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ASX ANNOUNCEMENT | 24 August 2022 | ASX: BSX

Ta Khoa Nickel Project Test Work Update

Blackstone Minerals Limited ("Blackstone" or the "Company") is pleased to provide an update on our ongoing metallurgical test work programmes for both the Ta Khoa Nickel Project ("TKN" or "Upstream Project") and the Ta Khoa Refinery Project ("TKR" or "Downstream Project") during their respective Definitive Feasibility Study ("DFS") phases.

Figure 1: Cobalt solvent extraction

Ta Khoa Refinery Project

In October 2021, Blackstone announced the appointment of Tier 1 engineering, minerals processing and metallurgical consultants Wood and ALS to perform critical roles in the delivery of the TKR DFS. With the support of Wood's expertise in hydrometallurgical flowsheet development and ALS' expertise in metallurgical laboratory testing and continuous integrated flowsheet piloting, Blackstone is pleased to announce the following test work updates:

- **Completion of bench test work program:** The hydrometallurgical bench test work program successfully confirmed the improved DFS process flowsheet. The data collected during the bench test work program has been used to update the TKR plant design criteria.

- **Design, procurement, and assembly of piloting equipment:** Extensive work has been completed between Blackstone, Wood and ALS to develop a pilot campaign that is fit for purpose and aligns with the DFS flowsheet.

- **Successful commissioning of piloting equipment:** ALS has successfully assembled the TKR flowsheet and commissioned all unit operations from mixed hydroxide precipitate ("MHP") re-leach through to the production of battery grade metal sulphates. The pressure oxidation ("POX") leach flowsheet will be commissioned by end of August 2022.

- **Successful operation of MHP to metal sulphate from third party MHP:** Blackstone has successfully piloted the TKR flowsheet, confirming our ability to process third-party MHP to battery grade metal sulphates.

The next steps for the TKR piloting program will be to pilot nickel concentrate feed (sourced from the mine site and third-party nickel sources) to produce MHP, then convert MHP to battery grade metal sulphate in preparation for precursor cathode active material ("pCAM") processing.

Blackstone will provide an update once the TKR pilot program is completed in Q4 2022.

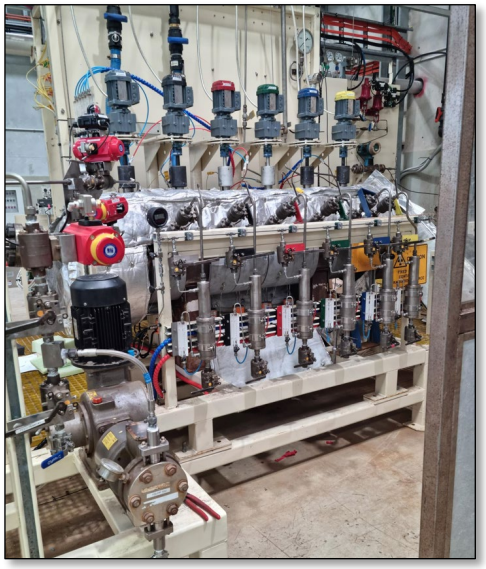

Figure 2: POX leach autoclave

Ta Khoa Nickel Project

In May 2022, Blackstone announced the appointment of process engineering, design, and construction company GR Engineering ("GRES") as the consultant for the upstream concentrator and non-process infrastructure, and collation of the TKN DFS.

The key components of the TKN project continue to develop in line with the Company's strategy.

- **Piloting and Bench Test Work Advancing:** Blackstone has completed construction of a pilot plant at the mine. Locating this plant at the existing plant allows Blackstone to utilise the significant skills and experience of our site team. Piloting is underway and will continue through the second half of 2022. Bench testing is undertaken in the metallurgical laboratory at the mine.

  Comminution test work commenced in August 2022 on a range of variability core samples obtained from a dedicated metallurgical drilling program completed in

Level 5, 600 Murray Street, West Perth, Western Australia 6005 | PO Box 1175, West Perth WA 6872
T +61 8 9425 5217 | **F** +61 8 6500 9982 **| E** admin@blackstoneminerals.com.au | **blackstoneminerals.com.au**

July 2022. The program of works with ALS Metallurgy in Perth is anticipated to be completed during the second half of 2022, in addition to variability test work for flotation flowsheet validation, dewatering and filtration.

Conducting the pilot program at the mine site has allowed Blackstone to trial various feed blends from the recent bulk sample drive through the existing plant. Piloting via the existing plant has enabled the onsite team to fine tune flotation performance under actual operating conditions whilst validating learnings from bench scale programs. Blackstone will continue to optimise efficiency throughout this programme to inform DFS design.

- **Multiple Sites Visit to Vietnam:** GRES has made several trips to the mine site to support the ongoing metallurgical programme and work with the site team in designing and planning the upcoming test work programmes in Vietnam and Perth.

- **Validation of Approach:** GRES has validated the suitability of the in-country facilities and the piloting equipment for providing process design data for the DFS.

- **Further Piloting:** Additional re-grind and flotation piloting equipment has been sourced from relevant equipment vendors.

Figure 3: TKN Pilot Plant located at the mine site

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Carbon Mineralisation

Blackstone has engaged the University of British Columbia ("UBC") to complete a study assessing the capability of the project to capture carbon via carbon mineralisation. The study has shown exciting results which have demonstrated that waste and tailings material to be rich in carbon absorbing minerals, such as brucite and hydrotalcite minerals, capable of capturing and storing up to 8.3g of CO_2 per kg of tailings. The findings from this study support Blackstone's ambition to deliver a net-zero emission project, further strengthening Blackstone's vision to be a Green Nickel™ producer.

Dr Greg Dipple from UBC said:

"Technology-ready approaches to mineralise CO_2 in mine tailings take advantage of the presence of highly reactive gangue minerals which are present in significant abundance in samples from Ban Phuc. Testing of these samples demonstrates the potential for enhanced carbon capture and storage."

BSX expects to receive a final report from UBC in September 2022.

Scott Williamson, Blackstone's Managing Director, said:

"It is very exciting to see the hard work from our Blackstone team and metallurgical partners to successfully design and pilot the respective Upstream and Downstream DFS flowsheets. The success of these respective pilot programs demonstrates our commitment to develop competitive and flexible flowsheets to service the future needs of the battery market. We will continue to work with our technical and strategic partners to ensure Blackstone is a leader within the Green Nickel™ battery market"

Authorised by the Managing Director on behalf of the Board.

For more information, please contact

Scott Williamson
Managing Director
+61 8 9425 5217
scott@blackstoneminerals.com.au

Graham Rigo
Executive
+61 8 9425 5217
graham@blackstoneminerals.com.au

About Blackstone

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

The Company owns a 90% interest in the TKN. The TKN is located 160km west of Hanoi in the Son La Province of Vietnam (refer Figure 4) and includes an existing modern nickel mine built to Australian standards, which is currently being used to process nickel ore delivered by the underground bulk sample program. The nickel mine successfully operated as a mechanised underground nickel mine from 2013 to 2016.

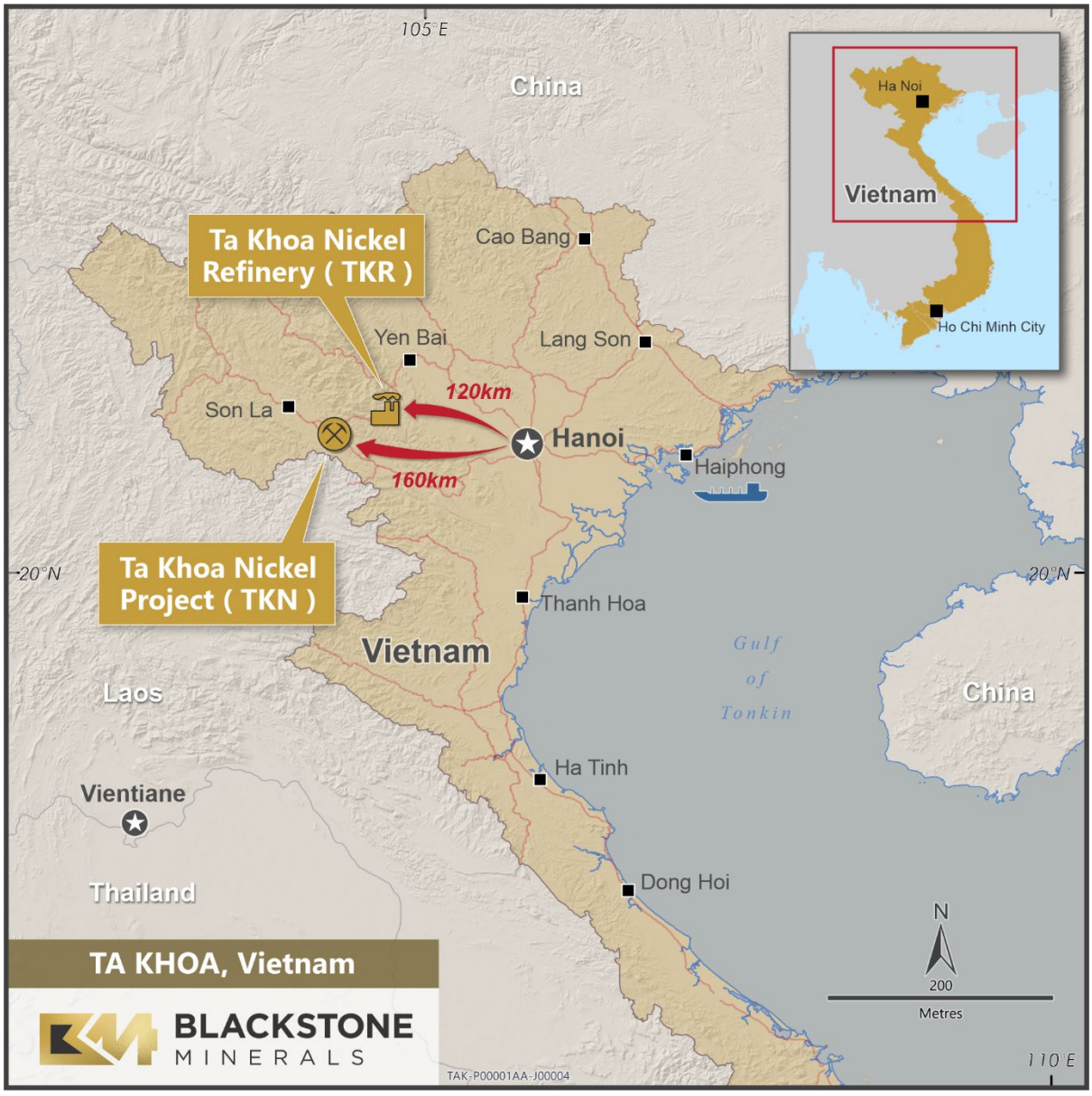

Figure 4. Ta Khoa Nickel Project Location

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Blackstone's TKN and TKR are the two major cogs in Blackstone's vertically integrated development strategy (together - the Ta Khoa Project). The Company's development strategy is underpinned by Blackstone's ability to secure nickel concentrate and Ta Khoa is emerging as a nickel sulphide district of enviable scale with several exploration targets yet to be tested.

In February 2022, Blackstone completed a Pre-Feasibility Study ("PFS") for the TKN and presented this on an integrated basis with the proposed TKR development (refer ASX announcement from 28 February 2022). The TKR is being designed to have a refining capacity of 400ktpa, with feedstock provided from a combination of concentrate from the TKN and third-party feed sources ("3PF"). Pilot Plant testing and Definitive Feasibility Studies are underway and will continue to technically de-risk the Ta Khoa Project.

At both the mine (Upstream) and refinery (Downstream) level, Blackstone is focused on a partnership model and is collaborating with groups who are focused on sustainable mining, minimising carbon footprint and implementing a fully vertically integrated supply chain.

Forward Looking Statements

This report contains certain forward-looking statements. The words "expect", "forecast", "should", "projected", "could", "may", "predict", "plan", "will" and other similar expressions are intended to identify forward looking statements. Indications of, and guidance on, future earnings, cash flow costs and financial position and performance are also forward-looking statements. Forward looking statements, opinions and estimates included in this announcement are based on assumptions and contingencies which are subject to change without notice, as are statements about market and industry trends, which are based on interpretations of current market conditions. Forward looking statements are provided as a general guide only and should not be relied on as a guarantee of future performance. Forward looking statements may be affected by a range of variables that could cause actual results or trends to differ materially. These variations, if materially adverse, may affect the timing or the feasibility of the development of the Ta Khoa Project.

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