BLACKSTONE MINERALS

Looking forward. Mining green.

BSX - TOWARDS ZERO CARBON

ASX:BSX

28th Feb 2022

CAUTIONARY & FORWARD LOOKING STATEMENT

The PFS referred to in this Presentation is the study of the potential viability of the Ta Khoa Project. It has been undertaken to understand the technical and economic viability of the integrated TKNP and TKR.

The Company has concluded that it has a reasonable basis for providing the forward looking statements included in this announcement. The reasons for this conclusion are outlined throughout this announcement. However, the assumptions and results of the PFS set out above and elsewhere in this announcement ("PFS Parameters") have been developed through feasibility work completed to the level of AACE Class 4 (+/-25% accuracy) and the use of macroeconomic assumptions. For the avoidance of doubt, investors are advised that the PFS Parameters do not constitute a production forecast or a target in relation any mineral resources associated with wit the Company. The Company wishes to expressly clarify that the PFS Parameters are based on the expected grade of nickel, cobalt and copper that is reliant upon 3PF for which there is currently no supply agreement. The PFS Parameters have been disclosed by Blackstone to provide investors with an intended scale and nature of the Project.

The PFS referred to in this announcement has been undertaken to assess the technical and financial viability of the Project. Further evaluation work, including a Definitive Feasibility Study ("DFS") is required before the Company will provide any assurance of an economic development case. The PFS is based on material assumptions set out in the Upstream PFS Report published on the 28th February 2022. These include assumptions about the availability of funding and the pricing received for the Ta Khoa Refinery Project products. While the Company consider all of the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by this PFS will be achieved. To achieve the outcomes in this PFS, the pre-production capital (including contingency) of US$854m, additional capital for pre-commitment activities such as a DFS , pilot plant development and working capital is likely to be required.

Investors should note that there is no certainty that the Company will be able to raise this amount of funding required when needed. It is also possible that such funding will only be available via equity funding which may have a dilutive effect on the Company's share value. The Company may also pursue other strategies in order to realise the value of the Ta Khoa Project, such as a sale, partial sale or joint venture of the Ta Khoa Refinery Project. If this occurs, this could materially reduce the Company's proportionate share of ownership of the Ta Khoa Refinery Project. Accordingly, given the uncertainties involved, investors should not make any investment decisions based solely on the results of the PFS.

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 Nickel Project.

The project development schedule assumes the completion of the TKR Definitive Feasibility Study (DFS) by Q3 2022. A DFS for the TKNP is assumed to be completed in H1 2023. Development approvals and investment permits will be sought from the relevant Vietnamese authorities concurrent to studies being completed. Delays in any one of these key activities could result in a delay to the commencement of construction (planned for early H2 2023). This could lead on to a delay to first production, currently planned for 2025. It is expected that the Company's stakeholder and community engagement programs will reduce the risk of project delays. Please note these dates are indicative only.

The Mineral Resource estimate that forms the basis of the Prefeasibility Study was presented publicly on the 23rd of December 2021. Over the life of mine considered in the Prefeasibility Study, 76% of mill feed originates from Probable Reserves and 24% from additional mining inventory. The viability of the development scenario envisaged in the Prefeasibility Study therefore does not depend on Inferred Mineral Resources. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target itself will be realised. The Inferred Mineral Resources are not the determining factors in project viability. The 24% of mill feed which is included in the feasibility study and excluded from the Ore Reserve may be upgraded after further drilling and historic core sampling in order to improved geological and geochemical confidence prior to mining. The TKNP is planned to meet the concentrate supply requirements for one of the refinery process streams (the refinery PFS considered up to four refinery streams).

AGENDA

1	**Corporate Update**	**2:00 – 2:20**
2	**Towards Zero Carbon** • Blackstone's Ambition, Initiatives & Challenges • Electric Mine Consortium – Industry Synopsis • BluVein – Heavy Battery Electric Vehicle Charging • Minviro – Life Cycle Assessment • Questions	**2:20 – 3:40**
3	**PFS Technical Update**	**3:40 – 4:00**
4	**PFS Economic Outcomes**	**4:00 – 4:20**
5	**Questions**	**4:20 – 5:00**

INVESTMENT SUMMARY

Vertically integrated business model

- Developing an integrated upstream (mining) and downstream (refining) battery metals processing business in Vietnam that produces NCM Precursor products for Asia's growing Lithium-ion battery industry

Globally relevant nickel sulfide mineral resource and probable reserve

- Global Ta Khoa Nickel Project (TKNP) resource of 130 Mt at 0.37% Ni for 485kt of Nickel
- Ban Phuc open pit probable reserve of 48.7Mt @ 0.43% Ni for 210kt Nickel

Base case Ta Khoa Refinery (TKR) designed to produce >80ktpa NCM 811 Precursor

- Targeting ~50% of TKR nickel concentrate feed to be supplied by the TKNP
- Strategic investments establish pathway to access other potential concentrate feed sources
- Strong relationships with third-party concentrate feed providers

Partnership based model

- Excellent relationships in Asia with cathode, battery, and electric vehicle manufacturers
- Focus on supply chain solution from mine to consumer

Blackstone strategy being delivered into rising macroeconomic environment

- Growth in nickel demand from battery related applications to be exponential in the next decade
- Blackstone has positioned for the once in a generation movement towards high nickel content cathodes needed for the EV revolution

BLACKSTONE VERTICALLY INTEGRATED BUSINESS MODEL

Blackstone Upstream Business
Ore → Concentrate

Blackstone Downstream Business
Concentrate → MHP → Precursor NCM

Targeting South – East Asian Lithium-ion battery and EV market

BLACKSTONE MINERALS

ban phuc NICKEL MINES

Ta Khoa Nickel Project (90%)

FLYING NICKEL Mining Corp.

Minago (~7%)

NiCo NICO RESOURCES

Wingellina (~15%)

Targeting >40ktpa nickel in intermediate feed sources

Third Party Concentrate Feed Providers (3PF)

BLACKSTONE MINERALS *X%*

Ta Khoa Refinery

>80tkpa NCM811 Precursor

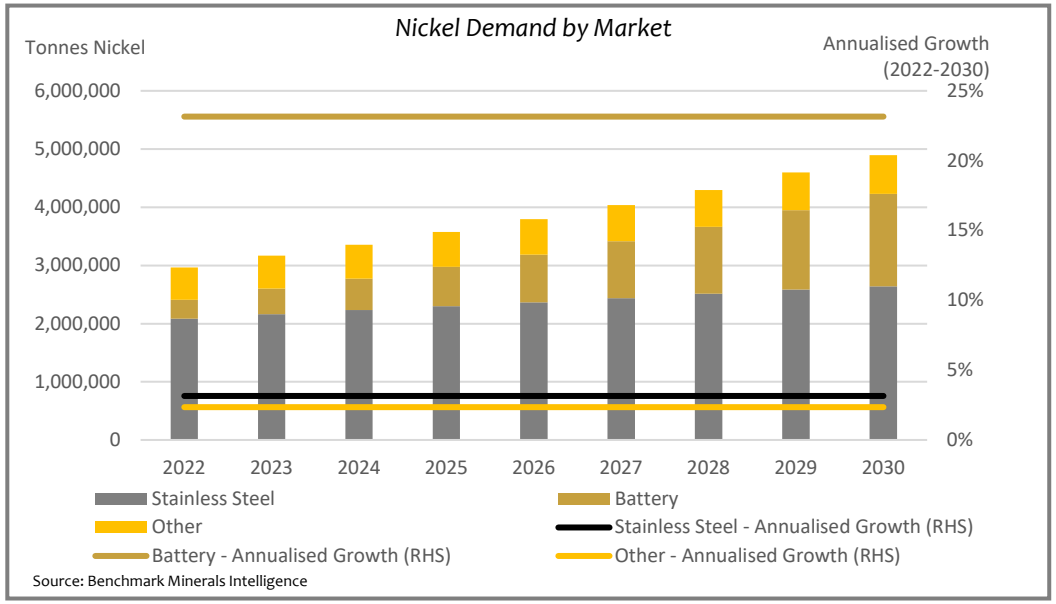
X%

Base Case Ta Khoa Refinery can supply enough nickel to produce between ~0.50 – 0.75million EVs p.a.

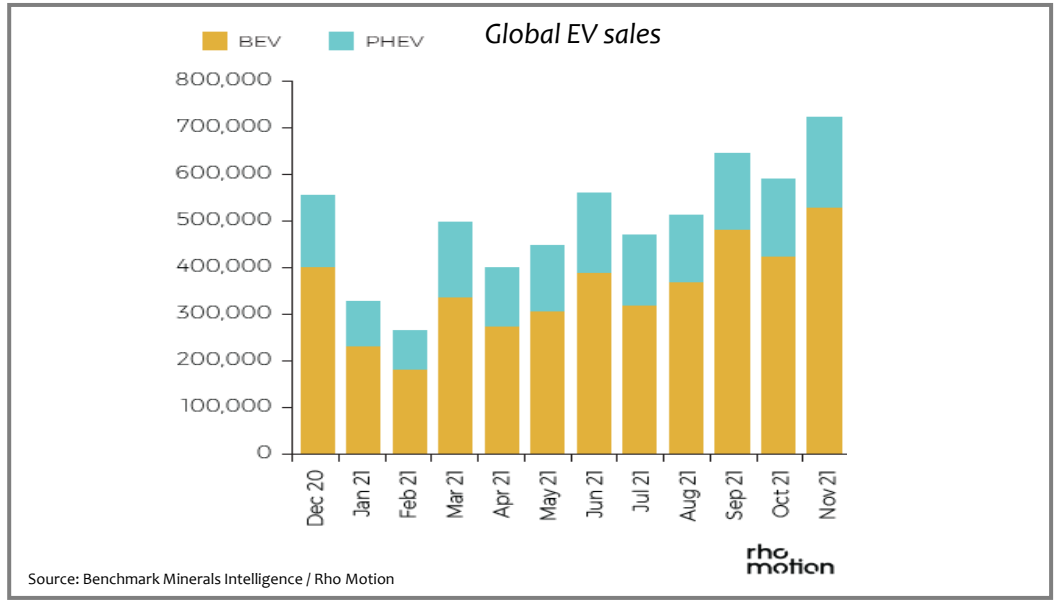
NCM is forecast to be the dominant battery chemistry. Overall there is a shift to higher nickel content cathodes which increases the need for OEMS to secure supply:

- ***Nickel intensity*** *in increasing on a per vehicle basis as the EV industry trends towards NCM811 cathode usage*
- ***Long range/ larger vehicles*** *typically have a battery capacity of between* ***70-90 kWh*** *battery capacity and would require* ***~55-75kg of Nickel*** *(source BMI)*

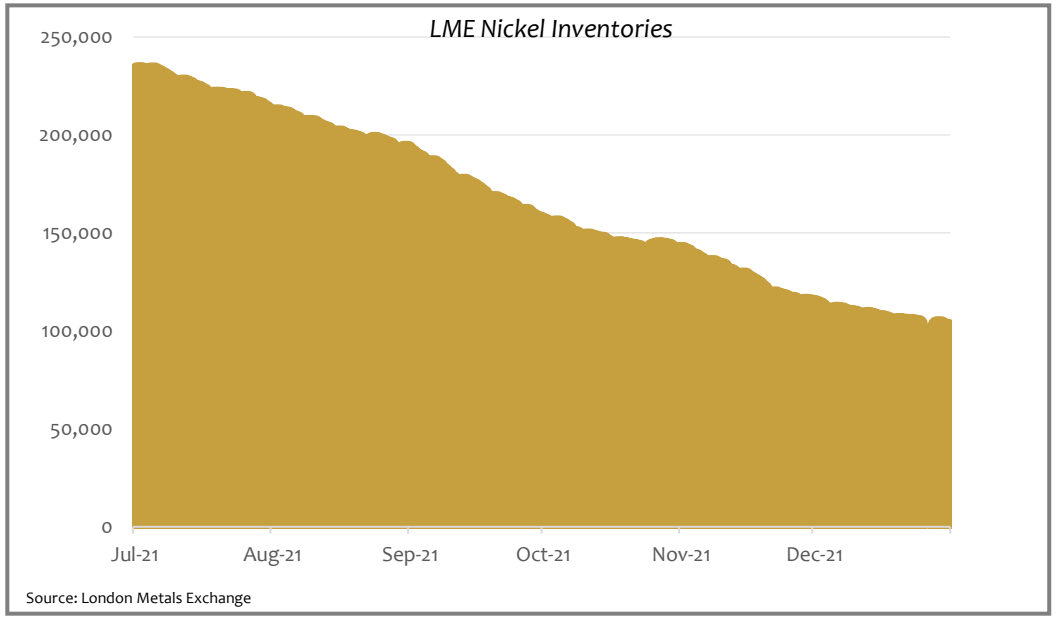
ACCELERATING MACROECONOMIC ENVIRONMENT



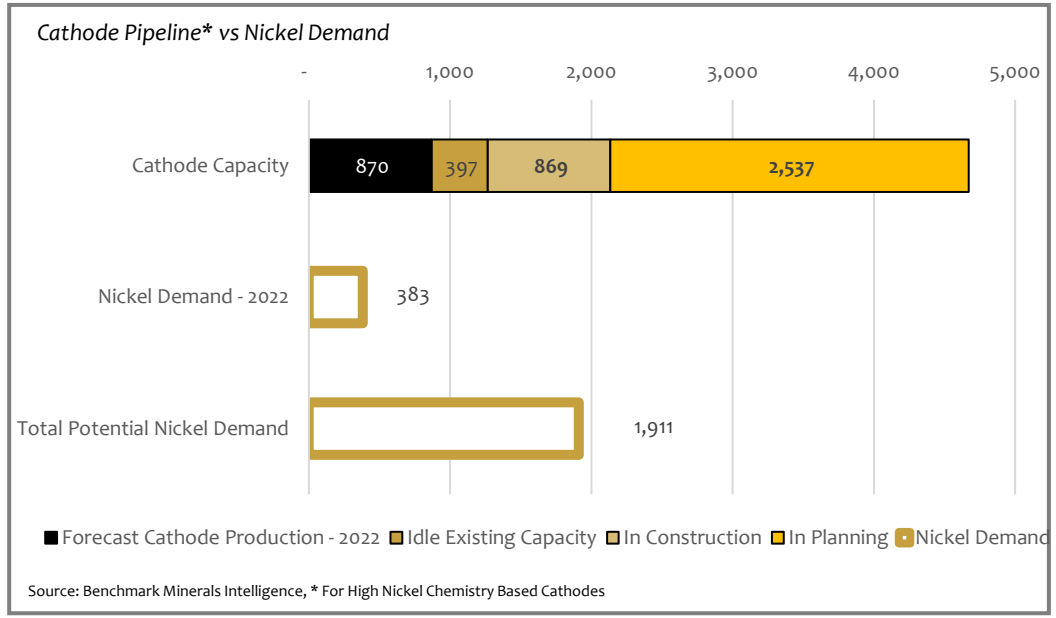
Source: Benchmark Minerals Intelligence



Source: Benchmark Minerals Intelligence / Rho Motion



Source: London Metals Exchange



Source: Benchmark Minerals Intelligence, * For High Nickel Chemistry Based Cathodes

BLACKSTONE MISSION AND VALUES

"Blackstone Minerals is a passionate leader in the battery revolution. We enable green solutions from mine to consumer"

2020 INAUGURAL SUSTAINABILITY REPORT

Blackstone's Sustainability Journey to date

01 Understand our Business Strategy against ESG Risks and Opportunities.

02 Consult with our Stakeholders to understand their Expectations

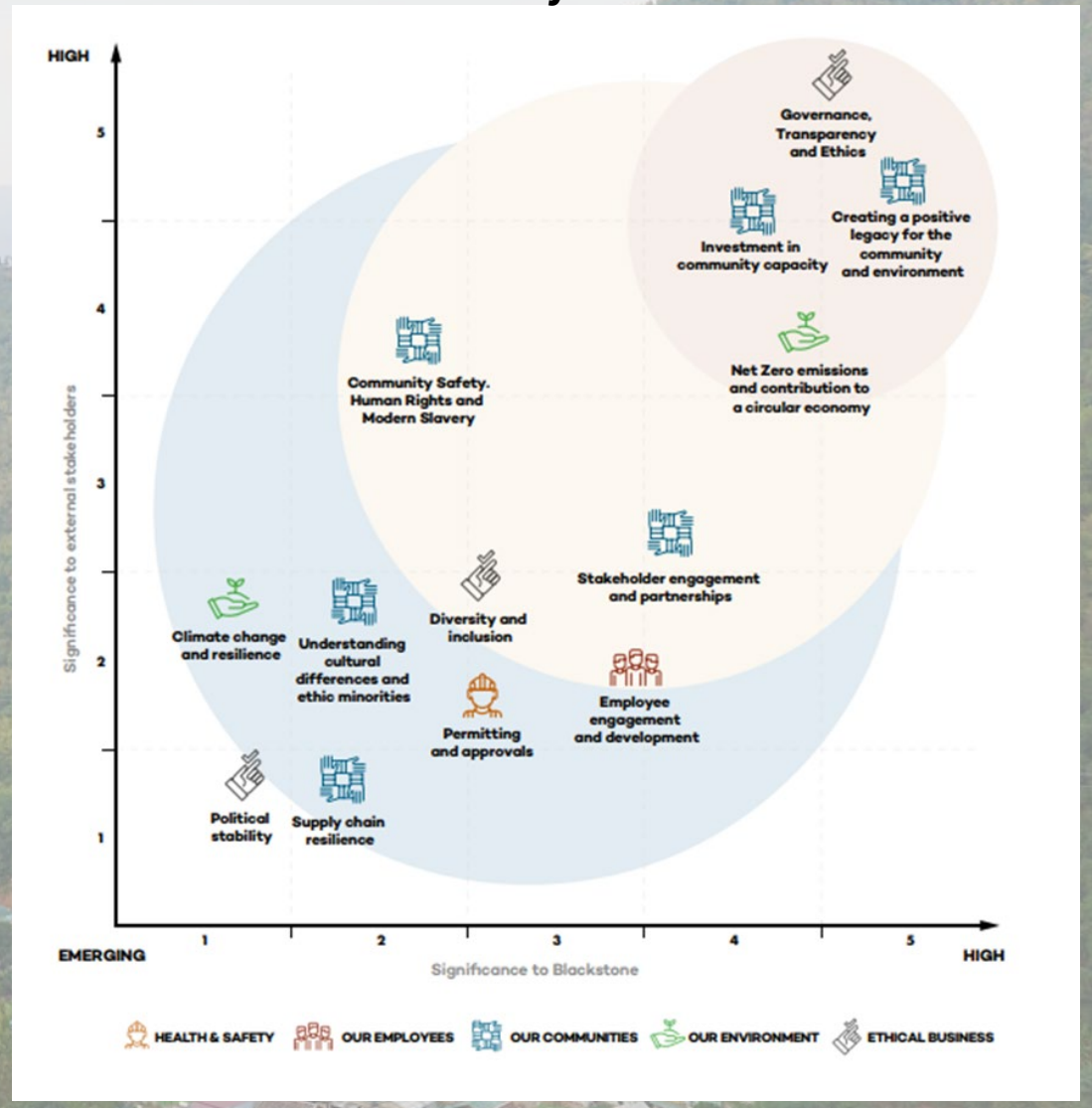
03 Identify and Define Material ESG Concerns and Opportunities as a Leadership Team.

Focus for 2021/2022

04 Build Metrics and Data Based on Material ESG Issues and International Frameworks.

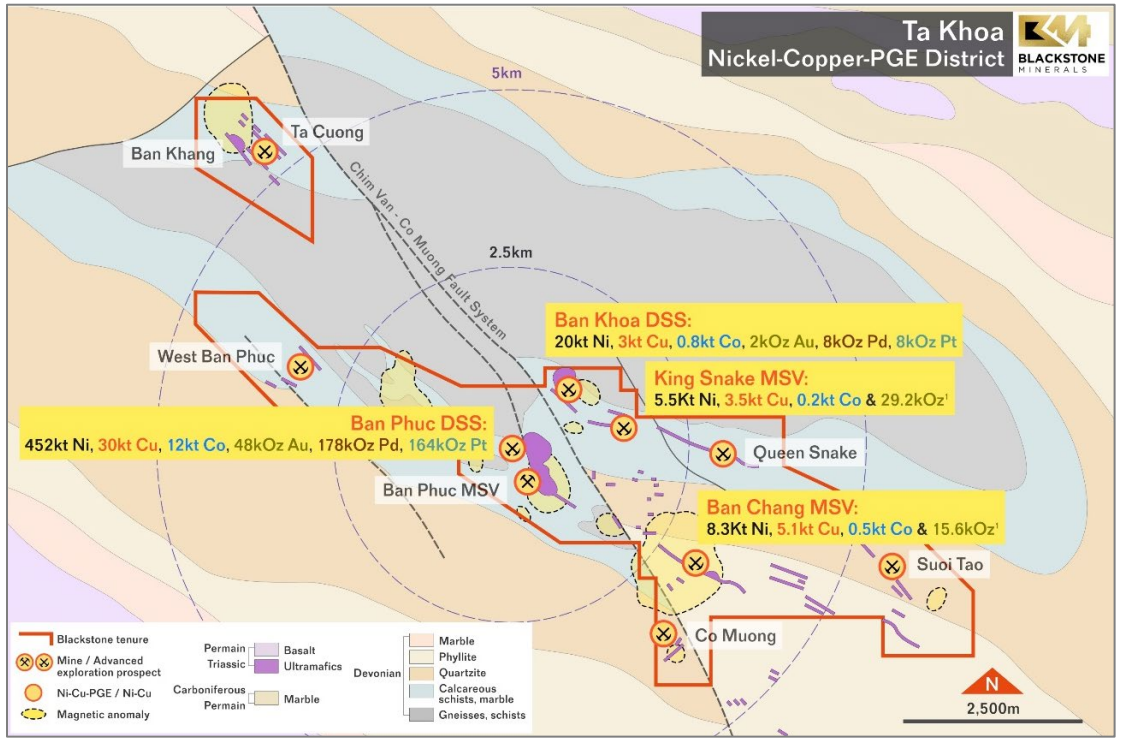
- Life Cycle Impact Assessment
- Digbee ESG Assessment & Report
- Whispli Implementation – Employee Speak Up and Community Contact Point
- ESIA to establish environmental and social baseline
- Local Content Plan for employment, procurement and social investment

Materiality Assessment



TA KHOA NICKEL PROJECT (TKNP)

130 Mt at 0.37% Ni for 485kt of Nickel *(0.44% NiEQ for 571kt Nickel Equivalent)*



- **Ban Phuc Mineral Resource Upgrade & Maiden Ore Reserve:**
  - Indicated & Inferred Mineral Resource of 123 Mt at 0.37% Ni for 452kt of nickel (or 0.43% NiEQ for 523kt NiEQ)
  - Probable Reserve of 48.7Mt @ 0.43% Ni for 210kt Nickel
- **Maiden Inferred Resources for Ban Chang, King Snake and Ban Khoa**
- **Ongoing Regional Exploration Program**
  - Systematically testing a total 25 massive sulfide vein (MSV) and disseminated sulfide (DSS) targets
- **Joint Venture Exploration on Chim Van Prospect (outside of current TKNP footprint**
  - Blackstone Minerals to jointly explore with the General Department of Geology & Minerals of Vietnam (GDGMV), initially conducting new geophysics exploration to advance the Chim Van target.

PRE – FEASIBILITY STUDY HIGHLIGHTS

Upstream – Ta Khoa Nickel Project

US$363m

Preproduction Capex –

- ~US$250m 8Mtpa beneficiation plant including dry stack tailings
- ~$71m preproduction mining

264kt Ni / 210kt Ni

Mining Inventory / Probable Reserve

- ~64.5Mt @ 0.41% Ni
- ~48.7Mt @ 0.43% Ni

28 Ni Nickel

225ktpa (steady state)

Concentrate Production

- 8% Ni concentrate grade

18ktpa Ni (steady state)

Nickel recovered in concentrate

- 57% overall metallurgical Ni recovery

US$584m

Pre-tax Cash Flows

- US$ 20,000 / t Nickel

Upstream + Downstream – Integrated Ta Khoa Project

US$854m

Preproduction capital paid back in 1.8 yrs

- Downstream – US$491m
- Upstream – US$363m

45ktpa

Avg annual refined Nickel Production

- 400ktpa nickel concentrate feed
- 11.9% avg Ni grade

28 Ni Nickel

88ktpa

Avg annual NCM811 Precursor Production

- 96.8% metallurgical recovery of Nickel into NCM811 Precursor

US$533m

Average annual operating cash flows

US$1.99bn

Post-tax NPV based on a 10 year life-of-operation

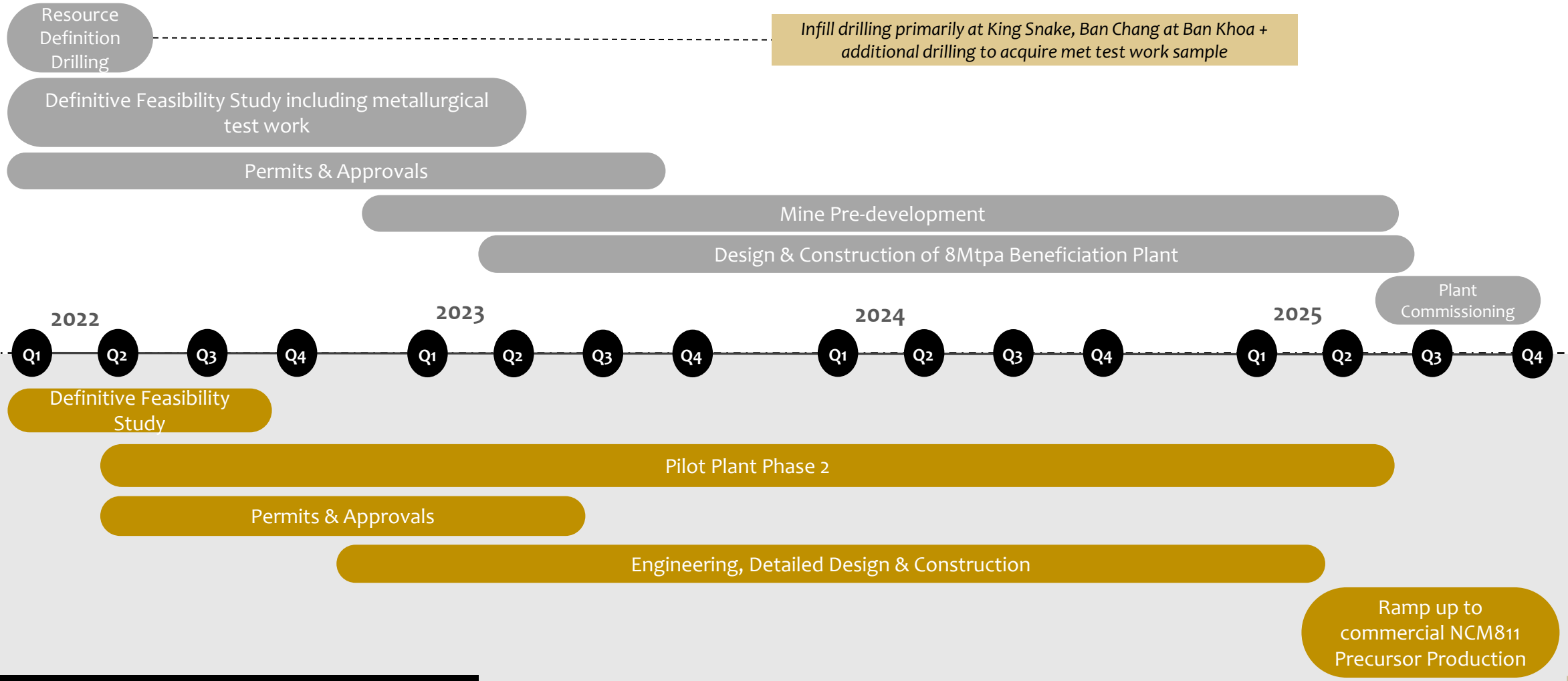
- US$ 17,670 / t NCM811

47%

Post-tax IRR

TIMELINE

UPSTREAM - TA KHOA NICKEL PROJECT



DOWNSTREAM – TA KHOA REFINERY

PILOT PLANT TESTWORK
STATUS UPDATE

DELIVERABLE / OBJECTIVE			
Pilot Plant Phase 1		**Pilot Plant Phase 2**	
Batch testwork commenced	✓	Engineering partners engaged	✓
Procurement commenced for Pilot Campaign	✓	Engineering complete	**June 22**
Completion of Batch Test Work	**April 22**	Permits obtained & construction in progress	**June 22**
Data collection complete to provide inputs for DFS parameters	**April 22**	Commence plant commissioning	**Jan 23**
Pilot Plant Campaign Completion	**Sep 22**	NCM Precursor product sample available to share with potential offtakers	**April 23**

SESSION 2 – ZERO CARBON MINING

PANEL DISCUSSION

Andrew Strickland

Head of Project Development - BSX

Mr Strickland is an experienced Study and Project Manager, a Fellow of the Australian Institute of Mining and Metallurgy, University of WA MBA graduate, with undergraduate degrees in Chemical Engineering and Extractive Metallurgy from Curtin and WASM.

Graeme Stanway

Director – Slate Advisory

Graeme is the director and co-founder of Slate Advisory, a leading strategy consultancy focusing on resources industries. He has extensive executive level experience in strategy development, innovation and large scale business transformation. His consulting assignments have included CEO-level strategy across most mineral commodities, as well as for services companies and utilities companies.

Michelle Keegan

Manager (EMC Lead)

Michelle Keegan is an experienced and highly respected mining industry innovator and leader, previously managing the development and application of emerging technology solutions across the portfolio at major global miner South32.

Richard Bach

CTO – BluVien

Richard has 20+ years' experience working on infrastructure and mining projects and understands the needs for the industry to move towards sustainable power solutions. He is committed to being at the forefront of accelerating the first truly sustainable haulage fleet by developing technologies in partnership with other likeminded organisations.

Laurens Tijsseling

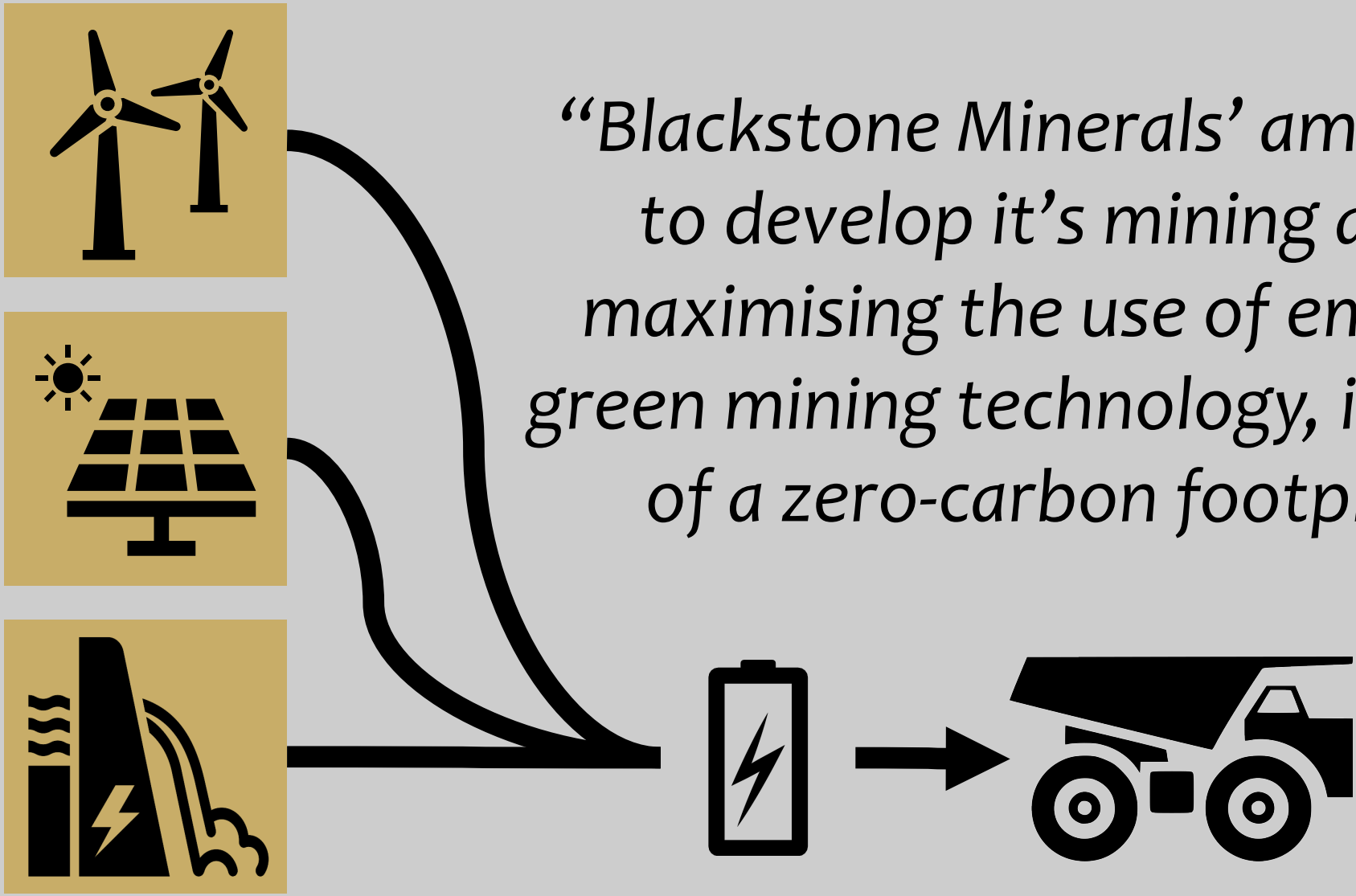
Sustainability Manager – Minviro Ltd

Laurens Tijsseling is Sustainability Manager at Minviro, where he supports resource projects in development, mining operations and battery material end users to quantitatively understand the environmental impact of their own processes and upstream and downstream supply chains.

WHAT DO WE MEAN BY GREEN NICKEL™?

- SULFIDE NICKEL
- VERTICALLY INTEGRATED VALUE CHAIN
- RENEWABLE POWER
- PRESSURE OXIDATION LEACH FLOWSHEET
- FOSSIL FUEL REPLACEMENT
- CORPORATE COMMITMENT TO ESG

BLACKSTONE'S MINING AMBITIONS



"Blackstone Minerals' ambition is to develop it's mining assets maximising the use of emerging green mining technology, in pursuit of a zero-carbon footprint "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The Electric Mine Consortium
Blackstone Minerals Webinar, February 2022
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Gold Fields
SOUTH32
OZ
igo
Barminco
Evolution MINING
BLACKSTONE MINERALS
NEWCREST MINING LIMITED
DASSAULT SYSTEMES
3ME TECHNOLOGY
SANDVIK
NUKON
ENERGY VAULT
Epiroc
METSO IGNITED
ZENITH ENERGY
zero AUTOMOTIVE
amazon
VIVOPOWER
Deswik
STATE OF PLAY

State of Play: Electrification

ELECTRIC MINE CONSORTIUM

Early in 2020, State of Play partnered with the FBI-CRC, METS Ignited and Project 412 to undertake a series of research activities on electrification in mining.

This research aimed to understand the drivers and barriers of mine electrification, identify the key enabling technologies and enable collaboration to accelerate its adoption. The research consisted of:

- 450+ individual surveys, which targeted mine electrification specifically, as well as strategy and innovation at a broader industry level.
- 5 industry webinars and workshops, which involved 40+ companies who interactively brainstormed ideas spanning the benefits, challenges and collaboration opportunities facing mine electrification.
- 5 interviews with identified thought leaders

As a result, five mining and seven services companies self-selected to form the founding members of the Electric Mine Consortium (EMC).

Since inception, the participation has expanded to a total of 20 highly respected, commercially astute mining (8) and services (12) companies.

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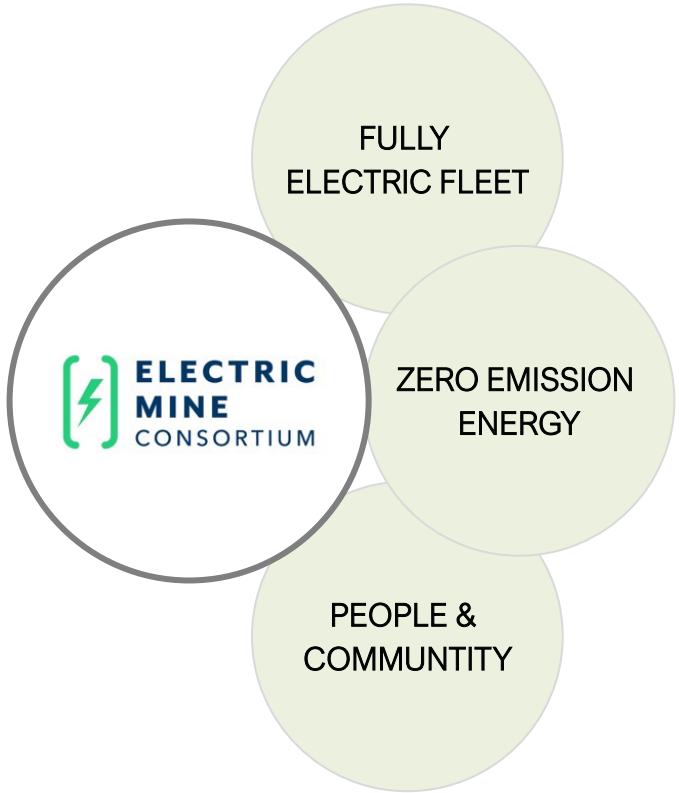
The Electric Mine Consortium: Ambition and Vision

Accelerate progress towards the fully electrified zero CO2 and zero particulates mine by:

1. Resolving technology choices
2. Shaping the supplier ecosystem
3. Influencing policy makers, and
4. Communicating the business case



The EMC is served by three core operating concepts which illustrate our vision:

1. A **zero-carbon emission** mine powered by 100% renewables
2. A **fully electrified, data-driven fleet**, unlocking greater productivity
3. A **people and community** approved mine, that is safe and healthy

The Electric Mine Consortium – Members & Partners

ELECTRIC MINE CONSORTIUM

Current working groups

ELECTRIC MINE CONSORTIUM

1 Challenge 1
Energy storage

Mine scale energy storage technologies are not yet operationally or economically proven in mining

2 Challenge 2
Mine design

Traditional asset design does not enable the realisation of the full benefits of mine electrification

3 Challenge 3
Underground haulage

Zero carbon load and haul equipment is not yet commercially available or technically viable underground at Australian scale

4 Challenge 4
Light BEVs & ancillary equipment

Economic and operating assumptions for light BEVs & ancillary equipment on site are unclear

5 Challenge 5
Electrical Infrastructure

Lack of understanding on the supporting infrastructure requirements for all electric equipment and vehicles

6 Challenge 6
Surface & long-road haulage

Large-scale, zero carbon surface and offsite haulage vehicles are not yet commercially available or technically understood

SLATE

Electric Mine Consortium selected achievements

ELECTRIC MINE CONSORTIUM

Mobilised a 10MW/h battery storage trial with Gold Fields worth $8m, with funding support from ARENA (funding application in progress)

Commissioned a major global crowd challenge for mine simulation technology with Unearthed and OZ Minerals

Commissioned the development of a data sharing platform to achieve the ‘virtual trial’ ambition and create critical mass for scaled learnings and adoption

Mobilised a working group to select a common carbon measurement platform for standardisation and certification

Mobilised a skills and capability enabling group to close the people gap for an electrified, automated mine, with delivery participation from TAFE, Universities and Government

Commissioned and supported over 20 vehicle and equipment trials and pilots across 8 consortium sites

Building a financial model to understand, and communicate, the true value of electrification, built on a portfolio of equipment cost models

Provided design input into the research and development of various zero-emission equipment and technologies

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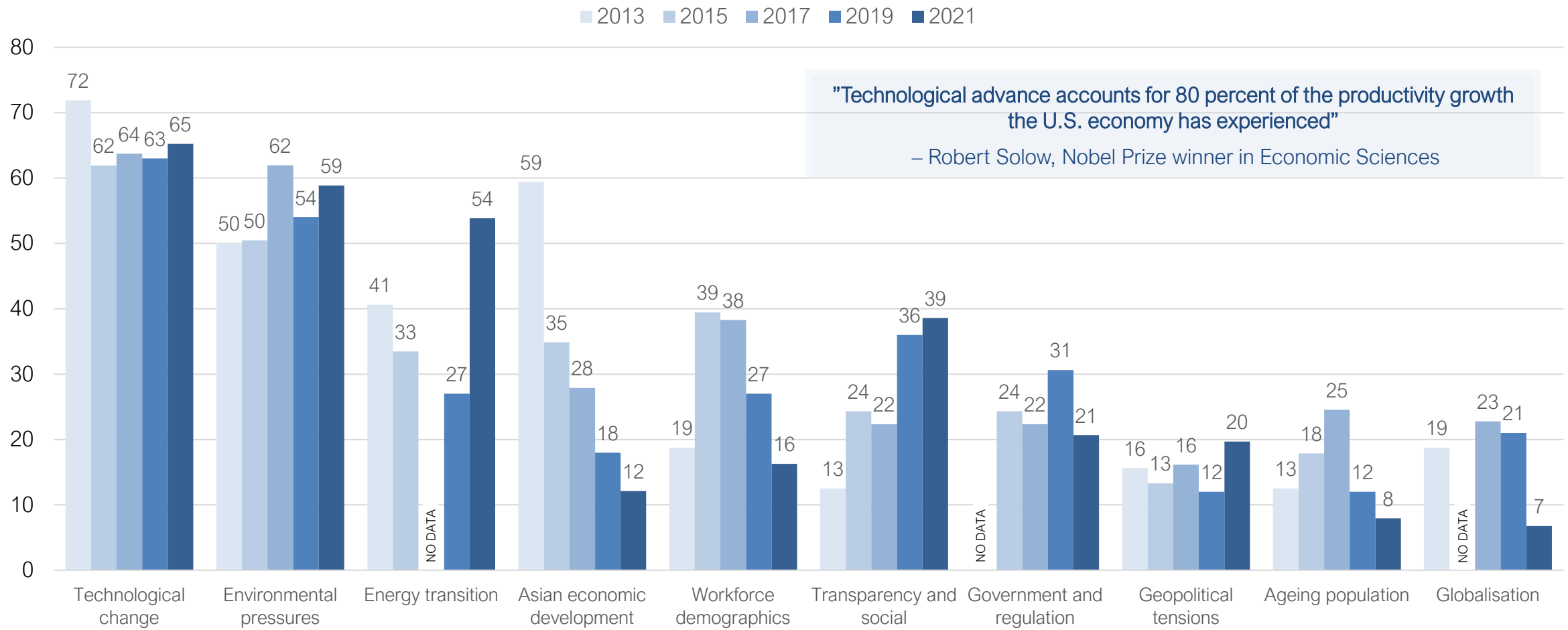
External Forces

Technology & the environment – equally significant

Question: Which of the following global trends will have the biggest impact on innovation in mining over the next 15 years?

(Respondents given 3 answers)

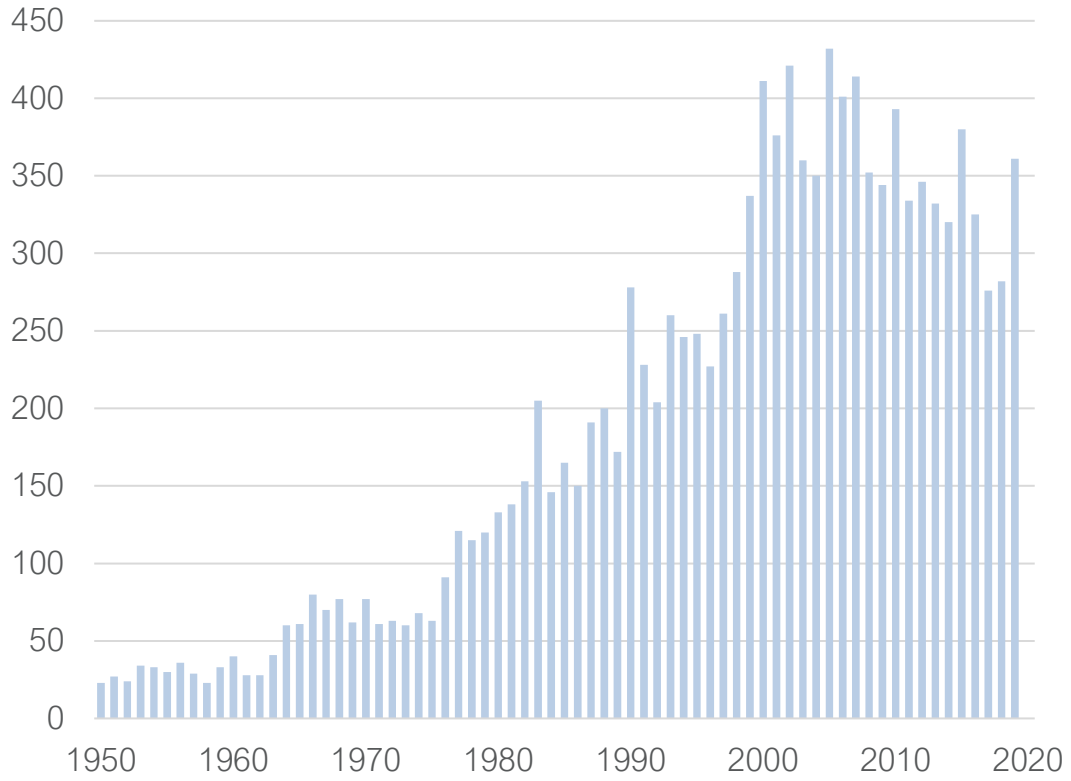


"Technological advance accounts for 80 percent of the productivity growth the U.S. economy has experienced"

– Robert Solow, Nobel Prize winner in Economic Sciences

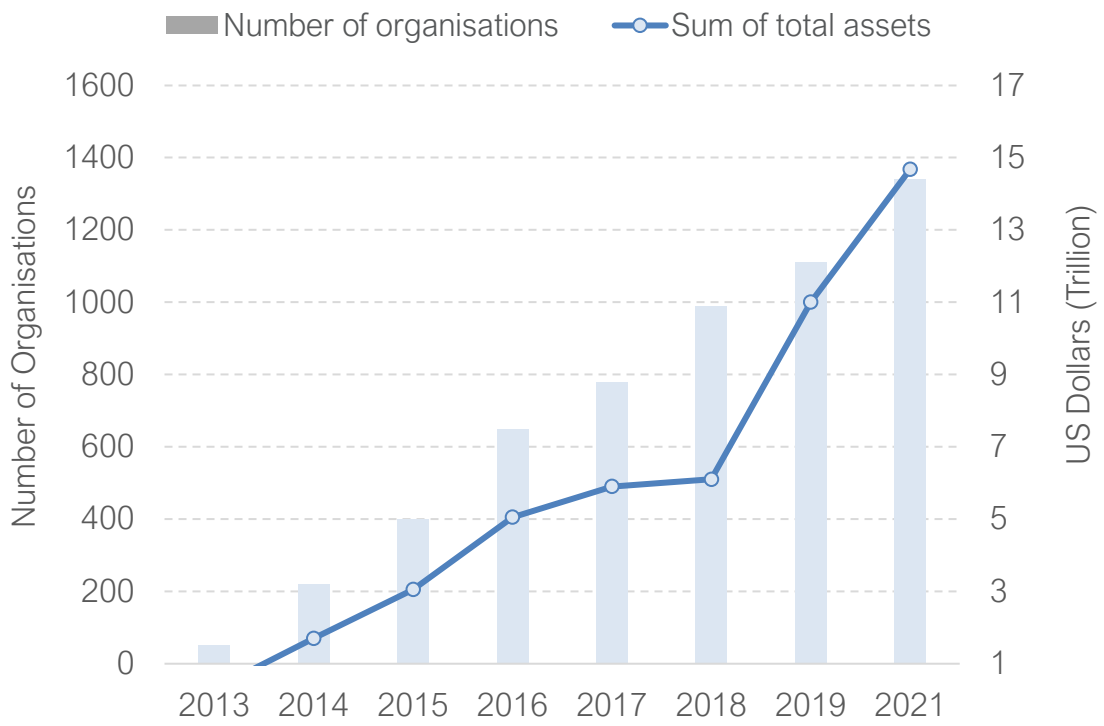
Climate pressure – more events and more activism

Increase in weather-related natural disasters over time



"Re-insurers have missed loss estimates by 30% in each of the last 3 years"
John Voeller (Former White House Office of Science and Technology Policy)

Growth in Fossil Fuel Divestment Commitments

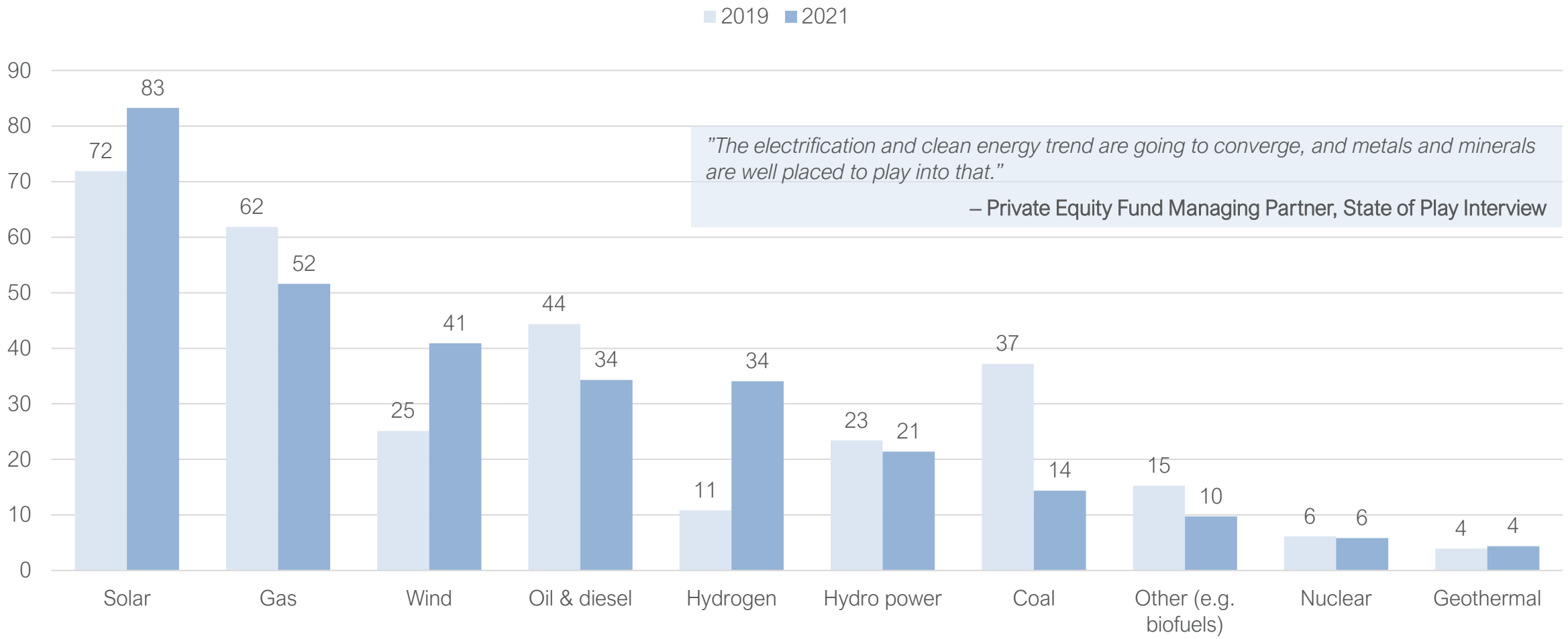


"Australian super funds have pulled $2.5bn from high carbon emitting companies like BHP, Woodside and Santos since 2018" - Market Forces (Environmental Finance Group)

Sources: Slate Analysis, The Forum for Sustainable and Responsible Investment, EMDAT (2020), Université catholique de Louvain

A lot can change in a matter of two years

What energy sources will become the most widely used in your country's mining companies over the next 15 years?



"The electrification and clean energy trend are going to converge, and metals and minerals are well placed to play into that."

– Private Equity Fund Managing Partner, State of Play Interview

ELECTRIC MINE CONSORTIUM

Outlook: Decarbonisation of mining

Decarbonisation of mining

ELECTRIC MINE CONSORTIUM

1	Emission reduction targets	*Harder and faster…*
2	Green premium pricing	*Differentiation – branding, pricing, and because they must…*
3	New mine design principles	*Unlocking new extraction methods…*
4	Value chain extension	*Value-added products, downstream processing*
5	Electric operating models	*Decentralised, data-driven decisions, services models…*

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ELECTRIC MINE CONSORTIUM

Blackstone, leading the way

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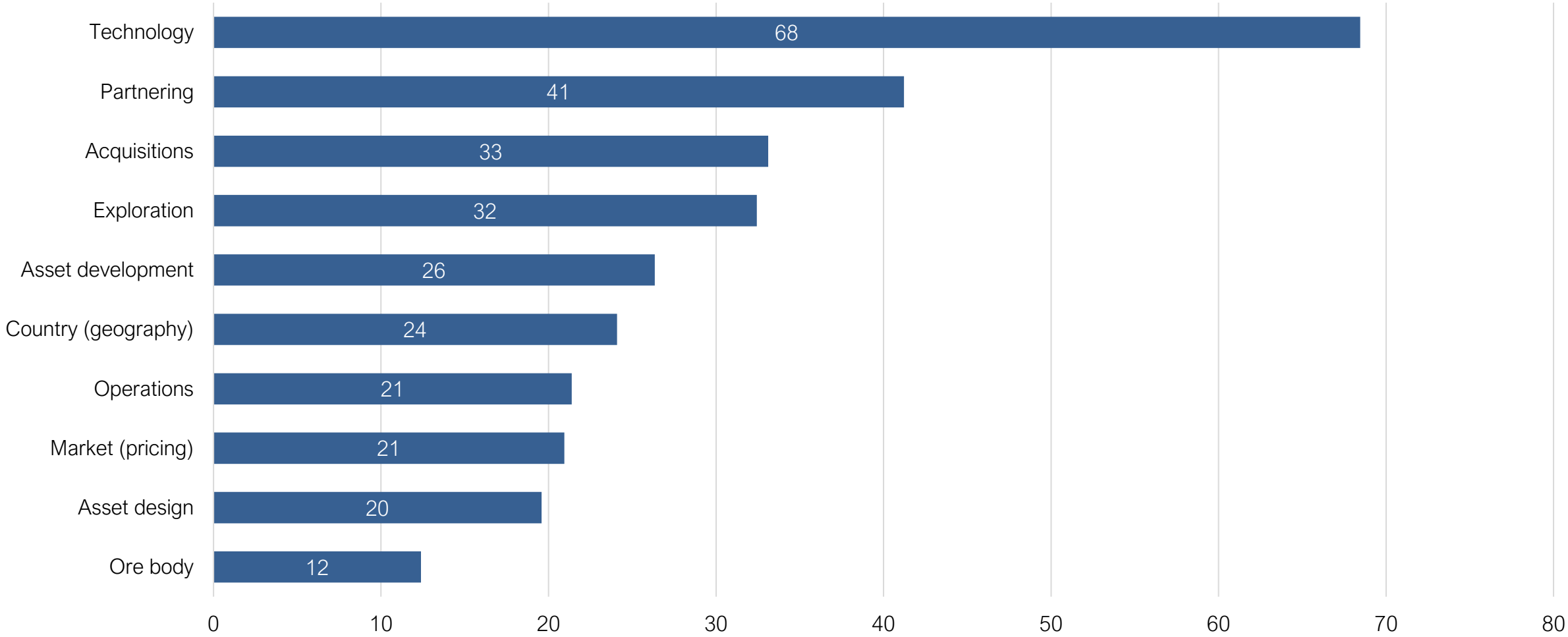
Risk tolerance

ELECTRIC MINE CONSORTIUM

As a mining business, where would you accept risk in order to increase financial returns?



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EMC 2022 Report – Download today

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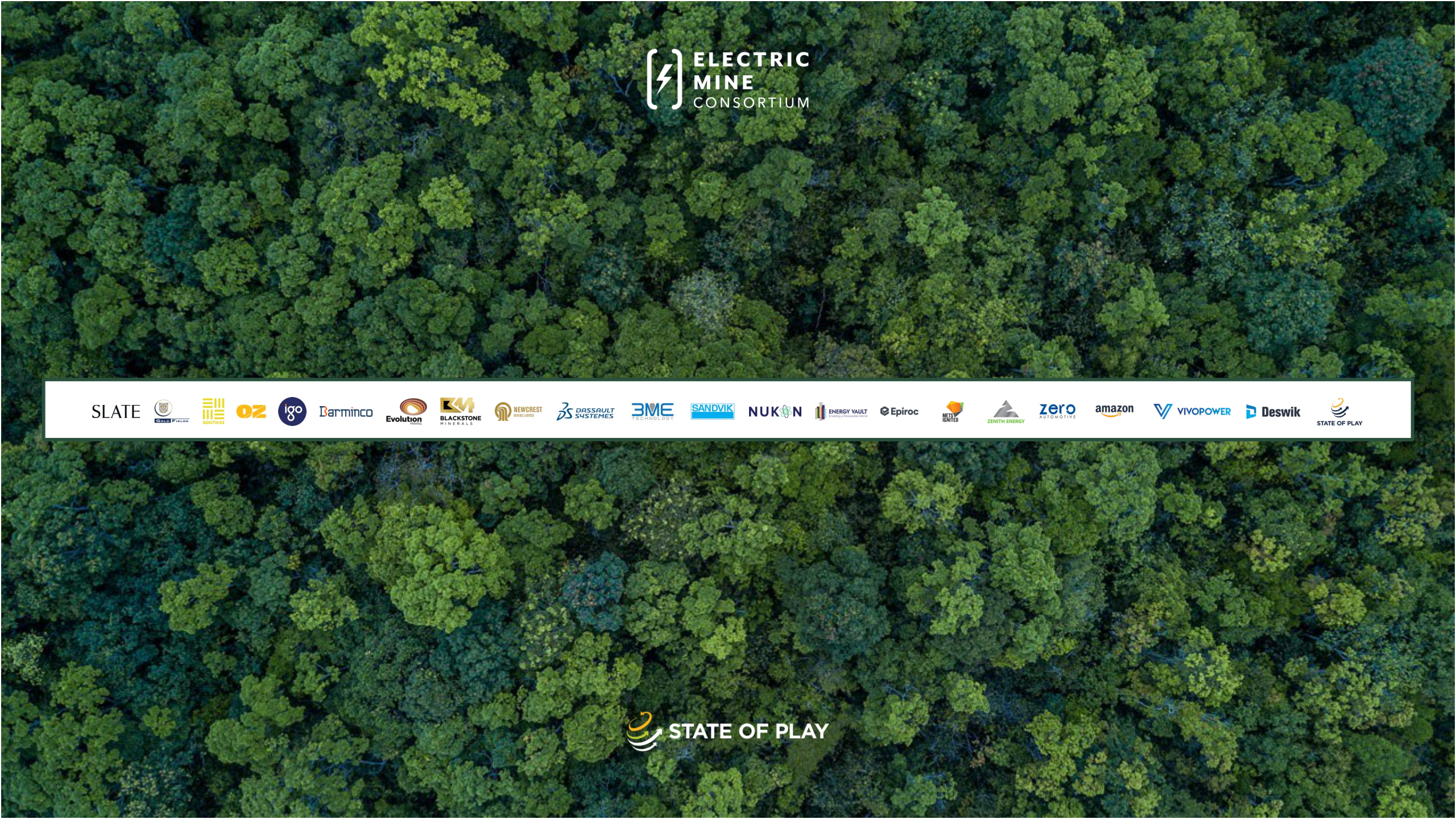
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TA KHOA CARBON FREE MINING CHALLENGES

Challenge 1: Immature Technology Development

- Technology development in the electrification and decarbonisation space is progressing at a blinding rate.
- No-one can foresee the final state, and access to design and access OEM data for design is difficult.

Challenge 2: Engineers' and Regulators Understanding and Experience

- Many key stakeholders are unfamiliar or even resistant to change. As a result, companies pushing the green boundary need to educate and assist other stakeholders. Some see as a competitive advantage, and a resistant to collaboration.

Challenge 3: Power Supply and Charging

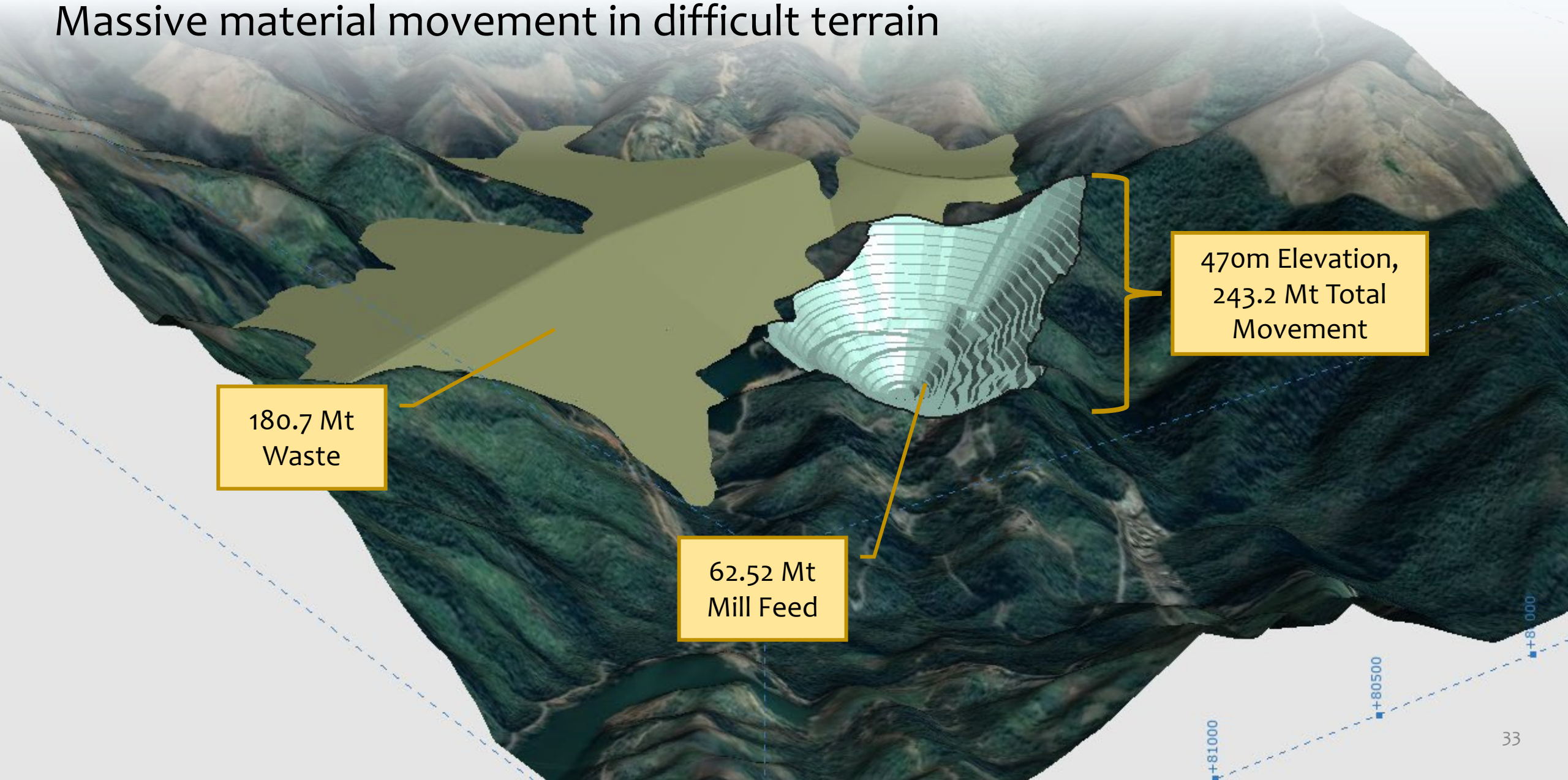
- Electric power requirements of truck haul cycles are so great that battery sizes need to be extreme, or trucks will require regular charging. Efficient means of charging is critical to increase truck utilization and minimize capital costs.

Challenge 4: Ta Khoa Project Environment

- The Ta Khoa project has several environmental challenges which will impact the decarbonization plan. The terrain is rugged and dense. Small electric trucks are not suitable, and haul roads will need to follow natural topography.

TA KHOA MINING CHALLENGE

Massive material movement in difficult terrain



Mine & Quarry Electrification Clean Tech

Heavy BEV Dynamic Charging

CONFIDENTIAL / COMMERCIAL IN CONFIDENCE

BLUVEIN

go electric.

The Missing Piece of the Puzzle

Dynamic Charging – powering the wheels whilst charging the battery

- ABB's Kiruna System has exposed open HV conductors
  - Unsafe and illegal in most major mining jurisdictions.
- Mining industry is stuck while waiting on OEM's to deliver viable electrification solutions.
- BluVein's standardized dynamic charging technology is this missing jigsaw piece
- The key: Mining companies install and manage standardized electrical infrastructure.
- OEM's adopting BluVein stand to make significant sales as their heavy BEV solutions become viable.

Historical catenary & pantograph system by ABB

Global Electric Heavy Haulage Projects

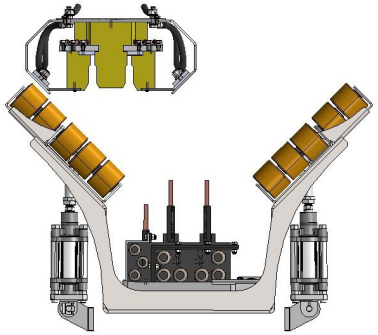
Assessed Suitability to Mining Application

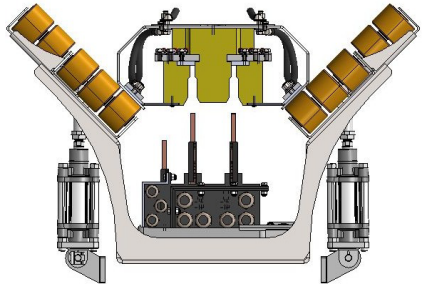
BLUVEIN

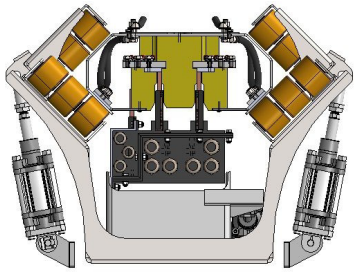
BluVein's Rail & Hammer

BluVein Design Philosophy

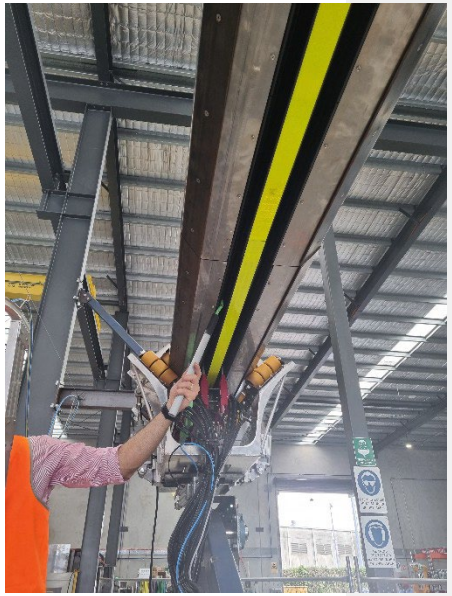
- **Safety** – comprehensive safety systems including conductors protected in slotted rail
- **Standardisation** – flexible adaptation to all applications & battery fleet
- **User Experience** – ease of install & operation through smart design, engineering and controls







IP rated slotted rail for protected electrical contacts



BluVein – System Testing at TRL3/4

BLUVEIN

Stationary Rail Connection Test

Mobile Rail Connection Test

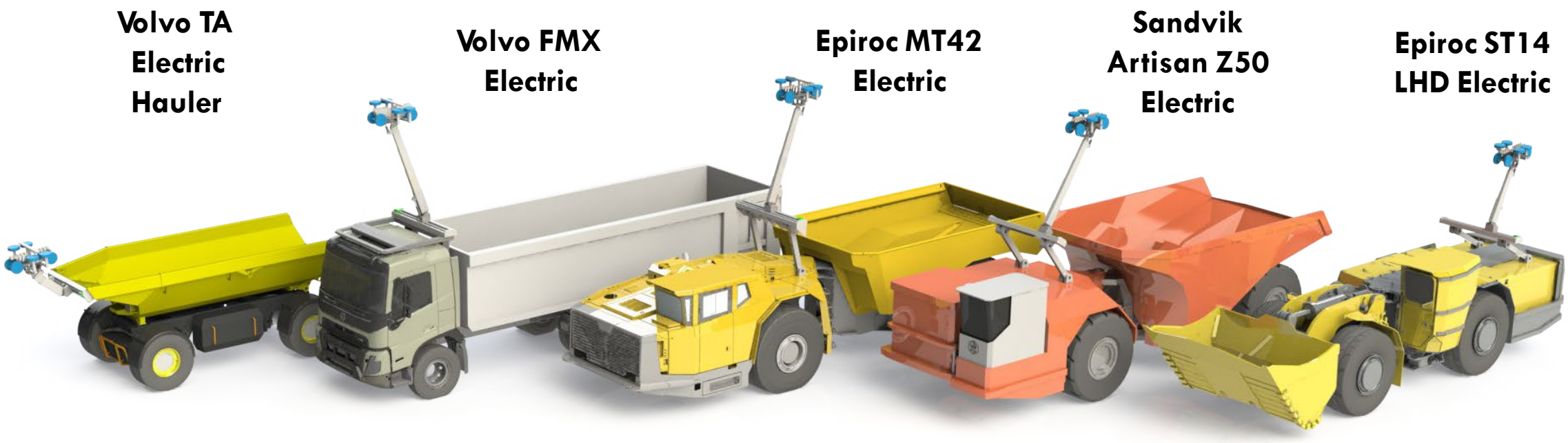
Proposed BluVein1 Pilot

Site - Kanmantoo, South Australia

Standardised Dynamic Charging Technology

Mixed Fleet, Scalable and OEM Agnostic

BLUVEIN



BluVein1 - Partner Mining Companies

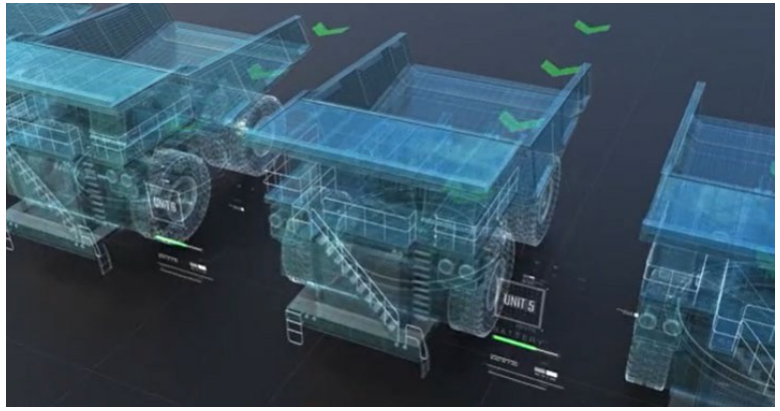
Partner Vehicle Manufacturers

Charge on Challenge

CHARGE ON™
INNOVATION CHALLENGE

BLUVEIN

- 22 Mining Company Patrons
- 400 technology submissions reduced to 80 before Round 1 judging
- 80 reduced to 20 tech solutions in Round 1
- Round 2 judging has just closed
- 4 major OEM's (CAT, Komatsu, Liebherr and Hitachi)
- Patrons seeking collaborative pilots
- VC investors waiting in the wings

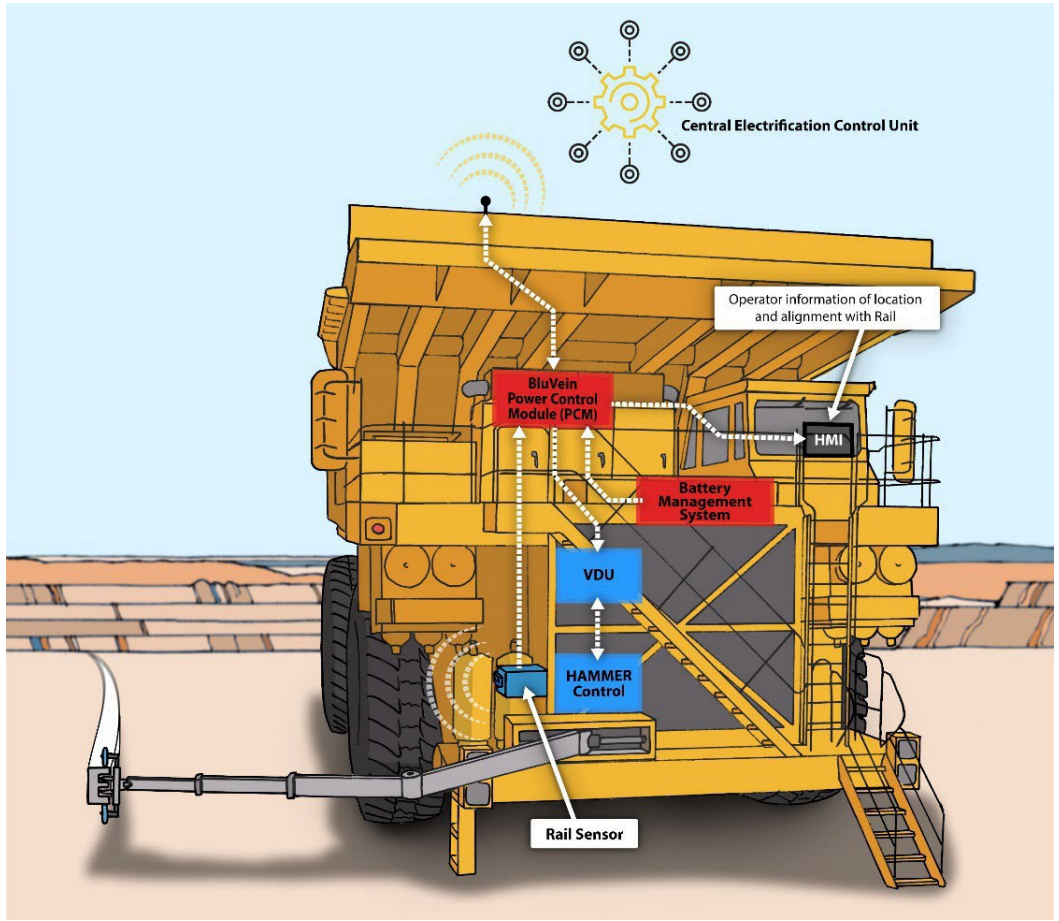


CHALLENGE PATRONS

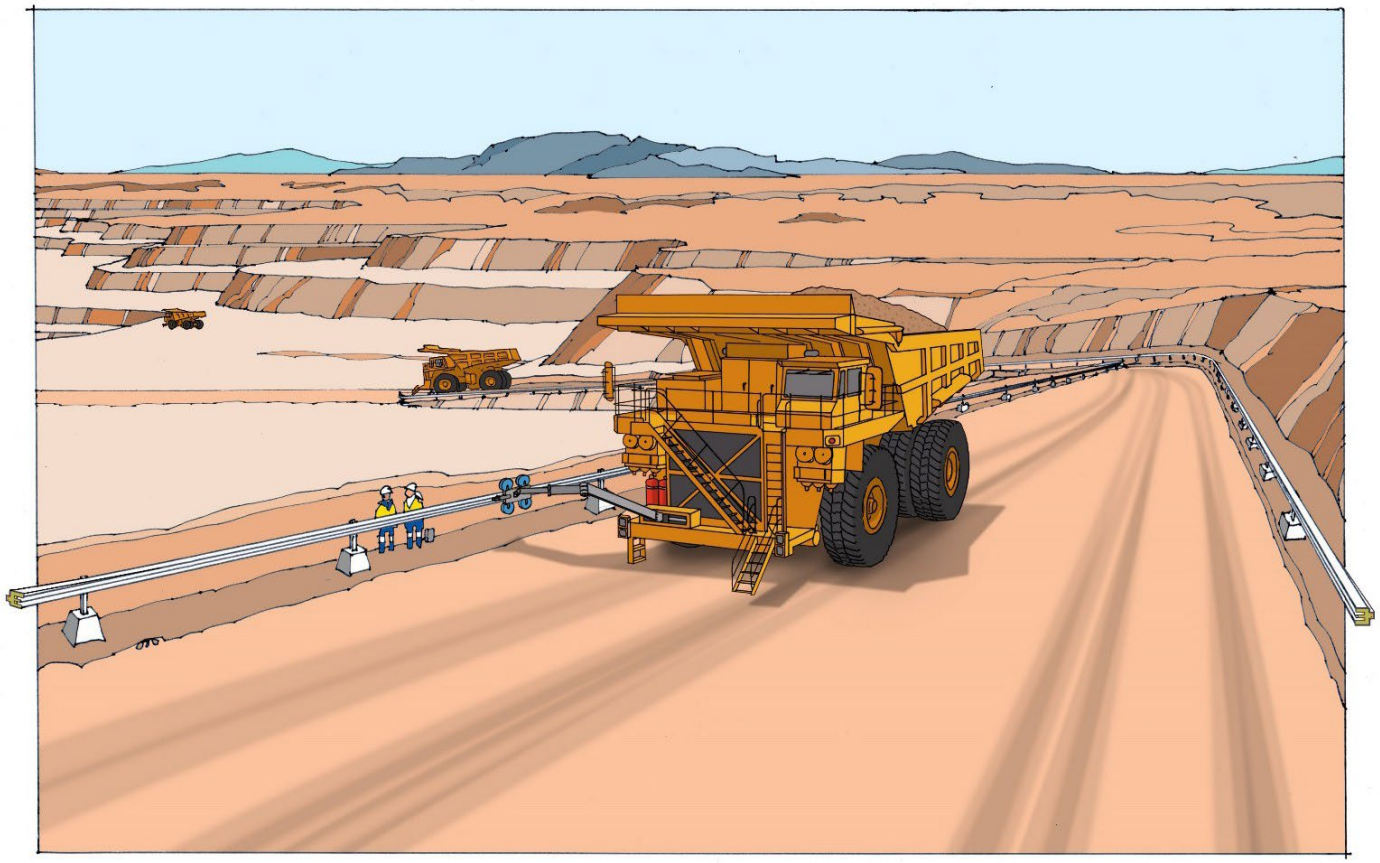
AUSTMINE Smart Mining
BHP
RioTinto
VALE
BOLIDEN
THIESS
Teck
ROY HILL
FREEPORT-McMoRan
GOLD FIELDS
CODELCO
YANCOAL
ANTOFAGASTA MINERALS
Syncrude
NEWCREST MINING LIMITED
HARMONY
CITIC PACIFIC MINING
Evolution MINING
OZ MINERALS
BARRICK
MINERAL RESOURCES
SOUTH32

BluVeinXL

BluVein1 Technology….Supersized



Central electrification control unit and on vehicle architecture



BluVein safe slotted rail installed near to ground for easier, lower cost installation and operation.

Thank you

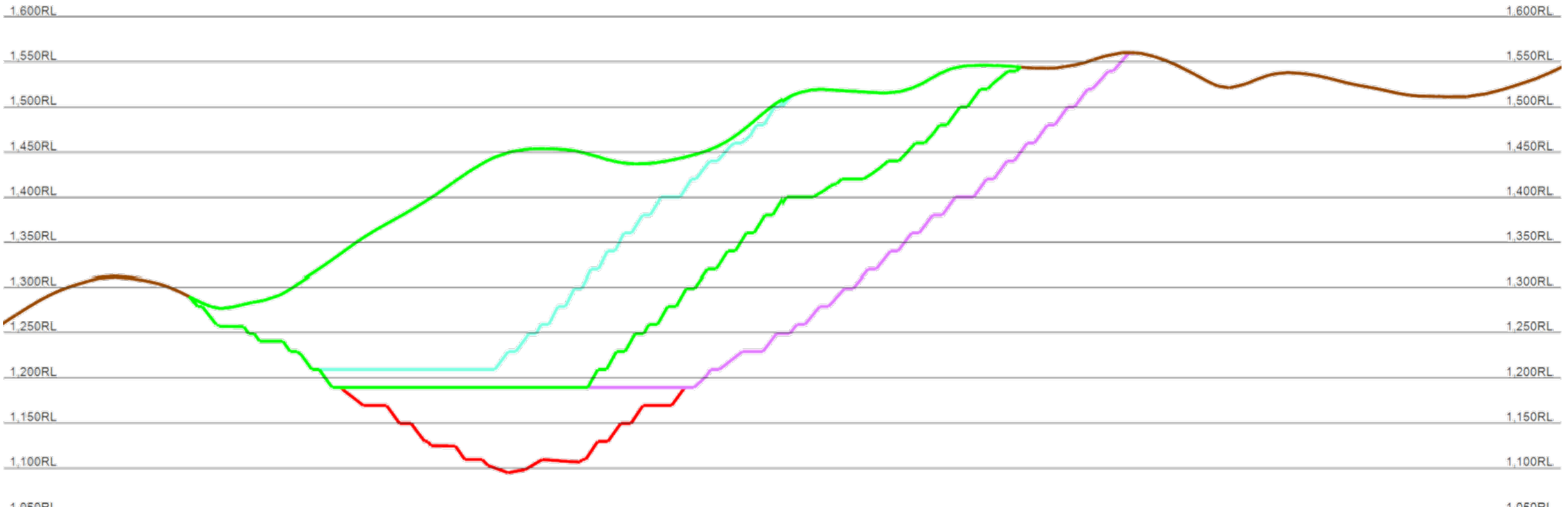
CONFIDENTIAL / COMMERCIAL IN CONFIDENCE

BLUVEIN

go electric.

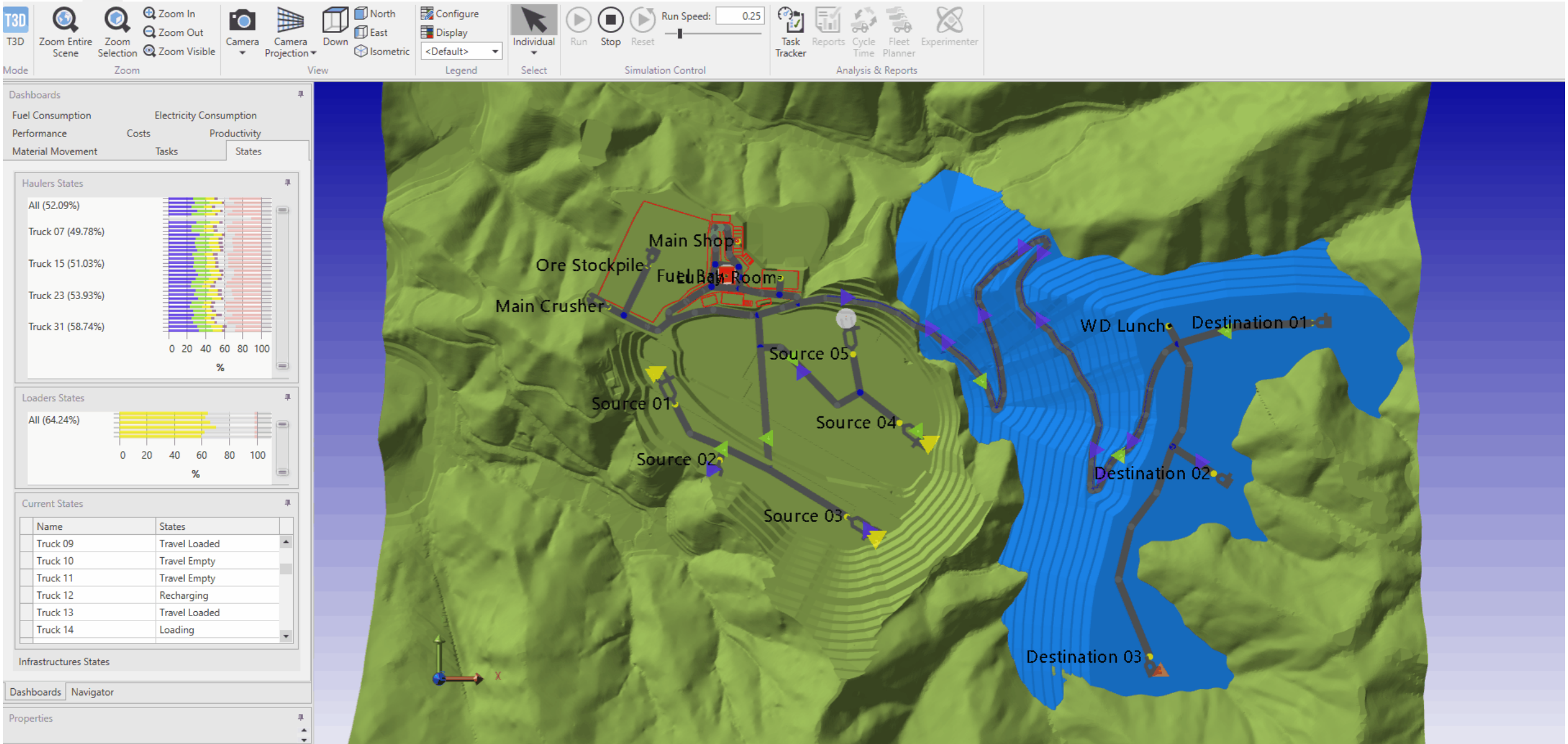
ELECTRIC HAULAGE – TA KHOA EXAMPLE

PIT DESIGNS – STATIC INFRASTRUCTURE



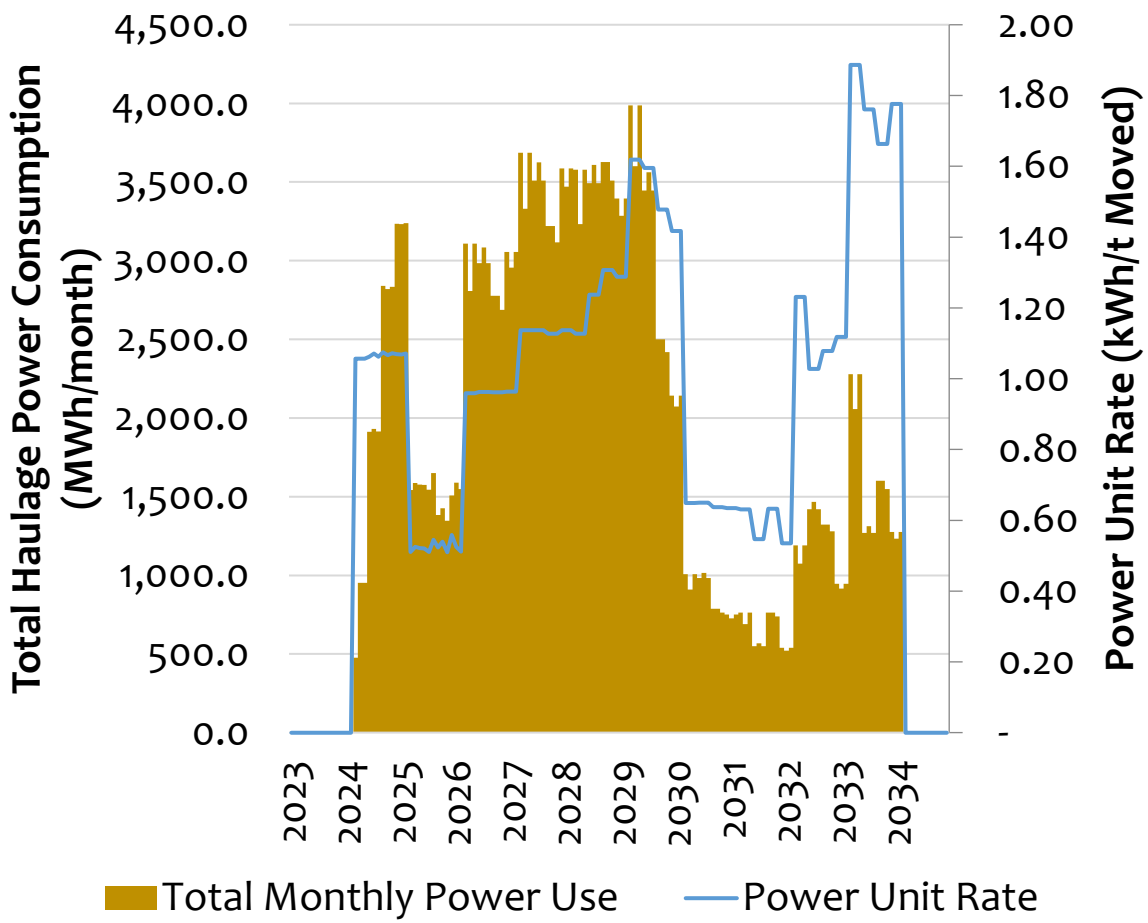
OUTCOMES – RESULTS OF THE ANALYSIS

Haul Cycles Modelled on RPM's HaulSim



OUTCOMES – RESULTS OF THE ANALYSIS

HaulSim Outputs



- Power Requirements:
  - Peak Annualised Power: 43,000 MWh
  - Average Annualised Power: 25,000 MWh

	Units	Diesel Fleet	Electrical Fleet
Haul Fleet Size	#	28	28
Diesel Consumption	ML	70,611	0
Power Consumption	MWh	0	250,897

MINVIRO

Life Cycle Impact Data Enabling Net Zero Nickel

28th of February 2022

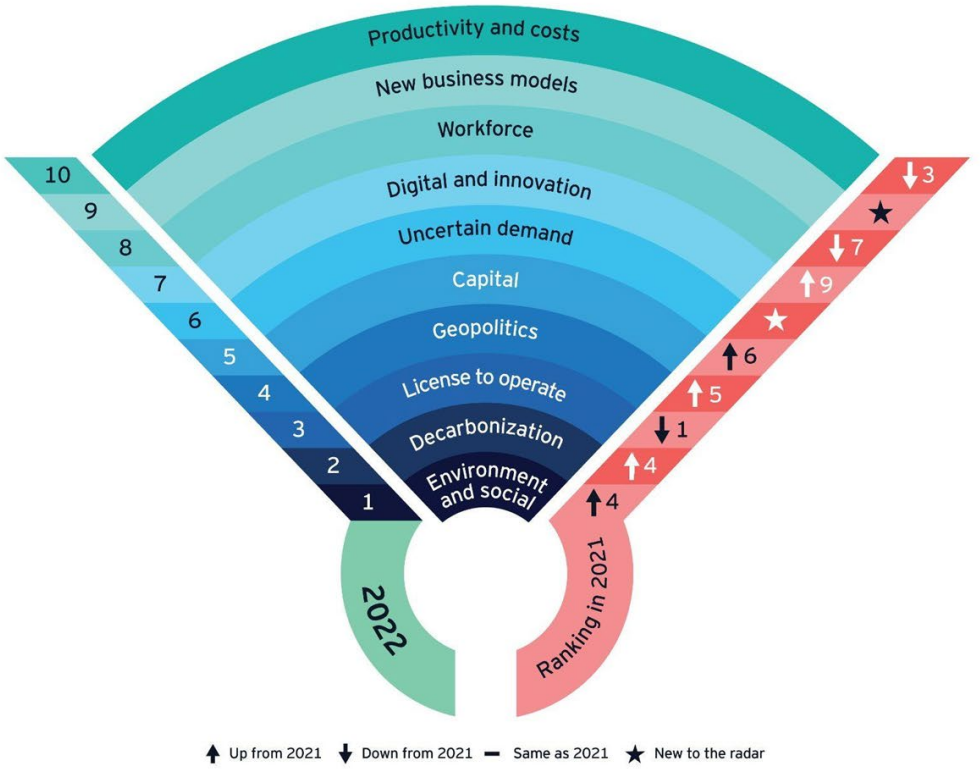
laurens@minviro.com

Understanding the environmental risks of your project

The importance of quantifying impacts

Reduction of the carbon footprint is considered a major risk to mining companies (Ernst & Young, 2021).

Minviro works with mining and metal projects through all stages of development and operation to understand, quantify and minimize the carbon footprint (scope 1, 2 and upstream scope 3 emissions) by applying Life Cycle Assessment.



Quantifying environmental impacts

Life Cycle Assessment

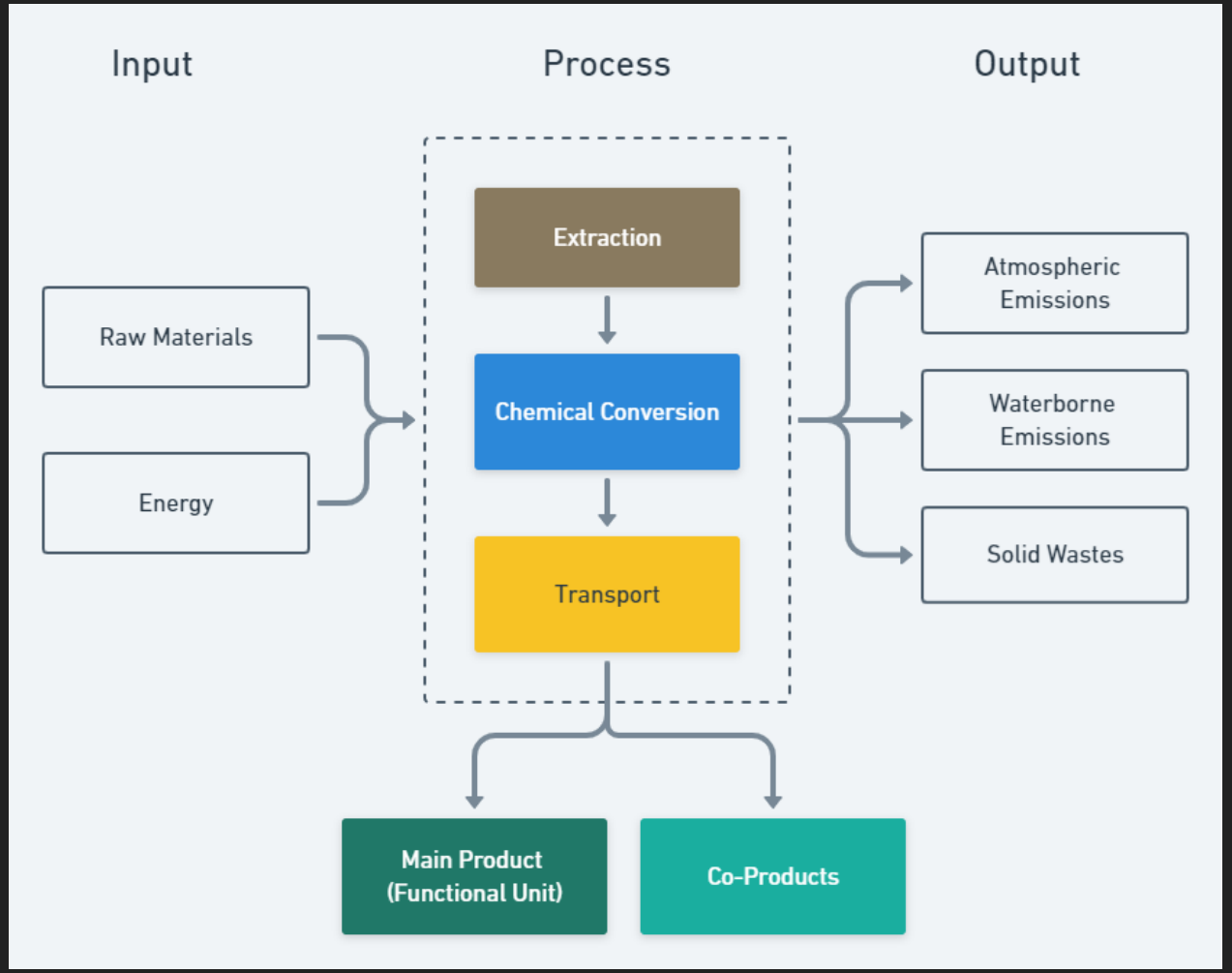
What is a Life Cycle Assessment?

A Life Cycle Assessment (LCA) is an inventory of global and local environmental impacts related to a product or process.

The LCA models a range of environmental impacts, ranging from CO_2 intensity to water use, following ISO 14040-14044 standards.

Environmental hotspots are identified, providing insights into suitable mitigation strategies ensuring that the raw materials for the low-carbon economy are sourced at minimum environmental impact.

LCA's can be carried out both for projects in development and for operations.



Environmental Impact in the Mining Industry

Environmental (Social) Impact Assessment
Assessment of local environmental impacts, prior to resource project construction and/or during operation allowing access to (social) license to operate.

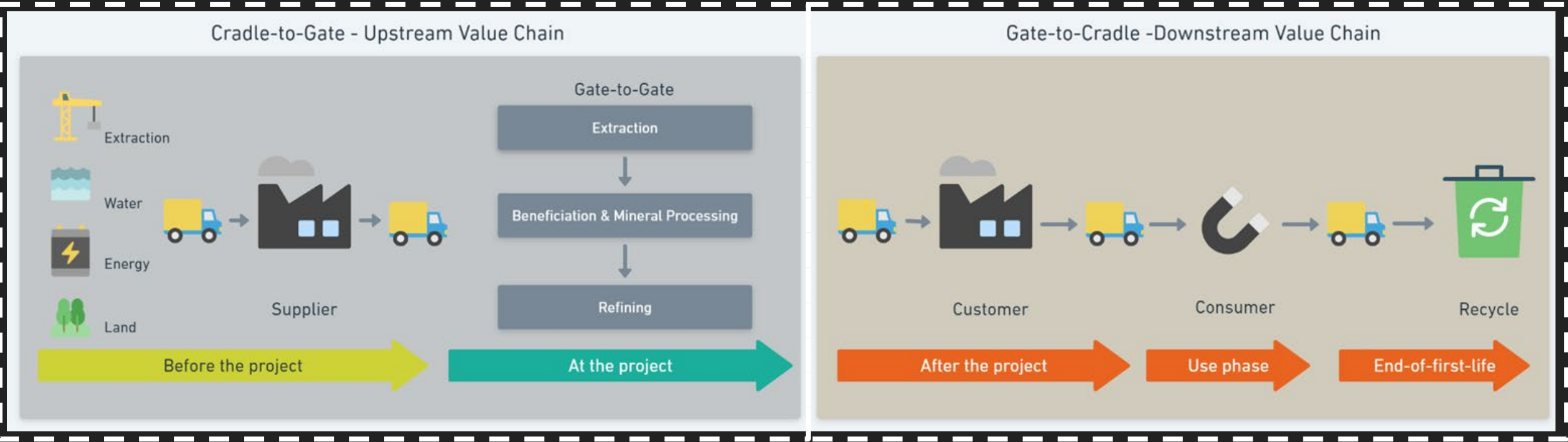
Greenhouse Gas Inventory
High level quantification of the CO_2 emissions associated with processes on site (scope 1) or imported energy (scope 2). Neglects upstream scope 3 impacts.

Life Cycle Assessment
Scientific methodology to assess global environmental impacts associated with the life cycle of a product or process.

Impacts occur upstream and downstream

Impact quantification through the entire supply chain

- Minviro LCAs are usually cradle-to-gate, quantifying impacts from the point of resource extraction to final product manufacturing
- For batteries, this involves metal extraction, processing and refining to cathode, anode and electrolyte material, in addition to cell assembly and all energy inputs involved throughout the entire process
- Use phase and end-of-life phases are optional add-ons to measure downstream scope 3 impacts



Environmental Impact categories

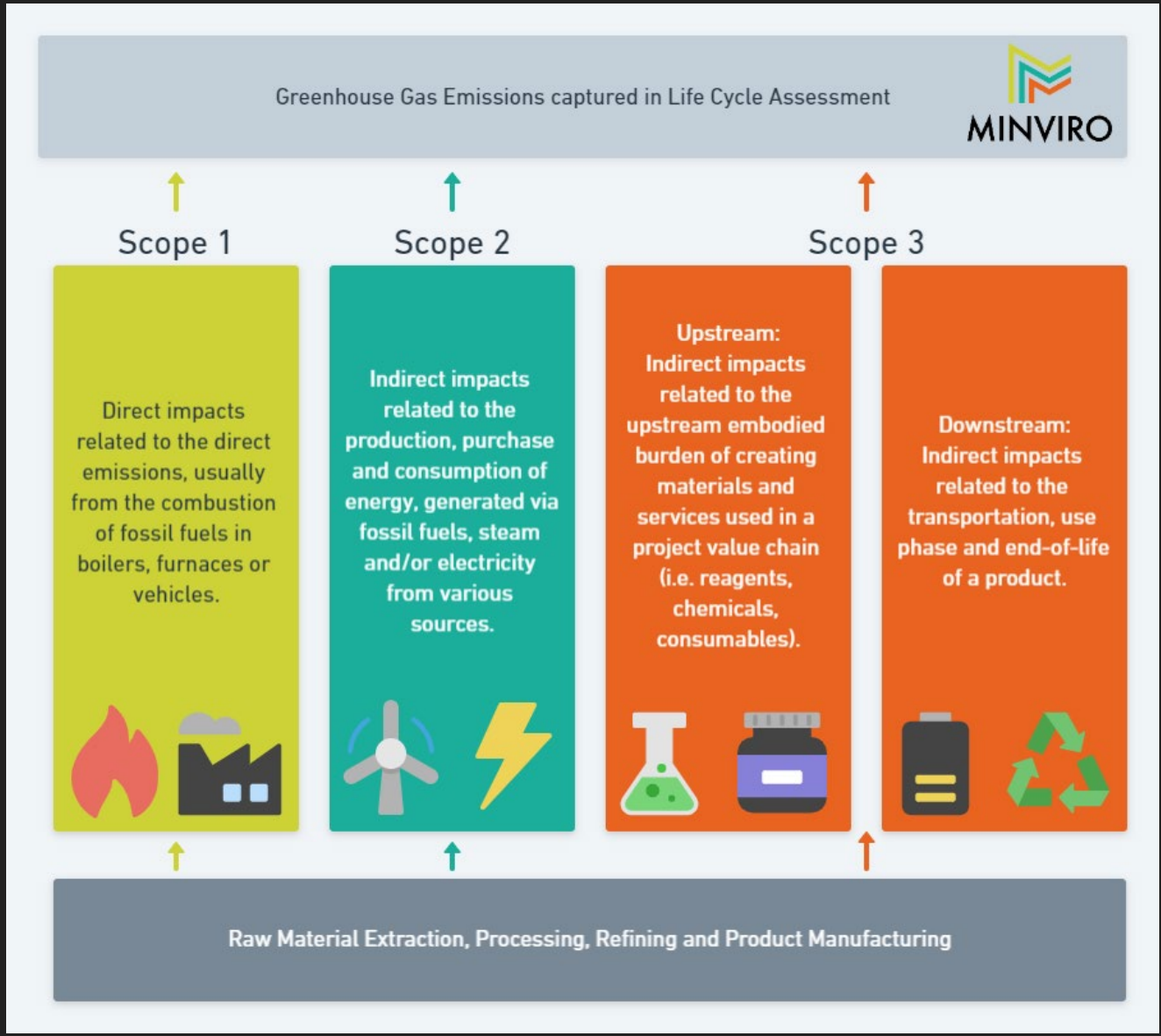
Global Warming Potential

Measured in kg CO_2 equivalent per kg product.

- Scope 1 emissions: represents direct combustion of fuel and energy sources on site (included in GHG analysis)
- Scope 2 emissions: represent embodied emissions of consumed electricity (included in GHG analysis)
- Scope 3 emissions: represent embodied emissions of materials and transportation

Scope 1, 2 and upstream scope 3 impact is responsibility of manufacturer.

Downstream scope 3 impact is not the responsibility of the manufacturer.



Ta Khao NCM811 LCA Study

Goal and Scope

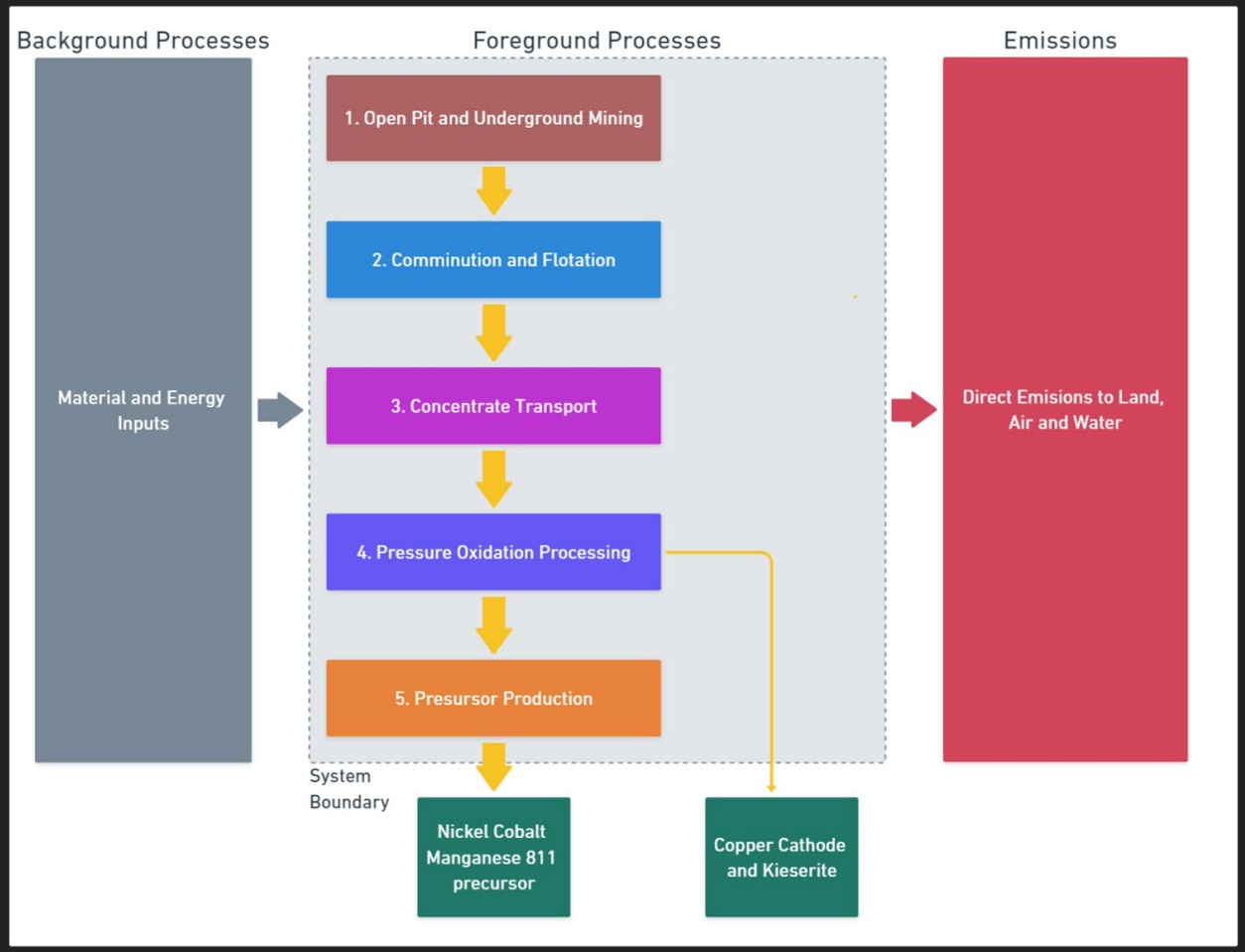
Goal: determine the life cycle impact of producing NCM811 at BSX' Ta Khao nickel project

Functional unit: 1 kg of NCM811 precursor product, up to the end gate of the refinery

System boundary: from cradle (resource extraction) to gate (refinery), analysing the contribution of the distinct stages

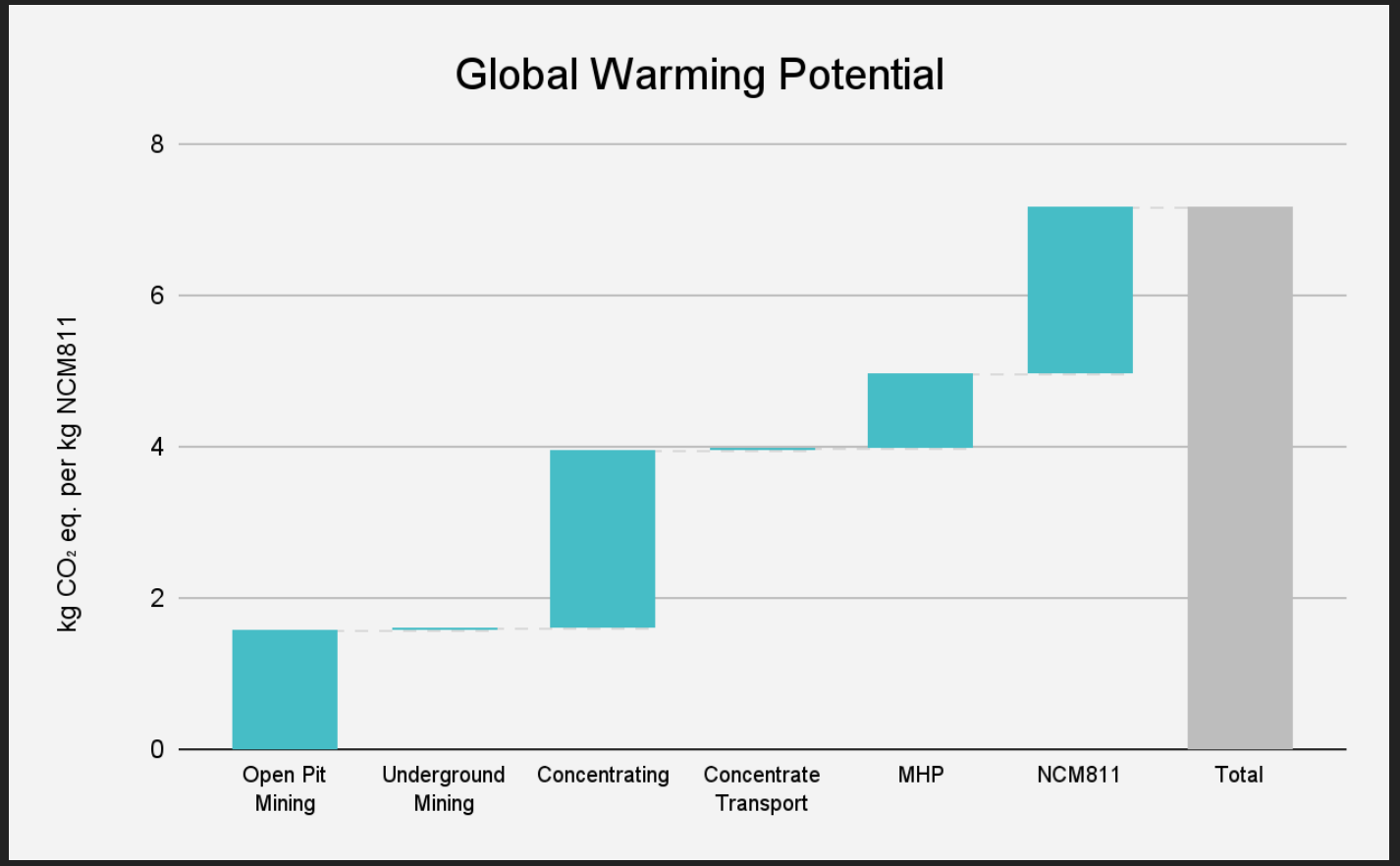
Impact allocation: divided the impact of the mining, concentrating, transport and POX process between the nickel, copper and kieserite products

- Mass based allocation for copper co-product
- System expansion for kieserite co-product



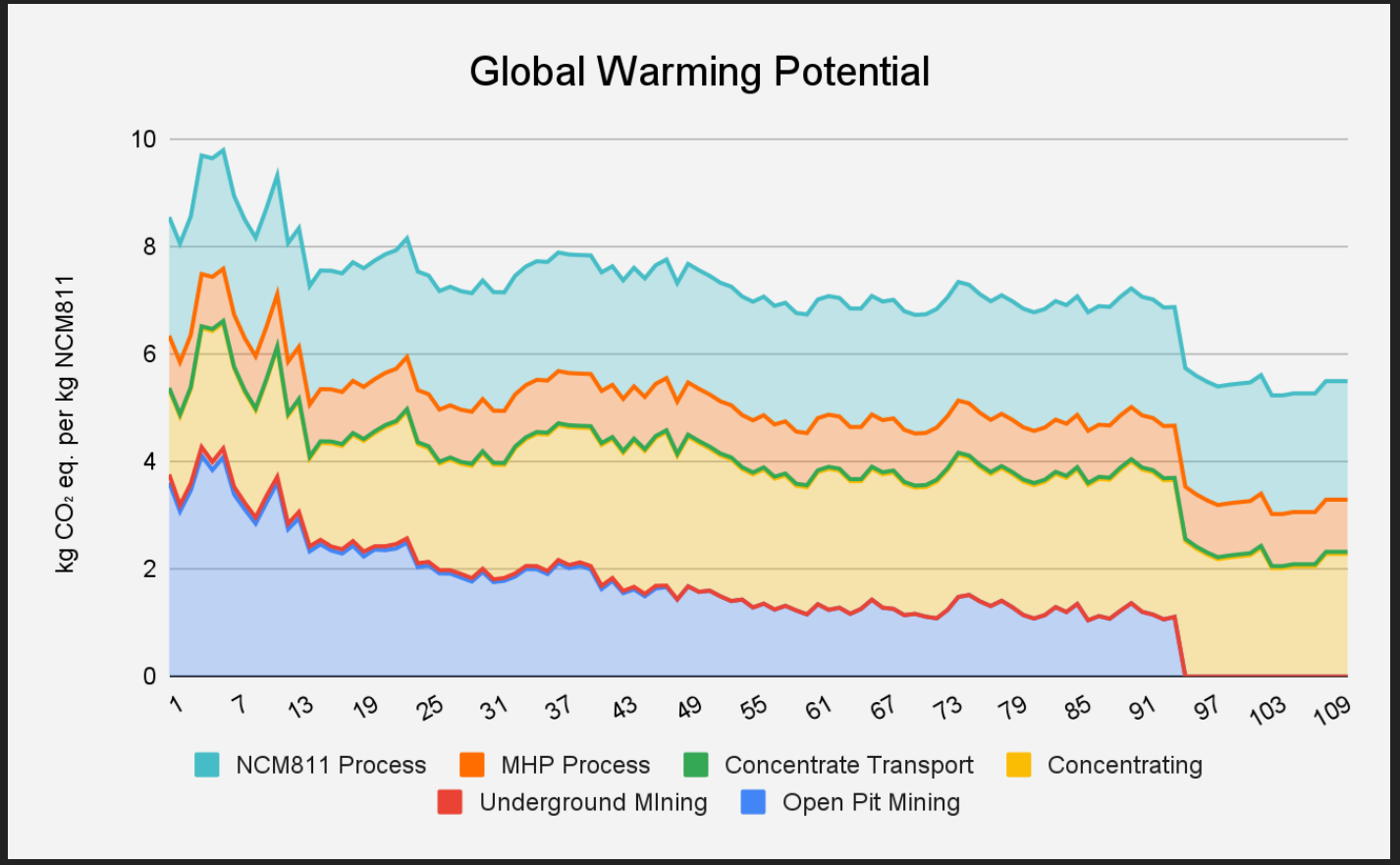
BSX' NCM811 Product Global Warming Potential

Results by Stage

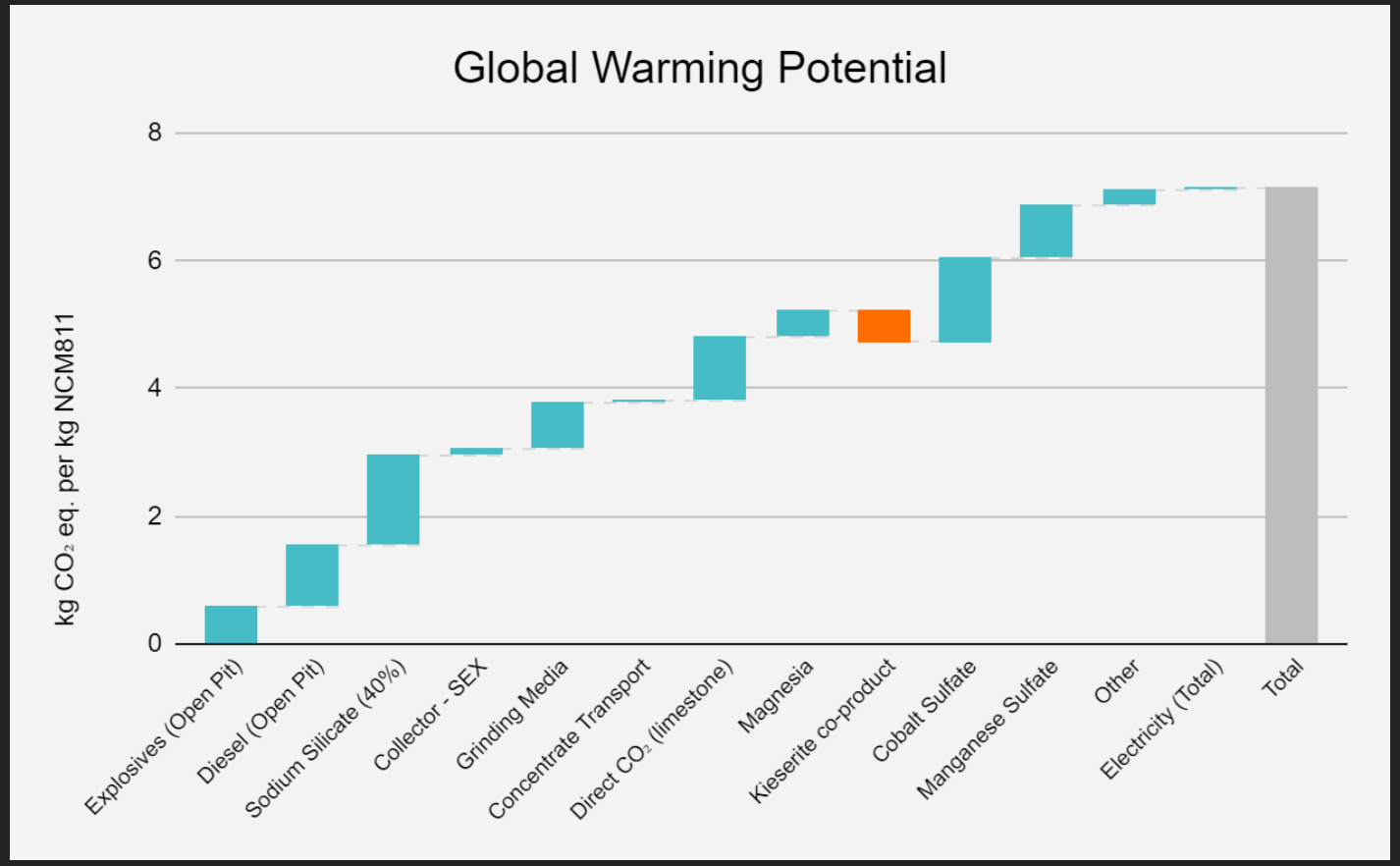


Temporally Explicit Results

Climate Change Impacts are Not Static

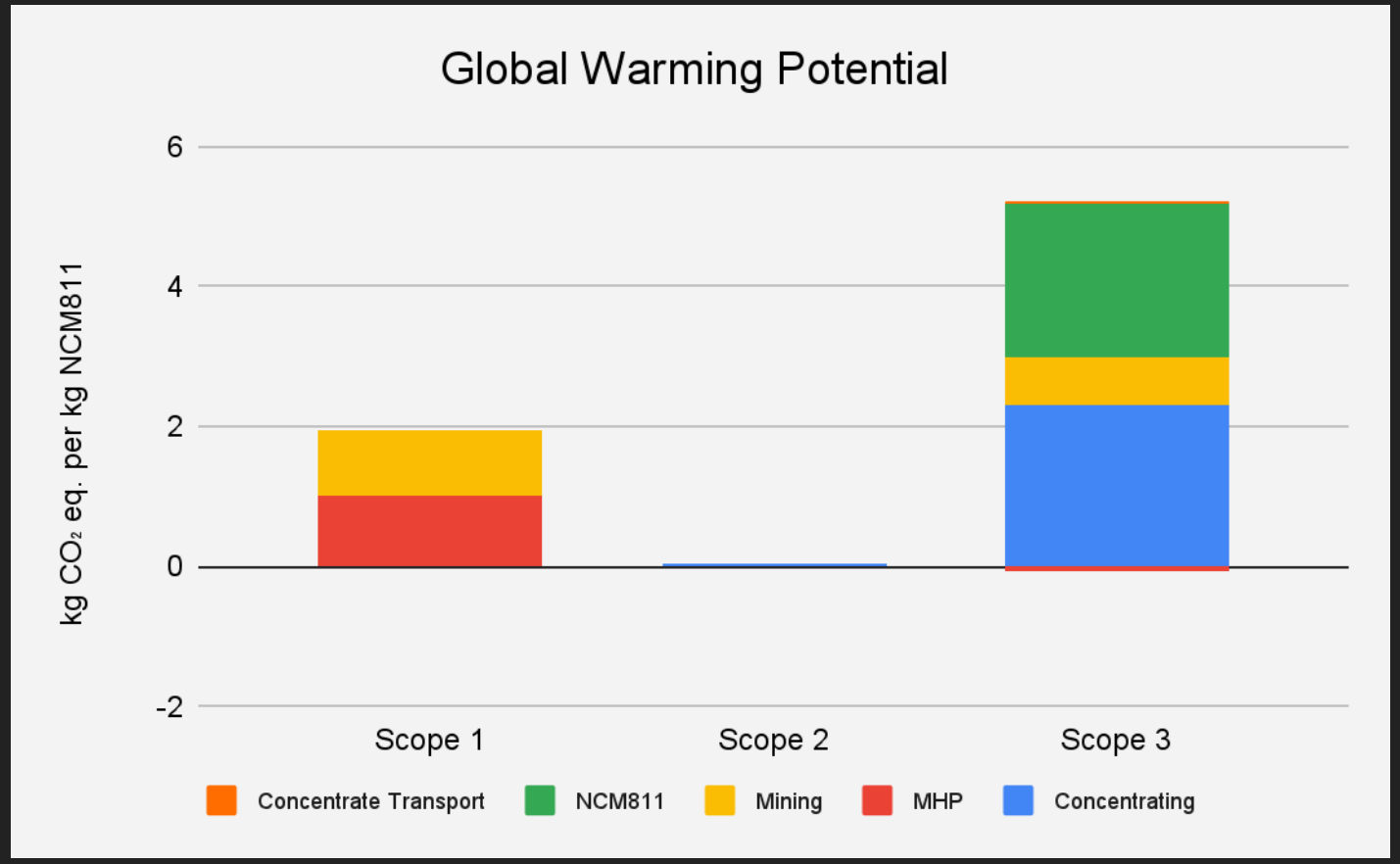


Life of Mine Average Contribution Analysis



Scope 1, 2 and 3 Impacts

The Importance of Scope 3 Emissions

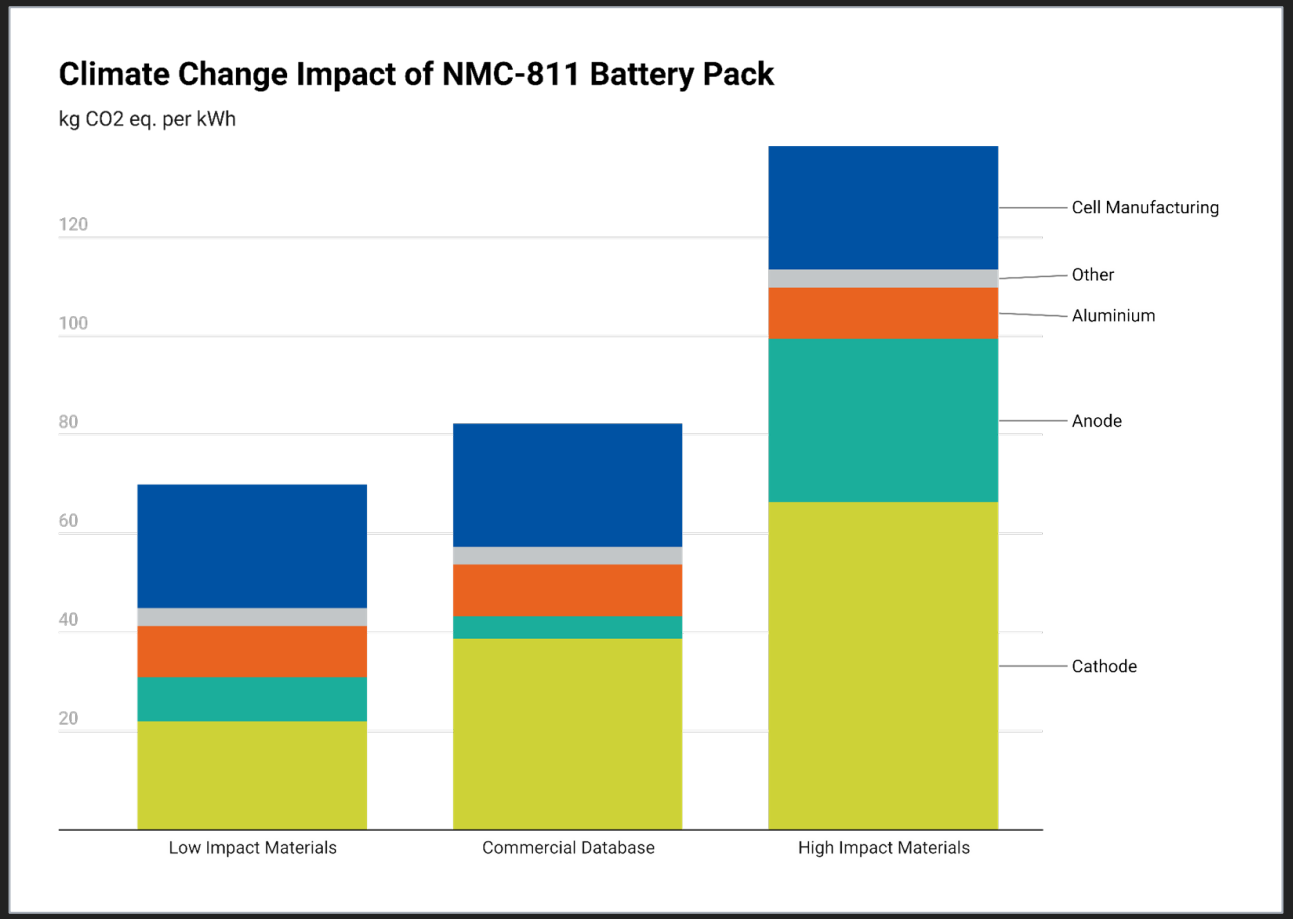


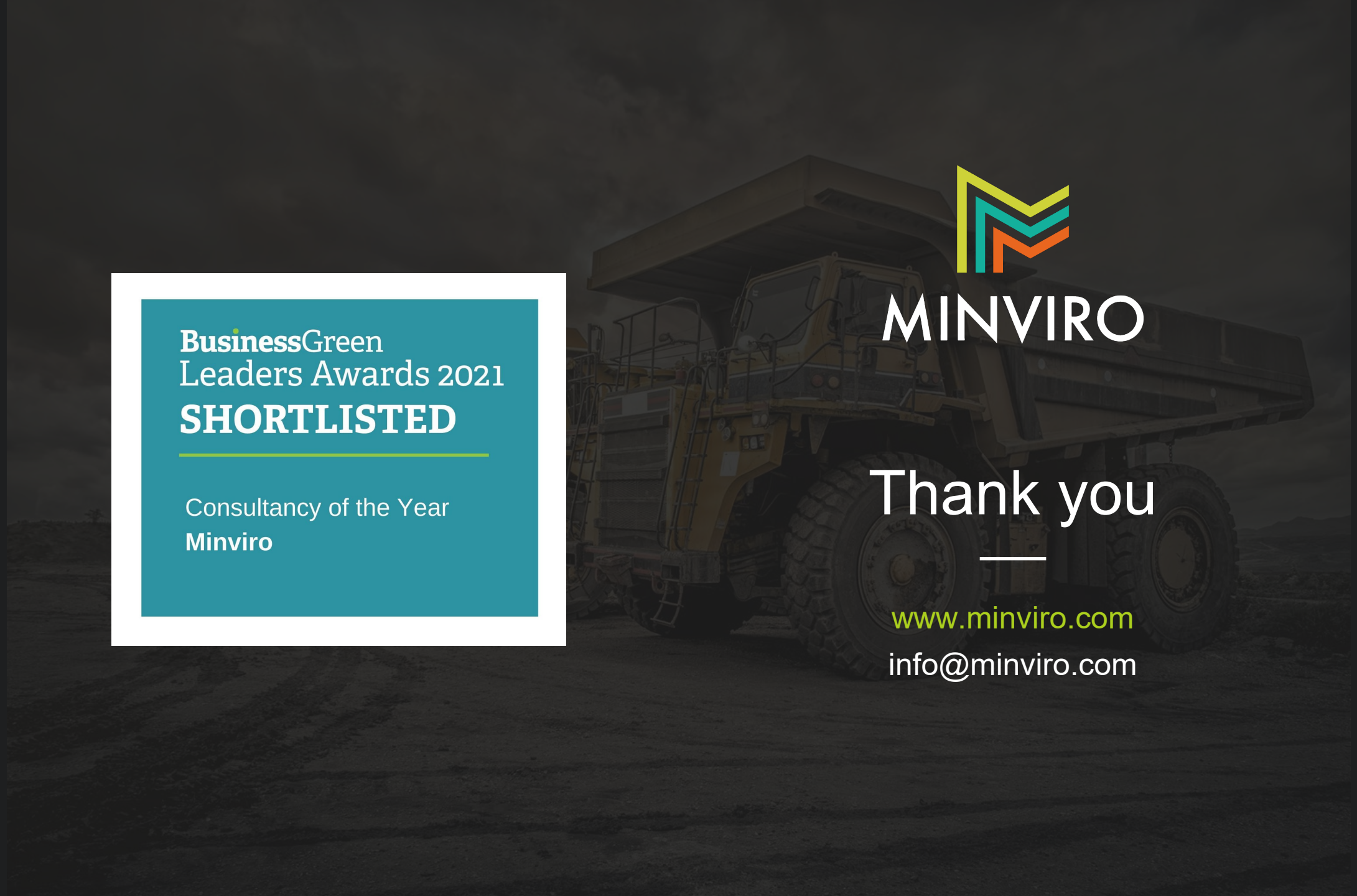
What is Next?

Quantify BSX' environmental value proposition:
Benchmark against NCM811 products using nickel sourced from different resource types and via different processing routes

Integration of environmental metrics:
Include LCA metrics into mine planning to enable minimum CO_2 intensity mining

And a number of other strategic initiatives to minimize the global warming of the NCM811 precursor product…





BusinessGreen
Leaders Awards 2021
SHORTLISTED

Consultancy of the Year
Minviro

MINVIRO

Thank you

www.minviro.com

info@minviro.com

LCA OUTCOMES

CONTINUING THE PATH TOWARDS ZERO CRABON

Auxiliary Mining Equipment

- Currently exploring options for other mining equipment. Application of Batteries and Hydrogen for mobile loaders, LV's, drill rigs and other mining equipment

Explosives Supply and Use

- Explosives used in mining are a major contributor to BSX's residual carbon footprint. New explosive technologies are emerging, and alternate low carbon production paths are being established for conventional techniques

Supplier Selection and Alternate Feed Stocks

- Selection of suppliers with lower Scope 3 Carbon contributions demonstrated using recognised traceability and accountability systems.

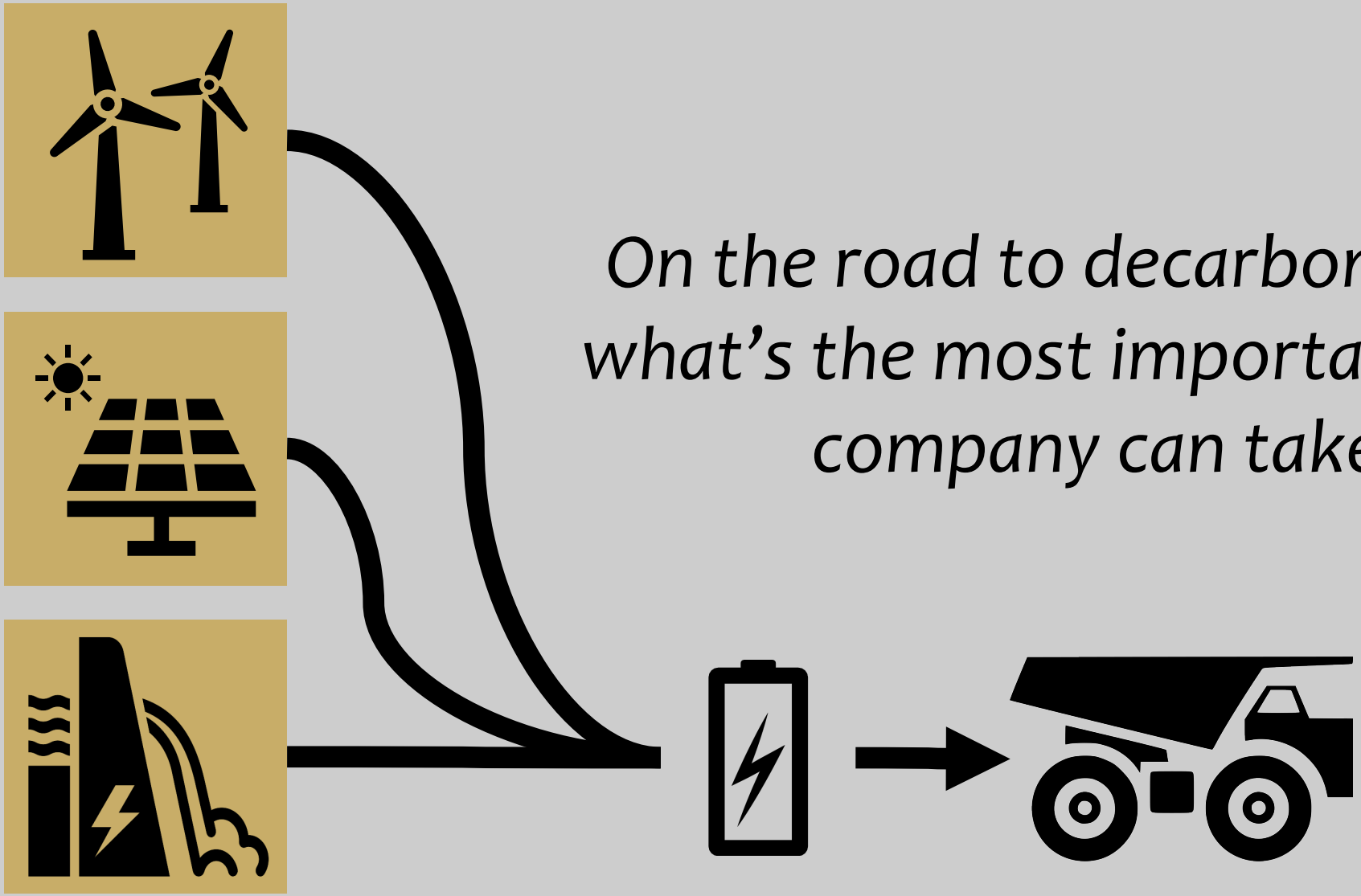
Carbon Geo-sequestration

- Studies have commenced with Canadian specialists investigating capture and storage of carbon in Ta Khoa ultramafic tailings and waste rock

Product and Supplier Traceability

- Through our service provider, Circulor BSX is developing full supply chain traceability and monitoring for not just carbon, but also Anti-slavery, community participation and human rights issues.

BLACKSTONE'S MINING AMBITIONS



On the road to decarbonization, what's the most important step a company can take?

Questions

SESSION 3 – PFS TECHNICAL UPDATE

Andrew Strickland

Head of Project Development - BSX

Mr. Strickland is an experienced Study and Project Manager, a Fellow of the Australian Institute of Mining and Metallurgy, University of WA MBA graduate, with undergraduate degrees in Chemical Engineering and Extractive Metallurgy from Curtin and WASM.

Chris Ramsay

Manager Resource Geology

Experienced mineral resource manager and mine development professional with over 20 years demonstrated experience in the mining industry around the globe. Skilled in mineral exploration & resource estimation, project development & evaluation, mineral resource management, mine geology & mining operations.

PREFEASIBILITY CONTRIBUTORS

Excellent global collaboration

Acknowledgement of the great work completed by our partners

SNOWDEN Optiro

OPTIMIZE GROUP
COMMUNICATE | COLLABORATE | INNOVATE

CPC PROJECT DESIGN

PSM

GOLDER
MEMBER OF WSP

BLUVEIN

MINVIRO

BENCHMARK MINERAL INTELLIGENCE

BURNvoir Corporate Finance

ALS

Metso:Outotec

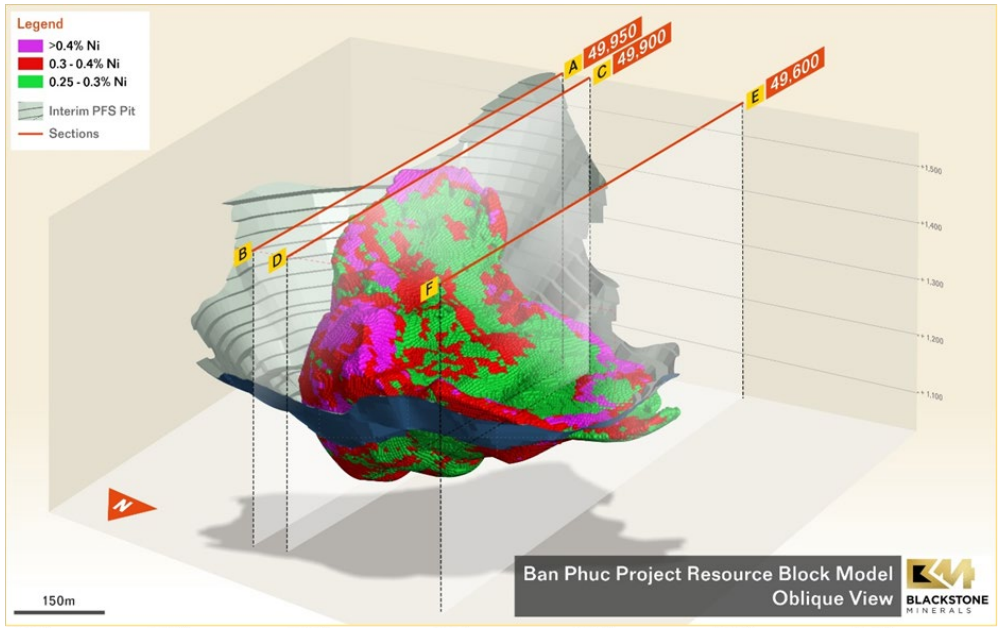
Ta Khoa Development Prospects

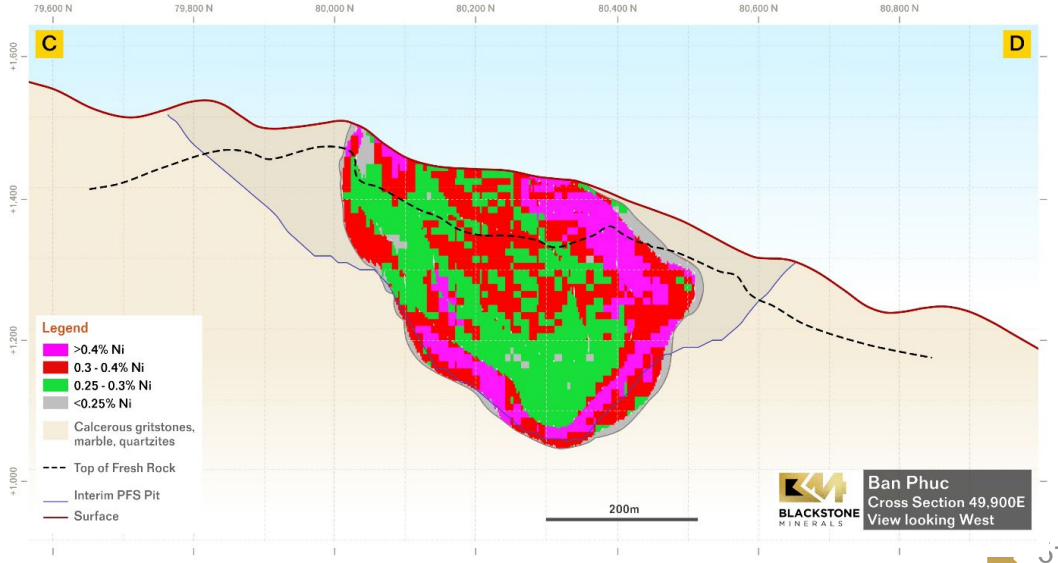
BAN PHUC (DSS)

BASE LOAD FEED

- **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)
- The Ban Phuc Mineral Resource is reported using a 0.25% Ni cut-off grade for the sulfide component and 0.3% Ni cut-off grade for the oxide and transitional component
- Updated Resource underpins higher throughputs, with a large 8 Mtpa concentrator as presented in Company's TKNP PFS
- Shape and width of mineralised domains and the continuity of mineralisation drive low strip ratios for the final Ban Phuc PFS pit design

Ban Phuc Resource	Mt	Ni (%)	NiEQ (%)	Cu (%)	Co (%)	Au (g/t)	Pd (g/t)	Pt (g/t)	S (%)	Ni (kt)	NiEQ (kt)	Cu (t)	Co (t)	Au (kOz)	Pd (kOz)	Pt (kOz)
Indicated Resources	**102**	**0.38**	**0.44**	0.03	0.01	0.01	0.05	0.04	0.25	**383**	**445**	27	10	42	159	145
Inferred Resources	**21**	**0.33**	**0.37**	0.01	0.01	0.01	0.03	0.03	0.07	**69**	**78**	3	2	6	18	19
Total	**123**	**0.37**	**0.43**	**0.02**	**0.01**	**0.01**	**0.04**	**0.04**	**0.22**	**452**	**523**	**30**	**12**	**48**	**178**	**164**





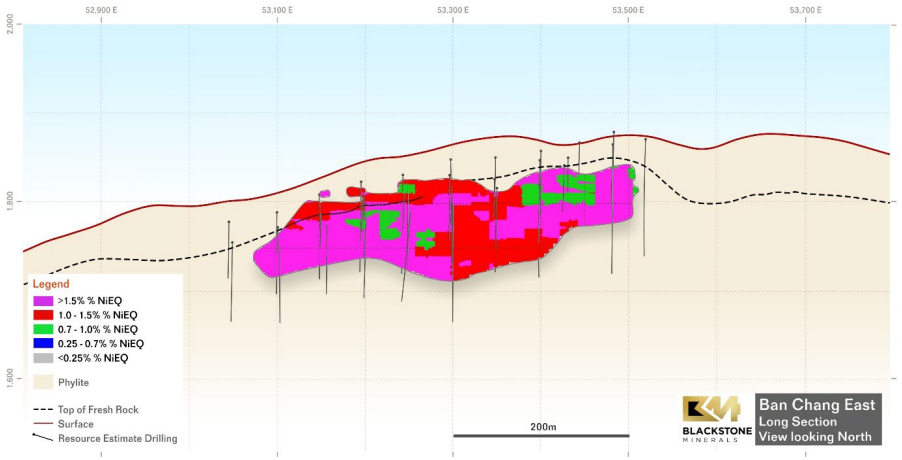
BAN CHANG & KING SNAKE (MSVs)

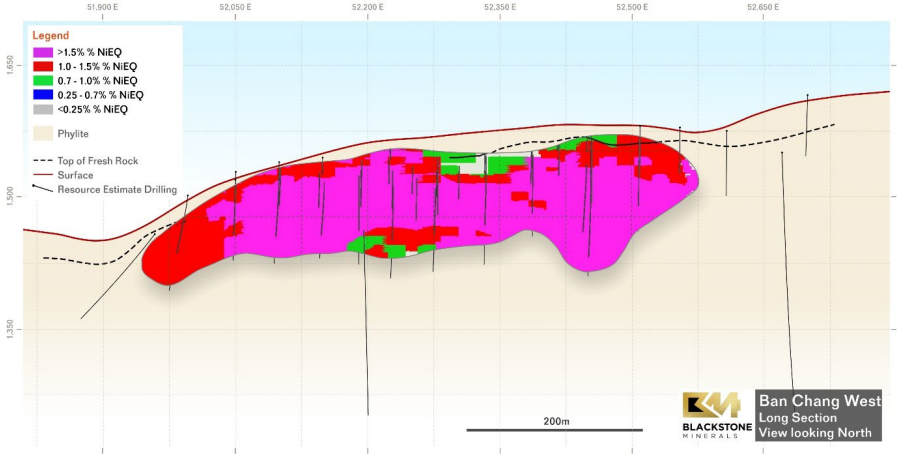
SUPPLEMENTARY NICKEL-COPPER-PGE³ FEED

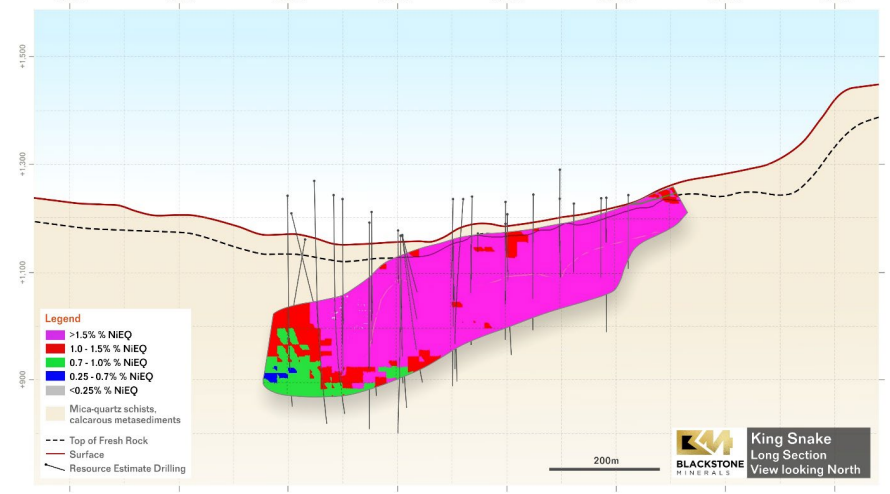
- **Ban Chang of 0.70Mt at 1.2% Ni (2.0% NiEQ) and King Snake of 0.43Mt at 1.3% Ni (2.4% NiEQ)**
  - Both MSV resources are reported using a 0.7% Ni cut-off grade
  - Additional test work underway to assess potential metallurgical improvements by blending King Snake and Ban Chang material with Ban Phuc ore
  - Strong copper, cobalt, gold, palladium, and platinum by-product credits
  - Excellent success rate applying geophysical exploration techniques to identify Electro-Magnetic (EM) targets
  - Drilling ongoing to increase resource confidence and determine an Ore Reserve as part of Definitive Feasibility Studies

Ban Chang Resource	Mt	Ni (%)	NiEQ (%)	Cu (%)	Co (%)	Au (g/t)	Pd (g/t)	Pt (g/t)	S (%)	Ni (kt)	NiEQ (kt)	Cu (kt)	Co (kt)	Au (kOz)	Pd (kOz)	Pt (kOz)
Inferred Resources	**0.7**	**1.2**	**2.0**	0.72	0.07	0.05	0.4	0.3	13	**8**	**14**	5	0.5	1.2	8.0	6.6

King Snake Resource	Mt	Ni (%)	NiEQ (%)	Cu (%)	Co (%)	Au (g/t)	Pd (g/t)	Pt (g/t)	S (%)	Ni (kt)	NiEQ (kt)	Cu (kt)	Co (kt)	Au (kOz)	Pd (kOz)	Pt (kOz)
Inferred Resources	**0.43**	**1.3**	**2.4**	0.8	0.05	0.14	0.7	1.3	11	**5.5**	**10**	3.5	0.2	1.9	10	17





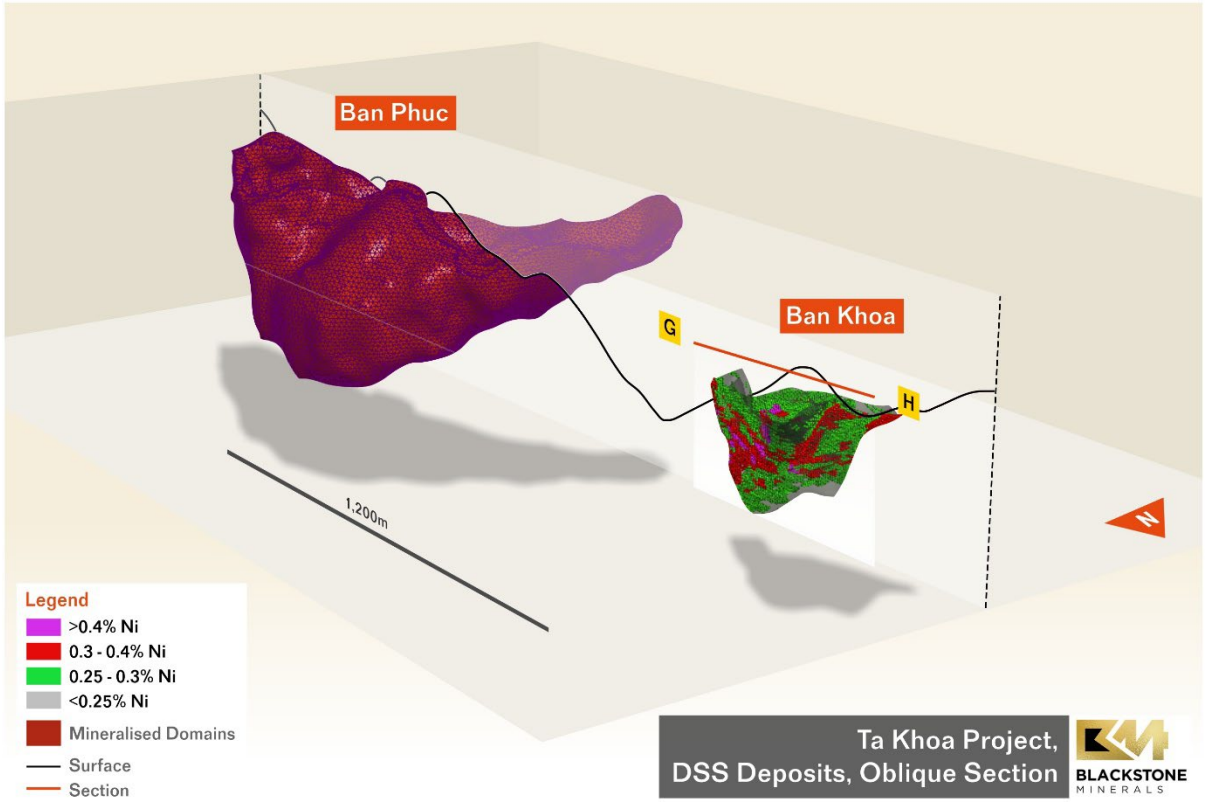


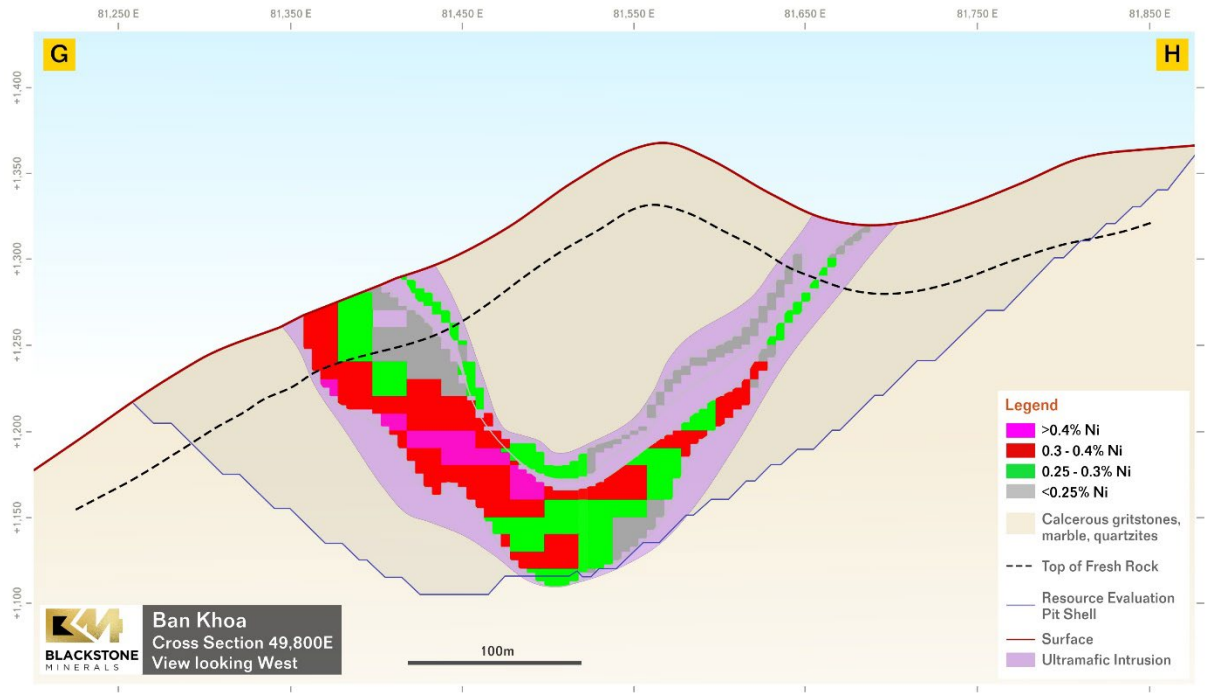
BAN KHOA (DSS)

ONGOING RESOURCE DEFINITON DRILLING

Potential to be included in the Definitive Feasibility Studies

- **Inferred Mineral Resource at Ban Khoa (DSS) of 6.2Mt @ 0.31% Ni**
  - Ban Khoa has potential to increase operational flexibility due to the mineralisation containing high sulfur content
  - Preliminary mining studies have indicated potential for an open pit mine



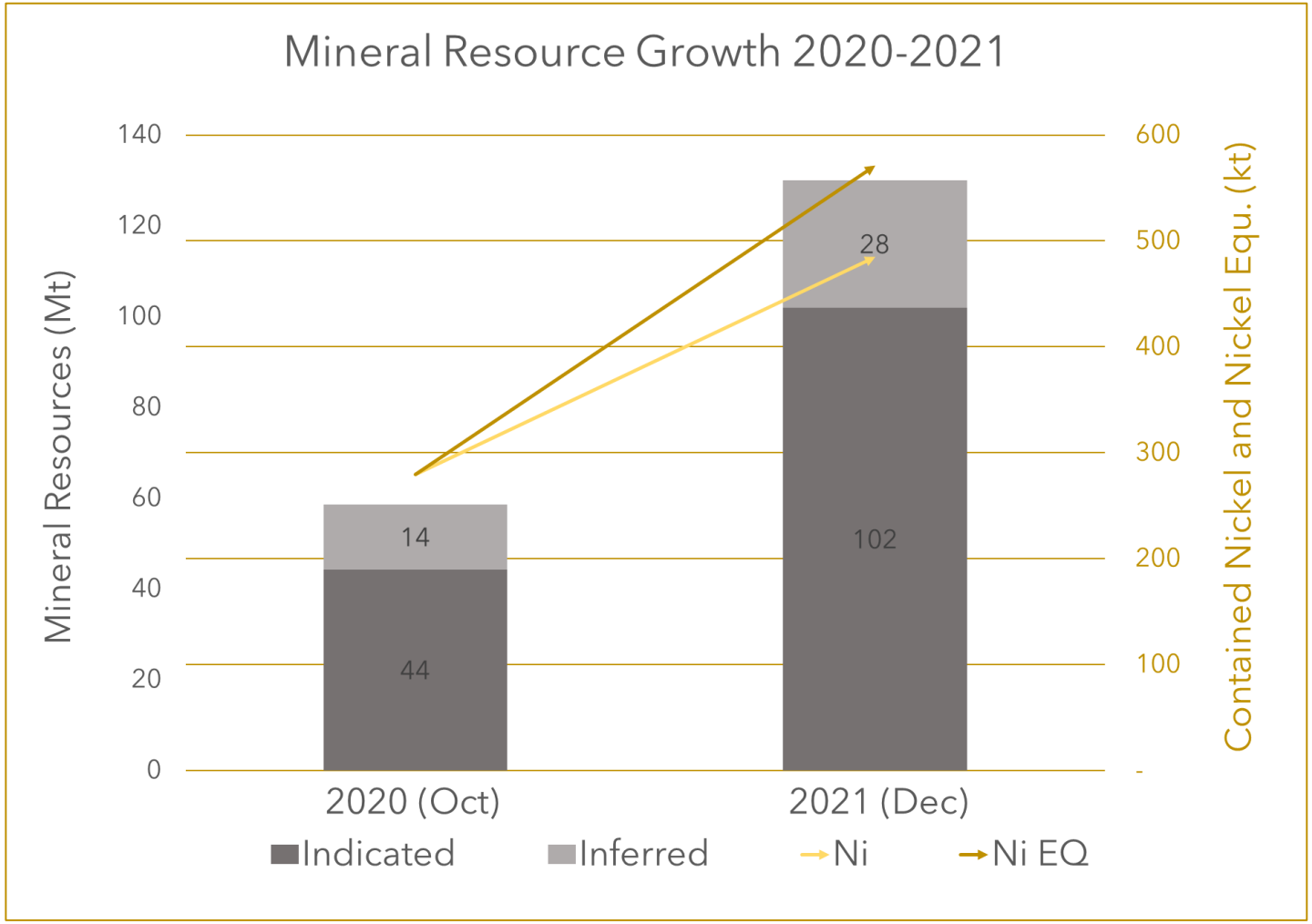


TA KHOA NICKEL PROJECT (TKNP)

MINERAL RESOURCE GROWTH SUMMARY

- **Ban Phuc update:**
  - 12 months drilling and metallurgical testing led to a significant increase in resource confidence and contained metal resources – due to potential recoveries at lower grades. Base load for PFS

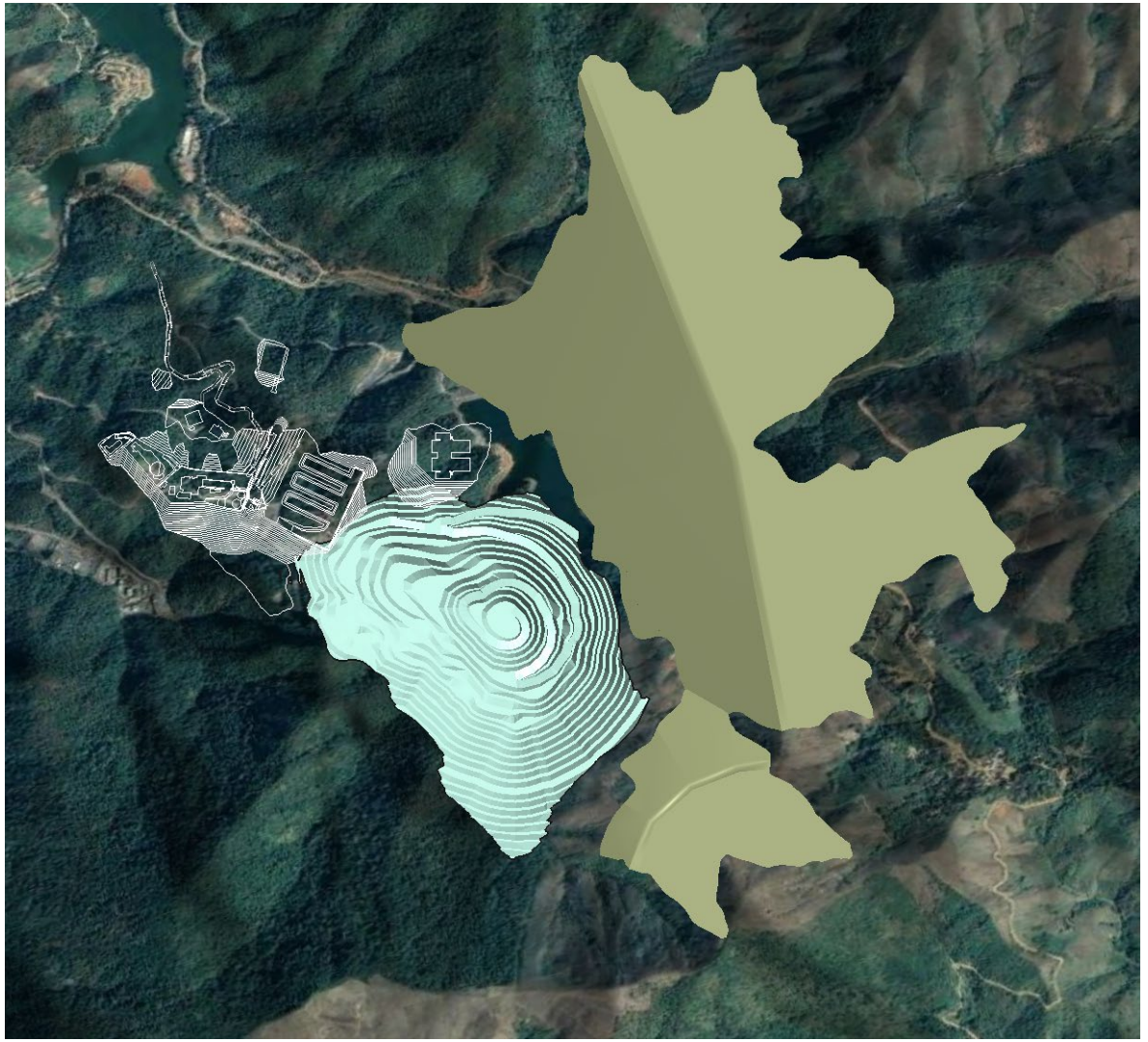
- **Maiden Resources:**
  - The King Snake and Ban Chang Massive Sulfide Vein deposits added 1.1Mt @ 2.2% NiEQ – to be included in PFS
  - Ban Khoa DSS added 6.2 Mt @ 0.39% NiEQ with high sulfur (3-5 x Ban Phuc) – planned to add to DFS in 2022



OPEN PIT MINING – BAN PHUC

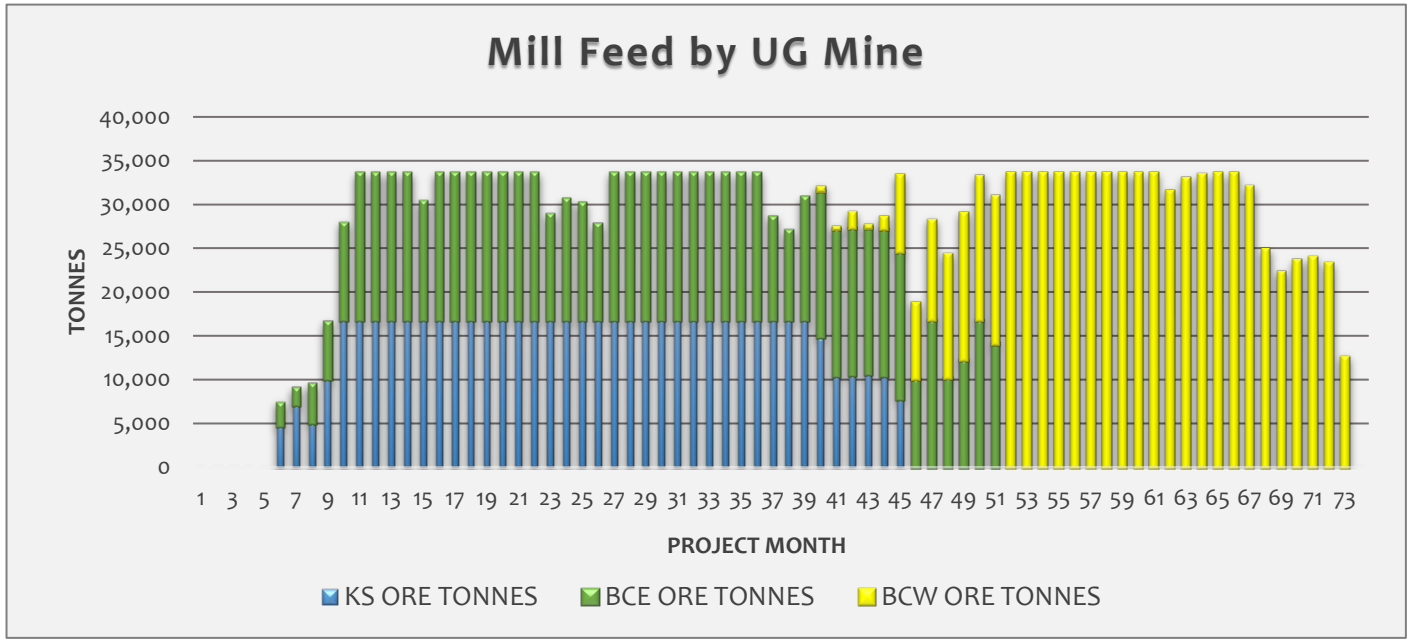
SIGNIFICANT TERRAIN CHALLENGES & ADVANTAGES

- **Key Production Stats:**
  - Three nested pit stages
  - Maximum Ann. Production: 35Mt
- **Key Physicals:**
  - Total Waste: 180.7Mt
  - Total Ore: 62.5Mt
  - Total Material Movement: 243.2Mt
  - Strip Ratio: 2.89
- **Design Stats:**
  - Top Elevation of 1,560m
  - Total Depth 470m

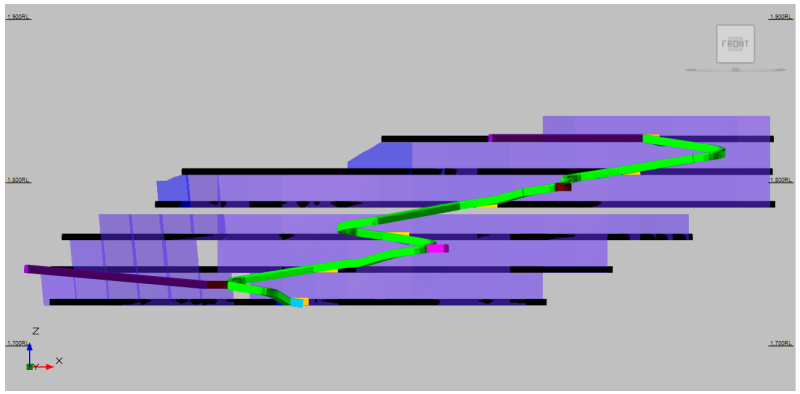


UNDERGROUND MINING – BAN CHANG & KING SNAKE

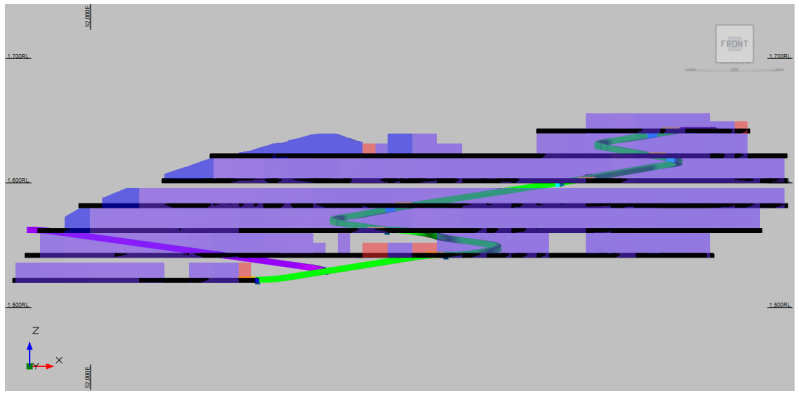
- **Key Elements:**
  - Three independent UG mines (Ni/Cu/Co/PGE[3])
  - Tabular sub-vertical continuous MSVs
  - Extensive strike continuity
  - Nickel DSS halo at BCE
  - Bottom-up long-hole open stoping
  - Maximum Annual Production: 0.4Mt
  - Resource recovery ~94%



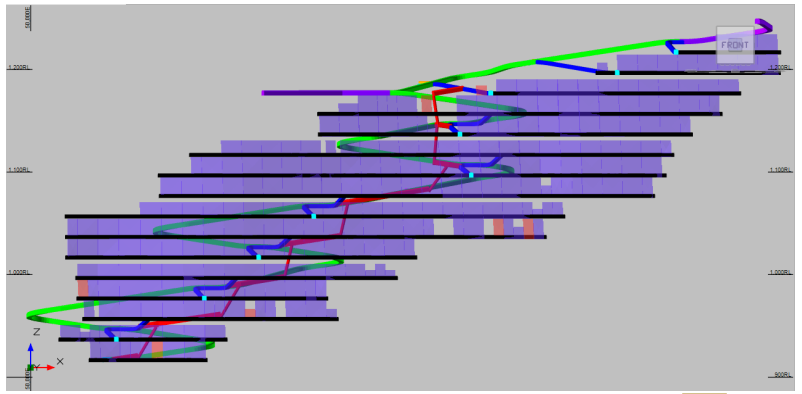
Ban Chang West



Ban Chang East



King Snake



BAN PHUC MAIDEN ORE RESERVES

Strong maiden Ore Reserve with upside potential

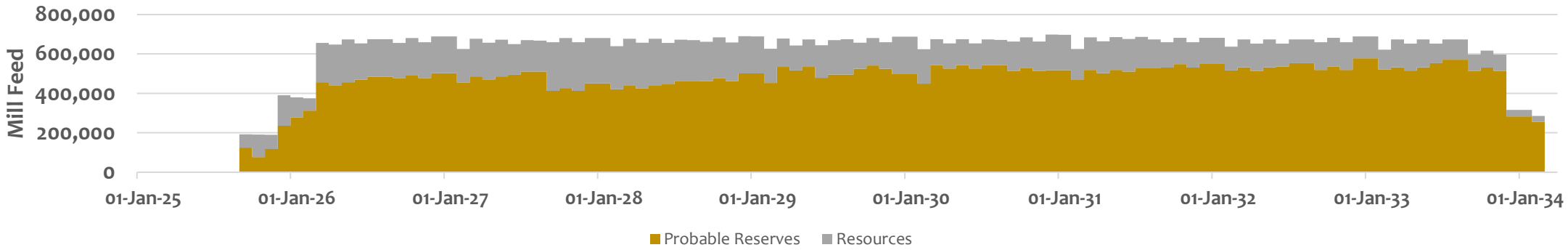
Classification	Tonnes (kt)	Ni (%)	Cu (%)	Co (%)
Proven	-	-	-	-
Probable	48,747	0.43	0.04	0.01
Total Proven and Probable	**48,747**	**0.43**	**0.04**	**0.01**

Notes to accompany Ore Reserves table:

1. The Qualified Person for the Ore Reserve estimate is Richard Jundis, P.Eng., of Optimize Group Inc. The estimate has an effective date of 31 Dec, 2021.
2. Ore Reserves are defined within a mine plan and incorporate 2% mining dilution and 2% overall metal losses.
3. Ore Reserves are based on Measured and Indicated Mineral Resource classifications only.
4. Ore Reserves are based on metal prices of US$16,800/tonne Nickel:Cobalt:Manganese 811 (NCM811), US$3.58/lb copper and US$18.60/lb The pits are constrained within an optimized pit shell ranging from 17-49° overall wall slopes depending on rock type, and process recoveries that vary according to the recovery curves.
5. For each block, a total revenue and cost is generated. If the net profit is greater than 0, the block is flagged as ore; if profit less than zero, the block is flagged as waste. Mining costs average 1.89 $/t mined, processing costs are 10.40 US$/t processed, site general and administrative 1.00 US$/t processed, and nickel royalties 4.74 US$/t processed.
6. The estimate of Ore Reserves may be materially affected by metal prices, US$/VND$ exchange rate, environmental, permitting, legal, title, taxation, socio-political, marketing, infrastructure development or other relevant issues.
7. Totals may not sum exactly due to rounding

COMBINED MINING INVENTORY

Classification	Tonnes (kt)	Ni (%)	Cu (%)	Co (%)
Ban Phuc	62,503	0.4	0.03	0.01
Ban Chang - East	658	0.67	0.48	0.04
Ban Chang - West	759	0.41	0.23	0.03
King Snake	594	0.74	0.48	0.03
Total Mine Inventory	**64,514**	**0.41**	**0.04**	**0.01**



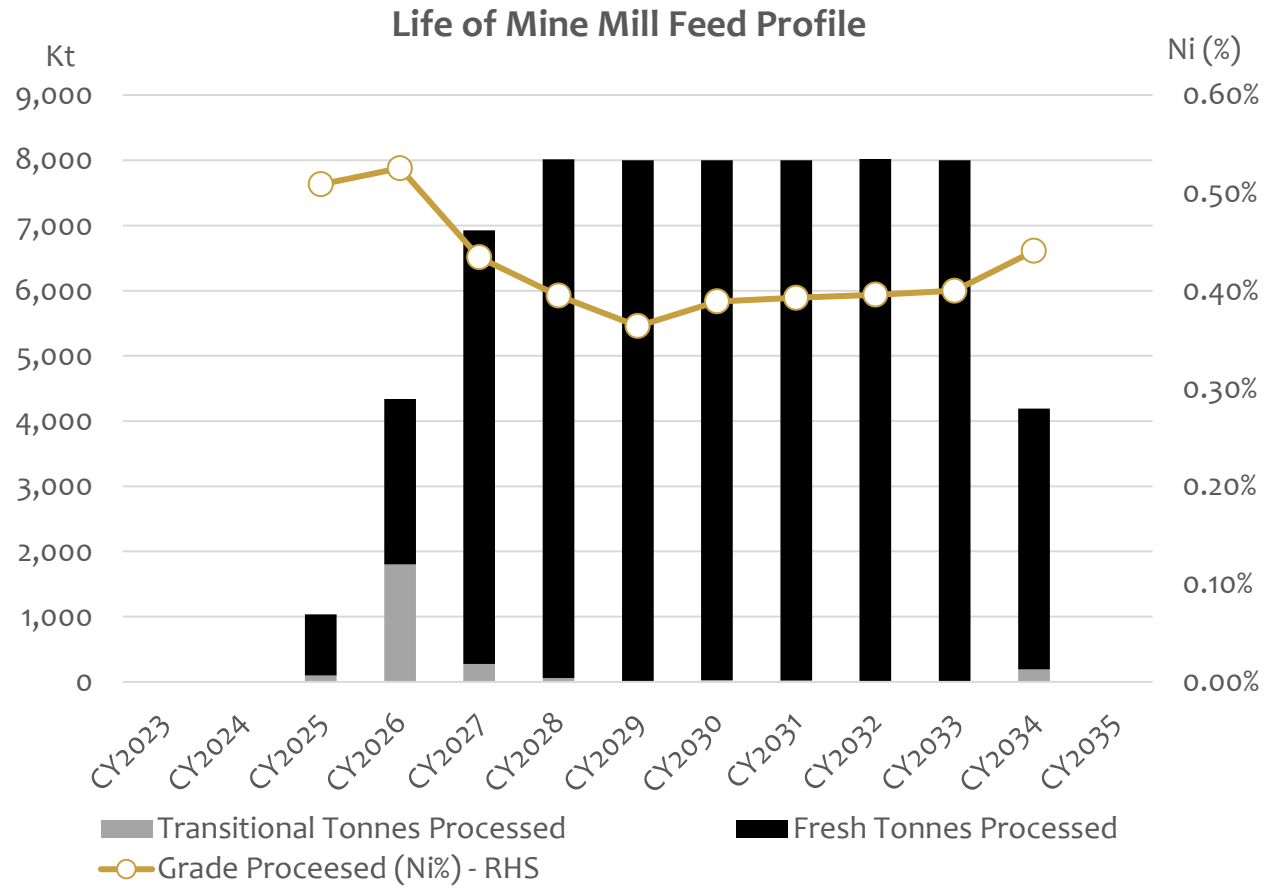
Notes:

1. The maiden 2022 Ban Phuc Ore Reserves accounts for 76% of mill feed tonnes.

MILL FEED PROFILE

64Mt over 10 year

- **Ten Year Mine Life**
  - Slow Ramp Up due to significant pre-strip
  - Rate limited by total mine movement (35Mtpa)
- **DFS Opportunities**
  - Low grade (0.25%<Ni%<0.3) recovery and incorporation
  - Fleet sizing
  - Ban Khoa resource inclusion

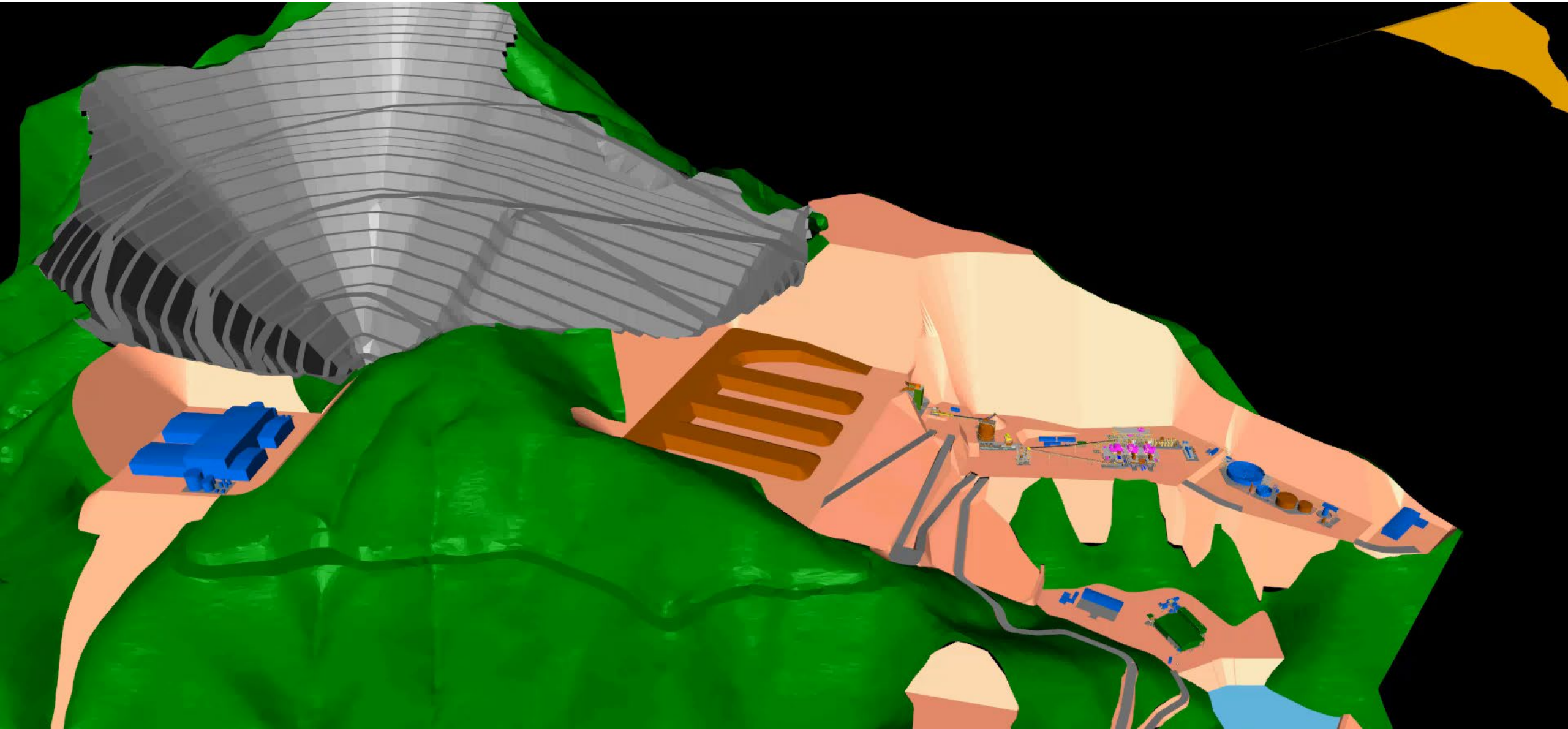


Notes:

1. The maiden 2022 Ban Phuc Ore Reserves accounts for 76% of mill feed tonnes.

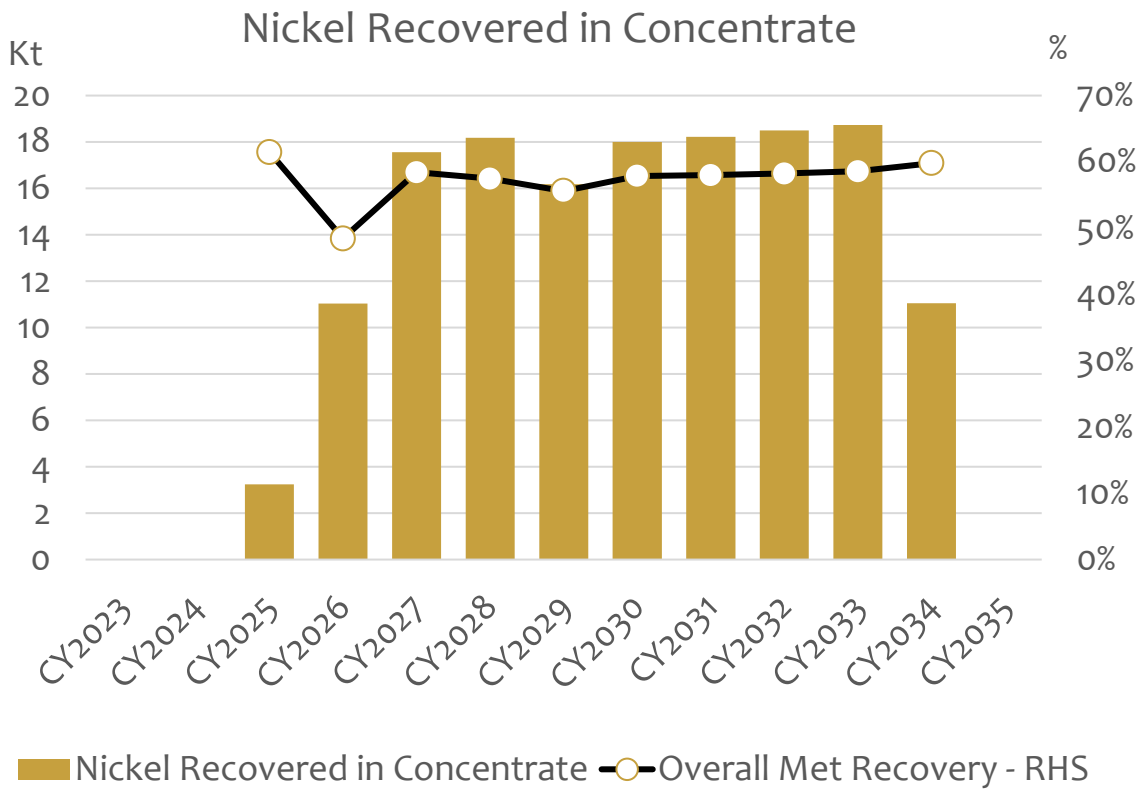
PROCESS PLANT DESIGN

See Webinar for Full Video



CONCENTRATE PRODUCTION

Steady State Nickel Production in excess of 17ktpa



	Units	Base Case
Processing Plant - Design Throughput	Mtpa	8
Tonnes Processed	kt	64,527
Average Nickel Grade Processed	% Ni	0.41%
Metallurgical Recovery - Nickel	%	57%
Nickel Recovered in Concentrate	**kt**	**151**
Avg Annual Nickel Recovered in Concentrate	kt	16.4
Concentrate Tonnes	kt	1,884
Nickel in Concentrate Grade	% Ni	8.0%

Notes:

1. The maiden 2022 Ban Phuc Ore Reserves accounts for 80% of Nickel in mill feed.

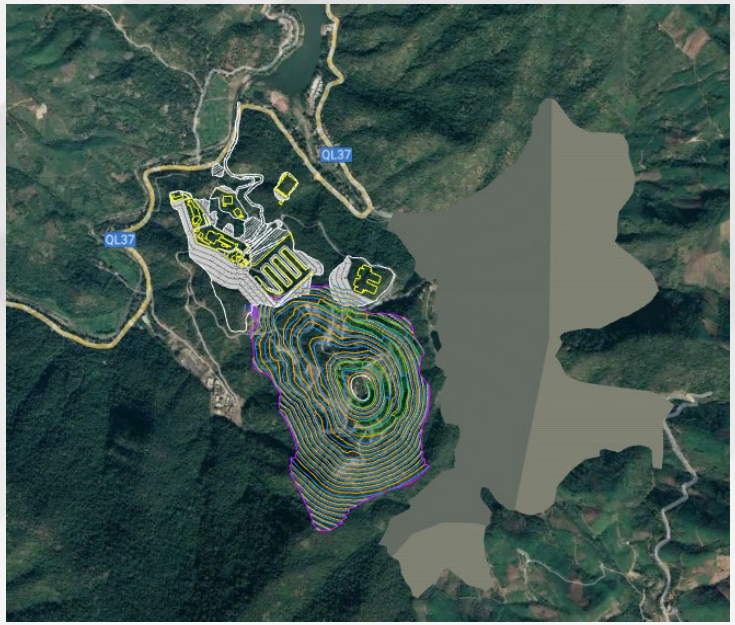
WASTE MANAGEMENTSTRATEGY

Option Analysis

- **Six tailings storage options were assessed at a high level through a workshop facilitated by Golder.**
- **Key factors in the assessment included:**
  - Geotechnical Risk
  - Lifecyle environmental impact
  - Social Impact and considerations
  - Overall project land use and disturbance
  - Closure conditions and requirements
  - Consequences of critical failure
  - Storage efficiency
  - Flexibility of future design and expansion
  - Permitting and compliance requirements
  - Construction Costs
  - Operating costs
  - Deposition complexity
  - Accessibility
  - Availability of construction material

WASTE MANAGEMENT PLAN

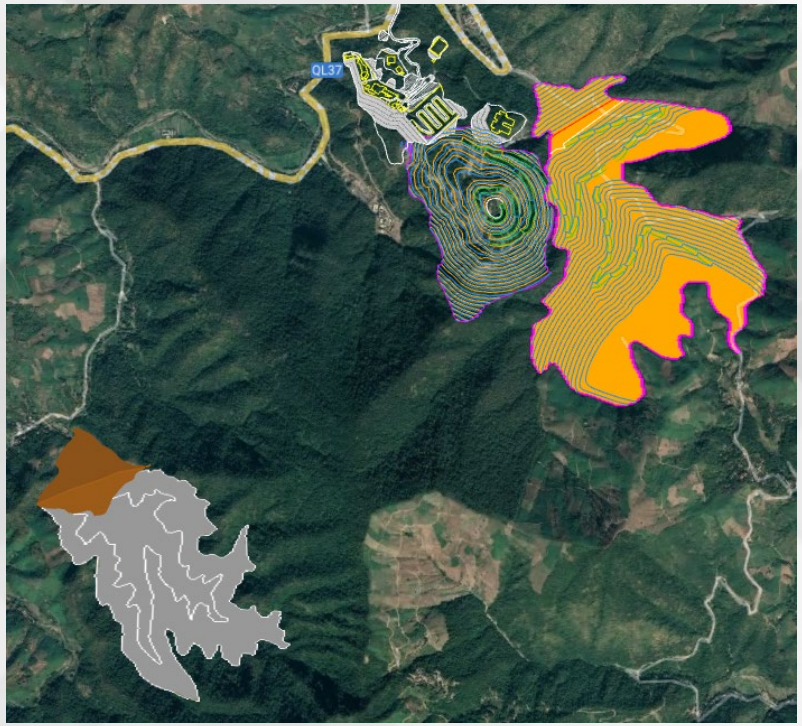
Integrated Waste Landform & Conventional Waste Dump and Wet Tailings



- **BSX challenged Golder to develop an option that:**
  - Utilised Dry Stacked tailings
  - Avoided disturbance in Ban Pot Valley

- **Integrated Waste Landform (IWL) proposed**
  - Walls and buttress built with mine waste
  - Filtered co-disposed with excess mine waste behind IWL wall

- **Base Case Design**
  - Conventional waste management plan
  - Waste dump adjacent to mine
  - Thickened tailings storage in Pan Pot Valley



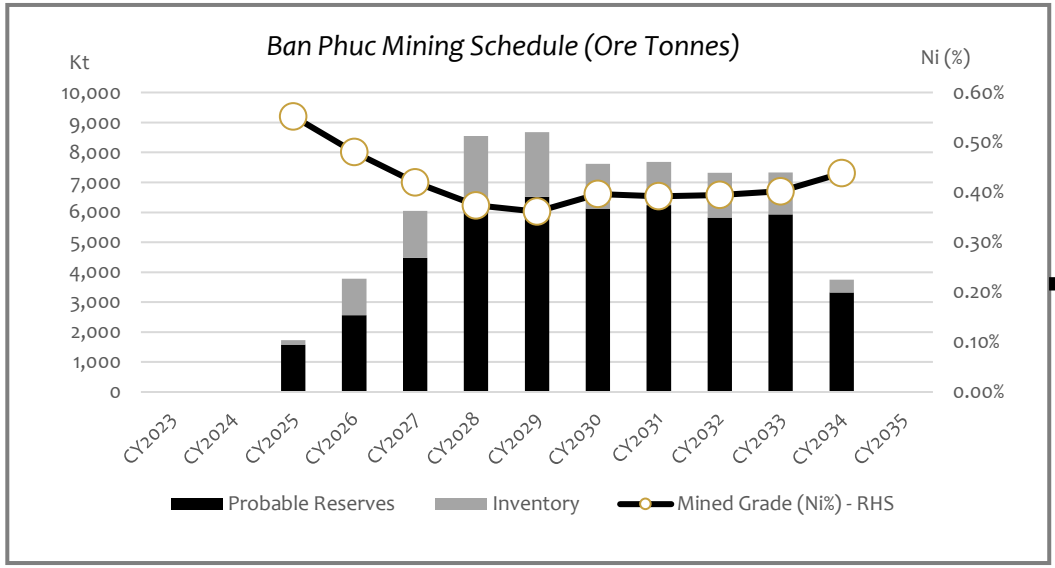
SESSION 4 – PRE-FEASIBILITY STUDY ECONOMIC OUTCOMES

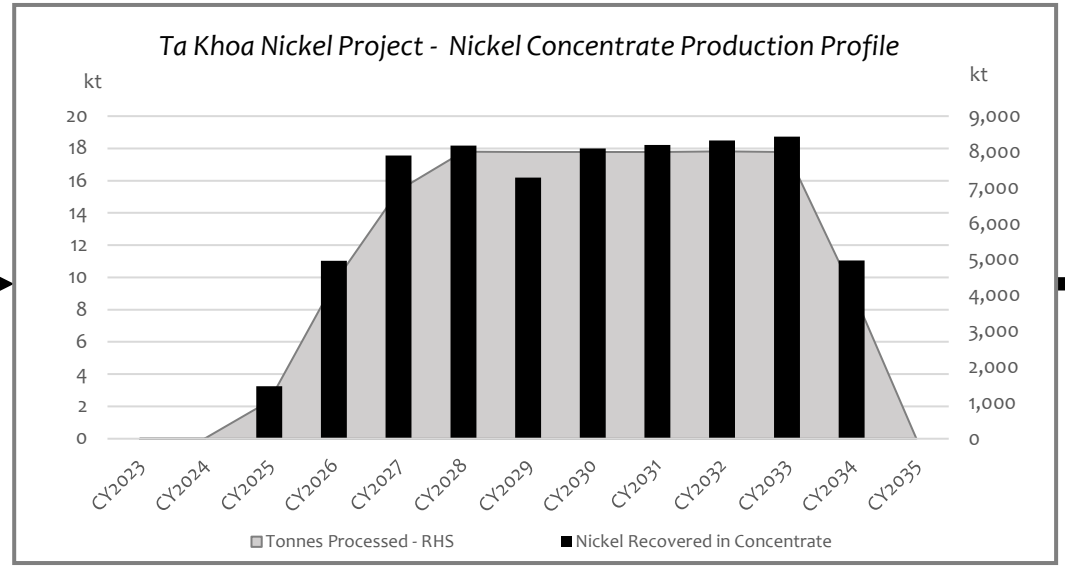
Dhanu Anandarasa

Manager, Corporate Development

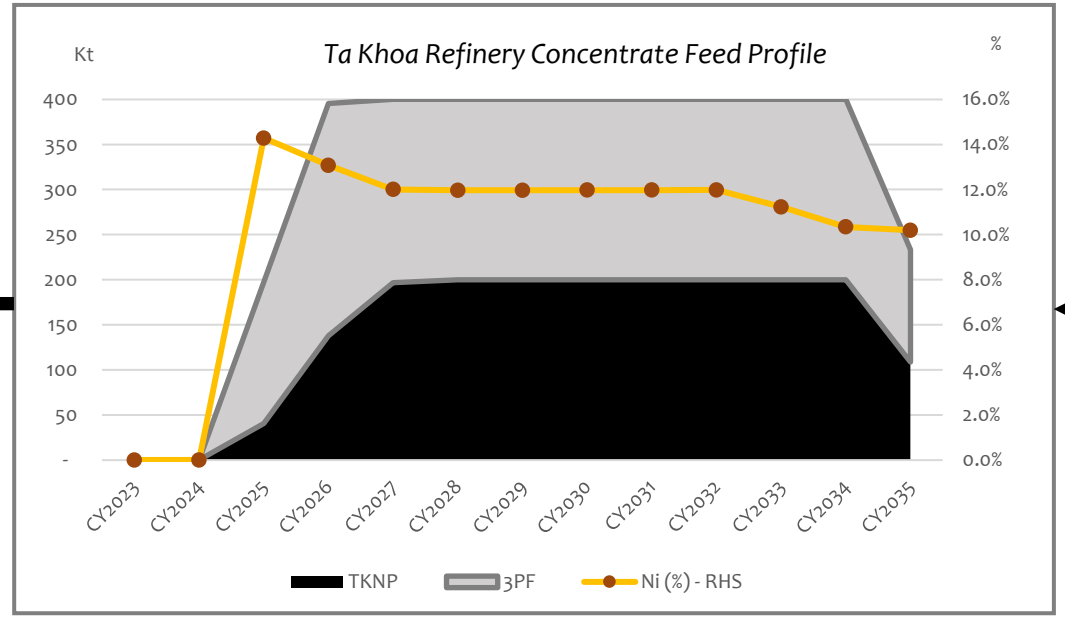
A Chartered Financial Analyst, Mr. Anandarasa has ten years' experience in corporate finance roles specialising in mining. His experience is predominantly in-house, working collaboratively with technical teams for planning and strategic purposes.

INTEGRATED TA KHOA PROJECT





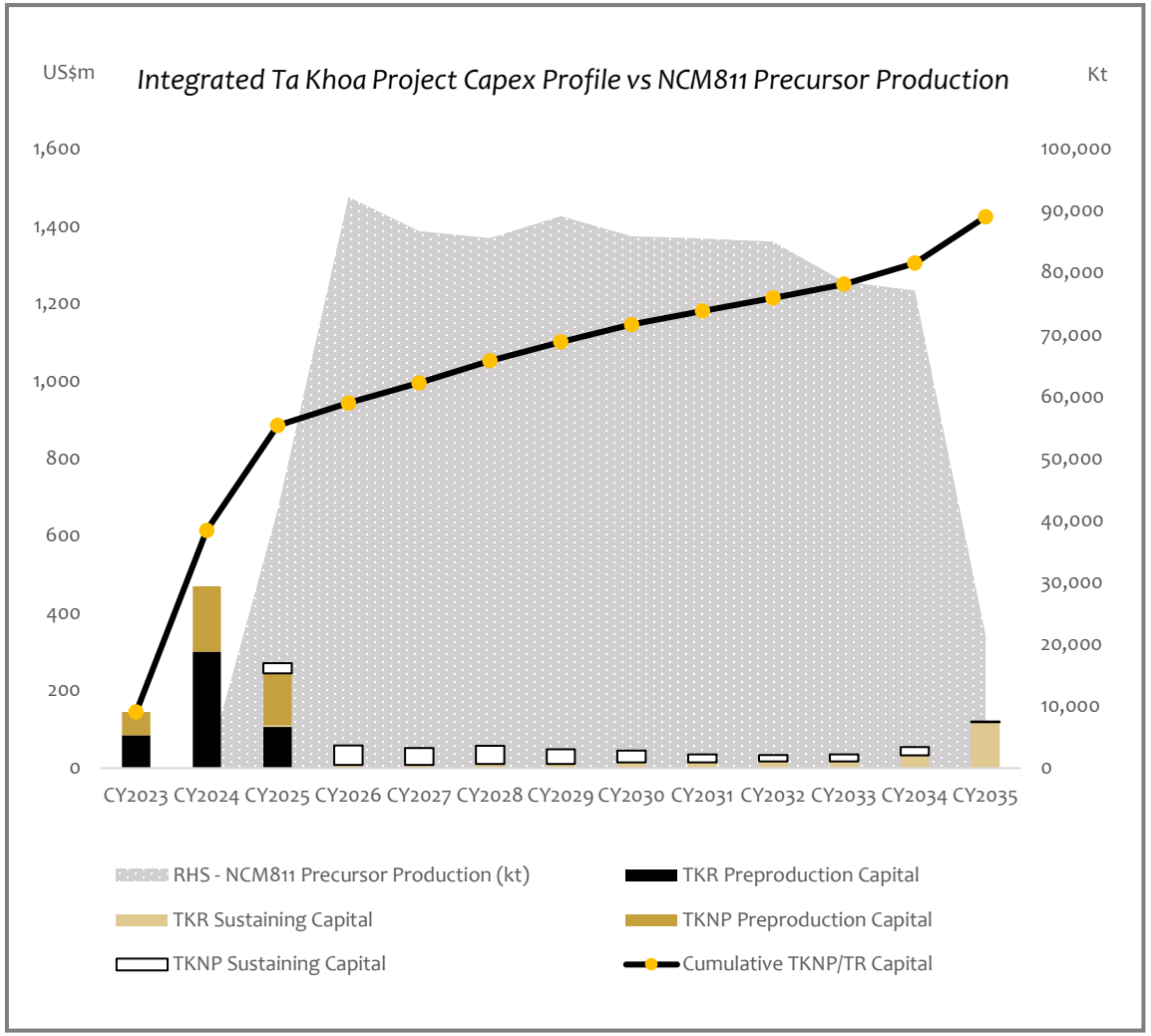
Ta Khoa Project Economic Outcomes	Unit	BASE	SPOT
Average Annual NCM811 Precursor Production	**Ktpa**	**88**	**88**
NCM811 Precursor Price (avg realised)	US$/t NCM811	17,670	22,982
All-in Cost	US$/t NCM811	13,192	15,259
Avg Annual Operating Cash Flow	US$mpa	533	818
TKNP Net Cash Flow (Pre-tax)	US$m	584	1,287
TKR Net Cash Flow (Pre-tax)	US$m	3,487	5,733
Net Cash Flow (Pre-tax)	**US$m**	**4,070**	**7,020**
Net Cash Flow (Post-tax)	**US$m**	**3,845**	**6,583**
Post-tax NPV (8% real)	**US$m**	**1,986**	**3,570**
IRR (Post-tax)	**%**	**47%**	**69%**
Capital Payback Period - from first production	**years**	**1.8**	**1.3**



LOW CAPITAL INTENSITY

PRE-PRODUCTION CAPITAL PAID BACK IN ~2 YEARS

US$854m capital investment to secure 50% of concentrate feed and build the TKR to produce >80ktpa NCM811 Precursor



Ta Khoa Pre-production Capital Summary	US$m
TKNP:	
Mining	71
Beneficiation Plant	145
On Site Infrastructure	14
Construction Indirects	15
Project Delivery	27
Owner's Costs	46
Provisions	45
TKNP Pre-production Capital	**363**
TKR Pre-production Capital	**491**
Total Ta Khoa Pre-Production Capital	**854**

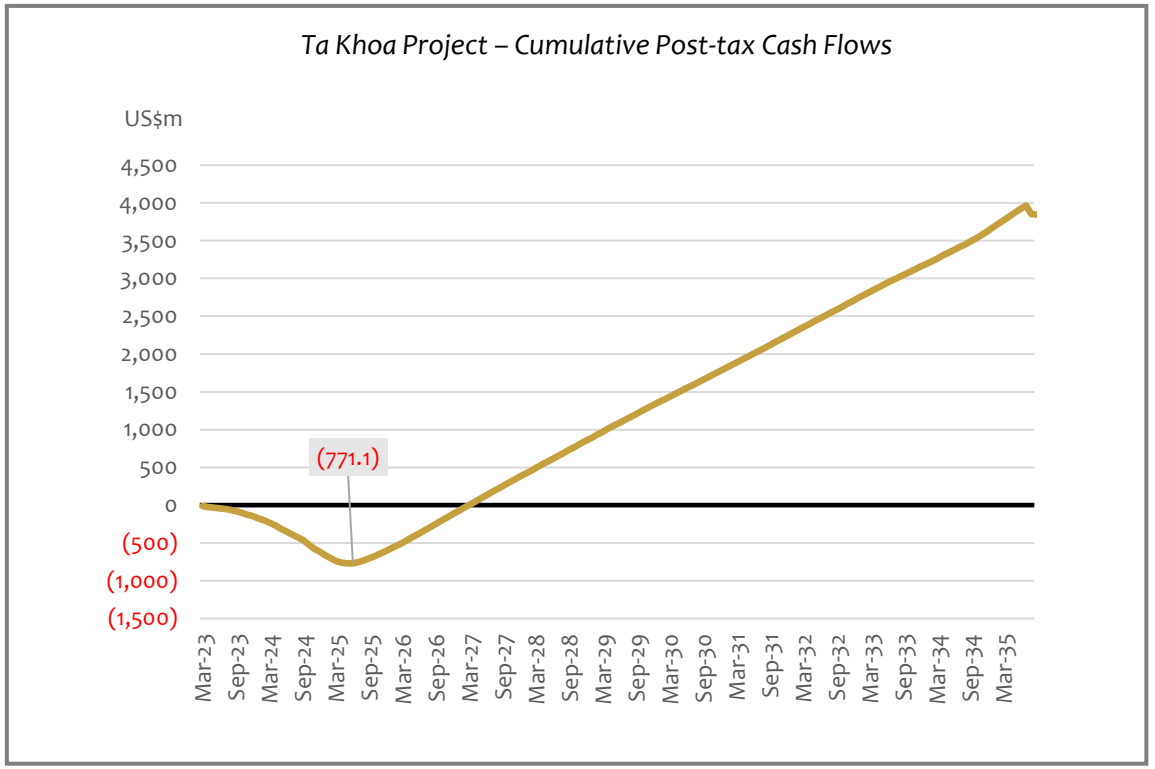
- **~US$250m across physical infrastructure, project delivery, owners' costs and provisions to deliver the 8Mtpa beneficiation plant**
  - Includes dry-stack tailings option
- **10 month Ban Phuc a pre-strip (US$71m)**
- **US$491m capital investment to develop the Ta Khoa Refinery**

TA KHOA PROJECT OPERATING COSTS

CHEAP RENEWABLE POWER AND COMPETITIVE LABOUR COST

Attractive product pricing combine with low operating cost environment drive robust margins and free cash flow generation

Ta Khoa Project Operating Cost	US$m LOM	US$/t NCM811
TKNP Cash Costs		
Mining	515	566
Processing	635	698
Integrated Land Waste Reform	103	113
G&A	55	60
Royalties - TKNP	194	213
TKR Cash Costs		
Purchase of 3PF Ni & Co in Concentrate	5,212	5,734
Refining	3,928	4,321
Logistics	114	125
G&A	28	31
Residue Storage	19	21
By-Product Credit (Copper)	(243)	(267)
Cash Costs	**10,560**	**11,616**



Notes:

1. Corporate tax rate of *20%* applicable to the Ta Khoa Nickel Project (Upstream)
2. Tax rates applicable to the Ta Khoa Refinery (Downstream):
   yrs 0-4 (0%) , yrs 5 – 13 (5%), yrs 14-15 (10%), after 15 yrs (20%)

OPTION ANALYSIS

DIESEL VS ELECTRIC HAULAGE FLEET

Additional capital costs for electric haulage fleet are offset by operating cost savings

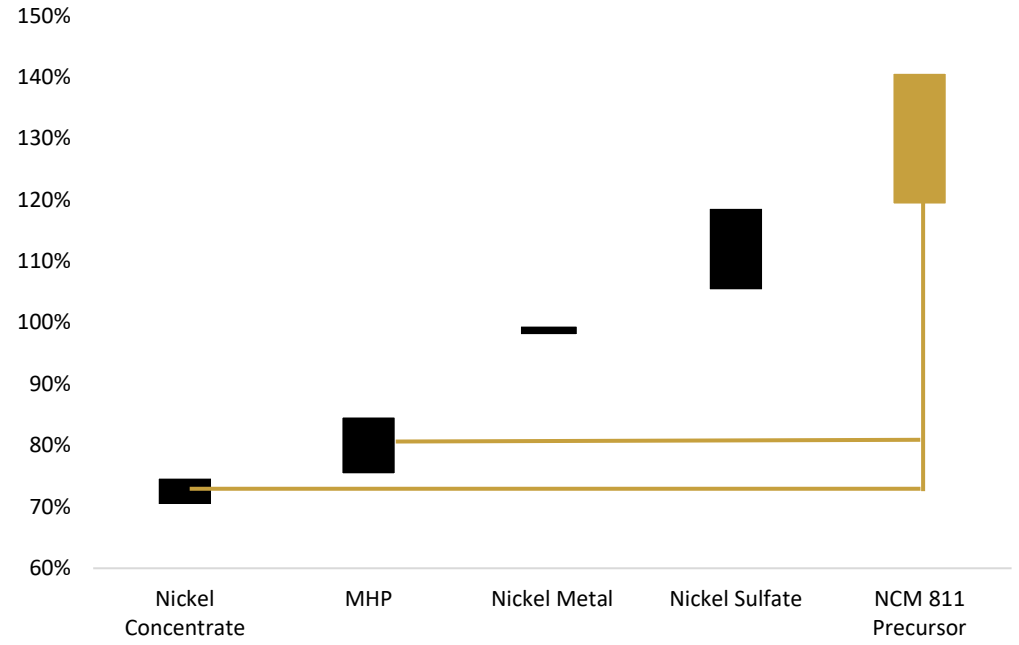
	Delta over life-of -mine (US$m)
Haulage Fleet Equipment Charges	~ +US$40m
Upfront Blue Vein Rail Infrastructure and Charging Stations	~ +US$13m
Substitute Diesel with Renewable Hydropower	~ (US$48m)
Maintenance Cost Benefit	~ (US$12m)

NICKEL PRICE EXPOSURE

TKNP ADDS NICKEL METAL PRICE LEVERAGE TO INTEGRATED PROJECT

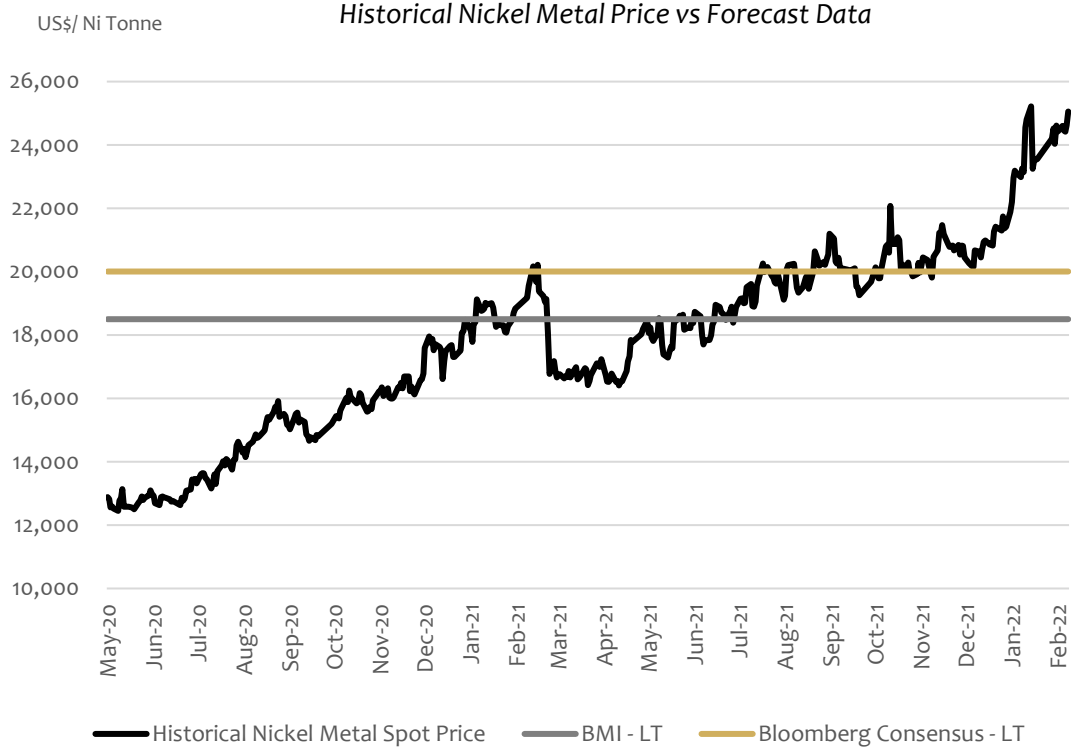
The largest Ta Khoa Project revenue drivers and cost inputs are linked to nickel metal spot pricing

Illustration of Nickel Product Payability vs Metal Spot Price



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

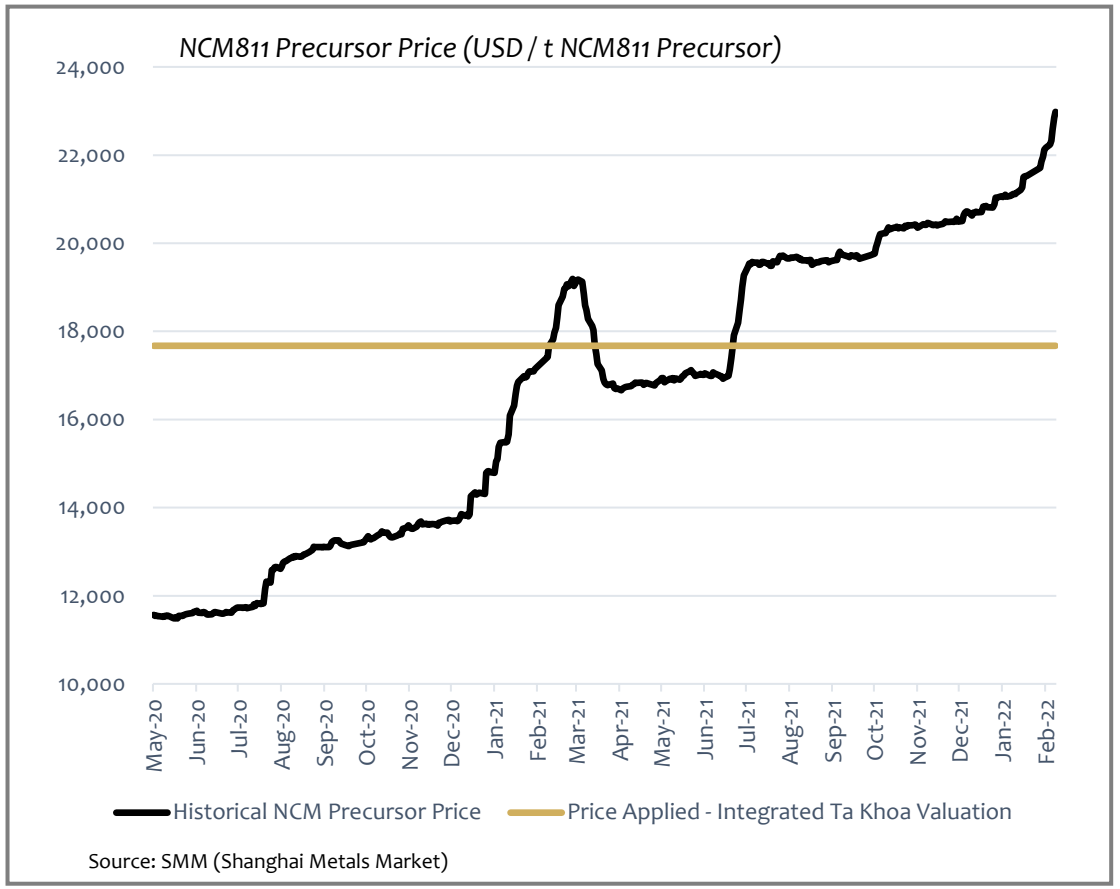
Historical Nickel Metal Price vs Forecast Data



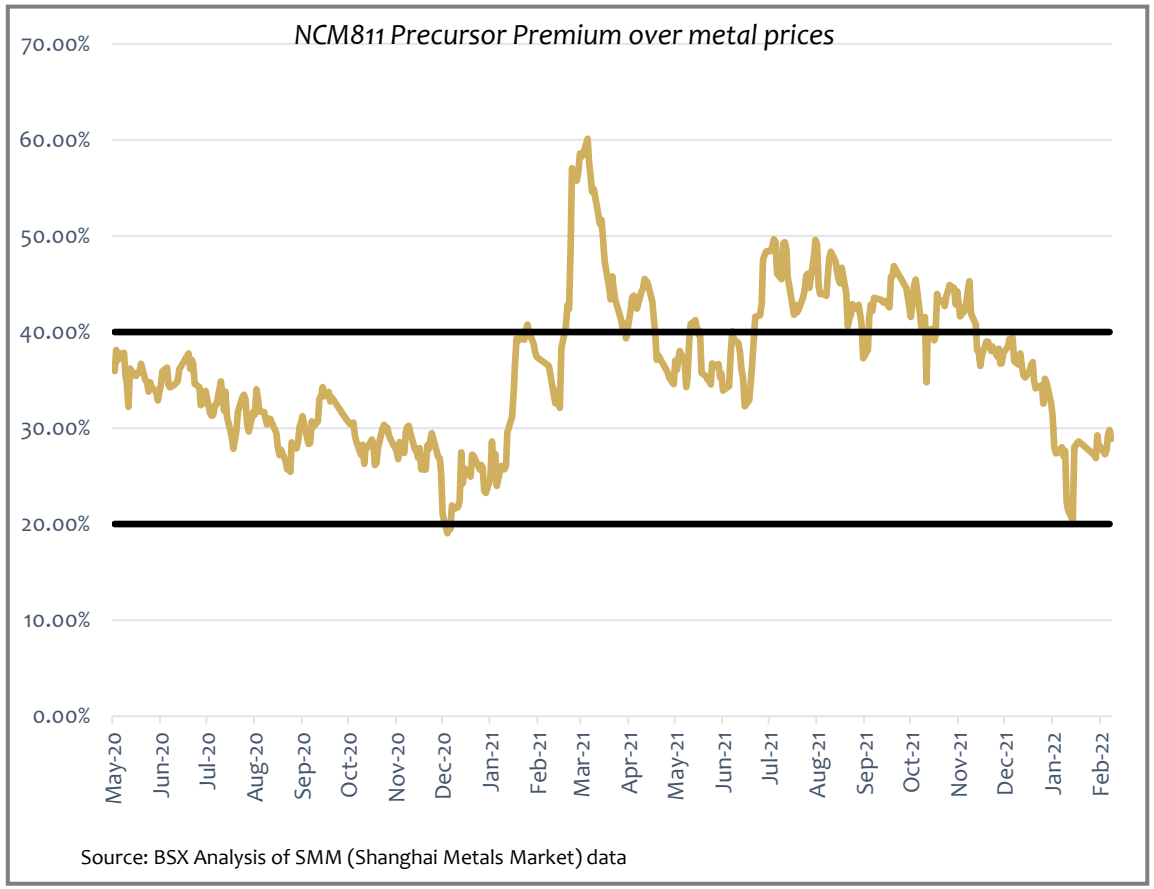
Source: SMM (Shanghai Metals Market), Benchmark Mineral Intelligence, Bloomberg Consensus Data

ATTRACTIVE PRODUCT PRICING

STRONG PREMIUM FOR NCM811 PRECURSOR PERSIST



Source: SMM (Shanghai Metals Market)



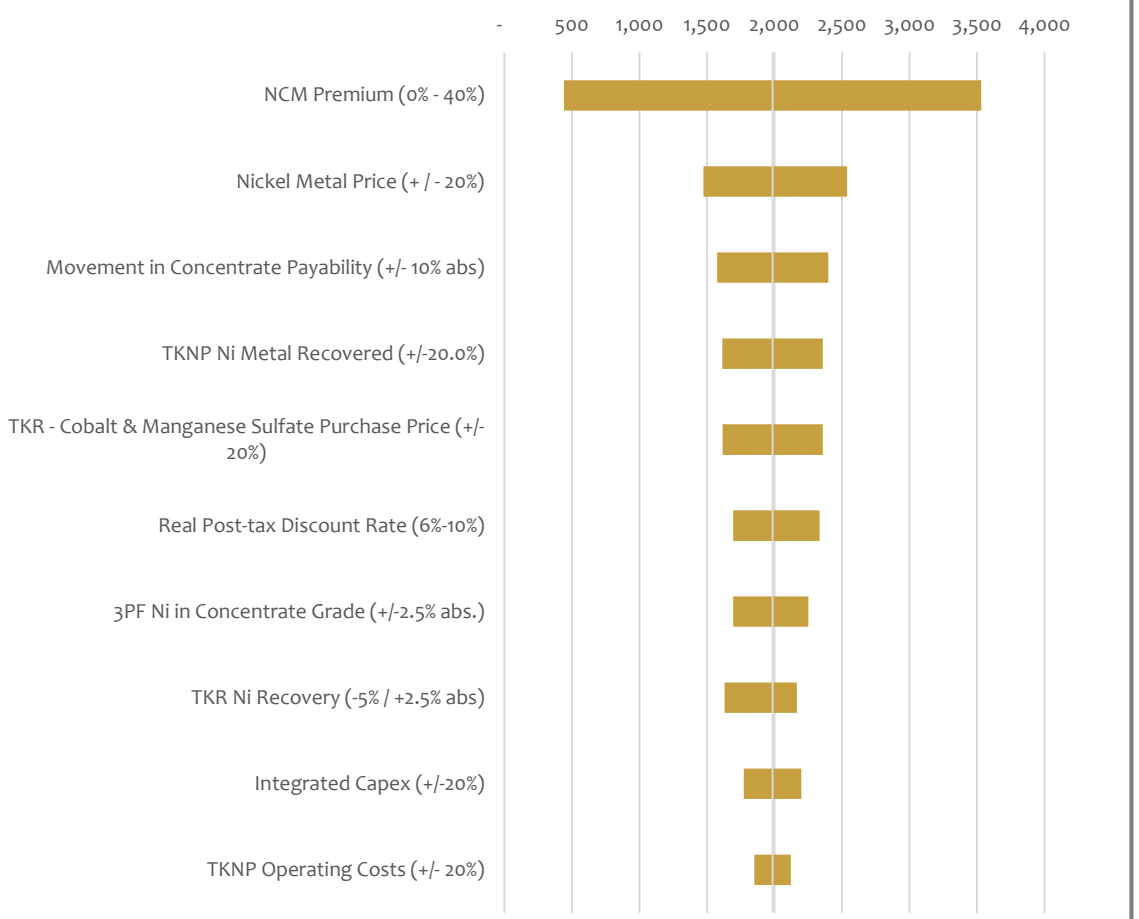
Source: BSX Analysis of SMM (Shanghai Metals Market) data

ROBUST ECONOMICS

SECURITY OF TKNP SUPPLY INCREASES VALUATION CONFIDENCE

Base Case & Spot Case Valuation of US$1.99bn and US$3.57bn respectively

Post-tax NPV Sensitivity Analysis (US$m)



Metal Price Assumption	Unit	BASE	SPOT
NCM811 Precursor	US$/t	17,670	22,982
Nickel Metal	US$/t	20,000	25,050
Cobalt Metal	US$/t	65,768	74,604
Cobalt Sulfate (21%)	US$/t	13,659	15,743
Manganese Sulfate (32%)	US$/t	1,427	1,427
Copper Cathode	US$/t	10,000	9,967

Notes:

1. The Base Case price assumption for nickel metal and copper cathode have been referenced from Bloomberg Consensus data
2. The Base Case price assumptions for cobalt metal and cobalt sulfate have been referenced from Benchmark Mineral Intelligence (BMI)
3. The Base Case Manganese sulfate price assumption is based on spot prices referenced from Shanghai Metal Markets (SMM)
4. All spot case prices have been referenced from SMM as at 18 February 2022
5. A 20% premium has been applied to determine NCM811 Precursor Price, a full explanation of BSX applied methodology is contained in the ASX announcement dated 26 July 2021

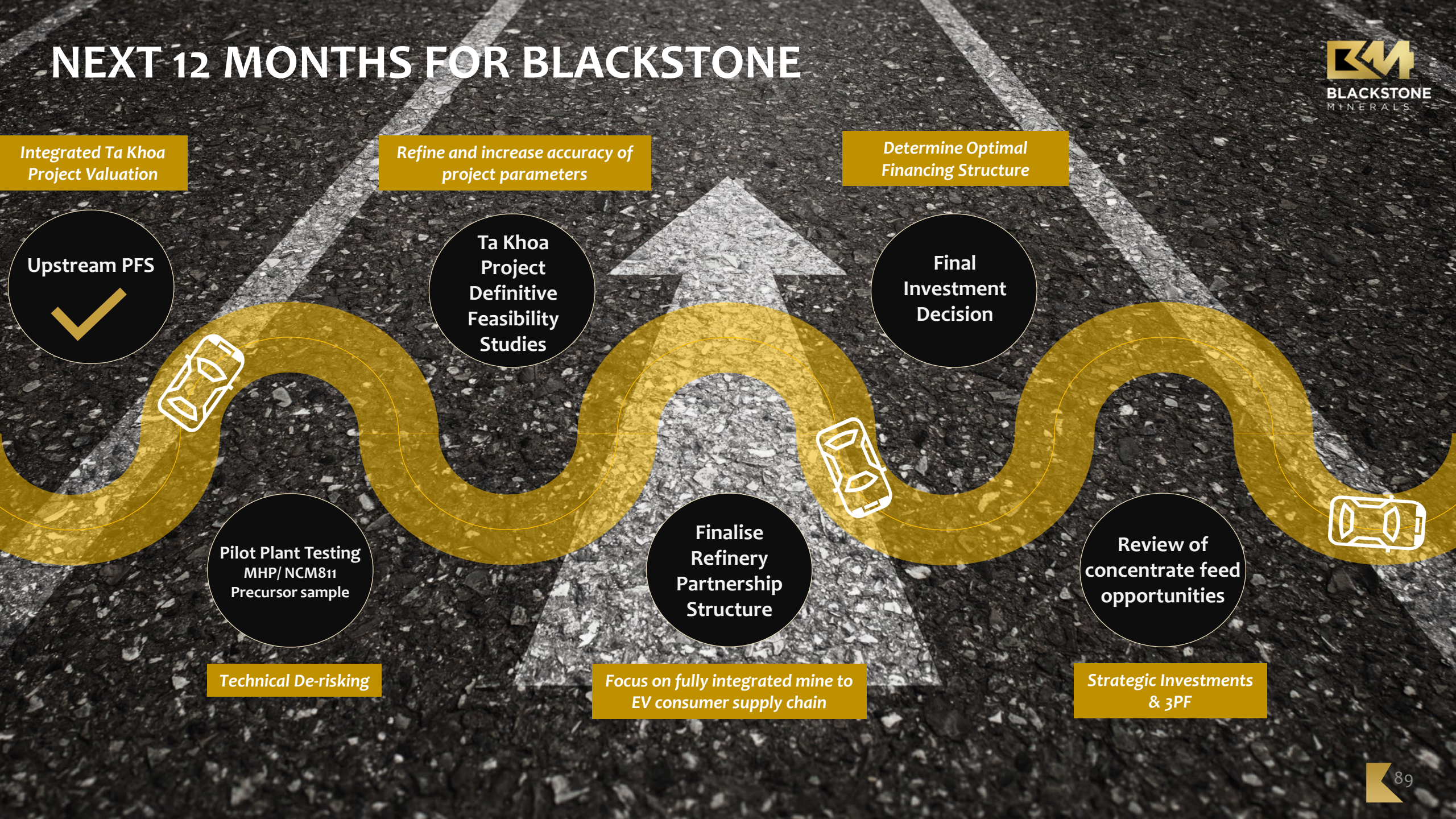
TWO-WAY SENSITIVITY ANALYSIS

NCM PRECURSOR PREMIUM VS CONCENTRATE PAYABILITY

Blackstone expects that increases in the NCM Premium will coincide with higher concentrate payability, and vice versa

Post-tax NPV (US$m) Sensitivity Analysis		NCM Precursor Price (US$/ t NCM 811)				
	Premium	*0%*	*10%*	*20%*	*30%*	*40%*
		14,725	**16,197**	**17,670**	**19,142**	**20,615**
Movement in Nickel Concentrate Payability (Net of Penalties) %	**-10.0%**	853	1,625	2,397	3,169	3,941
	-5.0%	648	1,420	**2,191**	2,963	3,735
	0.0%	441	**1,214**	**1,986**	**2,758**	3,530
	5.0%	233	1,009	**1,780**	2,552	3,324
	10.0%	25	803	1,574	2,346	3,118

NEXT 12 MONTHS FOR BLACKSTONE



Questions

APPENDICES

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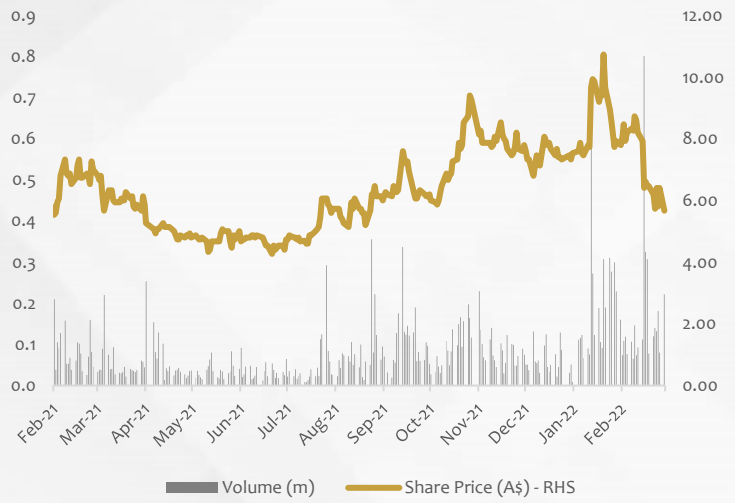
E: admin@blackstoneminerals.com.au | www.blackstoneminerals.com.au

APPENDIX 1- CORPORATE SNAPSHOT

BLACKSTONE MINERALS LIMITED	
ASX Code	BSX
OTCQX Code	BLSTF
Shares on Issue	449.6m
Last Share Price (28 February 2022)	A$0.425
Market Capitalisation	A$191m
Cash as at 31 December 2021	~A$60m
Options	12.4m
3-month Avg Daily Vol. (shares)	1.9m



BOARD OF DIRECTORS

Scott Williamson	Hamish Halliday	Dr Frank Bierlein	Alison Gaines	Hoirim Jung
				
Managing Director	Non-Executive Chairman	Non-Executive Director	Non-Executive Director	Non-Executive Director

ANALYST COVERAGE

EVOLUTION CAPITAL ADVISORS

PAC PARTNERS

ShawandPartners

cg Canaccord Genuity

EURØZ HARTLEYS

EXPLORATION insights

Zacks SCR

Debt Advisors

KDB Bank

BURNvoir Corporate Finance

Major Shareholders

Deutsche Balaton	14%
Fidelity	10%
EcoPro	9%
Board & Management	7%

APPENDIX 2 - BLACKSTONE BOARD

BEST IN CLASS LEADERSHIP WITH A PROVEN TRACK RECORD OF CORPORATE SUCCESS

Scott Williamson

Managing Director

Mining Engineer with a Commerce degree from the West Australian School of Mines and Curtin University, with more than 10 years' experience in technical and corporate roles in the mining and finance sectors.

Hamish Halliday

Non-Executive Chairman

More than 20 years corporate and technical experience, founder of Adamus Resources Ltd, a A$3M float which became a multi-million ounce emerging gold producer and eventual takeover by Endeavour Mining for >$160M

Dr Frank Bierlein

Non-Executive Director

Geologist with 30 years of technical and corporate experience, focusing on grass roots to mine-stage mineral exploration, target generation, project management and oversight, due diligence studies, mineral prospectivity analysis, metallogenic framework studies, and mineral resources market & investment analysis.

Alison Gaines

Non-Executive Director

20 years of experience as a director in Australia and internationally. Experienced in the roles of Board Chair and board committee chair, particularly remuneration and nomination and governance committees.

Hoirim Jung

Non-Executive Director

More than 10 years financial management experience, specifically in financing and feasibility studies for new projects. Holds a Bachelor of Economics from Seoul National University and has a qualification with the Korean Institute of Certified Public Accountants (KICPA).

APPENDIX 3 - MANAGEMENT TEAM

DRIVING THE DEVELOPMENT OF TA KHOA AS A MINE-TO-MARKET NICKEL BUSINESS

Jamie Byrde

CFO & Company Secretary

Chartered Accountant with more than 16 years' experience in accounting, company secretarial and corporate advisory.

Dr Stuart Owen

Head of Exploration

BSc & PhD in Geology with more than 20 years' experience in mineral exploration.

Andrew Strickland

Head of Project Development

Experienced Study and Project Manager, Fellow of the Australian Institute of Mining and Metallurgy, BSc (Extractive Metallurgy), BEng (Chemical), MBA.

Patrick Chang

Head of Corporate Development

Master of Science Degree in Geology, a Master of Computer Science Degree and Chartered Financial Analyst. Previously Corporate Development Officer with ASX-listed gold producer Medusa Mining.

Steve Ennor

GM Project Development Ta Khoa Project

Metallurgist with 30 years of experience in gold and base metals processing, including senior management and operational positions in Australia, Africa and South East Asia.

Quang Nguyen

General Director

MBA, a BE in Mechanical Engineering and a Graduate Diploma in Digital Electronics. Experience working on large complex mining, mineral processing, power, O&G, industrial and transport projects.

Vũ Hồng Cấm Vân

GM Commercial Ta Khoa Project

Joined Ban Phuc Nickel Mines in 2006 and has successfully performed in several roles transitioning from senior environment officer to HSE & CSR manager and government affairs director.

Tony Tang

General Manager Technology and Process Development

BSc Chemical and Metallurgy, a chartered professional member of AusIMM - FAusIMM(CP), with over 25 years experience in the resources sector.

APPENDIX 4 - TA KHOA MINERAL RESOURCE (JORC CODE 2012)

	Indicated Resources															Inferred Resources													
MINING CENTRE		**Ni**	**NiEQ**	**Cu**	**Co**	**Au**	**Pd**	**Pt**	**Ni**	**NiEq**	**Cu**	**Co**	**Au**	**Pd**	**Pt**		**Ni**	**NiEq**	**Cu**	**Co**	**Au**	**Pd**	**Pt**	**Ni**	**NiEQ**	**Cu**	**Co**	**Au**	**Pd**	**Pt**
	Mt	**%**	**%**	**%**	**%**	**g/t**	**g/t**	**g/t**	**kt**	**kt**	**kt**	**kt**	**kOz**	**kOz**	**kOz**	**Mt**	**%**	**%**	**%**	**%**	**g/t**	**g/t**	**g/t**	**kt**	**kt**	**kt**	**kt**	**kOz**	**kOz**	**kOz**
Ban Phuc (DSS)																														
Oxide	**4**	**0.54**	0.64	0.07	0.01	0.02	0.07	0.07	**23**	27	3.1	0.5	2.9	10	9.3	**8**	**0.36**	0.41	0.02	0.01	0.01	0.03	0.03	**28**	31	1.6	0.7	2.4	8.2	8.5
Transitional	**6**	**0.47**	0.55	0.05	0.01	0.02	0.06	0.06	**29**	34	3.3	0.7	3.5	13	12	**4**	**0.34**	0.39	0.02	0.01	0.01	0.03	0.03	**13**	15	0.6	0.3	1.2	3.9	4.1
Fresh	**91**	**0.36**	0.42	0.02	0.01	0.01	0.05	0.04	**331**	384	21	9.2	36	137	124	**10**	**0.29**	0.33	0.01	0.01	0.01	0.02	0.02	**28**	32	0.6	0.8	2.2	6.2	6.9
Ban Phuc total	**102**	**0.38**	**0.44**	**0.03**	**0.01**	**0.01**	**0.05**	**0.04**	**383**	**445**	**27**	**10**	**42**	**159**	**145**	**21**	**0.33**	**0.37**	**0.01**	**0.01**	**0.01**	**0.03**	**0.03**	**69**	**78**	**2.8**	**1.9**	**5.9**	**18.3**	**19**
Ban Khoa (DSS)																														
Oxide	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.2**	**0.33**	0.41	0.05	0.01	0.01	0.06	0.06	**0.8**	1.0	0.1	0.0	0.1	0.4	0.4
Transitional	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.1**	**0.33**	0.40	0.05	0.01	0.01	0.04	0.04	**0.3**	0.4	0.0	0.0	0.0	0.1	0.1
Fresh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**5.9**	**0.31**	0.38	0.05	0.01	0.01	0.04	0.04	**19**	23	2.8	0.8	2.0	7.8	7.8
Ban Khoa total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**6.2**	**0.31**	**0.39**	**0.05**	**0.01**	**0.01**	**0.04**	**0.04**	**20**	**24**	**2.9**	**0.8**	**2.1**	**8.4**	**8.4**
Sub-total - DSS	**102**	**0.38**	**0.44**	**0.03**	**0.01**	**0.01**	**0.05**	**0.04**	**383**	**445**	**27**	**10**	**42**	**159**	**145**	**27**	**0.32**	**0.37**	**0.02**	**0.01**	**0.01**	**0.03**	**0.03**	**88**	**101**	**5.7**	**2.7**	**8.0**	**27**	**28**
Ban Chang (MSV)																														
Oxide	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.01**	**0.88**	1.46	0.55	0.05	0.05	0.22	0.20	**0.1**	0.2	0.1	0.0	0.0	0.1	0.1
Transitional	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.04**	**0.91**	1.51	0.54	0.06	0.05	0.25	0.23	**0.4**	0.6	0.2	0.0	0.1	0.3	0.3
Fresh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.6**	**1.20**	2.00	0.73	0.07	0.05	0.36	0.30	**7.8**	13	4.8	0.5	1.1	7.5	6.2
Ban Chang total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.70**	**1.18**	**1.96**	**0.72**	**0.07**	**0.05**	**0.35**	**0.29**	**8.3**	**14**	**5.1**	**0.5**	**1.2**	**8.0**	**6.6**
King Snake (MSV)																														
Oxide	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.002**	**1.00**	1.72	0.51	0.04	0.16	0.46	0.70	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0
Transitional	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.01**	**1.05**	1.92	0.64	0.04	0.12	0.60	0.98	**0.1**	0.3	0.1	0.0	0.1	0.3	0.4
Fresh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.4**	**1.30**	2.40	0.82	0.05	0.14	0.74	1.28	**5.3**	9.8	3.4	0.2	1.8	9.7	16.8
King Snake total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.43**	**1.29**	**2.38**	**0.82**	**0.05**	**0.14**	**0.73**	**1.27**	**5.5**	**10.1**	**3.5**	**0.2**	**1.9**	**10.0**	**17.3**
Subtotal - MSV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1.1**	**1.22**	**2.12**	**0.76**	**0.06**	**0.08**	**0.49**	**0.66**	**14**	**24**	**8.5**	**0.7**	**3**	**18**	**24**
Ta Khoa Total	**102**	**0.38**	**0.44**	**0.03**	**0.01**	**0.01**	**0.05**	**0.04**	**383**	**445**	**27**	**10**	**42**	**159**	**145**	**28**	**0.36**	**0.44**	**0.05**	**0.01**	**0.01**	**0.05**	**0.06**	**102**	**126**	**14**	**3**	**11**	**45**	**52**

Notes: **(Refer original publication 23rd of December, 2021)**

1. Some numerical differences may occur due to rounding
2. The resource reporting lower cut-off grades have changed from the previous 2020 Mineral Resource:
   a. Cut-off grade reporting lower limit:
      i. **DSS**: Ban Phuc, Oxide & Transitional = 0.30% Ni, Fresh = 0.25% Ni – **previously reported at 0.30% Ni for all material types**
      ii. **MSV**: Ban Chang & King Snake = 0.70% Ni – **MSV's not previously reported by Blackstone Minerals**
3. Nickel Equivalent calculations are:
   a. Ban Phuc Ni Eq (%) = Ni (%) + 0.270 x Cu (%) + 2.76 x Co (%) + 0.336 x Pd (g/t) + 0.139 x Pt (g/t) + 0.190 x Au (g/t)
   b. Ban Khoa Ni Eq (%) = Ni (%) + 0.517 x Cu (%) + 1.95 x Co (%) + 0.314 x Pd (g/t) + 0.129 x Pt (g/t) + 0.244 x Au (g/t)
   c. Ban Chang & King Snake Ni Eq (%) = Ni (%) + 0.617 x Cu (%) + 2.24 x Co (%) + 0.331 x Pd (g/t) + 0.165 x Pt (g/t) + 0.252 x Au (g/t)
4. The Ban Phuc Mineral Resource Update includes all available drill holes drilled up to and including **BP21-41** (Completed June 2021)
5. The Ban Khoa Mineral Resource Update includes all available drill holes drilled up to and including **BK21-13** (Completed May 2021) – drilling and testing is ongoing at the prospect (at Dec 2021)
6. The King Snake Mineral Resource includes drill holes drilled up to and including **KS21-26** (Completed June 2021) – drilling and testing is ongoing at the prospect (at Dec 2021)
7. The Ban Chang Mineral Resource includes drill holes drilled up to and including **BC21-34** (Completed June 2021) – drilling and testing is ongoing at the prospect (at Dec 2021)
8. The effective date of the Mineral Resource reported is 30th of October 2021, (the approximate cut-off date of the information included in the Mineral Resource), however no new data for the DSS deposits was collected after June 2021. Drilling has been continuous at Ban Chang and King Snake for all of 2021.
9. The Ta Khoa mineral concessions are held by Ban Phuc Nickel Mine LLC, Vietnam (BPNM). Blackstone Minerals owns 90% of BPNM. Resources are presented on a 100 % basis.

COMPETENT PERSON STATEMENTS

Exploration Results:

The information in this document that relates to Exploration Results and Exploration Targets is based on information compiled by Mr. Chris Ramsay, Manager of Resource Geology for the Company and a Member of The Australasian Institute of Mining and Metallurgy. Mr. Ramsay has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity which he is undertaking 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'. Mr. Ramsay consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Mineral Resources:

Blackstone Minerals provided an update of the company's Minerals Resources on December 23rd, 2021. Among the four prospects included in the recent Mineral Resource update, was an update of the Ban Phuc Mineral Resource. The Ban Phuc Mineral Resource is the basis of the 'Ore Reserve' presented in this document. (Ban Chang and King Snake Prospects were assessed in the Pre-Feasibility Study and their limited contribution is noted and the prospects are not included in the 'Ore Reserve'). The update Mineral Resource was prepared by Optiro Pty Ltd in 2021. Full JORC disclosure can be found on the company's website (refer Dec 23rd, 2021).

Ore Reserves:

The information in this document which relates Ore Reserves for the Ban Phuc deposit was presented via an ASX Announcement dated 28 February 2021 (Ta Khoa Maiden DSS Ore Reserve). The disclosure and competency statement for the new reserve can be found on the company's website. The disclosure includes - Sections 4 of 'JORC Table 1', (Section 4 'Estimation and Reporting of Ore Reserves') prepared by Optimize Group (Toronto, Canada)).

No New Information:

The Company confirms that it is not aware of any new information or data that materially affects the information including in the original market announcements or the information on this page, and in the case of estimates of Mineral Resources and Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed.

The Company confirms that the form and context in which the Competent Persons' finding are presented have not been materially modified from the original market announcements.