



## Northern Graphite Announces Update of Expansion Case PEA

### *Project shows robust economics despite low graphite price environment*

**June 24, 2014** – Northern Graphite Corporation (**NGC:TSX-V, NGPHF:OTCQX**) announces that it has updated the Preliminary Economic Assessment (the “PEA”) on its 100% owned Bissett Creek graphite project to assess the economics of building a process plant with twice the capacity of the plant contemplated in the Company’s Feasibility Study (“FS”). The larger process plant was evaluated due to recent developments in the lithium ion battery industry and strong buyer interest in the extra large flake, high purity concentrates that will be produced using Northern’s proprietary purification technology.

The updated PEA indicates that the Bissett Creek Project has very attractive economics even at or below current depressed graphite price levels. The pre-tax internal rate of return (“IRR”) is 31.7% (26.7% after tax) and the pre-tax net present value (“NPV”) is \$264.7 million (\$178.9 million after tax) in the base case which is based on an 8% discount rate and a weighted average price of US\$1,800/tonne of concentrate which reflects current market conditions.

Development capital costs in the updated PEA have been estimated at \$134.1 million (including a 10% contingency) for an operation that will produce an average of approximately 44,200 tonnes of graphite concentrate annually over the first 10 full years of operation. Almost 90% of production will consist of large and extra large flake and battery grade graphite which is by far the highest ratio in the industry. There are also 27.3 million tonnes of Measured and Indicated resources and 24 million tonnes of Inferred resources that are not part of the PEA mine plan and the deposit has not yet been closed off by drilling, all of which indicates that further production expansions are possible.

Gregory Bowes, CEO, commented that: “It has been reported that multiple new graphite mines will be required to supply proposed lithium ion battery manufacturing plants because graphite deposits typically produce a high percentage of non battery grade material, and two thirds of the material that is battery grade is lost in the manufacturing process. However, Bissett Creek may be the only mine that is required to meet market demand due to its very high percentage of battery grade material, lower manufacturing losses and future expansion potential.”

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

Potential Economically Extractable Resources (million tonnes)*	40.5Mt*
Feed Grade (% graphitic carbon)	1.83%*
Waste to ore ratio	0.25:1
Annual processing rate (tonnes per year)	2,000,000
Processing rate (tonnes per day - 92% availability)	5,480
Project life (based on 2.0 Mtpa)	21 years
Mill recovery	94.7%
Average annual concentrate production (tonnes - first 10 years)	44,200
Capital cost (\$ millions - including 10% contingency)	\$134.1
Sustaining capital (\$ millions)	\$55.1
Cash operating costs (\$/tonne of concentrate)	\$736
Mining costs (\$/tonne of process feed material)	\$3.74

Processing costs (\$/tonne of process feed material)	\$7.78
General and administrative costs (\$/tonne of process feed material)	\$1.45
Concentrate transportation to Montreal (\$/tonne of process feed material)	\$0.55
CDN/US dollar exchange rate	\$0.95US = \$1 CDN

\* The PEA production plan is based on 24 million tonnes (“Mt”) grading 2.20% Cg (as estimated in the FS) 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. All grades are diluted. *Mineral resources that are not mineral reserves do not have demonstrated economic viability.*

	<b>PEA Update</b>		
	<b>(base case)</b>		
<b>Average graphite price (US\$ per tonne)</b>	\$2,100	<b>\$1,800</b>	\$1,500
Pre tax Net Present Value @8% (CDN\$ millions)	\$380.9	<b>\$264.7</b>	\$148.4
Pre tax IRR (%)	40.7%	<b>31.7%</b>	22.2%
After tax Net Present Value @8% (CDN\$ millions)	\$257.9	<b>\$178.9</b>	\$99.0
After tax IRR (%)	33.9%	<b>26.7%</b>	18.9%

The PEA was originally undertaken to demonstrate the ability to meet expected future growth in graphite demand by substantially increasing production from the Bissett Creek deposit after three years of operation based on Measured and Indicated resources only. The PEA built on the Feasibility Study completed by G Mining in August, 2012 and the expanded resource model, mine plan and updated FS economics completed by AGP Mining Consultants (“AGP”) in September, 2013. P&E Mining Consultants Inc. (“P&E”) reviewed the AGP mine plan and modified it to commence production at the expanded 2.0 Mtpa production rate in Year 1 rather than ramping up in Year 3 and to more aggressively backfill the open pit with waste. WorleyParsons Canada updated the capital and operating costs for the process plant which represents a portion of the total capital and operating costs for the project. Consistent with industry practice, the estimates have been prepared with an engineering accuracy of +15/- 20%.

### **Graphite Markets and Pricing**

Graphite prices have fallen 50% or more from their 2012 peak due to the economic slowdown in China and a lack of growth in the US, Europe and Japan. Recently, it has been reported that Chinese flake production has fallen 30% as uneconomic and polluting mines are being closed. Current prices are at the marginal cost of production for many producers which should limit further price declines. The weighted average price that would be realized by Bissett Creek concentrates in the current market is estimated at US\$1,800/t which is the highest in the industry because approximately 50% of production will be +50 mesh extra large flake and another 40% is +80 mesh large flake. Current graphite pricing is approximately \$2,100/t for +50 mesh XL flake concentrates, \$1,300/t for +80 mesh large flake, \$1,100/t and \$900/t for +100 mesh and +150 mesh medium and small flake respectively, and less than \$500/t for -150 mesh fines. Typical graphite deposits only have about 15% XL flake and over one third -150 mesh fines, and would realize average prices in the range of \$1,000-1,200 per tonne of concentrate under current conditions, assuming a market for the fines.

### **Qualified Persons**

Ken Kuchling, P.Eng., Senior Mining Associate of P&E Mining Consultants Inc. prepared the revised mine plan for the PEA update. Dan Peldiak, P.Eng., Principal Process Engineer WorleyParsons Canada prepared the revised capital and operating costs for the process plant. Andrew Bradfield, P.Eng., of P&E, who is independent of the Company, approved and authorized the disclosure of the technical information contained in this press release. Readers should refer to the NI 43-101 technical reports relating to the FS and the PEA for further details with respect to the Bissett Creek Project.

## **Northern Graphite Corporation**

Northern Graphite Corporation is a Canadian company that has a 100% interest in the Bissett Creek graphite deposit located in eastern Ontario. The Company expects graphite prices to outperform those of other commodities in an economic recovery because of Chinese supply problems and the continued rapid growth in new uses such as lithium ion batteries. Bissett Creek is the only true large flake deposit and the only one with a bankable Feasibility Study and its major environmental permit. It also has the best infrastructure of any new graphite project, the lowest capital costs and the highest operating margin. A copy of this press release which includes detailed cash flows for the updated PEA economics, as well as additional information on Northern, can be found at [www.sedar.com](http://www.sedar.com) and [www.northerngraphite.com](http://www.northerngraphite.com).

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