due to its access to green, hydroelectric power. The Company will cooperate with its different technological partners to develop this project. Among other initiatives. The Company has signed a non-binding letter of intent with Graphex Technologies LLC, the U.S. subsidiary of Graphex Group Limited (collectively "Graphex"), a global producer of the anode material used in EVs/LiBs, which contemplates Northern and Graphex creating a joint venture combining Northern's raw material supply capabilities with Graphex's downstream processing expertise for Baie-Comeau, pending Graphex's US spinoff of its Graphex Technologies business, currently being structured to create an independent US entity.
- 3) Downstream integration in non-BAM applications: The Company is also pursuing opportunities to move downstream into non-EV applications in the electronics, construction, graphene and hydrogen fuel cell markets. These markets provide the opportunity to increase revenues and profits through further processing of the Company's graphite mine concentrates. The Company had an option under an agreement with Edgewater Capital Partners ("Edgewater") to acquire an ownership interest in NeoGraf Solutions, LLC ("NeoGraf"), a company based in Cleveland, Ohio. Subsequent to December 31, 2023, on March 7, 2024 Northern has announced that it will not exercise or extend its agreement with Edgewater, and accordingly the option has expired. This decision was made given current market conditions and in the best interests of Company's shareholders. However, both Northern and Neograf have agreed to continue exploring different ways to enhance the partnership between both companies to address evolving supply needs in the downstream market for graphite products.

#### 5. Mining Operations & Projects

# a) Lac-des-Iles, Québec, Canada

The LDI graphite mine has been in operation for over 30 years and is the only flake graphite producer in North America. The mine is located approximately two kilometres south of Lac-des-Îles, Québec, approximately 110 km northeast of Ottawa and 180 km northwest of Montréal. LDI consists of an open pit graphite mine and a processing facility that includes crushing, grinding and flotation circuits that produce high quality concentrates of various sizes and purities that are sold directly to end-users for various applications.

The mine is covered by active mining title BM-788, which has an area of approximately 652.6 hectares over 23 contiguous smaller blocks as part of NTS sheet 31J05. The title is fully registered with a current expiration date of January 31, 2029. Agreements have been executed with the surface rights holders of certain lots on the mining lease for use of land for mining purposes. The agreements require that the owners be paid a royalty per metric tonne of ore extracted and processed.

Additional information on LDI can be found in independent technical reports dated December 22, 2021 and March 1, 2024 prepared by SLR (Canada) Ltd. in accordance with NI 43-101 and which has been filed under the Company's profile on SEDAR+. The Company acquired LDI with the belief that opportunities existed to extend the mine life and expand production. The Company subsequently completed an initial exploration program on the property itself which successfully increased resources and extended the life of the mine. During the fourth quarter of 2022, the Company acquired the Mousseau Project which it believes can provide another source of graphite mineralization to supply the LDI plant. With LDI, the Company has also acquired an established market share and customer base that could be transitioned to supply from Namibia and Bissett Creek.

The LDI mine and plant were temporarily placed in care and maintenance for the second, third and part of the fourth quarters of 2023 while the Company sold excess inventory which it acquired with LDI. The plant restarted on October 30, 2023, but the mine continued on care and maintenance. Northern currently plans to restart the mine in the Spring of 2024. Since there was no mining or production during the second, third and part of the fourth quarter, costs incurred of \$5,548,000 were recorded in the income statement as Care and Maintenance.

As at December 31, 2023, the Company had produced 4,261 tonnes of graphite concentrate and sold 8,592 tonnes of graphite concentrate. The Company realized an average sales price of \$1,990 per tonne, cash costs were \$1,429 per tonne sold and mine operating income of \$1,928,000 was generated.

The following table presents operational highlights on a quarterly basis and for the year ended December 31, 2023. The mine first came under Northern's ownership in the second quarter of 2022.

	Q1 2023	Q2 2023	Q2 2023	Q4 2023	2023 YTD
Mining (tonnes)					
Ore	40,877	-	-	_	40,877
Waste	224,492	-	-	-	224,492
Strip Ratio	5.49	-	-	-	5.49
Processing					
Crusher feed	38,554	-	-	19,930	58,484
Recovery	91.6%	-	=	88.5%	90.6%
Feed grade	6.8%	-	=	6.5%	6.7%
<b>Production</b>					
Tonnes	2,966	-	-	1,295	4,261
Sales					
Tonnes	1,813	2,016	2,587	2,176	8,592
Average realized selling price per tonne	2,202	1,966	1,907	1,935	1,990

#### Mining

During the year ended December 31, 2023 a total of 40,877 tonnes of ore were mined from Pit 2, all in the first quarter of the year as the mine was shut down for the second, third and fourth quarters.

Mining cash costs per tonne increased in the first quarter due to an increase in maintenance, higher production drilling activities as a new bench was opened up late in the fourth quarter of 2022 and an increased strip ratio.

# **Processing**

During year ended December 31, 2023, the plant processed a total of 58,484 tonnes of ore with an average feed grade of 6.7 % graphite and a recovery of 90.6 % to produce 4,261 tonnes of graphite concentrate. All of the processing and production in the period was in the first quarter and November and December as the plant was shut down for the second and third quarters and the month of October.

During the three month period ended December 31, 2023, the plant processed a total of 19,930 tonnes of ore with an average feed grade of 6.5% and a recovery of 88.5% to produce 1,295 tonnes of graphite concentrate. The recovery percentage in the quarter was negatively impacted by inefficiencies during the restart of the plant.

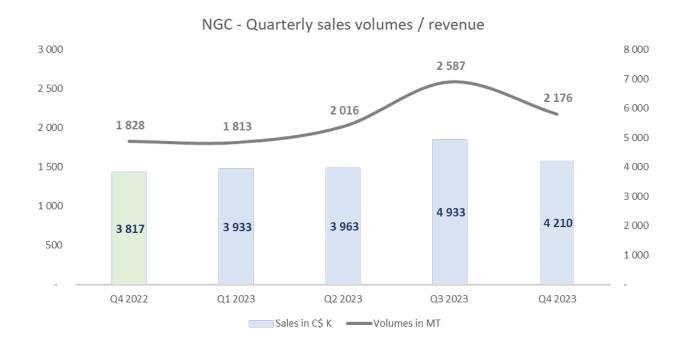
The plant is operated five days a week, 24 hours per day, with one of the down days used for plant maintenance.

The Company's average processing costs per tonne in the fourth quarter of 2023 were negatively impacted by lower production volumes and higher maintenance and labour costs during the restart.

#### Sales

During the year ended December 31, 2023 the Company sold 8,592 tonnes of graphite concentrate with an average realized sales price of \$1,990 per tonne.

During the fourth quarter of 2023 the Company sold 2,176 tonnes of graphite concentrate with an average realized sales price of \$1,935 per tonne, slightly higher than the third quarter of 2023 (\$1,907 per tonne), mainly impacted by a different product mix.



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The Company experienced slower sales during the first half of 2023 and a strong recovery during the second half of 2023 for the following reasons:

- Customers ended 2022 with high inventory levels and there was a destocking effect during most of the first half of 2023.
- Overall graphite demand worldwide was below anticipated levels during the period after China stopped incentives for the purchase of EVs, creating more opportunities for Chinese manufacturers to export graphite concentrate at low prices.
- In June, 2023, the Chinese government reintroduced EV rebates, which refocused domestic graphite
  production to supply the local battery market and had a favorable impact on sales for the second half of the
  year.
- After a weaker than anticipated first half of 2023, with total sales volumes of 3,829 tonnes, sales volumes increased significantly in the second half of 2023, amounting to 4,763 tonnes, representing an increase of + 24% from the first half of 2023 but also of 19% from the second half of 2022.
- Market demand has significantly increased following export limitations announcements in China as well as
  increased interest from North American and European customers (non-battery and battery markets) to secure
  volumes in the short, medium and long term.

The Company now has 4,417 tonnes of graphite concentrate in inventory with a production cost/carrying value of \$10.0 million and a market value of approximately \$10.9 million using LDI's average realized price for 2023. In addition, the Company has 124,239 tonnes of broken ore in stockpile containing approximately 7,759 tonnes of graphite which has a carrying value/production cost and net realizable value of \$7.3 million.

Based on current inventory levels and a need to meet increasing market demand, the LDI plant was restarted on October 30, 2023 and Northern currently plans to restart the mine in the spring of 2024. The plant was under temporary shutdown during the second and third quarters and October of 2023 and on care and maintenance to adjust existing inventory levels to market demand. This decision was taken to allow the Company to operate from its inventory without disruption for customers and to preserve cash while taking the opportunity to advance its yearly maintenance shutdown.

Management has been aggressively pursuing new markets/customer opportunities in North America and Europe for 2024 in order to balance liquidity with the amount of working capital tied up in inventories, and to create a market for future expected Namibian production.

## **LDI Exploration**

After a detailed review of historical studies, mine plans and the completion of an airborne geophysical survey, the Company launched a new drill program at LDI during the second quarter of 2023 that was designed to explore previously untested areas of the property with the objective of extending the life of the mine. The program consisted of 88 holes for 7,890 meters of drilling and was financed from the proceeds of the Company's \$2.25 million charity flow-through private placement completed on April 27, 2023. On October 5, 2023, Northern announced the completion of this drilling campaign which confirmed the potential to extend the life of the mine.

On January 17, 2024, the Company announced an updated mineral resource estimate for the LDI Project. The mineral resource update was prepared by SLR Consulting (Canada) Ltd. The Company also announced that it intends to meet rising demand by moving to a seven-days-per week operation in the second quarter of 2024, targeting annual nameplate capacity of 25,000 tpy. The updated mineral resource estimate creates potential to extend the life of the LDI Project by approximatively eight years, which will be confirmed and quantified through an updated mineral reserve estimate and life-of-mine plan that will be available later in 2024. Indicated Mineral Resources now total approximately 3.29 million Mt at an average grade of 6.4% Cg, containing approximately 213,000 tonnes of Cg. Inferred Mineral Resources total approximately 1.43 Mt at an average grade of 7.4% Cg, containing approximately 106,000 tonnes of Cg. Existing stockpiles at the mine site are not included in the updated mineral resource estimate. The updated mineral resource estimate is based on drill hole data available as of November 2, 2023, assuming an open pit mining scenario and a long-term average flake graphite concentrate market price of US\$1,550 per tonne. Mineral resources are constrained within an optimized pit shell at a cut-off grade of 2.3% Cg.

#### Mousseau

In October 2022, the Company acquired a 100% interest in the Mousseau Project by exercising an option and paying \$500,000 in cash and issuing 900,000 common shares of the Company. The project is located approximately 80 kms from, and within economic trucking distance of, the Company's producing LDI graphite mine in Québec. Northern also has the right to acquire a 2% net smelter royalty retained by the owners at any time upon the payment of \$1 million. Mousseau has the potential to extend the mine life at LDI and increase its production back to nameplate capacity.

Mousseau consists of 12 claims totalling 590.54 hectares in size. It is located approximately 150 kms north of Montreal in the Mont-Laurier area and can be accessed from Highway 117 over 12 kms of good quality logging roads. Over 7,500 meters of drilling has been carried out on the property.

On March 14, 2023 the Company announced an increase in the size of the Mousseau Project by an additional 101.64 hectares from an initial 489 hectares to a total of 590.54 hectares. The Company was granted additional mineral rights by the Québec Ministère des Ressources naturelles et des Forêts (the "Minister") through an automatic procedure under the *Mining Act* (Québec) due to the lapse of certain adjoining claims previously held by an arm's-length third party. In connection with the increase in the area covered by the Company's claims, the Company paid \$50,000 and issued 100,000 common shares of the Company to the previous holder of the adjoining claims in order to settle litigation proceedings challenging the Minister's increase in the area of the Company's claims.

On October 12, 2023, the Company announced a mineral resource estimate on Mousseau. The estimate consists of 2,821,041 tonnes of measured and indicated mineral resources with an average grade of 7.908% with 223,079 tonnes of contained graphite. In addition, there are an estimated 331,884 tonnes of inferred mineral resources with an average grade of 9.254% with 30,714 tonnes of contained graphite.

Category	Volume (m³)	Specific Gravity (t/m³)	Tonnes	Graphite (%)	Graphite (t)
Measured	283,605	2.85	808,275	7.612	61,525
Indicated	706,234	2.85	2,012,766	8.026	161,554
Measured and Indicated	989,839	2.85	2,821,041	7.908	223,079
Inferred	116,451	2.85	331,884	9.254	30,714

#### Notes:

- 1. The parameters used to estimate an open pit cut-off grade for the mineral resources are as follows: graphite price of US\$1,500/t, exchange rate of US\$1.00=CAD\$0.78; estimated costs including mining (\$2.50), process (\$50/t), haulage (\$22/t) and G&A (\$5/t), process recovery of 90% and a pit slope of 50°. Mineralized material that is not included within the open pit shell is not part of the mineral resource estimate.
- 2. Mineral resources which are not mineral reserves do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.
- 3. The quantity and grade of reported Inferred Resources in this estimation are uncertain in nature and it is uncertain if further exploration work will result in upgrading them to an Indicated or Measured mineral resource category.
- 4. Mineral resources were estimated using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines.

A technical report in respect of the resource estimate prepared in accordance with NI 43-101 was filed under the Company's profile on SEDAR+ on October 12, 2023.

# b) Okanjande Project, Namibia

The Company acquired a 100% interest in Northern Graphite Holdings (Namibia) (Pty) Ltd. ("Holdings") from Imerys and its joint venture partner in April 2022. Holdings owns a 100% interest in Northern Graphite Processing (Namibia) (Pty) Ltd. ("NGP") and a 100% interest in Northern Graphite Okanjande Mining (Pty) Ltd. ("NGOM"). NGOM holds Mining License ("ML") 196 which covers the Okanjande graphite deposit located approximately 23 km by road to the southwest of the town of Otjiwarongo, 230 km north of Windhoek, the capital city of Namibia, and 388 km east of the port of Walvis Bay. NGOM also holds Exclusive Prospecting License ("EPL") 4717 which surrounds the Mining License.

Namibia is considered one of the most favourable mining jurisdictions on the African continent. Okanjande graphite is of the highest quality and Okanjande is located just five hours over good roads from the deep water port of Walvis Bay, providing ready access to European and North American markets. These attributes, plus a much shorter time to market, are expected to provide a competitive advantage over other African graphite projects, and enable Northern to expand its market share in North America and Europe and reduce the market's dependence on Chinese supply.

During the year ended December 31, 2023, Northern put most of Okanjande on care and maintenance (except for engineering and activities relating to moving the plant from its site at Okorusu to Okanjande).

On August 28, 2023, the Company released the results of a new PEA that evaluated moving its processing plant to the Okanjande mine site, compared to the PEA released on July 11, 2022 which was based on processing at Okorusu. The PEA indicates that economics remain attractive under the new plan, with higher capital costs but lower operating costs. In addition, greenhouse gas emissions are reduced, sustainability is improved, and the expansion potential of the project is substantially enhanced.

The new PEA, dated July 31, 2023, was prepared by CREO Engineering Solutions and confirms the viability of moving milling operations directly to the Okanjande mine site, eliminating the need to truck mineralized material to the Okoruso processing site 70 kilometers away, reducing operating costs and allowing for a more sustainable operation that includes the use of solar power and reduced water consumption.

Key results include an average annual production of 31,315 tonnes of graphite concentrate, production costs of US\$666 per tonne, a Post Tax IRR of 36%, a Post Tax NPV of US\$70 million and a payback of under four years which were based on a 10-year mine life and a weighted average graphite price of US\$1,550/tonne. A technical report in respect of the PEA prepared in accordance with NI 43-101 was filed under the Company's profile on SEDAR+ on August 28, 2023.

The PEA is based on 5.9 million tonnes of weathered resources grading 4.21% Cg and 1.2 million tonnes of fresh rock resources grading 4.35%, all in the measured and indicated categories. The total fresh rock resource consists of 24,200,000t with 1,287,000t of contained graphite in the measured and indicated categories and 7,200,000t with 359,000t of contained graphite in the inferred category (all based on a 3.1% Cg cut-off grade and a US\$1,250/t graphite price).

#### **Summary of PEA Results**

	UOM	Updated PEA July 31, 2023 Okanjande
Measured and Indicated Resource - Weathered	Mt, %TGC	2.54Mt @ 5.03% TGC
Measured and Indicated Resource - Fresh	Mt, %TGC	3.56Mt @ 5.44% TGC
Total Measured and Indicated Resources	tonnes	6,096,950
Before Tax / 8% discount rate		
NPV	USD	\$120,396,195
IRR	%	46%
Cashflow	USD	\$239,077,435
PayBack Period	years	3
After Tax / 8% discount rate		
NPV	USD	\$70,218,979
IRR	%	36%
Cashflow	USD	\$145,674,213
PayBack Period	years	4
	HIGD	Ф24 (20 000
Capital Expenditures (excl. Sustaining capital)	USD	\$34,620,899
Working Capital Provision	USD	\$3,017,888
Average annual concentrate production	tonnes	31,315
C1 production costs	USD/tonne	\$666
Average grade	%	5,3%
Average recovery	%	92%
Graphite flake price	USD/t TCG	\$1,550
NAD / USD exchange rate	NAD : USD	18.5 : 1

#### Notes

- (1) All tabulated data have been rounded and as a result minor computational errors may occur.
- (2) Mineral Resources which are not Mineral Reserves have no demonstrated economic viability.
- (3) Inferred Mineral Resources are reported separately from other categories.
- (4) The Mineral Resources reported are the total Mineral Resources for the Okanjande Project, regardless of ownership.
- (5) Weathered mineral resources: The Mineral Resource is reported for mineralization contained within pit shells above a cut-off grade of 2.6% TGC, which is based on a product price of USD 1,250/t TGC, mining costs of USD 3.75/t RoM, transport cost to plant of USD 6.5/t RoM, processing and treatment costs of 14.9 USD/t (RoM), G&A USD 0.8/t (RoM), transport cost to the market USD 175/t product, 2% royalty, concentrate recovery 92%.
- (6) Fresh mineral resources: The Mineral Resource is reported for mineralization contained within a Whittle pit shell above a cut-off grade of 3.1% TGC, which is based on a product price of USD 1,250/t TGC, mining costs of USD 5.11/t RoM, transport cost to plant of USD 6.5/t RoM, processing and treatment costs of 17.88 USD/t (RoM), G&A USD 0.96/t (RoM), transport cost to the market USD 175/t product, 2% royalty, concentrate recovery 92%.
- (7) MSA is not aware of any known environmental, permitting, legal, title-related, taxation, socio-political, marketing, or other relevant issue that could materially affect the Mineral Resource Estimate.
- (8) The Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.

The above description of the Okanjande Project is derived from the technical report dated July 31, 2023 with an effective date of June 30, 2023 titled "Okanjande Graphite Project Preliminary Economic Assessment Study Update Report"

prepared by Etienne Roux, SME-RM, Robert Barnett, M (Eng), NHDip, BSc Geology (Hons), Pr Sci Nat, FGSSA, Ipelo Gasela, Pr Sci Nat, MGSSA, and Mark Mohring (the "Okanjande Technical Report"), which constitutes the current technical report for the Okanjande Project, and in many cases is a direct extract from such report. Portions of the following information are based on assumptions, qualifications and procedures described in the Okanjande Technical Report but which are not fully described herein. Reference should be made to the full text of the Okanjande Technical Report. The Okanjande Technical Report has been filed under the Company's profile on SEDAR+ and is available for review at <a href="https://www.sedarplus.ca">www.sedarplus.ca</a>.

The Company is evaluating options to fund the Okanjande project through the use of a royalty/stream/debt structure with equity contributed by a strategic partner without having to go to the market. During that process, the Namibian operations have been downsized to project mode, resulting in the retrenchment of 32 employees while maintaining 15 employees working on the preparation of the project. A full schedule is now in place to be executed within 12 to 14 months once financing is available, with the intent to start production in the middle of 2025.

The new available capacity will be used to serve BAM and non-BAM customers in North America and Europe.

#### c) Bissett Creek

The Company holds a 100% interest in the Bissett Creek Project, which is located approximately 15 km from the Trans-Canada Highway (Highway 17) between the towns of Deep River and Mattawa, Ontario. Bissett Creek is located in the United Townships of Head, Clara and Maria, in the County of Renfrew, Province of Ontario, approximately 300 km northeast of Toronto and 200 km west of Ottawa.

The Bissett Creek Project consists of Ontario mining lease number 109550 (covering 565 hectares) which expires on August 31, 2035, and Ontario mining lease number 109335 (covering 1,938 hectares) which expires on September 30, 2034 (the "Mining Leases"). The Company also held five unpatented mining claims, contiguous to the Mining Leases, which have been converted into 52 cells covering approximately 1,159 hectares under Ontario's Mining Lands Administration System.

A royalty of \$20 per ton of concentrate sold must be paid to the families of the original discoverers of the deposit once the mine is operational plus a 2.5% net smelter royalty ("NSR") on any other minerals derived from the Bissett Creek Project. An annual advance payment of \$27,000 must be made and will be credited against future payments when the mine commences production.

On July 15, 2020, the Company sold a 1% gross GRR on the Bissett Creek Project to Electric Royalties Ltd. ("ERL") for \$500,000 in cash and 2,000,000 common shares of ERL valued at \$440,000 at the time of closing (the "Consideration Shares"). The Company has the option to buy back 0.5% of the initial GRR at any time by returning the Consideration Shares or paying \$1.5 million in cash. On September 27, 2023, the Company closed the sale of an additional 0.5% GRR on the Bissett Creek Project for \$950,000 in cash proceeds.

The Bissett Creek Project is unique among its North American peers in that it has a very high percentage of large/XL flake which is ideally suited for high margin and value-added industrial markets such as micronized graphite, expandable graphite and high purity flake graphite that receive premium prices. The Company also intends to develop the capacity to produce anode material for the LiB market which is growing rapidly (due to EVs) and is dominated by China. Unlike many graphite deposits, essentially all Bissett Creek production will be "battery grade". No value-added products are included in the economics in the FS, Expansion PEA or the updates and sensitivity analyses relating thereto.

As at December 31, 2023, the Company had capitalized \$12,774,000 of exploration and evaluation expenditures relating to Bissett Creek, net of the proceeds from the ERL royalties.

The Company filed a revised Mine Closure Plan ("MCP") which was accepted by the Ontario Ministry of Northern Development, Mines, Natural Resources and Forestry ("NDMNRF") in 2013. While the MCP authorizes Northern to build and operate the mine in theory, doing so is still subject to a number of other permitting requirements and First Nation consultations. The MCP requires the Company to deposit \$2,329,008 with the Province of Ontario prior to the commencement of commercial production. This represents the estimated amount required to restore the Bissett Creek property to its original environmental state after the mine has been constructed and operations cease. A deposit of

\$850,000 has been made in the form of a surety bond. Because of operational changes made to improve the economics of the Bissett Creek Project, and to the passage of time, the Company must file an amendment to the MCP which will include a re-estimation of reclamation costs and the amount of the associated deposit.

Over the last number of years, the Company has continued to work on the major permits/authorizations required in addition to the MCP and most are at an advanced stage. Applications/documentation have been submitted with respect to a Permit to Take Water, Environmental Compliance Approval – Industrial Sewage, approval of the Class Environmental Assessment and authorizations required under the Lakes and Rivers Improvement Act (for tailings facilities) and under the Endangered Species Act. These and other permits/authorizations are expected to be received in the normal course prior to the commencement of construction and mining operations. The Company anticipates being in a position to make a construction decision in 2024 subject to arranging the necessary project financing and completing First Nation consultations.

#### **Mineral Resources**

Based on a 1.02% Cg cut-off, the Bissett Creek deposit has estimated measured and indicated resources of 69.8 million tonnes grading 1.74% Cg (1.2 million tonnes of in situ graphite) and inferred resources of 24.0 million tonnes grading 1.65% Cg (0.4 million tonnes of in situ graphite) (the "2013 Resource Estimate"). The Bissett Creek deposit has exceptionally high content of high-purity, coarse-flake graphite which are very important factors that must be considered along with tonnage and grade.

Mineral resources were estimated in conformance with the CIM Mineral Resource definitions referred to in NI 43-101. Pierre Desautels, P.Geo., Principal Resource Geologist, and Gordon Zurowski, P.Eng., Principal Mining Engineer, both of AGP Mining Consultants and Qualified Persons under NI 43-101 who are independent of the Company, prepared the mineral resource estimate.

Mineral resources that are not mineral reserves do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental, permitting, legal, title, taxation, sociopolitical, marketing, or other relevant issues including changing costs, recoveries and mineral prices.

The quantity and grade of reported inferred mineral resources are uncertain in nature and there has been insufficient exploration drilling to categorize inferred mineral resources as indicated or measured mineral resources and it is uncertain if further exploration will result in them being upgraded to indicated or measured mineral resources.

# **Bissett Creek Project – Economic Analysis**

The Company initially completed a Feasibility Study ("FS") for the Bissett Creek Project in 2012. The FS confirmed the technical and financial viability of constructing and operating an open pit mine and 2,500 tpd processing plant at Bissett Creek which is considered as Phase 1 of the ultimate development plan. In 2013, the Company revised the mine plan in the FS based on the 2013 Resource Estimate and updated the FS economics ("FS Update"). The FS Update also incorporated some modifications to capital and operating cost assumptions and lower graphite prices. The FS Update did not constitute a material change and a new technical report prepared in accordance with NI 43-101 was not filed.

The proposed development of the Bissett Creek graphite deposit consists of a shallow open pit mine and a processing plant with conventional crushing, grinding and flotation circuits followed by concentrate drying and screening. Power for the plant will be generated on site using compressed natural gas ("CNG") that will be delivered by truck from the main Trans Canada line, 15 km away. The processing plant includes a sulphide flotation circuit to remove enough sulphides to make approximately 97% of the tailings benign.

Probable mining reserves for the Bissett Creek deposit were established based on, and are a subset of, the 2013 Resource Estimate. The final mine plan only contemplated a 25 to 30 year operation and resulted in Probable Reserves of 28.3 Mt of ore grading 2.06% Cg based on a cut-off grade of 0.96% Cg. Probable Reserves include 24.3 Mt grading 2.20% Cg that will be processed first and 4.0 Mt grading 1.26% Cg from a low grade stockpile ("LGS") that will be processed at the end of the mine life. In order to increase head grades in the initial years of production while maintaining a reasonable stripping ratio, Measured and Indicated resources grading between 0.96% Cg and 1.5% Cg will be stockpiled, largely within the mined out areas of the pit. The total LGS is planned to be 16.5 Mt grading 1.26% Cg and is expected to provide a great deal of flexibility in future operations as it is intended to be available for processing at a

later date, either through an expanded facility or at the end of the mine life. It also represents a low cost source of feed that could be processed during periods of depressed prices.

There are an additional 27.3 million tonnes of Measured and Indicated resources grading 1.62% Cg which are not included in the mine plan and 24 million tonnes of Inferred resources grading 1.65% Cg which are treated as waste. Resource limits have not yet been fully defined and resources may be expanded in the future with additional drilling.

The FS Update assumes 60% of Bissett Creek production will be +50 mesh and a third of this material is actually +32 mesh, 35% of production will be +80 mesh, and 5% will be +100 mesh.

In 2013 the Company completed and filed a technical report prepared in accordance with NI 43-101 with respect to a Preliminary Economic Assessment which includes both the Phase 1 development and a Phase 2 expansion of the Bissett Creek Project (the "Expansion PEA") to demonstrate the ability to double processing capacity (to two Mtpa) after three years of operation based only on Measured and Indicated resources. This is the current technical report with respect to the Bissett Creek Project.

In 2014, the Company updated the Expansion PEA (the "Expansion PEA Update") in order to assess the economics of building a two Mtpa processing plant at the outset rather than increasing from one Mtpa to two Mtpa after three years of operation. There was no requirement for a new technical report relating to the Expansion PEA Update under NI 43-101 as the changes were not material. A press release was issued and filed on SEDAR+ and includes detailed cash flows relating to the Expansion PEA Update.

#### Comparison of the study results

	2013 FS Update	2013 Expansion PEA	2014 Expansion PEA Update
Reserves/resources (million tonnes)*	28.3*	39.4*	40.51
Feed Grade (% graphitic carbon)	2.06%*	1.85%*	1.83%1
Waste to ore ratio	0.79	0.24	0.25
Processing rate (tonnes per day – 92% availability)	2,670	2,670-5,340	5,480
Mine life (years)	28	22	21
Mill recovery	94.7%	94.7%	94.7%
Average annual production	20,800t	33,183t	$44,200t^2$
Initial capital cost (\$ millions – including 10% contingency)	\$101.6M	\$101.6M	\$134.1
Expansion capital	NA	\$45.2M	NA
Sustaining capital	\$43.0	\$58.7M	\$55.1
Cash operating costs (\$/tonne of concentrate)	\$795	\$695	\$736
Mining costs (\$/tonne of ore)	\$5.63	\$4.05	\$3.74
Processing costs (\$/tonne of ore)	\$8.44	\$7.35	\$7.78
General and administrative costs (\$/tonne of ore)	\$2.50	\$1.45	\$1.45
CDN/US dollar exchange rate	1.05	1.05	1.05

<sup>\*</sup>The probable reserve in the FS update consists of 24 million tonnes ("Mt") grading 2.20% Cg and 4.0 Mt of low-grade stockpile ("LGS") grading 1.26% Cg. The PEA accelerates the processing of the probable reserve and processes an additional 11.1 million tonnes of measured and indicated resources from the LGS at the end of the mine life. All grades are diluted.

<sup>&</sup>lt;sup>1</sup> Potentially economically extractable resources are based on the 24 million tonne probable reserve grading 2.20% Cg (as estimated in the FS Update) being processed first followed by the processing of 16.1 million tonnes of Measured and Indicated resources grading 1.26 % Cg from a low grade stockpile. *Mineral resources that are not mineral reserves do not have demonstrated economic viability.* 

<sup>&</sup>lt;sup>2</sup> First 10 years

#### Economic Summaries of the Expansion Scenarios

	2013 FS Update	2013	B Expansion 1 (base case)		2014 Exp	pansion PEA (base case)	
Graphite prices (US\$ per tonne)	\$1,800	\$2,100	\$1,800	\$1,500	\$2,100	\$1,800	\$1,500
Pre tax NPV @8% (CDN\$ millions) Pre tax IRR (%)	\$129.9	\$335.6	\$231.0	\$126.6	\$380.9	\$264.7	\$148.4
	19.8%	33.0%	26.3%	18.8%	40.7%	31.7%	22.2%
After tax NPV@8% (CDN\$ millions) After tax IRR (%)	\$89.3	\$221.9	\$150.0	\$77.3	\$257.9	\$178.9	\$99.0
	17.3%	27.7%	22.0%	15.7%	33.9%	26.7%	18.9%

During 2018 and into 2019 the Company engaged G Mining Services ("G Mining") to carry out a review of the economics of the Bissett Creek Project given the passage of time since the FS Update and Expansion PEA were completed. The review evaluated the effect of some modifications to the flow sheet as well as changes in commodity prices, exchange rates, equipment and labor costs, and other project inputs. The review estimated that the capital cost of Phase 1 has increased by approximately five percent. Operating costs are expected to be up to 20 percent higher than original estimates.

For the purposes of quantifying the potential effects of G Mining's review, the Company released the following sensitivity analysis with respect to the Expansion PEA. The sensitivity analysis is based on a five percent increase in capital and a 20 percent increase in operating costs, current exchange rates and commodity prices, and no change in resources or the mine plan.

	NI 43-101 PEA	Sensitivity Analysis
CDN/US dollar exchange rate	1.05	1.30
Graphite price (US\$/t)	\$1,800	\$1,750
Graphite price (CDN\$/t)	\$1,890	\$2,276
Initial capital cost (CDN\$ millions)	\$101.6	\$106.6
Initial capital cost (US\$ millions)	\$96.8	\$82.0
Expansion capital (CDN\$ millions)	\$45.2	\$47.5
Sustaining capital (CDN\$ millions)	\$58.7	\$61.5
Total capital costs (CDN\$ millions)	\$205.5	\$215.6
Average annual production (tonnes)*	38,400	38,400
Total cash operating costs (CDN\$ millions)	\$507.2	\$608.7
Cash operating costs (CDN\$/tonne)	\$695	\$834
Cash operating costs (US\$/tonne)	\$662	\$642
Pre-tax NPV (@8% - CDN\$ millions)	\$231.0	\$304.9
After -tax NPV (@8% - CDN\$ millions)	\$150.0	\$198.2
Pre-tax IRR (%)	26.3%	30.1%
After-tax IRR (%)	22.0%	25.0%
* Average over first 15 years		

The PEA is based on Measured and Indicated resources only. Mineral resources that are not mineral reserves do not have demonstrated economic viability. The PEA is preliminary in nature and there is no certainty that the results of the preliminary economic assessment will be realized.

G Mining subsequently completed an analysis which indicated that increasing annual concentrate production by at least 20 percent can be achieved with a relatively modest nine percent increase in capital costs for the first phase of development. Higher production would also be expected to reduce unit operating costs and have a very positive effect on the Bissett Creek Project's NPV and IRR.

# e) South Okak Project

On June 7, 2021, the Company entered into an option agreement to earn up to an 80% interest in the South Okak project in Labrador. The South Okak area produced some of the best nickel-copper-cobalt drill intervals outside of Voisey's Bay during the 1990s exploration rush.

The Company did not meet all the conditions of the option agreement and it lapsed according to its terms. The Company subsequently entered into negotiations with the South Okak owners to acquire the South Okak project on alternate terms but could not reach an agreement with them. An impairment of \$1,139,000 has been recognized in the financial statements for the year ended December 31, 2023.

#### 6. Downstream Battery Materials Development: Mine-to-Market Strategy

It is the Company's ambition to serve the evolving needs of the EV industry by creating an end-to-end, North American graphite supply chain from the mine to the battery, and Northern is advancing this goal on several fronts. Ongoing testing of graphite from the Company's projects, both internally and by potential partners, continues to demonstrate that it is ideally suited for battery applications in terms of milling, shaping, purification, coating and electrochemical properties.

The Company has been actively involved in discussions and negotiations with technology and OEM partners in both the US and Europe who want to collaborate with a quality supplier of graphite that has current production, immediately available inventory and the capacity to support future growth. These discussions center on volume requirements and the timing thereof, and plans for downstream conversion facilities in both North America and Europe. Discussions are also being held with various government organizations at both the federal and provincial level to gain support to speed up the development of the battery anode supply chain, with a particular focus on Ontario and Québec.

# **Newly created Battery Materials Group**

On January 31, 2024, the Company announced the launch of the NGC Battery Materials Group to spearhead its mine-to-battery strategy, which would make Northern one of the sole integrated developers, producers, and processors of natural graphite outside of China. NGC Battery Materials Group was formed through the acquisition of the assets and R&D team of the battery division of Germany's Heraeus Group, and includes a fully operational, state-of-the-art laboratory in Frankfurt. Northern has also licensed intellectual property from Heraeus Group to develop, produce, and sell Porocarb®, a high-performance porous hard carbon material developed over the last 10 years and patented by Heraeus Group to enhance the efficiency and speed of energy storage mechanisms. NGC Battery Materials Group will be operated by Northern and financed by selling excess production capacity to partners and other material developers. Northern will pay Heraeus Group a 2% royalty on sales of all Porocarb® products. NGC Battery Materials Group will specialize in advanced material analytics and electrochemical characterization techniques for carbon and battery materials as well as providing in-depth expertise in the field of high temperature processing, scale-up and carbon design. This will enable Northern to provide tailored solutions to EV battery makers and **OEMs** to satisfy their various unique battery requirements.

#### **Baie-Comeau Agreement**

In January 2023, the Company announced that it had entered into an agreement with Innovation et Development Manicouagan ("IDM") at Baie-Comeau, Québec to evaluate sites for the construction of a planned 200,000 tpy BAM plant in the industrial port zone of Baie-Comeau. The plant would be one of the largest in the world and is intended to convert graphite concentrate from the Company's mines, and potentially that of other producers, into BAM to supply existing and planned LiB manufacturing plants throughout North America. Building a low-cost, large-scale conversion facility is a key component of Northern's strategy to empower the EV industry by creating an end-to-end North American graphite supply chain from the mine to the battery.

On June 29, 2023, the Company announced that it had signed an LOI with the city of Baie-Comeau to purchase land

for a 200,000 tonne per year BAM plant as it advances plans to supply anode material to LiB manufacturing plants throughout North America. The LOI, which is subject to financing and receipt of regulatory approvals, gives Northern the right to purchase a 1.2 million m² property, approximately 300 acres, in the Baie-Comeau port industrial zone, with access to municipal services and infrastructure, for US\$1.2 million. There is effectively no capacity in the West to convert graphite mine concentrates into anode material and the EV manufacturers are depending on project proponents such as Northern to fill the void and supply existing and planned LiB manufacturing plants throughout North America. The Baie-Comeau BAM plant will be one of the world's largest such conversion facilities and will process concentrates from Northern's mines as well as from other producers that will be coming online. The plant will have one of the lowest CO<sub>2</sub> footprints in the industry due to its access to green, hydroelectric power with pricing that is among the most competitive in the world.

Baie-Comeau is located on the shores of the St. Lawrence River, approximately 400 km north-east of Québec City in the Cote-Nord economic region and has direct access to the rest of North America via road, rail and a deep water, all-season port. The BAM plant, the first phase of which the Company expects would cost in the range of \$500 million, and which the Company would target for completion in 2027, will be subject to financing, regulatory approvals and certain other conditions, and is eligible for assistance under programs offered by the province of Québec, the Canadian and U.S. governments, as well as other assistance by the Manicouagan region and potential Plan Nord incentives.

Northern is working with a network of global partners to bring to the group extensive expertise/know how and existing capacity to process natural graphite into BAM for North American and European markets. This network of partners is made up of established companies that are actively working in the space and smaller companies with innovative breakthrough technologies that can enhance the performance of Northern's material and processes by leveraging their expertise.

On October 19, 2023, Northern announced that testing of graphite samples from LDI have verified that it is suitable for the production of BAM, a key component in LiBs.

On December 21, 2022, the Company announced a non-binding letter of intent with Graphex, a global leader in the production of the anode material used in EVs/LiBs, with the intent of combining Northern's raw material supply capabilities with Graphex's downstream processing expertise to build plants that will provide an end-to-end North American supply chain from the graphite mine to the battery. Both companies are negotiating the terms of a joint venture to produce coated spherical graphite anode material for the EV/battery market.

Graphex Group Limited is a Cayman Island company with its principal offices in Hong Kong and regional offices in Shanghai and Royal Oak, Michigan. Graphex is focused on the development of technologies and products to enhance renewable energy, particularly the production of BAM and graphene, key components in EVs/LiBs as well as in other uses. Graphex has existing BAM production capacity in China of 10,000 tpy with an expansion project underway to increase production to 20,000 tpy.

Northern plans to provide the joint venture with security of raw material supply (graphite concentrate) and it is contemplated that Graphex will license and/or contribute all the technology, plans and expertise for building and operating the plant(s). Graphex has already secured and is developing a site in Warren, Michigan that is being designed to produce 15,000 tpy of BAM, and Northern is evaluating sites in Baie-Comeau, Québec, that could accommodate production of up to 200,000 tpy of anode material. Northern shall remain entitled to enter into supply agreements with third parties for production not committed to the joint venture and to participate in the construction of other processing plants provided that Northern may not directly or indirectly use, exploit or disclose any of Graphex's technology.

The creation of the joint venture is pending Graphex's US spinoff of its Graphex Technologies business, currently under investigation, to create an independent US entity.

#### Testing of LDI Graphite for Battery Anode Material Grade

On October 19, 2023 the Company announced that testing of graphite samples from the LDI mine verified that it is suitable for the production of BAM, a key component for Lithium-Ion batteries.

Testing was carried out by Heraeus Battery Technology ("Heraeus"), a Hanau, Germany-based laboratory, which Northern subsequently acquired in January 2024. Heraeus analyzed the electrochemical characteristics of BAM

produced from LDI graphite samples and demonstrated its potential to perform at or above the standards of commercially available reference materials.

The Heraeus laboratory results confirmed that anode electrodes produced in the laboratory and electrochemically tested in half-cells for Critical to Quality markers including first cycle efficiency, reversible specific capacity and cycling efficiency, demonstrated that graphite samples from the LDI mine that had been milled, shaped, purified and coated using currently available technologies meet or exceed current industry standards.

The specific capacity of graphite, the active material in the anode of LiBs, is a key indicator of the quality of the graphite and of how much energy can be stored per gram of material. Its value is measured in milliampere-hours per gram of active material ("mAh/g"). In second-cycle testing, used to determine the reversible capacity, a key indicator of the energy storage capability, LDI samples showed a specific capacity of 361 mAh/g versus an industry comparative of 358 mAh/g. The theoretical maximum storage capacity of graphite is 372 mAh/g and the goal of processing is to get as close to that figure as possible.

	Initial coulombic efficency (%) <sup>(a)</sup>	Charging (lithiation) capacity (mAh/g) (b)	Discharging (delithiation) capacity (mAh/g) <sup>(b)</sup>	Coulombic efficency (%) (b)
BAM demonstrator*	92.0	364	361	99.4
Industry standard*	94.0	360	358	99.3
Theoretical value		372	372	100.0

<sup>\*</sup> Values from first cycle (a) and second cycle (b) half-cell measurement using an anode with 96% graphite 1% carbon black and 3% binder (CMC+SBR). The BAM demonstrator is closer to the theoretical values than the measured industry standard (also based on natural graphite) which highlights the potential of Northern's graphite for this application.

# 7. Other Downstream Development Activities

In addition to the battery materials market, Northern is exploring opportunities to expand its presence in various other downstream segments through its traditional customer base. A particular focus is on graphene applications and the use of graphite to provide enhanced thermal and electrical properties in a variety of high value composite applications. The Company is in ongoing discussions with customers and other companies in this space that are looking for support to develop these markets. As the only graphite producer in North America and with expectations of becoming one of the largest outside of China, Northern is well positioned to invest in these new downstream markets and to support their growth.

On February 13, 2023, the Company entered into an agreement with Edgewater providing it with an option to acquire an ownership interest in NeoGraf, a leading provider of specialty, value added products manufactured from natural graphite with a strong intellectual property portfolio and a blue chip customer base. NeoGraf is one of Northern's largest customers. Under the terms of the agreement, Northern had a six month option to acquire an effective 50.1% voting interest and a 33.3% equity interest in NeoGraf and also had an option to increase its interest up to 100% at a later date subject to the terms and conditions of the agreement.

On August 29, 2023, the Company entered into an agreement with Edgewater to extend the Company's option to acquire a stake in NeoGraf for six months ending on February 29, 2024.

On February 29, 2024, the Company's option agreement with Edgewater was allowed to expire. The Company did not exercise the option due to current market conditions as it was no longer in the best interests of the Company's shareholders. Neograf remain one of Northern's main customer and both companies will continue to work closely together in this very important partnership to develop cutting edge graphite applications, inside and outside of the battery industry.

#### 8. Selected Financial Information

#### a. Selected Financial Information

The following tables contain selected interim financial information as at December 31, 2023 and December 31, 2022.

(Shown in Thousands of Dollars)	As at December 31, 2023	As at December 31, 2022
Statement of Financial Position		
Assets		
Current Assets		
Cash and cash equivalents	3,115	5,076
Restricted cash	-	7
Receivables	2,244	4,100
Prepaids	1,794	1,643
Deposits	147	32
Inventories (concentrate, stockpile, materials and supplies)	17,129	18,265
Marketable securities and deferred costs	490	560
Total current assets	24,919	29,683
Non-current assets		
Non-current inventory	1,863	6,331
Exploration and evaluation assets	15,693	15,407
Property, plant and equipment	23,956	23,110
Mineral interests	18,367	20,437
Restricted cash, goodwill and other assets	6,428	6,783
Total Assets	91,226	101,751
Current liabilities		,
Accounts payable and accrued liabilities	6,897	5,044
Flow through shares liability	500	-
Current portion of senior secured loan, royalty and leases	7,421	5,227
Total current liabilities	14,818	10,271
Non-current liabilities		
Senior secured loan, royalty, deferred revenue and leases	52,431	46,027
Reclamation provisions	6,402	6,601
Deferred tax liability	1,788	2,676
Total Liabilities	75,439	65,575
Shareholders' equity:		
Share capital	57,421	52,617
Reserves	12,758	14,308
Accumulated deficit	(54,392)	(30,749)
Total shareholders' equity	15,787	36,176
Total Liabilities and Shareholders' Equity	91,266	101,751

# b. Results of Operations

On April 29, 2022 the Company completed the acquisition of LDI, a producing graphite mine in Québec, and the Okanjande Project, a formerly producing operation in Namibia that is on care and maintenance and which the Company intends to bring back into production. As a result, LDI's operating results for the year ended December 31, 2022 only include LDI's operating results for the last two days of April and for the months of May through December. LDI's operating results for the year ended December 31, 2023 have been fully reflected in the Company's consolidated statements of loss and other comprehensive loss "Statement of Loss". The Okanjande Project is a development stage project and is not yet in production and all costs related to bringing the mine back into production have been capitalized and are not reflected in the Company's Statement of Loss. The Okanjande plant was temporarily placed in care and

maintenance in the third quarter of 2023 and costs for the third and fourth quarters of 2023 were recorded in the statement of loss and other comprehensive loss as Care and Maintenance.

The LDI mine and plant were temporarily placed in care and maintenance for the second, third and part of the fourth quarters of 2023 while the Company sold excess inventory which it acquired with LDI. The plant restarted on October 30, 2023, but the mine continued on care and maintenance. Costs incurred in those periods were recorded in the Statement of Loss as Care and Maintenance.

The following table contains selected interim financial information for the years ended December 31, 2023 and 2022.

(Shown in Thousands of Dollars)	December 31, 2023 \$	December 31, 2022 \$	
Revenue	17,099	11,993	
Production costs	(12,276)	(7,888)	
Depletion and depreciation	(2,895)	(1,055)	
Income from mine operations	1,928	3,050	
General and administrative	(9,156)	(4,866)	
Share-based compensation	(1,264)	(1,490)	
Project evaluation, acquisition and integration	(324)	(1,920)	
Foreign exchange gain (loss)	(670)	498	
Operating Loss	(9,486)	(4,728)	
Loss on marketable securities	(70)	(190)	
Finance expense	(6,568)	(3,328)	
Foreign exchange gain (loss) on finance	1,432	(2,633)	
Interest income	75	159	
Impairments	(2,683)	(3,167)	
Care and maintenance	(6,478)	-	
Okorusu moving costs	(587)	-	
Income tax recovery (expense)	722	(664)	
Net loss	(23,643)	(14,551)	
Loss per share – basic and diluted	(0.18)	(0.14)	

# Year Ended December 31, 2023 Compared to the Year Ended December 31, 2022

Revenue for the year ended December 31, 2023 was \$17,099,000 based on sales of 8,592 tonnes of graphite concentrate with an average realized sales price of \$1,990 per tonne and a cash cost per tonne of graphite concentrate sold of \$1,429 compared with the previous year which had revenue of \$11,993,000 based on sales of 5,785 tonnes of graphite concentrate with an average realized sales price of \$2,073 per tonne and a cash cost per tonne of graphite concentrate sold of \$1,364. Production costs for year ended December 31, 2023 were \$12,276,000 compared to \$7,888,000 for the prior year's period (LDI was acquired in late April 2022) which consisted of mining and processing costs, mine site general and administrative costs and selling expenses. Production costs were higher in the period mainly due to higher tonnes sold. Depletion and depreciation was \$2,895,000 and income from operations at LDI was \$1,928,000 for the year ended December 31, 2023 compared to \$1,055,000 and \$3,050,000 respectively for the prior year period.

Corporate general and administrative costs for the year ended December 31, 2023 were \$9,156,000 compared with \$4,866,000 for the prior year's period and increased due to certain costs being incurred for a full year in fiscal 2023 compared to only eight months post acquisition in fiscal 2022. Key costs that increased during this period included personnel and consulting fees to manage the business and operations.

Share-based compensation decreased by \$226,000 compared to the previous year due to the timing and vesting terms of stock options and restricted stock units granted to directors, officers, employees and other consultants.

Project evaluation, acquisition and integration costs for the quarter were \$324,000 compared to \$1,920,000 in the prior and decreased as the prior year period included project evaluation costs related to the LDI and Okanjande acquisitions.

A foreign exchange loss of \$670,000 was recorded for the year ended December 31, 2023 compared to a gain of \$498,000 in the previous year which is largely attributable to quarter-end revaluations of foreign currency denominated monetary assets and liabilities. An unrealized loss of \$70,000 (prior year - \$190,000) was recorded on 2,000,000 common shares of ERL held by the Company from the sale of the GRR on the Bissett Creek Project as these marketable securities are marked to market each reporting period.

In the year ended December 31, 2023, an impairment loss of \$2,683,000 was incurred relating to the following items:

- A write-off of \$1,139,000 relating to the carrying value of the South Okak property as the Company was not successful in renegotiating the terms of the option agreement;
- As a result of lower realized prices on the sale of concentrate and higher per tonne processing costs due to higher operating costs and lower production volumes on restart of the LDI plant, the Company recorded a net realizable value impairment of \$987,000 on its stockpile inventory;
- Following annual inventory surveys and counts of its LDI stockpile and concentrate inventories, the Company recorded impairments of \$234,000 and \$114,000 on them respectively, and
- During the first quarter of 2023, as a result of finalizing an agreement with the leaseholder of the Okorusu property, the Company recorded an impairment loss of \$209,000.

In December 2022, the Company made the decision to move the location of its processing plant equipment from Okorusu to Okanjande. This move, while enhancing the net present value of the project, resulted in an impairment of the prepaid lease access for Okorusu of \$2,286,000. The Company intends to move virtually all of the processing equipment to Okanjande except for foundations and other immovable objects. As a result, an additional impairment charge of \$881,000 has been taken which represents the fair value allocated in the purchase price to those items.

Moving costs of \$587,000 were incurred in the year ended December 31, 2023 as a result of the Company's decision in the fourth quarter of 2022 to relocate the Namibian processing facilities from Okorosu to Okanjande.

The LDI mine and plant were temporarily placed in care and maintenance for the second, third and part of the fourth quarters of 2023 while the Company sold excess inventory which it acquired with LDI. The plant restarted on October 30, 2023, but the mine continued on care and maintenance. Since there was no mining or production during the second, third and part of the fourth quarter, costs incurred of \$5,548,000 were recorded in the income statement as Care and Maintenance.

During the third quarter of 2023, Northern put most of Okanjande on care and maintenance (except for engineering and activities relating to moving the plant from its site at Okorusu to Okanjande). This resulted in a care and maintenance expense of \$930,000. The timing of the restart is subject to the availability of project financing.

Finance costs were \$6,568,000 during the year ended December 31, 2023 (2022 - \$3,328,000). They increased due to interest recorded on the Company's senior secured debt and royalty, deferred revenue and leasing arrangements for the full period as opposed to just five months in the prior year period as well as higher interest rates on the Company's senior debt, higher accretion and no capitalization of interest while the Okanjande project is under care and maintenance. Of this amount, \$486,000 (2022 – \$98,000) was paid in cash. A foreign exchange gain of \$1,432,000 was recorded on finance instruments denominated in US dollars (prior year period – loss of \$2,633,000) as the Canadian dollar finished the period stronger against the US dollar compared to the prior year period. Income tax recovery was \$722,000 (2022 – expense of \$664,000) as a deferred income tax recovery was partially offset by Québec mining taxes on operations.

For the year ended December 31, 2023 the Company recorded a net loss of \$23,643,000 or \$0.18 per share, compared to a net loss of \$14,551,000 or \$0.14 per share during the 2022. Lower income from mining operations and increases to general and administration costs, interest expense, asset impairments, Okorusu moving expenses and care and maintenance expenses at LDI and Okanjande were only partially offset by lower project evaluation, acquisition and integration costs and more favourable foreign exchange results. A significant portion of the net loss was for non-cash charges including depletion and depreciation, inventory impairments, drawdown of inventory for sales, capitalized

interest expenses, accretion of debt instruments, share-based compensation and the write-off of the South Okak property.

# **Summary of Quarterly Results**

The following tables contain selected financial information for the eight most recently completed quarters for the Company ending December 31, 2023.

(Shown in Thousands of Dollars)	December 31 2023 \$	September 30 2023 \$	June 30 2023 \$	March 31 2023 \$
Revenue	4,210	4,933	3,963	3,993
Production costs	(3,248)	(3,453)	(2,688)	(2,887)
Depletion and depreciation	(801)	(778)	(662)	(654)
Income from mine operations	161	702	613	452
General and administrative	(2,545)	(2,177)	(2,160)	(2,274)
Share-based compensation	(140)	(175)	(204)	(745)
Project evaluation, acquisition and integration	(279)	-	(16)	(29)
Foreign exchange gain (loss)	(160)	(407)	(148)	45
Operating Loss	(2,963)	(2,057)	(1,915)	(2,551)
(Loss) gain on marketable securities	60	(200)	(10)	80
Foreign exchange gain (loss) on financings	1,335	(1,098)	1,148	47
Finance costs	(2,775)	(1,188)	(1,397)	(1,208)
Interest income	23	17	26	9
Impairment loss	(2,474)	-	-	(209)
Care and maintenance	(1,382)	(2,305)	(2,791)	-
Okorusu moving costs	(72)	(83)	(237)	(195)
Income taxes recovery (expense)	284	87	543	(192)
Net loss	(7,964)	(6,827)	(4,633)	(4,219)
Loss per share – basic and diluted	(0.06)	(0.05)	(0.04)	(0.03)

#### **Results of Operations**

(Shown in Thousands of Dollars)	December 31, 2022 \$	September 30, 2022 \$	June 30, 2022 \$	March 31, 2022 \$
Revenue	3,817	4,483	3,693	_
Production costs	(2,268)	(3,357)	(2,263)	-
Depletion and depreciation	(586)	(359)	(110)	-
Income from mine operations	963	767	1,320	-
General and administrative	(1,456)	(1,779)	(1,009)	(622)
Share-based compensation	(166)	(80)	(153)	(1,091)
Project evaluation, acquisition and integration	136	(365)	(1,386)	(305)
Foreign exchange gain (loss)	(118)	556	29	31
Operating Loss	(641)	(901)	(1,199)	(1,987)
Gain (loss) on marketable securities	40	70	(230)	(70)
Finance costs	(1,587)	(656)	(1,081)	(4)
Foreign exchange gain (loss) on finance instruments	742	(3,057)	(318)	-
Interest income	44	71	39	5
Impairment	(3,167)		-	
Income taxes	(140)	(350)	(174)	-
Net loss	(4,709)	(4,823)	(2,963)	(2,056)
Loss per share – basic and diluted	(0.04)	(0.04)	(0.03)	(0.03)

# Three Months Ended December 31, 2023 Compared to the Three Months Ended December 31, 2022

Revenue for the quarter was \$4,210,000 based on sales of 2,176 tonnes of graphite concentrate with an average realized sales price of \$1,935 per tonne and a cash cost per tonne of graphite concentrate sold of \$1,429. In the previous year's fourth quarter revenues were \$3,817,000 based on sales of 1,828 tonnes of graphite concentrate with an average realized sales price of \$2,088 per tonne and a cash cost per tonne of graphite concentrate sold of \$1,241. Production costs for the quarter were \$3,248,000 compared to \$2,268,000 for the prior year's quarter which consisted of mining and processing costs, mine site general and administrative costs and selling expenses. Production costs were higher in the fourth quarter of 2023 due to the impact of increased tonnes sold and higher mining and processing costs compared to the prior year's quarter. Depletion and depreciation was \$801,000 and income from mine operations at LDI was \$161,000 for the quarter compared to \$586,000 and \$963,000 for the prior year's quarter.

Corporate general and administrative costs for the three months ended December 31, 2023 were \$2,545,000 compared with \$1,456,000 for the prior year's quarter and primarily increased due to higher personnel costs and consulting fees necessary to manage the business and operations.

Share-based compensation decreased by \$26,000 compared to the previous year's quarter due to the timing and vesting terms of stock options and restricted stock units granted to directors, officers, employees and other consultants.

Project evaluation, acquisition and integration costs for the quarter were \$279,000 and related to the Company's NGC Battery Materials Group which was launched on January 31, 2024. There was a gain of \$136,000 in the prior year's quarter related to costs that had been incurred in the second quarter that were reallocated to subsidiaries as they related to Okanjande construction in process activities post Acquisition rather than pre-acquisition costs.

A foreign exchange loss of \$160,000 was recorded for the quarter compared to a loss of \$118,000 in the previous year's quarter which is largely attributable to quarter-end revaluations of foreign currency denominated monetary assets and liabilities. The Company holds cash and accounts receivables in US dollars which were impacted by foreign exchange fluctuations in the fourth quarter of 2023. An unrealized gain of \$60,000 (prior year quarter – gain of \$40,000) was recorded on 2,000,000 common shares of ERL held by the Company from the sale of the GRR on the Bissett Creek Project as these marketable securities are marked to market each reporting period.

Finance costs were \$2,775,000 during the quarter (2022 - \$1,587,000) and increased as higher interest rates on the Company's senior debt and higher accretion as well as no capitalization of interest while the Okanjande project is under care and maintenance. A foreign exchange gain of \$1,335,000 was recorded on finance instruments denominated in US dollars (prior year period – gain of \$742,000) as the Canadian dollar finished the quarter stronger against the US dollar. Income tax recovery was \$284,000 (2022 – expense of \$140,000) as a deferred income tax recovery was partially offset by Québec mining taxes on operations.

In the quarter ended December 31, 2023, an impairment loss of \$2,474,000 was incurred relating to the following items:

- During 2021, the Company entered into an option agreement to earn up to an 80% interest in the South Okak. The Company did not meet the conditions of the option agreement and it lapsed. The Company engaged in discussions to amend the option agreement but they were ultimately unsuccessful and the Company wrote-off the \$1,139,000 carrying value of South Okak in the fourth quarter of 2023;
- As a result of lower realized prices on the sale of concentrates and higher per tonne processing costs due to higher operating costs and lower production volumes on restart of the LDI plant, the Company recorded a net realizable value impairment of \$987,000 on its stockpile inventory, and
- Following annual inventory surveys and counts of its LDI stockpile and concentrate inventories, the Company recorded impairments of \$234,000 and \$114,000, respectively.

In the fourth quarter of 2023 \$72,000 of moving costs were incurred as a result of the Company's decision in the fourth quarter of 2022 to move the Namibian processing facilities from Okorosu to Okanjande.

The LDI mine and plant were temporarily placed in care and maintenance for the second, third and part of the fourth quarters of 2023 while the Company sold excess inventory which it acquired with LDI. The plant restarted on October 30, 2023, but the mine continued on care and maintenance. Since there was no mining during the fourth quarter and the plant was only in production for part of the quarter, costs incurred during the periods of closure of \$862,000 were recorded in the income statement as Care and Maintenance.

During the third quarter of 2023, Northern put most of Okanjande on care and maintenance (except for engineering and activities relating to moving the plant from its site at Okorusu to Okanjande). This resulted in a Care and Maintenance expense of \$520,000 during the fourth quarter. The timing of the restart is subject to the availability of project financing.

For the three months ended December 31, 2023 the Company recorded a net loss of \$7,964,000 or \$0.06 per share, compared to a net loss of \$4,709,000 or \$0.04 per share during the three months ended December 31, 2022. Lower income from mining operations as well as increases to general and administration costs, interest expense, asset impairment charges and care and maintenance expenses at LDI and Okanjande, were only partially offset by higher foreign exchange gains. A significant portion of the net loss was for non-cash charges including depletion and depreciation, inventory impairments, drawdown of inventory for sales, accretion of debt instruments, share-based compensation and the write off of the South Okak property.

# c. Liquidity and Capital Resources

As at December 31, 2023 the Company held cash of \$3,115,000 (December 31, 2022 - \$5,076,000), \$1,874,000 of restricted cash (December 31, 2022 - \$2,083,000) and had working capital of \$10,101,000 (December 31, 2022 - \$19,412,000). Working capital includes \$17,129,000 (December 31, 2022 - \$18,265,000) in inventory consisting of 3,672 tonnes of graphite concentrate (December 31, 2022 - 8,743) and 124,239 tonnes of ore stockpiles (December 31, 2022 - 38,267) as well as materials and supplies. The ore stockpile contains approximately 7,765 tonnes of recoverable graphite (December 31, 2022 - 2,251 tonnes). Inventories of graphite concentrate, and the ore stockpile are recorded at cost. During the fourth quarter of 2023, the stockpile inventory was written down to its net realizable value. The realizable value of the concentrate inventory is higher than the cost and accordingly, the Company intends to continue

reducing inventories to generate liquidity. The value of finished goods in non-current assets is \$1,863,000 at December 31, 2023 (\$nil at December 31, 2022) representing 745 tonnes. The value of the ore stockpile in non-current assets was \$nil as at December 31, 2023 (December 31, 2022 - \$6,331,000) representing nil tonnes (December 31, 2022 - 107,082).

During the year ended December 31, 2023, the Company utilized net cash of \$4,729,000 with respect to operating activities (December 31, 2022 - \$10,505,000) and invested cash of \$4,478,000 primarily for property, plant and equipment at LDI, development work at Okanjande and exploration work at LDI (December 31, 2022 - \$51,574,000 as follows: the acquisition of LDI for \$25,636,000, the acquisition of Okanjande for \$20,003,000, exploration and evaluation costs for the Bissett Creek Project, South Okak and Mousseau properties of \$1,343,000, property, plant and equipment of \$\$5,116,000 and was provided cash from the release of restricted cash and reclamation deposits of \$534,000).

As part of the acquisition of LDI, the Company was required to put funds into escrow until the mining regulators in Quebec transferred LDI's reclamation obligation to the Company and they were replaced by a Surety Bond. During November 2022 cash held in escrow of \$6,725,000 was released to the Company upon the governmental administrative transfer of the reclamation obligations from the seller of LDI to the Company. During October 2022, the Company received \$848,000 of formerly restricted cash related to the Bissett Creek Property closure plan. During December 2022 the Company received \$1,561,000 of formerly restricted cash related to LDI.

The Company negotiated a surety bond of approximately \$9 million which replaced cash deposits securing the gross amount of Bissett Creek and LDI reclamation obligations. The issuer of the surety bond required a 20% cash deposit and accordingly, the Company provided the issuer with an irrevocable letter of credit for \$1,817,000 which is secured by a cash deposit in the same amount.

#### d. Financings

# i. Acquisition of LDI and the Okanjande Project and Financings

On April 29, 2022 the Company acquired from Imerys SA ("**Imerys**") 100% ownership of the producing LDI graphite mine in Québec for \$30,767,000 and the Okanjande graphite deposit and processing equipment at the Okorusu plant in Namibia for \$20,931,000.

As consideration for the acquisition of LDI, which was completed as a purchase of all of the assets of the LDI Project by the Company's new wholly-owned subsidiary Graphite Nordique Inc., the Company paid Imerys \$24,295,000 in cash which included a reimbursement for the reclamation deposit, held with Québec environmental regulatory authorities, for \$1,561,000. In addition, Imerys was issued \$5,131,000 (US\$4,000,000) worth of private placement units consisting of one common share and one-half of one share purchase warrant which have the same terms as the Private Placement (as defined below), resulting in the issuance to Imerys of 6,841,600 common shares and 3,420,800 warrants. The final purchase price for LDI was subject to post transaction closing adjustments relating to working capital of \$1,341,000 (US\$1,036,000) which was paid in 2022.

As consideration for the acquisition of the Okanjande Project, which was completed as a purchase of all of the shares of Imerys Gecko Holdings (Namibia) (Pty) Ltd. by the Company from Imerys and its joint venture partner, the Company paid Imerys and its joint venture partner \$20,237,000 (US\$15,820,000) in cash. The Company now owns the Okanjande deposit and all the processing equipment necessary to produce graphite concentrate from mineralized material mined therefrom. The Company also paid the owner of the Okorusu property \$2,948,000 (EUR2,200,000) for use of the land and buildings where the equipment is located.

#### Private Placement (\$23 million)

The Company completed a brokered private placement (the "Private Placement") of 30,762,500 subscription receipts issued at a price of \$0.75 for gross proceeds of \$23,072,000. In addition to the initial closing of the private placement in which the Company issued 25,762,500 subscription receipts for gross proceeds of \$19,322,000, the Company completed the final closing of the private placement which consisted of 5,000,000 subscription receipts for gross proceeds of \$3,750,000. Upon the closing of the LDI and Okanjande acquisitions, each subscription receipt automatically converted into one unit of Northern, with each unit being comprised of one common share and one-half

of one share purchase warrant of the Company. Each whole warrant is exercisable to purchase one common share of the Company at an exercise price of \$1.10 per common share and an expiry date of April 29, 2024.

In connection with the Private Placement, the agents received a cash fee of \$1,384,000 from the Company equal to 6% of the aggregate gross proceeds and 1,845,750 compensation warrants equal to 6% of the number of subscription receipts issued under the closing. Each compensation warrant is exercisable to purchase one common share at an exercise price of \$0.75 per common share for a period of two years.

#### Senior Secured Loan (US\$12 million)

The Company completed a senior secured loan with Sprott Private Resource and Streaming ("Sprott") for gross proceeds of \$15,350,000 (US\$12,000,000), made at a 2% discount, which matures in 48 months. The loan bears interest at 9% plus the greater of the three month SOFR or 1%. At the Company's option, interest payable during the initial twelve months can be capitalized and added to the principal. As partial consideration for providing the loan, the Company issued 4,800,000 warrants to Sprott each of which is exercisable to purchase one common share of the Company at an exercise price of \$1.01 with an expiry date of April 29, 2024. The loan is a senior secured obligation of the Company secured against the LDI and Okanjande Projects.

# Royalty Financing (US\$4 million)

The Company sold Sprott a 9% royalty on graphite concentrate sales revenue from LDI for gross proceeds of \$5,117,000 (US\$4,000,000). As partial consideration for providing the royalty financing, the Company issued to Sprott 1,200,000 warrants, each of which is exercisable to purchase one common share of the Company at an exercise price of \$1.01 with an expiry date of April 29, 2024. Sprott has also been granted a right of first refusal with respect to any proposed grant of a stream, royalty or similar transaction on the Bissett Creek Project.

#### Graphite Stream (US\$20 million)

The Company has completed, in exchange for an upfront deposit of \$25,584,000 (US\$20,000,000), a mineral purchase and sales agreement with Sprott for 11.25% of the graphite produced by the Okanjande Project until 350,000 tonnes of contained graphite in concentrate have been produced and delivered, at which time, at the option of the stream purchaser, the stream may convert into a 1% royalty for the remaining life of the Okanjande deposit. The stream is secured against the Okanjande Project. Sprott has also been granted a right of first refusal with respect to any proposed grant of a stream, royalty or similar transaction on the Okanjande deposit. As partial consideration for entering into the stream, the Company issued to Sprott 4,500,000 warrants, each of which is exercisable to purchase one common share of the Company at an exercise price of \$1.01 with an expiry date of April 29, 2024. The Company has the option, subject to any consents or approvals required under the senior secured loan, to reduce the stream percentage by up to 50% upon payment of \$20,618,000 (US\$15,250,000) in 2024 or \$23,660,000 (US\$17,500,000) in 2025. This option is exercisable in whole or in part on a pro rata basis.

# ii. Additional Financing and Subsequent Events

During the year ended December 31, 2023, 4,652,500 warrants with a strike price of \$0.45 were exercised for gross proceeds of \$2,093,000 in exchange for 4,652,500 common shares of the Company.

During the year ended December 31, 2023, 600,000 stock options with a strike price of \$0.50 were exercised for gross proceeds of \$300,000 in exchange for 600,000 common shares of the Company and 150,000 stock options with a strike price of \$0.25 were exercised for gross proceeds of \$38,000 in exchange for 150,000 common shares of the Company and 200,000 and stock options with a strike price of \$0.20 were exercised for gross proceeds of \$40,000 in exchange for 200,000 common shares of the Company.

During the year ended December 31, 2023, the Company paid \$1,649,000 in royalties to Sprott and made \$575,000 of lease payments.

On September 27, 2023, Northern closed the sale of an additional 0.5% GRR on the Bissett Creek for \$950,000 in cash proceeds. In connection with this sale, the Company will make a separate fixed royalty payment to ERL in the total amount of \$200,000, payable in equal quarterly payments (commencing in the fourth quarter of 2023) of \$25,000 for the next two years.

On April 27, 2023, the Company closed a non-brokered private placement financing of 3,000,000 units issued on a charity flow-through basis at a price of \$0.75 per unit for proceeds of \$2,250,000. Each unit consisted of one common

share and one-half of one common share purchase warrant with each whole warrant entitling the holder to purchase one common share at an exercise price of \$0.75 for a period of two years. In connection with the transaction, the Company issued 180,000 warrants to a finder exercisable at \$0.75 per share for a period of two years and has recorded finder's fee payable of \$135,000. The Company has been and plans to use the proceeds of the financing to complete a drill program on a number of targets around LDI with the objective of identifying potential new sources of plant feed.

On November 29, 2023, the Company obtained additional financing of US\$3 million from Sprott Resources and Royalties in the form of:

- An increase in the amount of the Senior Secured Loan by US\$1 million (from US\$12 million to US\$13 million), and
- An increase in the amount of the Royalty Financing by US\$2 million (from US\$4 million to US\$6 million) through an additional 4% graphite sales revenue royalty on LDI reducing to 0.25% once the additional royalty has been paid on 45,000 tonnes of sales.

The Company has a working capital position largely consisting of inventories, which are valued at cost not market and represent a substantial source of future liquidity. While additional capital will be required to restart operations in Namibia and advance the LDI exploration, Bissett Creek and Mousseau Projects, as well as for construction of the Baie-Comeau BAM facility, the Company's capital investment programs are discretionary and flexible and will be managed in a manner that minimizes the need to raise financing at current share prices. Numerous, active discussions are ongoing with respect to strategic partnerships and off take agreements and there continue to be many positive developments in the EV/battery/critical minerals space.

The Company has incurred losses since its inception and had an accumulated deficit of \$54,392,000 as at December 31, 2023 which has been primarily funded by the issuance of shares, a senior secured loan, royalty financing, a deferred revenue agreement and sales of graphite concentrate. The Company's ability to continue as a going concern depends upon its ability to raise adequate financing and to generate profitable operations in the future. The Company has been successful in the past in raising funds for operations by issuing shares and entering into financing arrangements, but there is no assurance that it will be able to continue to do so in the future. There is a material uncertainty related to these conditions that casts significant doubt about the Company's ability to continue as a going concern and therefore it may be unable to realize its assets and discharge its liabilities in the normal course of business.

The Company's consolidated financial statements do not give effect to any adjustments which would be necessary should the Company be unable to continue as a going concern and therefore be required to realize its assets and discharge its liabilities in other than the normal course of business and at amounts different from those reflected in these financial statements. Any such adjustments could be material.

Subsequent to December 31, 2023, the following share purchase warrants expired, leaving the Company with 1,680,000 warrants outstanding with an exercise price of \$0.75 at April 29, 2024:

- 1,545,750 warrants with an exercise price of \$0.75 expired on February 10, 2024;
- 300,000 warrants with an exercise price of \$0.75 expired on April 27, 2024;
- 10,500,000 warrants with an exercise price of \$1.01 expired on April 29, 2024, and
- 18,802,050 warrants with an exercise price of \$1.10 expired on April 29, 2024.

# e. Contractual Obligations

At December 31, 2023, the Company had the following contractual obligations outstanding:

(Shown in Thousands of Dollars)	Within 1 year	2-3 years	4-5 Years	5+ years	Total
Accounts payable and accrued liabilities	\$ 6,897	\$ -	\$ -	\$ -	\$ 6,897
Senior secured loan	3,146	25,298	-	-	28,444
Royalty	3,769	3,527	-	-	7,296
Deferred revenue	-	12,513	13,413	43,493	69,419
Lease commitments	506	501	334	645	1,986
Reclamation provisions	-	-	-	9,765	9,765
Firm commitments	4,218	-	-	-	4,218
	\$ 18,536	\$ 41,839	\$ 13,747	\$ 53,903	\$ 128,025

# f. Subsequent Events

Aside from the item noted below, all material events subsequent to December 31, 2023 have been described elsewhere in this MD&A.

On March 27, 2024, the Company announced that it had filed a preliminary short form base shelf prospectus. The base shelf prospectus has not yet become final for the purpose of sale of any securities. When final and effective, the base shelf prospectus would allow the Company to offer and issue up to a maximum amount of \$100 million of common shares, debt securities, warrants, subscription receipts, units or any combination thereof during the 25-month period over which the base shelf prospectus is effective.

# g. Off Balance-Sheet Arrangements

The Company has not entered into any off-balance sheet arrangements such as guarantee contracts, contingent interests in assets transferred to unconsolidated entities, derivative instrument obligations, or any obligations under a variable interest entity arrangement.

#### h. Transactions with Related Parties and Key Management Compensation

During the year ended December 31, 2023, the Company expensed salary and compensation to key management personnel of \$2,616,000 (year ended December 31, 2022 – \$1,212,000) and management fees to a company owned and controlled by key management personnel of \$47,000 (year ended December 31, 2022 – \$64,000). During the year ended December 31, 2023, the Company expensed directors' fees of \$239,000 (year ended December 31, 2022 – \$60,000). During the year ended December 31, 2023, the Company expensed share-based payments for stock options granted to key management personnel and directors of \$1,241,000 (year ended December 31, 2022 – \$1,408,000).

As at December 31, 2023, \$651,000 (December 31, 2022 – \$64,000) was included in accounts payable and accrued liabilities owing to officers and directors relating to management and directors' fees and for reimbursement of expenses.

During January 2023 the Board of Directors approved a grant of stock options to directors to purchase a total of 1,100,000 common shares of the Company at a price of \$0.55 per share, vesting immediately, for a period of five years.

During February 2023 the Board of Directors approved a grant of stock options to an officer of the Company to purchase a total of 200,000 common shares of the Company at an exercise price of \$0.55 per share, vesting immediately, for a period of five years.

On February 12, 2023, Northern announced that the vesting period for 1,300,000 RSUs granted by the Company to certain officers and employees were issued subject to time-based vesting of one quarter of the RSUs on each of the first and second anniversaries of the respective start dates for the officers and employees with the balance vesting on the third anniversary. It was originally announced that one quarter of the RSUs would vest on each of their first, second, third and fourth anniversaries. This change was made for tax reasons specific to the award of the RSU's.

On May 4, 2023, the Board of Directors approved a grant of stock options to certain new officers and employees to purchase a total of 390,000 common shares of the Company at a price of \$0.55 per share, vesting one quarter after each of years one and two, and one half after year three, and exercisable for a period of five years. In addition, the Board of Directors approved a grant of 490,000 RSUs to certain new officers and employees with a vesting period of one quarter after each of years one and two, and one half after year three. In the year ended December 31, 2023, 325,000 RSUs were exercised by certain officers of the Company in exchange for 325,000 common shares of the Company.

On January 11, 2024, the Company announced the appointment of Samantha Espley as a director of the Company. In connection with her appointment, the Company has granted Ms. Espley a total of 400,000 stock options under the Company's amended and restated stock option plan, which have an exercise price of \$0.55 per share, an exercise period of five years and which vest immediately upon grant.

On February 27, 2024, the Board of Directors approved a grant of stock options to certain new officers and employees to purchase a total of 1,011,000 common shares of the Company at a price of \$0.35 per share, vesting one third after each of years one, and two, and year three, which are exercisable for a period of five years. Of these stock options, 200,000 were to a related party.

At the Company's Annual and Special Shareholder meeting held on November 21, 2022, loans to certain executives of the Company in the amount of \$338,000 for the purpose of purchasing securities of the Company were approved by the Company's shareholders. These loans had not been issued and the related share purchases had not occurred as at December 31, 2023. At the same meeting the Company's shareholders approved the DSU/RSU Plan.

# i. Proposed Transactions

The Company continually reviews potential merger, acquisition, investment and other joint venture transactions that could enhance shareholder value. At the current time, there are no reportable proposed transactions except as disclosed elsewhere in this MD&A.

#### j. Critical Accounting Estimates and Judgements

The preparation of the interim condensed consolidated financial statements requires Company management to make estimates, assumptions, and judgements about the future that affect the amounts recorded in the consolidated financial statements. These estimates, assumptions, and judgements are based on the Company's experience and management's expectations about future events that are believed to be reasonable under the circumstances. They are continually being re-evaluated based on new facts and experience. Actual results may differ from estimates, assumptions and judgements. The effect of a change in an accounting estimate is recognized prospectively in the period of change and future periods if the change impacts both periods.

The critical accounting estimates and judgments that have the most significant effect in the preparation of the condensed consolidated interim financial statements are consistent with those disclosed in note 3 of the Company's annual consolidated financial statements for the year ended December 31, 2023.

# k. Material Accounting Policies

The Company's interim condensed consolidated financial statements have been prepared in accordance with IFRS as. Details of the significant accounting policies for significant (or potentially significant) areas that have had an impact (or may have an impact in future periods) on the Company's financial statements are disclosed in note 4 of the Company's annual audited consolidated financial statements for the year ended December 31, 2022. The accounting policies applied in the preparation of the condensed consolidated interim financial statements are consistent with those applied in the Company's annual audited consolidated financial statements for the year ended December 31, 2022.

*Amendments to IAS 1 – Presentation of Financial Statements* 

In October, 2022, the IASB issued amendments to IAS 1, *Presentation of Financial Statements* titled *Non-current Liabilities with Covenants*. These amendments sought to improve the information that an entity provides when its right to defer settlement of a liability is subject to compliance with covenants within 12 months after the reporting period. These amendments to IAS 1 override and incorporate the previous amendments, *Classification of Liabilities as Current or Non-current*, issued in January 2020, which clarified that liabilities are classified as either current or non-current, depending on the rights that exist at the end of the reporting period. Liabilities should be classified as non-current if a company has a substantive right to defer settlement for at least 12 months at the end of the reporting period. The amendments are effective January 1, 2024, with early adoption permitted. Retrospective application is required on adoption. Northern does not expect these amendments to have a material impact on its consolidated financial statements.

#### 1. Disclosure of Outstanding Share Data

Information with respect to outstanding common shares, warrants and stock options as at April 29, 2024, December 31, 2023 and December 31, 2022 is as follows:

	April 29, 2024	December 31, 2023	December 31, 2022
Common shares	130,496,868	130,343,022	121,315,522
Warrants	1,680,000	32,827,800	35,800,300
Stock options	11,067,538	9,810,384	9,656,000
Restricted stock units	1,465,000	1,465,000	1,300,000

# m. Non-IFRS Performance Measures

The Company has included certain non-IFRS measures in this MD&A. The Company believes that these measures, in addition to measures prepared in accordance with IFRS, provide investors an improved ability to evaluate the underlying performance of the Company and to compare it to information reported by other companies. The non-IFRS measures are intended to provide additional information and should not be considered in isolation or as a substitute for measures of performance prepared in accordance with IFRS. These measures do not have any standardized meaning prescribed under IFRS, and therefore may not be comparable to other issuers.

#### Cash Cost Per Tonne of Graphite Concentrate Sold

Cash costs are a common financial performance measure but have no standard meaning. The Company reports cash costs on a per tonne of graphite concentrate sold basis. The Company believes that, in addition to measures prepared in accordance with IFRS, such as revenue, certain investors can use this information to evaluate the Company's performance and ability to generate operating earnings and cash flow from its mining operations. Management uses this metric as an important tool to monitor LDI's operating cost and performance.

The following table reconciles these non-IFRS measures to the most directly comparable IFRS measure disclosed in the financial statements.

(Shown in Thousands of Dollars, Except Tonnes and Per Tonnes Figures)	Three months Ended December 31, 2022	Year Ended December, 2022	Three months Ended December 31, 2023	Year Ended December 31, 2023
Graphite concentrate sold (tonnes)	1,828	5,785	2,176	8,592
Cost of sales	\$2,854	\$8,943	\$4,049	\$15,171
Less: depletion and depreciation	586	1,055	801	2,895
Total cash costs	2,268	7,888	3,248	12,276
Cash cost per tonne of graphite concentrate sold	\$1,241	\$1,364	\$1,493	\$1,429

#### Average Realized Sales Price Per Tonne of Graphite Concentrate Sold

Average realized sales price per tonne of graphite concentrate sold is used by management and investors to better understand the graphite price realized throughout a period.

(Shown in Thousands of Dollars, Except Tonnes and Per Tonnes Figures)	Three months Ended December 31, 2022	Year Ended December 31, 2022	Three months Ended December 31, 2023	Year Ended December 31, 2023
Gross revenue	\$3,817	\$11,993	\$4,210	\$17,099
Graphite concentrate tonnes sold	1,828	5,785	2,176	8,592
Average realized sales price per tonne of graphite concentrate sold	\$2,088	\$2,073	\$1,935	\$1,990

#### n. Trends

There are significant uncertainties regarding the prices of industrial minerals and the availability of equity financing for the purposes of mineral exploration and development. For instance, the prices of industrial minerals, including graphite, have fluctuated widely in recent years and it is expected that wide fluctuations may continue. Management of the Company is not aware of any trend, commitment, event or uncertainty both presently known or reasonably expected by the Company to have a material adverse effect on the Company's business, financial condition or results of operations other than the normal speculative nature of the natural resource industry and the risks disclosed below under the heading "Risk Factors".

#### **Risk Factors**

An investment in the Company's common shares is speculative and subject to risks and uncertainties. The operating results and financial condition of the Company are subject to a number of inherent risks and uncertainties associated with its business activities, which include the operation of the LDI mine, the planned resumption of operations at the Okanjande Project and the development of the Bissett Creek and Mousseau Projects. The operating results and financial condition of the Company are also subject to numerous external factors, which include economic, environmental, regulatory, social, legal, tax, market and geopolitical risks impacting, among other things, graphite prices, the availability and cost of capital to fund the capital requirements of the business, inflation, the supply chain related to the business, uncertainty of production and cost estimates and the potential for unexpected costs and expenses, foreign exchange rates, and changes in general economic conditions or conditions in the financial markets. Each of these risks could have a material adverse effect on the Company's future business, results of operations, financial condition and prospects and the value of any investment in the Company, and could cause actual results to differ materially from those described in any forward-looking statements in this MD&A. The Company endeavors to manage these risks and uncertainties in a balanced manner. This includes developing appropriate risk management strategies, policies,

processes and systems. There can be no assurance that the Company has been or will be successful in identifying all risks or that any risk-mitigating strategies adopted to reduce or eliminate risk will be successful.

The risk factors noted below outline certain risks associated with an investment in the Company's common shares or in connection with the operations of the Company. Readers are cautioned that this is not an exhaustive list of all such risks.

# No History of Mineral Production; New Production Risks

The Company has one operating mine, being the LDI mine, which it acquired in April 2022. Prior to this, the Company did not have a history of mineral production and its principal focus was on the development of the Bissett Creek Project. The Company is subject to risks and uncertainties in integrating the acquisition of the LDI Project and transitioning to an operational mining company. The Company also acquired the Okanjande Project in April 2022, is in the course of working to resume mining operations there and is subject to risks and uncertainties with its abilities to do so.

With its mining operations at the LDI mine and planned mining operations in Namibia, the Company is and will be subject to all of the hazards and risks normally encountered with mining operations and related processing and infrastructure facilities. Such risks include, without limitation, technical difficulties or failures, equipment failure, industrial accidents, disruptions in the supply of critical materials and supplies, labour disputes, delays in obtaining work visas or other authorizations, disruptions due to pandemic conditions, environmental hazards, failure of retaining dams around tailings disposal areas which may result in environmental pollution and consequent liability, changes in laws, unusual and unexpected geologic formations, seismic activity, rock bursts, cave-ins, flooding and other conditions involved in the drilling and removal of material. Such risks could result in damage to, or destruction of, mines and other processing facilities, damage to life or property, environmental damage, delays in mining and processing, delays in scheduled maintenance, losses and possible legal liability and adverse governmental action. Any prolonged downtime or shutdowns at the Company's mining and processing facilities could have a material adverse impact on the Company's business, financial condition and results of operations.

Moreover, there can be no assurance of the profitability of the Company's future operations, nor that significant additional losses will not occur in the near future. The Company's operating expenses and capital expenditures may increase in subsequent years as the costs increase for the consultants, personnel and equipment associated with advancing exploration, development and production. The amount and timing of expenditures will depend on the progress of ongoing exploration, development and production, the results of consultant's analyses and recommendations, the rate at which operating losses are incurred, the Company's acquisition of additional properties and other factors, many of which are beyond the Company's control.

# **Limited Operating History and Financial Resources**

The Company has a limited operating history since the acquisition of the LDI Project in April 2022. Additional funds will be required to resume mining operations at the Okanjande Project, to bring the Bissett Creek and Mousseau Projects into production and to advance the Company's downstream mine-to-market strategy. The Company has limited financial resources and there is no assurance that the Company will be able to raise sufficient additional funding to do so on acceptable terms or at all. Failure to obtain additional funding on a timely basis could result in delay or indefinite postponement of these projects and could cause the Company to reduce or terminate its plans. Additional funds raised by the Company from treasury share issuances may result in further dilution to the shareholders of the Company or a change of control.

# **Going Concern and Financial Position**

The Company's consolidated financial statements have been prepared on a going concern basis, which assumes that the Company will be able to continue its operations for the foreseeable future and will be able to realize its assets and discharge its liabilities and commitments in the normal course of business. The Company will require additional capital to restart operations in Namibia and advance the Bissett Creek and Mousseau Projects and there is no assurance management will be successful in its endeavors.

During year ended December 31, 2023, the Company reported an operating loss of \$9.5 million and cash outflows from operating activities of \$4.7 million, and it has yet to generate positive earnings. As at December 31, 2023, the Company had working capital of \$10.1 million, largely consisting of inventories of \$17.1 million, and held cash and cash equivalents of \$3.1 million. As noted above, the Company's ability to continue as a going concern depends upon its ability to raise adequate financing and to generate profitable operations in the future. However, the Company's ability

to achieve its objectives is dependent upon its ability to generate positive cash flows from operations and the sales of inventories, obtain additional financing and fund the repayment of existing borrowings. The Company has been successful in the past in raising funds for operations by issuing shares and entering into financing arrangements, but there is no assurance that it will be able to continue to do so in the future. There is a material uncertainty related to these conditions that casts significant doubt about the Company's ability to continue as a going concern and therefore it may be unable to realize its assets and discharge its liabilities in the normal course of business.

#### Infrastructure

Mining, processing, development and exploration activities depend on adequate infrastructure. Reliable roads, bridges, power sources and water supplies are important requirements, which affect capital and operating costs. Although the Company can access its properties, by good quality all-weather roads and labour, power and water are all readily available, natural events such as unusual or infrequent weather phenomena and severe climactic conditions, as well as sabotage, government or other interference in the maintenance or provision of such infrastructure could have a material adverse effect on the Company's future operations, financial condition and results of operations.

#### Cost Overruns, Delays and Construction Risk

The Company's future plans include the development of the Bissett Creek Project, Mousseau and a large new plant at the Okanjande mine site. The Company has not yet initiated such development nor does it currently have the funds to do so. The Company has only just started preparing for the restart of operations at the Okanjande Project. All of these projects will be subject to risks associated with potential cost overruns, delays and construction risk.

# **Exploration and Development**

Exploration for and development of mineral properties involves significant financial risks, which even a combination of careful evaluation, experience and knowledge may not eliminate. While the discovery of a mineral body may result in substantial rewards, few properties which are explored are ultimately developed into producing mines. Major expenses may be required to establish mineral reserves by drilling, constructing mining and processing facilities at a site, developing processes and extracting minerals. The Company cannot ensure that its exploration and development programs will result in profitable commercial mining operations.

The economic feasibility of a mine is based upon many factors, including the accuracy of mineral resource and mineral reserve estimates; recoveries; capital and operating costs; government regulations relating to prices, taxes, royalties, land tenure, land use, importing and exporting and environmental management and protection; and prices, which are highly volatile. Development projects are also subject to the successful completion of feasibility studies, issuance of necessary governmental permits and availability of adequate financing.

#### Mineral Resources and Mineral Reserves

The Mineral Resources and Mineral Reserves disclosed by the Company are estimates and no assurance can be given that the anticipated tonnages and grades will be achieved or that the indicated level of recovery will be realized. There are numerous uncertainties inherent in estimating Mineral Resources and Mineral Reserves, including many factors beyond the Company's control. Such estimation is a subjective process and the accuracy of any Mineral Resource estimate is a function of the quantity and quality of available data and of the assumptions made and judgments used in engineering and geological interpretation. Short-term operating factors, such as the need for orderly development of the ore bodies or the processing of new or different ore grades, may cause the mining operation to be unprofitable in any particular accounting period. In addition, there can be no assurance that graphite recoveries in small scale laboratory tests will be duplicated in larger scale tests under on-site conditions or during production.

Fluctuations in graphite prices, results of drilling, change in cut-off grades, metallurgical testing, production and the evaluation of mine plans subsequent to the date of any estimates may require revision of such Mineral Resource and Mineral Reserve estimates. The volume and grade of Mineral Reserves mined and processed, and the recovery rates achieved may not be the same as currently anticipated. Any material reduction in the estimated Mineral Resources and Mineral Reserves could have a material adverse impact on the Company's business, financial condition and results of operations. A significant decrease in the Mineral Resource and Mineral Reserve estimates could have a material adverse impact on the carrying value of exploration and evaluation assets, mine properties, property, plant and equipment, depletion and depreciation charges, and estimated mine closure and rehabilitation costs, and could result in an impairment of the carrying value. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

#### **Inferred Mineral Resources**

Inferred Mineral Resources cannot be converted to Mineral Reserves unless they are first converted into Measured and Indicated Resources as a result of continued exploration. Due to the uncertainty which may be attached to Inferred Mineral Resources, there can be no assurance that Inferred Mineral Resources will be upgraded to Measured and Indicated Resources. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

# **Need for Mineral Reserves**

As mines have limited lives based on Proven and Probable Mineral Reserves, the Company must continually develop, replace and expand its Mineral Reserves and Mineral Resources as its mines produce graphite concentrates. The Company's ability to maintain or increase its annual production of graphite and its aggregate Mineral Reserves will be significantly dependent on its ability to expand its Mineral Resource base both at its existing mines and new mines it intends to bring into production in the future.

# **Reliance on Results of Prior Exploration Work**

In preparing technical reports on the Company's projects in accordance with NI 43-101, the authors of such studies and assessments relied upon data generated by exploration work carried out by geologists employed by others. There is no guarantee that data generated by prior exploration work is 100% reliable and discrepancies in such data not discovered by the Company or such authors may exist. Such errors and/or discrepancies, if they exist, could impact on the accuracy of any technical reports prepared for the Company.

# **Commodity Prices**

The price of the Company's securities, its financial results and its exploration, development and mining activities have previously been, or may in the future be, significantly adversely affected by declines in the price of graphite. Industrial mineral prices fluctuate widely and are affected by numerous factors beyond the Company's control such as the sale or purchase of industrial minerals by various dealers, interest rates, exchange rates, inflation or deflation, currency exchange fluctuation, global and regional supply and demand, production and consumption patterns, speculative activities, increased production due to improved mining and production methods, government regulations relating to prices, taxes, royalties, land tenure, land use, importing and exporting of minerals, environmental protection, the degree to which a dominant producer uses its market strength to bring supply into equilibrium with demand, and international political and economic trends, conditions and events. The prices of industrial minerals have fluctuated widely in recent years, and future price declines could cause continued exploration and development of the Company's assets to be impracticable and the Company's operations to become unprofitable.

Further, reserve calculations and life-of-mine plans using significantly lower prices could result in material write-downs of the Company's investments in its various mining and development projects and increased amortization, reclamation and closure charges.

In addition to adversely affecting reserve estimates and the Company's financial condition, declining prices can impact operations by requiring a reassessment of the feasibility of a particular project. Such a reassessment may be the result of a management decision or may be required under financing arrangements related to a particular project. Even if the project is ultimately determined to be economically viable, the need to conduct such a reassessment may cause substantial delays or may interrupt operations until the reassessment can be completed.

#### Financing and Liquidity

The Company relies on the cash flows generated from its mining and processing operations, including provisional payments received from its customers, cash on hand, and its ability to raise equity and debt from the capital markets to fund its operating, investment and liquidity needs. The cyclical nature of the Company's businesses, general economic conditions and the volatility of capital markets are such that conditions could change dramatically, affecting the Company's cash flow generating capability as well as its liquidity, cost of capital and its ability to access additional capital, which could have a material adverse impact on the Company's earnings and cash flows and, in turn, could affect total shareholder returns.

Furthermore, there can be no assurance that the Company's operations will be profitable or that the Company will be able to raise capital on terms that it considers reasonable. Adverse commodity market, general economic conditions and adverse capital market conditions could result in a delay or the indefinite postponement of development or construction

projects and could have a material adverse impact on the Company's business, financial condition, results of operations and share price.

#### **Mining Operations and Insurance**

The Company does not currently carry insurance against all the risks associated with mining operations and exploration and development. There is no assurance that such insurance will be available in the future, or if available, at economically feasible premiums or acceptable terms. The potential costs associated with losses or liabilities not covered by insurance coverage may have a material adverse effect upon the Company's financial condition.

#### Governmental and Environmental Regulation, Permits and Compliance

The existing and anticipated future operations of the Company, including mining, processing, exploration and development activities, require licenses, permits or other approvals from various federal, provincial and local governmental authorities and such operations are or will be governed by laws and regulations relating to prospecting, development, mining, production, exports, taxes, labor standards, occupational health and safety, waste disposal, toxic substances, land use, water use, environmental protection, land claims of indigenous people and other matters. The Company believes it is in substantial compliance with all material laws and regulations which currently apply to its activities. There can be no assurance, however, that the Company will obtain on reasonable terms or at all the permits and approvals, and the renewals thereof, which it may require for the conduct of its future operations or that compliance with applicable laws, regulations, permits and approvals will not have an adverse effect on plans to develop the Company's mineral assets. Possible future environmental and mineral tax legislation, regulations and actions could cause additional expense, capital expenditures, restrictions and delay on the Company's planned exploration and operations, the extent of which cannot be predicted.

Failure to comply with applicable laws, regulations and permitting requirements may result in enforcement actions thereunder, including orders issued by regulatory or judicial authorities causing operations to cease or be curtailed, and may include corrective measures requiring capital expenditures, installation of additional equipment, or remedial actions. Parties engaged in mining operations may be required to compensate those suffering loss or damage by reason of the mining activities and may have civil or criminal fines or penalties imposed for violations of applicable laws or regulations.

# **Reliance on Management and Experts**

The success of the Company will be largely dependent upon the performance of its senior management and directors. Due to the relatively small size of the Company, the loss of these persons or the inability of the Company to attract and retain additional highly skilled employees may adversely affect its business and future operations. The Company has not purchased any "key-man" insurance nor has it entered into any non-competition or non-disclosure agreements with any of its directors, officers or key employees and has no current plans to do so. The Company has hired and may continue to rely upon consultants and others for geological and technical expertise. The Company's current personnel may not include persons with sufficient technical expertise to carry out the future development of the Company's properties. There is no assurance that suitably qualified personnel can be retained or will be hired for such development.

#### Competition

The mineral exploration and mining business is competitive in all of its phases. The Company competes with numerous other companies and individuals, including competitors with greater financial, technical and other resources, in the search for and the acquisition of attractive mineral properties. The mining industry is facing a shortage of equipment and skilled personnel and there is intense competition for experienced geologists, field personnel, contractors and management. There is no assurance that the Company will be able to compete successfully with others in acquiring such equipment or personnel. The Company also competes for financing with other resource companies, many of whom have greater financial resources and/or more advanced properties. There can be no assurance that additional capital or other types of financing will be available if needed or that, if available, the terms of such financing will be favorable to the Company.

## **Title to Properties**

Although the Company has taken precautions to ensure that legal title to its property interests are properly recorded in the name of the Company or its subsidiaries where possible, there can be no assurance that such title will ultimately be maintained. The possibility exists that title to one or more of its properties, particularly title to undeveloped properties, might be defective because of errors or omissions in the chain of title, including defects in conveyances and defects in locating or maintaining such claims, or concessions. The ownership and validity of mining claims and concessions are

often uncertain and may be contested. There is no assurance that the interests of the Company in any of its properties may not be challenged or impugned.

# **Aboriginal and Treaty Rights**

In Canada, the issuance of government permits for mining projects may trigger the Crown's duty to consult and potentially accommodate the Indigenous people of Canada, which include the First Nations (Indian), Inuit and Métis people of Canada. The aboriginal and treaty rights of Canada's Indigenous people are recognized and affirmed by the Constitution Act, 1982, as a result of which Canadian courts have imposed on the federal and provincial governments a general duty to consult any Indigenous group whose aboriginal and treaty rights may be affected by a government decision, including the grant of permits or licences relating to mining activity. Although the duty to consult is imposed only on governments, the Crown may delegate some of the consultation's procedural aspects to third parties and it is common practice for a mine proponent to be a participant in the process. Typically, this involves consultation and negotiation of an impact benefits agreement ("IBA") between a mine proponent and applicable Indigenous group(s). Applicable Indigenous groups can file legal action on the basis of inadequate consultation, which could have the consequence of delaying the commencement of construction or operation of projects or increasing costs of projects. The Company is not aware of any aboriginal land claims having been asserted or any legal actions relating to indigenous issues having been instituted with respect to any of the Company's projects in Canada. To the Company's knowledge, no Indigenous group has been consulted regarding the LDI mine, which has been in production since 1989, but the closest Indigenous community to LDI is the Kitigan Zibi Anishinabeg First Nation reserve, which is located approximately 40 km to the southwest of the LDI mine. The Bissett Creek Project is located on unceded land claimed by the Algonquins of Ontario ("AOO"). The Company has begun the process of negotiating an IBA with the AOO and with the Algonquins of Pikwakanagan First Nation who are also a member of the AOO. To date the AOO have expressed support for the Bissett Creek Project and have shown interest in economic development. However, the negotiation of an IBA is subject to many factors beyond the Company's control and there is no guarantee or assurance that the Company will be successful. The Company has also consulted with the Metis Nation of Ontario and these consultations could also lead to an IBA.

The legal basis of a land claim is a matter of considerable legal complexity and the impact of a land claim settlement and self-government agreements cannot be predicted with certainty. In addition, no assurance can be given that a broad recognition of aboriginal rights by way of a negotiated settlement or judicial pronouncement would not have an adverse effect on the Company's activities. Such impact could be material and, in certain circumstances, could delay or even prevent the Company's mineral exploration and mining activities.

#### **Opposition to Mining**

The Company's ability to advance its development activities, particularly in respect of its Bissett Creek and Mousseau Projects, may be affected to varying degrees by local community opposition to mining activities, causing delays in obtaining or the inability to obtain necessary permits and/or resulting in government regulations with respect to, but not limited to, restrictions on future exploitation and production. In addition, any shifts in political attitudes or changes in laws that may result in, among other things, significant changes to mining laws or any other national or local regulations or policies are beyond the Company's control and there is the risk that governments may adopt policies, which may extend to the deemed or actual expropriation of assets or revocation or cancellation of mining concession rights, that could adversely affect the Company's business.

#### **Environmental Risks and Hazards**

All phases of the Company's operations are subject to environmental regulation in the jurisdictions in which it operates. These regulations mandate, among other things, the maintenance of air and water quality standards and land reclamation and provide for restrictions and prohibitions on spills, releases or emissions of various substances produced in association with certain mining industry activities and operations. They also set forth limitations on the generation, transportation, storage and disposal of hazardous waste. A breach of such regulation may result in the imposition of fines and penalties. In addition, certain types of mining operations require the submission and approval of environmental impact assessments. Environmental legislation is evolving in a manner which will 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. The cost of compliance with changes in governmental regulations has the potential to reduce the viability or profitability of operations of the Company. It is always possible that, as work proceeds, environmental hazards may be identified which are at present unknown to the Company and which may have the potential to negatively impact on the Company's exploration, development and operational plans.

#### Cost of Land Reclamation

It is difficult to determine the exact amounts which will be required to complete all land reclamation activities. Reclamation bonds and other forms of financial assurance represent only a portion of the total amount of money that will be spent on reclamation activities over the life of a mine. Accordingly, it may be necessary to revise planned expenditures and operating plans in order to fund reclamation activities. Such costs may have a material adverse impact upon the financial condition and results of operations of the Company.

# **Foreign Country and Political Risks**

Some of the Company's operations and business are outside of Canada, being the Okanjande Project in Namibia. As such, the Company's operations are exposed to various political and other risks and uncertainties normally associated with operations in a foreign jurisdiction. These risks and uncertainties may include, but are not limited to: restrictions on foreign exchange and movements of capital; fluctuations in foreign currency exchange rates; high rates of inflation; labour unrest; expropriation and nationalization; renegotiation or nullification of existing concessions, licences, permits and contracts; illegal mining; environmental policies; extreme weather conditions; changes in taxation or royalty policies; and changing political conditions. Any changes in mining or investment policies or shifts in political attitude in Namibia may have a material adverse impact on the Company's business, financial condition and results of operations.

#### Risks Related to Mine-to-Market Strategy

The Company's mine-to-market strategy for the downstream integration of its graphite concentrate capacity to produce BAM for use in Li-ion batteries and other possible value added products and its plans to build BAM production facilities in Baie-Comeau, Québec in furtherance of this strategy are subject to various risks and challenges including: the availability and terms of financing; the completion of all required binding commercial agreements relating to these initiatives including with any joint venture partners; the availability and performance of engineering and construction contractors, suppliers and consultants; the receipt of required governmental approvals and permits in connection with the construction of industrial facilities and the conduct of operations, including environmental and operating permits; price escalation on all components of construction and start-up. Any failure or delays in obtaining financing or concluding required commercial agreements, in the performance of any one or more of the contractors, suppliers, consultants or other persons on which the Company will be dependent in connection with these planned activities, to receive the required governmental approvals and permits in a timely manner or on reasonable terms, or in connection with the completion and successful operation of the operational elements in connection with such industrial facilities could delay or prevent the Company from executing on its mine-to-market strategy. There can be no assurance that the Company will be successful in executing on this strategy and in implementing its related plans.

# Obligations, Covenants and Restrictions in the Company's Senior Secured Loan

The Company has a senior secured loan with Sprott which it used to complete the acquisition of the LDI and Okanjande Projects. The Company's obligations under the loan are secured against the LDI and Okanjande Projects. The terms of the loan contain various customary positive and negative financial and operating covenants, as well as customary events of default, such as breach of covenants, conditions or obligations, and the occurrence of an insolvency event. Events may occur in the future, including events beyond the Company's control, that could cause it to fail to satisfy its obligations and covenants under the loan. A failure to comply with its obligations and covenants could result in an event of default which, if not cured or waived, could permit acceleration of the related debt. This could lead to enforcement actions or proceedings under the security granted in connection with the loan. The occurrence of any such events would have a material adverse effect and could, among other things, result in the bankruptcy or liquidation of the Company, and could result in the loss of the Company's entire interests in the LDI and Okanjande Projects. The Company can provide no assurance that it will achieve sufficient future cash flow and earnings to satisfy its debt obligations under the loan.

# Disclosure Controls and Procedures and Internal Controls over Financial Reporting

Disclosure controls and procedures ("DC&P") are intended to provide reasonable assurance that material information is gathered and reported to senior management to permit timely decisions regarding public disclosure. Internal controls over financial reporting ("ICFR") are intended to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external purposes in accordance with International Financial Reporting Standards.

As a "venture issuer" listed on the TSX Venture Exchange, the Company is not required to provide representations in its annual and interim filings relating to the establishment and maintenance of DC&P and ICFR, as defined in National Instrument 52-109 - Certification of Disclosure in Issuer's Annual and Interim Filings. In particular, the Company's CEO and CFO certifying officers do not make any representations relating to the establishment and maintenance of (a) controls and other procedures designed to provide reasonable assurance that information required to be disclosed by the Company in its annual filings, interim filings or other reports filed or submitted under securities legislation is recorded, processed, summarized and reported within the time periods specified in securities legislation, and (b) processes to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external purposes in accordance with the Company's Generally Accepted Accounting Principles.

#### **Price Volatility and Lack of Active Market**

Securities markets in Canada and elsewhere may from time-to-time experience high levels of price and volume volatility. Consequently, the market prices of the securities of many public companies may experience significant fluctuations in price which are not necessarily related to the operating performance, underlying asset values or prospects of such companies. It may be anticipated that any quoted market for the Company's securities will be subject to such market volatility and that the value of such securities may be affected accordingly. If an active market does not develop, the liquidity of an investment in the Company's common shares may be limited and the market price of such securities may decline.

# Litigation

From time to time, the Company may be involved in lawsuits. The outcomes of any such legal actions may have a material adverse effect on the financial results of the Company on an individual or aggregate basis.

#### **Dividends**

The Company has no earnings or dividend record and does not anticipate paying any dividends on its common shares in the foreseeable future.

#### **Global outbreak of COVID-19**

During the first quarter of 2020, there was a global outbreak of COVID-19 (coronavirus), which has had a significant impact on businesses through the restrictions put in place by the Canadian, provincial and municipal governments regarding travel, business operations and isolation/quarantine orders. At this time, it is unknown the extent of the impact the COVID-19 outbreak may have on the Company as this will depend on future developments that are highly uncertain and that cannot be predicted with confidence. These uncertainties arise from the extensive geographic spread of the disease, and the inability to predict the duration of the outbreak or reoccurrence of outbreaks, including the duration of travel restrictions, business closures or disruptions, and quarantine/isolation measures that are currently, or may be put, in place by Canada and other countries to fight the virus. While the full extent of the impact is unknown, COVID-19 may hinder the Company's ability to raise financing to build the Bissett Creek Project or the Mousseau Project or to restart operations at the Okanjande Project due to uncertain capital markets, reduced customer demand, supply chain disruptions, increased government regulations and other unanticipated factors, all of which may also negatively impact the Company's business and financial condition.

#### **Cautionary Statement Regarding Forward-Looking Statements**

Certain statements and other information included in this MD&A constitute "forward-looking information" or "forward-looking statements" within the meaning of applicable securities legislation, which are collectively referred to herein as "forward-looking statements". Forward-looking statements are statements that are not historical facts and are generally, but not always, identified by the use of forward-looking terminology such as "plans", "expects", "is expected", "budget", "scheduled", "estimates", "forecasts, "intends", "anticipates", "believes", or variations of such words and phrases, or statements that certain actions, events or results "may", "could", "would", "might" or "will" be taken, occur or be achieved, or the negative of any of these terms or similar expressions.

Forward-looking statements in this MD&A may include, but are not limited to statements with respect to the following: the future operating or financial performance of the Company and certain of its projects, including the existing operating mine at LDI; the future price of graphite; the estimation of Mineral Resources and Mineral Reserves and the realization of such mineral estimates; results of economic and technical studies, including the Okanjande PEA and the Bissett Creek feasibility study, and the realization of such results; the timing and amount of estimated future production and

costs of exploration, development, production, operations and capital for certain of the Company's projects; the success, timing and cost of the contemplated resumption of mining operations at the Okanjande Project; the success, timing and cost of exploration and development activities, including at the Mousseau and Bissett Creek Projects; the success and timeline of permitting activities; the Company's mine-to-market downstream processing strategy and its plans with respect to the construction of a BAM processing facility in Baie-Comeau, Québec; requirements relating to additional capital; government regulation of mining and processing operations; environmental risks; reclamation obligations and expenses; market trends including with respect to EV and Li-ion battery markets; and any other information as to the future plans and outlook for the Company.

Forward-looking statements are based on what the Company's management considers to be reasonable assumptions, beliefs, expectations and opinions based on the information currently available to it, as of the date such statements are made. Forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause the actual results, performance or achievements of the Company to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Such factors include, among others: general business, economic, competitive, political and social uncertainties; the speculative nature of mineral exploration and development; the actual results of current production, development and exploration activities; fluctuations in graphite prices; inherent uncertainties in respect of conclusions of economic and technical studies, including the Okanjande PEA and the Bissett Creek feasibility study; the accuracy of the Company's Mineral Resource and Mineral Reserve estimate (including, with respect to size, grade and recoverability) as well as the geological, operational and price assumptions on which they are based; changes in project parameters as plans continue to be refined; changes in labour costs or other costs of production, including risks arising from the current inflationary environment and the impact on operating costs and other financial metrics; possible variations of mineral grade or recovery rates; fluctuations in currency exchange rates; uncertainties and risks inherent to developing and commissioning new mines into production, including the resumption of activities at the Okaniande Project, which may be subject to unforeseen delays; uncertainties with respect to actual results of current exploration and development activities; uncertainties inherent with conducting business in foreign jurisdictions; accidents, labour disputes and other risks of the mining industry; delays in obtaining governmental approvals or financing or in the completion of development or construction activities; the availability of financing for the Company's development of its projects and other initiatives on reasonable terms; the possibility that the Company may incur additional debt; opposition by social or non-governmental organizations to mining projects and processing operations; unanticipated title disputes or other claims or litigation; increased costs and physical risks, including extreme weather events and resource shortages, related to climate change; cyber-attacks and other cybersecurity risks; failure of plant, equipment or processes to operate as anticipated; accidents, labour disputes and other risks of the mining industry, including but not limited to environmental hazards, cave-ins, pit-wall failures, flooding, rock bursts and other acts of God or unfavorable operating conditions and losses; regulatory changes; actual results of reclamation activities; risks relating to the Company's business generally and the impact of the COVID-19 global pandemic, resulting in changes to the Company's supply chain, product shortages, delivery and shipping issues, closure and/or failure of plant, equipment or processes to operate as anticipated, employees and contractors becoming infected, low vaccination rates, lost work hours and labour force shortages; the fact that certain of the initiatives described in this MD&A are still in the early stages and may not materialize; as well as those risk factors discussion in the section entitled "Risk Factors" in this MD&A or in any other documents filed by the Company from time to time with applicable Canadian securities regulatory authorities and available under the Company's profile on SEDAR+ at www.sedarplus.ca. This list is not exhaustive of the factors that may affect any of the Company's forward-looking statements.

Although the Company has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward-looking statements, there may be other factors that cause actions, events or results to differ from those anticipated, estimated or intended. Forward-looking statements contained herein are made as of the date of this MD&A and the Company disclaims any obligation to update any forward-looking statements, whether as a result of new information, future events or results or otherwise, except as may be required by applicable securities laws. There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward-looking statements.

# o. Qualified Person

Gregory Bowes B.Sc., MBA, P.Geo., is the Company's Qualified Person as that term is defined within NI 43-101 and has reviewed and approved the technical content of this MD&A.

**Additional Information** relating to the Company is available under the Company's profile on SEDAR+ at <a href="https://www.sedarplus.ca">www.sedarplus.ca</a>.