

# Redesigning Ta Khoa towards a globally significant nickel sulphide project

Company Profile by As at 30 October 2019



## COMPANY OVERVIEW / FLAGSHIP PROJECT

Blackstone Minerals Ltd (ASX: BSX) is a mineral exploration and development company, which acquired in May 2019 a 90% interest in the Ta Khoa nickel project in Vietnam. The Ta Khoa project includes the Ban Phuc nickel sulphide mine, which successfully operated from 2013 to 2016, when it shut due to low nickel prices (~US\$8,000/t).

Current price is now ~\$17,000/t

#### KEY ELEMENTS OF STRATEGY

The strategy consists of the following three key elements:

- 1. Delineate a large disseminated sulphide mineral resource
- 2. Increase the plant throughput from 450ktpa to 2mtpa
- 3. Add a Pressure Oxidation circuit to produce nickel sulphate

#### KEY OUTCOMES IF SUCCESSFUL

- 1. Globally significant mineral resource / project
- 2. Project restart on larger scale and longer mine life
- Value added nickel product to attract Li-ion battery raw materials manufacturers

#### TA KHOA ACQUISTION TERMS

- 12-month exclusive binding option agreement
- Quarterly option payments of US\$100,000
- Exercise of option by issuing A\$1,000,000 in BSX shares
- ⇒ Inexpensive acquisition and with hindsight quite timely, before the announcement in Aug 2019 of the earlier than scheduled Indonesian ore export ban to start in Jan 2020

CORPORATE OVERVIEW (AUD)		
Shares	191.7 Million ordinary fully paid shares	
Options	12 Jan 2020: 2 million \$0.20 unlisted options 6 Nov 20: 750k \$0.001 director performance options* 26 Mar 20: 1.7m \$0.001 employee perf. options* 17 Mar 21: 10 million \$0.10 advisor options 30 Sep 24: 11 million \$0.001 directors perf. options* * subject to vesting conditions	
Share Price	\$0.125	
Market Capitalisation	\$24 million	
Cash	\$4.9 million as at 30 September 2019 \$4.5 million were raised at \$0.15 in September 2019  ⇒ Fully funded for current drilling program and scoping study	

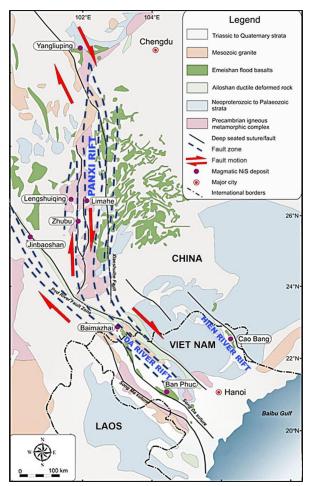


⇒ Positive response from the market in terms of both share price appreciation and increased liquidity

### **INVESTMENT HIGHLIGHTS**

Geology

 Ta Khoa located in Song Da Rift, which is a major crustal suture zone continuing north into China, where it is associated with similar Ni-Cu-PGE deposits: Baimazhai, Qungquanshan, Limahe and Yangliuping.



Previous	Previous exploration and mining focused on high  grade massive sulphide using (ACC)
Drilling	grade massive sulphide veins (MSV)
Current	Targeting the Disseminated Sulphide (DSS) mineralisation
Drilling	mineralisation
Program	• 56 holes for 12,000m, 2,000m drilled so far
	• Increasing to 4 rigs (2 BSX, 2 contract)
	BSX started drilling the deeper part of the
	disseminated sulphide mineralisation with results
	exceeding expectations in terms of grades and
	widths
	As drilling move towards the shallower part of the
	DSS, lower nickel grades, but higher Platinum
	Group Elements (PGE) grades are expected
Mineral	Terra Studio estimates conservatively a range of
Resource	<b>20-50 Mt</b> @ <b>0.5-0.6% Ni</b> , plus PGE, for a nickel
	metal content ranging from 100,000 tonnes to
	300,000 tonnes, see chart on next page
Exploration	Beyond the mineral resource to be delineated
Potential	through the current strategy, the Ta Khoa project
	contains 12 nickel prospects for high grade
	massive sulphide veins, most with economic drill
	hole intercepts
	Beyond the 50 km² tenement holding, 150 km² of
	ground is reserved to BSX by the Vietnamese

government



Scott Williamson, Managing Director +61 416 967 329 scott@blackstoneminerals.com.au www.blackstoneminerals.com.au



#### POTENTIAL NICKEL SULPHIDE MINERAL RESOURCE BENCHMARKING 10.0 Mines South Kambalda **Projects** Eagle Venus Kabanga Sudbury, Glencore Nickel Grade (% Ni) - Log Scale Voisey's Bay Savannah Nova Grasset Fisher East Jinchuan Lanfranchi Lake Johnston Nunavik Cosmos Honeymoon Well Windarra 1.0 Polar, Nornickel Avebury Duketon Leinster DSS Kola, Nornickel Ban Phuc (high estimate) Lynn Lake Yakabindie Mt Keith Kingash Radio Hill Dumont Nickel King Zebediela Ban Phuc (low estimate) Kevitsa Selkirk Turnagain Phoenix Ronnbacken Decar West Musgrave 0.1 100 10,000 10 1,000 Mineral Resources (million tonnes) - Log Scale

Vietnam	<ul> <li>Tailings facility with excess capacity and expansion options</li> <li>Internationally certified laboratory (SGS)</li> <li>250-person camp</li> <li>US\$136m invested by previous owner</li> <li>Established mining industry (45 mines)</li> <li>Ban Phuc identified as project of national significance</li> <li>Trans-Pacific Partnership to eliminate export taxes</li> <li>Country opening up to foreign investment</li> </ul>		
COMPANY, MINES AND PROJECTS PEERS			
Company	Cassini Resources Ltd (ASX: CZI), market capitalisation \$35m, cash \$8m, developing the West Musgrave Ni-Cu project (Western Australia) in JV 30/70 with Oz Minerals Ltd (ASX: OZL). In Aug 2016, OZL committed \$36m of exploration spend to progressively reach a 70% interest Mineral resources: Nebo-Babel deposit: 238 Mt @ 0.35% Ni, 0.38% Cu PFS expected in first quarter 2020		
Mines	BHP Leinster DSS: 168 Mt @ 0.52% Ni		
	BHP Mt Keith: 225 Mt @ 0.53% Ni (all DSS)		

HIGHLIGHTS (continued)

Access to competitive hydro grid power

Australian standards

450 ktpa concentrator plant built by and to

Infrastructure

KEY RISKS AND MITIGANTS		
Geological	<ul> <li>While exploring for high grade massive sulphide is difficult and costly, targeting disseminated sulphide mineralisation is cost-effective and can underpin a long-life project (20+ years)</li> </ul>	
Technical (mining, processing, completion, etc)	<ul> <li>Overall technical risks are significantly mitigated by the previous operation up to the production of nickel concentrate</li> <li>The pressure oxidation (POx) process treating the nickel concentrate is commonly and successfully used to process base metal concentrates</li> <li>⇒ POx should not be confused with the HPAL process, which treats lateritic ore in its entirety</li> </ul>	
Financial	<ul> <li>Plant upgrade including POx circuit could be in the order of US\$100 million</li> <li>BSX is looking to mitigate the financing risk by establishing a joint venture on the downstream processing circuit with a Li-ion battery raw material manufacturer</li> </ul>	
Market	<ul> <li>The nickel market outlook is excellent:         <ul> <li>Successive deficits since 2015</li> <li>Low official inventories</li> <li>Consistent growth from the stainless steel market (&gt;5% CAGR over 50+ years)</li> <li>Booming market demand from the battery sector although from a currently low base</li> </ul> </li> <li>Please visit Terra Studio's website to access a presentation on the nickel market outlook www.terrastudio.biz</li> </ul>	