## Robe Mesa DFS

Location, Low-cost and Outstanding Financial Returns

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 and have not materially changed.
 all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed.

All amounts are in Australian dollars unless stated otherwise.

## Forward Looking Statement






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 expectations in relation to any forward looking statements or any such change in events, conditions or circumstances on which any such statements were based.

## Competent Person Statement


 activity which he is undertaking to qualify as a 'Competent Person' as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (JORC Code).

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## Key DFS Highlights

## Operational

- Extension of Rio Tinto's Mesa F orebody
- DFS Ore Reserve increased from 8.2Mt (PFS) to 33 Mt at $55 \% \mathrm{Fe}(61.6 \% \text { calcined } \mathrm{Fe})^{1}$
- Targeting similar grade to Rio Tinto's Robe Valley Fines and FMG Super Special Fines
- Exceptionally low strip ratio of $0.6: 1$ (waste : ore)
- Simple crush and screen, DSO iron ore
- 3.5 Mtpa , increasing to 5 Mtpa , initial 8 yr mine life
- Proposed export facility at the Port of Ashburton
- CZR 50\% shareholder in Port of Ashburton consortium (PAC), but with $67 \%$ export quota
- Near-mine growth target acquired from FMG


## Financial

- Robe Mesa DFS reveals low costs and outstanding financial returns
- Low Cl cash cost of A\$49/wmt FOB
- Base case life of mine EBITDA of $\$ 824$ million, free cash flow of $\$ 419$ million, $\mathrm{NPV}_{8 \%}$ of $\$ 256$ million
- Financial returns rising to $\$ 1.3$ billion free cash flow at current iron ore prices
- Base case IRR of $62 \%$, rising to $159 \%$ at current iron ore prices
- Very low capex: A\$130m (CZR share)
- Offtake and funding agreements with global commodity traders well advanced


## Share Price Performance



## Capital Structure (ASX:CZR)

| Current Shares On Issue | (m) | 236 m |
| :--- | :---: | :---: |
| Unlisted Options and Performance Rights | $(\mathrm{m})$ | 16 m |
| Market Capitalisation @ 20cps | (A\$m) | $\$ 47 \mathrm{~m}$ |
| Cash (30 June 2023) | (A\$m) | $\$ 2.2 \mathrm{~m}$ |
| Debt | (A\$m) | Nil |

## Board and Management

| Russell Clark <br> Non-Executive Chairman | - Mining Engineer and experienced company executive <br> - Previously MD of ASX listed Australian iron ore producer Grange Resources |
| :---: | :---: |
| Annie Guo <br> Non-Executive <br> Director | - Finance professional with more than 20 years' experience in the resources sector <br> - Group General Manager of the Creasy Group |
| Stefan Murphy <br> Managing <br> Director | - Geology and finance background with extensive iron ore development and operations experience <br> - Previously MD of ASX listed Great Boulder Resources and CEO of iron ore miner Nathan River Resources |
| Fabian <br> Goddard <br> Study Manager | - Metallurgist with 25 years experience, specializing in project development, delivery and operations, <br> - Pit-to-port supply chain background in iron ore and bulk commodities |
| Trevor O'Connor <br> Company Secretary/CFO | - Chartered Accountant and Chartered Company Secretary with over 25 years' corporate experience |

## Robe Mesa Iron Ore Mine

## DFS Milestones Achieved

- $300 \%$ increase in Ore Reserves from the PFS to 33.4 Mt
- Native Title Mining Agreement signed Robe River Kuruma Aboriginal Corporation
- All Mining and Infrastructure Licences granted
- Consent from PPA to submit Port of Ashburton Export Facility development application
- Consolidation of Robe Mesa South - 5km from Robe Mesa and surrounds Rio Tinto's Mesa F deposit


## Upcoming Targeł Milestones

- Mining and Environmental Approvals (Q2 2024)
- Project Finance and FID (Q2 2024)
- Construction commences (Q2 2024 - contingent on FID)
- First Production (Q2 2025 - contingent on FID)
- CZR owns $85 \%$ of Robe Mesa, with Creasy Group (15\%) free-carried to DFS
- Unique position - highly valuable section of the Robe Valley iron ore deposits, sharing a common orebody with Rio Tinto
- Outstanding metallurgical testwork confirmed Robe Mesa can substitute Rio Tinto's Robe River Fines and FMG Super Special Fines and Blended Fine
- West Pilbara region attracting significant mining and infrastructure investment:
- $\$ 1.7$ billion spent by Rio Tinto controlled Robe River JV, expanding mining operations and extensive drilling adjacent to CZR's Robe Mesa
- MinRes $\$ 3$ billion Onslow Iron project, producing 35 Mtpa from Ken's Bore and transhipping from the Port of Ashburton (first ship mid-2024)


Location map for the Yarraloola project and Robe Mesa deposit in the West Pilbara - Rio Tinto operated mines and other significant Channel Iron Deposits (CID) in the region

- Exceptional orebody with low technical risk and very low strip ratio of 0.6: 1
- Ore Reserve expanded to 33.4 Mt at $55 \% \mathrm{Fe}$
- High calcined Fe (61.6\% Fe calcined) and low AI and P make Robe Mesa an attractive iron ore product
- Staged pit shells:
- Mining starts in the north-east and progresses south
- Waste backfilled behind mining advance
- Minimal environmental and heritage impact:
- All mining is above water table
- All waste to be back-filled into the mining void
- Buffer zone around mesa edge to protect areas of environmental and heritage significance
- No beneficiation or tailings storage
- Simple contractor managed drill-blast, truck-excavator mining method


October 2023 Robe Mesa Ore Reserve estimate

| Product | Tonnes Mt | $\begin{aligned} & \text { Fe } \\ & \% \end{aligned}$ | $\begin{gathered} \mathrm{SiO} \\ \% \end{gathered}$ | $\begin{gathered} \mathrm{Al} 2 \mathrm{O} 3 \\ \% \end{gathered}$ | $\begin{aligned} & \text { P } \\ & \% \end{aligned}$ | $\begin{gathered} \text { LOI } \\ \% \end{gathered}$ | $\begin{gathered} \mathrm{Fe}_{\mathrm{ca}} \\ \% \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Robe Mesa Fines | 26.4 | 55.6 | 6.4 | 2.9 | 0.038 | 10.7 | 62.2 |
| Robe Mesa LG Fines | 7.0 | 53.0 | 9.0 | 3.6 | 0.035 | 10.8 | 59.5 |
| TOTAL | 33.4 | 55.0 | 6.9 | 3.1 | 0.038 | 10.7 | 61.6 |

Mining schedule (first quarter contains pre-strip for civil works)

- Scheduled to produce 3.5 Mtpa, ramping up to 5 Mtpa in year 5 - initial 8 year life of mine
- Key design parameters include:
- Minimal pre-strip, with an exceptionally low strip ratio of 0.1 in the first 2 years
- Maximise HG ore production in the early years
- HG ore processed for the first 4 years, producing the Robe Mesa Fines product with LG ore stockpiled
- Processing throughput increased in year 5 with LG ore added to the processing schedule, producing a second Robe Mesa LG Fines produc $\dagger$
- Both products sold separately but potential to blend and smooth grade profile during operations
- The increase in production to 5 Mtpa reflects additional export capacity at the Port of Ashburton - however the plant and mine plan will be capable to produce at 5Mtpa from day one



## Process ore feed schedule



- All infrastructure associated with the mine site and haul road are covered by granted mining and miscellaneous licences
- Key mine site infrastructure includes:
- 38km private haul road
- Accommodation village
- Contractor processing plant
- Mine Operations Centre (workshop, offices)
- Power generation, water bore field, pipework and filtration systems
- Native Title Mining Agreement signed with the Robe River Kuruma Aboriginal Corporation (RRKAC) in December 2022
- Archaeology and ethnographic surveys completed with Robe River Kuruma Traditional Owners, with all mining and site infrastructure areas now cleared
- Extensive environmental surveys completed, with

CZR development area including tenure
 submissions made to environmental and mining regulators for approval

- CZR to produce two iron ore products
- Robe Mesa Fines (62.2\% Fe calcined)
- Robe Mesa LG Fines (59.5\% Fe calcined)
- Robe Mesa Fines has similar grade specifications to Rio Tinto's Robe Valley Fines and FMG's Super Special Fines
- Highly sought after product for conventional blast furnaces

| Product |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
| Robe Mesa - 2023 JORC Ore Reserve | 55.5 | 6.39 | 2.92 | 0.038 |
| Rio Tinto - Robe Valley Fines | 56.4 | 5.50 | 3.10 | 0.030 |
| FMG - Super Special Fines | 56.5 | 6.40 | 3.10 | 0.055 |
| FMG - Fortescue Blend Fines | 58.2 | 5.60 | 2.50 | 0.065 |
| BHP - Jinbao Fines | 56.5 | 7.31 | 1.69 | 0.041 |
| BHP - Yandi Fines | 57.0 | 6.35 | 1.70 | 0.045 |
| Atlas Iron - Atlas Fines | 57.5 | 6.50 | 1.95 | 0.090 |
| Platts 58\% Fe index (IODFE00) | 58.0 | 6.00 | 2.90 | 0.060 |

Comparison made between Robe Mesa Ore Reserves and operating mines of similar grade specification in the Pilbara, Western Australia (note CZR is currently non-producing from Robe Mesa)
Source: S\&P Global Platts Iron Ore and Metallurgical Coal Specifications Tree (2021)

Boundary between CZR's Robe Mesa deposit and Rio Tinto's Mesa F deposit


- Metallurgical testwork shows Robe Mesa has low internal variability and technical risk
- Physical results demonstrate:
- Robe Mesa ore is soft and easy to crush
- Classified as non-abrasive and non-hazardous
- Amenable to processing via conventional crushing equipment
- Simple crushing and screening plant designed to produce a DSO fines produc $\dagger$
- CZR assessed flowsheet and operating models that provided a low technical and financial risk, common to similar operating iron ore mines in the Pilbara
- Contractor processing is the preferred operating model as it reduces initial capital, system complexity and risks, while offering cost synergies when mining, civil and/or haulage contracts are combined with processing


## Robe Mesa sinter samples \& substitute ores

| Comp ID | Composite Description | Fe <br> $\mathbf{( \% )}$ | $\mathbf{S i O}_{\mathbf{2}}$ <br> $(\%)$ | $\mathbf{A l}_{2} \mathbf{O}_{\mathbf{3}}$ <br> $(\%)$ | $\mathbf{P}$ <br> $(\%)$ | LOI <br> $(\%)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| SINT_01 | Upper zone startup material | 55.75 | 5.91 | 2.66 | 0.036 | 11.13 |
| SINT_02 | Upper zone low grade <br> material | 53.60 | 7.93 | 3.41 | 0.037 | 11.29 |
| SINT_03 | Upper \& Lower blend <br> (standard product) | 55.37 | 6.53 | 2.98 | 0.041 | 10.81 |
| Robe River <br> Fines | Rio Tinto Robe River Fines <br> product | 55.35 | 5.12 | 3.00 | 0.037 | 11.44 |
| FMG Blend | FMG Blended fines product | 58.17 | 6.49 | 2.17 | 0.090 | 6.89 |

- Sinter testwork completed by Shougang Research in Beijing, using laboratory scale sinter pot tests
- The sinter testwork represented a range of product options from startup, potential low grade and life of mine Robe Mesa products; All showed excellent sinter characteristics
- The tests showed Robe Mesa iron ore can confidently replace Robe River fines and FMG blended fines with little impact on overall sinter performance and metallurgical outcomes


## Port of Ashburton POA Export Facility

## Corporate and Operating Structure

- CSL, CZR and Strike (SRK) have established a separate company (PAC JV) to assess and secure approvals for the construction of an iron ore export facility from the Port of Ashburton (POA Export Facility) located only 171 km from Robe Mesa.
- The participating interest, ownership and capital cost contribution of each party in the PAC JV is:
- CZR:50\%
- SRK: $25 \%$
- CSL:25\%
- CSL will have exclusive transhipment rights to the POA Export Facility, and CZR and Strike will have take or pay export allocation in the following proportions:
- CZR: 66.7\%
- SRK:33.3\%
- The Pilbara Ports Authority (PPA) has agreed for the PAC JV to submit a Development Application for the POA Export Facility, representing a significant development for the project
- A Development Application will be lodged in October 2023 and is expected to be assessed by Q1 2024



## Haulage Operations

resources

## Hub and spoke model that optimises haulage cycle times and efficiency

- Contractor haulage, targeting 60 m super-quad road trains to improve efficiency and safety
- Haulage from Robe Mesa to the intermediate stockyard located at the Onslow Hub, and direct to the POA Export Facility
- CZR and Strike shared infrastructure at the Onslow Hub includes stockyard, truck workshop and accommodation village

| Haulage (Mine to PSS) | Units | CZR | Strike |
| :--- | :---: | :---: | :---: |
| Production plan | tpd | 10000 | 5000 |
| Haulage distance | km | 96 | 150 |
| Road train payload | $\dagger$ | 142 | 120 |
| Road train loads per hour | number | 3 | 2 |
| Haulage (PSS to PoA) |  | Combined |  |
| Production Rate | tpd | 15000 |  |
| Haulage Distance | km | 75 |  |
| Availability | days | 334 |  |
| Road train Payload | $\dagger$ | 142 |  |
| Road train cycles per day | number | 7 |  |
| Road train loads per hour | number | 5 |  |



- Only existing multiuser port facility located in the West Pilbara
- PAC JV plans to develop a 5Mtpa iron ore export facility, with construction planned to commence in Q2 2024
- Located within the Port of Ashburton Eastern Port Precinct and utilising the existing East Quay
- Truck unloader and Storage Shed -23,000t capacity
- Front end loader reclaim system within shed and direct load from truck dumping, capable of loading TSV at 3,750 tph
- Covered conveyors, dust collectors and dust suppression
- Purpose built mobile ship loader located on the East Quay, benefits include:
- Minimising impact to the environment through the reduction in permanently installed infrastructure
- Easily modified to support other TSV arrangements and loading of other material types
- No dredging required as Port of Ashburton has sufficient
 depth to transhipment vessel (TSV) movements


## Transhipment Vessel

- TSV operations by CSL Australia, using the CSL Whyalla, a self-propelled transhipment vessel (TSV) with a selfunloading system, capable of loading cape-sized vessels (170,000 t)
- TSV handling simulations have been completed in consultation with the PPA
- TSV has a 12,000 t payload capacity
- Continuous under keel clearance - No tide restrictions
- Dust suppression systems/enclosed conveyors
- Single point loading system from shed to TSV
- Boom to discharge into cape-size vessels at 4,000tph
- Inner and outer anchorage located within the Port of Ashburton - average $18 \mathrm{~nm}(33 \mathrm{~km})$ transit
- 17 hour cycle time, loading a full cape-size vessel in


## CSL Whyalla (www.cslships.com/vessel/whyalla)



## Iron Ore Price Estimate

- Robe Mesa Fines product to be priced and hedged against P62 benchmark price
- Base case P62 benchmark price of US\$90/t CFR used in financial analysis (currently US\$117/t)
- Discount applied to P62 benchmark to estimate long-term average P58 benchmark price of US\$75/† CFR (currently US\$94/†)
- Long-term average P58 discount/premium for iron, silica and alumina applied to Robe Mesa product specs
- Robe Mesa Life of mine average discount to benchmark pricing:
- Robe Mesa Fines Discount to P62: 22.5\%
- Robe Mesa LG Fines Discount to P62: 38.4\%

60 day rolling average


P58 P62 ........ P62 Base Case ........P58 Base Case

- Low capital and operating cost through collaboration and infrastructure sharing
- Delivering long-term and sustainable outcomes for stakeholders and CZR shareholders

| Robe Mesa Pre-Production Capex Estimate | $100 \%$ Basis <br> (AS M) | CZR Share (85\%) <br> (AS M) |
| :--- | ---: | ---: |
| Haul Road and Site Earthworks | 48.0 | 40.7 |
| Mine Site Infrastructure | 22.6 | 19.2 |
| Mine Site Development | 11.7 | 9.9 |
| Robe Mesa Village | 8.7 | 7.4 |
| Onslow Hub1 | 8.2 | 5.5 |
| Contingency | 9.9 | 8.4 |
| Robe Mesa Project Capex | 109.1 | $\mathbf{9 1 . 1}$ |
| POA Export Facility Capex Estimate | $100 \%$ Basis | CZR Share (50\%) |
| (AS M) | 1.7 | 0.9 |
| Earthworks | 50.2 | 25.2 |
| Landside Infrastructure | 5.0 | 2.5 |
| Engineering | 2.7 | 1.4 |
| Road works | 12.0 | 6.0 |
| Building and infrastructure | 7.1 | 3.6 |
| Contingency | $\mathbf{7 8 . 7}$ | $\mathbf{3 9 . 4}$ |
| POA Export Facility Capex | 187.8 | 130.5 |
| Total Capex Estimate |  |  |


| Operating Cost | Unit Cost <br> (AS/wmi) | Unit Cost <br> (AS/dmi) | \% of C1 <br> Cost |
| :--- | ---: | ---: | ---: |
| Mine | 5.5 | 5.9 | $11 \%$ |
| Processing | 3.8 | 4.1 | $8 \%$ |
| Site overheads | 7.7 | 8.2 | $15 \%$ |
| Haulage | 17.8 | 19.0 | $37 \%$ |
| Port | 14.2 | 15.1 | $29 \%$ |
| C1 Cost | $\mathbf{4 8 . 9}$ | $\mathbf{5 2 . 4}$ | $100 \%$ |
| Cl Cost + Capitalised Waste | 52.0 | 55.6 |  |
| All in Sustaining Cost AISC ${ }^{1}$ | 52.5 | 56.1 |  |
| Delivered Cost China | 72.8 | 77.9 |  |
| Delivered Cost China USD ${ }^{2}$ | $\mathbf{4 9 . 5}$ | $\mathbf{5 2 . 9}$ |  |

1. $\mathrm{C} 1+$ capitalised waste and sustaining capital
2. Delivered cost of US\$49.5/wmt includes royalty, sustaining capital and sea freight
[^1]| Key Financial Metrics | Units | Base Case | Current Yid ${ }^{3}$ |
| :--- | :---: | :---: | :---: |
| P62 Price Assumption (CFR) | US $\$ / \mathrm{dmt}$ | 90 | 117 |
| P62 Price Assumption (CFR) | A\$/dmt | 132 | 174 |
| Exchange Rate | USD : AUD | 0.68 | 0.67 |
| Revenue | A\$M | 2,808 | 4,116 |
| All-In-Sustaining Cost (FOB) | A\$M | 1,879 | 1,879 |
| Delivered Cost China (CFR) | A\$M | 2,603 | 2,716 |
| EBITDA | A\$M | 824 | 2,027 |
| Capex (Pre-production) ${ }^{2}$ | A\$M | 109 | 109 |
| Capex (LOM) | A\$M | 128 | 128 |
| Free cash Flow (post-tax) | A\$M | $\mathbf{4 1 9}$ | $\mathbf{1 , 2 6 2}$ |
| NPV (8\% post-tax) | A\$M | $\mathbf{2 5 6}$ | $\mathbf{8 2 0}$ |
| IRR (post-tax) | $\mathbf{\%}$ | $\mathbf{6 2 \%}$ | $\mathbf{1 5 9 \%}$ |
| Payback (post-tax) | Years | 2.5 | 1.5 |



Current YTD Price Assumption Cash Flow (ASM)


1. Includes AISC, freight and royalties
2. Excludes port capex as captured in PAC tariff as an operating cost

Cash Flow

CZR's proposed financing strategy for Robe Mesa considers the following key factors:

- Secure a fully funded solution for the pit-to-port supply chain
- Minimising potential dilution to CZR shareholders; and
- Providing flexible funding solutions to:
- Protect revenue streams through proactive hedging of iron ore, freight and FX
- Facilitate additional development opportunities, and
- Continue exploration and development of CZR's asset portfolio
- CZR is working with potential financiers and oftake partners to secure the debt and equity finance to fund project development
- Target Final Investment Decision in Q2 2024, once all regulatory approvals have been received

Summary Funding Sources and Uses

| Sources (A\$m) | 100\% Basis | CZR Share |
| :--- | ---: | ---: |
| Senior Loan Facility | 115.1 | 80.3 |
| Working Capital Facility | 10.0 | 8.5 |
| New Project Equity | 83.4 | 59.2 |
| Total | $\mathbf{2 0 8 . 5}$ | $\mathbf{1 4 8 . 0}$ |


| Uses (A\$m) | 100\% Basis | CZR Share |
| :--- | ---: | ---: |
| Robe Mesa | 91.0 | 77.3 |
| Onslow Hub | 8.2 | 5.5 |
| POA Export Facility | 71.6 | 35.8 |
| Contingency | 17.1 | 11.9 |
| Total Capex | $\mathbf{1 8 7 . 8}$ | $\mathbf{1 3 0 . 4}$ |
| Working capital facility | 10.0 | 8.5 |
| Financing cost | 5.6 | 4.8 |
| Minimum Cash | 5.0 | 4.3 |
| Total | $\mathbf{2 0 8 . 5}$ | $\mathbf{1 4 8 . 0}$ |

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[^0]:    Stefan Murphy has given his consent to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

[^1]:    1. Costs shared with Strike Resources
