# With an abundance of inexpensive hydroelectric power, Blackstone aims to build a “green” battery metals supply chain

written by InvestorNews | April 8, 2021

## Upstream and Downstream PFS’s Drive Blackstone’s Battery Metal Project in 2021

**Blackstone Minerals Limited (ASX: BSX | OTCQX: BLSTF | FSE: B9S)** is an Australian-based mining company focusing on the district-scale, Ta Khoa Nickel-Copper-PGE project in northern Vietnam.

Blackstone’s project includes an existing disseminated nickel sulphide resource and processing plant, a historic high-grade underground mine as well as 25 other targets in the project area, and plans to build a downstream processing facility.

After releasing a Scoping Study in late 2020, Blackstone is working on two pre-feasibility studies (PFS) in 2021 that focus on: (1) the “upstream” mineral exploitation and processing plant, and (2) the “downstream” processing facility to produce customized Nickel-Cobalt-Manganese (NCM) “precursor” products for the Lithium-ion battery industry.

With an abundance of inexpensive hydroelectric power, Blackstone aims to build a “green” battery metals supply chain to furnish materials to the lithium-ion battery industry.

**Ta Khoa Project (Nickel-Copper-PGE)**

In April 2019, Blackstone entered into an option agreement to acquire a 90% interest in the Ta Khoa project and completed the acquisition a year later.

The Ta Khoa project is located 160 km west of Hanoi and includes the Ban Phuc Disseminated Sulfide (DSS) resource, an upstream processing plant, and the past-producing Ban Phuc Massive Sulfide Vein (MSV) nickel mine.

In late 2020, Blackstone released a Scoping Study for the development and restart of the Ta Khoa Project. The Scoping Study features an 8.5-year project life with ore from the Ban Phuc DSS deposit, and integrates upstream and downstream processing to produce customized NCM products for the Lithium-ion battery industry.

The results from the Scoping Study include:

- Maiden Ban Phuc DSS Indicated Resource of 44.3Mt at 0.52% Nickel for 229Kt
- Annual production of approximately 12.7kpta of nickel unit for a period of 8.5 years
- Capital cost approximately US$314 million of pre-production, including emergency
- Gross revenue of approximately US$3.3 billion
- Capital payback period of 2.5 years

**Finishing an “Upstream” PFS**

As previously mentioned, Blackstone is now advancing the Ta Khoa Project through to a Pre-Feasibility Study that includes an option to mine higher grade MSV deposits within the project area.

Blackstone has ten active drill rigs on the project site to

increase the confidence of the existing Ban Phuc DSS resource as well as to target higher-grade MSV deposits, identified using geophysics, with the plan to delineate new resources and incorporate these deposits into the PFS.

Blackstone anticipates the upstream PFS to be completed by the end of this year, allowing for the sufficient completion of the ongoing project drilling.

**Adding a "Downstream" Process**

Blackstone is working on the second PFS for a "downstream" processing facility to enable the production of a range of NCM "precursor" products for the Lithium-ion battery industry.

To reduce the risk and cost, the Company proposes to form joint venture(s) to construct downstream refineries to support the existing EV battery manufacturing companies in Vietnam, including LG Chem, Samsung SDI, and VinFast.

By further processing the material, the price improvement of nickel increases from 70-80% to 125-135% of the London Metal Exchange (LME) metal prices that price increase supports the robust economics reported in the Company's Scoping Study.

Blackstone anticipates the downstream PFS to be completed by July 2021.

**Past-Producing Ban Phuc MSV Nickel Mine**

Located in close proximity to the Ban Phuc DSS open-pittable resource is the past-producing Ban Phuc MSV nickel mine.

The high-grade Ban Phuc MSV mine operated as a modern mechanized underground mine between 2013 and 2016, producing 20.7kt Ni, 10.1kt Cu, and 0.67kt Co, before closing during a time of low nickel prices and mineral reserve depletion.

Currently, the Ban Phuc MSV mine is under care and maintenance and the deposit remains open at depth below the area of previous mining.

**Existing Processing Plant and Infrastructure**

One benefit of this project is the existing infrastructure. In this case, an existing processing plant (concentrator) capable of producing 450-kilo-tons- per-annum (ktpa) of nickel, a 250-person accommodation camp, and direct access to the site from Hanoi on a 240 km paved highway.

Other advantages include ample low-cost hydroelectric power and a professional low-cost labour force, as well as being located in a country that has become an Asian hub for electronics and battery manufacturing.

**Solid Bank Account**

In September 2020, Blackstone raised A$17.8 million by issuing 42.4 million shares at A$0.42 per share. As of December 31, 2020, the Company had approximately A$22 million in the bank that should cover off its exploration activities at the Ta Khoa Project this year.

**Final Thoughts**

In the race for EV dominance, China is leading the pack and with that, south-east Asia is becoming a supplier of raw materials and finished products.

Vietnam is already a hub for electronics and battery manufacturing and Blackstone’s project could add some additional “mineral” weight to its competitive advantage.

**Project Site Map:**

SOURCE: