### **CARAVEL MINERALS**

# Annual General Meeting Presentation 17 NOVEMBER 2022

SUITE 1, 245 CHURCHILL AVENUE, SUBIACO, WESTERN AUSTRALIA



### **DISCLAIMER AND CAUTIONARY STATEMENTS**

This presentation should be considered in its entirety. If you do not understand the material contained in this presentation, you should consult your professional advisers. The sole purpose of this presentation is to provide shareholders with an update on current activities of the Company and the current state of exploration at the Caravel Copper Project. Any statements which may be considered forward looking statements relate only to the date of this presentation document. Such forward looking statements involve known and unknown risks, uncertainties and other important factors beyond the Company's control that could cause actual results, performance or achievements of the Company to be materially different from future results, performance, or achievements expressed or implied by such forward looking statements. As a result of these factors, the events described in the forward-looking statements in this document may not occur. Notwithstanding the material in this presentation, shareholders should consider that any investment in the Company is highly speculative and should consult their professional advisers - whether scientific, business, financial or legal - before deciding whether to make any investment in the Company. The Company may at its absolute discretion, but without being under any obligation to do so, update, amend or supplement this presentation or any other information to the recipient. No person has been authorised to give any information or make any representation other than contained in this document and if given or made, such information or representation must not be relied on as having been so authorised.

#### **Previous Disclosure**

This document may include references to information that relates to Mineral Resources prepared and first disclosed under the JORC Code 2012. The information references the Company's previous ASX announcements

- 23 November 2021 "Major Mineral Resource Upgrade Caravel Copper Project"
- 12 July 2022 "Caravel Copper Project Pre-Feasibility Study Highlights Robust, Executable Project and Reports Maiden Ore Reserve"
- 20 September 2022 "Pre-feasibility Study Update Caravel Copper Project"

These announcements are available to view on the Company's website www.caravelminerals.com.au. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are represented have not been materially modified from the original market announcement.

#### **Competent Persons Statements**

The information in this report that relates to Exploration Results is based on and fairly represents information compiled by Mr Peter Pring. Mr Pring is a Senior Exploration Geologist with Caravel Minerals. Mr Pring is a shareholder of Caravel Minerals and is a member of the Australasian Institute of Mining and Metallurgy. Mr Pring has sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to the activities undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Pring consents to the inclusion in this report of the matters based on information in the form and context in which they appear.

The information in this report that relates to Mineral Resources is based on and fairly represents information compiled by Mr Lauritz Barnes, (Consultant with Trepanier Pty Ltd). Mr Barnes is a shareholder of Caravel Minerals. Mr Barnes is a member of both the Australasian Institute of Mining and Metallurgy and the Australasian Institute of Geoscientists. Mr Barnes has sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to the activities undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Barnes consents to the inclusion in this report of the matters based on information in the form and context in which they appear.

The information in this report that relates to Ore Reserves is based upon information and supporting documentation prepared by and mine planning work prepared by Mr Steve Craig (CEO of Orelogy Consulting Pty Ltd). Mr Craig is a member of the Australasian Institute of Mining and Metallurgy and has sufficient experience relevant to the style of mineralization and type of deposit under consideration to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Craig consents to the inclusion in this report of the matters based on their information in the form and context in which they appear.

#### **Forward Looking Statements**

This document may include forward looking statements. Forward looking statements include, but are not necessarily limited to, statements concerning Caravel Minerals planned exploration programmes, studies and other statements that are not historic facts. When used in this document, the words such as "could", "indicates", "plan", "estimate", "expect", "intend", "may", "potential", "should" and similar expressions are forward looking statements. Such statements involve risks and uncertainties, and no assurances can be provided that actual results or work completed will be consistent with these forward-looking statements.

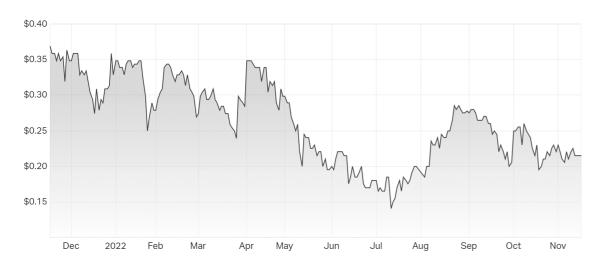
#### Authorisation of release

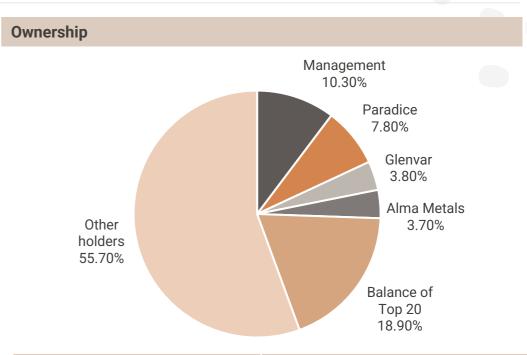
Release of this market announcement is authorised by Alasdair Cooke, Caravel Minerals Limited's Executive Director.

### **CORPORATE SNAPSHOT**

Proforma Snapshot post \$12M placement	
ASX ticker	CVV
Share price (16 November 2022)	22.0c
Shares on issue	479M
Unlisted options (8-75c strike)	27M
Market capitalisation	\$105M
Cash (includes net placement proceeds)	\$14M
Enterprise Value	\$91M
Debt	Nil

### **Twelve-month Share Price Performance**





Board	Management
Wayne Trumble – Chairman	Don Hyma – Incoming Managing Director
Richard Monti – Non-Executive Director	Jason (Vossie) Voss – Mining
Steve Abbott – Outgoing Managing Director	Peter Pring – Exploration
Don Hyma – Incoming Managing Director	Mick Klvac - Permitting
Alasdair Cooke – Executive Director	Bruce McLarty - Commercial
	Chantal Hartstone – Stakeholder Relations
	Dan Davis -CFO

# **CARAVEL – BECOMING A NEW AUSTRALIAN COPPER PRODUCER**

### **New Managing Director Mr Don Hyma Appointed**<sup>1</sup>



- Brings 30+ years of Australian and international mineral resource project development experience to Caravel Minerals
- Strong technical (engineering and metallurgy) and business leadership skillset to drive feasibility, financing and development of Australia's largest undeveloped copper resource
- Prior roles include senior positions with Mitsui & Co, Rio Tinto, Glencore and Fortescue Metals Group

\$12.0M Share Placement<sup>2</sup>

• Firm commitments to raise \$12.0M (less 5% costs) at 20c per share in a placement managed by Canaccord

#### Funding to progress Definitive Feasibility Study

DFS progressing based on an initial 28-year, 27Mtpa throughput project producing ~60,000 tonnes (130 million pounds) copper metal per year, at low unit cost



Aerial view Bindi West 2022 infill drilling program

# A YEAR OF MOMENTUM AND PROGRESS

### 100% owned copper development in Western Australia largest undeveloped copper project in Australia

• Mineral Resource 1.18 billion tonnes @ 0.24% Cu and 48 ppm Mo for **2.84Mt of contained copper** (0.1% Cu cut-off)

### Project feasibility studies well-advanced, DFS commenced

- Revised Scoping Study October 2021
- July 2022 PFS confirmed robust and executable project
- Delivery of Maiden Ore Reserve (JORC 2012) of 583.4Mt at 0.24% Cu for 1.42Mt contained Cu (at 0.10% cut-off)
- September 2022 PFS Update improved economics

#### **Copper fundamentals remain very strong**

- Major producers' output is in decline<sup>1</sup>
- Current inventories at near historical lows<sup>2</sup>
- Coppers is key to renewable energy and electrification <sup>3</sup>

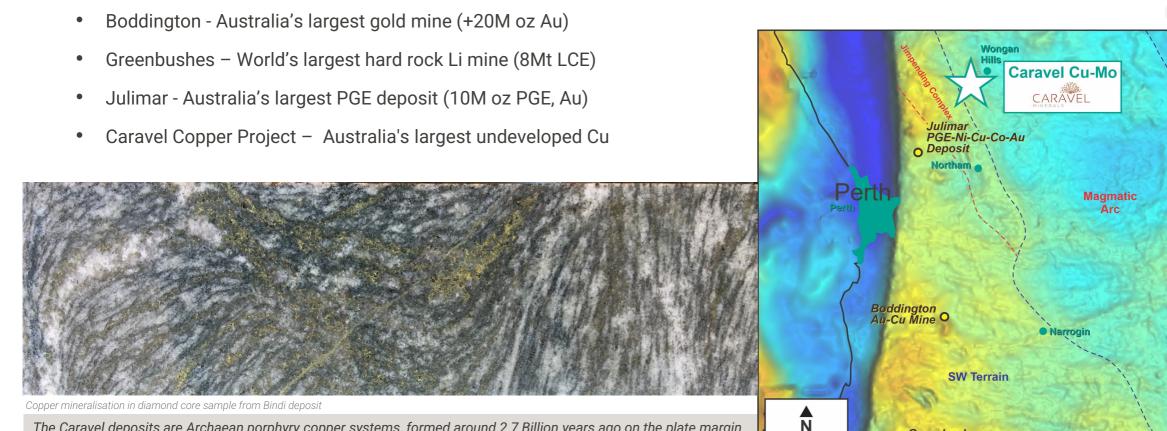
# Definitive Feasibility Study advancing the project towards development

- Construction decision (FID) in late 2024
- First production by 2026

- 1. www.woodmac.com/news/opinion/build-or-buy-are-the-copper-majors-rising-to-the-growth-challenge
- 2. www.bloomberg.com/news/articles/2022-09-21/copper-prices-fall-despite-signs-of-looming-crucial-metal-shortage
- 3. www.bhp.com/news/prospects/2020/08/bhps-economic-and-commodity-outlook#copper

### WORLD CLASS MINERAL PROVINCE – SW YILGARN TERRANE

### A relatively unexplored terrane, hosting some of Australia's largest and most important mineral discoveries:



The Caravel deposits are Archaean porphyry copper systems, formed around 2.7 Billion years ago on the plate margin of the Yilgarn Craton. Their formation is similar to modern porphyry copper deposits but they have since been metamorphosed and deformed. The deposits do not outcrop due to surface weathering and were discovered in 2010 by roadside geochemical sampling.

Gravity data for South-Western Australia

50 km

State Road

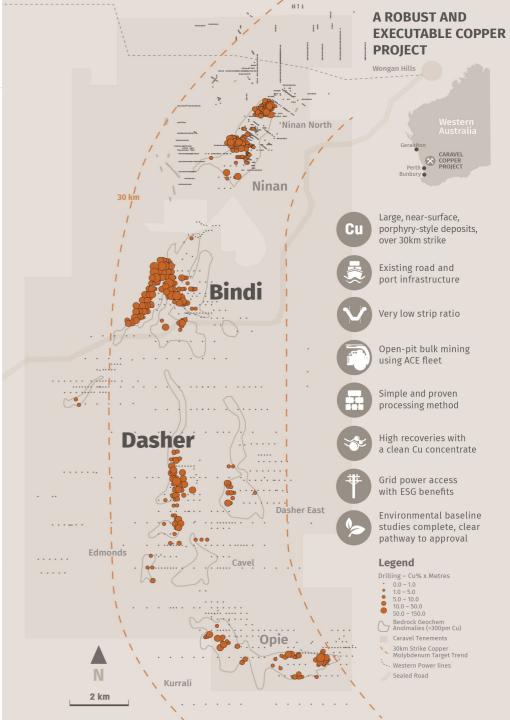
O Greenbushes Li-Ta-Sn Mine Yilgarn

Terrain

# **CARAVEL COPPER PROJECT**

### Long-term, stable copper producer ~60ktpa equ. 130m lbs metal per year

- Large, long-life project 1.4 Mt Cu Reserves, 2.8 Mt Cu Resources
- Simple open-cut, bulk mining and conventional mineral processing
- Low mining cost (USD 0.44 lb\*) bulk mining, very low strip-ratio (1.3:1)
- Low process cost (USD 0.82 lb\*) excellent metallurgy, grid power
- 150km from WA capital Perth access to services and workforce
- Existing infrastructure:
  - Heavy haulage road infrastructure direct to Bunbury port
  - Grid power, fibre optic communications links
  - Regional service towns
- Low environmental impact cleared, salted affected land
- Low emissions grid power and electrification of mine fleet
- Remote operations centre allows diverse and flexible work opportunities

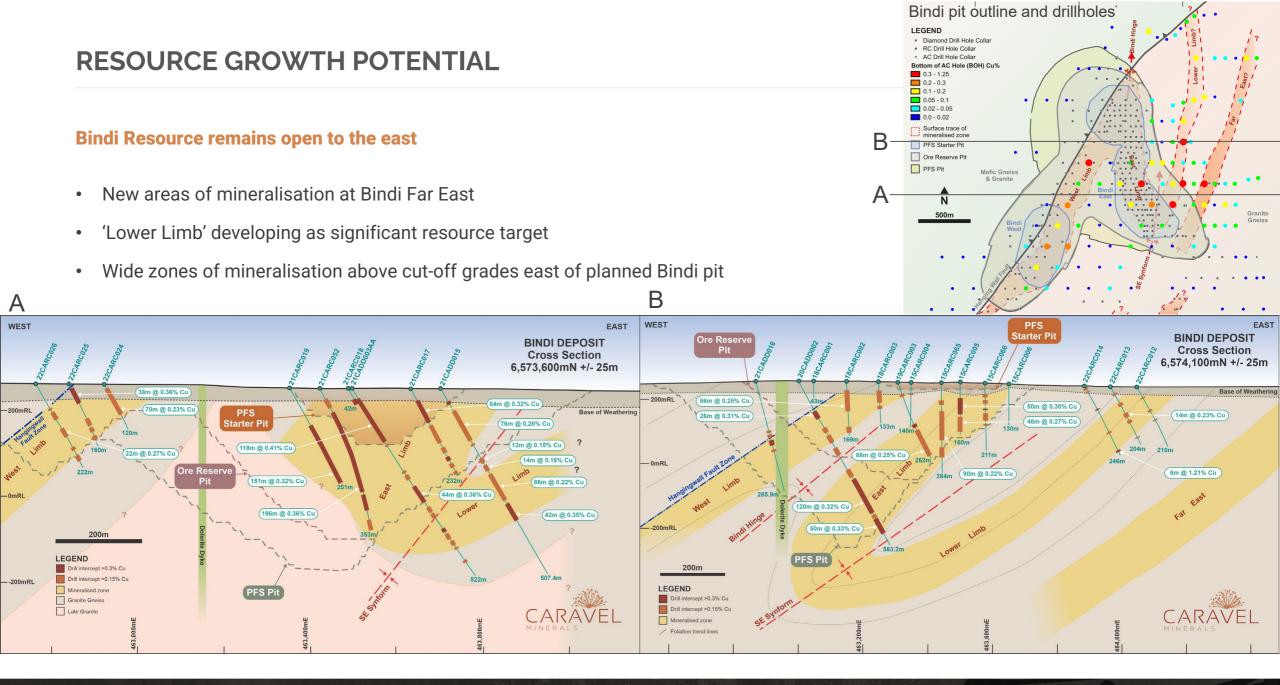


\* C1 USD/lb costs use Wood Mac Brook Hunt methodology

### FOURTH LARGEST COPPER DISCOVERY GLOBALLY IN LAST DECADE

DISCOVERY	DISCOVERY YEAR	DISCOVERED BY	COUNTRY	COPPER IN RESERVES, RESOURCES AND PAST PRODUCTION (MT)
Kamoa-Kakula (Kakula)	2014	Ivanhoe Mines	DRC	18.9
Onto (Hu'u)	2013	Vale 80% / Aneka Tambang 20%	Indonesia	15.0
Cascabel	2013	SolGold 85% / Corner Stone Capital 15%	Ecuador	12.3
Caravel (prev named 'Calingiri')	2016	Kingsgate/Caravel Copper	Australia	2.8
La Hulfa	2014	Codelco	Chile	2.4
Tatogga (Saddle)	2017	GT Gold	Canada	2.2
Winu	2017	Rio Tinto	Australia	1.8
Porvenir	2020	SolGold	Ecuador	1.7
Jebel Ohier	2014	Qatar Mining	Sudan	1.1
West Musgrave (Succoth)	2013	BHP Billiton	Australia	0.9
Copa Sur	2012	Codelco	Chile	0.8
Marimaca	2016	Coro Mining 51% / Compania Minera Constanza 49%	Chile	0.6

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# **OVER 100% GROWTH COPPER TONNES SINCE 2016**



#### 2016 Maiden Resource

- 1.4Mt contained copper at 0.15% cut-off
- 529Mt

#### 2019 Resource

- 32% increase in contained copper at 0.15% cut-off
- 1.86Mt contained Cu
- 661.9Mt
- 55Mo (ppm)

### 2021 Resource

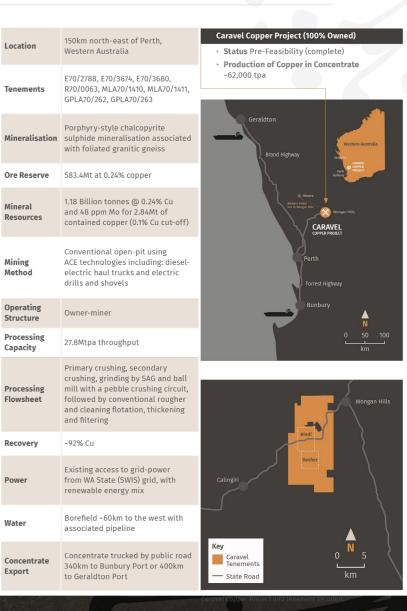
- 32% increase in contained copper at 0.15% cut-off
  - 2.46 Mt contained Cu
  - 874.9 Mt
  - 57 Mo (ppm)

#### 2021 Resource

- 53% increase in contained copper at 0.10% cut-off
- 2.84 Mt contained Cu
- 1,180.6 Mt
- 48 Mo (ppm)

### PFS DEMONSTRATED A ROBUST AND EXECUTABLE PROJECT

- Strong cashflows over 28-year initial mine life
- Mineral Resource 1.18 billion tonnes @ 0.24% Cu for 2.84Mt contained copper (at 0.1% cut-off)
- Caravel Ore Reserve (JORC 2012) of 583.4Mt at 0.24% Cu for 1.42Mt contained copper (at 0.10% cut-off)
  - Proven Ore Reserve of 105.4Mt for 0.28Mt contained copper
  - Probable Ore Reserve of 478.0Mt for 1.14Mt contained copper
- Ore Reserve confirms Caravel as Australia's largest undeveloped copper project
- Owner-miner using automation, communication and electrification (ACE), maximising safety, efficiency and lower diesel consumption and carbon emissions
- PFS based only on Bindi and Dasher deposits, **significant upside** for further resource growth within 30km mineralised system



# JULY PFS HIGHLIGHTED PROCESSING OPTIMISATION OPPORTUNITIES

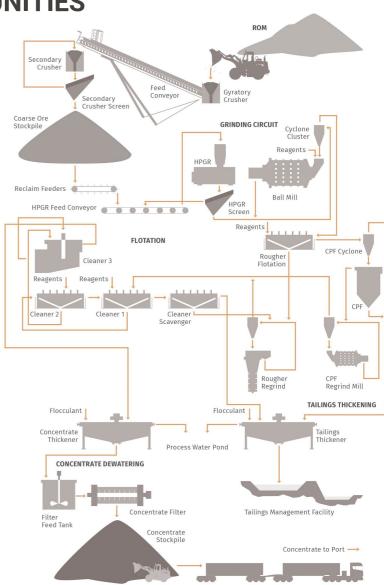
### Single train optimisation studies commenced in July 2022, investigating:

- Consolidation of the plant into a single ~27mtpa throughput train
- Comminution and flotation circuit improvements
- Studies undertaken by PFS engineers Ausenco

### **Studies resulted in modified flowsheet**

- Semi Autogenous Grinding Mills replaced with High-Pressure Grinding Rolls (HPGR) in the primary comminution circuit
- Inclusion of Coarse Particle Flotation (CPF) in the flotation circuit
- Single 27Mpta train design to simplify construction, enhance operability and improve capital and operating costs

### Reported in PFS Update (September 2022 - see next slide)



# **SEPTEMBER PFS UPDATE - FINANCIAL RESULTS**

### **NET CASHFLOW UP ~\$1B**

### NPV (7%) INCREASED TO \$1.5B

- HPGRs lower capital and operating costs
- CPF reduces capital and operating costs •
- Single train ~27Mtpa plant simplifies construction, ٠ enhances operability and lowers capital and operating costs



Cu: Chalcopyrite

**Contained Copper** 

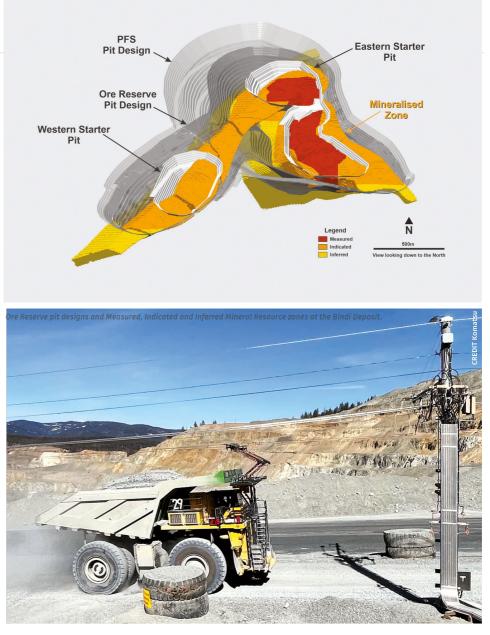
Resulting in;

- Reduced processing cash unit costs •
- Reduced capital costs by ~ AUD\$100M ٠
- Reduced installed power demand by ~ 22MW ٠
- Reduced water consumption by ~1.8Glpa •
- Reduced C1 costs from US\$1.72 to US\$1.54/lb .
- Reduced AISC cost from US\$2.55 to US\$2.37/lb ٠

IRR

# **SCALE AND SIMPLICITY - KEY TO LOW COST**

- Conventional open-pit with very low waste/ore ratio
- Bulk mining, wide ore zones, large equipment
- Autonomous trucks lower labour input, high efficiency
- Electrified mining fleet lower fuel cost, higher efficiency
- Standard crush grind (HPGRB) float filter
- Simple metallurgy, low variability and high recoveries
- Low-cost power from grid
- Close to existing port on heavy haul roads
- Excellent concentrate quality (Ag, Au credits)
- Benign waste/tails and flat terrain structurally lowers build and operating costs

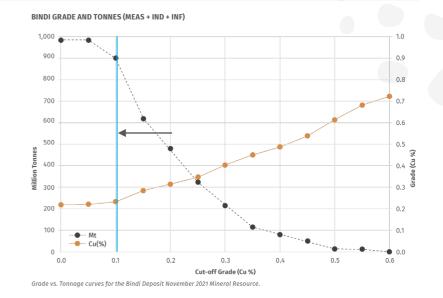


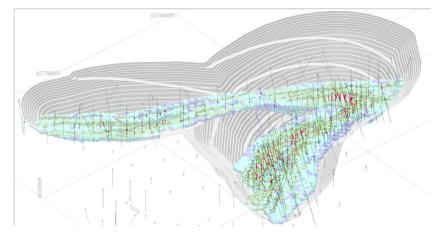
Autonomous mining vehicle on dedicated haul road.

# LOW COSTS ALLOW LOW CUT-OFF GRADE

- Resource has a **steep grade vs tonnage curve** favours bulk mining at lower cut-off grades
- Allows very **low strip-ratios (1.3:1)**
- Bulk mining > larger equipment > lowers mining costs and reduces dilution risk
- Ore grades delivered to the ROM under this scenario average around 0.25% Cu

   cash margins remain similar as higher cut-off scenarios
- Ores can be delivered at large throughputs (around 27Mtpa) and potentially higher, for > 28 years
- Large scale process plant allows low unit C1 costs (USD 0.82/lb) due to scale, grid power - low energy costs and good metallurgical characteristics with high recoveries
- Low costs allow low grades to be mined at volume with reduced risk C1 costs USD 1.54/lb, AISC USD 2.37/lb





Oblique view to NW of Bindi pit shell and ore block model with drill holes

# **PRODUCTION COST COMPARISON WITH SIMILAR OPERATING MINES**

	Gibraltar <sup>1</sup>	Copper Mountain <sup>2</sup>	Caravel I	Caravel Minerals <sup>3</sup>			
			First 5 Years	Life of Mine			
Tonnes Processed per annum (m)	29.2	13.4	27.0	26.5			
Cu Grade (%) <sup>6</sup>	0.25	0.25	0.29	0.24			
Strip ratio <sup>6</sup>	1:2.4	1:2.1	1:0.6	1:1.3			
Cu (kg) mined per 1 tonnes mined	0.74	0.81	1.81	1.04			
Costs (USD/t Processed) <sup>4</sup>							
Mining			2.03	2.19			
Processing			3.07	4.03			
Site Operating Costs	7.33	12.95	5.10	6.22			
Logistics	0.65	0.82	0.98	1.03			
Refining and treatment	0.34	1.26	1.40	1.24			
Credits	(1.03)	(5.00)	(0.66)	(0.93)			
C1 Cost	7.29	10.03	6.82	7.56			
AISC <sup>5</sup>	8.73	12.39	8.45	9.60			
Revenue value USD/t processed <sup>6</sup>	14.87	29.21	21.25	18.87			

<sup>1</sup> From data in Taseko Mines Ltd annual financial statements for 31-12-2021

<sup>2</sup> From data in Copper Mountain Mining Corporation's annual financial statements for 31-12-2021

3 CVV Figures converted at 2021 average rate of US\$75.15 cents to A\$1

4 Gibraltar and Copper Mountain calculate AISC as C1 costs plus sustaining costs (primarily royalties and sustaining capital)

5 Revenue is payable Copper

6 Technical report on the mineral reserve update at the Gibraltar mine 30-03-22 & Copper mountain mine life-of-mine plan and 65 kt/d expansion study update NI43-101 technical report 30-09-2022

# ACE OPERATIONAL MODEL

A Remote Operating Centre (ROC) will play a key role in ensuring a safe and efficient ACE operation.

#### ROC

- Continuously control, monitor and optimise operations
- Offers more attractive work options and flexibility

#### 2 GRID POWER CONNECTION

• Renewable energy mix

#### 3 COMMUNICATIONS

- Existing fibre optic cable
- WiFi mesh
- Mobile communications
- Direct fibre connection

#### DRILL AND BLAST

- Autonomous drilling
- Electric drills
- Autonomous cable management
  Drill hole probes with real-time
- grade control

#### 5 SHOVEL AND BACKHOE

- Electric shovels
- Blast fragmentation modelling
- Bucket teeth monitoring
- Autonomous cable management
- Load-assist technology

#### 6 HAULAGE

7

- Autonomous trucks with diesel electric and trolley assist
- Future battery truck trolley line charging
- Fuel agnostic future solutions (hydrogen and ammonia)



#### SCANNERS CCTV AND DRONES

- 24 hour CCTV
- Real-time pit, asset and environmental surveys
- Safety and mechanical field inspections
- Pit wall and TMF real-time monitoring



#### CRUSHING COMMINUTION AND PROCESSING

- Plant operations include automation
- Integration with ROC
- Real-time ore performance management
- Power optimisation via equipment utilisation

#### 9 MAINTENANCE

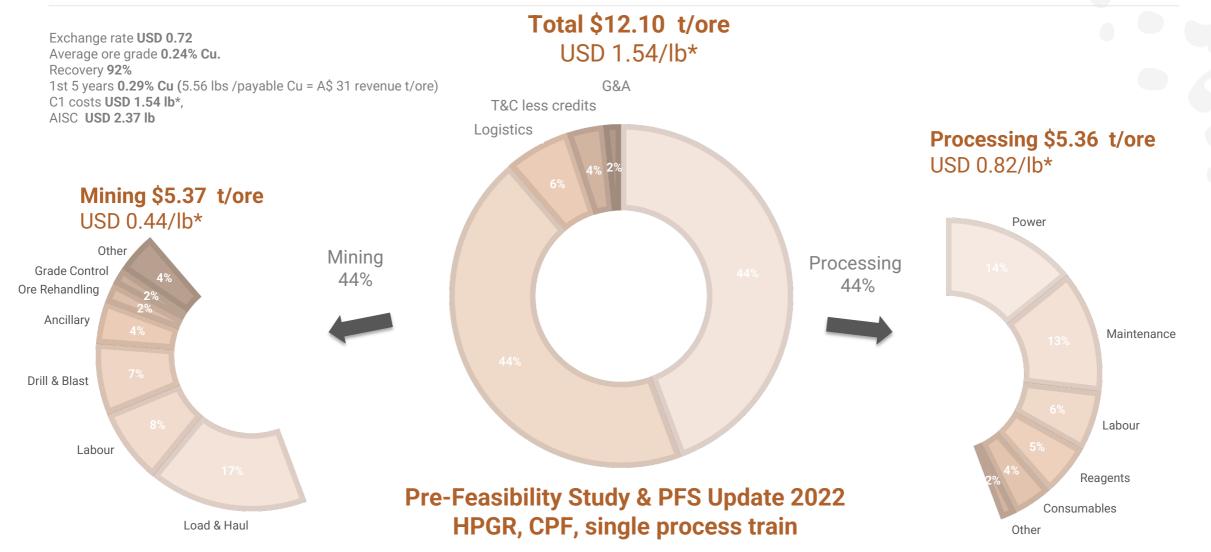
- Data analytics and predictive maintenance with OEMs
- Proximity to Perth consignment parts and components
- Digital inspection
- Asset life maximisation and cost reductions

#### 10 TRANSPORT

- Electric light vehicle
- Potential for electric road train haulage to port
- Nearest port less than 350km



# **AUTOMATION AND ELECTRIFICATION (ACE) - LOW OPERATING COSTS**



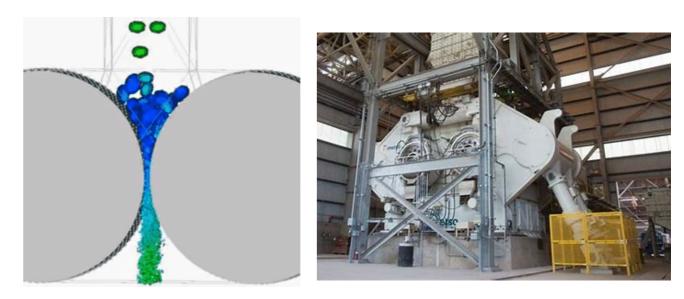
\* Note that C1 USD/Ib costs use Wood Mac Brook Hunt methodology and exclude waste stripping, which is included in AUD/t costs

# HIGH PRESSURE GRINDING ROLLS (HPRG)

### HPGR'S ARE A MODERN FORM OF GRINDING TECHNOLOGY WITH FAR GREATER EFFICIENCY THAN CONVENTIONAL SAG/BALL MILLS

- HPGR is far more energy efficient and does not require grinding media (balls)
- Lowers energy and emissions profile 27% reduction in greenhouse gases and processing enhancements
- Allows greater flexibility in power load management
- 2,000kg of core samples undergoing HPGR test work
- Test work largely complete currently compiling data





# **DEFINITIVE FEASIBILITY STUDY ALREADY UNDERWAY**

### DFS WORK SCOPE WELL-ADVANCED WITH CRITICAL PATH ACTIVITIES UNDERWAY

- Sterilisation drilling
- Grade control planning
- Additional metallurgical sampling
- Detailed mineral processing tests
- Mining equipment selection
- Environment approvals submission
- People & Culture strategy development
- Stakeholder consultation for tenure and PER
- Preliminary marketing and financing enquiries

2022				2023				2024				2025				2026			
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
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# **PROJECT FUNDING OPTIONS**

### The Caravel Copper Project has a range of options for funding development

### Strategic partner for debt and equity

- Producing >60ktpa of clean copper concentrate in an attractive investment destination like WA makes Caravel of interest to major copper smelters and traders seeking long term concentrate supply agreements
- These types of supply agreements commonly involve equity and debt financing arrangements

#### **Joint-venture partnering**

- The Caravel Project is one of very few projects globally with both scale or resource/production located in a good investment jurisdiction. This makes it attractive to mid-tier mining companies seeking near term copper production opportunities
- A joint venture arrangement can offer good return on equity for shareholders, for example Gold Road's JV with Goldfields to develop the Gruyere Gold Mine

#### **Vendor financing options**

- The Project's close location to Perth-based vendors offers opportunities for different funding models, such as service and performance-based contracts for certain mobile or replaceable equipment
- We expect the mining fleet will be largely vendor financed and we are investigating vendor financing models for significant components of the process plant
- These options will reduce the project financing requirement and, where performance based, will reduce operating risks

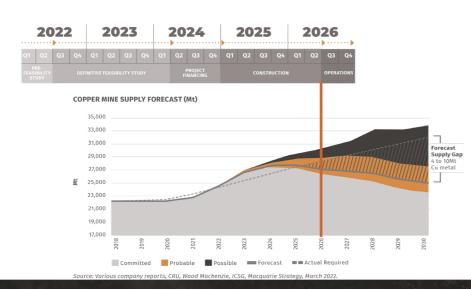
### **PRODUCTION TIMING TO MEET EMERGING SUPPLY GAP**

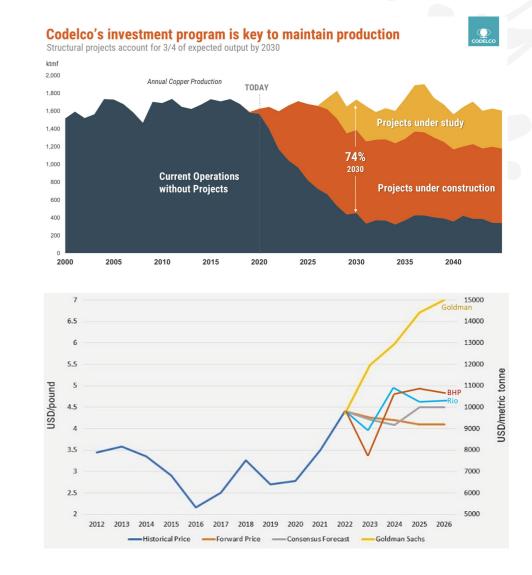
### Significant risks to new supply

- Fiscal and social instability in South America
- Over \$30B in investment required by Codelco and BHP to maintain production

### **Copper forecasts vary widely**

- Lower forecasts assume production comes on as scheduled
- GS assumes high demand and supply is delayed
- BHP and Rio in the middle, between 4.50 and 5.00 lb





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