

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

## FOR THE SIX MONTH PERIOD ENDED JUNE 30, 2017

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 three and six month periods ended June 30, 2017 compared to the three and six month periods ended June 30, 2016. This MD&A is dated and has been prepared with information available as of August 8, 2017.

This MD&A should be read in conjunction with the Company's financial statements for the three and six month periods ended June 30, 2017 and related notes (the "Interim Financial Statements"). The Interim 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 the cautionary language at the end of this MD&A and readers are advised to refer to it when reading any forward-looking statements.*

The MD&A is prepared in conformity with National Instrument 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) to develop and hold title to the Bissett Creek graphite project ("Bissett Creek" or the "Bissett Creek Project").

### Nature of Operations

The Company's principal focus is the potential development of the Bissett Creek Project which consists of a large flake graphite deposit located in the County of Renfrew, Ontario, and the upgrading of mine concentrates into value added products, particularly the manufacture of anode material for lithium ion batteries ("LiBs"). Bissett Creek was extensively explored and evaluated in the 1980's but was not developed as graphite prices subsequently declined due to an excess of supply from China. More recently, increased demand from traditional steel markets, rapidly growing demand from the relatively new LiB market, and potential supply problems with Chinese production have created renewed interest in graphite projects worldwide.

Northern completed a Full Feasibility Study in July, 2012 (the "FS") which confirmed the technical and financial viability of constructing and operating an open pit mine and 2,500 tonne per day (tpd) processing plant at Bissett Creek. A technical report prepared in accordance with National Instrument 43-101 – Standards of Disclosure for Mineral Projects ("NI 43-101") was filed on SEDAR in August, 2012. The FS was updated in September, 2013 (the "FS Update") following an additional 61 hole, 3,425 m drill program, the release of a new and larger resource estimate, and revision of the mine plan based on the new resource model. The FS Update also incorporated some modifications to capital and operating cost assumptions and lower graphite prices.

The Company subsequently completed a preliminary economic assessment on an expansion case for the Bissett Creek Project (the "Expansion PEA") and filed a technical report prepared in accordance with NI 43-101 on SEDAR in December, 2013. This is the current technical report on the Bissett Creek Project. The Expansion PEA was undertaken to demonstrate the ability to meet expected future growth in graphite demand by doubling production after three years of operation based on measured and indicated resources only. The Company updated the Expansion PEA (the "Expansion PEA Update") to also assess the economics of building a two million tonne per annum (Mtpa) processing plant at the outset rather than expanding to 2 Mtpa after three years of operation. The Company does not intend to pursue either expansion scenario at the present time and is focussed on the development scenario outlined in the FS and FS Update which is based on production volumes that are more realistic given the size of the market and current weak demand.

In August 2013, the Ontario Ministry of Northern Development and Mines (“MNDM”) accepted the Company’s amended mine closure plan (“MCP”) which is based on the FS. The Company is in a position to begin construction of a mine at Bissett Creek, subject to arranging the necessary full project financing and finalizing the permitting. The Company intends to file a statement of material change with the MNDM to reflect modifications in the FS Update and as a result, the MNDM could instead require the Company to file another amendment to the closure plan. A number of operational permits and environmental authorizations are also required and are expected to be obtained in the normal course prior to the commencement of mining operations.

### **The Bissett Creek Project**

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, Ontario.

The Bissett Creek property 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 June 30, 2034 (the “Mining Leases”). Property taxes and annual rental payments with respect to the Mining Leases are payable to the Minister of Finance and were \$23,639 in 2016. The Company also holds five unpatented mining claims, which are contiguous to Bissett Creek, and cover approximately 464 hectares.

Royalties on Bissett Creek 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.

Graphite prices began to increase in 2005 due to increased demand in traditional steel and automotive markets and peaked in 2012 in a range of US\$2,500 to \$3,000 per tonne for large flake graphite and some shortages were reported. The subsequent slowdown in the Chinese economy combined with a lack of growth in economies in the US/Japan/Europe has caused prices to fall back over 50% from 2012 levels. Based on its review of industry sources, the Company believes prices are currently around US\$850 for large flake graphite while +50 mesh XL flake is selling for approximately US\$1,500 per tonne and +32 mesh XXL flake over US\$2,000 per tonne. One of the key factors which differentiates Bissett Creek from other deposits is that approximately 60% of production will be XXL and XL flake. The Company believes that it can achieve an average selling price in the order of US\$1,500/tonne in the current market.

The Company also intends to produce and sell value added products such as expandable graphite, anode material for lithium ion batteries and high purity flake graphite which receive premium prices. While traditional markets have declined, graphite is the anode material in lithium ion batteries and that market is rapidly growing due to their use in cell phones, cameras, laptops, power tools, etc. and more recently, hybrid and all electric vehicles and stationary power storage. This creates the potential for higher prices. No value added products are included in the economics in the FS or Expansion PEA or the updates thereto.

As at June 30, 2017, the Company had capitalized \$11,743,785 of exploration and evaluation expenditures relating to Bissett Creek. Over the next twelve months the Company intends to complete the majority of the permitting required to initiate construction and operations while it continues to seek full project financing.

### **Mineral Resources**

Based on a 1.02% graphitic carbon (“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 base case cut-off grade was determined from the results of the FS. Metal price assumptions in the FS reflect the exceptionally high content of coarse flake graphite and the high purity of concentrates from the Bissett Creek deposit 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 Standards of Disclosure for Mineral Projects. Pierre Desautels, P.Geo., Principal Resource Geologist, and Gordon Zurowski, P.Eng., Principal Mining Engineer, both of AGP 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 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.*

## Feasibility Study

The Company completed a bankable Full Feasibility Study for the Bissett Creek Project in August, 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 2,500 tpd processing plant at Bissett Creek. The Company subsequently 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 was prepared by AGP and as it did not constitute a material change, a new NI 43-101 report was not filed.

### Summary of Updated Feasibility Study Economics

	2013 FS Update (base case)	2012 FS
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	\$968
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
<b>Graphite prices (US\$ per tonne)</b>	<b>\$1,800</b>	<b>\$2,100</b>
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%

\*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.

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 is 2,670 tpd (based on 92% availability). 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. 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.

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 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 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. Resources limits have not yet been fully defined and resources may be expanded in the future with additional drilling.

Flake graphite is sold based on 80% meeting the required size specification. Therefore, smaller flake sizes can be blended into larger as long as the carbon content is maintained. The -100 mesh small flake concentrate that will be produced from Bissett Creek 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, 35% of production will be +80 mesh, and 5% will be +100 mesh. The weighted average price that would be realized by Bissett Creek concentrates was estimated at US\$1,800/t at the time of the FS Update.

*Sensitivity Analysis - FS Update:*

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

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

- There is scope to reduce capital costs through the purchase of used equipment and lease financing of the mining fleet and natural gas generators.
- The 2013 Preliminary Economic Assessment and the Expansion PEA Update show that the economics of building a processing plant with double the capacity of that used in the FS Update are more attractive.
- Additional testing has determined that waste rock and the low grade stockpile will not become acid generating for a substantial period of time and therefore a lined pad is not required as contemplated in the FS Update. Also, the Company intends to build an engineered wetland to treat any run off from the low grade stockpile and therefore no financial assurance will be necessary to return to the pit, any potentially acid generating material that is stored on surface.
- The Company has carried out extensive purification testing and has developed a potentially commercial process to produce and sell high purity ( $\geq 99.95\%$  Cg) products. A pilot plant test is planned.

- The Company has successfully upgraded Bissett Creek concentrate for use in lithium ion batteries. Testing to further define the capital and operating costs of constructing an upgrading facility is ongoing.

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.

### **Expansion Preliminary Economic Assessment**

The Company completed and filed a NI 43-101 Technical Report with respect to a Preliminary Economic Assessment on an expansion case for Bissett Creek. The Expansion PEA was undertaken to demonstrate the ability to meet expected future growth in graphite demand by substantially increasing production from Bissett Creek based on Measured and Indicated resources only. The Expansion PEA was authored by Marc Leduc P. Eng. and estimates the economics of doubling mill throughput after three years of operation. It indicates that Bissett Creek has viable economics even at or below current depressed graphite price levels.

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. For the Expansion PEA Update, Ken Kuchling, P.Eng., Senior Mining Associate of P&E Mining Consultants Inc. (“P&E”) modified the Expansion PEA mine plan to commence production at the expanded 2.0 Mtpa production rate rather than ramping up in year three. Dan Peldiak, P.Eng. Principal Process Engineer, WorleyParsons Canada revised the capital and operating costs for the process plant. Andrew Bradfield, P.Eng. of P&E approved and authorized the disclosure of the technical information relating to the Expansion PEA Update. There is no requirement for a new NI 43-101 report relating to the Expansion PEA Update 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.

Both the Expansion PEA and the Expansion PEA Update show improved economics over the FS Update because production is essentially being doubled while capital costs increase by less than 50%. The Expansion PEA Update is a more optimal plan because it is more efficient to build one large mill rather than building a second parallel circuit after three years. However, a project this size has the potential to adversely affect prices, especially considering the volume of XL and XXL flake sizes that will be produced. The Company would only contemplate an expansion scenario if it had a strategic partner and secured offtake agreements.

Summary of PEA Results

	2013 FS Update	2013 Expansion PEA	2014 Expansion PEA Update
Reserves/resources (million tonnes)*	28.3*	39.4*	40.5 <sup>1</sup>
Feed Grade (% graphitic carbon)	2.06%*	1.85%*	1.83% <sup>1</sup>
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	44,200 <sup>2</sup>
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	0.95	0.95	0.95

\*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>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>2</sup> first 10 years

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

### Corporate Developments

On March 24, 2017 the Company completed a non-brokered private placement and issued 8,333,333 units at a price of \$0.30 per unit for gross proceeds of \$2,500,000. Each unit consisted of one common share and one half of one common share purchase warrant, with each full warrant entitling the holder to purchase one common share at a price of \$0.40 per share for a period of two years.

In April, 2017 the Company announced the results of additional metallurgical test work designed to optimize the

purity of concentrates that will be produced from the Bissett Creek deposit. Testing carried out by SGS Lakefield (“SGS”) evaluated new approaches to graphite processing developed since the Company completed the FS Update. SGS evaluated the effect on the flake size distribution and carbon content of graphite concentrates from using a stirred media mill instead of, or as a compliment to, the polishing mill. The stirred media mill successfully increased the overall purity of an earlier pilot plant concentrate from 93.4 to 97.9% Cg. The increase was mainly attributable to the smaller size fractions which averaged over 97% Cg. The higher purity of the finer materials will further enhance the price and marketability of the Bissett Creek concentrates.

In the second quarter of 2017 the Company hired Mr. Placido Campos as a Senior Process Consultant. Mr. Campos is a Professional Engineer with 32 years of experience in graphite production and processing. He has held a number of senior positions in his 13 years with Nacional de Grafite, the largest graphite producer outside of China, including most recently as General Manager of Operations. Mr. Campos was also formerly Graphite Beneficiation Manager with Syrah Resources where he was responsible for the metallurgical process and production. Mr. Campos will focus on reviewing the Bissett Creek Project metallurgical test work and the processing plant flow sheet with the objective of identifying potential reductions in capital expenditures and operating costs. The Company also announced that it had hired Mr. Antonio de Assis as a Senior Marketing Consultant. Mr. Assis has over 30 years of international sales and marketing experience including General Manager of Worldwide Sales and Marketing with Nacional de Grafite and General Manager of Sales and Marketing with Syrah Resources. Mr. Assis will develop a comprehensive marketing plan for Northern Graphite with respect to products, markets, prices, customers and value added manufacturing based on his years of experience with the battery, automotive, electronics, refractory and steel markets.

### 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.

	<b>Six months ended June 30, 2017 \$</b>	<b>Six months ended June 30, 2016 \$</b>
<b>Statement of Operations and Comprehensive Loss Data</b>		
Total Revenue	Nil	Nil
Total Expenses	430,396	1,252,928
Net Income/(Loss)	(427,538)	(1,249,970)
Net Income/(Loss) per Share – basic and diluted	(0.01)	(0.02)
<b>Statement of Financial Position Data</b>		
	<b>As at June 30, 2017</b>	<b>As at December 31, 2016</b>
Total Assets	15,431,228	13,405,650
Total Long-Term Debt	Nil	Nil
Total Liabilities	483,097	402,416
Shareholders’ Equity:		
Share Capital	23,205,412	21,459,258
Equity	14,948,131	13,003,234

## Results of Operations

	Three months ended June 30		Six months ended June 30	
	2017	2016	2016	
	\$	\$	\$	\$
<b>General and administrative expenses</b>				
Management and consulting fees	134,693	56,952	177,325	118,359
Legal and audit	22,981	13,280	28,372	15,901
Office and miscellaneous	95,546	132,868	150,734	192,370
Share-based payments	12,151	884,318	54,573	893,199
Depreciation	9,750	15,916	19,392	33,143
Foreign exchange (gain) loss	-	(44)	-	(44)
<b>Loss from operations</b>	(275,121)	(1,103,290)	(430,396)	(1,252,928)
Interest income	2,858	1,345	2,858	2,958
<b>Income before taxes</b>	(272,263)	(1,101,945)	(427,538)	(1,249,970)
Tax expense	-	-	-	-
<b>Loss and comprehensive loss for the period</b>	(272,263)	(1,101,945)	(427,538)	(1,249,970)

Management and consulting fees increased to \$177,325 in the first six months of 2017 as compare to from \$118,359 in the first six months of 2016 primarily as a result of the reinstatement of the CEO's full salary following a voluntary reduction in prior years. Legal and audit fees increased to \$28,372 from \$15,901 as a result of the private placement completed in the first half of 2017. Office and miscellaneous expenses decreased to \$150,734 in the first six months of 2017 from \$192,370 in the first six months of 2016 due to lower investor relations and promotion expenditures. During the first six months of 2017 the Company recognized \$54,573 in non-cash share-based expenses related to stock option grants as compared to \$893,199 in the same period of 2016. Depreciation expense decreased to \$19,392 in the six months ended June 30, 2017 from \$33,143 in 2016.

For the six months ended June 30, 2017, the Company recorded a loss and comprehensive loss of \$427,538, or \$0.01 per share, compared to \$1,249,970, or \$0.02 per share for the same period in 2016, primarily as a result of including non-cash charges for share-based payment expenses of \$893,199 related to the April 2016 stock option grants.

Expenses capitalized to the Company's exploration and evaluation assets during the six months ended June 30, 2017 increased to \$173,892 from \$88,816 in the same period last year. Environmental and mine permitting expenses totaled \$28,962 versus \$459 in the first six months of 2016. Metallurgical expenses increased from \$15,748 to \$93,203 as work continued on spherical graphite testing. Engineering expenditures totaled \$10,000 versus \$47,993 in the first six months of 2016. Site and royalty expenses increased to \$41,727 in the first six months of 2017 compared to \$24,616 in the same period last year.

## Summary of Quarterly Results

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

Year ended Dec 31	Quarter	Interest Income \$	Total Loss \$	Income (Loss) Per share \$
2017	2	2,858	(272,263)	(0.00)
	1	-	(155,275)	(0.00)
2016	4	1,835	(254,274)	(0.00)
	3	788	(169,549)	(0.00)
	2	1,345	(1,101,945)	(0.02)
2015	1	1,613	(155,525)	(0.00)
	4	4,741	(164,476)	(0.00)
	3	2,359	(118,945)	(0.00)
	2	1,852	(235,907)	(0.01)
2014	1	3,247	(516,948)	(0.01)
	4	8,748	(142,374)	(0.00)

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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 first three months of 2015, the Company awarded stock options which contributed \$249,723 to the increase in loss & comprehensive loss. In the second quarter of 2016, the Company awarded stock options which contributed \$884,318 to the increase in loss & comprehensive loss.

## Liquidity and Capital Resources

As at June 30, 2017:

- The Company's working capital increased to \$2,482,580 as a result of completing the \$2,500,000 private placement on March 24, 2017, from \$692,183 as at December 31, 2016: and
- The Company had \$2,638,567 in cash, receivables, and prepaid expenses, compared to \$767,489 as at December 31, 2016.

The Company has a long-term reclamation deposit with the Ministry of Finance for the Province of Ontario of \$815,689. The MCP requires the Company to deposit an additional \$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 deposit accrues interest and represents a financial guarantee to the Province of Ontario that the Company can effect the proper reclamation and closure of the Bissett Creek site when activities are terminated pursuant to the MCP. The Company is responsible for any reclamation costs in excess of the deposit. #

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## Contractual Obligations#

As at June 30, 2017, the Company had no contractual obligations (commitments as at December 31, 2016 – \$nil) 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 six months ended June 30, 2017, the Company expensed management fees to companies owned and controlled by key management personnel of \$nil (2016 – \$35,088), and salary and compensation to key management personnel of \$125,000 (2016 – \$60,000). In the six months ended June 30, 2017, the Company provided employee benefits totaling \$nil (2016 –\$3,997) to key management personnel.

### *Other Related Party Transactions*

There were no related party transactions.

## **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 and future 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, 2016. Pronouncements that are not applicable or do not have a significant impact to the Company have been excluded from the discussion below. The Company is currently evaluating the potential impacts of these new standards.

IFRS 9, Financial Instruments (effective January 1, 2018) introduces new requirements for the classification and measurement of financial assets, and will replace IAS 39. IFRS 9 uses a single approach to determine whether a financial asset is measured at amortized cost or fair value, replacing the multiple classification options available in IAS 39.

IFRS 16, Leases, was issued by the IASB in January 2016. The new standard brings most leases on balance sheet for lessees under a single model, eliminating the distinction between operating and finance leases. Lessor accounting however remains largely unchanged and the distinction between operating and finance leases is retained. This standard is effective for annual reporting periods on or after January 1, 2019. Early adoption is permitted if IFRS 15 has also been adopted.

IFRS 15 replaces the previous revenue standard IAS 18, Revenue, and the related Interpretations on revenue recognition. The standard scopes out contracts that are considered to be lease contracts, insurance contracts and financial instruments. The new standard is a control-based model as compared to the existing revenue standard which is primarily focused on risks and rewards. Under the new standard, revenue is recognized when a customer obtains control of a good or service. Transfer of control occurs when the customer has the ability to direct the use of and obtain the benefits of the good or service. This standard is effective for reporting periods beginning on or after January 1, 2018.

## **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. 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.

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
- (iv) 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
- (iv) the classification of expenditures as exploration and evaluation assets, and
- (v) 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 financial statements.

#### ***Going Concern***

The critical assumption made by management 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 \$427,538 for the six months ended June 30, 2017 (2016 - \$1,249,970) and has an accumulated deficit of \$11,720,110 since the inception of the Company. The Company completed a private placement on March 24, 2017 with gross proceeds of \$2,500,000 and as at June 30, 2017, had working capital of \$2,482,580. This level of working capital will enable the Company to continue as a going concern for at least the next 12 months. However, substantial additional capital is required to ultimately build a mine and processing plant at Bissett Creek and to enable the Company to enter production and continue its operations. 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 endeavours.

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.

With the continuation of weak investor sentiment in the graphite and resource sectors for an extended period of time, there exists a material uncertainty as to the Company's ability to raise additional funds on favourable terms. The Company's activities have considerable scope for flexibility in terms of the amount and timing of expenditures. The Company will thoroughly assess all such activities before undertaking them in advance of securing additional financing. 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 6 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 the Bissett Creek Project after the end of mining operations 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 June 30, 2017.

## 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 August 8, 2017):

### Common Shares

Authorized: Unlimited number of common shares.  
Outstanding: 59,817,612 common shares.#

### Warrants

A summary of the Company’s warrants outstanding and exercisable at August 8, 2017 is presented below:

Exercise price	Warrants outstanding	Warrants exercisable	Expiry date
\$0.35	455,000	455,000	March 24, 2018
\$0.40	4,166,666	4,166,666	March 24, 2019

### Share Options

A summary of the Company’s share options outstanding and exercisable at August 8, 2017 is presented below:

Exercise price	Options outstanding	Options exercisable	Expiry date
\$0.85	500,000	500,000	December 20, 2017
\$0.75	100,000	100,000	May 19, 2018
\$0.70	600,000	600,000	January 9, 2020
\$0.50	2,775,000	2,775,000	April 27, 2021
	3,975,000	3,975,000	

## 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 development and production;
- Mining operations and no insurance coverage on the inherent risks of such operations;
- Limited operating history and financial resources;
- Governmental and Environmental regulation, permits and compliance;
- The reliability of results of prior exploration work;
- Reliance on management and experts;
- Reliability of proprietary technologies;
- Intellectual property protection;
- Competition and the over supply of graphite from other operations;
- Risk to infrastructure;
- The possibility of conflicts of interest for the Company's directors and/or officers;
- The possibility of cost overruns, delays and construction risk;
- 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, 2016.

## **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. 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 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; potential over supply of graphite from other operations; 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**

Gregory Bowes B.Sc., MBA, P.Geo., 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** relating to the Company is available on SEDAR at [www.sedar.com](http://www.sedar.com).#