

ASX ANNOUNCEMENT

05 September 2023

ASX: BSX

## Developing Vietnam Rare Earth Supply Chain Update

Blackstone Minerals Limited ("Blackstone" or the "Company") is pleased to provide an update on the development of a Rare Earth project in the north of Vietnam.

Further to the signing of the Memorandum of Understanding ("MOU") with Vietnam Rare Earths Joint Stock Company ("VTRE"), the Company is pleased to advise that the Parties have now entered into a 12 month Binding Exclusivity Agreement in which the Parties agree to work exclusively on advancing the initiatives as outlined in the MOU.

### **Immediate Focus**

The following items will be the immediate focus for the partnership;

- Negotiate and finalise binding termsheets on the commercial model and structuring for the business in Vietnam;
- Secure mining concession(s) that are available in the Dong Pao region. The concession(s) will be made available through a process conducted by the Ministry of Natural Resources and Energy ("MONRE"). To be invited into the process, companies will need to demonstrate capability and experience across the full value chain from geology through to refining. The Parties are well positioned to demonstrate this in-country capability and expertise;
- Blackstone will make the Company's concentrator and testing facilities available to undertake flotation testwork on the Dong Pao ores. Laboratory scale testwork undertaken by VTRE has indicated that the Ban Phuc Nickel Mine ("BPNM") concentrator could be suitable for concentrating the Dong Pao rare earths;
- In addition to focusing on Dong Pao, the Parties will also investigate the option to secure ionic clay deposits in Yen Bai Province, with an immediate focus on Van Yen. The Parties are committed to investigating current-sustainable leaching technology that adheres to the Parties' high ESG standards. It is our collective vision to demonstrate to Vietnam, and the larger region, a more sustainable approach to extracting rare earth elements ("REE") from ionic clay deposits. VTRE has confirmed that precipitates from the leaching process can be refined through the VTRE Refinery located outside of Hanoi.

### **Well positioned to develop a world class Rare Earth Supply Chain**

Confirmed by recent reports<sup>1</sup> "*Vietnam aims to raise raw rare earths output to 2 million tonnes a year by 2023*" and Reuters article dated 22 August 2023: "*Rare earths magnet firms turn to Vietnam in China hedge*", Vietnam is firming as a creditable, meaningful and alternative supplier of rare earths into the International Market.

Footnote 1: Reuters article dated 25 July 2023 and 22 August 2023, accessed 4 September 2023 from <https://www.reuters.com/markets/commodities/vietnam-aims-raise-annual-raw-rare-earths-output-2-mln-tyr-by-2030-2023-07-25/> and <https://www.reuters.com/markets/commodities/rare-earths-magnet-firms-turn-vietnam-china-hedge-2023-08-22/>

Blackstone believes that the partnership has strategic advantages that can help expedite the development of the REE supply chain in Vietnam which would otherwise take many years to develop, these strategic advantages include;

Proven Technology	<ul style="list-style-type: none"> <li>• A long lead time activity in developing rare earth projects is the development of a refinery flowsheet which is usually tailored to the ore mineralogy and requires years of testwork and analysis.</li> <li>• The VTRE refinery flowsheet has tested and confirmed that it is able to process Dong Pao concentrates and other locally sourced Heavy Rare Earths.</li> <li>• The VTRE refinery has been in operations for over 12 years and has established itself as a reliable and consistent producer of rare earth oxides.</li> </ul>
Assets Available	<ul style="list-style-type: none"> <li>• Preliminary laboratory testwork indicates that the Ban Phuc Nickel Mine concentrator could be suitable in concentrating Dong Pao ores.</li> <li>• Existing spare equipment and assets currently located at BPNM can be repurposed to Lai Chau Province.</li> </ul>
Familiarity with operating in Vietnam	<ul style="list-style-type: none"> <li>• VTRE is a Vietnamese company and has operated a successful rare earth business for over 12 years.</li> <li>• Blackstone has been in Vietnam for more than 4 years and has demonstrated the capability to explore, secure mining licenses, develop a capable Vietnamese Management team and advance permitting.</li> <li>• Both VTRE and Blackstone are familiar with the corporate structures required to advance the partnership and have a good understanding of the permitting and licensing process to get the Dong Pao concessions into operations.</li> </ul>
Supply Chain Knowledge & Experience	<ul style="list-style-type: none"> <li>• VTRE has a deep understanding of the rare earth business.</li> <li>• Blackstone has considerable mining and concentrating experience and has established a high standard for ESG management.</li> <li>• The parties have a deep understanding of the full supply chain of rare earths from geology through to downstream processing.</li> <li>• The parties have a competitive advantage with many years of operational experience generating the knowledge, skills and capability to progress the strategy ahead of our peers.</li> </ul>
"Ready to Go"	<ul style="list-style-type: none"> <li>• With the recent approval of the National Mineral Master Plan, Vietnam will now look to expedite the issuing of mining concessions and the development of the country's rare earth business.</li> </ul>

- The partnership is ready to participate in the MONRE process and can move nimbly to establish the necessary corporate structures.

### **Additional Details on the Dong Pao Rare Earths Region**

The Dong Pao REE deposits were initially discovered in 1959 and exploratory activities between 1965 and 1969 resulted in the identification of 60 individual high grade REE mineralised bodies up to 1 km long and 500 m wide within a 15 km<sup>2</sup> syenite (alkali) intrusion. The main REE minerals at Dong Pao are bastnaesite and parisite, additionally significant amounts of fluorite and barite. Despite significant historic geological and resource definition work, as well as the confirmation that the REE mineralogy (bastnaesite and parisite) is suitable for conventional processing methods, the Dong Pao deposits remain unexploited. In 1990 the United Nations issued a publication reporting up to ~7 million tonnes of total rare earth oxide (TREO) for the Dong Pao region with reported grades of up to 30% TREO<sup>^</sup>. There has been a considerable amount of additional exploration since the United Nations publication and the potential of Dong Pao may be significantly higher than reported in 1990.

<sup>^</sup>Atlas of Mineral Resources of the ESCAP Region, Volume 6, Viet Nam, Explanatory Brochure, United Nations Economic and Social Commission for Asia and the Pacific in Co-operation with the General Department of Mines and Geology of Viet Nam, 1990

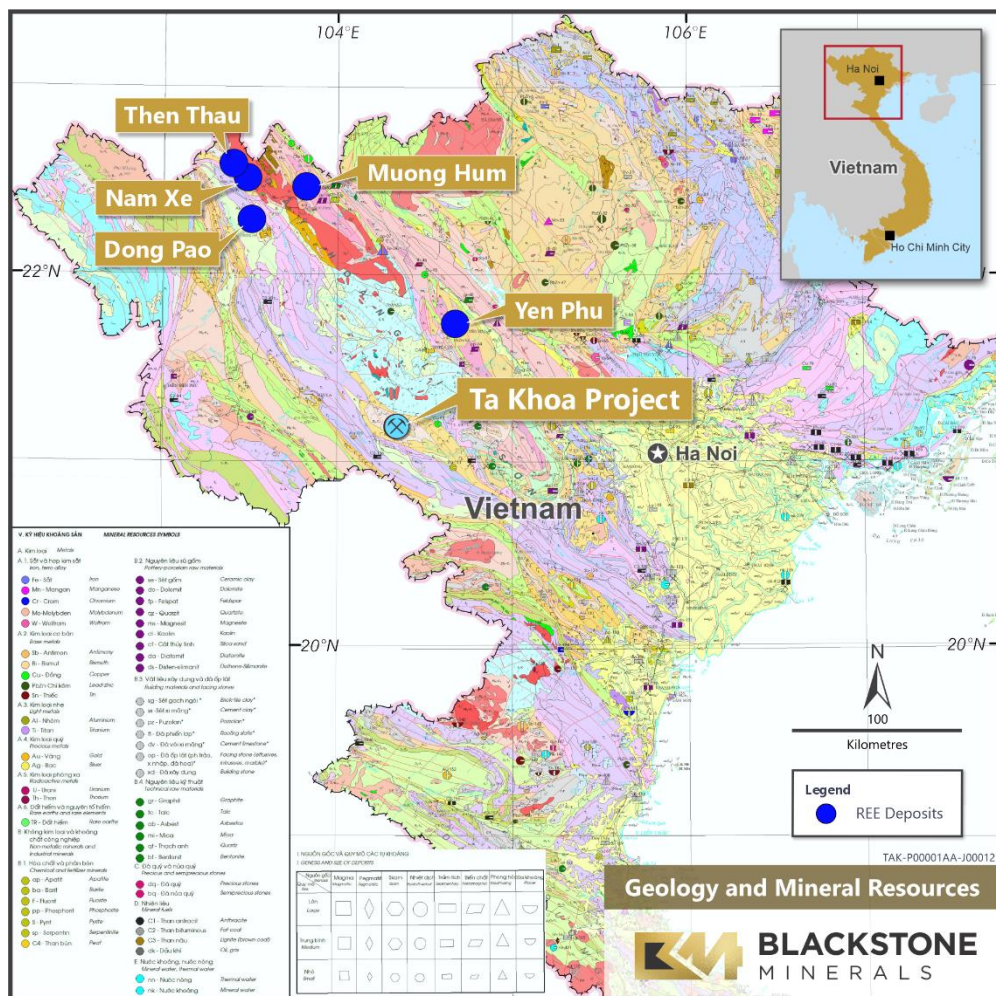


Figure 1. REE deposits of Vietnam relative to the Ta Khoa Project Location

Blackstone Minerals' Managing Director, Scott Williamson, commented:

*"Dong Pao represents one of the most significant undeveloped and potentially highest-grade REE deposits in the world. The Dong Pao REE mineralogy is highly favourable to the established mineral processing routes of this partnership, bringing together the skill sets that will enable the complete pathway from in-the-ground mineral to REE Oxides entirely within Vietnam. The proposed mining and process route is expected to have one of the lowest environmental and social footprints globally, which will be a major positive achievement for the production of high strength REE magnets that are eagerly sort after for the transition to renewable energy technologies and transportation."*

Authorised by the Managing Director on behalf of the Board.

For more information, please contact,

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**About Blackstone**

Blackstone Minerals Ltd (ASX: BSX / OTCQX: BLSTF / FRA: B9S) is focused on building an integrated battery metals processing business in Vietnam that produces Nickel:Cobalt:Manganese precursor products for Asia's growing lithium-ion battery industry.

Blackstone will produce the lowest emission precursor as verified by Minviro and the Nickel Institute (refer ASX announcement 15 September 2022).

The existing business has a modern nickel mine built to Australian standards, which successfully operated as a mechanised underground nickel mine from 2013 to 2016. This will be complemented by a larger concentrator, refinery and precursor facility to support integrated production in-country.

To unlock the flowsheet, the Company is focused on a partnership model and is collaborating with groups who are committed to sustainable mining, minimising the carbon footprint and implementing a vertically integrated supply chain.

The Company's development strategy is underpinned by the ability to secure nickel concentrate and Ta Khoa is emerging as a nickel sulphide district with several exploration targets yet to be tested.



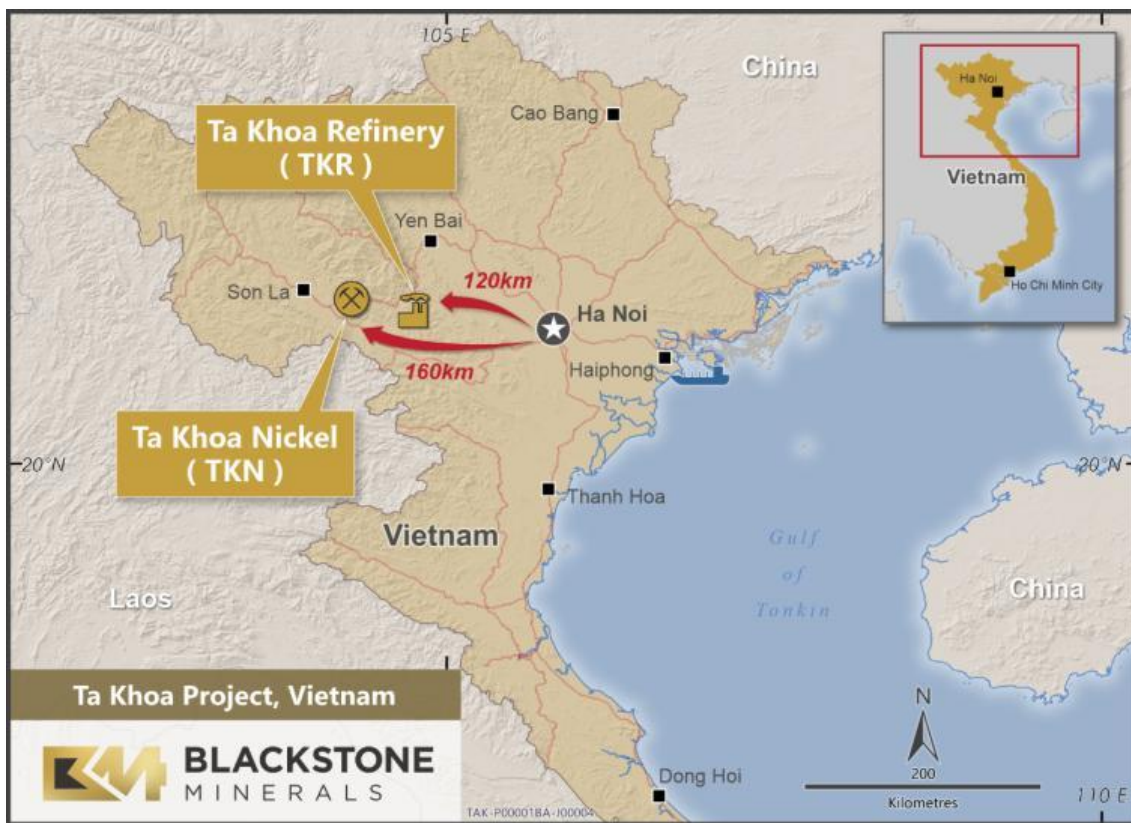


Figure 1. Ta Khoa Project Location

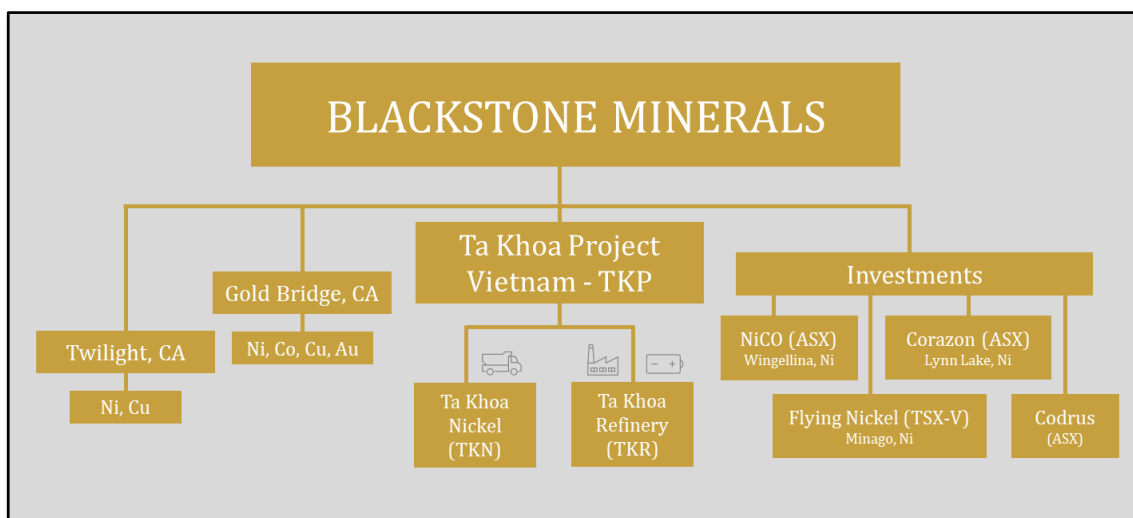


Figure 2: Blackstone Minerals Business Structure Schematic

## Competent Person Statement

### Reporting of Mineral Resources – Don Pao Project

No new Mineral Resource information is contained in this report. Information in this report which refers to the non-JORC resource for the Dong Pao deposits was compiled by Dr Stuart Owen from information within the United Nations publication Atlas of Mineral Resources of the ESCAP Region, Volume 6 Viet Nam, 1990. Dr Stuart Owen, Exploration

Manager for Blackstone Minerals Ltd and a Member of the Australian Institute of Geoscientists. Dr Stuart Owen has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration to qualify as a Competent Person (as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves') and consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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