



## Natural Graphite Market Update

**February 3, 2020** – Northern Graphite Corporation (**NGC:TSX-V, NGPHF:OTCQB**) (the “Company” or “Northern”) is pleased to provide an update on the natural graphite market which has been in a state of paradox for some time. There are almost weekly announcements of huge investments in new electric vehicle (“EV”) and lithium ion battery (“LiB”) production capacity which creates a very positive outlook for future flake graphite demand. At the same time, graphite prices continue to languish and no new mines have yet obtained financing.

The flake graphite price index of Benchmark Mineral Intelligence (“Benchmark”) declined 25% over the course of 2019 due to excess production capacity in China and new supply from Africa. Prices for large flake graphite (+80 mesh) are currently in the order of US\$850/tonne compared to over US\$2,500/t at their peak in 2012. The new African mine produced 153,000 tonnes of graphite in 2019 but only 15,000 tonnes in the fourth quarter due to low prices and continuing operating losses. Its production will likely be much lower in 2020 which may lead to an improvement in prices during the year. In the near term this supply will be replaced by surplus production capacity in China. However, substantial new sources of supply are urgently needed if the expectations of automobile and battery makers are to be even partially realized.

Benchmark estimates that the major auto makers have committed over US\$300 billion to developing EVs and that there are over 100 LiB mega-factories in the pipeline. These factories represent over 2,000 gWh of LiB production capacity which in turn equates to 800,000 tonnes of new annual graphite demand by 2023 and 1.4 million tonnes by 2028. Not all of these plans will come to fruition and not all plants will operate at 100 per cent capacity but the implications for battery minerals are substantial even with very conservative assumptions. World natural graphite production is only about 750,000 tonnes per year and currently there are no new graphite mines under construction. While junior graphite companies tend to be optimistic in their outlook, it is worth considering some recent industry announcements and their implications for the natural graphite market:

- (1) Volkswagen has committed US\$91 billion to electrifying its fleet and in doing so, its battery demand will increase to 300 gWh. That alone will require a 40 per cent increase in world graphite production.
- (2) Daimler (Mercedes) has committed US\$34 billion to developing EVs and securing its battery requirements which have been estimated at 200 gWh.
- (3) China wants 25 per cent of new vehicles sold to be electric by 2025. That’s more than 300 gWh of batteries.
- (4) GM and LG Chemical are going to build a 30 gWh LiB manufacturing plant in Ohio. This one battery plant will require the entire graphite output from a mine the size of Northern’s Bissett Creek project.
- (5) BMW has entered into lithium and cobalt supply agreements to directly source raw materials from mining companies and ensure that its battery manufacturers have a secure, transparent and ethical supply chain.
- (6) State owned China MinMetals, one of the largest metals and minerals trading companies in the world, has forecast a natural graphite shortfall in 2020 and a large supply deficit in 2025.

LiB demand for flake graphite has increased from about 40,000 tonnes in 2010 to approximately 250,000 tonnes in 2019. Very few industries experience 20 per cent annual growth over such an extended period of time and there is a high likelihood it will continue. Initial demand related to the proliferation of cell phones, cameras, laptops and other handheld devices. LiBs are smaller, lighter and more powerful than traditional technologies and there is no capacity fade as in a dying flashlight. It is almost full power to the end. LiBs still have to be charged more often than consumers would like but the functionality they support is orders of magnitude ahead of five years ago.

The high rate of growth of LiBs is being sustained by power tools, motor scooters, medical and military applications, forklifts, standby power systems, and many other markets. They are also moving into delivery vehicles, hybrid taxis, buses and other high mileage applications where the logistics and economics of electrification already make sense. But

growth in the EV market has been slower than forecast. Initially it has been driven by subsidies, early adopters and consumers willing to pay the higher cost of being green. Mass adoption will be an evolution, not a revolution, especially in pickup and SUV centric North America. But automakers are placing big bets that consumers will come around as costs decline, choice expands and comfort levels with the technology increase. In many respects, car manufacturers have no choice as rising emission standards and public opinion force them to offer lower carbon, price competitive products.

### **Investor Relations Consultant**

Subject to the approval of the TSX Venture Exchange (the "TSXV"), the Company has entered into a consulting agreement with Mr. Grant Galloway to provide investor relations services in compliance with the policies and guidelines of the TSXV and other applicable legislation. Mr. Galloway will focus on broadening the Company's exposure to US institutions, brokers and private investors. The Agreement has an initial term of six months, which can be extended by the mutual agreement of both parties. It provides for a monthly retainer of \$7,500 payable quarterly and does not include any incentive stock options. Mr. Galloway is an independent, arms length investor relations and financial professional based in San Diego, California. He has no direct or indirect interest in the securities of the Company as of the date hereof but may purchase its securities from time to time for investment purposes.

### **About Northern Graphite**

Northern's 100% owned Bissett Creek graphite deposit is located in the southern part of Canada with ready access to labour, supplies, equipment and concentrate transportation. The Company has completed a full Feasibility Study and a Preliminary Economic Assessment which includes a Phase 2 expansion. Permitting is well advanced and the Company is in a position to make a construction decision subject to financing.

The Company believes that Bissett Creek is unique among its North American peers in that it has a reasonable capital cost, an initial production rate that is realistic relative the size of the current market (and which can be expanded as demand grows), and it has the highest percentage of large/XL flake. The latter will enable the Company to initially focus on high margin, value-added industrial markets and expand into the LiB market as conditions warrant. Unlike many graphite deposits, essentially all Bissett Creek production is "battery grade".

### **Qualified Person**

Gregory Bowes, B.Sc. MBA, P. Geo., a Qualified Person as defined under National Instrument 43-101, has reviewed and is responsible for the technical information in this news release.

**For additional information, please contact:** Gregory Bowes, CEO (613) 241-9959

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*Although the forward-looking statements contained in this news release are based on what management believes are reasonable assumptions, the Company cannot assure investors that actual results will be consistent with them. These forward-looking statements are made as of the date of this news release and are expressly qualified in their entirety by this cautionary statement. Subject to applicable securities laws, the Company does not assume any obligation to update or revise the forward-looking statements contained herein to reflect events or circumstances occurring after the date of this news release.*

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