Rio Tinto

Pilbara Site Visit

October 2023
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Mineral Resources

The Mineral Resources reported for the Rhodes Ridge Joint Venture between Rio Tinto (50 per cent) and Wright Prospecting Pty Ltd (50 per cent), on slide 18 form part of the Pilbara Mineral Resource estimates reported in Rio Tinto’s 2022 Annual Report released to the ASX on 22 February 2023. These Mineral Resources are not materially different to the breakdown of the Rhodes Ridge Mineral Resources reported in Rio Tinto’s 2020 Annual Report released to the ASX on 22 February 2021. The Competent Persons responsible for reporting these Mineral Resource estimates were Mr P Savory, who is a Fellow of The Australasian Institute of Mining and Metallurgy, and Ms N Brnjakovic, Mr C Kyngdon, Mr M Judge and Ms A Latscha who are Members of The Australasian Institute of Mining and Metallurgy. Rio Tinto is not aware of any new information or data that materially affects these Mineral Resource estimates and confirms that all material assumptions and technical parameters underpinning the estimate continue to apply and have not materially changed. The form and context in which the Competent Persons’ findings are presented have not been materially modified from when they were reported. Mineral Resources are quoted in this release on a 100 per cent basis, as dry in-situ tonnes. Rhodes Ridge contains 6.8 billion tonnes of Mineral Resources at an average grade of 61.6% Fe; comprising 0.8 billion tonnes of Indicated Mineral Resources at an average grade of 62.4% Fe and 6.0 billion tonnes of Inferred Mineral Resources at an average grade of 61.5% Fe.

These Mineral Resources include:

• 0.6 billion tonnes of high grade Brockman Indicated Mineral Resources at an average grade of 63.9% Fe and 0.03 billion tonnes of high grade Detrital Indicated Mineral Resources at an average grade of 61.3% Fe.
• 5.3 billion tonnes of high grade Brockman, Marra Mamba and Detrital Inferred Mineral Resources at an average grade of 62.2% Fe.
## Agenda

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<tr>
<th>Time</th>
<th>Topic</th>
<th>Presenter</th>
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</thead>
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<td><strong>Session 1</strong></td>
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<td>13:45 – 13:55</td>
<td>Safety and Cultural Share</td>
<td>Cecile Thaxter</td>
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<tr>
<td>13:55 – 14:25</td>
<td>Iron Ore</td>
<td>Simon Trott</td>
</tr>
<tr>
<td>14:25 – 14:45</td>
<td>Pilbara Mines</td>
<td>Matthew Holcz</td>
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<tr>
<td>14:45 – 15:00</td>
<td>Rail, Port &amp; Core Services</td>
<td>Richard Cohen</td>
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<tr>
<td>15:00 – 15:10</td>
<td>Operational &amp; Technical Support</td>
<td>Stephen Jones</td>
</tr>
<tr>
<td>15:10 – 15:25</td>
<td>Break</td>
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<tr>
<td><strong>Session 2</strong></td>
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<tr>
<td>15:25 – 15:35</td>
<td>Markets</td>
<td>Will Millsteed</td>
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<tr>
<td>15:35 – 15:50</td>
<td>Steel Decarbonisation</td>
<td>Simon Farry</td>
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<tr>
<td>15:50 – 16:05</td>
<td>Financial Performance</td>
<td>Rowena Albones</td>
</tr>
<tr>
<td>16:05 – 16:15</td>
<td>Break</td>
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</tr>
<tr>
<td>16:15</td>
<td>Q&amp;A</td>
<td>Panel</td>
</tr>
<tr>
<td><strong>End</strong></td>
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Cecile Thaxter
Vice President, Health, Safety, Environment & Communities
Fatality prevention

The leading causes of fatalities across the mining industry in 2022\(^1\) are **risks that our people face today**…

<table>
<thead>
<tr>
<th>Mobile equipment</th>
<th>Falling objects</th>
<th>Working at heights</th>
</tr>
</thead>
</table>

\(^1\) Based on International Council on Mining and Metals (ICMM) member organisations
Integrated approach to preventing fatalities

Managing fatality risks
Ensuring critical controls are well designed, understood, in place, and working at the frontline

Shifting mindsets & behaviours
Through leadership & engagement and the Safe Production System

Building capability & learning
Applying innovative and inclusive methods to train, communicate, and share critical learnings

Assessing maturity – continually
Leading practice Safety Maturity Model to assess performance in key areas

Safety Maturity Model pillars

- Leadership & engagement
- Risk management
- Work planning & execution
- Learning & improvement
Nammuldi cultural heritage incident

August 2023
Identified dislodgement of Pilbara scrub tree and ~1m³ rock

Cultural heritage management
Design, implement, monitor & optimise critical controls
Engagement on Country and operating parameters
Monitoring blast operations in real time; analyse and update models and designs
Review underway to identify learnings

Site visit
Assessment found no structural damage and no damage to cultural material
We continue to work closely with Traditional Owners
Acknowledgement of country

We acknowledge the Yaburara and Ngarluma People on whose Traditional Lands Dampier is located and pay our respects to Elders past and present.

We extend that respect to all Aboriginal and Torres Strait Islander peoples on the lands where we operate.
Presenters

**Simon Trott**
Chief Executive, Iron Ore

**Cecile Thaxter**
Vice President, Health, Safety, Environment & Communities

**Matthew Holcz**
Managing Director, Pilbara Mines

**Richard Cohen**
Managing Director, Rail, Port & Core Services

**Stephen Jones**
Managing Director, Operational & Technical Support

**Will Millsteed**
Head of Market Analysis

**Simon Farry**
Head of Steel Decarbonisation

**Rowena Albones**
Chief Financial Officer, Iron Ore
Dampier
Our world class port and autonomous rail
Ports capable >360 Mtpa

Gudai-Darri
We continue to excel in development
Applying co-management

Rhodes Ridge
The best undeveloped project in the Pilbara
Large, grade-advantaged & close to infrastructure
Nothing is more important than the safety and wellbeing of our people

Fatality prevention
- Life Saving Commitments
- Critical Risk Management
- Safety Maturity Model

Everyday respect
- Embedding respectful behaviours
- Inclusion and respect
- Supportive leadership programmes to help support a mentally healthy workforce

In the last 5 years

<table>
<thead>
<tr>
<th>Fatality-free¹</th>
<th>80%¹</th>
<th>0.03²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potentially Fatal Injury rate</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| All Injury Frequency Rate |
| 11%¹ | 0.57² |

¹ In the last 5 years; ² As at the end of Q3 2023
We have a compelling global iron ore portfolio

Our portfolio includes the world’s two best undeveloped projects

Access to global markets
Iron ore projects on three continents

Rhodes Ridge & Simandou
The best undeveloped projects globally

Portside blending
Capability to de-risk supply chain

Resilient resource portfolio
Resources compatible with a low CO₂ future

Source: Company reports, vessel tracking (Kpler), excludes China and other domestic supply

1 Port blending facility
Proven record of outstanding Pilbara financials and a strategy that will deliver into the future

- **Average Pilbara EBITDA margin, 2013-2022**: 68%
- **Corporate Tax, 2013-2022**: $39bn
- **Spent with Pilbara-based businesses, 2022**: A$0.6bn
- **Free cash flow, 2013-2022**: $82bn
- **Return on Capital Employed, 2013-2022**: 53%
- **Spent with suppliers in WA, 2022**: A$9bn

We aim to be the ‘Most Valued’ resource business
Our strategy is realising tangible results across the value chain

### 2023 Focus areas

<table>
<thead>
<tr>
<th>Best operator</th>
<th>5 Mt uplift from Safe Production System (SPS) 320 to 335 Mt 2023 original shipments guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impeccable ESG credentials</td>
<td>Progress towards a lower cost renewables-powered business Developing green steel pathways at the next level of scale</td>
</tr>
<tr>
<td>Excel in development</td>
<td>Mine developments for replacement and growth Rhodes Ridge will underpin our competitive position for decades</td>
</tr>
<tr>
<td>Social licence</td>
<td>Positioning for a future defined by access to Country</td>
</tr>
</tbody>
</table>

### 2023 YTD Outcomes

<table>
<thead>
<tr>
<th></th>
<th>&gt; 2023 forecast to be upper half of guidance with SPS 5 Mt uplift on track 2023 Q3 results – Production 83.5 Mt(^1), Shipments 83.9 Mt(^1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;</td>
<td>Climate Change partnership signed with Baowu Water stewardship and Dampier desalination plant investment</td>
</tr>
<tr>
<td>&gt;</td>
<td>Gudai-Darri reached nameplate within 12 months of commissioning Rhodes Ridge Order of Magnitude study underway and Western Range on schedule</td>
</tr>
<tr>
<td>&gt;</td>
<td>Progressing mining co-design with Traditional Owners across the Pilbara</td>
</tr>
</tbody>
</table>

**Values-based performance culture**

\(^1\) 100% basis
Three global forces define our strategic context

1. Global steel demand

- **~24% growth by 2050**
  - Driven by emerging markets with maturing Chinese steel industry

2. Decarbonisation

- **~50% with net zero targets**
  - Based on 2022 iron ore sales volumes
  - Share of customers with...

3. ESG Stewardship

- **+12-18 months since 2018**
  - Increase in Western Australian mining approvals timeframes

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The next 10 years will be defined by access to infrastructure, markets and resources

Access to Markets
- Strategic JV relationships
- Pilbara Blend base load
- Cracking the Code for Pilbara ores

Access to Resources
- Co-designing mines
- Relationship with Traditional Owners
- Resource base strength and optionality

Access to Infrastructure
- Competitive advantage
- Port capability >360 Mtpa
- Rail delivering

Cracking the Code for Pilbara ores
Generating robust returns from disciplined capital investment

**Mine capital intensity outlook ($/t installed capacity)**

- **Western Range**
  - **Range:** 30% – 80% IRR\(^1\)
  - **In development**

- **Brockman 4**
  - **Grade-advantaged**
  - **>100 Mtpa capacity**
  - **>62% for Pilbara Blend**

- **Hope Downs 1**
  - **Infrastructure**
  - Close to established rail

- **West Angelas**
  - **Greater Nammuldi**

**Rhodes Ridge: the best undeveloped project in the Pilbara**

- **Large**
  - >100 Mtpa capacity

- **Grade-advantaged**
  - >62% for Pilbara Blend

- **Infrastructure**
  - Close to established rail

- **6.8Bt\(^2\) at 61.6% Fe**
  - Includes 5.3Bt at 62.2% Fe and 0.6Bt at 63.9% Fe

**Marra Mamba**

- **Range:** 30% – 80% IRR\(^1\)
  - **In development**

- **Brockman Range**
  - **6.8Bt\(^2\) at 61.6% Fe**
  - Includes 5.3Bt at 62.2% Fe and 0.6Bt at 63.9% Fe

(Dimensions: 30km x 60km)

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1 IRR range across next tranche of replacement mines; 2 Mineral Resources. See slide 2 for supporting references and breakdown of Mineral Resources.
We have production momentum, targeting a higher range in 2024

**Shipping guidance**
(Mt, 100% basis)

<table>
<thead>
<tr>
<th>Year</th>
<th>Guidance</th>
<th>Outlook</th>
</tr>
</thead>
<tbody>
<tr>
<td>2023</td>
<td>320</td>
<td>328-335</td>
</tr>
<tr>
<td>2024</td>
<td>323</td>
<td>335</td>
</tr>
</tbody>
</table>

**Guidance**
On track for upper half of guidance in 2023
323 – 338 Mt in 2024

**Equity**
Equity tonnes 84%\(^1\) in 2022
Effective equity share of free cashflow remains stable at >85%\(^2\)

**Product mix**
45 – 50 Mt of SP10 in 2023 (13 – 15% of shipments)
SP10 to remain elevated until replacement projects delivered
Rhodes Ridge re-orients Pilbara Blend to >85% of shipments\(^3\)

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\(^1\) Based on 2022 actual performance; \(^2\) Post Rhodes Ridge; \(^3\) Rhodes Ridge first production expected before the end of the decade
Volume and productivity to enable cost improvement

Unit costs
$/t shipped

<table>
<thead>
<tr>
<th>Year</th>
<th>Unit Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011-2015</td>
<td></td>
</tr>
<tr>
<td>2016-2020</td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td>21.2</td>
</tr>
<tr>
<td>2022</td>
<td>21.2</td>
</tr>
<tr>
<td>H1 2023</td>
<td>21.2</td>
</tr>
<tr>
<td>Mid-term</td>
<td>~20</td>
</tr>
</tbody>
</table>

2023 Guidance
$21-22.5

~$20/t mid-term unit cost target

Volumes increasing
Productivity improvements
Work index rising

1 Mid-term unit cost - AUD:USD FX 0.67, real basis, subject to inflationary pressures
Building valued partnerships across our business

State-wide benefits

Largest residential and regional FIFO presence

1 Residential locations
~4,000 workforce¹

6 Fly-in fly-out locations
~10,000 workforce¹

Working to build healthy, resilient communities and strong local economies

- Community health
- Pilbara-based businesses
- Inclusive education
- Climate partnerships
- Perth Children’s Hospital
- Perth Wildcats & Lynx
- Thriving Pilbara communities
- Care for Country
- Pilbara rail car manufacturing

¹ In 2022. Residential workforce excludes Perth workforce of ~3,000.
Positioning for a green future

Scope 1 & 2
Reducing operational emissions

- Progressing a renewable-powered business with options for expansion

Scope 3
Pathways to producing low CO₂ steel

- Lower the carbon impact of existing Blast Furnace steel making technology
- Leverage our high-grade iron ores to participate in DRI-EAF technologies
- Unlock new economic pathways to produce low CO₂ steel using Pilbara ores

Existing pathways
Ongoing

- Emerging pathways
<10 years to commercial scale
- Future pathways
>10 years to commercial scale

Reducing operational emissions

Piloting electrification technologies on Rail and in HME

Positioning for a green future
A proven record and a strategy for the future

**Best operator**
2023 volumes at the upper half of guidance
Maximising productivity with our Safe Production System

**Impeccable ESG**
Safety and wellbeing of our people
Partnering on low CO$_2$ technologies for Pilbara ores

**Excel in development**
Gudai-Darri at nameplate within 12 months
Progressing Rhodes Ridge to pre-feasibility

**Social licence**
Extending co-management
Building thriving communities

Rio Tinto
Matthew Holcz
Managing Director,
Pilbara Mines
A globally significant bulk commodities business

- 17 Mines
- 430 Haul trucks (361 automated)
- 60 Production drills (34 automated)
- 17 Processing plants (7 wet plants)
- 1,900 Rail network distance (km)
- 220 Locomotives (13,500 wagons)
- 7 Car dumpers
- 4 Port terminals
- 4 Gas-fired power stations
- 1 Solar farm (34 MW)
- > 100 Global customers
# Building resilient and reliable performance

## Volume

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2021</th>
<th>2023¹</th>
<th>Today</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shipments</td>
<td>338 Mt</td>
<td>320 Mt</td>
<td>328–335 Mt²</td>
<td>Volume recovering</td>
</tr>
</tbody>
</table>

## Mine Health

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2021</th>
<th>2023¹</th>
<th>Today</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mine spatial conformance³</td>
<td>&lt;1.00</td>
<td>1.25</td>
<td>1.33</td>
<td>Mine health restored</td>
</tr>
<tr>
<td>Blasted stocks</td>
<td>103 Mt</td>
<td>110 Mt</td>
<td>142 Mt</td>
<td></td>
</tr>
<tr>
<td>Run of mine stocks</td>
<td>12 Mt</td>
<td>15 Mt</td>
<td>30 Mt</td>
<td></td>
</tr>
</tbody>
</table>

## Asset Health

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2021</th>
<th>2023¹</th>
<th>Today</th>
</tr>
</thead>
<tbody>
<tr>
<td>End-to-end process maturity³</td>
<td>1.00</td>
<td>1.35</td>
<td>1.41</td>
<td>Asset health improving</td>
</tr>
</tbody>
</table>

## Customers

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2021</th>
<th>2023¹</th>
<th>Today</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shipment quality variation³</td>
<td>1.00</td>
<td>0.83</td>
<td>0.76</td>
<td>Quality control restored</td>
</tr>
</tbody>
</table>

## Heritage

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2021</th>
<th>2023¹</th>
<th>Today</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume mined with BMP⁴ (%)</td>
<td>0</td>
<td>~6%</td>
<td>~31%²</td>
<td>Leading practice</td>
</tr>
</tbody>
</table>

## Projects

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2021</th>
<th>2023¹</th>
<th>Today</th>
</tr>
</thead>
<tbody>
<tr>
<td>90 Mtpa brownfield extensions plus Gudai-Darri. Total capacity of ~130 Mtpa.</td>
<td></td>
<td></td>
<td></td>
<td>Projects delivered</td>
</tr>
</tbody>
</table>

¹ YTD to 30 September 2023 unless noted | ² 2023 full year guidance | ³ Internal metric, indexed to 2018 | ⁴ Blast Management Plans; one of the ways to protect heritage
Blast Management Plans are designed to protect heritage sites

Design
Detailed understanding of the heritage site and surrounding areas
Technical analysis defining exclusion zones and operating parameters
Final review of drill pattern and blast design

Implement, monitor & optimise
Monitoring of blast operations and heritage sites in real time
Data analysis and benchmarking to update models and designs
>1,800 controlled blasts undertaken over the past three years
Embedding co-management across our business

Gudai-Darri case study

Changes to mine plan

- 10% reduction in ore reserve from Kara deposit
- 12% of production to date is SP10
- 53% of Kara pit mined with blast management plans

Employee cultural awareness

- Warlu hole identified by operator following cultural awareness training

Protection zones

- Protected zones established where no mining will occur

Controlled operating zones

- Operational controls in place to reduce impact on protected areas

Iterative mine planning

- Retrospective redesign of mine to protect significant sites

Changes to mine plan

- 10% reduction in ore reserve from Kara deposit
- 12% of production to date is SP10
- 53% of Kara pit mined with blast management plans
Mining work index continues to increase but at a slower rate

<table>
<thead>
<tr>
<th>Total material moved (Bt)</th>
<th>Effective flat haul (km)</th>
<th>Mining work index (Bt.km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAGR = 4%</td>
<td>CAGR = 6%</td>
<td>CAGR = 11%</td>
</tr>
<tr>
<td>1.0</td>
<td>11.6</td>
<td>12.0</td>
</tr>
<tr>
<td>2018</td>
<td>2018</td>
<td>2018</td>
</tr>
<tr>
<td>1.3</td>
<td>15.7</td>
<td>20.0</td>
</tr>
<tr>
<td>2023F</td>
<td>2023F</td>
<td>2023F</td>
</tr>
<tr>
<td>1.3</td>
<td>15.3</td>
<td>19.9</td>
</tr>
<tr>
<td>2024F</td>
<td>2024F</td>
<td>2024F</td>
</tr>
<tr>
<td>1.4</td>
<td>18.2</td>
<td>25.4</td>
</tr>
<tr>
<td>Mid-term</td>
<td>Mid-term</td>
<td>Mid-term</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Blast management plan volume¹ (Mt)</th>
<th>Below water table mined (Mt)</th>
<th>Wet plant tonnes processed (Mt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAGR = n.m.</td>
<td>CAGR = 0%</td>
<td>CAGR = 0%</td>
</tr>
<tr>
<td>303</td>
<td>297</td>
<td>128</td>
</tr>
<tr>
<td>2018</td>
<td>2018</td>
<td>2018</td>
</tr>
<tr>
<td>312</td>
<td>299</td>
<td>127</td>
</tr>
<tr>
<td>2023F</td>
<td>2023F</td>
<td>2023F</td>
</tr>
<tr>
<td>351</td>
<td>232</td>
<td>149</td>
</tr>
<tr>
<td>2024F</td>
<td>2024F</td>
<td>2024F</td>
</tr>
<tr>
<td>Mid-term</td>
<td>Mid-term</td>
<td>Mid-term</td>
</tr>
<tr>
<td>CAGR = 3%</td>
<td>CAGR = 5%</td>
<td>CAGR = 6%</td>
</tr>
<tr>
<td>297</td>
<td>377</td>
<td>173</td>
</tr>
<tr>
<td>2018</td>
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<td>Mid-term</td>
<td>Mid-term</td>
<td>Mid-term</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018 to 2023</td>
</tr>
<tr>
<td>3 x Brownfield and 1 x Greenfield projects executed ~130 Mtpa total capacity</td>
</tr>
<tr>
<td>2023 to 2028</td>
</tr>
<tr>
<td>5 x Brownfield projects to be developed ~130 Mtpa total capacity</td>
</tr>
</tbody>
</table>

¹ Estimate only, n.m. = not meaningful
Pathway to Best Operator

Safe Production System

- Leading practice
- Problem solving
- Digital applications

Key enablers

- Organisation design
- Operational routines
- Capability uplift

Focus areas

System wide improvement priorities

- Mine water management
- Load & Haul productivity
- Maintenance excellence
- Rail interface productivity
- People productivity

Safe Production System deployment

- Dampier
- Cape Lambert
- Yandicoogina
- Gudai-Darri
- Robe Valley
- Brockman 4
- Nammuldi
- Marandoo
- Tom Price
- Paraburdoo
- West Angelas
- Hope Downs

Rio Tinto
Safe Production System is delivering: 5 Mt uplift in 2023 on track

<table>
<thead>
<tr>
<th>Development</th>
<th>Drill &amp; Blast</th>
<th>Load &amp; Haul</th>
<th>Processing</th>
<th>Rail</th>
<th>Ports</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spatial conformance</td>
<td>14%</td>
<td>27%</td>
<td>11%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metres drilled per hour</td>
<td>10%</td>
<td>1%</td>
<td>10%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ex-Pit movement</td>
<td>10%</td>
<td>27%</td>
<td>14%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D&amp;B confirmed tonnes</td>
<td>21%</td>
<td>14%</td>
<td>82%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drill availability</td>
<td>6%</td>
<td>25%</td>
<td>18%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surface mining health</td>
<td>25%</td>
<td>6%</td>
<td>48%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drill availability</td>
<td>25%</td>
<td>6%</td>
<td>48%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Focus on front line engagement is delivering results

- 4,332 Increase in ideas from front line
- 2,196 Increase in ideas actioned
- 4% reduction in all injury frequency rate
- 25% increase in People Survey participation
- **Highest** employee satisfaction since survey began in 2018
- 4% increase in employee productivity per tonne of saleable ore

1 Year-on-year improvement; 2 Improvement since deployment commenced
Gudai-Darri: Pathway to Best Operator

Phase 1: Ramp-up achieved within 12 months

Chute and conveyor belt upgrades to main plant
Additional mining fleet and rail stockyard expansion
Leverage incremental crushing and screening facility
Deployment of Safe Production System
Co-design water management plan with Traditional Owners
Engage with Banjima on cultural heritage mapping
Additional biological survey work and required approvals

Annualised monthly production\(^1\) (% of nameplate capacity)

Phase 2: Creep capacity towards 50 Mtpa

Pathway
Chute and conveyor belt upgrades to main plant
Additional mining fleet and rail stockyard expansion
Leverage incremental crushing and screening facility
Deployment of Safe Production System

Opportunity
7 Mtpa Uplift in annual production capacity
~$70 M Incremental development capital\(^2\)
<$12 /t Maintain operating cost per tonne

\(^1\) Indicative only, based on publicly reported data on peer greenfields projects; \(^2\) 7Mtpa incremental capital, not including ongoing resource development
Disciplined approach
to deliver resilient and
reliable performance

**Volume recovering**
Mine health, product quality and heritage management

**Continue the momentum**
Drive productivity and overcome work index challenges

**Safe Production System**
Productivity pathway embedded and delivering
Richard Cohen
Managing Director,
Rail, Port & Core Services
World class infrastructure

Our mines are serviced by a fully integrated supply chain, supported by our Operations Centre in Perth

**Extensive rail network**
~1,900km of privately owned rail
AutoHaul® delivering safety and efficiency

**Port competitive advantage**
Unencumbered, low risk, port facilities
4 Port terminals; 7 shiploaders; 7 car dumpers

**Supporting infrastructure**
4 power stations; 3 bulk fuel distribution hubs
Water, gas & telecommunication systems

**Accommodation**
3,000 houses across 6 Pilbara towns
FIFO to 24 villages via 120 flights per week from 15 airports
Existing capacity 350 – 360 Mtpa\(^1\)
~330 Mtpa average weekly performance\(^2\)

Reliable rail and port infrastructure already supports 360 Mtpa

**Rail performance**
Weekly annualised actual performance from H2 2022 to H1 2023

<table>
<thead>
<tr>
<th>Annualised performance (Mtpa)</th>
<th>&lt;320</th>
<th>320-360</th>
<th>&gt;360</th>
</tr>
</thead>
<tbody>
<tr>
<td>33%</td>
<td></td>
<td>55%</td>
<td>12%</td>
</tr>
</tbody>
</table>

**Port performance**
Weekly annualised actual performance from H2 2022 to H1 2023

<table>
<thead>
<tr>
<th>Annualised performance (Mtpa)</th>
<th>&lt;320</th>
<th>320-360</th>
<th>&gt;360</th>
</tr>
</thead>
<tbody>
<tr>
<td>45%</td>
<td></td>
<td>29%</td>
<td>27%</td>
</tr>
</tbody>
</table>

\(^1\) Achievable capacity assuming no feed constraints, figures are sometimes more precise than rounded numbers shown; \(^2\) Since Q3 2022
Our ports offer a competitive advantage

**Two berths per shiploader**
Maximising utilisation of our shiploaders

**Dedicated shipping channels**
Maximising tonnes loaded and ships moved

**Port improvements**
Dampier reclaimer replacement
Product flexibility

---

Existing capacity >360 Mtpa
Demonstrated port capability above 360 Mtpa

**Weekly outload capacity**
2018-2023, Mtpa annualised

- <320: 14%
- 320-360: 36%
- >360: 50%

---

1 Achievable capacity assuming no feed constraints, figures are sometimes more precise than rounded numbers shown
Increasing rail capacity towards 360 Mtpa

**Improved AutoHaul® performance**
Percentage of time a train driver responds to a train in the field

- Safety improvement
- Reduced variability
- <1 fault in every 300 journeys\(^1\)
- Train separations down 66% since 2018

<table>
<thead>
<tr>
<th>Year</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>H1 2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>13%</td>
<td>6%</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
<td>2%</td>
</tr>
</tbody>
</table>

\(^1\) H1 2023

**Rail track renewal progress**

- Improving asset health
- Increasing efficiency of execution
- Delivering increased rail capacity

Average increase in train speed over 32km section of central rail corridor

+13km/hr

Completed
Planned
Our Safe Production System will build on our downstream advantage

<table>
<thead>
<tr>
<th>Ports</th>
<th>Rail</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dampier</td>
<td>Cape Lambert A plant</td>
<td>5%</td>
<td>60</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>effective utilisation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dampier Port unscheduled loss</td>
<td>Cape Lambert yard cycle time</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minutes by month</td>
<td>Less wagons called for service every week</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Unscheduled loss compared to 2022

The voice of our people

“We are clear on our purpose and our priorities”
- Superintendent, Cape Lambert Port

“The upside opportunity is staggering”
- Maintenance Planner, Rail

<table>
<thead>
<tr>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>H1 2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>238</td>
<td>248</td>
<td>226</td>
<td>186</td>
<td>144</td>
</tr>
</tbody>
</table>
Safe, respectful and inclusive communities at our villages & towns

Safety and security
- Improvements in lighting, CCTV and village security

Infrastructure modernisation
- Room and housing refurbishments, enhanced dining and gym facilities

Social connection
- Creating spaces and optionality for human connection

Village committees
- Residents driving improvements that matter

Wellbeing
- Introduction of psychologists on site, social officer trial

Thriving communities
- Partnerships to deliver infrastructure projects, local services and events
Decarbonising our Pilbara supply chain

~600MW of renewable generation will displace the majority of gas use

A strategic Integrated System Model optimises our renewables pathway as options and technology develop

- 34MW of solar farm built at Gudai-Darri
- 45MW Battery Energy Storage Systems in commissioning
- 300MW of solar energy in advanced study
- Wind monitoring commenced

Engaging with partners to progress land access & approvals
Expanding engineering capability de-risks construction schedule

Battery Electric Haul Trucks and Train development continues
Preparation underway for pilots in 2024-2025

Illustrative Renewable Generation

1 This figure above does not represent the actual location of sites being considered by Rio Tinto and is provided for illustrative purposes only
Advancing our rail and port advantage

Unrivalled port capacity
Port infrastructure above 360 Mtpa

Safe Production System
Building on our network efficiency

Safety & wellbeing
Improving safety and amenity at villages and camps

Scope 1 & 2
Decarbonising our Pilbara supply chain
Stephen Jones
Managing Director,
Operational & Technical Support
An extensive geoscience, planning and research capability

**Resource development**
Acquire and interpret geological information to define our extensive resource portfolio

**Mine planning**
Design and optimisation of our new and existing portfolio of mines

**Integrated planning**
Connect our people and systems to produce an optimised, flexible and feasible physicals plan

**Studies & capital projects**
Responsible development of high value infrastructure and mining projects

**Research & Development**
Transform our ways of mining with a focus on water stewardship and reducing our impacts

**Engineering**
Drive performance improvements through maintenance planning and process engineering
Designing a mining portfolio that is compatible with the environmental and heritage values of the region

Co-design of mines
Investing in genuine engagement with Traditional Owners
Protecting culturally significant areas

Water stewardship
Preservation of areas of cultural significance
Maintaining healthy aquifers that sustain regional biodiversity

Resource strength and optionality
Opening up a large and grade advantaged mining region at Rhodes Ridge
Reducing mining footprint and impacts

Opportune use of SP10
SP10 to remain elevated until sustaining projects are delivered
Levels potentially higher if replacement projects delayed
Our next replacement projects are in progress

Co-design with Traditional Owners
Developments compatible with regional heritage values

Sustaining Production
Mine extensions at West Angelas, Hope Downs 1 and Brockman 4 leveraging existing infrastructure

Growing our Pilbara Blend profile
Greater Nammuldi, West Angelas and Hope Downs 1 providing low phosphorous resources to support Pilbara Blend

Replacig existing production

West Angelas
Pre-Feasibility Study
First ore 2027

Hope Downs 1
Feasibility Study
First ore 2027

Greater Nammuldi
Feasibility Study
First ore 2028

Brockman 4
Feasibility Study
First ore 2028
Rhodes Ridge is a world class mining hub in the making

‘Big Rock’ Choices

<table>
<thead>
<tr>
<th>Scale</th>
<th>Resources</th>
<th>Processing</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Hub</td>
<td>Brockman</td>
<td>Dry Crush &amp; Screen</td>
<td>Pilbara Blend contributor</td>
</tr>
<tr>
<td>2 Hubs</td>
<td>Marra Mamba</td>
<td>Wet Processing</td>
<td>Other products (high-grade and/or discrete low-grade)</td>
</tr>
<tr>
<td>Staging</td>
<td></td>
<td>Concentration</td>
<td></td>
</tr>
</tbody>
</table>

Transforming our ways of mining

- **Water stewardship**: Reduced mining footprint and impacts
- **Orebody knowledge approach**: Protecting heritage values
- **Capital intensity opportunities**: Move towards a regional approach to environmental management and approvals

Large
- >100 Mtpa capacity, scalable

Grade Advantaged
- Re-orientate mix to Pilbara Blend
- Well suited to a green iron future

Infrastructure
- Close to established rail
- Existing rail & port infrastructure
## Advancing a more sustainable and lower cost business

<table>
<thead>
<tr>
<th>Reshaping our orebody knowledge</th>
<th>Remote operations &amp; automation</th>
<th>Lower cost &amp; lower impact mining methods</th>
<th>Processing options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using technology to shape timely and effective orebody knowledge programmes</td>
<td>Digital programmes to support and optimise our workforce</td>
<td>Progressive rehabilitation Sustainable water management</td>
<td>New processing options for the resources of today and tomorrow</td>
</tr>
</tbody>
</table>

**Rio Tinto**
Designing the future mining portfolio

Driving a sustainable and respectful future in mining
Co-designing mines

An extensive development pipeline
Replacement projects commencing construction in 2024

Rhodes Ridge
A world class mining hub in the making
Will Millsteed
Head of Market Analysis
China steel demand resilient as growth drivers shift from property to other sectors

Weak property market more than offset by …

YTD Aug 2023 growth

- Property FAI\(^1\) -9%
- Floor space (FS) sold -9%
- Commodity building FS starts -25%
- Commodity building FS under construction -7%
- FS completion +19%

… resilient infrastructure and manufacturing investment …

- Transport FAI +11%
- Utilities FAI +27%
- Manufacturing FAI +6%
- Grid investment +1%

… and robust increase in manufactured goods

- Auto production +7%
- A/C production +16%
- EV production +37%
- Refrigerator production +17%
- Shipbuilding completion +16% (July)
- Washing machine production +20%

* Excluding steel exports. Chart includes data in each year from January to August

Source: RT Market Analysis, China NBS, Mysteel | \(^1\) FAI = Fixed Asset Investment
Incremental iron ore demand met mainly by higher cost seaborne supply growth

**China’s steel demand and trade**

<table>
<thead>
<tr>
<th></th>
<th>Jan-Aug’23</th>
<th>Mt</th>
<th>YoY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finished steel demand</td>
<td>604</td>
<td>632</td>
<td>+27</td>
</tr>
<tr>
<td>Net steel trade</td>
<td>55</td>
<td>55</td>
<td>0</td>
</tr>
<tr>
<td>Finished steel production</td>
<td>659</td>
<td>659</td>
<td>0</td>
</tr>
</tbody>
</table>

**2023 YTD (Mt)**

- Finished steel: 632
- Crude steel: 604
- Iron ore demand: 37

**2023 YTD increase (Mt)**

- Finished steel: 27
- Crude steel: 30
- Iron ore: 11

**Impact of Chinese steel exports on iron ore demand**

<table>
<thead>
<tr>
<th></th>
<th>Jan-Aug’23</th>
<th>Mt</th>
<th>YoY</th>
</tr>
</thead>
<tbody>
<tr>
<td>IO in China steel exports</td>
<td>73</td>
<td>26</td>
<td>-2</td>
</tr>
<tr>
<td>Ex-China crude steel output</td>
<td>543</td>
<td>30</td>
<td>-2</td>
</tr>
<tr>
<td>Ex-China pig iron output</td>
<td>277</td>
<td>26</td>
<td>-1</td>
</tr>
</tbody>
</table>

**Global iron ore market balance**

<table>
<thead>
<tr>
<th></th>
<th>Jan-Aug’23</th>
<th>Mt</th>
<th>YoY</th>
</tr>
</thead>
</table>
| China IO demand     | 996        | 11   | 3.9%
| Major producers’ supply | 795      | 30   | 17.1%
| High-cost supply    | 209        | 0    | 0   |

**Steel demand Net exports**

- China's steel demand and trade
- Finished steel: 604
- Crude steel: 55
- Iron ore demand: 27

**Impact of Chinese steel exports on iron ore demand**

- IO in China: 73
- Ex-China crude: 543
- Ex-China pig: 277

**Global iron ore market balance**

- China IO demand: 996
- Major producers’ supply: 795
- High-cost supply: 209

*Portside and supply chain inventories*
Global steel demand growth is driven by emerging markets

Steel intensity curves by region
Finished steel consumption per person (kg)

Finished steel demand by region (Bt)

Source: Rio Tinto, CRU Long-term Steel Market Outlook Feb-23
Decarbonisation drives potential for segmented steel value chains

**Western hemisphere**

- ~25% of 2040 iron ore demand
- Robust future demand for high grade iron ores (DRI → EAF pathway)
- Policy incentives in US, EU\(^1\) supporting decarbonisation and clean energy
- Gas → Green H₂ advantages in MENA / Americas
- Proximity to high grade ores and premium scrap

**Eastern hemisphere**

- ~75% of 2040 iron ore demand
- Robust future demand for all iron ore grades + scrap
- Less progressive carbon and energy policies
- Proximity to mid-grade iron ore
- High BOF steel share in China and east Asia
- Preference for liquid iron solutions\(^2\)

---

1. EU policies include binding target of 55% GHG emission reduction by 2030, and 2050 net-zero target, supported by industry level targets, removal of free allowances, implementation of CBAM and green energy subsidies. US Inflation Reduction Act offers generous subsidies and rebates for clean energy including up to $3/kg tax credit for green hydrogen and up to $85/t CO₂ for CCUS.

2. Refers to any technology that abates CO₂ emissions from and upstream of the melting separation of slag from hot metal. This includes BF+CCUS, DRI-BF-BOF and DRI-electric melting furnace-BOF.
Simon Farry
Head of Steel Decarbonisation
Our approach spans 3 time horizons and the full steel value chain
We are working with ~40 partners, across ~50 projects in 10 countries

Existing pathways
Ongoing
Working with our customers to lower the CO₂ intensity of the Blast Furnace

Emerging pathways
~1-10 years to commercial scale
Utilise our high-grade iron ores to accelerate the early proliferation of low CO₂ technologies

Future pathways
>10 years to commercial scale
Unlock new low CO₂ technologies for our low-mid grade iron ores
Majority of steel is produced today via the Blast Furnace – Basic Oxygen Furnace (BF-BOF) route, reliant on coal

Today’s steelmaking production routes:
- Steel recycling (Scrap-EAF): 25%
- Shaft Furnace (DR-EAF): 5%
- Blast Furnace (BF-BOF): 70%

Carbon intensity and energy source of each production route:

- Scrap-EAF: Uses Electricity
  - 0.1 – 0.5 Tonnes of CO₂ emissions per tonne of liquid steel

- DR-EAF: Uses Natural Gas (NG)
  - 0.7 – 1.1 Tonnes of CO₂ emissions per tonne of liquid steel

- BF-BOF: Uses Coal
  - 2.0 – 2.4 Tonnes of CO₂ emissions per tonne of liquid steel

A range of new technological pathways are emerging to produce low CO₂ steel, transitioning away from fossil fuels.

Existing pathway (BF-BOF)

01 Blast Furnace is being optimised but will eventually be substituted with lower CO₂ technologies.

Emerging pathway (DR-EAF)

02 DR-EAF technology will increase, limited by availability of scarce high-grade pellets.

Future pathways

03 Range of new low CO₂ technologies suitable for Pilbara type iron ores.

Global steel produced by technological pathway (in tonnes) (representative only)

Blast Furnace (BF-BOF)

Scrap recycling via Electric Arc Furnace

Shaft Furnace (DR-EAF)

New low CO₂ technologies

Today Future

Low-carbon energy / reductant source

Carbon-intensive energy / reductant source

Coal Natural Gas Hydrogen Biomass Renewables

Source: Net Zero Steel Initiative’s Technology Moratorium Scenario
Ironmaking will likely dislocate from steelmaking, moving to advantaged energy locations, with near zero hubs emerging.

**Today’s supply chain**

- **Iron ore**
- **Energy & reductant (Coal)**
- **Iron & steelmaking**
- **End user**

**Future supply chain**

- **Iron ore**
- **Ironmaking**
- **Energy & reductant (Natural Gas → Hydrogen)**
- **Near zero ironmaking hubs**
- **Hot Briquetted Iron (HBI)**
- **Steelmaking**
- **End user**

*Illustrative only*
Work is underway across a suite of new low CO₂ technologies suitable for Pilbara ores.

<table>
<thead>
<tr>
<th>Ore &amp; ore processing</th>
<th>Ironmaking</th>
<th>Steelmaking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blast Furnace</td>
<td>Sinter</td>
<td>Blast Furnace</td>
</tr>
<tr>
<td>Shaft Furnace</td>
<td>High-Grade Fines</td>
<td>Pellet / Briquette</td>
</tr>
<tr>
<td>Fluid Bed</td>
<td>High-Grade Fines</td>
<td>Fluid Bed</td>
</tr>
<tr>
<td>Fluid Bed with Melter</td>
<td>Low-Mid-Grade Fines</td>
<td>Pellet / Briquette</td>
</tr>
<tr>
<td>Fluid Bed with Melter</td>
<td>Low-Mid-Grade Fines</td>
<td>Fluid Bed</td>
</tr>
<tr>
<td>BioIron™</td>
<td>Low-Mid-Grade Fines</td>
<td>Pellet / Briquette</td>
</tr>
</tbody>
</table>

- **Existing pathways**
- **New low-carbon pathways under development**
- **Upgradeability work underway to improve the grade of our Pilbara iron ores**

Highly suitable for Pilbara ores

Less suitable for Pilbara ores

More suitable for Pilbara ores
Melter programme - unlocking new low CO₂ technologies for Pilbara iron ores

Developing a process step to remove impurities from Direct Reduced Iron (DRI) made with Pilbara ores

What is exciting

1. Unlocks pathway for producing low CO₂ steel with > 80%¹ of the world’s iron ores
2. Effective at removing contaminants found in low-mid grade iron ores
3. Widely used in Ferro Alloy and Ilmenite (titanium) industries
4. Produces a more sustainable by-product which can be used in construction

Progress and Partners

• MoU signed in 2021
• Concept studies complete
• Next steps include laboratory testwork and pilot detailed design

• MoU signed in 2023
• Targeting to build a pilot scale melter in China by 2025

¹ Primetals Gerald Wimmer September 2021
BioIron™ - unlocking new low CO₂ technologies for Pilbara iron ores

BioIron™ is Rio Tinto proprietary technology which uses sustainable biomass and microwave energy as alternatives to coal in steelmaking

Progress and partners

We have successfully produced iron in the small-scale pilot plant. We are currently designing a continuous pilot plant to commence operations in 2026.

Our key partners include:

What is exciting

1. High productivity with world’s largest iron ore region, the Pilbara
2. Produces pig iron metal with less than 5% emissions
3. Uses agricultural by-products to produce sustainable biomass
4. Consumes < 1/3rd electricity compared to other green hydrogen technologies
5. Potential to be net negative if combined with carbon capture and storage
Our approach spans 3 time horizons and the full steel value chain
We are working with ~40 partners, across ~50 projects in 10 countries

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Existing pathways</th>
<th>Emerging pathways</th>
<th>Future pathways</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower the carbon impact of the Blast Furnace</td>
<td>Ongoing</td>
<td>~1-10 years to commercial scale</td>
<td>&gt;10 years to commercial scale</td>
</tr>
<tr>
<td>Blast furnace burden optimisation</td>
<td></td>
<td>Utilise our high-grade iron ores to accelerate the proliferation of low CO₂ DR-EAF technologies</td>
<td>Unlock new low CO₂ technologies for Pilbara grade iron ores</td>
</tr>
<tr>
<td>Slag usage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sintering optimisation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New blast furnace technologies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CCUS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct our high-grade iron ore products to low CO₂ pathways</td>
<td></td>
<td>Support the development of near zero hubs</td>
<td></td>
</tr>
<tr>
<td>Electric Melter</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biolron™</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pelletisation for Shaft Furnace</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluidised bed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upgrade our Pilbara ores</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Key Partners**

- Metso
- BlueScope
- Chinalco
- University of Western Australia
- Mineral Technologies
- Imperial College London
- H2greensteel
- Hatch
- Nippon Steel
- KOBELCO
- Monash University
- Hyundai Steel
- Future Energy Exports
- ThyssenKrupp
- Occidental
- Pechiney
- Vale
- Rio Tinto
- Pilbara Iron
- Australian National University
- PRIMETALS Technologies
- The University of Queensland
- The University of Nottingham
- University of New South Wales
- Salzgitter AG
- Macquarie University
- COREM
- UNSW
- The University of Queensland
- FUTUEREnergy Exports
- ThYSsenkRupP
- ocCidenT
- PechineY
- Vale
- RIo Tinto
We have great assets that generate superior returns through the cycle

<table>
<thead>
<tr>
<th>$ Billion except where stated</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>H1 2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underlying EBITDA</td>
<td>18.8</td>
<td>27.6</td>
<td>18.6</td>
<td>9.8</td>
</tr>
<tr>
<td>EBITDA margin</td>
<td>74%</td>
<td>76%</td>
<td>68%</td>
<td>69%</td>
</tr>
<tr>
<td>Capex</td>
<td>2.9</td>
<td>3.9</td>
<td>2.9</td>
<td>1.1</td>
</tr>
<tr>
<td>Free cash flow</td>
<td>10.2</td>
<td>15.2</td>
<td>11.0</td>
<td>5.6</td>
</tr>
<tr>
<td>ROCE</td>
<td>74%</td>
<td>100%</td>
<td>62%</td>
<td>63%</td>
</tr>
</tbody>
</table>

**Asset quality**
- Strong resource base
- Integrated mining and infrastructure system
- Attractive EBITDA and returns

**Local contribution**
- ~$10 billion spend in Australia\(^1\) in 2022
- $8.8 billion taxes paid\(^2\) in 2022
- >50% increase in indigenous procurement in H1 2023

**Disciplined investment**
- Next phase of mine replacement projects
- Rhodes Ridge development
- Green steel R&D and low impact mining

---
\(^1\) Includes operating and capital expenditure in Australia excluding taxes and royalties
\(^2\) Rio Tinto Taxes Paid Report
Our strong resource base provides options in the market

Pilbara sales mix and index price relativity

Resilient product mix

Pilbara Blend >85% of volume post Rhodes Ridge
Strong SP10 relativities

SP10 flex
Competitive cost, provides options
Alternate customer supply via portside and IOC blend

Preparing for the future
Mid-term mine replenishment
Rhodes Ridge options

Average realised price vs 62% Fe
98% 97% 98%

Product mix

<table>
<thead>
<tr>
<th>2020</th>
<th>2022</th>
<th>H1 2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pilbara Blend lump</td>
<td>Pilbara Blend fines</td>
<td>Pilbara Blend fines</td>
</tr>
<tr>
<td>Robe Valley lump &amp; fines, and Yandicoogina fines</td>
<td>SP10 lump and fines</td>
<td></td>
</tr>
</tbody>
</table>

1 Average realised price per iron unit; 2 Rhodes Ridge first production expected before the end of the decade;
We have focused on improving mine and asset health

Pilbara unit costs (2020 v 2022)

$/t shipped

<table>
<thead>
<tr>
<th>Year</th>
<th>Support &amp; other</th>
<th>Mining</th>
<th>Infrastructure</th>
<th>Diesel</th>
<th>Inflation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>15.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2022</td>
<td>21.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Increase

- ~$4/t (market driven)
  - Inflation: ~7% p.a. Western Australia cost escalation
  - Diesel price: ~150% increase in price, ~1 billion litres

- ~$2/t (controllable)
  - Infrastructure: largely fixed, remote operations
  - Mining and processing: pit health, >22% increase in mining work index since 2020
  - Maintenance: ~30% of operational costs, ~30% increase driven by asset health and brownfield additions
  - Support: increased heritage, community and technical resources offset by removing COVID-19 response costs

1 AUD:USD exchange rate 0.69 in 2022 and 2020; 2 Rio Tinto estimated price escalation across a basket of RTIO specific consumption metrics
This year, improved productivity is offsetting mining headwinds

Pilbara unit costs (H1 2022 v H1 2023)
$/t shipped

<table>
<thead>
<tr>
<th></th>
<th>H1 2022</th>
<th>Exchange rates</th>
<th>Inflation</th>
<th>H1 2022 Flexed</th>
<th>Productivity</th>
<th>Work index</th>
<th>H1 2023</th>
<th>Guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Productivity</td>
<td>21.6</td>
<td>1.6</td>
<td>1.4</td>
<td>21.2</td>
<td>1.0</td>
<td>0.6</td>
<td>22.5</td>
<td></td>
</tr>
<tr>
<td>Work index</td>
<td>21.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guidance</td>
<td>21.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Productivity and asset health
Improved system productivity and uplift in volume offset ~6% uplift in mining work index
Retain focus on maintenance

Our cost profile
85% of cost base denominated in AUD

- Labour: 35%
- Energy: 20%
- Contractor: 20%
- Materials: 15%
- Other: 10%

1 AUD:USD exchange rate at 0.68 in H1 2023.
2 Rio Tinto estimated price escalation across a basket of RTIO specific consumption metrics
Higher sustaining capital improving asset health and reliability

Average sustaining capital remains ~$6/t in the medium term

Disciplined approach to decarbonization ($XB over next 10-years)

Phase 1 – solar plus on-grid battery storage (<$40 Carbon)

[>X% IRR]

Next tranche of mine replacement supports efficient volume growth - [$50–75/t] & offsets work index growth

~$[2]B medium term guidance

Volume and productivity to enable cost improvements

Pilbara unit costs
$/t shipped

Reduces unit costs from current
Increases unit costs from current

Guidance
$21-22.5

1 Mid-term unit cost – AUD:USD FX 0.67, real basis, subject to inflationary pressures
Disciplined capital investment across our Pilbara assets

**Capital expenditure**

$ billion, Rio Tinto share

- **Sustaining**
- **Replacement and Expansion**
- **Decarbonisation**
- **Depreciation and Amortisation**

- **Decarbonisation**
  - ~$0.2bn/year
- **Replacement**
  - ~$1.8bn/year
- **Sustaining**
  - remains at ~$1.8bn/year

*1 This includes mine replacement from the bubble chart on slide 18 as well as existing mine pit development and stock yard equipment replacement;*  
*2 ~$6 per tonne capital intensity; 3 Real basis, subject to inflationary pressures*
We have clear priorities and are positioning for the future

**Best operator**
- Focus on safety and culture
- Production momentum
- Cost control

**Impeccable ESG**
- “Cracking the code” on green steel
- Pilbara decarbonisation
- Water management

**Excel in development**
- Advantaged infrastructure
- Resource base strength
- Capital discipline

**Social licence**
- Resource co-design and development
- Community investment

---

**Volume**: 345 – 360 Mtpa mid-term capacity

**Effective equity**: remains >85%\(^1\) post Rhodes Ridge

**Pilbara Blend**: >85% of volume post Rhodes Ridge\(^2\)

**Unit costs**: ~$20/t mid-term\(^3\)

**Capital expenditure**:
- **Sustaining**: ~$1.8bn\(^4\) per year in 2024-26
- **Mine Replacement**: $20 - 50/t installed capacity\(^5\)
- **Growth**: large, grade-advantaged, near infrastructure

---

1. RTIO share of total asset free cashflow; 2. Rhodes Ridge first production expected before the end of the decade; 3. Mid-term unit cost - AUD:USD FX 0.67, real basis, subject to inflationary pressures; 4. ~$6 per tonne capital intensity, real basis, subject to inflationary pressures; 5. Next tranche of replacement projects
A proven record, and a strategy for the future

We will be the ‘Most Valued’ resource business

Defined by the cash flow we generate and as viewed by our people and external stakeholders
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AHS</td>
<td>Autonomous Haulage System</td>
</tr>
<tr>
<td>EAF</td>
<td>Electric Arc Furnace</td>
</tr>
<tr>
<td>IRR</td>
<td>Internal rate of return</td>
</tr>
<tr>
<td>RT</td>
<td>Rio Tinto</td>
</tr>
<tr>
<td>AIFR</td>
<td>All Injury Frequency Rate</td>
</tr>
<tr>
<td>EBITDA</td>
<td>Earnings Before Interest, Taxes, Depreciation and Amortisation</td>
</tr>
<tr>
<td>JV</td>
<td>Joint Venture</td>
</tr>
<tr>
<td>RTE</td>
<td>Round trip efficiency</td>
</tr>
<tr>
<td>ASEAN</td>
<td>Association of Southeast Asian Nations</td>
</tr>
<tr>
<td>ESG</td>
<td>Environmental, Social and Governance</td>
</tr>
<tr>
<td>km</td>
<td>kilometre</td>
</tr>
<tr>
<td>RTIO</td>
<td>Rio Tinto Iron Ore</td>
</tr>
<tr>
<td>ATAL</td>
<td>Aboriginal Training and Liaison</td>
</tr>
<tr>
<td>EU</td>
<td>European Union</td>
</tr>
<tr>
<td>M</td>
<td>Millions</td>
</tr>
<tr>
<td>RTX</td>
<td>Rio Tinto Exploration</td>
</tr>
<tr>
<td>ASX</td>
<td>Australian Securities Exchange</td>
</tr>
<tr>
<td>FAI</td>
<td>Fixed asset investment</td>
</tr>
<tr>
<td>MENA</td>
<td>Middle East and North Africa</td>
</tr>
<tr>
<td>SMM</td>
<td>Safety Maturity Model</td>
</tr>
<tr>
<td>AUD</td>
<td>Australian dollar</td>
</tr>
<tr>
<td>Fe</td>
<td>Iron</td>
</tr>
<tr>
<td>MoU</td>
<td>Memorandum of Understanding</td>
</tr>
<tr>
<td>SPS</td>
<td>Safe Production System</td>
</tr>
<tr>
<td>Bn</td>
<td>Billion</td>
</tr>
<tr>
<td>FIFO</td>
<td>Fly-in fly-out</td>
</tr>
<tr>
<td>Mt</td>
<td>Million tonnes</td>
</tr>
<tr>
<td>T</td>
<td>Tonne</td>
</tr>
<tr>
<td>BF</td>
<td>Blast furnace</td>
</tr>
<tr>
<td>FOB</td>
<td>Free On Board</td>
</tr>
<tr>
<td>Mtpa</td>
<td>Million tonnes per annum</td>
</tr>
<tr>
<td>t/ha</td>
<td>Tonnes per hectare</td>
</tr>
<tr>
<td>BMP</td>
<td>Blast management plan</td>
</tr>
<tr>
<td>FS</td>
<td>Feasibility Study</td>
</tr>
<tr>
<td>MW</td>
<td>Megawatt</td>
</tr>
<tr>
<td>tLS</td>
<td>Tonnes of liquid steel</td>
</tr>
<tr>
<td>BOF</td>
<td>Blast Oxygen Furnace</td>
</tr>
<tr>
<td>FY</td>
<td>Full Year</td>
</tr>
<tr>
<td>MWh</td>
<td>Megawatt hour</td>
</tr>
<tr>
<td>tCO₂e</td>
<td>Tonne of carbon dioxide equivalent</td>
</tr>
<tr>
<td>Bt</td>
<td>Billion tonnes</td>
</tr>
<tr>
<td>GHG</td>
<td>Greenhouse gas</td>
</tr>
<tr>
<td>NPV</td>
<td>Net present value</td>
</tr>
<tr>
<td>tpa</td>
<td>Tonnes per annum</td>
</tr>
<tr>
<td>CAGR</td>
<td>Compound annual growth rate</td>
</tr>
<tr>
<td>Gt</td>
<td>Giga tonnes</td>
</tr>
<tr>
<td>O&amp;M</td>
<td>Operation &amp; Maintenance</td>
</tr>
<tr>
<td>TWh</td>
<td>Terawatt hour</td>
</tr>
<tr>
<td>CBAM</td>
<td>Carbon Border Adjustment Mechanism</td>
</tr>
<tr>
<td>GW</td>
<td>Gigawatt</td>
</tr>
<tr>
<td>OBK</td>
<td>Ore body knowledge</td>
</tr>
<tr>
<td>USD</td>
<td>United States dollar</td>
</tr>
<tr>
<td>CCUS</td>
<td>Carbon Capture Utilisation and Storage</td>
</tr>
<tr>
<td>H₂</td>
<td>Hydrogen</td>
</tr>
<tr>
<td>p.a</td>
<td>Per annum</td>
</tr>
<tr>
<td>WA</td>
<td>Western Australia</td>
</tr>
<tr>
<td>CO₂</td>
<td>Carbon dioxide</td>
</tr>
<tr>
<td>HBI</td>
<td>Hot briquetted iron</td>
</tr>
<tr>
<td>PFI</td>
<td>Potentially fatal injury</td>
</tr>
<tr>
<td>WTS</td>
<td>Western Turner Syncline</td>
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<tr>
<td>CPP</td>
<td>Continuous pilot plant</td>
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<tr>
<td>HME</td>
<td>Heavy Mining Equipment</td>
</tr>
<tr>
<td>PP&amp;E</td>
<td>Plant, Property &amp; Equipment</td>
</tr>
<tr>
<td>YoY</td>
<td>Year on Year</td>
</tr>
<tr>
<td>D&amp;B</td>
<td>Drill &amp; Blast</td>
</tr>
<tr>
<td>IEA</td>
<td>International Energy Agency</td>
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<tr>
<td>R&amp;D</td>
<td>Research &amp; Development</td>
</tr>
<tr>
<td>YTD</td>
<td>Year to date</td>
</tr>
<tr>
<td>DRI</td>
<td>Direct Reduction Iron</td>
</tr>
<tr>
<td>IOC</td>
<td>Iron Ore Company of Canada</td>
</tr>
<tr>
<td>ROCE</td>
<td>Return on capital employed</td>
</tr>
<tr>
<td>$</td>
<td>United States dollar</td>
</tr>
</tbody>
</table>
Our ability to flex product mix is an important value lever

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pilbara Blend (since 2007)</strong></td>
<td>Our flagship, long-term product strategy</td>
</tr>
<tr>
<td></td>
<td>Reliable</td>
</tr>
<tr>
<td><strong>Yandicoogina Fines (since 1998)</strong></td>
<td>Baseload by large, quality sensitive mills in Japan</td>
</tr>
<tr>
<td></td>
<td>Low in phosphorous &amp; alumina</td>
</tr>
<tr>
<td><strong>Robe Valley (Since 1970s)</strong></td>
<td>Niche, very low phosphorous</td>
</tr>
<tr>
<td></td>
<td>Sold principally to Japan, Korea &amp; Taiwan</td>
</tr>
<tr>
<td><strong>SP10 (since 2014)</strong></td>
<td>Delivering further operational &amp; product flexibility</td>
</tr>
<tr>
<td></td>
<td>Flexibility to fill capacity</td>
</tr>
</tbody>
</table>
Our world class Pilbara iron ore blending capability

- Robe Valley Lump
- Robe Valley Fines
- Yandicoogina Fines
- Pilbara Blend Lump
- Pilbara Blend Fines

Port blending capability reduces product variability

- Dampier & Cape Lambert Ports
- Robe Valley
- Yandicoogina
- West Angelas
- Hope Downs
- Greater Nammuldi
- Marandoo
- Brockman 4
- Tom Price
- Greater Paraburdoo
- Hope Downs 4
- Brockman 2
- Gudai-Darri
- Mesa A Hub
- Mesa J Hub
- Yandicoogina
- West Angelas
- Hope Downs 1
- Greater Nammuldi
- Marandoo
- Brockman 4
- Tom Price
- Greater Paraburdoo
- Hope Downs 4
- Brockman 2
- Gudai-Darri

Product quality variance from mean

Fe | Alumina | Silica | Phosphorus
---|---------|--------|-----------
| Ship | | | |
| Mine/Rail | | | |
## Accounting treatment for Pilbara mines

<table>
<thead>
<tr>
<th>Asset</th>
<th>%</th>
<th>Location</th>
<th>Accounting treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brockman (2 and 4)</td>
<td>100.0</td>
<td>Australia</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Eastern Range JV(^1)</td>
<td>54.0</td>
<td>Australia</td>
<td>Proportional consol</td>
</tr>
<tr>
<td>Hope Downs JV (1 and 4)</td>
<td>50.0</td>
<td>Australia</td>
<td>Proportional consol</td>
</tr>
<tr>
<td>Marandoo</td>
<td>100.0</td>
<td>Australia</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Mt Tom Price</td>
<td>100.0</td>
<td>Australia</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Nammuldi</td>
<td>100.0</td>
<td>Australia</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Pannawonica (Mesas J and A)</td>
<td>53.0</td>
<td>Australia</td>
<td>Proportional consolidation(^2)</td>
</tr>
<tr>
<td>Paraburdo</td>
<td>100.0</td>
<td>Australia</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>West Angelas</td>
<td>53.0</td>
<td>Australia</td>
<td>Proportional consolidation(^2)</td>
</tr>
<tr>
<td>Western Turner Syncline</td>
<td>100.0</td>
<td>Australia</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Yandicoogina</td>
<td>100.0</td>
<td>Australia</td>
<td>Full consolidation</td>
</tr>
</tbody>
</table>

\(^1\) Under the terms of the Eastern Range Joint Venture Agreement, Hamersley Iron manages the operation and is obliged to purchase all production from the JV;

\(^2\) Rio Tinto recognises 65% of the assets, liabilities, revenues and expenses of Robe River, with a 12% non-controlling interest. The Group therefore has a 53% beneficial interest in the Robe River mines (Mesas J and A and West Angelas).