

Northern Graphite: Right-Sizing for Take-Off

This company was the first graphite stock we ever stumbled across at the end of last decade when the commodity had none of the sound and fury that it generated since. Northern Graphite Corp. (TSXV: NGC | OTCQX: NGPHF) has been less one of the noise-makers” and more one of the doers as it ploughed through the various “report phases” in search of the ideal metrics for a rightsized graphite project. Amongst the new wave of projects it has the best infrastructure, the lowest capital costs, the best flake size distribution and the lowest unit operating costs which offsets it being a lower grade deposit.

Bissett Creek

The company owns a 100% interest in the Bissett Creek large-flake graphite deposit, located in eastern Ontario, which is located 15kms from the Trans-Canada Highway. The site is however 130 kms from railway connections, but only five hours by road from the port of Montreal.



Late last decade Northern Graphite re-activated the project due to higher graphite prices and renewed interest in graphite projects. An additional 6,600m of drilling in 118 holes has been completed by NGC to bring the total drilling on the project to approximately 12,200m in 275 holes.

The actual graphite deposit occurs at surface and covers an area of approximately 1.5 by 0.5 kilometres. There is minimal overburden and the maximum depth of the resource is about 80m. Northern maintains that Bissett Creek is a unique deposit in that approximately 90% of the contained graphite will be categorized as large flake (and 60% XL flake), which are the

highest ratios reported by any of the juniors.

The resource estimate for Bissett Creek currently stands at 69.8 million tonnes of measured and indicated resources grading 1.74% graphitic carbon and 24 million tonnes of inferred resources grading 1.65% graphitic carbon (both at a 1.02% Cg cutoff grade).

The proposed development consists of an open pit mine and a 2,900 tpd processing plant with conventional crushing, grinding and flotation circuits. The capital cost to construct the processing plant, power plant and all associated mine infrastructure is estimated at \$101.6 million including a \$9.3 million contingency.



NGC anticipates being in a position to commence construction early in 2016 and to commence production in 2017. However, that timetable is subject to financing which is currently the subject of negotiations. As we are nearly at the beginning of 2016, this schedule must inevitably be pushed back slightly even in the most optimistic of financing outcomes.

The Mine Closure Plan has been filed and accepted by the Provincial Government and is the main environmental approval required prior to the commencement of construction. A number of other operational approvals and permits are required. This process is underway and they are expected to follow the main permit in due course.

Economics

The Bissett Creek project has a pre-tax IRR of 19.8% (17.3% after tax) and a pre-tax NPV of \$129.9 million (\$89.3 million after tax) in the base case which uses a weighted average price of US\$1,800/tonne for the concentrates that will be produced. The one should also consider the foreign exchange kicker from an extended period of the Canadian dollar trading

at a substantial discount to the USD, which appears the most likely scenario at least through the minebuild and the first years of the mine's operation.

Conclusion

For NGC this is all about rightsizing for current conditions. Despite having an expansion scenario the company is cognizant that current graphite prices do not justify going with an over-sized project. Most of its peers are modeling projects with 40,000-50,000tpa (or more) of production. This is very optimistic given that the annual flake market is less than 400,000 tonnes.

Having a grip on reality is one of the key elements for gaining our interest and support for a project. Reality is in short supply in the graphite space with some off-the-chart capex projections that would make even a Rare Earth wannabe blanch. Northern Graphite is hunting for the title as lowest capex in the greenfield sites and thus far has taken the prize. Now to make it reality.

Click [here](#) to see the Hallgarten & Company report on Northern Graphite.