# MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL POSITION AND RESULTS OF OPERATIONS

#### FOR THE YEAR ENDED DECEMBER 31, 2013

The following management's discussion and analysis ("MD&A") of the financial position and results of the operations of Northern Graphite Corporation ("Northern" or the "Company") constitutes management's review of the factors that affected the Company's financial and operating performance for the year ended December 31, 2013 compared to the year ended December 31, 2012. This MD&A is dated and has been prepared with information available as of February 28, 2014.

This MD&A should be read in conjunction with the Company's financial statements for the year ended December 31, 2013 and related notes (the "Financial Statements"). The Financial Statements have been prepared in accordance with International Financial Reporting Standards ("IFRS").

This MD&A contains forward-looking statements. Statements regarding the adequacy of cash resources to carry out the Bissett Creek Project and programs related thereto, in addition to the need for future financing, are forward-looking statements. All forward-looking statements, including those not specifically identified herein, are made subject to cautionary language at the end of this document. Readers are advised to refer to the cautionary language at the end of this MD&A when reading any forward-looking statements.

The MD&A is prepared in conformity with 51-102F1 and has been approved by the Board of Directors prior to its release.

#### Introduction

The Company was incorporated on February 25, 2002 under the *Business Corporations Act* (Ontario) under the name Industrial Minerals Canada Inc. The Company's name was changed to Northern Graphite Corporation on March 1, 2010. The Company was incorporated by its former parent company, Mindesta Inc. (formerly "Industrial Minerals, Inc.") ("Mindesta") to develop and hold title to the Bissett Creek graphite project.

The Company was a wholly-owned subsidiary of Mindesta until early in 2010. As the result of a number of financings and debt settlement transactions by the Company, some sales of shares by Mindesta, and Mindesta distributing 9,413,581 shares of Northern that it owned to Mindesta, as at December 31, 2012, Mindesta's interest in Northern was less than 1%. As at December 31, 2013, Mindesta no longer held any shares of Northern.

# **Nature of Operations**

The Company's sole focus is the potential development of the Bissett Creek graphite project located in the County of Renfrew, Province of Ontario (the "Bissett Creek Project"). The Company has no other properties or rights to acquire other properties. On July 9, 2012, the Company released results from its full bankable feasibility study ("FS") for the Bissett Creek Project which confirmed the technical and financial viability of constructing and operating an open pit mine and 2,500 tpd processing plant. A National Instrument 43-101 technical report based on the FS has been filed on SEDAR. On March 7, 2013, the Company announced positive results from a 61 hole, 3,425 meter drilling program and on May 7, 2013, the Company released a new resource estimate for the Bissett Creek graphite project based on results from this drill program. The drill program successfully achieved its objective of upgrading a significant portion of inferred resources to the measured and indicated categories. On September 23, 2013, the Company announced that the economics in the previously released FS were updated to incorporate the new and larger resource estimate, some modifications to the capital and operating cost assumptions, and lower graphite prices.

The Company originally filed a mine closure plan ("MCP") with the Ministry of Northern Development and Mines ("MNDM") in 2004 and was authorized to begin production based on a dry recovery process but a commercial operation was never established due to technical problems and financial difficulties. In the fourth quarter of 2012, the Company filed an amended MCP to increase the size of the potential operation and to use a conventional flotation recovery process as outlined in the FS. On August 26, 2013, the Company announced that the MNDM had accepted

the Company's MCP for filing. The Company is in a position to begin construction of a mine on the Bissett Creek Project, subject to the availability of financing and species at risk permitting.

# **The Bissett Creek Project**

The Company holds a 100% interest in the Bissett Creek Project, which contains a large flake graphite deposit, and is located approximately 15 km from the Trans-Canada Highway (Highway 17) between the towns of Deep River and Mattawa, Ontario. The Bissett Creek Project 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, Ontario.

The Bissett Creek Project consists of a 565 hectare mining lease expiring September 22, 2014 (Ontario Mining Lease number 106693), a 1,938 hectare mining lease expiring June 30, 2034 (Ontario Mining Lease number 109335) and five unpatented claims totalling approximately 464 hectares. The Company intends to renew the lease that expires in 2014 having met the requirement of moving the lease toward production based on the substantial amount of work done and expenditures incurred. The application for renewal must be submitted within the 90 day period before the expiration of the lease.

Royalties on the Bissett Creek Project consist of an annual advance payment of \$27,000 to the three original prospectors that discovered the deposit which will be credited against a royalty of \$20 per ton of concentrate sold once the mine is operational, and a 2.5% Net Smelter Royalty ("NSR") on any other minerals derived from the Bissett Creek Property.

The Bissett Creek Project was extensively explored in the 1980's and over 8,400 metres of drilling was completed. A full feasibility study, including the calculation of a proven and probable reserve, was completed but the Bissett Creek Project was not developed due to a subsequent decline in graphite prices. This full feasibility study and reserve estimate pre-date NI 43-101 standards and therefore, are non-compliant and cannot be relied upon. The price of graphite has increased since 2005 due to the ongoing industrialization of emerging economies which has led to increased demand in traditional steel and automotive markets. In addition, lithium-ion batteries, fuel cells, vanadium redox batteries and new nuclear technologies are all large users of graphite and have the potential to create substantial additional demand in the future. As a result, there is renewed interest in graphite projects.

In 2010 Systèmes Geostat International Inc. ("SGS") updated work they performed in 2007 and produced a technical report entitled "Technical Report Preliminary Economic Assessment on the Bissett Creek Graphite Property of Industrial Minerals, Inc. & Northern Graphite Corporation" dated July 16, 2010 and revised February 2, 2011 (the "**Technical Report**"). The Technical Report was prepared by Gilbert Rousseau P.Eng and Claude Duplessis P.Eng of SGS, each of whom is an independent Qualified Person pursuant to National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* ("NI 43-101"). The Technical Report is available under the Company's profile at www.sedar.com.

#### **2011 Mineral Resource Estimate**

In September, 2011 The Company announced a significant increase in estimated resources based on the results from a 51 hole, 2,927 meter drilling program. In order to establish a reasonable prospect of economic extraction in an open-pit context, mineral resources were constrained within an optimized Whittle pit shell using an average graphite price of US\$2,000 per tonne along with operating and capital costs that were updated from the Technical Report.

The 2011 mineral resource estimate was prepared by François Thibert, M.Sc. P. Geo. from SGS, independent Qualified Person under NI 43-101, using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Standards on Mineral Resources and Reserves, Definitions and Guidelines.

#### **2013 Mineral Resource Estimate**

On May 7, 2013, the Company announced a new resource estimate for the Bissett Creek graphite project based on results from a 2012 61 hole, 3,782 meter drill program carried out in 2012. This drill program successfully achieved its objective of upgrading a significant portion of inferred resources to the measured and indicated categories. Measured and indicated resources were estimated at 69.8 million tonnes grading 1.74% graphitic carbon ("Cg") based on a 1.02% Cg cutoff grade compared to the previous estimate of 26 million tonnes grading 1.81% Cg at a cutoff of 0.98%Cg. Inferred resources declined to 24 million tonnes grading 1.65% Cg (at a 1.02% Cg cutoff) in the latest resource estimate due to a significant portion being upgraded to higher categories.

Bissett Creek Resource Estimate, May 6, 2013

	Measured + Indicated Resources			Infer	red Resourc	es
Cutoff	Tonnage	Cg%	In Situ Graphite (t)	Tonnage	Cg%	In Situ Graphite (t)
1.02	69,791,000	1.74	1,213,000	24,038,000	1.65	396,000
1.50	37,565,000	2.14	803,000	11,971,000	2.02	242,000
1.75	23,439,000	2.45	574,000	6,274,000	2.39	150,000
2.00	15,902,000	2.73	435,000	3,564,000	2.79	100,000

Notes:

- Resource shell was based on Measured, Indicated and Inferred material, tonnages rounded to the nearest thousand
- Graphite price used is US\$1,800 per tonne with an exchange rate of \$1Cdn=\$1 US
- Dilution and ore loss are considered to be zero
- Feasibility Study costs and information have been used for Resource Shell generation:

Overburden Mining Cost \$1.85 per tonne material Waste Mining Cost \$3.24 per tonne material Ore Mining Cost \$4.15 per tonne ore **Process Cost** \$9.61 per tonne ore General and Administrative \$3.41 per tonne ore Recovery 95%

Royalty

\$20 per tonne of concentrate

- No mining restrictions relating to permitting were applied
- Pit slopes of 45 degrees in rock and 30 degrees in overburden
- Cutoff of 1.02% Cg

Mineral resources are estimated in conformance with the CIM Mineral Resource definitions referred to in NI 43-101 Standards of Disclosure for Mineral Projects. 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, have prepared and authorized the release of the mineral resource estimates presented herein.

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.

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

# **Exploration and Development**

As at December 31, 2013, the Company had capitalized \$10,009,218 of exploration and evaluation expenditures relating to the Bissett Creek Project. Over the next 12 months the Company expects to spend approximately \$400,000 to complete the mine permitting work relating to construction and operations and initiate the initial phases of the updated FS. On January 18<sup>th</sup>, 2013, the Company announced that it had awarded a \$3.5 million contract for the detailed engineering and design of the Bissett Creek Project which is part of the capital cost in the FS. The contract allows for cancellation on 30 days notice. The Company slowed the pace of expenditures on detailed engineering in the final quarter of 2013 and suspended them at year end based on cash resources and market conditions. Approximately one third of the work has been completed.

#### Feasibility Study

The Company completed a bankable feasibility study ("FS") for the Bissett Creek Project and filed it on SEDAR on August 27, 2012. The FS was prepared by GMining Services Inc. and included contributions from SGS Canada Inc. (Lakefield–metallurgy and Geostat-resource modelling), Knight Piesold Ltd. (environmental, permitting, tailings management and road infrastructure) and Met-Chem Canada Inc. (process engineering). The FS confirmed the technical and financial viability of constructing and operating an open pit mine and 2,300 tpd processing plant on the Bissett Creek property.

The Company revised the mine plan in the FS based on the new 2013 resource model and on September 23, 2013, announced updated FS economics ("FS Update"). The FS Update incorporated the new and larger resource estimate, some modifications to the capital and operating cost assumptions, and lower graphite prices. The update was prepared by AGP Mining Consultants and did not require the filing of a new NI 43-101 Report.

The FS Update indicated a pre-tax internal rate of return ("IRR") of 19.8% (17.3% after tax) and a pre-tax net present value ("NPV") of \$129.9 million (\$89.3 million after tax) in the base case which used a weighted average price of US\$1,800/tonne for the concentrates that will be produced. This represented a substantial improvement in project economics over the FS which had a 15.6% pre-tax IRR at a price of US \$2,100/t. The project has significant leverage to higher prices as the pre tax IRR increases from 19.8% to 25.7% and the pre-tax NPV from \$129.9 million to \$201.1 million at a price of US \$2,100/t.

# **Summary of Updated Feasibility Study Economics**

	FS Update	FS
	(base case)	
Probable reserves (million tonnes)	28.3Mt*	19.0Mt
Feed Grade (% graphitic carbon)	2.06%*	1.89%
Waste to ore ratio (excl. low grade stockpile)	0.79	0.50
Processing rate (tonnes per day - 92% availability)	2,670	2,300
Mine life*	28 years	23 years
Mill recovery	94.7%	92.7-94.7%
Average annual production	20,800t	15,900t
Capital cost (\$ millions - including 10% contingency)	\$101.6M	\$102.9M
Cash operating costs (\$/tonne of concentrate)*	\$795/t	\$968/t
Mining costs (\$/tonne of ore)	\$5.63	\$5.79
Processing costs (\$/tonne of ore)	\$8.44	\$9.60
General and administrative costs (\$/tonne of ore)	\$2.50	\$2.94
CDN/US dollar exchange rate	0.95	1.00
Graphite prices (US\$ per tonne)	\$1,800	\$2,100
Pre tax NPV @8% (CDN\$ millions)	\$129.9	\$71.7
Pre tax IRR (%)	19.8%	15.6%
After tax NPV @8% (CDN\$ millions)	\$89.3	\$46.9
After tax IRR (%)	17.3%	13.7%

<sup>\*</sup>Includes 24 million tonnes ("Mt") grading 2.20% Cg and 4.0 Mt grading 1.26% Cg of low grade stockpile ("LGS") to be processed at the end of the mine life. An additional 12.5 Mt LGS grading 1.26% Cg is stored in the pit and is available for processing through a future expansion or at the end of the mine life. The waste to ore ratio is 0.24 if the low grade stockpile is processed. All grades are diluted.

#### (a) Project Description

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. The

capacity of the plant has been increased slightly to 2,670tpd in the updated FS economics from 2,300tpd (based on 92% availability) and the update assumes that compressed natural gas ("CNG") will be trucked from the main Trans Canada line, approximately 15 kms away, rather than brought in by pipeline. These changes had minimal effect on estimated capital costs. The processing plant includes a sulphide flotation circuit to remove enough sulphides to make approximately 97% of the tailings benign. All sulphide and non-sulphide generating waste rock will be backfilled into mined out areas of the pit after five years of operation, and all sulphide tailings after eight years, resulting in low final closure costs. The CNG will fuel five 1.0 MW-generators to produce electrical power and waste heat from the generators will be used to dry the concentrate. This will result in low overall energy costs.

## (b) Resources and Reserves

Probable mining reserves for the Bissett Creek deposit were established based on measured and indicated resources of 69.8 million tonnes ("Mt") grading 1.74% graphitic carbon ("Cg") based on a 1.02% Cg cutoff. The resource estimate was prepared by AGP who established a breakeven cut-off grade ("COG") and ran optimized Whittle pits on the measured and indicated resources based on a number of parameters including those outlined in summary above. 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 COG 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 will be 16.5 Mt grading 1.26%Cg and will provide a great deal of flexibility in future operations as it will 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 ore 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. Also, resources have not yet been closed off by drilling and therefore further expansions are possible.

The mine plan was also designed to supply blasted rock and glacial till for tailings dam construction during preproduction and to allow for sulphide and non-sulphide waste disposal in mined out areas by year five. Sulphide tailings may also be stored in the mined out pit starting in year eight. Contact dilution was estimated at 1% overall. Due to the gradational nature of the deposit, contact block grades were queried and utilized in individual block dilution calculations. A one metre dilution skin was assumed between waste and ore with negligible grade dilution except along the base of the deposit. The resulting global dilution was determined to be 1%. Backhoe support will be utilized to minimize dilution along this and other contacts.

# (c) Metallurgy

SGS-Lakefield has completed the full suite of metallurgical tests on the Bissett Creek deposit including lab and bench scale work, a bulk sample/pilot plant test, and variability testing to determine if recoveries and flake size distribution are consistent across the deposit. A similar program was also carried out in the 1980's as part of a previous feasibility study (non NI 43-101 compliant) with consistent results.

The FS is largely based on pilot plant results from the processing of slightly weathered material that does not respond as well to flotation as unweathered rock. The locked cycle tests, which were performed on fresh drill core, were better in terms of recoveries, concentrate grades and flake size distribution which represents potential upside in the project. The FS assumes recoveries of 92.7% in the first year of operation, 93.7% in year two and 94.7% over the balance of the project. Recoveries in the eight locked-cycle test averaged 97.2% and ranged from 95.2% to 99.1%. The updated FS assumes recoveries of 94.7% for the entire project.

The FS assumed an average concentrate grade of 94.5% Cg compared to 94.9% Cg in the locked-cycle tests. However, the locked cycle tests generated average grades of 98.1%, 97.0% and 95.1% for the important +32 (XXL), +50 (XL) and +80 (L) mesh size fractions respectively. Based on pilot plant results, the FS assumes that production will consist of 18% +32 mesh at 95.1% Cg, 31% +50 mesh at 95.1% Cg, 28.2% +80 mesh at 94.5% Cg, 5% +100 mesh at 97.3% Cg, 7% +150 mesh at 98% Cg and 11% -150 mesh at 92.7% Cg.

Flake graphite is sold based on 80% meeting the required specification. Therefore, smaller flake sizes can be blended into larger as long as the carbon content is maintained. The -100 flake concentrate produced by Bissett Creek is at least 94%Cg and therefore is suitable for this purpose. After blending, the FS Update assumes 60% of Bissett Creek production will be +50 mesh and a third of this material is actually +32 mesh, 97-98%Cg. Because of the latter, the price for the +50 mesh concentrates was estimated at US\$2,100/t. Prices of US\$1,400/t were used for the 35% of production that will be +80 mesh, 95%+Cg and US\$1,200/t has been used for the 5% that will be +100 mesh, 95-97%Cg. Therefore, the weighted average price that would be realized by Bissett Creek concentrates in the current market is estimated at US\$1,800/t in the FS Update.

Additional testing is underway to determine if waste rock and the low grade stockpile will be acid generating. The FS Update assumed this is the case and included the cost of a lined pad and additional financial assurance.

# (d) Production

In the FS Update, an average of 20,800 tonnes of graphite concentrate at 94.5% Cg is expected to be produced yearly over the course of 28 years compared to an average of 15,900 tonnes in the FS. The increase was mainly due to higher grades and slightly higher throughput.

## (e) Operating Costs

Cash mine operating costs were estimated to average \$795 per tonne of concentrate in the FS Update (compared to \$968/t in the FS) over the mine life. The decline in operating costs is mainly due to a switch from contract to owner mining, increased grades and throughput, and shorter haul distances in the new mine plan.

# (f) Capital Costs

In the FS Update, the capital cost to construct the processing plant, power plant and all associated mine infrastructure is estimated at \$101.6 million including a \$9.3 million contingency, compared to \$102.9 million in the FS including contingency. Increased capital costs of approximately \$6.5 for mining equipment due to the switch from contractor to owner mining were largely offset by the removal of costs for detailed engineering which is approximately one third complete (\$4.5 million), modifications to the SAG mill drive and discharge (\$1.3 million), switching to a mobile crusher (\$1.0 million) and removal of a redundant mill circuit (\$750k).

The Company is required to deposit a financial assurance of \$2.3 million with the Province of Ontario (\$799,200 is already deposited) to guarantee its obligations with respect to the Mine Closure Plan, compared to the \$3.57 million estimate used in the FS. An additional \$800,000 must be deposited prior to placing any footings in the ground for construction of structures such as buildings and dams and \$729,088 must be deposited prior to the commencement of commercial production. The Company will be discussing additional financial assurance requirements relating to the new mine plan with government ministries and has included an additional potential provision of \$2.5 million over four years in the FS Update.

# (g) Sensitivities (pre-tax)

# Sensitivity Analysis - September 23, 2013 Update:

	<u>\$2,100</u>		<u>\$1,8</u>	<u>\$1,800</u>		<u>\$1,500</u>	
	NPV*	<u>IRR</u>	NPV*	<u>IRR</u>	NPV*	<u>IRR</u>	
Base Case	\$201.1	25.7%	\$129.9	19.8%	\$58.7	13.6%	
Grade +10%	\$250.6	29.7%	\$172.3	23.4%	\$93.9	16.8%	
Grade -10%	\$151.6	21.6%	\$87.6	16.2%	\$23.6	10.3%	
Operating costs -10%	\$218.8	27.1%	\$147.6	21.3%	\$76.5	15.2%	
Operating costs +10%	\$183.4	24.2%	\$112.2	18.3%	\$41.0	11.9%	
Capex -10%	\$212.3	28.4%	\$141.2	22.0%	\$70.0	15.3%	
Capex +10%	\$189.8	23.4%	\$118.7	18.0%	\$47.5	12.2%	
*\$ millions @ 8%							

#### Significant Project Opportunities

A number of significant, low risk opportunities exist to improve upon the FS including.

- There is scope to reduce capital costs through the purchase of used equipment, lease financing of the mining fleet and natural gas generators, and additional permitting of lower cost tailings options.
- The Company has released the results of a Preliminary Economic Assessment that show the economics of doubling production in three or four years based on measured and indicated resources only to meet the anticipated growth in graphite demand. Due to the flat lying nature of the deposit, production can be expanding without a significant increase in the stripping ratio and can take advantage of lower grade material currently planned to be stockpiled in the mined out pit.
- Testing of waste rock and the low grade stockpile is ongoing to determine if it has acid generating potential. The FS Update includes the cost of a lined storage pad and additional financial assurance, neither of which would be required if the material is not acid generating.
- The Company has carried out extensive purification testing over the last two years and is developing a commercial process to produce and sell high purity (99.95%Cg+) products.
- The Company has successfully upgraded Bissett Creek concentrate for use in Lithium ion batteries. Testing to define the capital and operating costs of constructing an upgrading facility is underway.

No revenues or costs associated with mine expansion or upgrading and purifying to sell into value added markets are included in the FS or the FS update.

# (h) Environmental, Permitting and Local Community

In 2012, the Company filed a revised MCP with the MNDM and in August, 2013, it was accepted for filing. The MCP is a comprehensive document that describes in detail the scope of the project including the nature of mining and processing operations, buildings and infrastructure, potential effects on the environment, mitigation measures to protect the environment, a description of First Nation, government agency and local community consultation, and the Company's plan to rehabilitate the site and return it to its natural state at the end of operations including an estimate of the cost of doing so. The Company will be required to post a \$2.3 million financial assurance to ensure that funds are available to meet its obligations under the MCP. Approval of the MCP enables the Company to initiate construction, subject to securing financing and species at risk permitting. A number of other permits relating to operations are required and the Company has initiated this permitting process now that the MCP has been approved.

## (i) Qualified Persons

The FS was prepared in accordance with NI 43-101 standards by G Mining Services Inc. Louis Gignac, ing., Nicolas Ménard, ing., Antoine Champagne, ing., Ahmed Bouajila, ing., Robert Menard, ing., and Robert Marchand, ing. are the independent "qualified persons" under NI 43-101 who were responsible for preparing the FS on behalf of GMining Services Inc.

Gordon Zurowski, P.Eng., Principal Mining Engineer, of AGP Mining Consultants and Qualified Persons under NI 43-101 and who is independent of the Company, prepared and authorized the release of the updated economics for the FS.

Readers should refer to the NI 43-101 technical report relating to the FS for further details.

# (j) Expansion Case Preliminary Economic Assessment

On October 23, 2013, the Company completed a Preliminary Economic Assessment (the "Expansion PEA") on an expansion case for its Bissett Creek project. The Expansion PEA was undertaken to demonstrate the ability to meet expected future growth in graphite demand by substantially increasing production from the Bissett Creek deposit based on measured and indicated resources only. The Expansion PEA built on the FS completed by G Mining in August, 2012 and the expanded resource model and updated FS economics subsequently completed by AGP. The Expansion PEA was authored by Marc Leduc P. Eng. A NI 43-101 Technical Report was filed on www.sedar.com.

The Expansion PEA estimates the economics of doubling mill throughput after three years of operation and indicates that Bissett Creek has very attractive economics even at or below current depressed graphite price levels. The pre-tax internal rate of return ("IRR") is 26.3% (22.0% after tax) and the pre-tax net present value ("NPV") is \$231.1 million

(\$150.0 million after tax) in the base case which uses an 8% discount rate and a weighted average price of US\$1,800/tonne of concentrate. The Expansion PEA notes that the deposit was extensively investigated in the 1980s and this work was essentially redone over the last three years with consistent results and brought up to NI 43-101 standards. In addition, resources have been infill drilled and significantly expanded..

## Summary of October 23, 2013 Expansion PEA Results:

	Expansion PEA	FS Update
Reserves/resources (million tonnes)*	39.4Mt*	28.3Mt*
Feed Grade (% graphitic carbon)	1.85%*	2.06%*
Waste to ore ratio	0.24	0.79
Processing rate (tonnes per day - 92% availability)	2,670-5,340	2,670
Mine life	22 years	28 years
Mill recovery	94.7%	94.7%
Average annual production	33,183t	20,800t
Initial capital cost (\$ millions - including 10% contingency)	\$101.6M	\$101.6M
Expansion capital	\$45.2M	NA
Sustaining capital	\$58.7M	\$43.0
Cash operating costs (\$/tonne of concentrate)	\$695/t	\$795/t
Mining costs (\$/tonne of ore)	\$4.05	\$5.63
Processing costs (\$/tonne of ore)	\$7.35	\$8.44
General and administrative costs (\$/tonne of ore)	\$1.45	\$2.50
CDN/US dollar exchange rate	0.95	0.95

<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.

	FS Update	TS Update Expansion PEA (base case)		
Graphite prices (US\$ per tonne)	\$1,800	\$2,100	\$1,800	\$1,500
Pre tax Net Present Value @8% (CDN\$ millions)	\$129.9	\$335.6	\$231.0	\$126.6
Pre tax IRR (%)	19.8%	33.0%	26.3%	18.8%
After tax Net Present Value @8% (CDN\$ millions)	\$89.3	\$221.9	\$150.0	\$77.3
After tax IRR (%)	17.3%	27.7%	22.0%	15.7%

The Expansion PEA assumed that the processing plant is expanded after three years of operation, except for the crusher which has excess capacity, and that the capacity of the plant is effectively doubled. Corresponding adjustments were made to the power plant, mine fleet and tailings storage facilities and other infrastructure to account for the increased throughput.

The Expansion PEA used the same mine plan as the FS Update but accelerates the mining of the high grade ore and processes all of the LGS thereafter. 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. Also, resources have not yet been closed off by drilling and therefore further expansions are possible. Over the first ten years of operation almost 38,000 tonnes of graphite concentrate will be produced yearly and an average of 33,100 tonnes will be produced over the project life.

The Expansion PEA estimated that cash mine operating costs will average \$695 per tonne of concentrate over the mine life. Due to the flat lying nature of the deposit, production can be expanded without any capital investment required for additional stripping or pushback of the pit walls. The waste to ore ratio actually declines in the Expansion PEA and contributes to lower operating costs. The initial capital cost estimate to construct the processing plant, power plant and all associated mine infrastructure remains at \$101.6 million including a \$9.3 million contingency. Under the Expansion PEA, an additional \$45.2 million in expansion capital has been added in year three for the parallel mill circuits and sustaining capital over the mine life was increased by \$15.7M for additional mining equipment, tailings facilities and other infrastructure.

## **Expansion PEA Sensitivities (pre-tax):**

<b>Graphite Price</b>	<u>\$2,100</u> <u>\$1,800</u>		<u>\$1,5</u>	<u>00</u>		
	NPV*	<u>IRR</u>	NPV*	<u>IRR</u>	NPV*	<u>IRR</u>
Base Case	\$335.6	33.0%	\$231.1	26.3%	\$126.6	18.8%
Grade +10%	\$408.3	37.4%	\$293.3	30.4%	\$178.3	22.6%
Grade -10%	\$263.0	28.4%	\$168.9	21.9%	\$74.9	14.8%
Operating costs -10%	\$358.7	34.5%	\$254.2	27.8%	\$149.7	20.6%
Operating costs +10%	\$312.6	31.5%	\$208.1	24.7%	\$103.6	17.1%
Capex -10%	\$351.2	36.2%	\$246.7	29.0%	\$142.2	21.1%
Capex +10%	\$320.1	30.3%	\$215.6	23.9%	\$111.1	16.9%
*\$ millions @ 8%						

# **Qualified Persons**

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 estimates in the Expansion PEA. Gordon Zurowski, P.Eng., prepared the reserve estimate and the updated Feasibility Study economics. Marc Leduc, P.Eng., who is independent of the Company, prepared the Expansion PEA and approved and authorized the release of the information contained therein.

# **Corporate Developments**

On January 8, 2013, the Company announced that it had signed a Letter of Intent with Caterpillar Financial Services Corporation ("Cat Financial") to provide financing for up to US\$17.5 million in mining and power equipment financing for the Bissett Creek Project. Cat Financial has preliminarily indicated its additional interest in participating in a Project Debt Facility, subject to receipt of an Information Memorandum relating thereto and its agreement with the terms and conditions thereof. This facility will cover the cost of the mobile mining fleet and the purchase and installation of natural gas powered generators including the engineering, procurement and construction management related thereto. Closing of the facility is contingent on customary requirements for due diligence, satisfaction of conditions precedent, Cat Financial credit approval and negotiation and execution of definitive legal documentation.

On January 18, 2013, the Company announced that it had awarded a \$3.5 million contract for the detailed engineering and design of the Bissett Creek project to PES-BECMA. PES-BECMA, a joint venture between Porcupine Engineering Services Inc. and BECMA LIMITED, was awarded the responsibility for the front end engineering and design of the 2,500 tonne per day processing facility, and related infrastructure that will produce approximately 20,000 tonnes of large flake, high purity graphite per year. The Company has temporarily suspended detailed engineering due to market conditions.

On March 7, 2013, the Company announced positive results from a 61 hole, 3,425 meter drilling program on the Bissett Creek graphite project. The drill program was designed to infill a significant portion of inferred resources with the objective of upgrading them to the measured and indicated categories. In addition, extensions to higher grade

zones outside of the current resource model were tested. All 61 holes returned widths and grades as good as or better than those used in the completed bankable Feasibility Study.

On May 7, 2013, the Company announced a new resource estimate for the Bissett Creek graphite project based on results from a recent 61 hole, 3,425 meter drill program. The drill program successfully achieved its objective to upgrade a significant portion of inferred resources to the measured and indicated. Measured and indicated resources are now estimated at 69.8 million tonnes grading 1.74% graphitic carbon ("Cg") based on a 1.02% Cg cutoff grade compared to the previous estimate of 26 million tonnes grading 1.81% Cg at a cutoff of 0.98% Cg.

On July 8, 2013, the Company announced that Don Baxter had resigned as President of the Company. The Company plans to hire a COO as part of its efforts to finance and build the Bissett Creek Project.

August 26, 2013, the Company announced that the MNDM had accepted the Company's Mine Closure Plan for filing and that the Company has been granted an additional mining lease for the Bissett Creek project.

On September 23, 2013, the Company completed an update FS economics based on a revised mine plan in the existing FS based on the new 2013 resource model. This FS Update incorporated a new and larger resource estimate, some modifications to the capital and operating cost assumptions, and lower graphite prices. The update was prepared by AGP Mining Consultants.

On September 30, 2013, the Company announced that it had developed a proprietary process for purifying concentrates from the Bissett Creek Project and had consistently achieved 99.95%+C purity levels in extensive independent laboratory and bench scale testing. High purity graphite is required for many value added applications including lithium ion batteries.

On October 23, 2013, the Company announced that it had completed a PEA on an expansion case for its Bissett Creek project. The Expansion PEA was undertaken to demonstrate the ability to meet expected future growth in graphite demand by substantially increasing production from the deposit based on measured and indicated resources only. A NI 43-101 Technical Report was filed on <a href="https://www.sedar.com">www.sedar.com</a>.

On November 11, 2013, the Company announced that it has partnered with Coulometrics LLC to manage development of the Company's proprietary technologies for manufacturing spherical graphite ("SPG") and improving the performance of lithium ion ("Li-ion") batteries. The initial focus is on the development of nano-material based surface coatings for SPG. SPG is manufactured from flake graphite concentrate is the anode material in Li-ion batteries.

# **Selected Information**

The selected financial information set out below is based on and derived from the Financial Statements which have been prepared in accordance with IFRS.

	Year ended	Year ended
	December 31, 2013	December 31, 2012
	\$	\$
Statement of Operations and Comprehensive Loss Data		
Total Revenue	Nil	Nil
Total Expenses	1,564,863	3,719,286
Net Income/(Loss)	(1,493,512)	(3,635,335)
Net Income/(Loss) per Share – basic and diluted	(0.03)	(0.08)
Statement of Financial Position Date	As at December 31,	As at December 31,
Statement of Financial Position Data	As at December 31, 2013	As at December 31, 2012
Statement of Financial Position Data  Total Assets		
	2013	2012
Total Assets	<b>2013</b> 14,818,863	<b>2012</b> 16,485,803
Total Assets Total Long-Term Debt	2013 14,818,863 Nil	2012 16,485,803 Nil
Total Assets Total Long-Term Debt Total Liabilities	2013 14,818,863 Nil	2012 16,485,803 Nil

# **Results of Operations**

•	Years ended December 31		
	2013	2012	
	\$	\$	
General and administrative expenses			
Management and consulting fees	836,860	1,133,804	
Legal and audit	96,959	133,994	
Office and miscellaneous	561,050	942,316	
Share-based payments	(69)	1,438,646	
Depreciation	68,104	71,782	
Foreign exchange (gain) loss	1,959	(1,256)	
	1,564,863	3,719,286	
Loss from operations	(1,564,863)	(3,719,286)	
Finance cost	-	-	
Interest income	71,351	83,951	
Gain on debt settlement			
Loss on sale of assets	-	-	
Income before taxes	(1,493,512)	(3,635,335)	
Tax expense	-	-	
Loss and comprehensive loss for the period	(1,493,512)	(3,635,335)	

Management and consulting fees decreased from \$1,133,804 in 2012 to \$836,860 in 2013 as the Company decreased activity levels with respect to the Bissett Creek Project as the FS has been completed and approval of the MCP received. In addition, the number of personnel, bonuses paid to management, and the total time required by consultants were all reduced. Office and miscellaneous expenses decreased from \$942,316 in 2012 to \$561,050 in 2013 as a result of the Company's decreased overall activity including public company costs, conference and exhibitor costs and investor relations activity. Depreciation expenses decreased to \$68,104 in 2013 from \$71,782 last year due to a slightly lower carrying value of assets.

For the year ended December 31, 2013, the Company recorded a loss and comprehensive loss of \$1,493,512, or \$0.03 per share, compared to a net loss of \$3,635,335, or \$0.08 per share, in the same period last year, as a result of lower management and consulting fees and lower office and miscellaneous expenses. The loss and comprehensive loss in 2013 included non-cash charges for share-based payments and depreciation totalling \$68,035, compared to \$1,510,428 in 2012. In the year ended December 31, 2013, the Company expensed share-based compensation for stock options granted to key management personnel of \$23,184. This expense was offset by a \$23,253 adjustment to the estimate for forfeitures of unvested options. The decrease in non-cash charges was the result of lower share-based payments.

Expenses capitalized to the Company's exploration and evaluation assets during the year ended December 31, 2013 decreased to \$2,865,401 compared to \$3,790,671 in the same period last year. Environmental and mine permitting expenses decreased from \$919,925 to \$538,469 as the prior year included expenses related to the MCP. Metallurgical expenses fell from \$1,155,482 to \$425,961 and feasibility expenses declined from \$524,484 to a credit of \$60,582 as both of these areas were the focus of significant activity related to the FS in the prior year. There was a credit of \$65,607 against feasibility expenses in 2013 as the Company received funds related to its 2011 scientific research and experimental development program claims ("SR&ED"). Spending on drilling decreased to \$209,139 from \$483,066 in the same period last year as the Company completed the drill program that it initiated in 2012. Spending on detailed engineering was \$1,247,695 versus nil in the same period last year as the Company initiated work on detailed engineering in 2013. Spending on engineering totalled \$156,360 versus \$34,247 in the same period last year. Other expenses capitalized to the Company's exploration and evaluation assets included site and royalty expenses, which totalled \$99,210 compared to \$183,879 in 2012. Expenditures related to maintenance of the property (including property taxes) increased from \$49,031 to \$57,897, while expenditures related to consultations and infrastructure fell from \$134,847 to \$41,313. Geotechnical expenditures were \$278,260, less a credit of \$28,152 related to SR&ED, in comparison to \$221,163 of expenditures in 2012. There was very little surveying and geophysics activity in 2013. As a result, surveying and geophysics had a credit balance of \$960 in 2013, reflecting a \$960 SR&ED credit related to expenditures in a prior year, in comparison to expenditures of \$268,425 in 2012.

#### **Summary of Quarterly Results**

The summary of quarterly results has been prepared in accordance with IFRS.

Year ended		Interest Income	Total Loss	Income (Loss) Per share
Dec 31	Quarter	\$	\$	\$
2013	4	13,307	(351,887)	(0.01)
	3	15,877	(300,776)	(0.01)
	2	19,872	(398,134)	(0.01)
	1	22,294	(442,715)	(0.01)
2012	4	25,936	(876,058)	(0.02)
	3	27,960	(394,755)	(0.01)
	2	25,911	(1,666,852)	(0.04)
	1	4,144	(697,670)	(0.02)

The Company, as an exploration stage company, experiences a high degree of variability in its quarterly results. The Company's expenses are not related to the regular and continuous activities that take place when a mine is in production. In the fourth quarter of 2012, the Company awarded stock options which contributed \$385,834 to an increase in loss & comprehensive loss. In the second quarter of 2012, the Company awarded stock options which contributed \$978,952 to an increase in loss & comprehensive loss of \$1,666,852.

# **Liquidity and Capital Resources**

As at December 31, 2013, the Company had \$280,079 in accounts payable and accrued liabilities, compared to accounts payable and accrued liabilities of \$481,129 as at December 31, 2012. The Company had cash of \$3,358,399 as at December 31, 2013 compared to \$8,281,725 as at December 31, 2012. The decrease in cash was the result of the

Company having completed a private placement on March 16, 2012 and having received funds from the exercise of warrants during 2012 in conjunction with it continuing to incur expenses and undertake exploration and evaluation activities since the receipt of these funds.

The Company's working capital has decreased from \$7,998,184 at December 31, 2012 to \$3,224,752 primarily as a result of the continued expenditures on the Bissett Creek Project as well as on-going expenses. As at December 31, 2013 the Company had \$3,504,831 in cash, receivables, and prepaid expenses, compared to \$8,479,313 as at December 31, 2012.

In March 2010, the Company completed a non-brokered private placements of 7,327,000 units at \$0.25 per unit for total proceeds of \$1,831,750. Each unit consisted of one common share and one common share purchase warrant exercisable at a price of \$0.35 per share until October 7<sup>th</sup>, 2012. All of these warrants were exercised by the end of 2012.

The Company closed its IPO on April 18, 2011 which consisted of the sale of 8,000,000 common shares at a price of \$0.50 per share for gross proceeds of \$4,000,000, and obtained a listing on the TSX Venture Exchange effective April 20, 2011. From the IPO to December 31, 2011, 6,478,242 warrants have been exercised resulting in proceeds to the Company of \$2,095,553. During the first nine months of 2012, 3,132,594 warrants were exercised resulting in additional proceeds to the Company of \$1,144,851.

On March 16, 2012, the Company completed a private placement of 6,206,377 common shares at a price of \$1.70 for gross proceeds of \$10,550,841. In connection with the offering, the Company paid finders' fees totaling \$121,517, and issued to the agents 71,480 common share purchase warrants entitling the holder to purchase one common share at a price of \$2.00 until March 16, 2013.

The Company has increased its long-term reclamation deposit with the Ministry of Finance for the Province of Ontario to the amount of \$799,200 from \$319,590. The MCP requires the Company to deposit \$800,000 prior to placing any footings in the ground for construction of structures such as buildings and dams and \$729,088 prior to the commencement of commercial production. The Company will be discussing additional financial assurance requirements relating to the new mine plan with government ministries and has included an additional potential provision of \$2.5 million over four years in the updated FS economics. The deposit accrues interest and represents a financial guarantee to the Province of Ontario that the Company will effect the proper reclamation and closure of the Bissett Creek site when activities are terminated pursuant to a Mine Development and Closure Plan that was filed with, and accepted by, the MNDM in accordance with the *Mining Act* (Ontario), including the standards, procedures and requirements of the Mining Code of Ontario. The Company is responsible for any reclamation costs in excess of the deposit.

#### Use of the Proceeds from Private Placement

Net proceeds of \$10,429,323 from the private placement completed in 2012 were to be used to finance the completion of the FS and permitting with respect to the Company's Bissett Creek Project, certain engineering work and the acquisition of long lead time equipment upon the positive completion of the FS and for working capital and general corporate purposes. As at December 31, 2013, the Company has used all of the proceeds.

## **Contractual Obligations**

As at December 31, 2013, the Company had no contractual obligations (commitments as at December 31, 2012 – \$Nil) which related to costs associated with work at the Bissett Creek Property. Purchase obligations represent agreements to purchase goods or services that are enforceable and legally binding on the Company

# **Off Balance Sheet**

# Arrangements

The Company does not have any off balance sheet arrangements.

## **Transactions with Related Parties**

Major Shareholder
The Company has no major shareholder

## **Key Management Compensation**

In the year ended December 31, 2013, the Company expensed management fees to companies owned and controlled by key management personnel of \$157,500 (2012 – \$201,250) and expensed salary to key management personnel of \$430,000 (2012 – \$414,375). In the year ended December 31, 2013 and 2012, the Company provided short-term employee benefits totaling \$23,323 (2012 - \$23,929) to key management personnel. In the year ended December 31, 2013, the Company expensed share-based compensation for stock options granted to key management personnel of \$23,184. This expense was offset by a \$23,253 adjustment to the estimate for forfeitures of unvested options. As a result, the Company recorded a credit balance of \$69 in share-based compensation expense for the year ended December 31, 2013. In the year ended December 31, 2012, the Company expensed share-based compensation for stock options granted to key management personnel of \$123,890 (1,800,000 share options, 1,616,667 share options vested, exercisable at \$0.50; and 225,000 share options, 112,500 share options vested, exercisable at \$0.80) and share-based payments of \$1,251,353 to directors (500,000 share options exercisable at \$2.50; and 500,000 share options exercisable at \$0.85). In the year ended December 31, 2013, the Company provided bonus payments of \$48,000 (2011 - \$236,911) to key personnel.

# **Other Related Party Transactions**

During the year ended December 31, 2013, the Company expensed office rental payments of \$22,680 (2012 – \$19,170) to a Company whose CEO and a Director is also a Director of Northern.

# **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.

## **Changes in Accounting Policies**

## Recent pronouncements issued

Certain pronouncements were issued by the IASB or the International Financial Reporting Interpretations Committee ("IFRIC") that are mandatory for accounting periods after December 31, 2013. Pronouncements that are not applicable or do not have a significant impact to the Company have been excluded from the discussion below.

The IASB has issued a new standard, IFRS 9, Financial Instruments ("IFRS 9"), which will ultimately replace IAS 39, "Financial Instruments: Recognition and Measurement" ("IAS 39"). The replacement of IAS 39 is a multi-phase project with the objective of improving and simplifying the reporting for financial instruments and the issuance of IFRS 9 is part of the first phase of this project. IFRS 9 uses a single approach to determine whether a financial asset or liability is measured at amortized cost or fair value, replacing the multiple rules in IAS 39. For financial assets, the approach in IFRS 9 is based on how an entity manages its financial instruments in the context of its business model and the contractual cash flow characteristics of the financial assets. IFRS 9 requires a single impairment method to be used, replacing multiple impairment methods in IA 39. For financial liabilities measured at fair value, fair value changes due to changes in an entity's credit risk are presented in other comprehensive income. Companies may early adopt IFRS 9 however there is no mandatory application date. The Company does not expect the implementation to have a significant impact on the Company's results of operations, financial position and disclosures.

# **Critical Accounting Estimates and Judgements**

The preparation of the Financial Statements requires Management to make estimates, assumptions, and judgements about the future that affect the amounts recorded in the 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, and they are continually being evaluated based on new facts and experience. Actual results may differ from these 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.

Significant estimates used in the preparation of the Financial Statements include, but are not limited to:

- (i) asset carrying values and impairment charges;
- (ii) the economic recoverability of exploration expenditures incurred and the probability of future economic benefits from development expenditures incurred;
- (iii) the expected costs of asset retirement obligations; and
- (vi) the calculation of share-based compensation and warrants which includes the assumptions used in the Black-Scholes option pricing model including volatility, estimated forfeiture rates and expected time until exercise.

Significant judgements used in the preparation of the Financial Statements include, but are not limited to:

- (i) those relating to the assessment of the Company's ability to continue as a going concern;
- (ii) the useful lives and related depreciation of property and equipment;
- (iii) the identification of separately identifiable components in property and equipment where their respective cost is significant in comparison to the total cost;
- (v) the classification of expenditures as exploration and evaluation assets; and
- (vi) the recognition of deferred tax.

## **Critical Accounting Policies**

The Company believes the following critical accounting policies affect its more significant judgments and estimates used in the preparation of its interim financial statements:

## Going Concern

The critical assumption made by management of the Company is that the Company will continue to operate as a going concern.

The Company is an exploration stage company that incurred a net loss of \$1,493,512 for the year ended December 31, 2013 (2012 - \$3,635,335) and has an accumulated deficit of \$8,706,716 since the inception of the Company. As at December 31, 2013, working capital was \$3,224,752 and the Company's ability to continue as a going concern is dependent upon its ability to raise additional capital to continue the development of the Bissett Creek Project. The Company completed a private placement with proceeds of \$10,550,841 during the first quarter of 2012, and an IPO with proceeds of \$4,000,000 during the second quarter of 2011. However, substantial additional capital is required to ultimately build a mine and processing plant on the Bissett Creek Project and to enable the Company to continue its operations. However, there is a high degree of risk and many inherent uncertainties in the mining industry and there is no assurance management will be successful in its endeavors. These factors indicate the existence of a material uncertainty which may cast significant doubt about the ability of the Company to continue as a going concern.

The Financial Statements have been prepared on a going concern basis, which assumes that the Company will be able to continue in operation 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's management believes that it will continue to be able to generate sufficient funds from public or private debt or equity financings for the Company to continue to operate. The Company's Financial Statements do not include any adjustments that might result from negative outcomes with respect to these uncertainties.

# Impairment of Long-Lived Assets

At each balance sheet date, the Company assesses whether there is any indication that any long-lived assets or finite life tangible assets are impaired. The Company monitors the recoverability of long-lived assets based on factors such as current market value, future asset utilization, business climate and future undiscounted cash flows expected to result from the use of the assets. An impairment is recognized if the recoverable amount, determined as the higher of an asset's fair value less cost to sell and the discounted future cash flows generated from use and eventual disposal of an asset, is less than its carrying value. Where the carrying amount of an asset exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

Mining properties and exploration and evaluation assets are also assessed for impairment upon the transfer of exploration and evaluation assets to development assets regardless of whether facts and circumstances indicate that the carrying amount of the exploration and evaluation assets is in excess of their recoverable amount.

#### Mining properties and exploration and evaluation expenditures

Mining properties correspond to acquired interests in mining exploration permits/claims/leases which include the rights to explore, mine, extract and sell all minerals from such permits/claims/leases. All pre-exploration costs, i.e. costs incurred prior to obtaining the legal right to undertake exploration and evaluation activities on an area of interest, are expensed as incurred.

Once the legal right to explore has been acquired, exploration and evaluation expenditures are capitalized in respect of each identifiable area of interest until the technical feasibility and commercial viability of extracting a mineral resource are demonstrated.

General and administration expenditures relating to exploration are capitalized where they can be directly attributed to the site undergoing exploration and evaluation.

Exploration and evaluation assets are carried at historical cost, less any impairment losses recognized.

When technical feasibility and commercial viability of extracting a mineral resource are demonstrated for an area of interest, the Company stops capitalizing exploration and evaluation costs for that area, tests recognized exploration and evaluation assets for impairment, and reclassifies any unimpaired exploration and evaluation assets either as tangible or intangible mine development assets according to the nature of the assets.

## Share-based compensation

The Company has a share option plan (the "Plan") described in Note 7 of the Financial Statements. The Company measures the compensation cost of stock options issued under the Plan using the fair-value method as determined using the Black-Scholes option pricing model. Compensation costs are measured at the grant date based on the fair value of the award and are recognized over the vesting period in net income (loss) with a corresponding increase to contributed surplus. Upon exercise, common shares are issued from treasury and the amount reflected in contributed surplus is credited to share capital, as adjusted for any consideration paid.

The Black-Scholes option pricing model incorporates highly subjective assumptions, including volatility, estimated forfeiture rates and expected time until exercise, which affect the calculated values. At the end of each reporting period, the Company reviews the option pricing model and updates model inputs for any changes for the purposes of determining the fair value of new grants, and reflects the impact of changes to non-market input estimates for previous grants in net income (loss) with a corresponding adjustment to contributed surplus.

# Restoration and site closure provision

The Company has an obligation to reclaim its mining property after the minerals have been mined from the site, and has estimated the costs necessary to comply with existing reclamation standards. The fair value of an asset retirement obligation is recorded in the period in which it is incurred. When the liability is initially recorded, the cost is

capitalized by increasing the carrying amount of the related long-lived asset. Over time, the liability is adjusted to reflect the passage of time (accretion expense) and for changes in estimated future cash flows. Accretion expense is charged to the statement of comprehensive profit or loss, while adjustments related to changes in estimated cash flows are recorded as increases or decreases in the carrying value of the asset. The capitalized cost is amortized over the useful life of the related asset. Upon settlement of the liability, a gain or loss is recorded if the actual costs incurred are different from the liability recorded.

#### Income Taxes

The Company uses the asset and liability method of accounting for income taxes. Under this method, deferred tax is determined based on differences between the financial statement carrying values of existing assets and liabilities and their respective income tax bases (temporary differences), and losses carried forward. Deferred tax is measured using the enacted tax, or substantially enacted tax rates which will be in effect when the temporary differences are likely to reverse. The effect on deferred tax of a change in tax rates is included in operations in the period in which the change is enacted. The amount of deferred tax recognized is limited to the amount of the benefit that is probable.

Deferred tax and the recognition and measurement of uncertain tax positions are subject to various assumptions and management judgement. Actual results may differ from these estimates. In circumstances where the applicable tax laws and regulations are either unclear or subject to ongoing varying interpretations, it is reasonably possible that changes in these estimates could occur that materially affect the amounts of deferred tax recorded at December 31, 2013.

#### **Financial instruments**

All financial instruments are required to be measured at fair value on initial recognition. Measurement in subsequent periods depends upon whether the financial instrument is classified as fair value through profit or loss ("FVTPL"), available-for-sale assets, held-to-maturity investments, loans and receivables, or other liabilities measured at amortized cost ("Other Financial Liabilities"). Financial instruments classified as FVTPL are measured at fair value with unrealized gains and losses recognized in the statement of operations. Available-for-sale asset financial instruments are measured at fair value with unrealized gains and losses recognized in other comprehensive income. Financial assets classified as held-to-maturity investments, loans and receivables and Other Financial Liabilities, are measured at amortized cost. Transaction costs in respect of financial assets and liabilities which are FVTPL are recognized in profit or loss immediately. Transaction costs in respect of Other Financial Instruments are included in the initial fair value measurement of the financial instrument.

The Company may enter into derivative contracts or, financial instruments and non-financial contracts containing embedded derivatives. Embedded derivatives are required to be accounted for separately at fair value as derivatives when the risks and characteristics of the embedded derivatives are not closely related to those of their host contract, and the host contract is not carried at fair value.

## Disclosure of Outstanding Share Data (as at February 28, 2014):

## **Common Shares**

Authorized: Unlimited number of common shares.

Outstanding: 49,131,281 common shares.

#### **Trends**

There are significant uncertainties regarding the prices of industrial minerals and in 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 occurrence of any one or more of these risks or uncertainties could have a material adverse effect on the value of any investment in the Company and the business, prospects, financial position, financial condition or operating results of the Company. The risk factors noted below, in no specific order, are not an exhaustive list of all risk factors associated with an investment in the Company's common shares or in connection with the operations of the Company.

- Exploration stage company developing one single asset;
- The highly speculative nature of mineral exploration and development;
- No history of mineral production;
- Mining operations and no insurance coverage on the inherent risks of such operations;
- Limited operating history and financial resources;
- Government regulation and compliance;
- The reliability of results of prior exploration work;
- Reliance on management and experts;
- Competition;
- The possibility of conflicts of interest for the Company's directors and/or officers;
- Competitive conditions;
- Title to property;
- Aboriginal land claims;
- Environmental risks and hazards;
- Cost of land reclamation;
- Commodity prices;
- Price volatility and lack of active market;
- Litigation;
- No earning or dividend record and no anticipation of paying in foreseeable future.

For a more detailed discussion of the above risk factors, refer to the Company's Annual Information Form filed for the year ended December 31, 2013.

# **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 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 new 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. Forwardlooking 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 activities; conclusions of economic evaluations; fluctuations in currency exchange rates; 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 mineral prices; 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; actual results of reclamation activities, and the factors discussed in the section entitled "Risk Factors" in this 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.

#### **Qualified Person**

Mehmet F. Taner, Ph.D., P.Geo., a Consulting Geologist who is independent of the Company, is the Company's Qualified Person as that term is defined within National Instrument 43-101 and has reviewed and approved the technical content of the MD&A.

#### **Additional Information**

Additional information relating to the Company is available on SEDAR at www.sedar.com.