

**GRAPHITE ONE INC.**  
**(formerly known as Graphite One Resources Inc.)**

**Management's Discussion and Analysis**

**June 30, 2019**



## **GRAPHITE ONE INC.**

### **Management's Discussion and Analysis**

#### **For the Three-and Six-Month Periods ended June 30, 2019 and 2018**

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The following Management's Discussion and Analysis ("MD&A"), prepared as of July 29, 2019, should be read together with the consolidated financial statements of Graphite One Inc. ("Graphite One" or the "Company") for the three and six-month periods ended June 30, 2019 and June 30, 2018, and related notes thereto, which are prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board ("IFRS"). All amounts are stated in Canadian dollars unless otherwise indicated. The reader should be aware that historical results are not necessarily indicative of future performance.

#### **Forward Looking Statements**

Forward-looking statements look into the future and provide an opinion as to the effect of certain events and trends on the business. Certain statements contained in this MD&A constitute forward-looking statements. The use of any words such as "anticipate", "continue", "estimate", "expect", "may", "will", "project", "should", "believe" and similar expressions are intended to identify forward-looking statements. These forward-looking statements are based on current expectations and various estimates, factors and assumptions and involve known and unknown risks, uncertainties and other factors. Examples of where the company uses forward looking statements include when discussing exploration plans, operational plans and future expenditure expectations.

It is important to note that:

- Unless otherwise indicated, forward-looking statements in this MD&A describe the Company's expectations as of July 29, 2019.
- Readers are cautioned not to place undue reliance on these statements as the Company's actual results, performance or achievements may differ materially from any future results, performance or achievements expressed or implied by such forward-looking statements if known or unknown risks, uncertainties or other factors affect the Company's business, or if the Company's estimates or assumptions prove inaccurate. Therefore, the Company cannot provide any assurance that forward-looking statements will materialize.
- The Company assumes no obligation to update or revise any forward-looking statement, whether as a result of new information, future events or any other reason except as required by law.

The mineral resource estimates reported in this MD&A were prepared in accordance with Canadian National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101"), as required by Canadian securities regulatory authorities. For United States reporting purposes, the United States Securities and Exchange Commission ("SEC") applies different standards in the classification of mineralization. In particular, while the terms "measured," "indicated" and "inferred" mineral resources are required pursuant to NI 43-101, the SEC does not recognize such terms. Canadian standards differ significantly from the requirements of the SEC. Investors are cautioned not to assume that any part or all of the mineral deposits in these categories constitute or will ever be converted into reserves. In addition, "inferred" mineral resources have a great amount of uncertainty as to their existence and great uncertainty as to their economic and legal feasibility. It cannot be assumed that all or any part of an inferred mineral resource will ever be upgraded to a higher category. Under Canadian securities laws, issuers must not make any disclosure of results of an economic analysis that includes inferred mineral

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resources, except in rare cases. Inferred mineral resources may be included in the results of a preliminary economic assessment.

For a description of material factors that could cause the Company's actual results to differ materially from the forward-looking statements in this MD&A, please see "Mining Risks" and "Business Risks".

#### **Nature of Operations**

Graphite One was incorporated in Alberta and commenced operations on March 16, 2006 under the name Cedar Mountain Exploration Inc. On October 18, 2007, the Company closed its initial public offering and on October 29, 2007 began trading on the TSX-Venture Exchange under the symbol CED. On March 23, 2012, the Company changed its name to Graphite One Resources Inc. and adopted the symbol GPH on the TSX-Venture Exchange effective March 27, 2012. On June 11, 2012 the Company began trading in the over the counter market in the United States on the OTCQX under the symbol GPHOF and due to changes in the listing requirements of the OTCQX, the Company began trading on the OTCQB on April 1, 2017. On February 27, 2019, the Company changed its name to Graphite One Inc. Graphite One is the parent company of the consolidated group.

Graphite One is engaged in the acquisition, exploration and evaluation of graphitic mineral properties. The Company is focusing its exploration and evaluation efforts on the Graphite Creek Property. The recoverability of the invested amounts shown for the exploration and evaluation property is dependent upon the existence of economically recoverable reserves, securing and maintaining title and beneficial interest in the property, obtaining the necessary financing to complete development and, ultimately, generating sufficient profits from future production or sufficient proceeds from the disposition of the exploration and evaluation property. In July 2017, the Company released the results of its inaugural Preliminary Economic Assessment ("PEA") and on March 26, 2019 released an updated resource estimate. See "Preliminary Economic Assessment" for further discussion.

#### **Exploration and Evaluation Property**

##### **Graphite Creek Property Summary**

The Graphite Creek Property is located on the Seward Peninsula of Alaska about 59 kilometers ("km") north of the deep sea port at Nome and is situated about 20 km from a seasonal road and 4km from tidewater.

The Graphite Creek Property consists of 176 mining claims covering 9,583 hectares (23,680 acres) and is comprised of:

- Fifty-six Alaska state mining claims (the "GC Purchased Property"); and
- One hundred and twenty located Alaska state mining claims (the "GC Staked Property").

##### **Graphite Creek Lease Agreement and Net Smelter Royalty Agreements**

In May 2015, the Company executed a long-term lease agreement ("Lease") with Kougarok LLC ("Kougarok"), commencing effective January 1, 2014 with an initial term of twenty years, and with provisions to extend the lease for two successive twenty-year periods and ultimately for as long as

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production continues from the property. An advance royalty in the amount of US\$30,000 was paid upon execution of the Lease, with annual payments of US\$30,000 due each year until January 2020. The advance royalty becomes US\$40,000 January 1, 2020, US\$50,000 January 1, 2021, and then increases by US\$10,000 each year until production commences. All required payments under the Lease have been made to date. The production royalties are to be calculated as follows: 5% from lands in 4 former federal claims originally located in 1943; 2.5% from lands within 20 former federal claims; 5% from lands within state claims staked by the Company within the area of interest; and 2.5% from state claims acquired by the Company within the area of interest. All advance royalties paid may be recouped from production royalties. The Company has the option to reduce the production royalties by up to 2% by paying US\$2 million for each 1% reduction of the production royalties.

On January 24, 2012, the Company purchased from a private individual (the "Seller") 28 of the claims included in the GC Purchased Property for \$20,000 and a 2% production royalty on future production from the GC Purchased Property. The Company had the right to purchase the production royalty for \$1 million until January 24, 2015 (the "Royalty Purchase Option"). The Company and the Seller entered into an extension agreement effective January 24, 2015 (the "2015 Extension Agreement") whereby the Royalty Purchase Option could have been exercised at any time on or before the earlier of (i) January 24, 2017, or (ii) the date that is six (6) months after the release by the Company of a feasibility study on the Graphite Creek Property. In connection with the 2015 Extension Agreement, the Company issued to the Seller pre-consolidated 769,231 common shares of the Company at an issue price of \$0.13 per share. In January 2017, the Company and the Seller agreed to further extend the terms of the Royalty Purchase Option and entered into an extension agreement effective January 24, 2017 (the "2017 Extension Agreement") whereby the Royalty Purchase Option may be exercised at any time on or before January 24, 2021. In connection with the 2017 Extension Agreement, the Company issued to the Seller pre-consolidated 1,666,667 common shares of the Company at an issue price of \$0.09 per share and 1,153,846 common share purchase warrants of the Company.

During June 2015, the Company purchased from another private individual the balance of the GC Purchased Property (28 Alaska state mining claims covering the same lands as the 28 Alaska state mining claims acquired in January 2012) for US\$50,000, the issuance of 3 million common shares of the Company at a fair value of \$270,000 and a royalty interest equal to 1% of the Net Smelter Returns received by the Company on production from the claims. The Company has the right to purchase the royalty for US\$500,000 at any time within 36 months following the start of mine production.

The Company located an additional 43 Alaska state mining claims in 2015, bringing the total to 176 Alaska state claims, for a total area of 9,583 hectares (23,680 acres) covering the project area. The new claims include eight on Alaska select and transferred lands and 35 on unselected Alaska state land, which will require selection and transfer to be active. These new claims cover areas adjacent to the Graphite Creek deposit for potential infrastructure needs and access to tide water.

In March 2018 and under the terms of the Lease, Kougarok completed the conversion of its 24 Federal unpatented lode mining claims to State of Alaska mining claims with the Alaska Department of Natural Resources. The Company in turn transferred ownership to Kougarok of thirteen of its Alaska state mining claims that overlapped with the lands of 4 of the former federal claims and simultaneously leased them back from Kougarok. This conversion relieves the Company of the need to comply with certain federal regulatory requirements since federal lands are no longer involved and is anticipated to simplify the permitting process for the project.

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#### **TRU Graphite Reports**

In 2014, TRU Group was commissioned by the Company to identify options for the Graphite Creek Project with a focus on matching the resources to up-market functionalized end uses for graphite (Stage A). In 2015, TRU Group undertook a second stage of study (Stage B) to conduct test work and determine the characteristics of the graphite. On April 15, 2015, the Company announced receipt of TRU Group's Stage B Report (see the Company's press release dated April 15, 2015) which revealed that Graphite Creek graphite has unique characteristics, including spheroidal shaped graphite, high proportions of coarse flake graphite with high aspect ratios and naturally expanded/exfoliated flake graphite. TRU Group also identified the need for additional research and development to more fully understand these characteristics and the impact on processing and finished products. As a result of the importance of this development, the Company suspended work on its PEA in order to incorporate the findings from the Stage B Report into the PEA.

In November 2015, the Company engaged TRU Group to produce trial spherical graphite lab samples for internal assessment of electrochemical performance and for potential end-user evaluation. In May 2016, the Company announced the successful production of premium grade spheroidized graphite ("SPG") from 99.98% Cg purified graphite (see the Company's press release dated May 5, 2016), with yield in these first trial runs averaging 74.6%. The results of Phase 5 of the Company's Exploratory Product Development have shown that first discharge capacity of the samples approached, and in one case equaled the theoretical maximum capacity of natural graphite and results from repeat charge/discharge cycles confirm high performance, repeatability and stability of GPH STAX graphite (see the Company's press release dated May 20, 2016).

#### **Preliminary Economic Assessment**

In January 2017, the Company announced the results of its PEA for the Graphite Creek Project. The Project is conceived as a vertically integrated manufacturer of high grade Coated Spherical Graphite ("CSG") with mining and processing facilities near Nome, Alaska and advanced material processing done at a dedicated graphite product manufacturing facility situated, for the purposes of the PEA, in Washington State.

The PEA projects an estimated Net Present Value ("NPV") for the Project on a pre-tax basis of US\$1,037 million using a 10% discount rate, with an Internal Rate of Return ("IRR") of 27%. On a post-tax basis, the NPV is projected at US\$616 million using a 10% discount rate, with an Internal Rate of Return ("IRR") of 22%. Combined federal taxes, state taxes and royalties are about US\$2,163 million or 32% of earnings before depreciation, interest and taxes ("EBDIT"). Annual production of CSG and other graphite specialty materials is projected at 55,350 metric tonnes when full production is reached in Year 6. The PEA is based on 40 years of indicated and inferred resources grading 7% Cg (graphite) that have been identified in the target exploitation zone to sustain full scale operations, notwithstanding additional potential resources immediately outside the target zone or the broader Graphite Creek property.

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<b>Summary of the Project's Pre-Tax Financial Results (US\$ Million)</b>	
Project Earnings before Depreciation, Interest and Taxes (EBDIT)	\$6,696
Net Cash Flow	\$6,268
NPV of Net Cash Flow at 10% Discount Rate	\$1,037
IRR	27%
Payback Period in Production Year	4
<b>Summary of the Project's Post-Tax Financial Results (US\$ Million)</b>	
Project Earnings Post-tax	\$4,533
Capital Outlay and NSR Buyout/Buydown	\$433
Net Cash Flow Post-tax	\$4,100
NPV of Net Cash Flow at 10% Discount Rate	\$616
IRR	22%
Payback Period in Production Year	4

Pending a detailed graphite market study, the PEA is based on a selling price of US\$6,200 per tonne for CSG and an average selling price of US\$1,500 per tonne for Purified Graphite Powders. The Project's average blended price of its manufactured products is expected to be US\$5,054 per tonne, ex plant, on a 2016 constant US dollar basis. This is expected to generate cash earnings of US\$182 million per year on sales of US\$280 million at full capacity with a consolidated operating margin ("EBDIT") of 63% on sales. CSG will dominate output and is expected to account for 75% of sales volume and 93% of sales revenue, or US\$260 million, of the total. Purified graphite powders will account for the balance with sales of US\$20 million.

**PEA Mineral Resource Estimates**

The Company's mineral resources as identified in the PEA contain an estimated 10.3 million tonnes classified as Indicated Resources averaging 7.2% Cg, and 71.2 million tonnes classified as Inferred Resources grading 7.0% Cg, both at 6% graphitic carbon ("Cg") cut-off grade. The resource estimates are summarized in the table below.

Using results from the 2018 field program, the resource estimates were updated on March 26, 2019. The updated resource estimates are summarized starting on page 9 and compared to the estimates in the PEA.

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##### Graphite Creek Mineral Resource Estimates – January 2017<sup>c</sup>

Mineral Resource Classification <sup>a</sup>	Tonnage (Million Tonnes <sup>b</sup> )	Graphite % (% Cg)	In Situ Graphite <sup>b</sup> (000's Tonnes <sup>b</sup> )
Indicated	10.3	7.2	1,133,000
Inferred	71.2	7.0	1,109,000

a: This resource estimate uses a 6.0 % Cg cut-off grade with a resource recovery of 80 to 95% Graphite concentrate with average selling price of US\$5,054/tonne.

b: The tonnage and in situ graphite (metric tonnes) have been rounded off to the nearest thousand, and therefore may not tally due to rounding.

c: Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no guarantee that all or any part of the mineral resource will be converted into a mineral reserve.

The mineral resource estimate was prepared by R. James Robinson, P.Geo of TRU Group Inc., who is an independent Qualified Persons under National Instrument 43-101, using the most current Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Standards on Mineral Resources and Reserves, Definitions and Guidelines.

Resource estimates are based on cumulative drill data from the Company's 2012, 2013 and 2014 drill programs, totaling 48 holes and about 7,500 metres of drilling.

The Project's economic analysis has been designed based on the 6% mining cut-off grade, producing the desired 7.0% Cg mill-feed head grade. The scale of available material at 7% Cg is estimated to be 43.66 million tonnes using both Indicated and Inferred Resources, sufficient to support over 40 years of mining at full-scale production of 1,018,000 tonnes per year.

#### Graphite Creek Mine

The Graphite Creek Mine (the "Mine") has been designed to operate on a 24-hour per day schedule (assuming two 12-hour shifts per day) on a year-round basis. When in full production in Year 6, the mine plan proposes delivering 1,018,000 tpy of graphite mineralized material to a nearby Mineral Processing Plant ("Processing Plant"). The PEA assumes mining would be performed year-round with owner-operated equipment.

#### Processing Plant

The proposed Processing Plant, to be located at the Mine when at full production capacity, is to receive from the Mine 1,018,000 tpy of graphite mineralization grading 7% Cg and extract and recover 60,000 tpy of concentrate, grading 95% Cg. Graphite recovery during mineral processing is assumed under optimized conditions to reach 80%. The single concentrate recovered would be packaged in one tonne super sacks, placed in 20 tonne shipping containers and trucked to the Port of Nome. The containers would be loaded onto barges during the seasonal shipping window and delivered to the Product Manufacturing Plant (the "Manufacturing Plant").

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#### Manufacturing Plant

For purposes of the PEA, the Manufacturing Plant is assumed to be situated on a brownfield industrial site in Washington State serviced by public utilities with developed road and rail infrastructure. Criteria relevant to deciding its location include power cost, availability of industrial zoned land, proximity to tidewater and port facilities, and infrastructure that supports both the workforce and delivery logistics for input materials, services and finished products. The Company is identifying suitable locations for the Manufacturing Plant site.

The Manufacturing Plant would receive 60,000 tpy of concentrate grading 95% Cg from the Processing Plant. It would then be purified under an inert atmosphere to at least 99.95% Cg. Spherical graphite size fractions suitable for lithium-ion batteries are combined with coating precursor. The 'green' surface coated graphite product is heat treated in kiln type furnaces to harden the coating and into the final spherical graphite product.

Finished products at full production are projected to include:

- 41,850 tpy of Coated Spherical Graphite with a minimum purity of 99.95% Cg for the EV Li-ion battery market; and,
- 13,500 tpy Purified Graphite Powders, 99.8% Cg, <20 microns, suitable for lubricants, friction products, conductive polymers, specialty powder and metallurgical additives.

#### Project Capital Cost Summary

Estimated capital costs for mining operations, the Processing Plant and the Manufacturing Plant and infrastructure are summarized in the table below and estimated to be US\$363 million. The plant capital expenditures were spread over three years and ramp up to full production at 60,000 tpy of graphite concentrate at the Processing Plant in Year Six of production. The Manufacturing Plant would concurrently reach full capacity of 55,350 tpy of graphite products. No contingency is included for the two plants. Indirect costs were assumed to be 33% of direct costs: 20% for EPCM (engineering, procurement, construction & management), 10% for freight and capital spare parts, and 3% for commissioning and start-up costs.

##### Capital Cost Estimates, Mine and Plants

Operations Category	Capital Cost (US\$ millions)
Mine & Processing Plant	\$233
Product Manufacturing Plant	\$130
Total All Operations	\$363

#### Project Operating Cost Summary

Operating costs at full capacity for the Mine, Processing Plant and Infrastructure, and the Manufacturing Plant are estimated to be US\$98 million per year, as summarized in the table below. On a plant input/output basis, the total Project operating cost equates to US\$96 per tonne of processing plant feed or US\$1,774 per tonne of finished graphite product.

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MAJOR OPERATING COST ITEM	Mining (US\$ 000)	Mineral Processing (US\$ 000)	Product Manufacturing (US\$ 000)	Integrated Project (US\$ 000)
Labour	\$21,887	\$12,170	\$7,270	\$41,327
Energy (Power and Diesel) <sup>1</sup>		\$9,900	\$14,900	\$24,800
Equipment Operation	\$2,800			\$2,800
Consumables		\$3,300	\$7,100	\$10,400
Maintenance & Supplies	\$1,781	\$2,700	\$3,600	\$8,081
Miscellaneous	\$1,273			\$1,273
Concentrate Shipping		\$1,800	\$7,698	\$9,498
Total Operating Cost (OPEX)	\$27,741	\$29,870	\$40,568	\$98,179
<b>Operating Expenses per tonne</b>	<b>(US\$)</b>	<b>(US\$)</b>	<b>(US\$)</b>	<b>(US\$)</b>
Processing Plant Feed	\$27	\$29	\$40	\$96
Concentrate	\$462	\$498	\$676	\$1,636
Graphite Product	\$501	\$540	\$733	<b>\$1,774</b>

Notes: 1 The mining energy cost is included in Mineral Processing Plant cost

The complete PEA can be obtained on the SEDAR website at [www.sedar.com](http://www.sedar.com).

#### Alaska Industrial Development and Export Authority

On February 16, 2017 the Company and the Alaska Industrial Development and Export Authority ("AIDEA") announced that they had entered into a Memorandum of Understanding ("MOU") to explore opportunities to collaborate on the development of Graphite One's proposed Project as outlined in the PEA (see Press Release of February 16, 2017).

#### 2018 Field Program and Updated Resource Estimate

During the summer and fall of 2018, the Company conducted a field program that comprised 801 metres in six core holes. The drill holes were angled to perpendicularly intercept the projected graphite material zones with the objective of determining their true thickness. Results from all 2018 drill holes were consistent with previous drilling in the graphite mineralized zones, including significant high-grade intercepts with Cg values greater than 10 percent.

The field program also included preliminary field surveying and an aerial LiDAR survey along possible access routes. Surface water sampling and anadromous fish surveys were also conducted, which added to the environmental baseline studies from prior years.

Further to the 2018 drill program, the Company issued an updated resource estimate on March 26, 2019 and filed the mineral resource update report on SEDAR on May 9, 2019. The results from the drill program moved a portion of the previously released resource estimate set forth in the PEA from Indicated to Measured Resource status.

Following are the highlights of the updated resource estimate as compared to the estimate reported in the PEA.

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- Infill drilling results from 2018 and a more detailed block model have elevated a portion of the resource to Measured Resources, totaling 1.69 Mt at 8.0% Cg and 0.14 Mt of contained graphite.
- Total Measured and Indicated Resources are 10.95 Mt at 7.8% Cg with 0.85 Mt of contained graphite. This represents a 6% increase in tonnage, an 8% improvement in grade and a 14% increase in contained graphite when compared to the PEA's Indicated Resource results.
- Inferred Resources totaled 91.89 Mt at 8.0% Cg with 7.3 Mt of contained graphite. This represents an increase in tonnage, grade and contained graphite when compared to the PEA's Inferred Resources and supports the potential of a long-term mine life described by the PEA.
- High-grade graphite mineralization is present at the surface and has been extended to depths of over 200 m by drilling.
- The deposit remains open along strike in both the east and west directions, as well as down dip.
- The updated resource estimate provides direction for continued drilling which is expected to form the basis for a pre-feasibility study, the next phase for the Project.

The updated mineral resource estimate for the Graphite Creek Project is summarized in the following table and is compared to the previous mineral resource estimate reported in the PEA.

The PEA presented a cut-off grade of 6.0% Cg "as it would produce mill feed grading 7% percent Cg. This has been determined to be the minimum grade required to support economically viable graphite production in western Alaska."<sup>1</sup> With this guidance, a cut-off grade of 5.0% Cg for the updated resource estimate was selected as it resulted in Cg grades in excess of 7% in all resource categories. The selected cut-off grades in each case are highlighted in the table below.

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<sup>1</sup> Page 14-7; NI 43-101 Preliminary Economic Analysis on the Graphite One Project; dated June 30, 2017 and filed July 12, 2017; Prepared by TRU Group

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#### Comparison of Estimated Resources - March 2018 Resource Update to PEA Dated June 30, 2017

Graphite Creek Resource Estimate Update: March 2019					PEA June 30, 2017				
MINERAL RESOURCE CLASSIFICATION	CUT-OFF GRADE (% Cg)	TONNAGE (MILLION TONNES)	GRAPHITE GRADE (% Cg)	CONTAINED GRAPHITE (TONNES)	CUT-OFF GRADE (% Cg)	TONNAGE (MILLION TONNES)	GRAPHITE GRADE (% Cg)	CONTAINED GRAPHITE (TONNES)	MINERAL RESOURCE CLASSIFICATION
INFERRED	4.0	125.48	7.1%	8,850,296	4.0	121.62	6.2%	7,591,000	INFERRED
	5.0	91.89	8.0%	7,342,883	5.0	105.81	6.5%	6,881,000	
	6.0	65.94	9.0%	5,922,778	6.0	71.24	7.0%	4,969,000	
	7.0	44.01	10.2%	4,504,835	7.0	22.24	8.2%	1,823,000	
	8.0	29.77	11.6%	3,440,831	8.0	8.79	9.3%	817,000	
INDICATED	4.0	12.57	6.9%	864,110	4.0	17.34	6.4%	1,111,000	INDICATED
	5.0	9.26	7.7%	715,363	5.0	15.10	6.7%	1,009,000	
	6.0	6.45	8.7%	561,470	6.0	10.32	7.2%	744,000	
	7.0	4.32	9.8%	423,790	7.0	4.46	8.2%	367,000	
	8.0	2.80	11.1%	309,862	8.0	2.07	9.1%	189,000	
MEASURED	4.0	2.19	7.2%	157,634	4.0	0.00	0.0%	0	MEASURED
	5.0	1.69	8.0%	135,171	5.0	0.00	0.0%	0	
	6.0	1.22	9.0%	109,456	6.0	0.00	0.0%	0	
	7.0	0.84	10.1%	84,904	7.0	0.00	0.0%	0	
	8.0	0.57	11.3%	64,825	8.0	0.00	0.0%	0	
MEASURED + INDICATED	4.0	14.76	6.9%	1,021,744	4.0	17.34	6.4%	1,111,000	MEASURED + INDICATED
	5.0	10.95	7.8%	850,534	5.0	15.10	6.7%	1,009,000	
	6.0	7.67	8.8%	670,926	6.0	10.32	7.2%	744,000	
	7.0	5.16	9.9%	508,694	7.0	4.46	8.2%	367,000	
	8.0	3.37	11.1%	374,687	8.0	2.07	9.1%	189,000	

#### Notes to the Mineral Resource Estimate:

- Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no guarantee that all or any part of the indicated or inferred mineral resource will be converted into a mineral reserve. The collective work to date from the Graphite Creek Property indicates that while the project is in early stages of exploration/resource work that indications of the size and grade of the graphite give suggestions that they are of high enough concentration to be of economic interest.
- Values in the tables have been rounded. Totals may not tally due to rounding.

The mineral resource estimate was prepared by Chris Valorose, M.Sc., MAusIMM of Valorose Consulting, Inc.

Mr. William Ellis, P. Geo, with Alaska Earth Sciences, Inc. provided oversight to the 2018 drilling and sampling program. Mr. Ellis is a "Qualified Person" under NI 43-101 and has reviewed and approved the mineral resource update.

#### 2019 Field Program and Ongoing Graphite Testing

The Company has contracted JDS Energy and Mining to initiate work on a preliminary feasibility study (PFS) in 2019. Contingent upon finalizing appropriate levels of financing, additional field work will be undertaken during the summer and fall of 2019 including 2000 metres of core drilling to expand the Measured & Indicated resource. Additional field work planned for 2019 includes PFS level engineering data collection for mine design and infrastructure planning, and a comprehensive program of environmental baseline data collection to facilitate timely permitting. In addition, ongoing outreach to the Alaska Native villages closest to the Project and other local governmental entities will continue. This

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includes an active Subsistence Advisory Council comprised of representatives from the closest communities to facilitate two-way communication about the Project, environmental protection measures and the subsistence resources of the region.

Research and development work also continues on the primary and secondary processing of Graphite Creek material. This includes work to better understand and quantify the significant features of STAX graphite as well as assess its performance in commercial equipment for establishing purchase specifications.

#### Overall Performance and Results of Operations

The Company has generated no operating revenue to date and relies on the issuance of common shares as well as debt to finance exploration on its exploration and evaluation property, and to provide general operating working capital. The majority of the Company's expenditures relate to the acquisition and exploration of its exploration and evaluation property which is reflected in the Company's consolidated financial statements as capitalized exploration and evaluation costs.

#### Summary of Quarterly Results

The following is a summary of selected financial data for the Company for the eight most recently completed quarters based on and derived from the unaudited consolidated financial statements of the Company.

Period ended	Jun 30 2019	Mar 31 2019	Dec 31 2018	Sep 30 2018
Net loss (\$)	799,315	410,184	272,033	345,616
Basic and diluted loss per common share (\$)	0.02	0.01	0.01	0.01

Period ended	Jun 30 2018	Mar 31 2018	Dec 31 2017	Sep 30 2017
Net loss (\$)	232,008	285,849	531,815	317,062
Basic and diluted loss per common share (\$)	0.01	0.01	0.02	0.01

Over the past eight quarters, the Company continued its focus on exploration and evaluation of the Graphite Creek Project including a field program in the summer of 2018, release of revised resources estimates in early 2019 and planning for further field work in 2019. The 2018 field program included core drilling, preliminary engineering evaluations of potential access routes and ongoing environmental baseline surveys in preparation for state and federal permitting. The Company also continues to expand the profile of the Company with prospective and current investors while preparing for a proposed expanded field program in 2019 to provide the data required for a Pre-Feasibility Study.

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#### Results of Operations

##### Three months ended June 30, 2019

During the three months ended June 30, 2019 (the "second quarter of 2019"), the Company incurred a net loss of \$799,315 compared to a net loss of \$232,008 during the three months ended June 30, 2018 (the "second quarter of 2018").

General and administrative expenses consist of management fees and salaries, marketing and investor relations, office and administration and professional fees.

Three months ended June 30,	2019	2018	Increase/ (decrease)
Management fees and salaries	\$ 179,125	\$ 177,003	\$ 2,122
Marketing and investor relations	101,760	31,679	70,081
Office and administration	86,956	33,412	53,544
Professional fees	23,368	29,887	(6,519)
	<u>\$ 391,209</u>	<u>\$ 271,981</u>	<u>\$ 119,228</u>

- Management fees and salaries remained constant in the second quarter of 2019 when compared to the first quarter of 2018 as the number and cost of personnel has remained unchanged.
- Marketing and investor relations costs increased in the second quarter of 2019 primarily due to the increased marketing efforts compared to the second quarter of 2018.
- Office and administration costs increased in the second quarter of 2019 compared to the second quarter of 2018 related to an increase in travel costs.
- Professional fees decreased in the second quarter of 2019 compared to the second quarter of 2018 primarily due primarily to slightly lower legal fees incurred in the second quarter of 2019 compared to the second quarter of 2018.
- Share-based payments of \$367,800 were granted in the second quarter of 2019 compared to no share-based payments granted in the second quarter of 2018.

##### Six months ended June 30, 2019

During the six months ended June 30, 2019 (the "first half of 2019"), the Company incurred a net loss of \$1,209,499 compared to a net loss of \$515,550 during the six months ended June 30, 2018 (the "first half of 2018").

General and administrative expenses consist of management fees and salaries, marketing and investor relations, office and administration and professional fees.

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Six months ended June 30,	2019	2018	Increase/ (decrease)
Management fees and salaries	\$ 366,594	\$ 358,459	\$ 8,135
Marketing and investor relations	181,901	83,612	98,289
Office and administration	174,005	73,189	100,816
Professional fees	58,881	37,880	21,001
	<u>\$ 781,381</u>	<u>\$ 553,140</u>	<u>\$ 228,241</u>

- Management fees and salaries remained constant in the first half of 2019 when compared to the first half of 2018 as the number and cost of personnel has remained unchanged.
- Marketing and investor relations costs increased in the first half of 2019 primarily due to the increased marketing efforts compared to the first half of 2018.
- Office and administration costs increased in the first half of 2019 compared to the first half of 2018 related to the Special Meeting of Shareholders held in Q1 2019, and an increase in travel costs.
- Professional fees increased in the first half of 2019 compared to the first half of 2018 primarily due primarily to lower legal fees incurred in the first quarter of 2018 and an increase in legal fees related to the costs related to the consolidation of the Company's shares and the change of the Company's name to Graphite One Inc.
- Share-based payments of \$367,800 were granted in the first half of 2019 compared to no share-based payments granted in the first half of 2018.

**Liquidity, Capital Resources and Going Concern**

The Company's consolidated financial statements have been prepared on a going concern basis which assumes that the Company will be able to realize its assets and discharge its liabilities in the normal course of business for the foreseeable future.

The continuing operations of the Company are dependent upon the Company's ability to arrange adequate financing in the near term. However, there can be no assurance that the Company will be able to obtain adequate financing in the future or that the terms of such financing will be favourable. If adequate financing is not available when required, the Company may be required to delay, scale back or eliminate various programs and may be unable to continue operations. The Company will seek such additional financing through debt or equity offerings, but there can be no assurance that such financing will be available on terms acceptable to the Company or at all.

The Company raised \$2,000,070 through the issuance of 6,666,900 units warrant during six months ended June 30, 2019, where each unit comprises one common share and one transferable common share purchase. During year ended December 31, 2018, the Company raised \$4,283,695 through the issuance of 6,118,959 units, where each unit comprises of one common share and on transferable common share purchase warrant.

As at June 30, 2019, the Company had a cash balance of \$907,442 and working capital (current assets minus current liabilities) of \$1,027,317. Current liabilities as at June 30, 2019 totaled \$243,876. The

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### **Management's Discussion and Analysis**

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Company has incurred losses since inception and does not generate any cash inflows from operations. In the six-month period ended June 30, 2019, cash used in operating activities totaled \$688,939.

The Company's ability to continue to meet its obligations and carry out its planned exploration activities is uncertain and dependent upon the continued financial support of its shareholders and on securing additional financing. There is, however, no assurance that any such initiatives will be sufficient and, as a result, there is significant doubt regarding the going concern assumption and, accordingly, the ultimate appropriateness of the use of accounting principles applicable to a going concern. The Company's consolidated financial statements do not reflect the adjustments to the carrying values of assets and liabilities and the reported expenses and balance sheet classifications that would be necessary if the Company were unable to realize its assets and settle its liabilities as a going concern in the normal course of operations for the foreseeable future. These adjustments could be material.

#### **Financial Instruments and risk management**

##### Financial instrument classification

The Company's financial instruments recognized on the statement of financial position consist of cash, deposits and trade and other accounts payable and loans.

On adoption of IFRS 9, Graphite One has classified its cash and cash equivalents, deposits, trade payables and loans as subsequently measured at amortized cost. Until December 31, 2017, under IAS 39, Graphite One has classified its cash and cash equivalents and deposits as loans and receivables and trade and accounts payable as other liabilities, and accordingly they are measured at amortized cost. There is no impact of adoption of IFRS 9 on the carrying values of financial assets and liabilities.

The estimated fair market values of the Company's financial instruments carried at amortized cost approximate their carrying values due to their short-term nature.

##### Financial Risk Management

The Company may be exposed to risks of varying degrees of significance which could affect its ability to achieve its strategic objectives. The main objectives of the Company's risk management processes are to ensure that risks are properly identified and that the capital base is adequate in relation to those risks. The principal risks to which the Company is exposed are described below.

##### Interest rate risk

Interest rate risk is the risk arising from the effect of changes in prevailing interest rates on the Company's financial instruments. The Company's cash balances held at financial institutions earn interest at rates which vary according to prevailing rates. The Company does not deem the associated interest rate risk to be material.

##### Credit risk

Credit risk is the risk of potential loss to the Company if a counter party to a financial instrument fails to meet its contractual obligations. The Company is not exposed to any material credit risk.

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##### Foreign currency risk

Foreign currency risk is the risk that the fair value of, or future cash flows from, the Company's financial instruments will fluctuate because of changes in foreign exchange rates. Graphite One maintains the majority of its cash reserves in Canadian dollars. A portion of the Company's funds are held in United States dollars and are, therefore, subject to fluctuations in foreign exchange rates.

At June 30, 2019, the Company has certain monetary items denominated in United States Dollars. Based on these net exposures, a 10% appreciation or depreciation of the Canadian dollar against the United States dollar would result in an increase or decrease of \$105,500 in the Company's net loss.

##### Liquidity risk

Liquidity risk is the risk that the Company will not meet its financial obligations as they fall due. See "Liquidity, Capital Resources and Going Concern" section.

##### **Related party transactions and balances**

Relationships	Nature of the relationship
Huston and Huston Holdings Corp. ("Huston")	Huston and Huston Holdings Corp. is a private company controlled by Anthony Huston, an officer and director of the Company which provides management services to the Company.
Rockford Resources LLC ("Rockford")	Rockford is a private company controlled by Patrick Smith, a director of the Company which provides director services to the Company.
0897877 BC Ltd. ("0897877 BC")	0897877 BC is a private company controlled by Brian Budd, a director of the Company which provides director services to the Company.
Taiga Mining Company, Inc. ("Taiga")	Taiga is a private company and a Control Person of the Company in accordance with Policy 4.1 of the TSX Venture Exchange Corporate Finance Manual.

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	<b>Management Consulting and Directors' Fees</b>	
	<b>2019</b>	<b>2018</b>
<b>For the six months ended June 30</b>		
Huston & Huston Holdings Corp.	\$ 125,000	\$ 125,000
Rockford Resources, LLC	12,000	12,000
0897877 BC Ltd.	12,000	12,000
<b>For the three months ended June 30</b>		
Huston & Huston Holdings Corp.	\$ 62,500	\$ 62,500
Rockford Resources, LLC	6,000	6,000
0897877 BC Ltd.	6,000	6,000

Related party transactions

The above transactions relate to consulting fees incurred by the Company. Management services expenses are included in Management fees and salaries and marketing consulting expenses are included in Marketing, advisory and investor relations in the consolidated statements of financial position.

During the six months ended June 30, 2019, the Company settled the loan payable with Taiga through the issuance of 1,330,000 common shares and paid \$13,274 in interest.

Amounts owing to related parties are non-interest bearing, unsecured and due on demand. The transactions were in the normal course of operations. At June 30, 2019, the Company owed \$15,000 (June 30, 2018 - \$81,015) to related parties.

Key management compensation

<b>For the six months ended June 30,</b>	<b>2019</b>	<b>2018</b>
Consulting and directors' fees	\$ 149,000	\$ 149,000
Salaries and benefits	405,381	266,864
Stock-based compensation	343,280	49,700
	<b>\$ 897,661</b>	<b>\$ 465,564</b>
<b>For the three months ended June 30,</b>		
Consulting and directors' fees	\$ 74,500	\$ 74,500
Salaries and benefits	197,277	142,242
Stock-based compensation	343,280	49,700
	<b>\$ 615,057</b>	<b>\$ 266,442</b>

Key management are those personnel having the authority and responsibility for planning, directing and controlling the Company and include the President, Chief Executive Officer, Directors, Chief Financial Officer and Chief Operating Officer.

Management contracts

The Company entered into a consulting agreement effective February 1, 2014 with a private company controlled by the President and CEO to provide certain management services to the Company ("the 2014 Agreement"). Pursuant to the 2014 Agreement, the Company paid an annual fee for services of \$250,000

## GRAPHITE ONE INC.

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and, in the event of a change of control of the Company, would have paid an amount equal to three times the annual fee. Subsequent to September 30, 2016, the Company entered into a new consulting agreement to replace the 2014 Agreement with a private company controlled by the President and CEO (the "New President & CEO Agreement"). Pursuant to the New President & CEO Agreement, the Company will also pay an annual fee for services of \$250,000 and, in the event of a change of control of the Company, an amount equal to three times the annual fee.

Commencing January 1, 2016, the Executive Chairman has been engaged as an employee of the Company. Subsequent to September 30, 2016, the Company finalized the terms of the employment agreement with the Executive Chairman. Under this agreement, the Company will also pay an annual fee for services of \$200,000 and, in the event of change of control of the Company, an amount equal to two times the annual salary.

Commencing January 1, 2016, the Chief Financial Officer has been engaged as an employee of the Company. Subsequent to September 30, 2016, the Company finalized the terms of the employment agreement with the Chief Financial Officer. Under this agreement, the Company will pay an annual fee for services of \$190,000 and, in the event of a change of control of the Company, an amount equal to two times the annual salary.

#### Outstanding Share Data

The following table summarizes the Company's outstanding share capital (after share consolidation):

	July 29, 2019
Common shares issued and outstanding	40,609,143
Stock options outstanding (weighted average exercise price \$0.65)	4,015,000
Warrants outstanding (weighed average exercise price \$0.79)	15,285,330
Broker warrants outstanding (weighted average exercise price \$1.03)	28,056
<u>Fully diluted common shares outstanding</u>	<u>59,937,529</u>

#### Additional Disclosure for Venture Issuers without Significant Revenue

Details of the Company's general and administrative expenses for the three and six-months ended June 30, 2019 and March 31, 2018 are included in the results of operations section of this MD&A. Details of the Company's expenditures relating to exploration and evaluation properties are presented in Note 5 to the consolidated financial statements.

#### Mining Risks

The Company is subject to risks typical in the mining business. Many are beyond its control and their aggregate effects are impossible to predict with any degree of certainty. Mining risks include, but are not limited to: uncertainty of exploration programs successfully revealing an economic resource; possibility of encountering unusual or unexpected geological formations; adverse weather, flooding or other conditions affecting exploration or extraction of materials or delivery of equipment, supplies or products; equipment failure; unforeseen events or conditions impacting the intended exploration, development or

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#### **For the Three-and Six-Month Periods ended June 30, 2019 and 2018**

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construction schedules or the estimated costs; availability of skilled workers; and timely granting of permits.

#### **Business Risks**

Exploration, development, production, processing and marketing of mineral resources involves numerous business risks, some of which are beyond the Company's control. These can be categorized as operational, financial and regulatory risks. The Company continuously monitors and responds to changes in these factors and adheres to all regulations governing its operations. Insurance may be maintained at levels consistent with prudent industry practices to minimize risks however the Company is not fully insured against all risks nor are all such risks insurable or mitigable.

- Operational risks include, among others, the ability to: find, develop and produce economical graphite products; meet exploration, development and production timelines including the timely completion of pre-feasibility and feasibility studies; successfully develop and market satisfactory quantities of graphite products and services at profitable prices; hire, train and retain skilled employees and contractors; conduct operations in a cost effective and safe manner; and, consistently maintain the Company's social license to operate.
- Financial risks include, among others: availability of capital; volatility of commodity prices and rates for interest, foreign exchange and inflation; and, fluctuations in prices of equipment, supplies and products. These could all be affected by perceived changes in the stability of the global and regional political, economic and banking systems. The graphite industry's demand, supply and pricing could be affected by high competitor production rates in major producing regions or future technologies that use less graphite.
- Regulatory risks include, among others: the ability to obtain Project permits in a timely manner and a change in local, regional, national or international regulations regarding development, production, transportation, taxation, tariffs, fees, duties, or product use.

#### **Outlook**

The Company's primary focus is the exploration and development of the Graphite Creek Project. In addition to the exploration at this Property, the Company may evaluate other prospects worthy of exploration and development. The ability of the Company to do so is contingent upon its ongoing ability to raise the risk capital necessary to advance such prospects.

#### **Approval**

The Board of Directors of the Company have approved the disclosure contained in this MD&A as of July 29, 2019.

#### **Other Information**

Additional information related to the Company is available for viewing on SEDAR at [www.sedar.com](http://www.sedar.com) and on the Company's website at [www.graphiteoneinc.com](http://www.graphiteoneinc.com).