

## Zacks Small-Cap Research

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**Blackstone Minerals Ltd. (BLSTF-OTCQX)**

**Blackstone Minerals: PFS on Integrated (both upstream & downstream portions) Ta Khoa Project Completed reflecting management's vertically integrated strategy.**

Based on comparative analysis of junior nickel companies in the developmental phase, an industry mid-first quartile price-to-book (P/B) ratio of 7.57 indicates a share price target of US\$1.06.

Current Price (03/24/22) \$0.33  
Valuation **\$1.06**

**OUTLOOK**

Blackstone Minerals is advancing two nickel projects: a **downstream refinery business** and an **upstream mining operation**.

A **PFS was completed** on the **integrated Ta Khoa Project** (both upstream and downstream components).

The **pilot plant project** is proceeding in order to produce MHP/NCM811 Precursor samples that will support the work on a DFS.

**Demand for nickel is expected to exceed supply** in the upcoming years as the EV mega-trend appears to be favoring NCM battery chemistry.

**SUMMARY DATA**

52-Week High \$0.99  
52-Week Low \$0.10  
One-Year Return (%) -7.46  
Beta 1.62  
Average Daily Volume (shrs.) 7,434

Shares Outstanding (million) 449.6  
Market Capitalization (\$mil.) 145.6  
Short Interest Ratio (days) 0.4  
Institutional Ownership (%) 21.8  
Insider Ownership (%) 24.1

Annual Cash Dividend \$0.00  
Dividend Yield (%) 0.00

5-Yr. Historical Growth Rates  
Sales (%) N/M  
Earnings Per Share (%) N/M  
Dividend (%) N/M

P/E using TTM EPS N/A  
P/E using 2021 Estimate N/A  
P/E using 2022 Estimate N/A

Risk Level Above Average  
Type of Stock Small-Value  
Industry Mining: Non-Ferrous

**ZACKS ESTIMATES****Revenue**

(in thousands of \$)

	Q1 (Sep)	H1 (Dec)	Q3 (Mar)	H2 (Jun)	Year (Jun)
2019		97 A		4 A	101 A
2020		438 A		147 A	586 A
2021		111 A		711 A	821 A
2022		330 A		407 E	737 E

**Earnings per Share**

(EPS is operating earnings before non-recurring items)

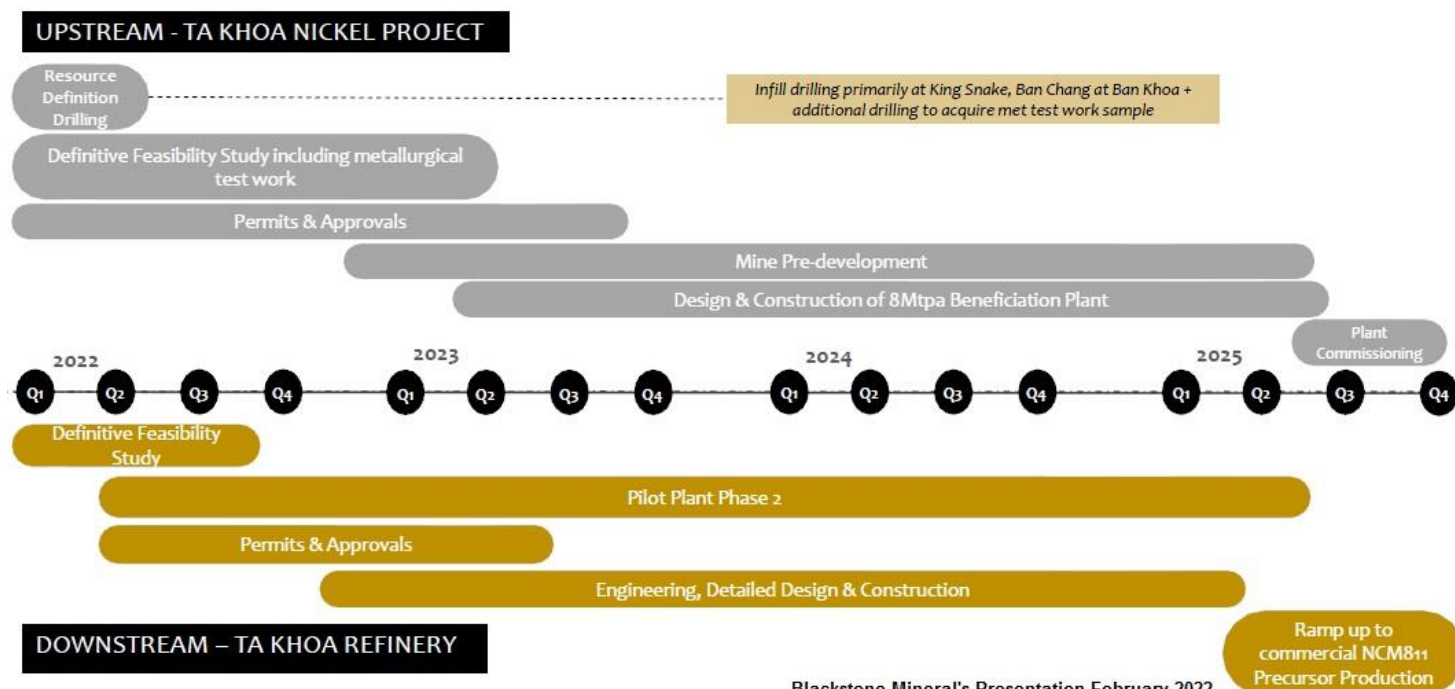
	Q1 (Sep)	H1 (Dec)	Q3 (Mar)	H2 (Jun)	Year (Jun)
2019		-\$0.027 A		-\$0.013 A	-\$0.040 A
2020		-\$0.024 A		-\$0.017 A	-\$0.041 A
2021		-\$0.023 A		-\$0.025 A	-\$0.047 A
2022		-\$0.033 A		-\$0.039 E	-\$0.072 E

Quarterly EPS may not equal annual EPS due to rounding.

## COMPANY SUMMARY

Blackstone Minerals is pursuing the development of the **district-scale Ta Khoa Nickel Project** through a **vertically integrated strategy** which entails an **upstream project** (Ta Khoa Nickel Project aka TKNP) and a **downstream project** (Ta Khoa Refinery Project aka TKR), along with arrangements to secure further upstream supply for the refinery and to develop a distribution/sales network for the refinery's projected NCM Precursor products.

The **upstream project** involves the exploration and advancement of several nickel prospects, foremost the **Ban Phuc** disseminated sulfide (DSS) deposit, but also the underground massive sulfide vein (MSV) deposits at Ban Chang and King Snake. The key **objective** of the upstream project is to **provide a reliable supply of feedstock** for Blackstone's planned refinery. A **beneficiation plant** is expected to receive ore not only from Ban Phuc but also from the underground MSV deposits at Ban Chang and King Snake. Initially, an existing 450,000 tpa concentrator plant is planned to be utilized until a new 8 million tpa facility is constructed as presented in the PFS.



The **downstream project** is comprised of the development of a **refinery** capable of refining nickel-cobalt concentrate into high-value **NCM** (nickel-cobalt-manganese) **Precursor products**. Feedstock from the upstream project is expected to satisfy about half the refinery's capacity with the remainder being sourced from third parties, some of which are expected to be found through an arrangement with Trafigura, a significant global trader of physical commodities, including nickel, copper, cobalt, zinc and lead.

Blackstone's **partnership model** should facilitate management's integrated approach. Strategic investments, agreements and arrangements are being made to help secure nickel concentrate feed for the refinery from third parties (front-end) and to help build solid relationships with Asian manufacturers of cathodes, batteries and EVs so that the company's NCM Precursor products can be sold readily (back-end).

## RECENT NEWS - SUMMARY

### Developmental Milestones

Blackstone Minerals has achieved **two very significant milestones** for the Ta Khoa Project, namely the release of the **PFS for the upstream project (TKNP) & the integrated project** in late-February 2022 and a **Mineral Resource upgrade** in late-December 2021. Previously, in July 2021, a PFS for the downstream refinery (TKR) was completed that concerned the construction of a refining facility with the capacity to process 400,000 tpa of nickel concentrate feedstock into battery-grade NCM Precursor products.

In addition, Blackstone Minerals has embarked on a **pilot plant testing program** to fine-tune the process of manufacturing NCM Precursor products, which entails laterally mining approximately 1,000m through the Ban Phuc DSS ore body for bulk sample material. This underground mine development commenced in early-December 2021.

Also, **strategic investments** were made in **NICO Resources Limited** and **Corazon Mining Limited** to help ensure the supply for nickel concentrate for the Ta Khoa Refinery Project.

## RECENT NEWS - DETAILS

On February 28, 2022, Blackstone Minerals announced the completion of a **Pre-Feasibility Study (PFS)** for the **upstream portion** of the Ta Khoa Nickel Project, which **also integrated** the results of the PFS for the downstream project.

To better understand the PFS, First we will examine the **economics of the upstream PFS** and then the **PFS on the integrated Ta Khoa Nickel Project**.

### PFS for Upstream Mining Project

## PRE – FEASIBILITY STUDY HIGHLIGHTS



Blackstone Minerals Presentation February 2022

The February 2022 PFS enlarged the magnitude of the mining project, including the **construction of an 8Mtpa processing facility**, instead of the 4Mtpa base case in the October 2020 Scoping Study. Consequently, the pre-production capex increases 15.6% from \$314 million to \$363 million resulting in ore feedstock to rise 104% to 64.5 MT from 31.6 Mt. Though the expected recovery rate declines from 65.9% to 57.0%, the **expected production of nickel expands 39.5% to 151kt** from 108kt in the Scoping Study. The capital payback period contracts from 2.5 to 1.8 years.

Blackstone Minerals						
Upstream Project Base Case		Pre-Prod. Capex (US\$million)	Payback Period (years)	Ore Feed (Mt)	Recovery	Nickel Production (kt)
Date	Event					
10/19/2020	Scoping Study	\$314	2.5	31.6	65.9%	108
2/28/2022	PFS	\$363	1.8	64.5	57.0%	151

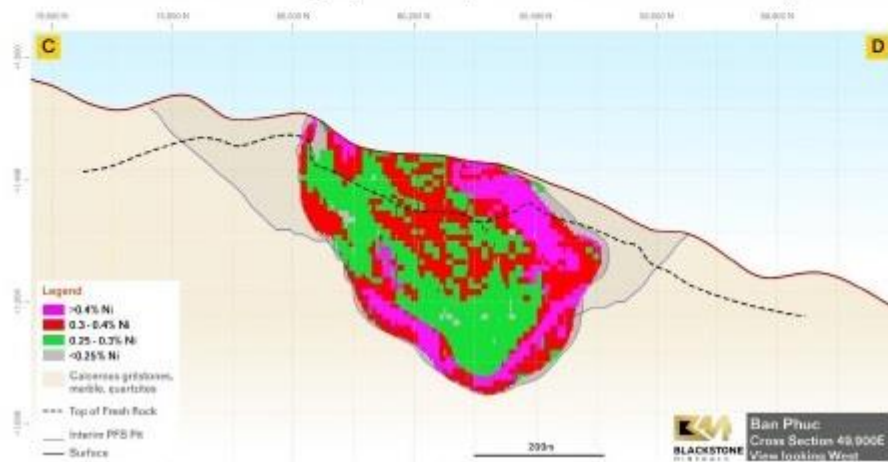
Also, a portion of the Indicated Resource at Ban Phuc was deemed economically mineable and hence upgraded to a **Probable Reserve** of **47.7Mt** grading at **0.43% Ni**.

## BAN PHUC (DSS) BASE LOAD FEED

### Indicated Resource

	Mt	Ni %	NiEQ %	Cu %	Co %
<b>Ban Phuc (DSS)</b>					
Oxide	4	0.54	0.64	0.07	0.01
Transitional	6	0.47	0.55	0.05	0.01
Fresh	91	0.36	0.42	0.02	0.01
<b>Ban Phuc total</b>	<b>102</b>	<b>0.38</b>	<b>0.44</b>	<b>0.03</b>	<b>0.01</b>

- 123Mt at 0.37% Ni for 452kt of Nickel (or 0.43% NiEQ for 523kt NiEQ)
- Increased from 58.7Mt at 0.48% Ni for 280kt of Nickel (June 2020)



Blackstone Mineral's Presentation February 2022

## BAN PHUC MAIDEN ORE RESERVES

Classification	Tonnes (kt)	Ni (%)	Cu (%)	Co (%)
Proven	-	-	-	-
Probable	48,747	0.43	0.04	0.01
<b>Total Proven and Probable</b>	<b>48,747</b>	<b>0.43</b>	<b>0.04</b>	<b>0.01</b>

Blackstone Minerals Presentation February 2022



## PFS for Integrated Ta Khoa Project

The February 2022 Integrated PFS vertically integrates the Ta Khoa upstream and downstream projects and greatly expands upon the Scoping Study of October 2020. The company's mining operations are expected to provide approximately half the feed to the refinery. Versus the Scoping Study, **nickel production from the Ban Phuc DSS deposit increases 39.5%**. Furthermore, the anticipated **NCM production expands 327% to 909kt** from 213kt in the Scoping Study as the life of Refinery operation expands to 10.3 years.

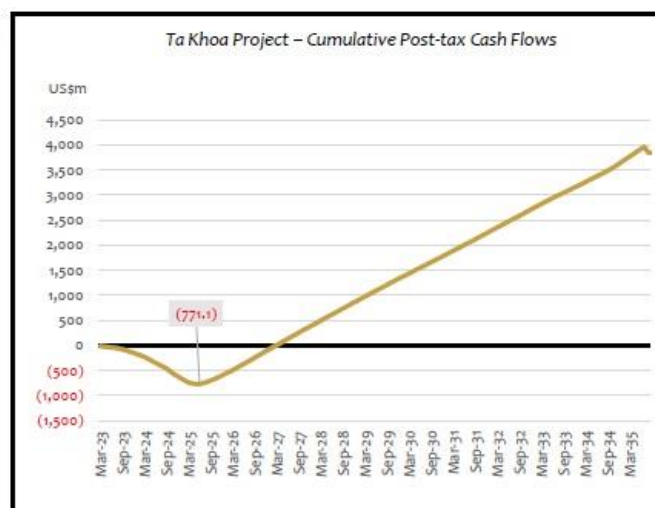
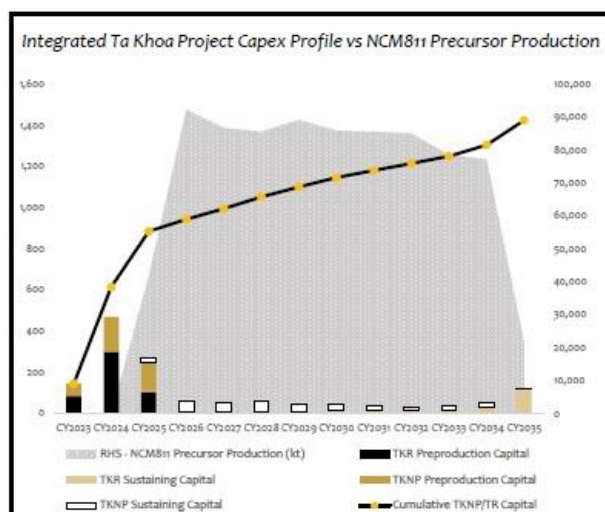
### PRE – FEASIBILITY STUDY HIGHLIGHTS



Blackstone Minerals Presentation February 2022

Blackstone Minerals					
Integrated Project Base Case		Pre-Prod. Capex	Payback Period	NCM Production	IRR
Date	Event	(US\$million)	(years)	(kt)	
10/19/2020	Scoping Study	\$314	2.5	213	45%
2/28/2022	PFS	\$854	1.8	909	47%

The integrated project requires **pre-production capital of US\$854 million**, up from US\$314 for the mine alone in the Scoping Study, but the **payback period declines to 1.8 years** from 2.5 years. The **maximum cash drawdown is US\$771 million**. The internal rate of return (IRR) **expands to 47%** from 45%. The base case uses and average nickel metal price of US\$20,000/t and a NCM 811 Precursor price of US\$17,670/t, both of which are well below current spot prices.



Blackstone Minerals Presentation February 2022

The integrated Ta Khoa Project estimates that concentrate production from the refinery would commence in 2025 and then ramp to nameplate capacity of 8.0Mtpa in 2027. The life-of-operation

for the refinery is 10.3 years. A fully electrified haulage fleet is planned for the operation of the open-pit mine. Management plans to fund the integrated project by a combination of equity and debt.

### **Mineral Resource Upgrade**

On December 23, 2021, Blackstone Minerals announced that the Ta Khoa Mineral Resource had been updated. As a result of two years of wide-ranging exploration programs (including geochemical & geophysical surveys and drilling campaigns, the **estimated Mineral Resource** for the **Ban Phuc DDS deposit was upgraded, increasing 62%** from 29kt Ni to **452kt Ni** as the **Indicated Resource** expanded 67% to **383kt Ni**.

<b>Blackstone Minerals</b>										
Mineral Resource		Indicated			Inferred			Total		
Ban Phuc DSS		Grade	Ni	Grade	Ni	Grade	Ni	Grade	Ni	
Date	Event	(Mt)	(% Ni)	(kT)	(Mt)	(% Ni)	(kT)	(Mt)	(% Ni)	(kT)
10/19/2020	Scoping Study	44.3	0.52%	229	14.3	0.35%	50	58.7	0.48%	279
12/23/2021	Res. Upgrade	102	0.38%	383	21	0.33%	69	123	0.37%	452
2/28/2022	PFS	102	0.38%	383	21	0.33%	69	123	0.37%	452

Also, a NiEq Mineral Resource was provided: 123Mt grading 0.43% for **523kt NiEq** with an **Indicated Resource** of 102Mt grading 0.44% for **446kt NiEq**.

<b>Blackstone Minerals</b>										
Mineral Resource		Indicated			Inferred			Total		
Ban Phuc DSS		Grade	Ni Eq	Grade	Ni Eq	Grade	Ni Eq	Grade	Ni Eq	
Date	Event	(Mt)	(% Ni Eq)	(kT)	(Mt)	(% Ni Eq)	(kT)	(Mt)	(% Ni Eq)	(kT)
10/19/2020	Scoping Study	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
12/23/2021	Res. Upgrade	102	0.44%	446	21	0.37%	78	123	0.43%	523
2/28/2022	PFS	102	0.44%	446	21	0.37%	78	123	0.43%	523

There were also **Maiden Inferred Resources** for Ban Chang MSV, King Snake MSV & Ban Khoa DSS deposits (see table below for NiEq estimates).

<b>Blackstone Minerals</b>										
Mineral Resource		Indicated			Inferred			Total		
Maiden		Grade	Ni	Grade	Ni	Grade	Ni	Grade	Ni	
Date	Deposit	(Mt)	(% Ni)	(kT)	(Mt)	(% Ni Eq)	(kT)	(Mt)	(% Ni)	(kT)
12/23/2021	Ban Khoa (DSS)	N/A	N/A	N/A	6.20	0.39%	24	6.20	0.39%	24
12/23/2021	Ban Chang (MSV)	N/A	N/A	N/A	0.70	2.00%	14	0.70	2.00%	14
12/23/2021	King Snake (MSV)	N/A	N/A	N/A	0.43	2.40%	10	0.43	2.40%	10

Concerning the Ban Khoa DSS deposit, preliminary studies indicate the potential for open pit mining. Drilling continues at Ban Khoa.

The **higher grade MSV deposits** at Ban Chang and King Snake contain **by-product credits** for copper, cobalt, gold, palladium and platinum. These resources could be developed as underground mines in order provide supplementary feed (being **blended into the DSS feed**) for the planned 8 Mtpa concentrator. Drilling also continues at Ban Chang and King Snake.

The **Combined Total Estimated Mineral Resource** for the Ta Khoa Project **increased 73%** to **485kt Ni** (130 Mt grading 0.37% Ni). **Adding by-product credits**, the Combined Total Estimated Mineral Resource is **510kt NiEq** (130 Mt grading 0.44% NiEq).

### **Pilot Plant Project**

On October 19, 2021, Blackstone Minerals announced the appointment of **Wood** (a leading E&C firm) and **ALS Metallurgy Services** to perform critical consulting roles in delivery of Definitive Feasibility Study and Pilot Plant test work for the Ta Khoa Refinery Project.

**Wood** is responsible for **project management** of the plant design for the Ta Khoa Refinery, including project controls, engineering, auxiliary services, cost estimating and utilities, along with execution planning services. Importantly, Wood has a specialized hydrometallurgical group with extensive experience in pressure oxidation (POX) projects and has offices in Vietnam.

**ALS Metallurgy Services** is responsible for performing the test work in **Phase 1** of the **Pilot Plant Project**. ALS Metallurgy will verify the process flow sheet from the PFS, conduct bench-scale confirmatory test work and perform a hydrometallurgical test work, all of which will help generate the engineering specifications for the refinery's design. Phase 1 includes the development of a design that will process nickel concentrate feed at a rate of 20kg per hour in order to produce NCM products at approximately 1.75kg per hour.

Utilizing its facilities with state-of-the-art laboratories and equipment in Perth Western Australia, ALS Metallurgy Services will deliver a continuous pilot plant that produces a **MHP intermediate product** from blended concentrate (**Campaign 1**), and deliver a continuous pilot plant that **produces battery-grade NCM811** from MHP intermediate product (**Campaign 2**). Blackstone will provide concentrate samples for the two campaigns from both the Ban Phuc mine and third parties.

In early December 2021, Blackstone Minerals **commenced underground mining at Ta Khoa** after being granted approval to perform **bulk sampling work** related to pilot plant testing. Roughly **1,000m of lateral development** through the middle of the Ban Phuc disseminated sulfide (DSS) ore body is planned. The mining activities will **provide bulk sample ore** for the recently re-commissioned Ban Phuc concentrator (450ktpa) at Ban Phuc, which will be operated at a de-rated capacity. The crushing circuit was re-commissioned in November 2021, and the mill and flotation circuit will be commissioned in 2022.

The produced **nickel concentrate** will serve as **feedstock for the pilot plant testing** in Perth Australia by ALS Laboratories (Phase 1) and later in Son La Vietnam at yet-to-be constructed pilot plant (Phase 2) in order to generate Mixed Hydroxide Precipitate (MHP) and Nickel-Cobalt-Manganese (NCM) Precursor products. In the **first Campaign**, Ban Phuc concentrate will be blended with third-party concentrate in different portions for use in four trials: 25% Ban Phuc / 75% third-party, 50%/50%, 75%/25% and a to-be-determined optimum blend. The **second Campaign** consists of two trials which are expected to produce 1t of MHP and 1.5t of NCM811.

For **Phase 2**, the company is in early discussions for development of the 1:25 scale pilot plant (PP2) with the capacity to process 1t per hour of concentrate.

### **Strategic Investments**

Part of Blackstone's development strategy for the Ta Khoa Refinery is to using **third party feed** to supplement the nickel concentrate supply expected from the upstream Ta Khoa Project, including feed from the Ban Phuc, King Snake and Ban Chang mines. The company has already announced an arrangement with **Trafigura Pte Ltd**, which was signed in January 2021 and a CAD\$2.975 million strategic equity investment in **Flying Nickel**, which holds 100% of the **Minago Nickel Sulfide**

**Project**, an advanced stage, district-scale, undeveloped, disseminated nickel sulfide deposit located in Manitoba, Canada.

### **NICO Resources Limited**

On January 18, 2022, Blackstone Minerals announced a **AUD\$2.75 million strategic investment** in **NICO Resources Limited** (ASX: NC1) for the purpose of securing a long-term supply option for the feedstock required for the downstream Ta Khoa Refinery Project. NICO holds exploration licenses for the Australian **Central Musgrave Project**, which currently has JORC-compliant **Mineral Resource of 1.95Mt Ni** (see table below).

Central Musgrave Project Nickel Resource	Cut-off (Ni%)	Mt	% Ni	Ni (Mt)
Wingellina - Measured & Indicated	0.5%	168.5	0.93%	1.56
Wingellina - Inferred	0.5%	14.1	0.87%	0.12
Claude Hills - Inferred	0.5%	33.0	0.81%	0.27
<b>Total</b>	<b>0.5%</b>	<b>215.6</b>	<b>0.91%</b>	<b>1.95</b>

Blackstone Minerals Press Release January 18, 2022

The AUD\$2.75 million investment gives Blackstone a **15.11% equity interest** in NICO Resources.

### **Corazon Mining**

On March 4, 2022, Blackstone Minerals made a AUD\$2.0 million strategic investment in **Corazon Mining Limited** (ASX: CZN) for the purpose of securing a long-term supply option for the feedstock required for the downstream Ta Khoa Refinery Project. Corazon holds 100% of Ni-Cu-Co **Lynn Lake Project**. Located in Manitoba, Lynn Lake has a **Mineral Resource of 168.0kt Ni**, 81.7kt Cu and 7.9kt Co (see table below). There is a development-ready underground mine which operated for 24 years up until the 1970s. In early 2019, Corazon completed metallurgical test work, which produced nickel concentrate grading 26% Ni with recoveries of 71% using modern flotation processing techniques.

Lynn Lake Mineral Resource	Cut-off (Ni%)	Mt	Ni (%)	Cu (%)	Co (%)	Ni (kt)	Cu(kt)	Co(kt)
Measured	0.40%	5.1	0.59	0.29	0.027	30.1	14.7	1.4
Indicated	0.40%	15.3	0.61	0.30	0.031	93.2	46.6	4.8
Inferred	0.40%	7.3	0.61	0.28	0.023	44.6	20.4	1.7
<b>Combined – M&amp;I&amp;I</b>	<b>0.40%</b>	<b>27.7</b>	<b>0.61</b>	<b>0.29</b>	<b>0.028</b>	<b>168.0</b>	<b>81.7</b>	<b>7.9</b>

Blackstone Minerals Press Release March 3, 2022

The AUD\$2 million investment gives Blackstone a **14.32% equity interest** (51,016,778 shares) in Corazon Mining.





Blackstone Minerals Press Release March 3, 2022

## Financings

On November 1, 2021, Blackstone Minerals announced firm commitments for a **Private Placement** of **94,827,587 fully paid ordinary shares** (at an issue price of AUD\$0.58 per share) had been received. With the shares being issued at a price well above book value, the private placement is **accretive to book value**, benefiting both existing shareholders as well providing management with significant funds to invest in the development of the Ta Khoa Project. The shares were issued in two tranches.

The **first tranche** consisted of 38,134,805 shares, which were issued around November 10<sup>th</sup>. **Gross proceeds were AUD\$22,118,187**. The **second tranche** of 56,692,782 shares provided **gross proceeds of AUD\$ 32,881,814**. The lead investment managers are Shaw & Partners Limited, Evolution Capital Partners LLC and PAC Partners.

In addition, the company offered certain eligible existing shareholders the opportunity to participate in a **Share Purchase Plan (SPP)** of 8,620,690 shares at the same price. The oversubscribed SPP closed on November 19<sup>th</sup> with 9,137,788 shares being issued on November 26<sup>th</sup>. The **gross proceeds were AUD\$5,299,917** from the SPP.

The three equity issuances provided **net proceeds of AUD\$56.8 million** while the conversion of options provided **AUD\$904,300** for the Development of the Ta Khoa Nickel Project

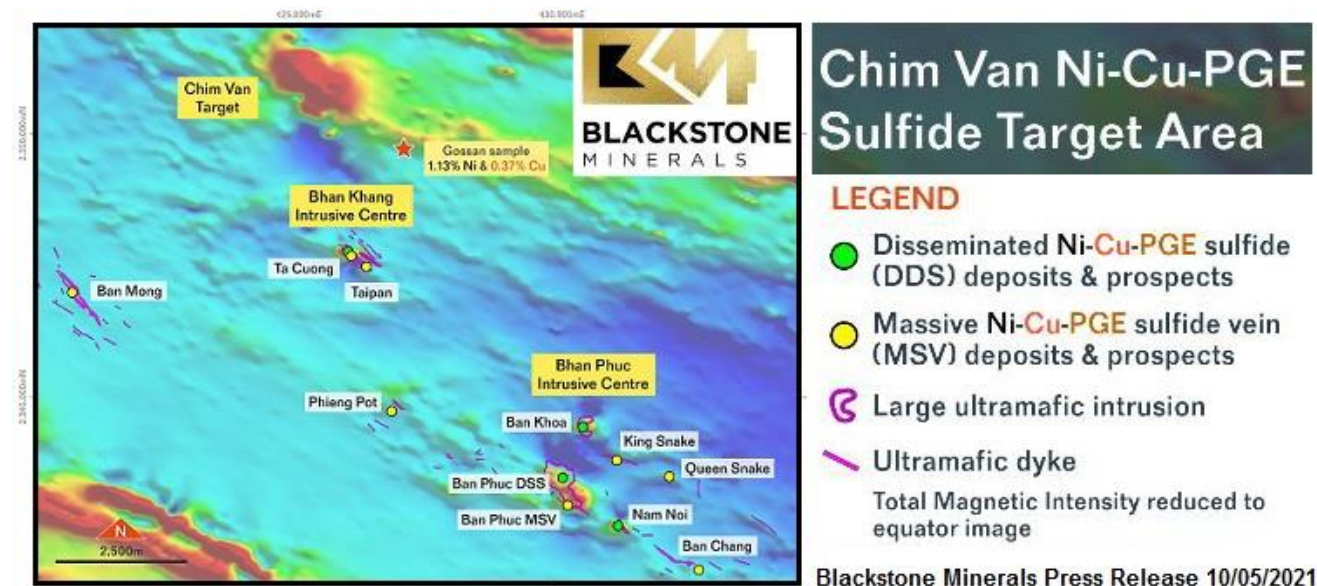
## OTHER IMPORTANT DEVELOPMENT

### *Chim Van Prospect - Joint Exploration with Vietnam Government*

On October 5, 2021, Blackstone Minerals announced a **collaboration with the General Department of Geology & Minerals of Vietnam (GDGMV)** to identify new nickel opportunities in **Northern Vietnam**. The first project is the joint geophysics exploration of **Chim Van**, a highly **prospective large magnetic anomaly**, which is located approximately 10 kilometers NW of the Ban

Phuc open pit deposit. Historical sampling has indicated the presence of Ni and Cu with portable XRF testing of gossan samples reporting up to 1.13% Ni and 0.37% Cu.

Blackstone will provide technical expertise and equipment to support geophysical work. If results indicate the presence of a Ni-Cu mineralized ultramafic-mafic intrusion, Blackstone, through Ban Phuc Nickel Mines, plans to apply for an exploration license on the project. The Chim Van target could potentially provide feedstock to Blackstone's the company's planned large concentrator and the Ta Khoa downstream refinery.



## COMPANY OVERVIEW

Blackstone Minerals (OTCQX: BLSTF; ASX: BSX) is advancing both upstream and downstream nickel projects in northern Vietnam. The **upstream Ta Khoa Project** is developing a series of **nickel-sulfide deposits** within a 12-kilometer **district-scale exploration corridor**. The Project has Maiden Resource, a processing facility and a permitted tailings facility, along with access to local, green hydroelectric power. In addition, management is pursuing a **downstream refinery project** in order to produce higher-margin NCM (Nickel-Cobalt-Manganese) products for the lithium-ion battery industry. Management's downstream strategy includes collaboration with Tier1 partners in the development of a refinery.

**Nickel is a strategic raw material in the EV battery industry**, and there are growing concerns of a disruption in the supply of nickel and other metals, such as lithium and cobalt, that are crucial to the wide-scale adoption of electric vehicles and power grids. Due to the growing stainless steel production and the significant incremental demand from the adoption of EVs, the nickel industry is expected to experience significant supply shortages starting in 2023.

A **Scoping Study** on the Ta Khoa Project **was completed in October 2020**, after which management divided the Project into upstream and downstream components. Blackstone Minerals is advancing both segments: a **PFS for downstream refinery business unit was completed** in July 2021 and now work is beginning on a pilot plant and a DFS. The **Scoping Study** included a **Maiden Resource** on the **Ban Phuc DSS deposit**. The PFS on the upstream business unit should be completed in the second half of 2021. Resource drilling continues at four other prospects (Ban Chang, King Snake, Ta Cuong and Ban Khoa).

## Critical Milestones Achieved

May 8, 2019	Entered term sheet for option to acquire a 90% interest in the Ta Khoa Project
April 2020	<b>Exercised option</b> to acquire 90% interest in the Ta Khoa Project
October 2020	Completed <b>Scoping Study</b> on <b>Ta Khoa Project</b> , which included <b>Maiden Resource</b> on the <b>Ban Phuc DSS deposit</b>
July 26, 2021	Completed <b>PFS</b> on downstream Ta Khoa Refinery Project
December 2021	Resource Upgrade which consisted of an <b>increase in the Ban Phuc DSS</b> estimate and <b>Maiden Inferred Resources</b> for the Ban Khoa, Ban Chang & King Snake deposits
February 28, 2021	Completed <b>PFS</b> on upstream Ta Khoa Refinery Project

## Expected Future Milestones

<b>2H21-1H/22</b>	Initial production from Pilot Plant Project
<b>2H21-1H/22</b>	DFS on downstream Ta Khoa Refinery Project
<b>2022</b>	DFS on upstream Ta Khoa Mining Project
<b>2022</b>	Final Investment Decision

Blackstone Minerals is moving forward with both upstream and downstream nickel projects, which are **located in proximity to major battery manufacturers** that are supplying Asia's growing demand for lithium-ion batteries. **For example**, in the first quarter of 2020, **VinFast** (a subsidiary of Vingroup JSC, Vietnam's largest conglomerate) launched Vietnam's first EV automobile, which is powered by NCM (nickel-cobalt-manganese) batteries. In 2020, VinFast sold about 30,000 vehicles (gas-powered cars, EVs and e-scooters) in Vietnam. VinFast has plans to expand production to 250,000 automobiles per year, including the sale of vehicles into the United States starting in March 2022. VinFast's production facilities are located in northern Vietnam, a greenfield factory near the port of Hai Phong and an acquired GM factory in Hanoi. Currently, LG Chem is producing NCM lithium-ion batteries for VinFast through a joint venture entered into during 2019. This strong and growing local demand for NCM-based batteries is in Blackstone's backyard. VinFast also signed a letter of intent with Gotion High-Tech in August 2021. VinFast is considering building a LFP battery factory in Vietnam.

## Green Operational Advantage

Management plans to develop its mineable deposits in the Ta Khoa Project with a fully electric-powered fleet as management targets net-zero carbon mining operations. Also, the downstream refinery will utilize renewable, inexpensive (roughly US\$0.07 per kWh) local, renewable hydroelectric power sources. To further its green efforts, Blackstone Minerals joined the Electric Mine Consortium in April 2021.

## Equity Milestones

In October 2020, the shares of Blackstone Minerals Limited were admitted to the OTCQB market. Less than four months later, on February 10, 2021, the company's shares were **uplisted to the OTCQX Best Market**. The OTCQX listing should expand awareness of the company among US investors, both retail and institutional. The company's primary listing continues to be the Australian Stock Exchange (ASX) under the symbol BSX.

## AUSTRALIAN SECURITIES EXCHANGE (ASX) - SUMMARY DATA

<b>Blackstone Minerals Limited</b>			
<b>ASX: BLX</b>			
<b>Current Price</b>	<b>AUD 0.415</b>	<b>Average Daily Volume (shrs.)</b>	<b>1,692,860</b>
<b>52-Week High</b>	<b>AUD 0.840</b>	<b>Shares Outstanding (million)</b>	<b>449.60</b>
<b>52-Week Low</b>	<b>AUD 0.315</b>	<b>Market Capitalization (million)</b>	<b>AUD 186.58</b>

### COMMITMENT TO ESG

**Blackstone Minerals has a strong commitment to ESG (Environmental, Social and Governance) principles.**

#### **Refinery POX Metallurgical Technology (A Green Operational Advantage)**

The battery industry has become very mindful of the environmental impact of nickel refining operations. OEMs are willing to pay a premium for responsibly sourced and refined nickel. Blackstone's use of a **Pressure Oxidation (POX) leaching method** for the refining of nickel concentrate from sulfide deposits is more environmentally friendly than the High Pressure Acid Leach (HPAL) process for extracting nickel from laterite ore.

The **High Pressure Acid Leach (HPAL) extraction process** requires elevated temperatures (approximately 255° Celsius) and high pressure (around 725 psi), both of which are energy intensive. In addition, sulfuric acid is required to separate the nickel and cobalt from laterite ore. Therefore, it is necessary to utilize reagents to neutralize the acid discharge.

In contrast, the use of POX technology requires less energy and a smaller amount of caustic chemicals while providing a high level of metal recovery. As a result, the POX process produces quality, high purity MHP product with a lower carbon footprint, more eco-friendly discharge stream and lower overall operating costs. MHP is an intermediate product in Blackstone's hydrometallurgical flowsheet to produce NCM811 Precursor. Consequently, the ESG metrics of energy usage and emissions discharge are enhanced.

#### **Hydroelectric Power (Another Green Operational Advantage)**

Part of the process of finding the optimal location for the Ta Khoa Refinery included access to renewable (and inexpensive) hydroelectric power. Vietnam has 306 hydroelectric plants in operation, two of which (2,400 MW Son La and 1,920 MW Hòa Bình, both on the Black River) are in close proximity to the Ta Khoa Project.

### NICKEL INDUSTRY – UPCOMING SHORTAGE OF SUPPLY

The nickel industry is expected to benefit from the global transition to electric vehicles (EVs) as well as from economic growth that is expected to drive increased demand for stainless steel, which is currently the largest end-market for nickel. The transition of the energy source for automobiles from



fossil fuels to electricity stored in EV batteries is expected to drive an increased demand for Class I nickel, which, within the next several years, will not be able to be met by the current production capacity of existing mining operations nor by current global nickel processing capacity. Therefore, the increasing demand for EV batteries portends robust demand for nickel.

A sampling of the increase in demand being spurred by the mega-trend toward EVs includes:

- To support its EV product lines, **Tesla** (NASDAQ: TSLA) has built and currently operates three EV battery production facilities, two in the U.S (San Francisco and Sparks, NV) and one in China (Shanghai). Upcoming giga-factories under construction are in Berlin, Germany and Austin, TX.
- In January 2021, **General Motors** (NYSE: GM) announced plans to offer only EVs by 2035.
- In February 2021, **Ford** (NYSE: F) announced that its spending on EVs and autonomous vehicles (AVs) is planned to more than double to \$29 billion by 2025.
- In December 2019, **Volkswagen** (Xetra: VOW) stated a corporate goal of producing 1,000,000 EVs annually year by 2023 and 1.5 million a year by 2025. Volkswagen is also targeting that 50% of its North America sales will be fully electric vehicles by 2030. In March 2021, Volkswagen announced plans to construct six battery factories in Europe by 2030 to support its EV goals.
- In March 2021, **Volvo** (STO: VOLV-B) made a commitment to only make and sell all-electric vehicles by 2030.
- In December 2020, the Government of **Japan** launched the Green Growth, which includes the goal to produce only EVs (i.e. no gasoline-powered cars) by the mid-2030s.

The number of **giga-factories** has grown rapidly from 17 in 2019 to 70 in 2020 to **142 in mid-2021**.

### **Abridged Synopsis of the Dynamics of the Nickel Industry**

According to the U.S. Geological Survey (USGS), the vast majority of **economic global nickel resources** (with an average 1.0% Ni or more) are generally dispersed in two types of ore deposits: **laterite** (approximately 60% of known deposits) and **sulfide** (40%) deposits. A variety of techniques are utilized to extract nickel from these ores, including Pressure Oxidation (POX) leaching for sulfide ores and High Pressure Acid Leaching (HPAL), Caron Processing, Pressure Acid Leaching (PAL), ferro-nickel smelting, atmospheric leaching and bioleaching for laterites. Typically, sulfide ores have a higher grade than laterites, and sulfide ores are easier and less expensive to process than laterites.

Nickel production is most often categorized as high-purity **Class I nickel** (electrolytic nickel, powders and briquettes) and **Class II nickel** (nickel pig iron and ferronickel). Nickel is an essential component for the manufacture of cathodes in many types of batteries used for both the Electrical Vehicle and Battery Storage segments of the battery industry; however, the nickel feedstock varies depending technology employed by battery manufacturers. Feedstock options include Class I nickel, Mixed Hydroxide Product (MHP), Mixed Sulphide Precipitate (MHP), Nickel Pig Iron (NPI) and matte intermediates, among others.

Currently, the **vast majority of nickel demand** is derived from the **production of stainless steel** and **super alloys** (65% and 12% of consumption, respectively) due to nickel's physical and chemical properties of a high melting point, an ability of being easily alloyed, its ductility and a resistance to corrosion/oxidation. As a result, nickel-based stainless steels and alloys are used in the pharmaceutical, petrochemical, chemical, aerospace, marine and food & beverage industries.

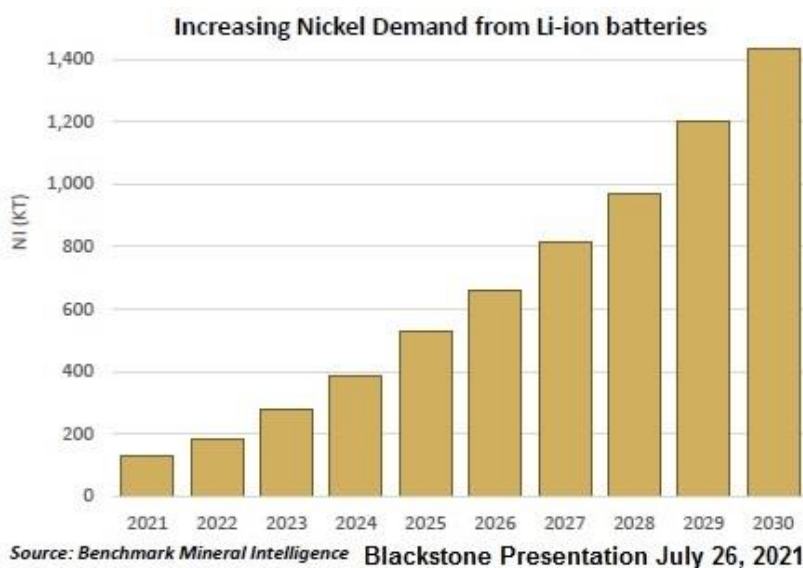
### **Lithium-ion Battery-related Demand for Nickel**

**Demand for rechargeable lithium-ion batteries**, especially those used to power EVs and to store electric energy, particularly from renewable sources (such as solar panels and wind turbines), is



expected to accelerate and become the **major driving factor of incremental growth of the nickel market.**

In 2021, Benchmark Minerals Intelligence, a leading market intelligence provider, estimates that lithium-ion batteries constitute a \$50 billion market in 2021 and expects that market will expand to \$200 billion in 2030. Consequently, Benchmark forecasts that this growing demand will increase lithium-ion battery's share of the nickel market from 2.3% in 2020 to 30% in 2030.<sup>1</sup>



According to the International Nickel Study Group (INSG), **global demand for nickel** is expected to increase 12.0% from 2.405 million tonnes in 2019 to 2.673 million tonnes in 2021, driven by robust demand from manufacturers of stainless steel and strong sales of electric-vehicles (EVs).

<b>Global Nickel Industry</b>					
Year	Global Production (MM tonnes)	YOY Change	Global Usage (MM tonnes)	YOY Change	Surplus/ (Deficit) (tonnes)
2010	1.450		1.470		(20,000)
2011	1.610	11.0%	1.580	7.5%	30,000
2012	1.760	9.3%	1.660	5.1%	100,000
2013	1.750	-0.6%	1.660	0.0%	90,000
2014	1.994	13.9%	1.863	12.2%	131,000
2015	1.973	-1.1%	1.881	1.0%	92,000
2016	1.991	0.9%	2.037	8.3%	(46,000)
2017	2.070	4.0%	2.184	7.2%	(114,000)
2018	2.184	5.5%	2.328	6.6%	(144,000)
2019	2.369	8.5%	2.405	3.3%	(36,000)
2020	2.494	5.3%	2.386	-0.8%	108,000
2021 E	2.718	9.0%	2.673	12.0%	45,000

Another indication of the looming shortage of nickel is the actions of producers of EV battery and energy storage batteries to lock in supply. A prominent example is **Tesla**, which in July 2021 **entered into a long-term supply contract with BHP Billiton for Class I nickel.** Tesla is also securing additional nickel supply through agreements with Prony Resources and Vale.

### **Environmental Sustainability and the Nickel Industry**

The environmental impact of nickel mining and refining operations has come to the forefront as countries and the managements of both upstream and downstream companies focus on addressing net-zero emissions targets. Concerns range from the **carbon footprint** of powering mining and nickel smelting operations to the **remediating** the clearance of large areas of land during the mining process and sulfuric acid/the emissions of sulfur dioxide in some processes of refining nickel into intermediate products. As ecological and sustainability efforts become an increasingly significant factor in the nickel market, eco-friendly nickel for use in batteries will command a premium.

## The Use of Nickel Cathodes for Electric Vehicles

Rechargeable lithium-ion batteries have become ubiquitous, powering electric vehicles (EVs) and large-scale energy storage systems. The current growth in these applications is being enabled not only by lithium but also by nickel. The expansion of these devices and systems is dependent on several attributes battery technology, namely life span, recharging time, energy capacity and the capability for rapid discharge (enables quick acceleration and rapid recharge).

Several popular types of lithium-ion batteries utilize a variety of other elements. Each type has attributes that are better suited for certain applications, some of which are listed below in order of energy density:

- Lithium Manganese Oxide ( $\text{LiMn}_2\text{O}_4$  aka **LMO**) for power tools, medical devices & electric powertrains – energy density (100-150 Wh/kg) and with 300-700 recharging cycles
- Lithium Iron Phosphate ( $\text{LiFePO}_4$  aka **LFP**) for high load requirements – energy density (90-200 Wh/kg), 1,000-2,000 recharging cycles but can pulse discharge for high 40 amp load
- Lithium Nickel Manganese Cobalt Oxide ( $\text{LiNi}_x\text{Mn}_y\text{Co}_{1-x-y}\text{O}_2$  aka **NMC / NCM**) for E-bikes, medical devices & EVs – energy density (150-220 Wh/kg) and with 1,000-2,000 recharging cycles
  - NMC333 ( $\text{LiNi}_{0.8}\text{Co}_{0.1}\text{Mn}_{0.1}\text{O}_2$ ): 33.3% Ni, 33.3% Mn, 33.3% Co
  - NMC622 ( $\text{LiNi}_{0.6}\text{Co}_{0.2}\text{Mn}_{0.2}\text{O}_2$ ): 60% Ni, 20% Mn, 20% Co
  - NMC811 ( $\text{LiNi}_{0.8}\text{Co}_{0.1}\text{Mn}_{0.1}\text{O}_2$ ): 80% Ni, 10% Mn, 10% Co
- Lithium Cobalt Oxide (**LCO**) energy density (150-280 Wh/kg); encumbered by the disadvantages of a higher price & cobalt toxicity due to a higher cobalt content
- Lithium Nickel Cobalt Aluminum Oxide ( $\text{LiNiCoAlO}_2$  aka **NCA**) for medical devices, electric powertrain (Tesla) – high energy density (200-280+ Wh/kg) but only 500 recharging cycles

The **cathode** is at **critical part of a lithium-ion battery** and is a **significant part in determining the cost of that battery** (usually between 42%-to-48%). Multiple active materials (e.g. cobalt, nickel and manganese) are utilized in attempts to increase energy density and lower costs (particularly decreasing cobalt content) while maintaining or improving overall battery life span (aka cycle life or cyclability or durability) and safety (overheating aka thermal runaway).

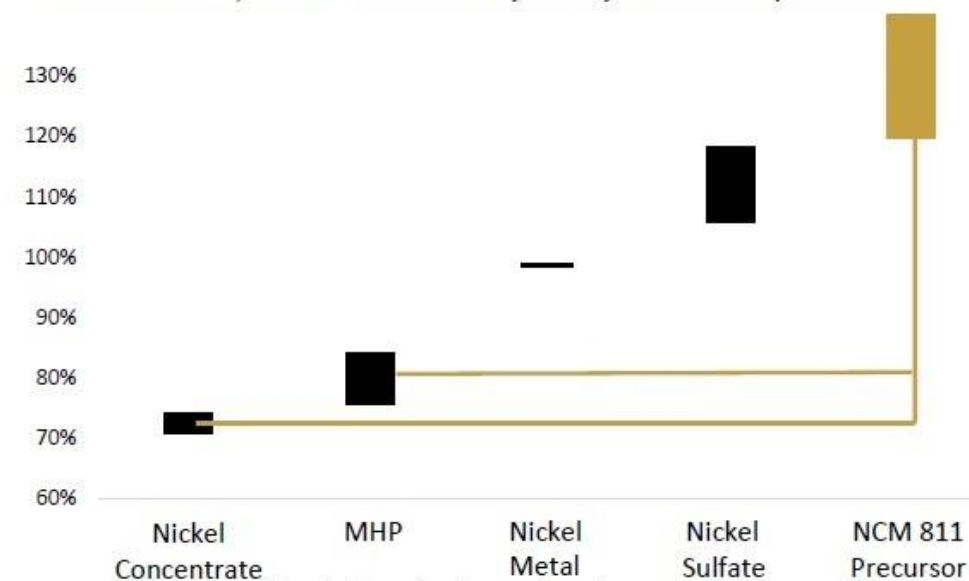
There are multiple scenarios related to which cathode-type will dominate; however, the most logical forecast is that several chemistries will co-exist with the penetration rate of each type of cathode varying by region, automobile company and/or application (from low-end e-scooters to high-end passenger vehicles). The cathode types range from ultra-high-nickel (LNO) and high-nickel chemistries (NCM811) to low-nickel (NCM217) and no-nickel alternatives (LFP). Currently, EVs mainly utilize Nickel-Cobalt-Manganese (NCM) and Nickel-Cobalt-Aluminum (NCA) cathode chemistries due to their high energy densities. Benchmark Minerals forecasts that **NCM chemistry will account for 68% of the cathode market in 2025**.

For example, Tesla utilizes multiple cathode chemistries through its battery suppliers: Panasonic (NCA), LG Chem/LG Energy Solutions (NCM811) and Contemporary Amperex Technology Co Ltd aka CATL (LFP). Furthermore, in China, LFP-cathode batteries account for over 51% of EV battery production.<sup>ii</sup>

## Nickel Products and the Value Chain

After **nickel ore** is mined, it is crushed and processed into **nickel concentrate**, after which it is upgraded/refined into various standard **intermediate nickel products**, such as **MHP** (Mixed Hydroxide Precipitate), **nickel sulfate** (NiSO<sub>4</sub>) and **NCM** (NiCoMn) concentrate **precursors** (shown below), along with matte (nickel-iron sulfide), MSP (Mixed Sulfide Precipitate) and various nickel salts, such as nickel hydroxide, mixed nickel-cobalt hydroxide and nickel carbonate.

*Illustration of Nickel Product Payability vs Metal Spot Price*



Source: SMM (Shanghai Metals Market), Benchmark Minerals Intelligence

Blackstone Minerals Presentation June 2021

Each **intermediate nickel product is priced differently**. Historically, **MHP** has been priced at roughly 80% of the LME price for nickel metal (a **20% discount**), while **nickel sulfate** has commanded a **5%-to-20% premium**.

**NCM 811 Premium Over Nickel Metal Prices**



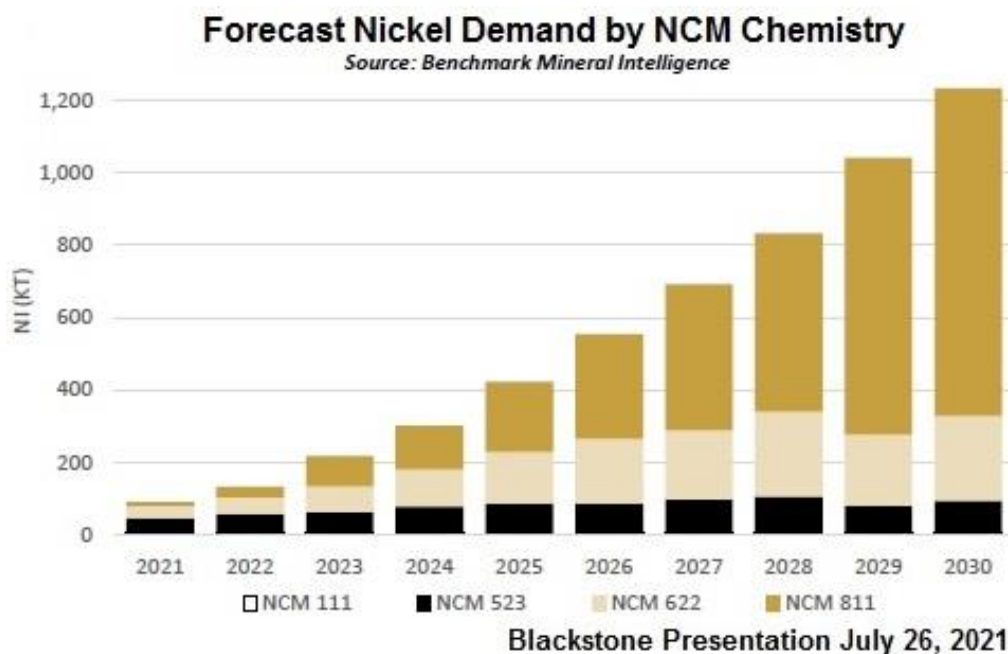
Source: BSX Analysis of SMM (Shanghai Metals Market) data

Blackstone Minerals Presentation February 2022

In March 2021, Blackstone provided an update of **management's corporate strategy** that included the ability to produce a range of intermediate nickel products based on the refinery's expanded flexible design. The planned downstream facility will be able to process nickel concentrate,

upgrading it to MHP, and further treat this intermediate product to produce premium, high-value nickel products, such as **NCM Precursor products**, including **NCM811**, which has commanded a significant **20%-to-60% premium to nickel metal price** over the last 14 months.

In an effort to increase energy density and also reduce a dependence on high-cost cobalt, battery manufacturers are migrating toward NCM811 cathodes. Consequently, Benchmark Minerals Intelligence is forecasting that **NCM811** will grow faster than other NCM chemistries and **achieve market share dominance**. According to TerraFame, the market share of NCM622 batteries was 30%, with NCM811 rapidly gaining share with 12% as of mid-2021 versus 7% a year earlier.

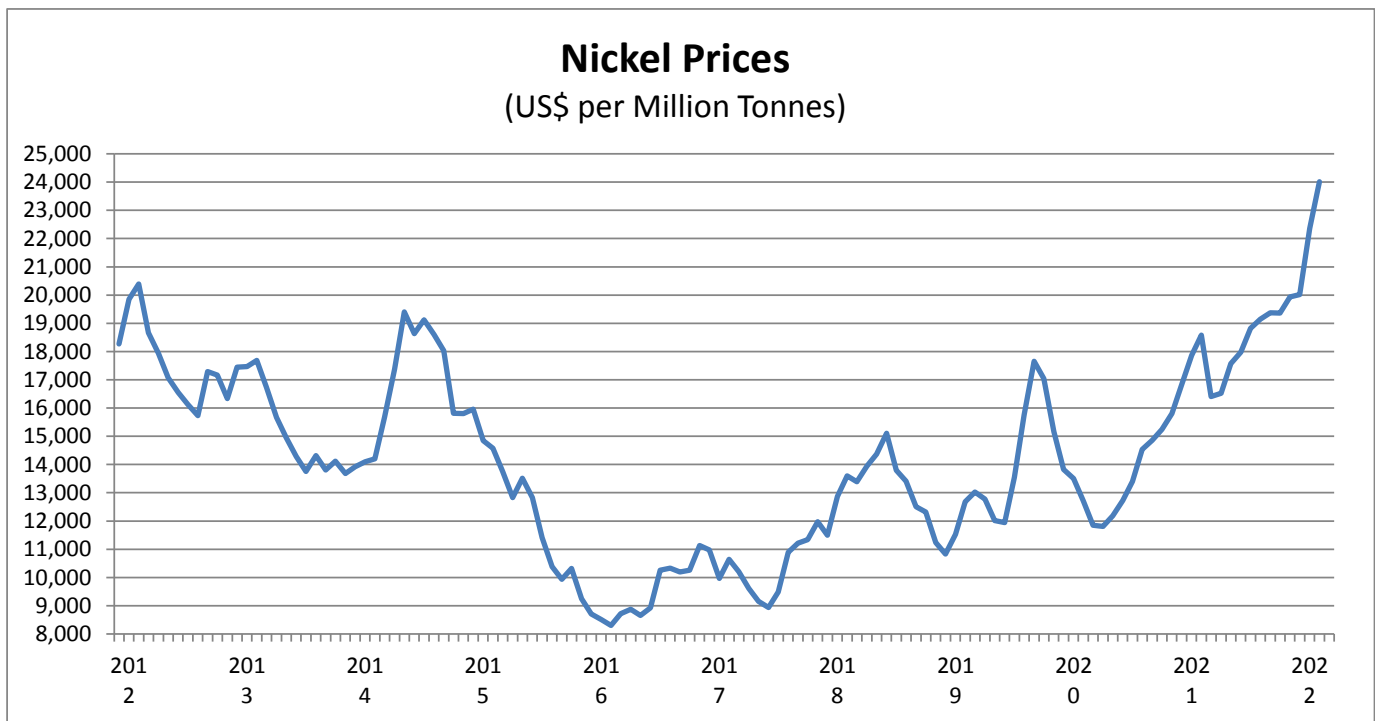


## Nickel Pricing

Nickel metal prices bottomed around \$8,300 per tonne in early 2016 as LME stocks peaked slightly above 500,000 tonnes. **LME inventories continued to decline to below 200,000 tonnes through September 2019** as some nickel mines were idled, including the Ravensthorpe Mine in Western Australia in 2017, along with reduced mine output from the Philippines. In addition, nickel consumption exceeded nickel mine supply starting in 2016 through 2019.

Nickel prices plummeted from \$17,657 per tonne in September 2019 to \$11,804 in April 2020 as LME inventories expanded from 157,000 to roughly 230,000 tonnes. However, demand for nickel recovered in the second half of 2020 due to rising demand driven to increasing EV sales, which drove the price of nickel to \$18,500 in February 2021.

After a brief correction in March, nickel prices have rallied from \$16,400 to over \$19,100 in August as demand increased for stainless steel and EV nickel-cathode batteries (first half 2021 EV sales increased 168% YOY to 2,650,000). In addition, LME stock has declined from approximately 261,000 tonnes in April to roughly 189,000 tonnes in August. This increased demand that reduced inventories, along with the Russian invasion of the Ukraine, has stimulated higher prices of nickel in order to incentivize the development of incremental nickel projects.



## VALUATION

As a junior nickel company, Blackstone Minerals cannot be valued on a revenue, earnings or cash flow basis. The goal of management's strategy is to increase shareholders' value through the development of the upstream and downstream components of company's Ta Khoa Project.

More sophisticated methodologies based on market capitalization-to-reserves, average value per tonne, per-pound costs or cash profit margins per pound produced also are not germane. However, once the Definitive Feasibility Studies are completed and the financings for both components are secured, we will be able to utilize a resource valuation methodology that calculates a per share value of attributable resources for the upstream component, along with a Discounted Cash Flow (DCF) model for the downstream component. In the meantime, an alternative valuation technique based on book value is an appropriate alternative, especially in comparison to junior nickel companies that share similar attributes to Blackstone's.

Book value of a **junior nickel development company** represents the equity capital that has been raised to acquire the minerals rights on properties and to conduct exploration and development programs. An amalgamation of this information is encapsulated within the raised capital total, including the quality of the properties (both in terms of mineral potential and political stability), exploration results from drilling programs and the steps of development process that management has initiated /completed (Scoping Study, Pre-Feasibility Study, Metallurgical Test Work, Environmental Impact Statement, Baseline Studies and Definitive Feasibility Study). Therefore, book value captures the complex valuation of the company's base nickel resource value by relatively sophisticated investors (many with expert knowledge of junior nickel companies in the development phase both in terms of upstream and downstream projects). Hence, we find the use of book value is a valid and appropriate metric by which to determine a junior nickel company's valuation.

Broadly speaking, the public nickel companies can be grouped into three segments: producers, development companies and exploration companies. Producers are actively mining and generating revenues. Exploration companies are prospecting and/or drilling to establish mineral resources. In



between these two segments are the development companies that already have established resources and are advancing through the process of bringing a mine into operation, generally from the point of initiating a Scoping Study to the actual construction of a permitted mine. The comparable companies to Blackstone Minerals fall into this developmental category.

Further, the comparable companies have been narrowed through quantitative factors, particularly those with a market capitalization over \$200 million and trading above \$0.10 per share. This process captures a range of well-funded junior nickel development companies, which are listed in the table above. Currently, the P/B valuation range of these comparable companies is between 3.66 and 8.10. With the expectation that Blackstone's stock will attain a mid-first quartile P/B ratio of 7.57, our **comparable analysis valuation price target is US\$1.06.**

<i>Industry Comparables</i>	% Chg YTD	Ticker	Exch.	OTC Ticker	Project Country	Phase	Mkt Cap	
							Local Curr. (\$ mil.)	Price/ Book
<b>Blackstone Minerals Ltd</b>	-22.9%	BLSTF	OTCQX		Vietnam	DFS	145.6	2.32
<b>Blackstone Minerals Ltd</b>	-26.5%	BSX	ASX		Vietnam	DFS	186.6	2.23
<b>NICKEL SULFIDE COMPANIES</b>								
Canada Nickel Company Inc.	-22.6%	CNC	TSXV	CNIKF	Canada	PEA	272.4	5.76
Horizonte Minerals Limited	9.1%	HRZ	TSX	HZMMF	Brazil	PFS	431.5	7.66
Mincor Resources NL	23.2%	MCR	ASX	MCRZF	Australia	DFS	1,040.0	8.10
Panoramic Resources Limited	11.1%	PAN	ASX	PANRF	Australia	DFS	635.8	3.66
Poseidon Nickel Limited	-11.8%	POS	ASX	PSDNF	Australia	SS	268.6	4.64
<b>Industry Mean</b>	<b>1.8%</b>						<b>529.7</b>	<b>5.96</b>
S&P 500 Index	-5.2%	^SPX:US	NYSE	N/A	N/A	N/A	N/M	4.38

## RISKS

- As with almost all junior resource exploration companies, currently Blackstone Minerals does not generate sufficient cash flow to adequately fund its developmental and exploration activities and is in need of additional capital to continue pursuing management's strategy. Nevertheless, the company has effectively funded its operations and initiatives to date.
- Shares outstanding increased significantly in fiscal 2018 (+264%), fiscal 2019 (+27.7%), fiscal 2020 (+105%) and fiscal 2021 (+27.8%) as capital from equity financings have funded the company's exploration and developmental activities, along with general corporate expenses.
- As with any metals company, the price of the targeted mineral is beyond management's control, in the case of Blackstone Minerals, primarily the price of nickel. Consequently, any significant movements in the price of nickel would materially affect the outlook of the company, more so for the plans of the upstream business.

## BALANCE SHEETS

<b>Blackstone Minerals Limited</b>					
(in AUD\$ except share data)	FY 2018	FY 2019	FY 2020	FY 2021	1H FY 2022
Period ending	6/30/2018	6/30/2019	6/30/2020	6/30/2021	12/31/2021
<b>ASSETS</b>					
Cash and cash equivalents	3,064,947	307,532	6,786,541	21,800,914	60,150,658
Accounts receivable	241,285	174,638	2,226,050	1,050,318	1,880,445
<b>Total Current Assets</b>	<b>3,306,232</b>	<b>482,170</b>	<b>9,012,591</b>	<b>22,851,232</b>	<b>62,031,103</b>
Trade and other receivables	96,183	96,183	114,840	575,169	6,839,496
Other financial assets	-	-	-	-	10,635,557
Property, plant and equipment	29,095	16,472	11,512,910	11,096,604	104,590
Intangible Assets	-	-	-	-	5,870,237
Exploration and evaluation expenditures	10,127,010	10,204,152	7,931,498	5,800,000	494,996
Right-of-Use Assets	-	-	386,179	278,640	4,725,000
Investment in Associate	-	-	-	-	278,640
<b>TOTAL ASSETS</b>	<b>13,558,520</b>	<b>10,798,977</b>	<b>28,958,018</b>	<b>40,601,645</b>	<b>90,979,619</b>
Trade and other payables	911,703	221,727	6,823,462	4,381,517	3,703,552
Provisions	53,811	72,890	901,713	390,195	736,267
Lease Liabilities	-	-	136,722	158,245	243,488
<b>Total Current Liabilities</b>	<b>965,514</b>	<b>294,617</b>	<b>7,861,897</b>	<b>4,929,957</b>	<b>4,683,307</b>
Provisions	-	-	465,980	425,378	425,378
Lease liabilities	-	-	258,804	138,025	138,025
Deferred Tax Liabilities	-	-	2,337,918	2,225,478	2,225,478
<b>Non-Current Liabilities</b>	<b>0</b>	<b>0</b>	<b>3,062,702</b>	<b>2,788,881</b>	<b>2,788,881</b>
<b>TOTAL LIABILITIES</b>	<b>965,514</b>	<b>294,617</b>	<b>10,924,599</b>	<b>7,718,838</b>	<b>7,472,188</b>
<b>SHAREHOLDERS' EQUITY</b>					
Issued equity	21,338,801	23,377,083	38,171,741	61,360,348	127,184,515
Reserves	558,355	613,687	1,353,979	4,244,702	5,038,967
Accumulated losses	(9,304,150)	(13,486,410)	(21,380,716)	(35,839,819)	(47,391,225)
Non-controlling interest	-	-	(111,585)	3,117,576	(1,324,826)
<b>Total Stockholders' Equity</b>	<b>12,593,006</b>	<b>10,504,360</b>	<b>18,033,419</b>	<b>32,882,807</b>	<b>83,507,431</b>
<b>TOTAL LIABILITIES &amp; STOCKHOLDERS' EQ</b>	<b>13,558,520</b>	<b>10,798,977</b>	<b>28,958,018</b>	<b>40,601,645</b>	<b>90,979,619</b>
Ordinary shares outstanding	96,204,766	122,879,766	251,768,816	331,832,190	449,597,565

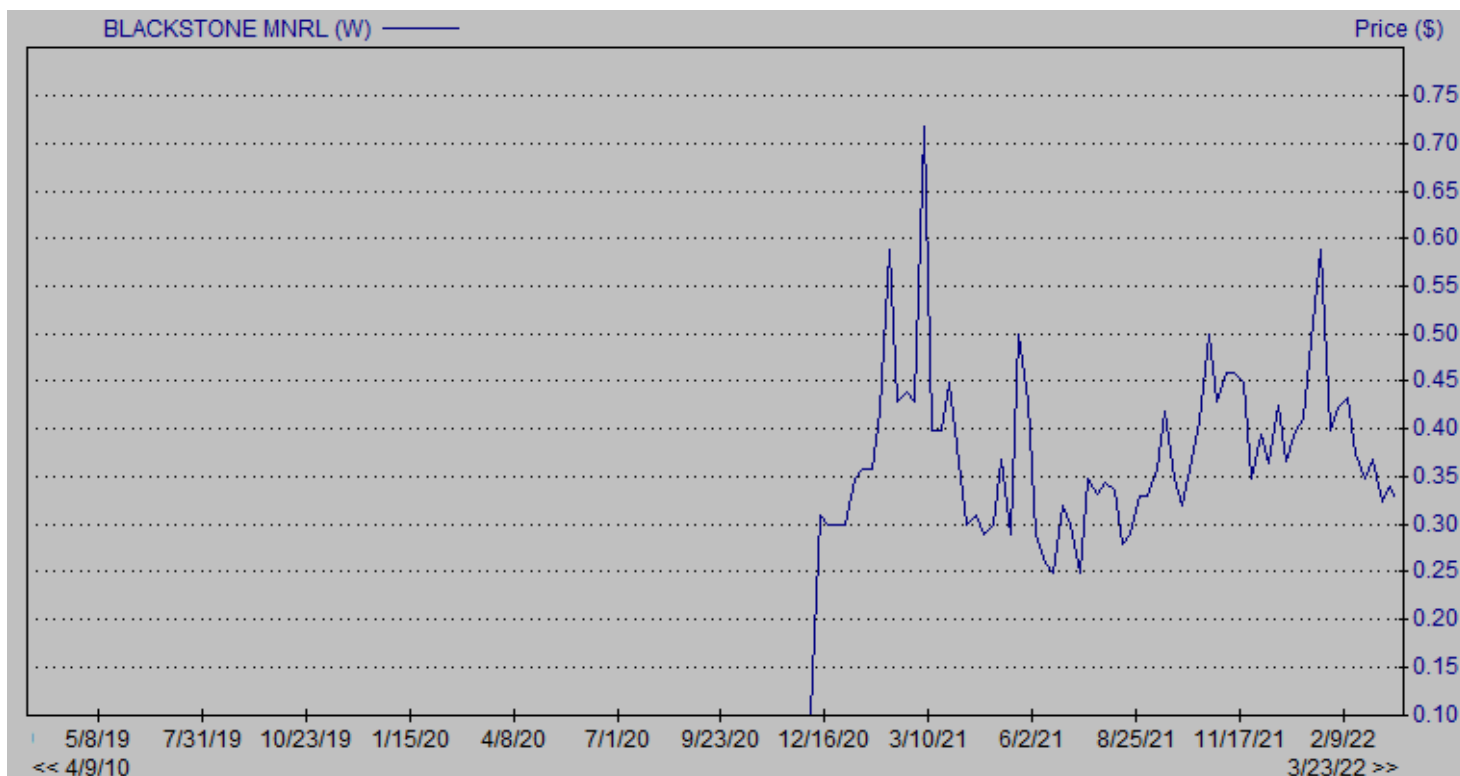
## ANNUAL INCOME STATEMENTS

<b>Blackstone Minerals Limited</b>					
Income Statement	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022 E
(in AUD\$ except share data)	6/30/2018	6/30/2019	6/30/2020	6/30/2021	6/30/2022
Revenue from continuing operations	46,469	12,345	46,333	77,247	49,306
Other income	-	88,635	539,699	744,202	688,046
<b>Total Revenues</b>	<b>46,469</b>	<b>100,980</b>	<b>586,032</b>	<b>821,449</b>	<b>737,352</b>
Administration costs	(580,706)	(594,922)	(1,338,551)	(2,905,051)	(5,906,214)
Consultancy expenses	(135,240)	(316,063)	(700,464)	(1,139,531)	(1,761,866)
Employee benefits expense	(560,546)	(573,751)	(677,666)	(1,246,116)	(2,766,176)
Share based payments expense	(4,504,934)	(335,680)	(1,752,605)	(2,570,248)	(3,669,915)
Occupancy Expenses	(65,117)	(70,030)	(46,104)	(63,515)	(87,192)
Compliance and regulatory expenses	(75,994)	(81,138)	(103,068)	(187,400)	(408,475)
Insurance expenses	(20,900)	(40,889)	(36,990)	(49,684)	(95,527)
Exploration expenditures	(2,511,782)	(2,245,881)	(2,635,304)	(8,934,772)	(16,230,427)
Depreciation expense	(22,331)	(15,042)	(100,908)	(725,197)	(901,892)
Depreciation on right of use assets	-	-	(126,468)	(121,300)	(157,821)
Interest expense on lease liabilities	-	-	(23,810)	(82,575)	(13,400)
Finance and interest costs	(7,910)	(9,844)	(8,990)	(17,626)	(25,368)
Effect of Deconsolidation of Subsidiary	-	-	-	-	4,677,850
Share of loss -equity-acc'ted inv.	-	-	-	-	(403,387)
Provision for Impairment of Inv.	-	-	-	-	(1,346,613)
Impairment of Explor. & Eval. Assets	-	-	(2,727,010)	(1,600,000)	0
Gain from bargain purchase	-	-	1,722,326	0	0
<b>Expenses</b>	<b>(8,485,460)</b>	<b>(4,283,240)</b>	<b>(8,555,612)</b>	<b>(19,643,015)</b>	<b>(29,096,423)</b>
<b>Pre-tax Income (loss)</b>					<b>(28,359,071)</b>
Income tax benefit (expense)					207,425
<b>Net Income (loss)</b>	<b>(8,438,991)</b>	<b>(4,182,260)</b>	<b>(7,969,580)</b>	<b>(18,821,566)</b>	<b>(28,151,646)</b>
Non-controlling interest		0	(75,274)	(4,250,023)	(1,063,491)
Net Loss attrib. for BLSTF shareholders	<b>(8,438,991)</b>	<b>(4,182,260)</b>	<b>(7,894,306)</b>	<b>(14,571,543)</b>	<b>(27,088,155)</b>
Basic & diluted (loss) per BLSTF share	<b>(0.126)</b>	<b>(0.040)</b>	<b>(0.041)</b>	<b>(0.047)</b>	<b>(0.072)</b>
Wgted. Avg. Ord. Shares Out. - diluted	66,976,119	104,556,500	192,544,049	308,845,672	375,021,303

## HALF INCOME STATEMENTS

<b>Blackstone Minerals Limited</b>						
Income Statement (in AUD\$ except share data)	1H 2021 12/31/2020	2H 2021 6/30/2021	FY 2021 6/30/2021	1H 2022 12/31/2021	2H 2022 E 6/30/2022	FY 2021 E 6/30/2022
Revenue from continuing operations	60,721	16,526	77,247	14,306	35,000	49,306
Other income	50,000	694,202	744,202	315,945	372,101	688,046
<b>Total Revenues</b>	<b>110,721</b>	<b>710,728</b>	<b>821,449</b>	<b>330,251</b>	<b>407,101</b>	<b>737,352</b>
Administration costs	(1,018,410)	(1,886,641)	(2,905,051)	(2,906,214)	(3,000,000)	(5,906,214)
Consultancy expenses	(631,143)	(508,388)	(1,139,531)	(861,866)	(900,000)	(1,761,866)
Employee benefits expense	(492,553)	(753,563)	(1,246,116)	(1,366,176)	(1,400,000)	(2,766,176)
Share based payments expense	(1,171,869)	(1,398,379)	(2,570,248)	(1,869,915)	(1,800,000)	(3,669,915)
Occupancy Expenses	(32,972)	(30,543)	(63,515)	(42,192)	(45,000)	(87,192)
Compliance and regulatory expenses	(69,428)	(117,972)	(187,400)	(208,475)	(200,000)	(408,475)
Insurance expenses	(21,484)	(28,200)	(49,684)	(45,527)	(50,000)	(95,527)
Exploration expenditures	(3,488,121)	(5,446,651)	(8,934,772)	(8,230,427)	(8,000,000)	(16,230,427)
Depreciation expense	(75,184)	(650,013)	(725,197)	(451,892)	(450,000)	(901,892)
Depreciation on right of use assets	(60,466)	(60,834)	(121,300)	(78,671)	(79,150)	(157,821)
Interest expense on lease liabilities	(9,588)	(72,987)	(82,575)	(6,700)	(6,700)	(13,400)
Finance and interest costs	(3,980)	(13,646)	(17,626)	(12,368)	(13,000)	(25,368)
Effect of Deconsolidation of Subsidiary	-	-	-	4,677,850	0	4,677,850
Share of loss -equity-acc'ted inv.	-	-	-	(403,387)	0	(403,387)
Provision for Impairment of Inv.	-	-	-	(1,346,613)	0	(1,346,613)
Impairment of Explor. & Eval. Assets	0	(1,600,000)	(1,600,000)	0	0	0
Gain from bargain purchase	0	0	0	0	0	0
<b>Expenses</b>	<b>(7,075,198)</b>	<b>(12,567,817)</b>	<b>(19,643,015)</b>	<b>(13,152,573)</b>	<b>(15,943,850)</b>	<b>(29,096,423)</b>
<b>Pre-tax Income (loss)</b>	<b>(6,964,477)</b>	<b>(11,857,089)</b>	<b>(18,821,566)</b>	<b>(12,822,322)</b>	<b>(15,536,749)</b>	<b>(28,359,071)</b>
Income tax benefit (expense)	-	112,440	112,440	207,425		207,425
<b>Net Income (loss)</b>	<b>(6,964,477)</b>	<b>(11,744,649)</b>	<b>(18,709,126)</b>	<b>(12,614,897)</b>	<b>(15,536,749)</b>	<b>(28,151,646)</b>
Non-controlling interest	(282,320)	(3,967,703)	(4,250,023)	(1,063,491)		(1,063,491)
Net Loss attrib. for BLSTF shareholders	<b>(6,682,157)</b>	<b>(7,776,946)</b>	<b>(14,459,103)</b>	<b>(11,551,406)</b>	<b>(15,536,749)</b>	<b>(27,088,155)</b>
Basic & diluted (loss) per BLSTF share	<b>(0.023)</b>	<b>(0.024)</b>	<b>(0.047)</b>	<b>(0.033)</b>	<b>(0.039)</b>	<b>(0.072)</b>
Wgted. Avg. Ord. Shares Out. - diluted	290,528,565	321,832,190	308,845,672	350,042,606	400,000,000	375,021,303

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<sup>i</sup> Benchmark Launches Nickel Industry's First Mixed Hydroxide Precipitate (MHP) Price, August 25, 2020, <https://www.benchmarkminerals.com/membership/benchmark-launches-nickel-industrys-first-mixed-hydroxide-precipitate-mhp-price/>

<sup>ii</sup> Cathode and precursor materials: Can success in the Chinese LFP battery market be mimicked in the European and North American EV markets?, August 12, 2021, <https://roskill.com/news/cathode-and-precursor-materials-can-success-in-the-chinese-lfp-battery-market-be-mimicked-in-the-european-and-north-american-ev-markets/>