



**NORTHERN  
GRAPHITE  
CORPORATION**

**TSXV NGC  
OTCQB NGPHF**

[northerngraphite.com](http://northerngraphite.com)

## **Northern Graphite Concentrates Demonstrate Excellent Performance in Battery Testing**

**November 11, 2021** – Northern Graphite Corporation (**NGC:TSX-V, NGPHF:OTCQB**) (the “Company” or “Northern”) is pleased to announce that battery anode material (“BAM”) manufactured from its Bissett Creek concentrates demonstrated excellent electrochemical performance during recent battery testing by ProGraphite in Germany. Testing showed that Northern’s anode material can be charged to high values which remain stable with high Coulomb efficiency under various discharge conditions. ProGraphite concluded that Northern’s anode material is very well suited for the manufacture of high capacity, durable, long-life lithium-ion batteries.

ProGraphite is one of the world's leading graphite R&D laboratories with several decades of professional expertise and experience. Its test results demonstrated that Bissett Creek BAM can be charged to lithiation values above 362 mAh/g which shows that the capacity of the batteries will be excellent. The delithiation (discharging) performance was also excellent as the batteries delivered stable, high values with a very high Coulomb efficiency under various test conditions. Northern’s BAM also proved to be very robust. Even after charging/discharging several times at 10C (i.e. complete charging in only six minutes) and after many cycles, the Coulomb efficiency remained at a very high, constant level indicating almost no degradation of the anode material. This performance is better than many commercial natural or synthetic grades.

Northern CEO, Greg Bowes commented that “graphite is generally evaluated based on flake size and purity but when it comes to making batteries, many other factors are critical and not all concentrates are suitable. High bulk density translates into higher capacity batteries, and ease of purification and high yield result in lower costs. Testing by ProGraphite provides independent, third-party validation that Bissett Creek concentrates are of the highest quality.”

Electrochemical testing was the third phase in evaluating the use of Northern’s concentrates in the manufacture of BAM and follows very successful spheronization and purification testing. ProGraphite demonstrated that material from the Bissett Creek deposit is very suitable for the spheronization process as the tap density is high (0.99 kg/l), particle size distribution relatively steep and the yield was above 50%. All are very desirable qualities (see [May 25, 2021 Press Release](#)). Bissett Creek concentrates can also be easily purified to battery standards using either acid or alkaline based processes. Generally, the minimum required carbon content is 99.95% which means a maximum of 500 ppm impurities are allowed. The critical impurities are usually Fe (<30 ppm) and Si (<30 ppm) and often Al (<ppm), Ca (<3 ppm), Ni (<5 ppm), Cr (<5ppm) and Cu (<5 ppm). The results of acid purification testing were excellent and comparable to the performance of thermal purification as 99.99% purity was achieved and impurity levels were far below the typical limits required for BAM (see [August 16, 2021 Press Release](#)).

### **About Northern Graphite**

Northern Graphite is a mineral development and technology company focussed on developing its Bissett Creek graphite deposit and upgrading mine concentrates into high value components used in lithium-ion batteries, electric vehicles, fuel cells, graphene and other advanced technologies. An independent study estimates that Bissett Creek will have the highest margin of any existing or proposed graphite deposit due to its very favorable location, simple metallurgy and the

high quality of its concentrates which the Company believes will provide a competitive advantage in manufacturing products for the green economy.

Bissett Creek is an advanced stage project with a full Feasibility Study and its major mining permit which puts the Company in position to make a construction decision, subject to financing. The Project is located in the southern part of Canada between the cities of North Bay and Ottawa and close to the Trans-Canada highway providing ready access to labour, supplies, equipment, natural gas and markets.

#### **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 visit the Company's website at <http://www.northerngraphite.com/investors/presentation/>, the Company's profile on [www.sedar.com](http://www.sedar.com), contact Gregory Bowes, CEO (613) 241-9959 or visit our **Social Channels**.



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