

BLACKSTONE MINERALS (BSX)

28 July 2021

Phil Carter 0400 252 465

pcarter@pacpartners.com.au

A Dominant Downstream Development

KEY POINTS

- Blackstone Minerals (BSX) release a compelling pre-feasibility study on a downstream nickel refining facility in Vietnam. BSX hold a 90% interest in the Ta Khoa nickel sulphide project in Vietnam. The project was placed into care and maintenance due to a low nickel price and overly onerous Government tariffs on nickel concentrate exports. To counter these tariffs, BSX investigated the downstream processing of nickel concentrates into battery precursor products which has opened the door to whole new nickel refining opportunity.
- A substantial nickel production. The downstream process developed by the Company uses conventional processing techniques to convert nickel concentrate into NCM precursor products for use in battery cathode chemistry. The downstream facility contemplated in the PFS is designed to produce 85.6ktpa of NCM811 precursor from a nickel concentrate throughput of 400ktpa. This is the equivalent of producing 43.5ktpa of nickel metal. The operating life has been limited to 10 years based on the concentrate feed from the Ta Khoa nickel project which will deliver less than half the required nickel concentrate, the rest to be sourced from third parties.
- Compelling financials. The 10-year PFS shows revenue of US\$14bn and a net cash flow after tax of US\$3.6bn. Cash costs as stated in NCM811 tonne, are US\$11,125/t with an estimated realised NCM811 price of US\$16,397/t. Capex is slated at US\$491m and the project has a post-tax Source: PAC Partners estimates NPV8 of \$3.6bn. The project now moves into DFS with JV partners likely to enter the fray to reduce capital requirements and assist in securing offtakes for both nickel concentrate feed and the final suite of NCM precursor products.

INVESTMENT VIEW - BUY

The value in BSX is in the downstream facility which was clear in the scoping study released last year. The Ban Phuc open pit does not have the size nor the grade to be a significant standalone operation. It doesn't need to be, the mine will be able to wash its face but more importantly, provide initial and a steady baseline feed for the downstream facility, which is a high margin, value add business generating significant cash flows. The Company has an enormous opportunity to become a dominant player in the battery nickel space with production on a nickel metal basis set to exceed all ASX listed peers with the exception of BHP. We believe BSX offers a great opportunity to play the EV thematic with the company having robust ESG framework in its own right. We increase our target price to \$1.16/sh (previous \$0.64/sh) and maintain our buy recommendation.

NEAR TERM CATALYSTS

Resource Drilling and Mining Studies-Ongoing

BSX continue to diamond drill at the Ta Khoa project including the prospective Ban Chang and King Cobra, both of which have shown high grade massive sulphide mineralisation. Additional targets are continually being identified and explored. Further studies on the production of concentrate for the downstream facility are being investigated from these exploration targets.

Pilot Plant/Definitive Feasibility Study - 1H 2022

The construction of pilot plants will commence late CY21 which will feed into a DFS slated for completion mid-2022.

Financing/FID - 2H 2022

A final investment decision will likely occur in 2H 2022 with offtake and JV partners secured prior. Construction will commence in CY 2023.

Recommendation	BUY
Previous Recommendation	Buy
Risk Rating	High
Current Share Price	\$0.44
12 Month Price Target	\$1.16/sh
Total Return (Capital + Yield)	164%
Market Capitalisation	\$141m
Liquidity	\$9m/month

Financial Forecasts	& Valuation	Metrics		
Y/e June (\$m)	2020A	2021F	2022F	2023F
Revenue	0.5	0.5	0.5	0.5
EBITDA	(6.8)	(14.7)	(14.7)	(17.7)
NPAT	(8.0)	(14.9)	(14.8)	(17.7)
EPS (cps)	(3.7)	(4.9)	(4.0)	(3.2)
EPS Growth %	na	na	na	na
EV / EBITDA (x)	(9.3)	(5.8)	(8.0)	(11.9)
PER (x)	(13.5)	(9.0)	(10.9)	(13.6)
Dividend Yield	0.0	0.0	0.0	0.0



Source: Iress

Downstream Processing/Refining: The downstream process is based on a hydrometallurgical process to produce downstream nickel products directly from a nickel concentrate. While the flowsheet is based on conventional technology it is a new concept in its entirety. This will inherently come with development/execution risk.

Third Party Concentrate Supply: The demand for nickel is forecast to increase substantially in the short-medium term. The downstream facility needs additional concentrate to meet production targets. If concentrate cannot be sourced at satisfactory commercial terms, this will have a significant impact on the operation and profitability of the facility.

Geopolitical: Vietnam is a developing country and subject to emerging country risks. Royalties in Vietnam have been historically onerous and there is no guarantee that in-country downstream processing will not be the subject of future taxes and/or royalties.

Summary

COMPANY OVERVIEW

Perth based, Blackstone Minerals Limited (BSX) hold a 90% interest in the Ta Khoa nickel project in northern Vietnam. A local and supportive Vietnamese industrial conglomerate, COXAMA, hold the remaining 10%.

Ta Khoa includes the Ban Phuc DSS project with a resource of 58mt @ 0.48% Ni and several other promising massive and disseminated sulphide mineral exploration prospects. Complementing the traditional mining/processing business model, the Company has recently released a PFS on a downstream refining project converting nickel concentrate from Ta Khoa as well as third party nickel concentrate into battery precursor products such as NCM 811.

DOWNSTREAM PRE-FEASIBILITY STUDY

The downstream refining PFS is a value-add project which significantly improves payabilities on nickel products by refining into battery grade precursor products. The project has been established as a standalone operation and will not be solely reliant on the upstream Ta Khoa nickel project.

The PFS contemplates a life of operation of 10 years. 10 years was used as this is the life of the Ban Phuc resource, however, the project is not reliant on just the Ban Phuc feed and can operate in perpetuity. The project will produce 85.6ktpa of NCM 811 precursor from a concentrate feed of 400ktpa. This translates into an annual nickel metal output of 43.5ktpa. The project will also produce 4.1ktpa of copper as a by-product. By way of context, WSA (Mcap \$806m) produces ~16ktpa, IGO (Mcap \$6.9bn) produces ~20ktpa, NIC (Mcap \$3.0bn) produces ~30ktpa and MCR (Mcap \$530m) is set to produce ~14ktpa.

Figure 1: Downstream Refining PFS Physicals

Item	Value
Facility Capacity	400ktpa
Operating Life	10 Years
Ni in Concentrate grade	11.5%
Co in Concentrate grade	0.3%
Cu in Concentrate grade	1.1%
Ni Recovery	96.8%
Co Recovery	96.7%
Cu Recovery	93.1%
NCM811 Precursor Production	856kt
Annual Precursor Production	85.6ktpa
Annual Ni Production	43.5ktpa
Annual Cu By-Product Production	4.1ktpa

Source: BSX

The financial outcomes of the PFS are compelling. Over 10 years the project will deliver a revenue of US\$14bn and an operating cashflow of US\$4.5bn. All in sustain costs are US\$11,423/t of NCM811 which has been assumed to have a sales price of \$US16,397/t, equivalent to a nickel price of US\$18,230 (current spot US\$19,666/t). Capex is \$US491m with an additional \$US298m on sustaining and closure capital. The project's NPV8 is US\$2bn.

Figure 2: Downstream Refining PFS Financials

J	
Item	Value
Revenue	US\$14bn
Realised NCM811 Precursor Price	US\$16,397/t
Realised Nickel Price	US\$18,230/t
C1 Cash Costs	US\$11,125/t
AISC	US\$11,423/t
Operating Cashflow	US\$4.5bn



Net Cash Post Tax	US\$3.6bn
Post Tax NPV ₈	US\$2bn
IRR	67%
Capex	US\$491m
Sustaining + Closure Capex	US\$298m

Source: BSX

REFINING PROCESS

The downstream process will convert the nickel concentrate to an NCM precursor product via a hydrometallurgical process. This will be achieved via pressure oxidation followed by a two-stage neutralisation process, ending in a precipitation to create an intermediate MHP (Mixed Hydroxide Precipitate).

Initially, the flotation concentrate is repulped in site process water and fed with sulfuric acid to an atmospheric pre-leach and pressure oxidation leach (POX) to recover the cobalt, copper, and nickel. Following solid and liquid separation, the combined leach and wash liquor will then be fed to a solvent extraction and electrowinning circuit to recover copper as copper cathode.

The raffinate from solvent extraction will then be neutralised with limestone forming a precipitate containing impurities that are recycled back into the process. Magnesia will be added to the neutralised liquor to precipitate the bulk of the nickel and other base metals as MHP1, which has been thickened, filtered, and washed. The barren liquor from MHP1 still contains some nickel, which will then be recovered by raising the pH with hydrated lime. The precipitate, MHP2 will be recycled. Barren liquor from MHP2 still contains significant concentrations of magnesium. This liquor is fed to a crystallisation circuit, which produces kieserite, a marketable fertiliser product.

The MHP1 solids will be releached in two counter-current stages with sulfuric acid to give a concentrated nickel sulfate liquor with low levels of soluble impurities. To remove the remaining impurities, the leach liquor will be fed to a solvent extraction circuit that produces an aqueous raffinate containing nickel and sodium. The scrub liquor will be returned to the MHP1 unit, the cobalt strip liquor fed to an ion exchange column to remove impurities and the zinc strip liquor is pumped to effluent treatment.

The raffinate containing the nickel in solution is combined with cobalt sulfate and manganese sulfate in a molar ratio of 8:1:1 (Ni:Co:Mn). This mixture will be fed to the NCM precipitation circuit along with aqueous ammonia and sodium hydroxide to raise the liquor pH. The recipitate is then separated and dried as the NCM 811 ternary precursor product. The ammonia, sodium hydroxide and sulfuric acid will be recovered from the barren liquor via BPED for reuse and as such will be recycled back to the process.

Waste tailings residue from the refining process will consist of a dry stack inert material which will be stored in purpose-built storage facilities. Several valleys have been identified as possible candidates for storage locations.



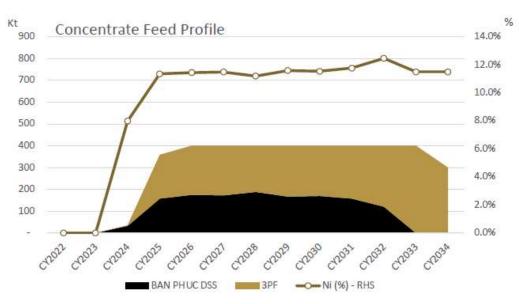
⇒Flash Steam Repulp & Pre-leach **BLACKSTONE** Filtration Concentrate Stockpile Leach Residue Copper Solvent Extaction Copper Electrowinni MHP Re-leach Cobalt & Magnesium Solvent Extraction Kieserite NCM Precipitation NaOH NCM Recycle to POX NCM Drye lectrodialysis

Figure 3: Downstream Flowsheet

Source: BSX

The plant has been designed to be able to accept a wide range of nickel concentrate specifications. The 400ktpa throughput capacity is too large to be supplied solely from the Ta Khoa project which will supply less than half of the concentrate, so there will need to be a third-party supply of nickel concentrate. BSX is working closely with Trafigura on locking in this third-party supply. The concentrate will not contain enough cobalt to meet NCM811 specifications. A cobalt sulfate and a manganese sulfate will also need to be sourced from third party suppliers to meet production requirements.

Figure 4: Concentrate Feed Profile



Source: BSX



The project is reliant on third

party concentrate

The location of the downstream facility is still to be determined. Two sites in northern Vietnam have been identified as preferred locations. The two sites have the advantage of being in locations where Government tax incentives exist for new industrial projects. These tax concessions include a 4-year tax holiday followed by a period of 9 years at a corporate tax rate of 5%, a further 2 years at 10% and 20% for the life beyond 15 years. The two preferred locations are Tan Phu and Mai Son as per figure 5.

107°E 105°E CHINA Major road CHINA 500kV powerline Port Cao Bang Ť Airport Lao Cai Hydropower plant ai Chau VIETNAM Son Thinh IZ Ho Chi Minh City (Industrial Zone Ta Khoa Project EV & Li-lon Battery Tan Phu IC 22°N Nickel PGE (Cu Co) Manufacturing Hub (LG Chem, Sams Thai Nguyen Kepo Son La Ha Long Da River Hanoi I Mai Son IZ Hai Phong Hoa Binh LAOS Mong Hoa IZ Gulf of Tonkin Nam Dinh IZ Proposed Industrial Zone 100km

Figure 5: Potential Facility Locations

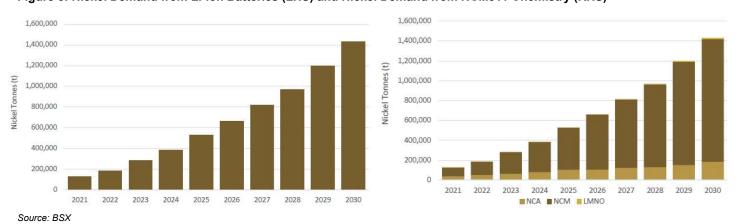
Source: BSX

Nickel demand is set to increase dramatically on the back of EV growth

MARKETING

The project is predicated on the expected increased demand for NCM precursor products used in battery cathodes associated with the worldwide adoption of electric vehicles. The PFS facility has been designed to manufacture NCM 811 precursor as this is the expected dominant battery chemistry makeup.

Figure 6: Nickel Demand from Li-ion Batteries (LHS) and Nickel Demand from NCM811 Chemistry (RHS)



There is limited independent product pricing forecasts for NCM products however the spot NCM811 precursor is tracked live on the Shanghai Metals Market. The Company has provided an inhouse analysis of the NCM811 product pricing which suggests the precursor product trades at a premium of between 20-40% of the contained metal costs which reflects the additional processing costs required (Figure 7).



Figure 7: NCM811 Premium to Metal Prices



A 20% premium is the lowest premium realised for NCM811 precursor in 12 months.

Source: BSX

In order to forecast future NCM811 prices, the Company has used metal forecasts from Benchmark Intelligence and applied a 20% premium. (Figure 8) The average realised price used in the study of \$US16,397/t is below the current spot price of ~US\$19,559/t.

Figure 8: NCM811 Pricing Forecasts

Item	Nickel Metal Forecast (50.8%)	Cobalt Metal Forecast (6.4%)	Manganes e Metal Forecast (6.0%)	NCM811 Precursor Price Based on Metal Inputs (a)	NCM811 Precursor Premium (b)	NCM811 Precursor Price Forecast	NCM811 Precursor Spot Price
Source:	ВМІ	ВМІ	SMM		BSX analysis of SMM	a*(1+b)	SMM
CY2024	16,000	58,387	2,696	12,020	20%	14,425	19,559
CY2025	16,400	67,145	2,696	12,783	20%	15,339	19,559
CY2026	17,300	72,011	2,696	13,551	20%	16,261	19,559
CY2027	17,800	75,904	2,696	14,053	20%	16,864	19,559
CY2028	18,300	77,850	2,696	14,432	20%	17,318	19,559
CY2029	18,500	75,033	2,696	14,354	20%	17,224	19,559
CY2030	18,800	61,227	2,696	13,625	20%	16,350	19,559
LT	18,800	58,577	2,696	13,456	20%	16,147	19,559

The base case NCM price is somewhat lower than the prevailing spot price

Source: BSX



FINANCIALS

Capital costs have been estimated at US\$491m plus with an additional \$143m of sustaining capital across the 10 years of operation and a further \$113m in closure costs.

Figure 9: Capex Estimate Breakdown

Item	Capex US\$m
Process Plant	245
Infrastructure	16
Residue Storage	8
Owners Direct	43
EPCM	51
Owners Costs	47
Contingency	82
Total	491

Source: BSX

The process is essentially a margin business with the largest operating cost being the purchase of nickel concentrate. The downstream business has been designed as a standalone unit at arm's length to the Ta Khoa upstream mining business. Therefore, all concentrate has been assumed to be purchased at typical market rates with credits for by-products and penalties for impurities. A typical payability of 70-80% has been assumed. Operating C1 costs have been calculated at US\$11,125/NCM811 tonne.

Figure 10: Operating Costs

Operating Costs	US\$/NCM811 tonne
Purchase of Concentrate	7,062
Refining	4,195
Logistics	138
G&A	32
Residue Storage	22
By-Product Credits	(323)
Operating C1 Cost	11,125
All-in Sustaining Cost	11,423

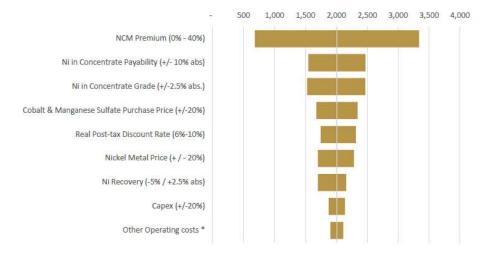
Source: BSX

Being a margin value add business its not surprising the project is most sensitive to the premium attached to NCM, the payabilty of purchasing the nickel concentrate and the grade of the nickel concentrate. Operating costs, capex and recovery have little influence on the project economics. The spot nickel price also has limited impact as essentially a higher purchase price means a higher selling price and vice-versa.



Figure 11: Sensitivities

Nickel metal price has a low sensitivity as any price increases flow through to an increased NCM price



Source: BSX

Figure 12: Annual Cashflows

Cash Flow Item (US\$M)		CY 2022	CY 2023	CY 2024	CY 2025	CY 2026	CY 2027	CY 2028	CY 2029	CY 2030	CY 2031	CY 2032	CY 2033	CY 2034
NCM811 Revenue	14,032			77	1,188	1,416	1,474	1,476	1,519	1,435	1,445	1,531	1,412	1,059
Less:														
Purchase of Ni & Co Concentrate	6,043	(4)	9	28	474	565	602	600	634	640	656	704	651	488
Cobalt sulfate	2,682	28	24	16	266	306	324	325	322	260	235	248	217	163
Manganese sulfate	165	***	8	1	15	17	17	16	17	17	17	18	17	13
Reagents	310	120	9	4	31	31	31	31	31	31	31	31	31	24
Power	231	.50	-	3	23	23	23	23	23	23	23	23	23	17
Maintenance	172	3		2	17	17	17	17	17	17	17	17	17	13
Labour	29	(*)		1	3	3	3	3	3	3	3	3	3	2
Logistics	118	350		0	10	11	11	11	11	11	12	13	16	12
G&A	27	-	-	1	3	3	3	3	3	3	3	3	3	2
Residue Storage	18	(4)		0	2	2	2	2	2	2	2	2	2	1
By Product Credits - Copper	(276)			(5)	(34)	(27)	(26)	(27)	(25)	(24)	(26)	(24)	(33)	(24)
Operating Cash Flows	4,512	(4)	*	26	379	464	467	471	480	450	472	492	464	348
Less:														
Sustaining Capital	143	100	2	1	6	6	10	10	15	15	17	17	32	14
Closure Capital	113	20	1 8	5	95	2			-	-	-	15	51	113
Project Capital	491	33	174	276	8	8	2	2	2	150		:5	5)	
Tax	119				*			5	21	20	20	21	19	13
Post-tax Project Level Cash Flows	3,646	(33)	(174)	(252)	365	458	456	455	444	416	435	454	412	208

Source: BSX

NEXT STEPS

Following the PFS, the Company will now embark on a 2-stage pilot plant program with phase 2 of the program to be a 1:25 scale of a single train of the commercial facility. A DFS will be run concurrently with the pilot plant program through until mid-2022. Prior to final investment decision the Company will lock in offtake agreements for both concentrate supply and NCM sales. The Company has an MOU with the worlds largest cathode produce Ecopro, to investigate JV options on the downstream facility. Ecopro is also the Company's largest shareholder with 12% and is likely the largest customer for the NCM precursor products.



BAN PHUC DSS

A previously released scoping study on the Ban Phuc DSS project remains relevant with the project expected to produce nickel concentrate to supply the downstream facility. A PFS on the Ban Phuc project along with a potential underground supply of higher-grade nickel ore is currently in progress.

Figure 13: Ban Phuc Scoping Study

Item	Value
Production	4mtpa
Mine Life	8.5 Years
Head Grade	0.52% Ni
Recovery	65.9%
Mining Cost US\$/milled tonne	\$12.00-14.70/t
Processing Cost US\$/milled tonne	\$10.70-13.00/t
G&A Cost US\$/milled tonne	\$2.75-3.40/t
Royalty	~5.3%
Sustaining Capex \$USm per year	~\$3mpa
Capex \$USm	\$189m

Source: BSX

Investment View, Valuation and Catalysts

COMPANY VALUATION

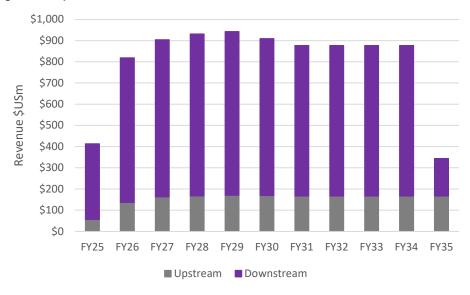
We adjust our model to incorporate the downstream PFS. Previously we contemplated a 25ktpa downstream refinery process based on indicative costs as part of the Ban Phuc scoping study. We now separate the business into distinct business units downstream and upstream.

The Ban Phuc upstream mining business remains as per the previously released scoping study with the removal of any downstream processes previously modelled. We attribute 90% based on current ownership status assuming the minor party will contribute. We assume all concentrate being sold at commercial rates into the downstream business. A 20% tax rate and 5.3% royalty has been applied to the business. We use the same nickel price assumptions as the downstream business.

We assume the downstream PFS inputs into our model assuming the same 20% premium to the NCM price noting this appears to be on the conservative side. We believe a JV with Ecopro is likely as this will assist with project finance and product offtakes. For the purpose of this exercise, we are assuming an equal 50:50 JV. We estimate first production during FY25.

At what point and for what premium does Ecopro become a strategic partner?

Figure 14: Upstream vs Downstream Attributable Revenue



Source: BSX



\$400 \$300 \$200 \$100 \$0 -\$100 -\$300 -\$400 -\$500 Pre FY25 FY26 FY27 FY28 FY29 FY30 FY31 FY32 FY33 FY34 FY35 Prod

Figure 15: Upstream vs Downstream Attributable Post Tax Cashflows (Ungeared)

Source: BSX

At what point and for what premium does Ecopro become a strategic partner?

We allow an attributable capex of US\$416m of which US\$170m is for the upstream mining project. We assume a debt/equity financing of 80:20 with equity raised at a conservative \$0.40/sh. We assume a further \$20m of funding is required to advance to FID stage. We therefore assume 695.5m fully diluted shares on issue. We run our DCF using a discount rate of 8%, assuming first production in FY25. We keep to the PFS assumptions of a 10-year operating life; however, we remove closure capital costs as opposed to adding a terminal value to the operation. We apply a risk weighting discount of 30% allowing for project execution and country jurisdiction risk. On this basis we value BSX at \$805m and \$1.16/sh on a fully diluted basis.

Figure 16: Valuation

Valuation	\$m	\$/sh
Downstream Refining	\$789	\$1.14
Ban Phuc DSS	\$3	\$0.00
Ta Khoa Exploration	\$20	\$0.03
Codrus Shareholding	\$7	\$0.01
Corporate	-\$28	-\$0.04
Cash	\$14	\$0.02
Total	\$805	\$1.16

Source: PAC Partners

INVESTMENT VIEW - BUY. PT \$1.16/SH

The value in BSX is in the downstream facility which was clear in the scoping study released last year. The Ban Phuc open pit does not have the size nor the grade to be a significant standalone operation. It doesn't need to be, the mine will be able to wash its face but more importantly, provide initial and a steady baseline feed for the downstream facility, which is a high margin, value add business generating significant cash flows. The Company has an enormous opportunity to become a dominant player in the battery nickel space with production on a nickel metal basis set to exceed all ASX listed peers with the exception of BHP. We believe BSX offers a great opportunity to play the EV thematic with the company having robust ESG framework in its own right. We increase our target price to \$1.16/sh (previous \$0.64/sh) and maintain our buy recommendation.



UPCOMING CATALYSTS

Resource Drilling and Mining Studies-Ongoing

BSX continue to diamond drill at the Ta Khoa project including the prospective Ban Chang and King Cobra, both of which have shown high grade massive sulphide mineralisation. Additional targets are continually being identified and explored. Further studies on the production of concentrate for the downstream facility are being investigated from these exploration targets.

Pilot Plant/Definitive Feasibility Study - 1H 2022

The construction of pilot plants will commence late CY21 which will feed into a DFS slated for completion mid-2022.

Financing/FID - 2H 2022

A final investment decision will likely occur in 2H 2022 with offtake and JV partners secured prior. Construction will commence in CY 2023.

Risks

Emerging companies are usually subject to normal key person and funding risks.

Downstream Processing

The downstream process is based on a hydrometallurgical process to produce downstream nickel products directly from a nickel concentrate. While the flowsheet is based on conventional technology it is a new concept in its entirety. This will inherently come with development/execution risk.

Third Party Concentrate Supply

The demand for nickel is forecast to increase substantially in the short-medium term. The downstream facility needs additional concentrate to meet production targets. If concentrate cannot be sourced at satisfactory commercial terms, this will have a significant impact on the operation and profitability of the facility.

Geopolitical

Vietnam is a developing country and subject to emerging country risks. Royalties in Vietnam have been historically onerous and there is no guarantee that in-country downstream processing will not be the subject of future taxes and/or royalties.

Reliance on Key Personnel

The board and the management team's ability to understand, construct and operate a complex vertically integrated value chain will be critical to the success or failure of BSX.

Access to Capital

BSX require ongoing capital to fund future exploration programs, feasibility studies and project financing. There is no certainty that capital will become available to BSX at satisfactory commercial terms.

Development Risk

BSX is undergoing development studies with a view of progressing these to an investment decision. Following an affirmative investment decision, the project will enter a construction phase and the inherent risks associated with this phase of a project's life.

Commodity pricing and demand

As with all resource projects, geopolitical risks, competitive forces, and changes in commodity application with technological improvements could see demand and or prices for BSX focused commodities be reduced.



Blackstone Minerals Limited			
BSXAX			
28/07/2021			
5			
Price Information			
Price (\$/Share)		\$0.440	
Mkt Cap (\$m) (dil)		\$140.9	
Enterprise Value (\$m)		\$126.6	
Target Price (\$/Share)		\$1.16	
Recommendation		BUY	
Total Return		164%	
W 1	•	A	
Valuation	\$m	\$/sh	
Upstream Ban Phuc	3.0	0.00	
Downstream Refining	789.4	1.14	
Exploration Upside	20.0	0.03	
Codrus	7.0	0.01	
Corporate	(28.3)	(0.04)	

14.3

805.4

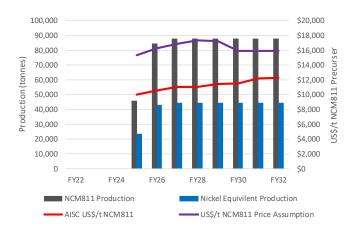
0.02

1.16

Nickel & NCM811 Production (100% Project Basis)

Cash

Total



Resources & Reserves			
Resources	Tonnes (m)	Ni %	Ni Tonnes
Indicated	44	0.52%	228,800
Inferred	14	0.35%	49,000
Total	58	0.48%	277.800

Year End - Jun	FY20A	FY21F	FY22F	FY23F
KEY METRICS				
EPS Growth (%)	na	na	na	na
PER (x)	(13.5)	(9.0)	(10.9)	(13.6)
Dividend Yield (%)	0.0	0.0	0.0	0.0
EV/EBITDA (x)	(9.3)	(5.8)	(8.0)	(11.9)
EV (\$m)	84.9	115.0	158.8	284.0
ROÈ (%)	(48.6)	(67.0)	(49.1)	(20.8)
ROA (%)	(35.0)	(45.5)	(36.6)	(5.5)
ROIC (%)	(33.1)	(52.1)	(41.0)	(3.0)
PROFIT & LOSS (\$m)				
Revenue	0.5	0.5	0.5	0.5
EBITDA	(6.8)	(14.7)	(14.7)	(17.7)
Depreciation & Amortisation	(0.0)	(0.2)	(0.2)	0.0
EBIT	(7.0)	(15.0)	(15.0)	(17.7)
Net Interest Expense	0.0	0.1	0.1	0.0
Income Tax	0.0	0.0	0.0	0.0
NPAT Reported	(8.0)	(14.9)	(14.8)	(17.7)
NPAT Adjusted	(7.0)	(14.9)	(14.8)	(17.7)
•	, ,	, ,	` ,	,
PER SHARE DATA (cps)				
Shares on Issue (m)	213.9	305.5	368.0	545.5
EPS Reported	(3.7)	(4.9)	(4.0)	(3.2)
EPS Adjusted	(3.3)	(4.9)	(4.0)	(3.2)
DPS	0.0	0.0	0.0	0.0
DALANCE SHEET (\$m)				
BALANCE SHEET (\$m) Cash	6.8	14.4	2.3	447.5
Debtors & Inventory	2.3	2.3	2.3	417.5 2.3
PP&E	2.3 19.4	2.3 19.5	39.3	2.3 176.4
Intangibles	0.0	0.0	0.0	0.0
Total Assets	28.6	36.1	43.9	596.2
Borrowings	0.0	0.0	0.0	450.0
Creditors	7.7	7.7	7.7	7.7
Total Liabilities	7.7	7.7	7.7	457.7
Net Assets	20.8	28.4	36.2	138.5
BALANCE SHEET RATIOS				
Gearing - Debt/Equity (%)	na	na	na	23.9
Interest Cover (x)	na	na	na	na
NTA per Share (cps)	0.1	0.1	0.1	0.3
CASH FLOW (\$m)				
EBITDA	(6.8)	(14.7)	(14.7)	(17.7)
Interest & Tax	0.0	0.1	0.1	0.0
Working Capital Change	(0.2)	0.0	0.0	0.0
Operating Cash Flow	(6.5)	(14.7)	(14.6)	(17.7)
Maintenance Capex	0.0	0.0	0.0	0.0
Free Cash Flow	(6.5)	(14.7)	(14.6)	(17.7)
Capex	(0.4)	(0.2)	(20.1)	(137.1)
Equity Issues	13.1	23.0	22.6	120.0
Proceeds from Borrowings	0.0	0.0	0.0	450.0
Other	0.2	0.0	0.0	0.0
Net Cash Flow	6.5	8.1	(12.1)	415.2



CONTACT INFORMATION

CORPORATE FINANCE		RESEARCH		DEALING	
BROOKE PICKEN Chief Operating Officer/ECM bpicken@pacpartners.com.au	03 9114 7402	CRAIG STRANGER Managing Director cstranger@pacpartners.com.au	03 9114 7405	JAMES WILSON Institutional Sales,– Sydney jwilson@pacpartners.com.au	02 9134 9111
SEAN KENNEDY Corporate Finance skennedy@pacpartners.com.au	03 9114 7403	PAUL JENSZ Executive Director, Research pjensz@pacpartners.com.au	03 9114 7444	PHIL CAWOOD Institutional Sales - Sydney pcawood@pacpartners.com.au	02 9134 9122
CHARLES REED Corporate Finance creed@pacpartners.com.au	03 9114 7406	HEATH ANDREWS Senior Analyst handrews@pacpartners.com.au	03 9114 7415	MARK PASHLEY Sales Trading – Sydney mpashley@pacpartners.com.au	02 9134 9177
BEN SEWARD Corporate Finance bseward@pacpartners.com.au	0466 360 715	PHIL CARTER Analyst pcarter@pacpartners.com.au	0400 252 465	RYAN GALE Advisor – Melbourne rgale@pacpartners.com.au	03 9114 7404
DAVINA GUNN Corporate Broking dqunn@pacpartners.com.au	03 9114 7408	ALEX SMITH Analyst asmith@pacpartners.com.au	03 9114 7408	PATRICK GIBSON Senior Operations – Melbourne paibson@pacpartners.com.au	02 9114 9740
JAMES EMONSON Corporate Finance jemonson@pacpartners.com.au	03 9114 7407	SHANE BANNAN Senior Analyst sbannan@pacpartners.com.au	02 9134 9191	IAN LEETE Corporate Sales – Sydney ileete@pacpartners.com.au	02 9134 9144
ANDREW SHEARER Technical Consultant ashearer@pacpartners.com.au	04 1172 0516	TOM WAITE Analyst twaite@pacpartners.com.au	03 9114 7414	DANIEL GADALLA Operator – Melbourne dgadalla@pacpartners.com.au	03 9114 7400
PETER WARD Corporate Broking pward@pacpartners.com.au	03 9114 7417				
TIM CHAMPMAN Corporate Broking tchapman@pacpartners.com.au	03 9114 7418				
WILLIAM GEORGE Corporate Broking wgeorge@pacpartners.com.au	03 9134 9144				
SYDNEY Kyle House, 27 – 31 Macquarie Pl +61 2 9233 9600	ace, Sydney	MELBOURNE (Head Office) Level 10, 330 Collins Street, Melbourne +61 3 8633 9831		PERTH Suite 2.1, 9 Havelock Street, West Perth	

RECOMMENDATION CRITERIA

Investment View

PAC Partners Investment View is based on an absolute 1-year total return equal to capital appreciation plus yield. A Speculative recommendation is when a company has limited experience from which to derive a fundamental investment view.

Buy	Hold	Sell
>20%	20%-5%	<5%

Risk Rating

PAC Partners has a four tier Risk Rating System consisting of: Very High, High, Medium, and Low. The Risk Rating is a subjective rating based on: Management Track Record, Forecasting Risk, Industry Risk and Financial Risk including cash flow analysis.

Disclosure of Economic Interests

The views expressed in this research report accurately reflect the personal views of Phil Carter about the subject issuer and its securities. No part of the analyst's compensation was, is or will be directly or indirectly related to any recommendation or view expressed in this report.

The following person(s) **do not** hold an economic interest in the securities covered in this report or other securities issued by the subject issuer which may influence this report:

- the author of this report
- a member of the immediate family of the author of this report

Disclaimer

PAC Partners Securities Pty Ltd. ("PAC Partners", "PAC" or "PPS") is a Corporate Authorised Representative of PAC Asset Management Pty Ltd holder of an Australian Financial Services Licence (AFSL No. 335 374).

The information contained in this report is provided by PAC Partners to Wholesale Investors only. Retail investor and third-party recipients should not rely, directly or indirectly, on this report. Users of this research report should not act on any content or recommendation without first seeking professional advice. Whilst the report has been prepared with all reasonable care from sources which we believe are reliable, no responsibility or liability is accepted by PAC Partners, for any errors or omissions or misstatements however caused. Any opinions, forecasts or recommendations reflect our judgement and assumptions at the date of publication or broadcast and may change without notice. This report is not and should not be construed as an offer to sell or the solicitation of an offer to purchase or subscribe for any investment. This publication contains general securities advice. In preparing our Content it is not possible to take into consideration the investment objectives, financial situation, or particular needs of any individual user. Access of this report does not create a client relationship between PAC Partners and the user. Before making an investment decision on the basis of this advice, you need to consider, with or without the assistance of a securities adviser, whether the advice in this publication is appropriate in light of your particular investment needs, objectives and financial situation. PAC and its associates within the meaning of the Corporations Act may hold securities in the companies referred to in this publication. PAC believes that the advice and information herein is accurate and reliable, but no warranties of accuracy, reliability or completeness are given (except insofar as liability under any statute cannot be excluded). No responsibility for any errors or omissions or any negligence is accepted by PAC or any of its directors, employees, or agents. Any content is not for public circulation or



reproduction, whether in whole or in part and is not to be disclosed to any person other than the intended user, without the prior written consent of PAC Partners. Past performance is not a reliable indicator of future performance.

Disclosure of Corporate Involvement

PAC Partners has not received fees in the past 24 months by the corporate issuer described in this report. PAC Partners does and seeks to do business with companies covered in the research. PAC may receive commissions from dealing in securities associated with the Company. As a result, investors should be aware that PAC Partners may have a conflict of interest that could affect the objectivity of this report.

For more information about PAC Partners please visit www.pacpartners.com.au

