

# hastings

## Corporate Update and Half Year Summary

Half Year Ended  
31 December 2024

14 March 2025

For personal use only



## DISCLAIMER

This presentation has been prepared by Hastings Technology Metals Ltd (“Company” or “Hastings”). This presentation is not an offer, invitation, solicitation or other recommendation with respect to the subscription for, purchase or sale of any securities in the Company. This presentation has been made available for information purposes only and does not constitute a prospectus, short form prospectus, profile statement or offer information statement nor does it constitute investment or financial product advice (nor taxation, accounting or legal advice) and it is not intended to be used as a basis for making an investment decision. This presentation is provided expressly on the basis that you will carry out your own independent inquiries into the matters contained in the presentation and make your own independent decisions about the affairs, financial position or prospects of the Company. The Company reserves the right to update, amend or supplement the information at any time in its absolute discretion (without incurring any obligation to do so).

To the maximum extent permitted by law neither the Company, nor its related bodies corporate, officers, their advisers, agents and employees accept any responsibility or liability to any person or entity as to the accuracy, completeness or reasonableness of the information, statements, opinions or matters (express or implied) arising out of, contained in or derived from this presentation or provided in connection with it, or any omission from this presentation, nor as to the attainability of any estimates, forecasts or projections set out in this presentation. Any such responsibility or liability is, to the maximum extent permitted by law, expressly disclaimed and excluded. Nothing in this material should be construed as either an offer to sell or a solicitation of an offer to buy or sell securities in the United States or any other jurisdiction where it would be illegal. It does not include all available information and should not be used in isolation as a basis to invest in the Company.

## FORWARD LOOKING STATEMENTS

This presentation contains reference to certain intentions, expectations, future plans, strategies and prospects of the Company. Those intentions, expectations, future plans, strategies and prospects may or may not be achieved. They are based on certain assumptions, which may not be met or on which views may differ and may be affected by known and unknown risks. The performance and operations of the Company may be influenced by a number of factors, many of which are outside the control of the Company. No representation or warranty, express or implied, is made by the Company, or any of its directors, officers, employees, advisers or agents that any intentions, expectations or plans will be achieved either totally or partially or that any particular rate of return will be achieved.

Given the risks and uncertainties that may cause the Company’s actual future results, performance or achievements to be materially different from those expected, planned or intended, recipients should not place undue reliance on these intentions, expectations, future plans, strategies and prospects. The Company does not warrant or represent that the actual results, performance or achievements will be as expected, planned or intended. The Company is under no obligation to, nor makes any undertaking to, update or revise such forward looking statements, but believes they are fair and reasonable at the date of the presentation.

## COMPETENT PERSONS’ STATEMENT

The information in this presentation relating to Mineral Resources and Ore Reserves have been prepared by a Competent Person in accordance with the 2012 edition of the ‘Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves’ (“JORC Code”) and have been extracted from the release title ‘Annual Report to shareholders’ dated 30 September 2024 which is available to view at [www.asx.com.au](http://www.asx.com.au) under the code “HAS” (the original release). The Company confirms that it is not aware of any other 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 estimates in the relevant market announcement continue to apply and have not materially changed. Hastings confirms that the form and context in which the Competent Person’s findings are presented have not been materially modified from the original market announcements.

The information that relates to Mineral Resources is based on information compiled by David Princep and Lyn Widenbar. Both Mr. Princep and Mr Widenbar are independent consultants to the Company and members of the Australasian Institute of Mining and Metallurgy (AusIMM). Mr Princep and Mr Widenbar have sufficient experience relevant to the styles of mineralisation and types of deposits which are covered in this announcement and to the activity which they are undertaking to qualify as a Competent Person as defined in the JORC Code.

The information that relates to the Ore Reserves at Bald Hill, Simon’s Find, Fraser’s, Auer, Auer North, Yangibana and Yangibana North is based on information reviewed or work undertaken by Mr. Stephen O’Grady. Mr O’Grady is an independent consultant to the Company and a member of the AusIMM, and a Director of Intermine Engineering Consultants. Mr O’Grady has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the preparation of mining studies to qualify as a Competent Person as defined by the JORC Code. Mr O’Grady consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

The scientific and technical information in this announcement and that relates to process metallurgy is based on information reviewed by Scott Atkinson. Mr Atkinson is a full-time employee of Hastings Technology Metals Limited and member of the Australasian Institute of Mining and Metallurgy (AusIMM; 3056865) and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined by the JORC Code. Mr Atkinson consents to the inclusion in this announcement of the matters based on their information in the form and context in which it appears.

The information in this announcement that relates to exploration results in relation to the Yangibana Rare Earths and Niobium Project (“Yangibana Project” or “Yangibana”) and the Centipede Range Project (“Centipede Project” or “Centipede”) and other exploration results, are based on information compiled by Competent Person, Dr. Louis Schürmann. Dr. Schürmann is a full-time employee of Hastings and Fellow of the Australasian Institute of Mining and Metallurgy (Aus IMM: 308067). Dr Schürmann has sufficient experience relevant to the styles of mineralization and types of deposits which are covered in this announcement and to the activity which they are undertaking to qualify as a Competent Persons as defined in the JORC Code. Dr Schürmann consents to the inclusion of this announcement of the matters based on the information and context in which it appears. Dr Schürmann has +30 years’ experience as an exploration geologist and project manager.

For personal use only

# **CORPORATE, JOINT VENTURE AND PROJECT OVERVIEW**

# HALF YEAR REVIEW<sup>1</sup>

Significant progress made to support pathway to completion and production

## Q1 FY25

World's leading producer of rare earths permanent magnets, JL Mag Rare-Earth Co. (market cap: HKD29.9 / A\$6bn), to become 9.8% strategic investor in Hastings

Maiden 6.7Mt Niobium Resource (Measured & Indicated). By-product credits to provide a multi-commodity recovery process stream

Hafnium, a critical metal, was also identified at the Yangibana Project.

Investor site visit conducted during the quarter with attendance from investors, research analysts, government, investment banks and media.

Completion of Hastings 2024 Sustainability Report, sustainability ratings include:

- Sustainalytics ranked Hastings 4th out of 187 companies in the metals and mining sub-industry category.
- Ecovadis rated Hastings in the 91st percentile of companies.

## Q2 FY25

Hastings was selected as one of nine parties by the Ministry of Investment of Saudi Arabia (MISA) for their Global Supply Chain Resilience Initiative ("GSCRI") program totalling SAR 35 billion (US\$9bn / A\$14bn).

- Hastings and MISA entered into a non-binding MOU, which sets out the pathway for Hastings to develop a fully integrated downstream rare earths processing facility with the support of MISA through their GSCRI program.
- MISA will support Hastings to refresh the BFS based on the location of the Hydrometallurgical Plant (Stage 2) in the Kingdom of Saudi Arabia (KSA), secure strategic JV partners, facilitate access to potential KSA-based funding.

Mr Peter Phan joined Hastings as the Company's Project Director for Yangibana. Peter was the former Project Director at Australian Premium Iron Management, the manager of assets owned by a JV between, POSCO, AMCI and Aquila.

Receipt of \$5m from Equator shareholder loan

Annual General Meeting with all resolutions successfully passed by poll.

## Post-1H FY25

Landmark 60:40 Wyloo:Hastings Joint Venture. Transaction will include cancellation of all existing Exchangeable Notes:

- Reduces Hastings' final equity contribution to between \$13 - \$32m (subject to gearing mix)
- Wyloo to act as UJV Manager and Operator
- The term sheet has been approved by Wyloo's Investment Committee and supported by the Hastings' board.

Long lead equipment for the Yangibana Project continued to arrive in Perth including the horizontal belt filter, flocculant plant and the wet screen.

Hastings presented at the Future Minerals Forum (FMF) in KSA and progressed engagement with key KSA ministries and Australian government embassy officials.

**hastings**  **WYLOO**

JOINT VENTURE

<sup>1</sup> Refer Slide 18 for source information

# HALF YEAR SUMMARY<sup>1</sup>

Audit review for the period ended 31 December 2024

## Key Highlights

- As at 31 December 2024, 33% of the Yangibana Rare Earths and Niobium Project's ("Project") budget remains spent to date
- \$158m in supporting infrastructure has been fully completed including: 294-room accommodation village, 2km airstrip to facilitate landing of up to 70-seater aircrafts, 20km site access road, SipHon borefield including six bores and a 20km pipeline, series of communications towers installed to allow permanent high-speed communication and long-lead time equipment in storage ready for deployment.
- Closing consolidated cash and term deposit balance of \$9.1m.
- Implied valuation from the JV transaction of \$220m with Yangibana CGU assessed at this amount (Nb: forms part of \$334m Total Assets, refer table to the right).
- Cancellation of \$220m Exchangeable Notes as part of JV transaction announced.

## 1H FY25 Cashflow Waterfall

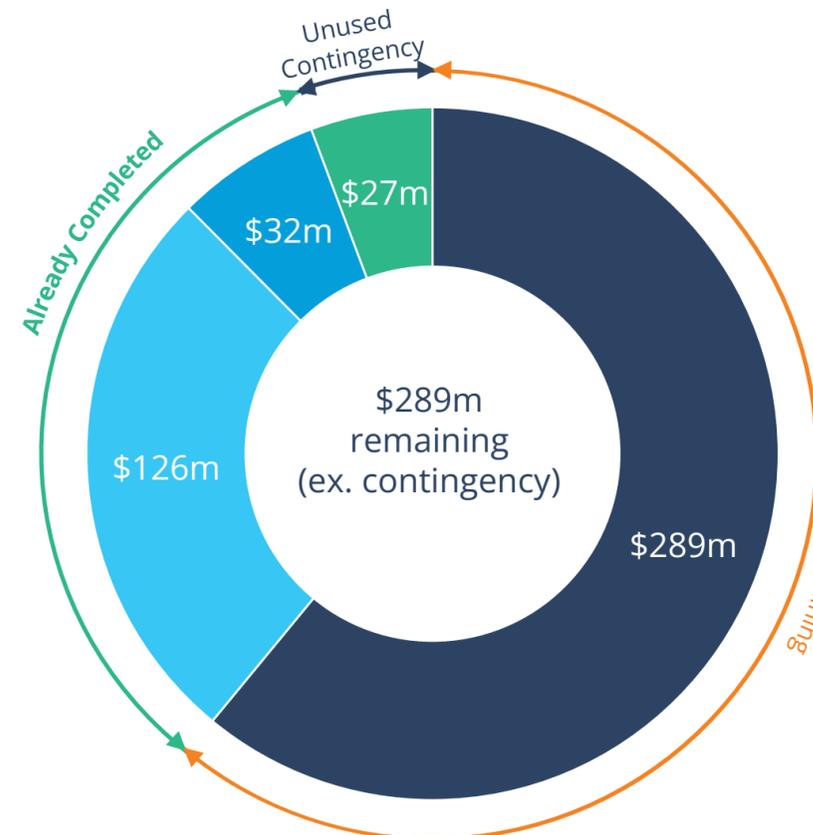


## Balance Sheet

Summary (A\$m)	Dec-24
Total Assets	\$334
Total Liabilities	\$202
Net Assets / Equity	\$132

- Total Assets of \$334m, of which \$175m consists of Plant and Equipment
- Net Assets of \$132m post non-cash impairment of \$141m (based on implied valuation of \$220m for the Joint Venture).

## Yangibana Capital Cost Breakdown (A\$m)



- Wyloo:Hastings Joint Venture Reduces Hastings' final equity contribution to between \$13 – \$32m (subject to gearing mix)<sup>2</sup>

- Remaining Capex
- Non Processing Infrastructure
- Critical Path Equipment
- Contingency

<sup>1</sup> Refer ASX Announcement "Interim Financial Report H1 FY2025" dated 14 March 2025.

<sup>2</sup> Refer Slide 10

# STAKEHOLDER ENGAGEMENT

Strong half of engagement with stakeholders and investors

For personal use only

Left: Tharrkari Elder - Mr Ben Roberts



Right: Chief Geologist, Louis Schurmann providing a geological update to Yangibana site visit attendees.



Yangibana Investor Site Visit  
(July 2024)

Diggers and Dealers Conference  
(August 2024)

MOU with Ministry of Investment  
Kingdom of Saudi Arabia  
(November 2024)

Future Minerals Forum  
(January 2025)

Wyloo JV Agreement  
(February 2025)

RIU Conference  
(February 2025)

Hastings Diggers and Dealers booth attended by Hon. Peter Dutton MP and Libby Mettam MLA



Hastings' Executive Chairman, Charles Lew (right) participating in the Future Minerals Forum



Hastings Executive Chairman, Charles Lew with Khalid S.Al-Modaifer His Excellency Vice-Minister for Mining Affairs Ministry of Industry and Mineral Resources, Kingdom of Saudi Arabia



Wyloo and Hastings Teams



Right: Hastings' Director, Jean-Claude Steinmetz presenting at the World Investment Conference in Riyadh. Hastings was one of nine investment deals were announced under Saudi Arabia's Global Supply Chain Resilience Initiative (GSCRI)

Left: Hastings COO Tim Gilbert presenting at the RIU explorers conference in Fremantle

# YANGIBANA AND JV SUMMARY<sup>1</sup>

Developing Western Australia Rare Earths and Niobium

## World Class Ore Body In-Demand Critical Minerals

- One of the highest global NdPr : TREO ratio of 37% (LOM average) and up to 52%
- In-Demand REEs: Nd + Pr + Dy + Tb = ~96% of Yangibana Basket Price
- Niobium by-product credit stream
- Offtake with German, thyssenkrupp, Baotou Sky Rock.

## Fully Permitted in Tier 1 Jurisdiction

- Australia AAA Sovereign Risk, Frasers Institute ranked WA 4<sup>th</sup> out of 77 jurisdictions
- State and Commonwealth Approvals secured
- Granted Mining Lease tenure in premier rare earths province
- Native Title Agreement in place.

## 1st Quartile Globally - Robust Economics<sup>2</sup>

- \$865m Post-tax NPV<sub>11</sub> (ungeared)
- 31.28% IRR; 3.4 years payback
- \$258m per annum EBITDA. LOM Free cash flow \$3,345m
- 1st Quartile on Global Margin Curve (CRU).

## De-Risked with Infrastructure Built

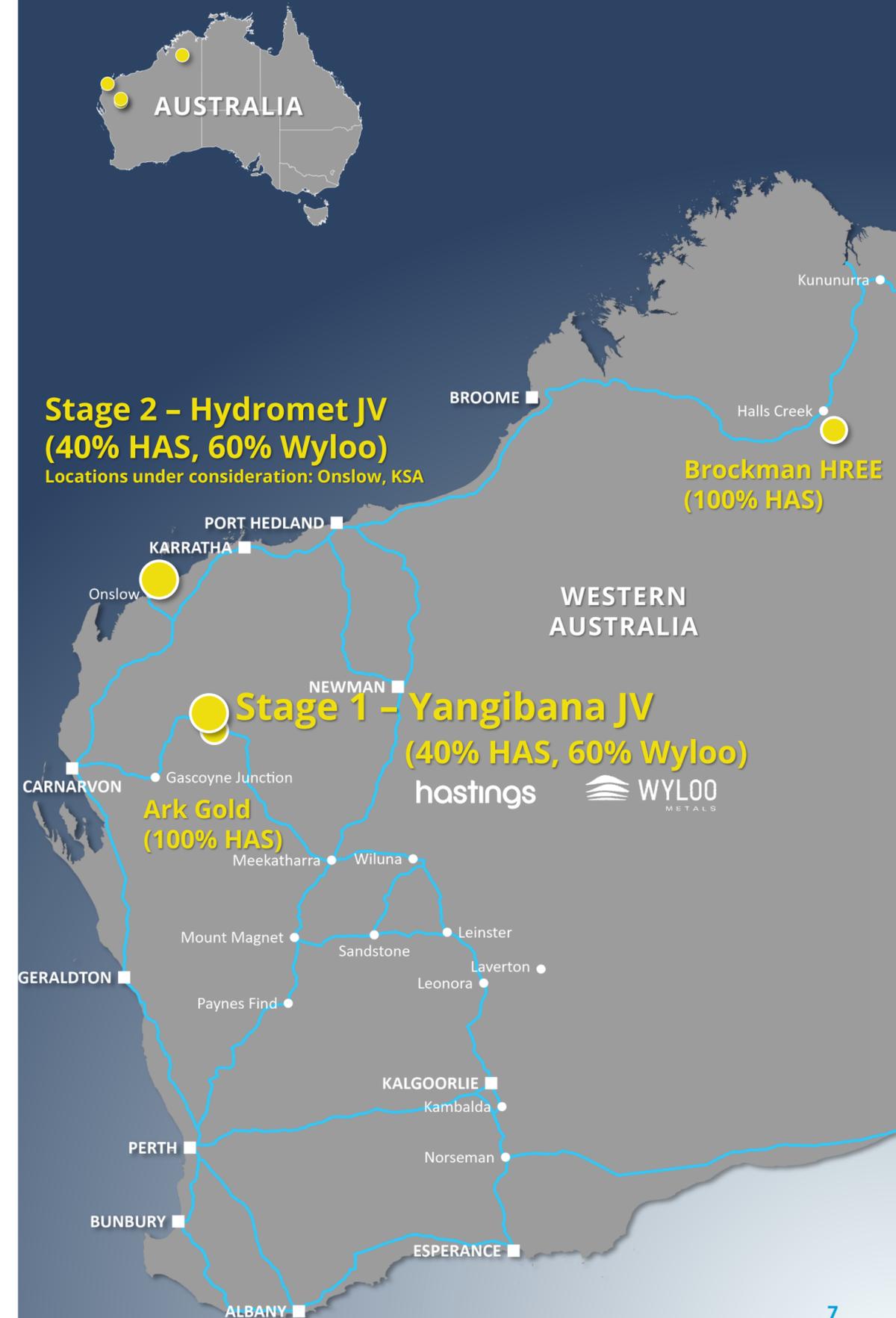
- Supporting infrastructure fully complete: 294 room village, 2km airstrip, 20km site access road, borefield, communications towers and all long-lead equipment
- \$158m spent on Yangibana (Stage 1) and \$68m on Stage 2 Plant
- 33% complete.

## Multi-Decade Project (17 years LOM)

- Initial Life of Mine of 17 years (Ore Reserves)
- 20.9Mt Reserves and 29.9Mt Mineral Resource
- Stage 2 Hydrometallurgical Plant Project will capture additional downstream processing margins Discussions ongoing for Kingdom of Saudi Arabia partnerships.

## JV Partnership (Tier 1 Partner)

- 60:40 JV with Wyloo:Hastings Term Sheet signed (non-binding). IC approved; commercial terms agreed
- Wyloo will be JV Manager/Operator
- Hastings retains pro-rata/40% of revenue (REEs, niobium), FCFs
- Project Finance to be raised jointly.



<sup>1</sup> Refer Slide 19 for source information

<sup>2</sup> Hastings confirms that all material assumptions underpinning the Ore Reserves supporting the Life of Mine Plan in ASX release dated 6 February 2023, forecast financial information and production targets in the ASX release dated 31 May 2023 and supplemented by the 16 February 2024 ASX release continue to apply and have not materially changed. In addition, production targets and forecast financial information are based on Ore Reserves and Mineral Resources (Measured and Indicated), and no inferred mineral resources nor exploration information is included.

For personal use only

# ADDITIONAL LONG LEAD EQUIPMENT DELIVERED TO WA

Majority of long lead equipment finalised and delivered during 1H FY25



Slurry Pumps



SAG mill main assembly



SAG mill trolley, slurry pumps and SAG mill trunnion Bearing Housing



Positive Displacement Pumps



Positive Displacement Pumps



Cyclone rated shelter, Off Gas Scrubber Gaset CEMS 2 System

For personal use only

For personal use only

**WYLOO  
YANGIBANA  
JOINT VENTURE**

# TRANSACTION OVERVIEW<sup>1</sup>

## Unlocking value from the Yangibana Rare Earths and Niobium Project

### Joint Venture (UJV) and Asset Portfolio (Post Completion)

- Hastings' portfolio of assets incl. 40% JV interest in Stage 1 of the Yangibana Project and Stage 2 Hydrometallurgical Plant Project. Hastings will retain 100% of Brockman Heavy Rare Earths Project and Ark Gold. Exploration tenements subject to DD.

### Joint Venture Overview

- Commercial terms agreed for UJV over Yangibana Rare Earths and Niobium Project (non-binding)
- 60:40 Unincorporated JV (UJV) structure with Wyloo (60%) and Hastings' wholly owned subsidiary, Yangibana Jubilee Pty Ltd (40%)
- Wyloo will act as the UJV Manager and Operator
- Hastings retains 40% share of revenue (rare earths, niobium and other by-product credits) and Project cash flows
- Transaction consideration:
  - Cancellation of all exchangeable notes totaling \$220m at maturity in Oct-25
  - Wyloo to fund its pro-rata share of remaining capital cost<sup>1</sup>
  - Neo Performance Materials Inc. stake transferred to Wyloo.

### Reduced Equity Requirements

- JV significantly de-risks project funding for Yangibana
- JV parties to procure project funding together (target minimum gearing 50%)
- Reduces Hastings' final equity contribution materially for the remaining two-thirds of the capital cost (33% complete) that is not debt funded, refer below (\$13m - \$32m subject to gearing assumption applied).

AUD	Yangibana Project (100%)	Hastings (40% JV)
Remaining Capital Cost (i)	\$316m	\$126m
Residual Project Equity (50% Gearing) (ii)	\$79m	\$32m
Residual Project Equity (60% Gearing) (iii)	\$32m	\$13m

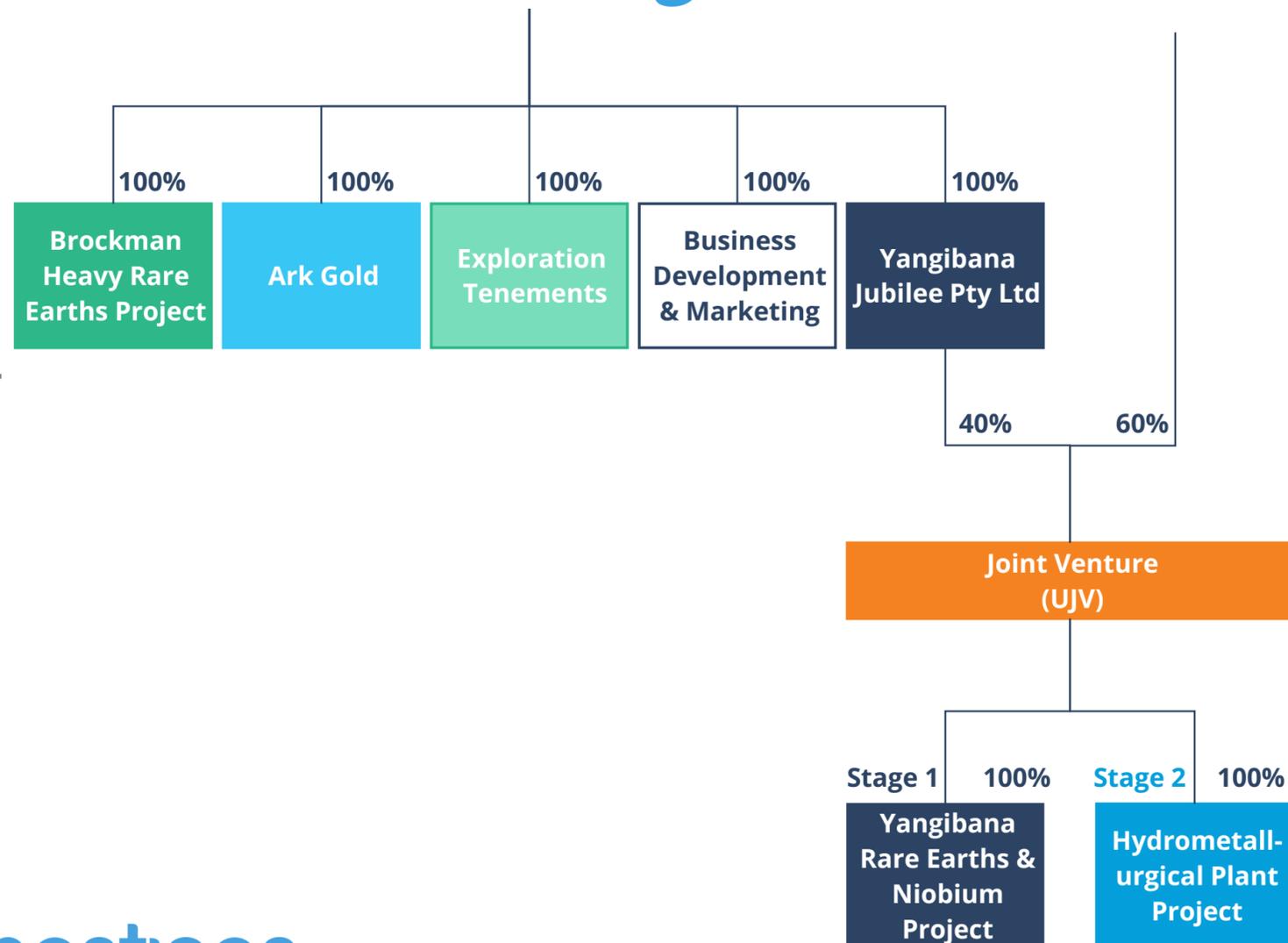
Reduced capital requirements for Hastings

Explanatory Notes:

<sup>i</sup> Total capital cost for the project of \$474m (subject to further optimisation by Wyloo/ JV). Spent CAPEX as at 31 December 2024 of \$158m (excl. Stage 2 spent CAPEX of \$68m). Remaining capital costs of \$316m (100% basis) incl. contingency (excluding working capital and ancillary costs). 60% basis is \$190m  
<sup>ii</sup> Assumed gearing of 50:50 (D:E) based on total Capital Cost (incl. Contingency) less spent equity  
<sup>iii</sup> Assumed gearing of 60:40 (D:E) based on total Capital Cost (incl. Contingency) less spent equity.

hastings

WYLOO



<sup>1</sup> Refer ASX Announcement "Hastings And Wyloo to Form Joint Venture on the Yangibana Rare Earths & Niobium Project" dated 20 February 2025.

For personal use only

# ABOUT WYLOO



## ABOUT WYLOO

- Privately owned by Tattarang with a focus on critical minerals for the energy transition
- Brings significant technical and financial capability to the Yangibana Rare Earths and Niobium Project as Operator
- Strong support and alignment with Hastings' mine to magnet strategy

**Greatland Gold** Au Cu



## Yangibana Rare Earths and Niobium JV<sup>1</sup>

Nd Pr Nb REE

### Yangibana JV, WA (60% Wyloo)

- Development Ready
- Initial Life of Mine of 17 years
  - 20.9Mt Reserves and 29.9Mt Mineral Resource
  - Infrastructure completed and long lead equipment procured
  - Stage 2 Hydrometallurgical Plant Project will capture additional downstream processing margins.

## Kambalda, Australia

### Kambalda Operations Ni Au

- Cassini & Northern Operations
  - Currently in care & maintenance, actively planning for re-start.
  - Ongoing exploration success to grow resource base.
  - Evaluating options for a concentrator in the region.

## Downstream Processing

### Kwinana, WA pCAM

- Feasibility Study paused

### Sudbury, Ontario pCAM

- MOU City of Greater Sudbury

### Toronto, Canada

- Neo Performance Materials<sup>2</sup>

## Ring of Fire, Canada

### Eagle's Nest Ni Cu Co PGE

- Feasibility Study
  - 15.8Mt @ 3.3% NiEq<sup>3</sup> for 522kt contained Ni Eq
  - Targeting first production: 2030
  - Mine of the future

### Chromite Cr

- Scoping / Pre-Feasibility
  - 247Mt chromite resource @ 31.5% Cr<sub>2</sub>O<sub>3</sub>

<sup>1</sup> Proposed and subject to completion of final and binding documentation expected by the end of March 2025.  
<sup>2</sup> Neo Performance Materials (TSX:NEO) Wyloo 19.99% holding  
<sup>3</sup> Equivalent grades calculated using US\$8.70/lb Ni, US\$4.00/lb Cu, US\$20.00/lb Co, US\$1,200/oz Pd, US\$1,150/lb Pt and US\$1,800/oz Au.

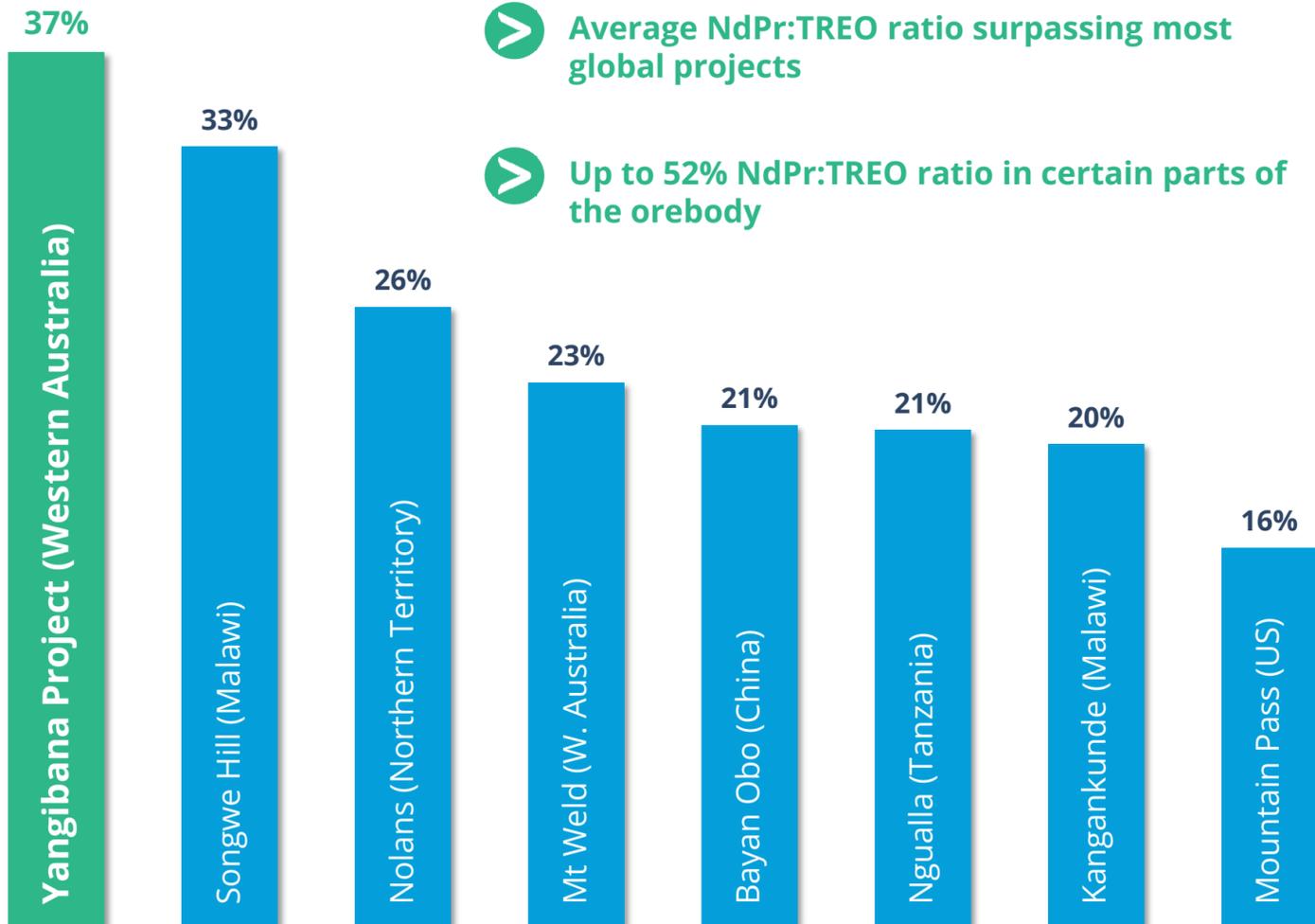
For personal use only

# YANGIBANA - UNIQUE TIER ONE ASSET

World-class deposit with unrivalled high percentage of NdPr:TREO in the orebody in a tier one jurisdiction, supplying the critical raw materials for rare earth magnets

## Average NdPr:TREO Ratio<sup>1</sup>

For personal use only

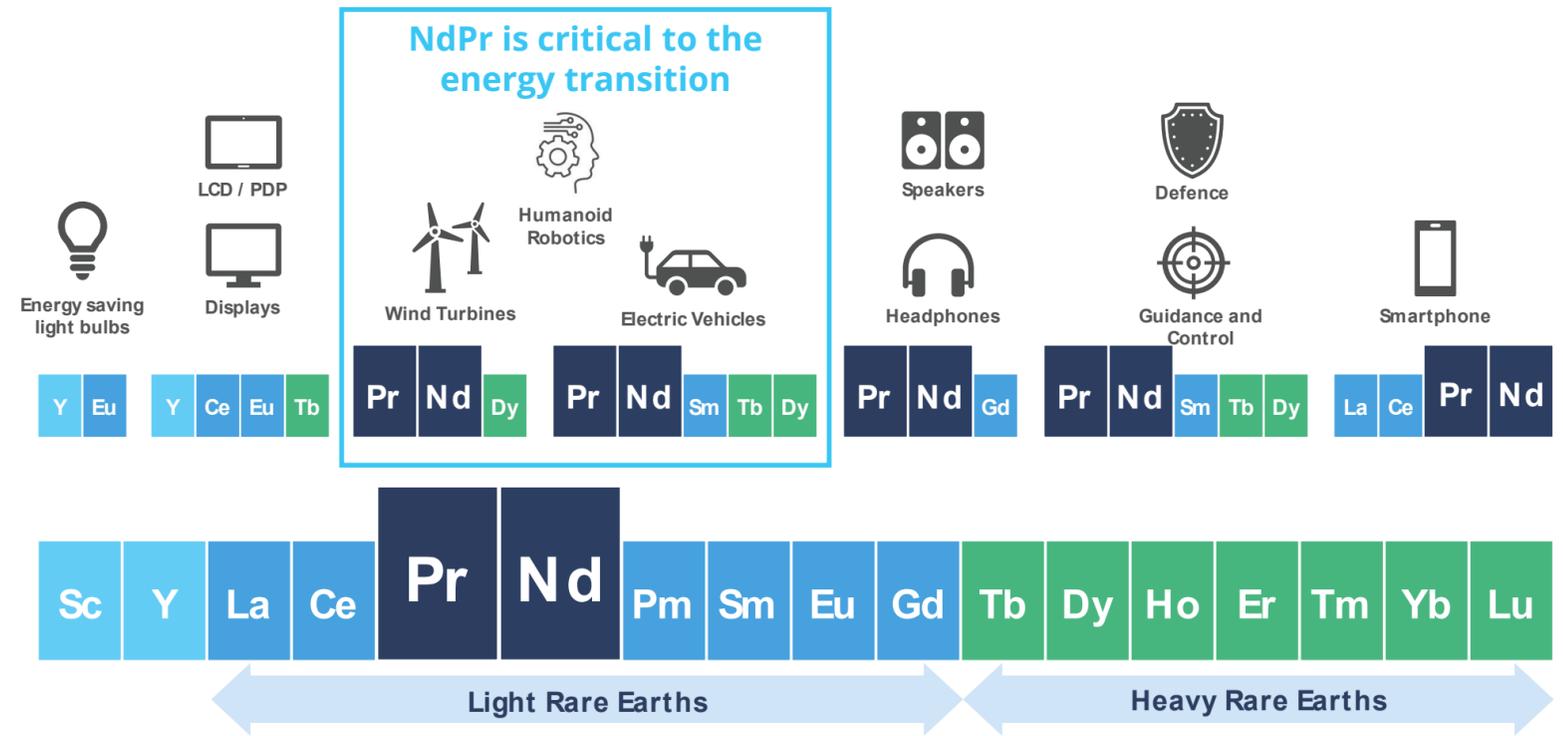


- Average NdPr:TREO ratio surpassing most global projects
- Up to 52% NdPr:TREO ratio in certain parts of the orebody



## Uses of Rare Earth Elements

- REE's have a variety of end uses, the most significant area for current and future demand growth relates to NdFeB permanent magnets
- Demand for NdFeB permanent magnets is being driven by the transition to a "green economy", with the electrification of vehicles and decarbonisation of the economy.



# YANGIBANA PROJECT SNAPSHOT<sup>1</sup>

Fully permitted and high-margin project with multi-generational opportunities for the Gascoyne region

**17-year**

Life-of-mine

**20.9Mt**

Ore Reserves<sup>2</sup>

**37%**

Average NdPr:TREO ratio over life of mine, driving higher realized rare earth oxide basket price

**High margins**

First quartile on global operational margin curve, as verified by CRU Group

**~1.1mtpa**

Material to the crusher, followed by a grinding and flotation circuit

**37,000tpa**

Rare earth concentrate at 27% TREO, containing ~3,400tpa of NdPr oxide

**Employment**

Construction Jobs >470  
Operations Jobs >270

**Economic Benefits**

>\$1bn in Commonwealth tax income  
>\$240m in WA state royalties  
>\$65m in Native Title royalties

<sup>1</sup> Hastings confirms that all material assumptions underpinning the Ore Reserves supporting the Life of Mine Plan in ASX release dated 6 February 2023, forecast financial information and production targets in the ASX release dated 31 May 2023 and supplemented by the 16 February 2024 ASX release continue to apply and have not materially changed. In addition, production targets and forecast financial information are based on Ore Reserves and Mineral Resources (Measured and Indicated), and no inferred mineral resources nor exploration information is included

<sup>2</sup> Refer Slide 17 for Ore Reserves and Mineral Resources  
Refer to disclaimer on Slide 2 for cautionary statements.



Photo: Investor Site Visit

# APPENDIX

# PROJECT ECONOMICS<sup>1</sup>

## Robust Financial Metrics

**\$865m**

Post-tax NPV<sub>11</sub> (ungeared)

**31.28%**

Post-tax IRR (ungeared)

**3.4 years**

Payback period

**\$9,639m**

Net revenue (Life-of-Mine)

**\$3,345m**

Free cash flow (Life-of-Mine)

**\$258m**

Average EBITDA per annum

### Key Material Assumptions / Updates

The Base Case Financial Model (“BCFM”) assumptions adopted in the Staged Development Study released on 31 May 2023 continues to apply and have not materially changed, save for the following key updates:

- **Offtake and payabilities:** Shift from domestic profit-sharing model to rare earth concentrate sale and third-party processing (hydrometallurgical and oxide separation) to achieve a full rare earth oxide basket price, on terms expected in the term sheet with Baotou Sky Rock. Adjustments to yields and costs may be required following pre-production pilot test work, as contemplated in the Term Sheet. Negotiations are ongoing with other potential customers to conclude similar arrangements.
- Spent capital cost: \$158m of capital cost estimate incurred as at 31 December 2024

- **Commodity price:** Average 10-year blended neodymium and praseodymium (“NdPr”) oxide price (Wood Mackenzie, CRU, Adamas Intelligence) of US\$121/kg real, 2024\$ (reduction from US\$129/kg adopted in the Staged Development Study).
- **Stage 1 standalone:** The impact of Stage 2 for the Yangibana Project (i.e. the potential hydrometallurgical plant) is excluded from the economic analysis.
- **Mining:** Mine schedule optimisation for the first five years of mining targets lower strip ratio zones of the Yangibana Project’s ore bodies, while maintaining the grade to the beneficiation plant. The total ore processed remains at 20.9Mt, the mine life remains at 17 years, and annual average production of rare earth concentrate remains at 37,000tpa as per the ASX Announcement 6 February 2023 “Yangibana Ore Reserves increase by 25%”

- **Macroeconomics:** FX Forward (Bloomberg), 10-year average AUD:USD 0.65
- **Cost assumptions:** Incorporation of MREC and oxide separation fees based on the fees provided in the Term Sheet, updated power tariffs (40% renewable) from Independent Power Producer, and other revisions for escalation

<sup>1</sup> Hastings confirms that all material assumptions underpinning the Ore Reserves supporting the Life of Mine Plan in ASX release dated 6 February 2023, forecast financial information and production targets in the ASX release dated 31 May 2023 and supplemented by the 16 February 2024 ASX release continue to apply and have not materially changed. In addition, production targets and forecast financial information are based on Ore Reserves and Mineral Resources (Measured and Indicated), and no inferred mineral resources nor exploration information is included.

# YANGIBANA PROJECT – PEER COMPARISON

PEER COMPARISON – NDPR:TREO RATIO												
Mine	Majority / Full Ownership	Ticker	Stage of Development	Capex (A\$m)	Ore Reserves (Proved) Mt	Ore Reserves (Proved) Grade - NdPr / TREO	Ore Reserves (Probable) Mt	Ore Reserves (Probable) Grade NdPr/TREO	Ore Reserves (Total) Mt	Ore Reserves (Total) Grade NdPr/TREO	NdPr:TREO ratio <sup>1</sup> (Total Ore Reserves)	Source
Yangibana	Hastings Technology Metals Ltd	HAS:ASX	Pre-production	474	4.89	0.37 / 0.95%	16.03	0.32 / 0.88%	20.93	0.33 / 0.90%	37%	<b>6 February 2023:</b> ASX Announcement: "Yangibana Ore Reserves Increase by 25%"
Nolans	Arafura Rare Earths Ltd	ARU:ASX	Pre-production	1,886 (US\$1,226m)	5	0.79 <sup>1</sup> / 3.00%	24.6	0.74 <sup>1</sup> / 2.80%	29.50	0.77 <sup>1</sup> / 2.90%	26%	<b>11 November 2022:</b> ASX Announcement: "Nolans Project Update" <b>23 July 2024:</b> ASX Announcement: "Arafura achieves major debt funding milestone"
Mt Weld	Lynas Rare Earths Ltd	LYC:ASX	Production	N/A	21.2	1.72 / 7.40%	10.8	1.06 / 4.50%	32.0	1.50 / 6.42%	23%	<b>5 August 2024:</b> ASX Announcement: "Mineral Resources and Ore Reserve Update"
Bayan Obo <sup>2</sup>	China Northern Rare Earth Group High-Tech Co Ltd	600111:CH	Production	N/A	-	-	-	-	48	1.26 <sup>1</sup> / 6%	21%	<b>September 2021:</b> Dating of monazite-apatite-allanite-epidote corona from the Bayan Obo Group in the northern margin of the North China Craton: implications for the time of regional Au and REE mineralization <b>4-7 September 2014:</b> 1 <sup>st</sup> European Rare Earth Conference, "China's Rare Earth Ore Deposits and Beneficiation Techniques" refer table 2
Ngualla	Peak Rare Earths Limited	PEK:ASX	FEED Completed	441	17.0	1.02 <sup>1</sup> / 4.78%	1.5	1.08 <sup>1</sup> / 5.10%	18.5	1.07 / 4.80%	21%	<b>24 October 2022:</b> ASX Announcement: "Ngualla Rare Earths Project Completion of Bankable Feasibility Study Update" <b>30 November 2023:</b> ASX Announcement: "Completion of FEED Study"
Songwe Hill	Mkango Resources Ltd	MKA:TSXV	Feasibility	479 (US\$311m)	8.16	0.26 / 1.28%	9.99	0.21 / 1.07%	18.15	0.24 / 1.16%	20%	<b>19 August 2022:</b> SEDAR Announcement: "Technical report (NI-43-101) Mkango"
Kangankunde	Lindian Resources Limited	LIN:ASX	Feasibility	A\$60m (US\$40m)	-	-	23.7	0.57 <sup>1</sup> / 2.9%	23.7	0.57 <sup>1</sup> / 2.9%	20%	<b>1 July 2024:</b> ASX Announcement: "Kangankunde Project Stage 1 Outstanding Feasibility Study Results"
Mountain Pass	MP Materials Corp	MP:NYSE	Production	N/A	0.58 <sup>3</sup>	0.67 <sup>1</sup> / 4.28%	25.23 <sup>3</sup>	0.98 <sup>1</sup> / 6.25%	25.81 <sup>3</sup>	0.97 <sup>1</sup> / 6.20%	16%	<b>28 February 2024:</b> SEC Filing: Form 10-K – Annual Report

Notes:

<sup>1</sup> Calculated from available information i.e. NdPr/TREO ratio when provided converted to NdPr % (grade)

<sup>2</sup> Bayan Obo is a Chinese Ore Reserve estimate and doesn't have Proved and Probable estimates. The Ore Reserve estimate (Total) was obtained from a geological research paper

<sup>3</sup> Mountain Pass has been converted from US short-tons to metric tonnes  
Capital Costs in US Dollars converted at 0.65 AUD/USD exchange rate.

# YANGIBANA PROJECT – RESOURCES AND RESERVES

## MINERAL RESOURCES AND ORE RESERVES<sup>1</sup>

### TOTAL JORC (2012) MINERAL RESOURCES (30 OCTOBER 2022)

Category	Mt	%TREO	%NdPr	TREO tonnes
Measured	4.97	0.96	0.37	47,721
Indicated	19.51	0.88	0.32	171,936
<b>Sub-total</b>	<b>24.49</b>	<b>0.90</b>	<b>0.33</b>	<b>219,657</b>
Inferred	5.45	1.05	0.31	57,298
<b>TOTAL</b>	<b>29.93</b>	<b>0.93</b>	<b>0.32</b>	<b>276,955</b>

### INDIVIDUAL DEPOSITS (at Yangibana)

Bald Hill				
Category	Mt	%TREO	%NdPr	TREO tonnes
Measured	3.55	0.82	0.34	29,136
Indicated	5.23	0.75	0.30	39,290
<b>Sub-total</b>	<b>8.79</b>	<b>0.78</b>	<b>0.31</b>	<b>68,425</b>
Inferred	1.17	0.67	0.27	7,787
<b>TOTAL</b>	<b>9.96</b>	<b>0.77</b>	<b>0.31</b>	<b>76,212</b>

Simon's Find				
Category	Mt	%TREO	%NdPr	TREO tonnes
Measured	-	-	-	-
Indicated	3.14	0.52	0.27	16,206
<b>Sub-total</b>	<b>3.14</b>	<b>0.52</b>	<b>0.27</b>	<b>16,206</b>
Inferred	0.05	0.06	0.31	295
<b>TOTAL</b>	<b>3.19</b>	<b>0.52</b>	<b>0.27</b>	<b>16,501</b>

Fraser's				
Category	Mt	%TREO	%NdPr	TREO tonnes
Measured	0.75	1.25	0.53	9,407
Indicated	1.47	0.75	0.32	11,001
<b>Sub-total</b>	<b>2.23</b>	<b>0.92</b>	<b>0.39</b>	<b>20,408</b>
Inferred	0.01	0.60	0.25	44
<b>TOTAL</b>	<b>2.24</b>	<b>0.91</b>	<b>0.39</b>	<b>20,452</b>

Auer				
Category	Mt	%TREO	%NdPr	TREO tonnes
Measured	-	-	-	-
Indicated	3.54	0.93	0.32	32,796
<b>Sub-total</b>	<b>3.54</b>	<b>0.93</b>	<b>0.32</b>	<b>32,796</b>
Inferred	1.10	0.76	0.24	8,297
<b>TOTAL</b>	<b>4.64</b>	<b>0.89</b>	<b>0.30</b>	<b>41,093</b>

Yangibana				
Category	Mt	%TREO	%NdPr	TREO tonnes
Measured	-	-	-	-
Indicated	1.98	0.71	0.34	14,034
<b>Sub-total</b>	<b>1.98</b>	<b>0.71</b>	<b>0.34</b>	<b>14,034</b>
Inferred	0.33	0.64	0.31	2,146
<b>TOTAL</b>	<b>2.31</b>	<b>0.70</b>	<b>0.33</b>	<b>16,180</b>

Yangibana North				
Category	Mt	%TREO	%NdPr	TREO tonnes
Measured	0.66	1.39	0.36	9,179
Indicated	4.15	1.41	0.36	58,609
<b>Sub-total</b>	<b>4.81</b>	<b>1.41</b>	<b>0.36</b>	<b>67,788</b>
Inferred	0.97	1.43	0.37	13,914
<b>TOTAL</b>	<b>5.78</b>	<b>1.41</b>	<b>0.36</b>	<b>81,702</b>

### TOTAL JORC (2012) ORE RESERVES BY CATEGORY AND DEPOSIT (6 FEBRUARY 2023)

Category	Mt	%TREO	%NdPr	NdPr: TREO
Proved	4.89	0.95	0.37	39
Probable	16.03	0.88	0.32	36
<b>TOTAL</b>	<b>20.93</b>	<b>0.90</b>	<b>0.33</b>	<b>37</b>

Deposit	Mt	%TREO	%NdPr	NdPr: TREO
Bald Hill	8.12	0.79	0.32	41
Fraser's	1.77	1.01	0.43	43
Simon's Find	2.69	0.53	0.28	53
Auer	2.83	0.96	0.34	35
Yangibana	1.31	0.79	0.37	47
Yangibana North	4.21	1.29	0.34	26
<b>TOTAL</b>	<b>20.93</b>	<b>0.90</b>	<b>0.33</b>	<b>37</b>

### NIObIUM RESOURCES (at Yangibana)

Category	Mt	Nb <sub>2</sub> O <sub>5</sub> ppm	Nb <sub>2</sub> O <sub>5</sub> tonnes
Measured	2.37	1,035	2,251
Indicated	4.36	2,995	13,050
<b>Sub-total</b>	<b>6.73</b>	<b>2,305</b>	<b>15,501</b>
Inferred	0.01	1,435	20
<b>TOTAL</b>	<b>6.74</b>	<b>2,305</b>	<b>15,521</b>

<sup>1</sup> Refer ASX Announcement 6 February 2023 "Yangibana Ore Reserves Increase by 25%"; numbers may not add due to rounding; for reference that the Ore Reserves stated is included as part of the Mineral Resources. Other prospects of 1.82Mt not included in the individual prospects section.

<sup>2</sup> Refer ASX Announcement 4 September 2024 "Maiden Niobium Measured and Indicated Mineral Resource at the Yangibana Rare Earth and Niobium Project"

Disclaimer: There is no certainty that further exploration work will result in the determination of Mineral Resources (or Ore Reserves).

# SOURCE DATA FOR SLIDE 4

For personal use only

SOURCE DATA FOR SLIDE 4	
Statement	Source(s)
<ul style="list-style-type: none"> <li>World's leading producer of rare earths permanent magnets, JL Mag Rare-Earth Co. (market cap: HKD29.9 / A\$6bn), to become 9.8% strategic investor in Hastings</li> </ul>	<b>9 July 2024:</b> ASX Announcement "JL MAG to Become 9.8% Strategic Investor in Hastings"
<ul style="list-style-type: none"> <li>Maiden 6.7Mt Niobium Resource (Measured &amp; Indicated). By-product credits to provide a multi-commodity recovery process stream</li> </ul>	<b>4 September 2024:</b> ASX Announcement: "Niobium Maiden Mineral Resource"
<ul style="list-style-type: none"> <li>Hafnium, a critical metal, was also identified at the Yangibana Project.</li> </ul>	<b>26 August 2024:</b> "High-Grade Niobium, REE and Hafnium-Rich Zircon Results"
<ul style="list-style-type: none"> <li>Investor site visit conducted during the quarter with attendance from investors, research analysts, government, investment banks and media.</li> </ul>	<b>28 October 2024:</b> ASX Announcement "Quarterly Activities Report"
<ul style="list-style-type: none"> <li>Completion of Hastings 2024 Sustainability Report, sustainability ratings include:                             <ul style="list-style-type: none"> <li>Sustainalytics ranked Hastings 4th out of 187 companies in the metals and mining sub-industry category.</li> <li>Ecovadis rated Hastings in the 91st percentile of companies.</li> </ul> </li> </ul>	<b>30 September 2024:</b> ASX Announcement "Hastings Sustainability Report 2024"
<ul style="list-style-type: none"> <li>Hastings was selected as one of nine parties by the Ministry of Investment of Saudi Arabia (MISA) for their Global Supply Chain Resilience Initiative ("GSCRI") program totalling SAR 35 billion (US\$9bn / A\$14 bn).</li> </ul>	<b>28 November 2024:</b> ASX Announcement: "HAS Signs MOU Ministry of Investment Kingdom of Saudi Arabia"
<ul style="list-style-type: none"> <li>Hastings and MISA entered into a non-binding MOU, which sets out the pathway for Hastings to develop a fully integrated downstream rare earths processing facility with the support of MISA through their GSCRI program.</li> </ul>	<b>28 November 2024:</b> ASX Announcement: "HAS Signs MOU Ministry of Investment Kingdom of Saudi Arabia"
<ul style="list-style-type: none"> <li>MISA will support Hastings to refresh the BFS based on the location of the Hydrometallurgical Plant (Stage 2) in the KSA, secure strategic JV partners, facilitate access to potential KSA-based fundin.</li> </ul>	<b>28 November 2024:</b> ASX Announcement: "HAS Signs MOU Ministry of Investment Kingdom of Saudi Arabia"

SOURCE DATA FOR SLIDE 4	
Statement	Source(s)
<ul style="list-style-type: none"> <li>Mr Peter Phan joined Hastings as the Company's Project Director for Yangibana. Peter was the former Project Director at Australian Premium Iron Management the manager of assets owned by a JV between, POSCO, AMCI and Aquila.</li> </ul>	<b>18 October 2024:</b> ASX Announcement "Management and Board Structure Update"
<ul style="list-style-type: none"> <li>Receipt of \$5m from Equator shareholder loan</li> </ul>	<b>28 October 2024:</b> ASX Announcement "Quarterly Activities Report"
<ul style="list-style-type: none"> <li>Annual General Meeting with all resolutions successfully passed by poll.</li> </ul>	<b>26 November 2024:</b> ASX Announcement "Results of Meeting"
<ul style="list-style-type: none"> <li>Hastings presented at the Future Minerals Forum (FMF) in KSA and progressed engagement with key KSA ministries and Australian government embassy officials.</li> </ul>	<b>28 November 2024:</b> ASX Announcement: "HAS Signs MOU Ministry of Investment Kingdom of Saudi Arabia"
<ul style="list-style-type: none"> <li>Landmark 60:40 Wyloo:Hastings Joint Venture. Transaction will include cancellation of all existing Exchangeable Notes</li> </ul>	<b>20 February 2025:</b> ASX Announcement "Hastings and Wyloo to form Joint Venture on the Yangibana Rare Earths & Niobium Project"
<ul style="list-style-type: none"> <li>Reduces Hastings' final equity contribution to between \$13 – \$32m (subject to gearing mix)</li> </ul>	<b>20 February 2025:</b> ASX Announcement "Hastings and Wyloo to form Joint Venture on the Yangibana Rare Earths & Niobium Project"
<ul style="list-style-type: none"> <li>Wyloo to act as UJV Manager and Operator</li> </ul>	<b>20 February 2025:</b> ASX Announcement "Hastings and Wyloo to form Joint Venture on the Yangibana Rare Earths & Niobium Project"
<ul style="list-style-type: none"> <li>The term sheet has been approved by Wyloo's Investment Committee and supported by the Hastings' board.</li> </ul>	<b>20 February 2025:</b> ASX Announcement "Hastings and Wyloo to form Joint Venture on the Yangibana Rare Earths & Niobium Project"
<ul style="list-style-type: none"> <li>Long lead equipment for the Yangibana Project continued to arrive in Perth including the horizontal belt filter, flocculant plant and the wet screen.</li> </ul>	<b>20 February 2025:</b> ASX Announcement "Hastings and Wyloo to form Joint Venture on the Yangibana Rare Earths & Niobium Project"

# SOURCE DATA FOR SLIDE 7

For personal use only

SOURCE DATA FOR SLIDE 7	
Statement	Source(s)
<ul style="list-style-type: none"> <li>One of the highest global NdPr : TREO ratio of 37% (LOM average) and up to 52%</li> </ul>	<b>6 February 2023:</b> ASX Announcement: "Yangibana Ore Reserves Increase by 25%" and refer to slide 17
<ul style="list-style-type: none"> <li>In-Demand REEs: Nd + Pr + Dy + Tb = ~96% of Yangibana Basket Price</li> </ul>	<b>16 February 2024:</b> ASX Announcement: "Presentation - Offtake and Economics Update"
<ul style="list-style-type: none"> <li>Niobium by-product credit stream</li> </ul>	<b>4 September 2024:</b> ASX Announcement: "Niobium Maiden Mineral Resource" and <b>26 August 2024:</b> "High-Grade Niobium, REE and Hafnium-Rich Zircon Results"
<ul style="list-style-type: none"> <li>Offtake with German, thyssenkrupp, Baotou Sky Rock</li> </ul>	<b>16 February 2024:</b> ASX Announcement: "Binding Term Sheet Signed for Integrated Tolling and Offtake" <b>20 April 2021:</b> ASX Announcement "Hastings Signs Major Offtake Contract with thyssenkrupp" <b>12 September 2023:</b> ASX Announcement "TK Expanded Offtake to Meet Bankability Requirements"
<ul style="list-style-type: none"> <li>Australia AAA Sovereign Risk, WA Frasers Institute ranked 4th out of 77 jurisdictions</li> </ul>	<b>13 February 2024:</b> "Australia's AAA credit rating reaffirmed following MYEFO" Available: <a href="https://ministers.treasury.gov.au/ministers/jim-chalmers-2022/media-releases/australias-aaa-credit-rating-reaffirmed-following-myefo">https://ministers.treasury.gov.au/ministers/jim-chalmers-2022/media-releases/australias-aaa-credit-rating-reaffirmed-following-myefo</a> <b>14 May 2024:</b> Fraser Institute "2023 Annual Survey of Mining Companies" Available: <a href="https://www.fraserinstitute.org/sites/default/files/2023-annual-survey-of-mining-companies.pdf">https://www.fraserinstitute.org/sites/default/files/2023-annual-survey-of-mining-companies.pdf</a>
<ul style="list-style-type: none"> <li>State and Commonwealth Approvals secured</li> </ul>	<b>14 April 2020:</b> ASX Announcement "Commonwealth Environmental Approval Received at Yangibana" <b>20 August 2019:</b> ASX Announcement "Significant Milestone Achieved EPA Approval for Yangibana"
<ul style="list-style-type: none"> <li>Granted Mining Lease tenure in premier rare earths province</li> </ul>	<b>21 February 2022:</b> ASX Announcement "Yangibana Project NPV increased 84% to A\$1Billion (post tax)" <b>30 September 2024:</b> ASX Announcement "Annual Report to Shareholders"
<ul style="list-style-type: none"> <li>Native Title Agreement in place</li> </ul>	<b>14 November 2017:</b> ASX Announcement "HAS Signs NTA Covering Entire 650 sq km Yangibana Project" <b>16 October 2023:</b> ASX Announcement "Hastings & TMWTJ People Review Native Title Agreement"

SOURCE DATA FOR SLIDE 7	
Statement	Source(s)
<ul style="list-style-type: none"> <li>\$865m Post-tax NPV<sup>11</sup> (ungeared)</li> <li>31.28% IRR; 3.4 years payback</li> <li>\$258m per annum EBITDA. LoM Free cash flow \$3,345m</li> </ul>	<b>16 February 2024:</b> ASX Announcement: "Binding Term Sheet Signed for Integrated Tolling and Offtake"
<ul style="list-style-type: none"> <li>1st Quartile on Global Margin Curve (CRU)</li> </ul>	Rare Earth Margin Curve (2028) as produced by independent commodities analysis group CRU (2024)
<ul style="list-style-type: none"> <li>Supporting infrastructure fully completed: 294 room village, 2km airstrip, 20km site access road, 6 water borefield, communications towers and all long-lead equipment.</li> </ul>	<b>30 January 2024:</b> ASX Announcement "Quarterly Activities Report December 2023"
<ul style="list-style-type: none"> <li>\$158m on Yangibana (Stage 1) and \$68m on Stage 2 Plant</li> <li>33% complete</li> </ul>	<b>30 January 2025:</b> ASX Announcement "Quarterly Activities Report December 2024" <b>20 February 2025:</b> ASX Announcement "Hastings and Wyloo to Form Joint Venture on the Yangibana Rare Earths & Niobium Project"
<ul style="list-style-type: none"> <li>Initial Life of Mine of 17 years (Ore Reserves)</li> </ul>	<b>6 February 2023:</b> ASX Announcement: "Yangibana Ore Reserves Increase by 25%"
<ul style="list-style-type: none"> <li>20.9Mt Reserves and 29.9Mt Mineral Resource</li> </ul>	<b>6 February 2023:</b> ASX Announcement: "Yangibana Ore Reserves Increase by 25%"
<ul style="list-style-type: none"> <li>Stage 2 Hydrometallurgical Plant Project will capture additional downstream processing margins. Discussions ongoing for Kingdom of Saudi Arabia partnerships.</li> </ul>	<b>28 November 2024:</b> ASX Announcement: "HAS Signs MOU Ministry of Investment Kingdom of Saudi Arabia"
<ul style="list-style-type: none"> <li>60:40 JV with Wyloo:Hastings. Term Sheet signed (non-binding) IC approved; commercial terms agreed</li> <li>Wyloo will be JV Manager and Operator</li> <li>Hastings retains pro-rata/40% of revenue (REEs, niobium), FCFs. Project Finance to be raised jointly.</li> </ul>	<b>20 February 2025:</b> ASX Announcement "Hastings and Wyloo to form Joint Venture on the Yangibana Rare Earths & Niobium Project"

# GLOSSARY

<b>ASX</b>	Australian Securities Exchange Ltd	<b>HREE</b>	Heavy Rare Earth Elements	<b>PGE</b>	Platinum group elements
<b>AMCI</b>	American Metals & Coal International	<b>Hydromet</b>	Hydrometallurgical Plant	<b>P80</b>	Probability 80%
<b>Aquila</b>	Aquila Resources Pty Ltd	<b>IRR</b>	Internal Rate of Return	<b>ppm</b>	Parts per million
<b>ATM</b>	At the Market Facility	<b>IC</b>	Investment Committee	<b>Pr</b>	Praseodymium
<b>Au</b>	Gold	<b>JORC</b>	The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves	<b>Project</b>	Yangibana Rare Earths & Niobium Project
<b>AusIMM</b>	Australasian Institute of Mining and Metallurgy	<b>JV</b>	Joint Venture	<b>Q</b>	Quarter
<b>BCFM</b>	Base Case Financial Model	<b>KSA</b>	Kingdom of Saudi Arabia	<b>RE</b>	Rare Earths
<b>BFS</b>	Bankable Feasibility Study	<b>LoM</b>	Life-of-Mine	<b>REE</b>	Rare Earth Elements
<b>bn</b>	Billion	<b>Lynas</b>	Lynas Corporation Ltd	<b>REO</b>	Rare Earth Oxides
<b>Capex</b>	Capital Expenditure	<b>MISA</b>	Ministry of Saudi Arabia	<b>SEC</b>	Security Exchange Commission
<b>CGU</b>	Cash Generating Unit	<b>MoU</b>	Memorandum of Understanding	<b>SEDAR</b>	System for Electronic Document Analysis and Retrieval
<b>Co</b>	Cobalt	<b>MREC</b>	Mixed Rare Earth Carbonate	<b>sq km</b>	Square Kilometres
<b>Company</b>	Hastings Technology Metals Ltd (ASX:HAS)	<b>Mt</b>	Million tonnes	<b>t</b>	Metric tonne
<b>Cr</b>	Chromite	<b>MYEFO</b>	Mid Year Economic and Fiscal Outlook	<b>Tb</b>	Terbium
<b>Cr<sub>2</sub>O<sub>3</sub></b>	Chromium Oxide	<b>Nb<sub>2</sub>O<sub>5</sub></b>	Niobium Pentoxide	<b>TK or TMT</b>	thyssenkrupp Materials Trading, thyssenkrupp Materials Services, and thyssenkrupp AG
<b>CRU</b>	CRU Group	<b>Nd</b>	Neodymium	<b>TMWTJ</b>	Thiin-Mah Wariyangka, Tharrkari and Jiwarli
<b>DD</b>	Due Diligence	<b>NdPr: TREO</b>	NdPr to Total Rare Earth Oxide ratio	<b>tpa</b>	Tonnes Per Annum
<b>Dy</b>	Dysprosium	<b>NdFeB</b>	Neodymium-Iron-Boron	<b>TREO</b>	Total Rare Earth Oxides
<b>EBITDA</b>	Earnings Before Interest, Tax, Depreciation and Amortisation	<b>Neo</b>	Neo Performance Materials Inc (NEO:TSX)	<b>TSX</b>	Toronto Stock Exchange
<b>FEED</b>	Front End Engineering Design	<b>Ni</b>	Nickel	<b>UJV</b>	Unincorporated Joint Venture
<b>FCFs</b>	Free Cash Flows	<b>NiEq<sub>3</sub></b>	Nickel Content	<b>US\$</b>	United States Dollar
<b>FMF</b>	Future Minerals Forum	<b>NPV</b>	Net Present Valuation	<b>WA</b>	Western Australia
<b>FX</b>	Exchange Rate	<b>NTA</b>	Native Title Agreement	<b>WMC</b>	Western Mining Corporation (which BHP acquired in 2005)
<b>GSCRI</b>	Global Supply Chain Resilience Initiative	<b>Owner</b>	Hastings Technology Metals Ltd (ASX:HAS)	<b>Wyloo</b>	Wyloo Metals Pty Ltd
<b>Hastings or HAS</b>	Hastings Technology Metals Ltd (ASX:HAS)	<b>pCAM</b>	Precursor cathode active material	<b>Yangibana</b>	Yangibana Rare Earths & Niobium Project

For personal use only

# hastings

**Hastings Technology Metals Limited**

**ABN 43 122 911 399**

Level 3, 5 Mill St

Perth Western Australia 6000

**T: +61 8 6117 6118**

**E: [info@hastingstechmetals.com](mailto:info@hastingstechmetals.com)**

**[hastingstechmetals.com](http://hastingstechmetals.com)**

Follow us on



For personal use only