

FROM DEVELOPER TO PRODUCER

BRUCE GRIFFIN
EXECUTIVE CHAIR

TZMI Congress
17 November 2023

ASX: SFX

www.sheffieldresources.com.au



SheffieldResources
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This document contains summary information about Sheffield Resources Limited (ACN 125 811 083) (**Company** or **Sheffield**), its subsidiaries and their activities which is current as at the date of this document, unless otherwise indicated. The information in this document remains subject to change without notice. The information in this document does not purport to be complete nor does it contain all the information that would be required in a disclosure statement or prospectus prepared in accordance with the Corporations Act 2001 (Cth). This presentation should be read in conjunction with Sheffield's periodic and continuous disclosure announcements lodged with the Australian Securities Exchange (ASX), which are available at <http://www.sheffieldresources.com.au/irm/content/asx-announcements1.aspx?RID=398> or www.asx.com.au, including and in particular "\$30m Share Placement And Entitlement Issue To Advance Sheffield Growth Strategy".

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Information regarding the South Atlantic Project

All information in this presentation relating to the South Atlantic Project has been sourced from Rio Grande Mineração S/A (RGM). The information in this announcement that relates to the Retiro and Bujuru Exploration Targets is based on information compiled under the guidance of Mr Greg Jones, a Competent Person who is a Fellow of the Australasian Institute of Mining and Metallurgy (AusIMM). Mr Jones is an employee of IHC Mining and has sufficient experience that is 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 in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Jones consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. This presentation should be read in conjunction with the Company's announcement "\$30m Share Placement And Entitlement Issue To Advance Sheffield Growth Strategy" dated 28 February 2023 which contains relevant exploration results for RGM reported in compliance with the Joint Ore Reserves Committee's Australasian Code for Reporting of Mineral Resources and Ore Reserves (**JORC Code**). Nothing has come to the attention of Sheffield that causes it to question the accuracy or reliability of the information provided by RGM. Nothing in this presentation can be relied on as implying that there has been no change to any information relating to the South Atlantic Project since the date of this presentation, or as a representation as to future matters in relation to RGM and its projects.

Industry data

Certain market and industry data used in connection with or referenced in this document, including in relation to other companies in Sheffield's peer group, may have been obtained from public filings, research, surveys or studies made or conducted by third parties, including as published in industry-specific or general publications. Neither Sheffield or their respective representatives have independently verified any such market or industry data.

Compliance Statements

This presentation should be read in conjunction with the following announcements by the Company: "KMS Bankable Feasibility Study Presentation" dated 24 March 2022, "Thunderbird Ore Reserve Update" dated 24 March 2022, "Thunderbird BFS, Results, Financing and Project Update" dated 24 March 2022, "Thunderbird Final Investment Decision" and "Final Investment Decision – Presentation" dated 10 October 2022 and "Mineral Resource and Ore Reserve Statement" dated 24 September 2019 (the **Primary Announcements**). Information in this document in relation to Mineral Resources, Ore Reserves and metallurgy and process design has previously been reported in the Primary Announcements. The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements and, in the case of the 24 September 2019 Thunderbird Mineral Resource and Ore Reserve Statement and the 24 March 2022 Thunderbird Ore Reserve Update, that all material assumptions and technical parameters underpinning the estimates with regards to the Company in the relevant market announcement continue to apply and have not materially changed. The Company confirms that all material assumptions underpinning any production target and any forecast financial information derived from any production target that is disclosed in this announcement continue to apply and have not materially changed. The Company confirms that the form and context of the Competent Person's findings are presented and have not been materially modified from the original market announcements.

Estimates of Mineral Resources and Ore Reserves and Exploration Results

This document and the Primary Announcements contain estimates of Ore Reserves and Mineral Resources and information that relates to exploration results. The Company confirms that all material assumptions underpinning any production target and any forecast financial information derived from any production target that is disclosed in this presentation continue to apply and have not materially changed. The Company confirms that the form and context of the Competent Person's findings are presented and have not been materially modified from the original market announcements. It is a requirement of the ASX Listing Rules that the reporting of ore reserves and mineral resources in Australia comply with the JORC Code. Investors outside Australia should note that while exploration results, mineral resources and ore reserves estimates of Sheffield in this presentation comply with the JORC Code, they may not comply with the relevant guidelines in other countries and, in particular, do not comply with (i) National Instrument 43-101 (Standards of Disclosure for Mineral Projects) of the Canadian Securities Administrators; or (ii) Industry Guide 7, which governs disclosures of mineral reserves in registration statements filed with the US Securities and Exchange Commission (SEC). Information contained in this presentation describing mineral deposits may not be comparable to similar information made public by companies subject to the reporting and disclosure requirements of Canadian or US securities laws.

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Financial data

A number of figures, amounts, percentages, estimates, calculations of value and fractions in this document are subject to the effect of rounding. Accordingly, the actual calculation of these figures may differ from the figures set out in this document. All currency amounts are in Australian Dollars (\$) or A\$) unless otherwise stated.

Future performance, forward-looking statements and key risks

This document contains certain "forward-looking statements". Forward-looking statements can generally be identified by the use of forward looking words such as "forecast", "likely", "believe", "future", "project", "opinion", "guidance", "should", "could", "target", "propose", "to be", "foresee", "aim", "may", "will", "expect", "intend", "plan", "estimate", "anticipate", "continue", "indicative" and "guidance", and other similar words and expressions, which may include, without limitation, statements regarding plans, strategies and objectives of management, anticipated production dates, expected costs or production outputs for the Company, based on (among other things) its estimates of future production of the Thunderbird Mineral Sands Mine and the future operation of Sheffield and the Thunderbird Project.

To the extent that this document contains forward-looking information (including forward-looking statements, opinions or estimates), the forward-looking information is subject to a number of risk factors, including those generally associated with the mineral sands industry. Any such forward-looking statement also inherently involves known and unknown risks, uncertainties and other factors that may cause actual results, performance and achievements to be materially greater or less than estimated. These factors may include, but are not limited to, changes in commodity prices, foreign exchange fluctuations, general economic and share market conditions, increased costs and demand for production inputs, the speculative nature of exploration and project development (including the risks of obtaining necessary licenses and permits and diminishing quantities or grades of reserves), changes to the regulatory framework within which the Company operates or may in the future operate, environmental conditions including extreme weather conditions, geological and geotechnical events, and environmental issues, and the recruitment and retention of key personnel.

SHEFFIELD RESOURCES

Assembling a portfolio of global mineral sands development and production assets to generate cash returns and growth

CORE ASSET	KMS GROWTH	SOUTH ATLANTIC	FUTURE GROWTH
<p>Thunderbird Mineral Sands Mine (50% interest)</p> <ul style="list-style-type: none"> ▶ Production commenced, ramp up underway ▶ A\$60m cash buffer at start up ▶ On target for first customer deliveries in Q1 2024 ▶ Stage 1 NPV_g \$842m, generating ~\$120m pa of cash to Sheffield following debt repayment (mid FY2027 in the base case)¹ 	<p>Enhance KMS through</p> <ul style="list-style-type: none"> ▶ Thunderbird Stage 2, incremental NPV_g of \$548m¹ ▶ Additional zones of mineralisation along a 120 km trend ▶ East Derby construction sand opportunity 	<p>South Atlantic Option</p> <ul style="list-style-type: none"> ▶ Exploration Target ranging between 500 to 720Mt at 3.2 to 4.0% HM² ▶ Exploration Targets comprising sulfate ilmenite and zircon ▶ Option Agreement executed with US\$2.5m contribution to fund de-risking activities 	<p>Review of other quality mineral sands opportunities</p> <ul style="list-style-type: none"> ▶ Targeting advanced projects with potential to unlock value by applying Sheffield's mineral sands and funding experience

Reference:

1. The material assumptions and other matters required by LR 5.16 and 5.17 in respect of this financial forecast based on a production target are set out in the Primary Announcements. The Company confirms that all material assumptions underpinning any production target and any forecast financial information derived from any production target that is disclosed in this presentation continue to apply and have not materially changed. The Company confirms that the form and context of the Competent Person's findings are presented and have not been materially modified from the Primary Announcements.
2. The potential quantity and grade of the Exploration Target is conceptual in nature, as there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource. (Low-grade cut-off above 1.0% HM; High-grade cut-off above 2.0%HM). HM – heavy mineral, VHM – valuable heavy mineral, THM – total heavy mineral (same as HM).

HOW DID WE GET HERE?

STEP 1: MAKE THE PROJECT BANKABLE

Address key risks identified during project financing phases



Oversize and Induration

- ++ Mining trial
- ++ Design mining fleet and DMU for expected mining conditions



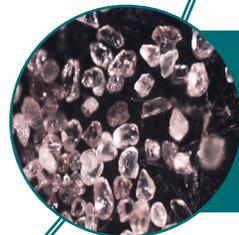
Fine Ore

- ++ 7 stage WCP
- ++ Extensive flowsheet development



Capital Intensity

- ++ Concentrates only – reduced capital by around 1/3



Marketability of Magnetic Concentrate

- ++ NOT a low TiO₂ ilmenite – high quality ilmenite mixed with titano-haematite
- ++ Offtake partner fully committed to the product and project

HOW DID WE GET HERE?

STEP 2: COMPLETE ON TIME & ON BUDGET



ON TIME

- ◆ Advance project during dry seasons, using Yansteel \$143m equity
- ◆ Secure complete funding solution to enable FID
- ◆ Q4 2023 first production target - achieved 23 October 2023
- ◆ Target date for first customer shipments – Q1 2024, on track



ON BUDGET

- ◆ Project CAPEX \$335m at FID – project completed for ~\$311m
- ◆ Pre-operating capex forecast of \$70m – delivered for ~\$68m



HOW

- ◆ Mature engineering into EPC contract
- ◆ EPC contractor with relevant experience of plant and project size
- ◆ EPC process plant only – self executed non-process infrastructure
- ◆ Experienced owners' team – oversight of EPC performance

THE THUNDERBIRD JOURNEY - Q1 2022



MOBILISATION



CLEARING SITE

Q2 2022



ACCOMMODATION VILLAGE

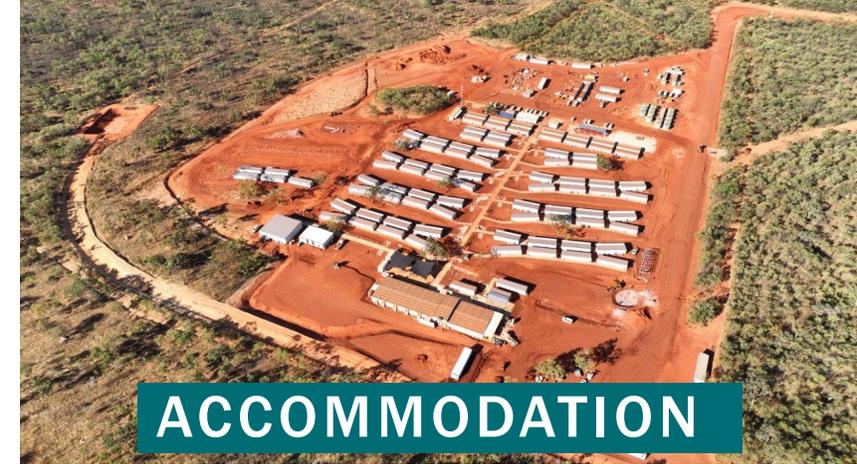


PROCESS PLANT CIVILS

**FID & ACTIVITY
RAMP UP - Q3 2022**



PLANT SITE



ACCOMMODATION

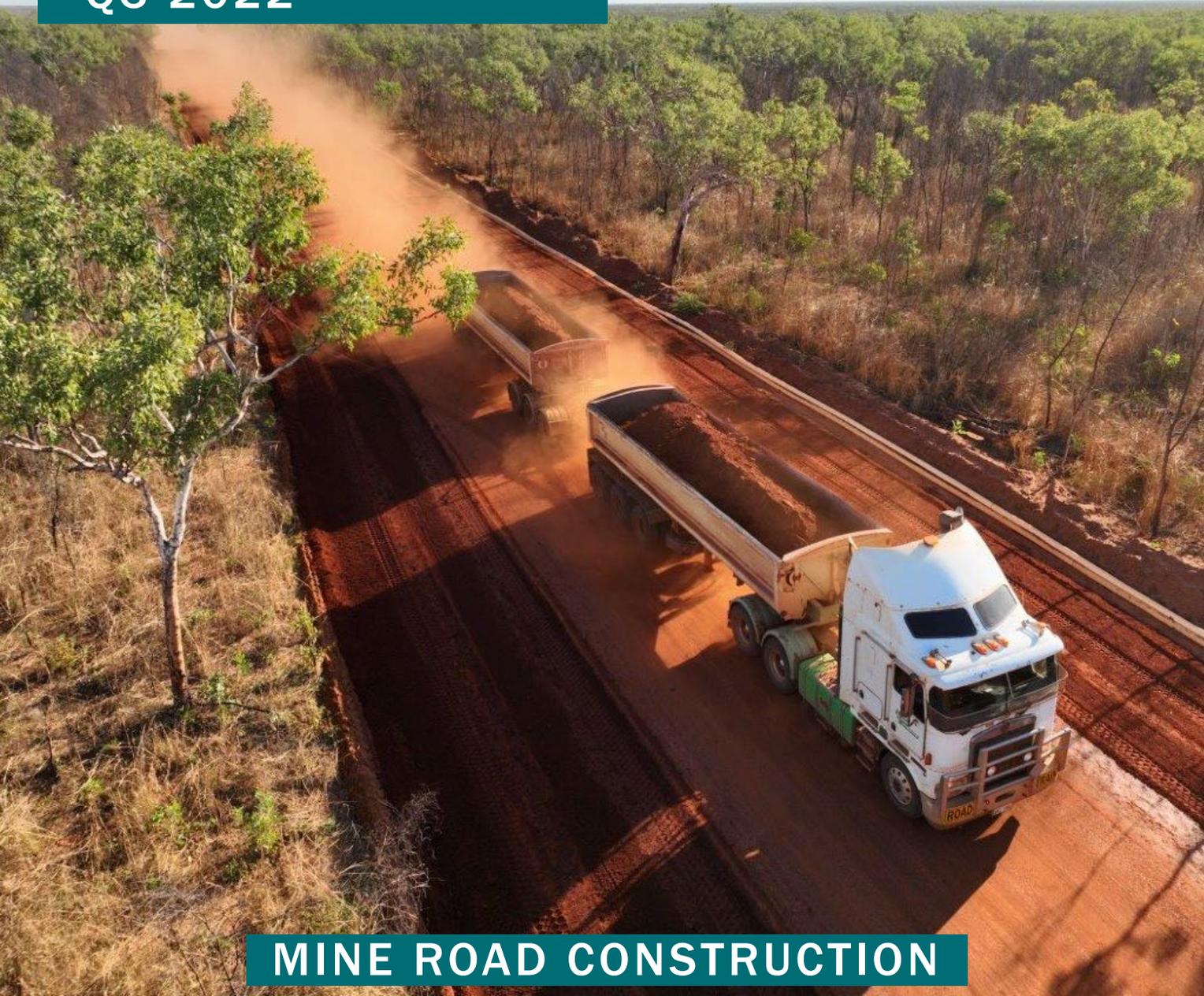


PROCESS WATER POND



LNG TANK FABRICATION

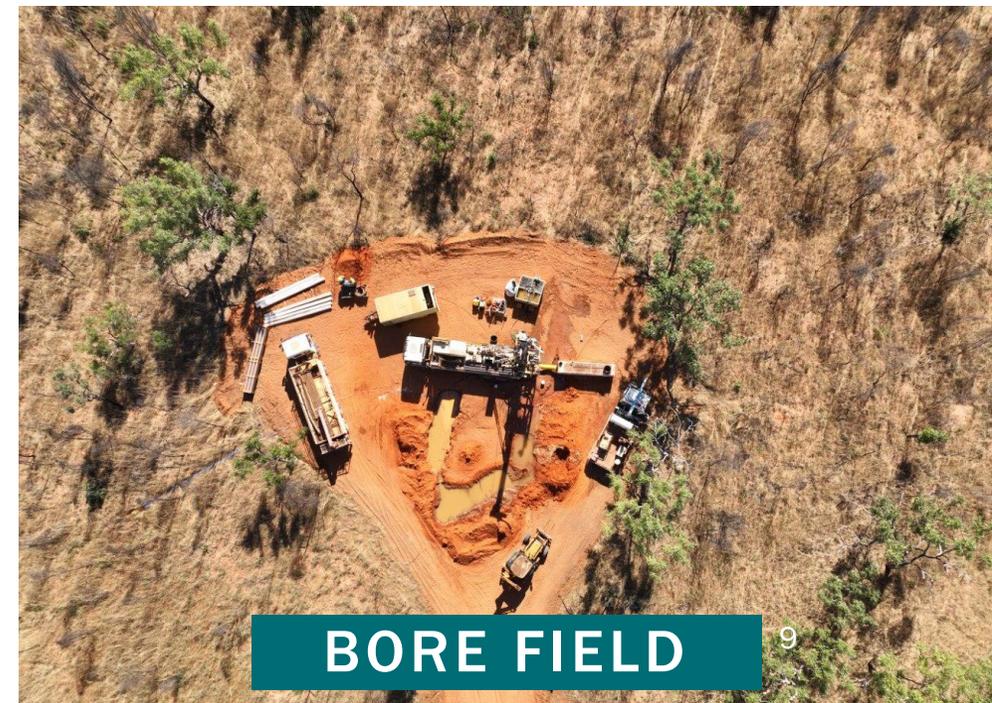
**RAMP UP CONTINUED
- Q3 2022**



MINE ROAD CONSTRUCTION



TAILINGS DAM



BORE FIELD

Q4 2022



TAILINGS STORAGE & SSP



STEEL INSTALLATION



SPIRALS ARRIVE ON SITE



PLANT SITE

Q1 2023



WCP SCREENS



PLANT PROGRESS



EARLY Q2 2023



THICKENER



SPIRAL ASSEMBLY



LNG TANKS ARRIVE



POWER STATION

LATE Q2 2023



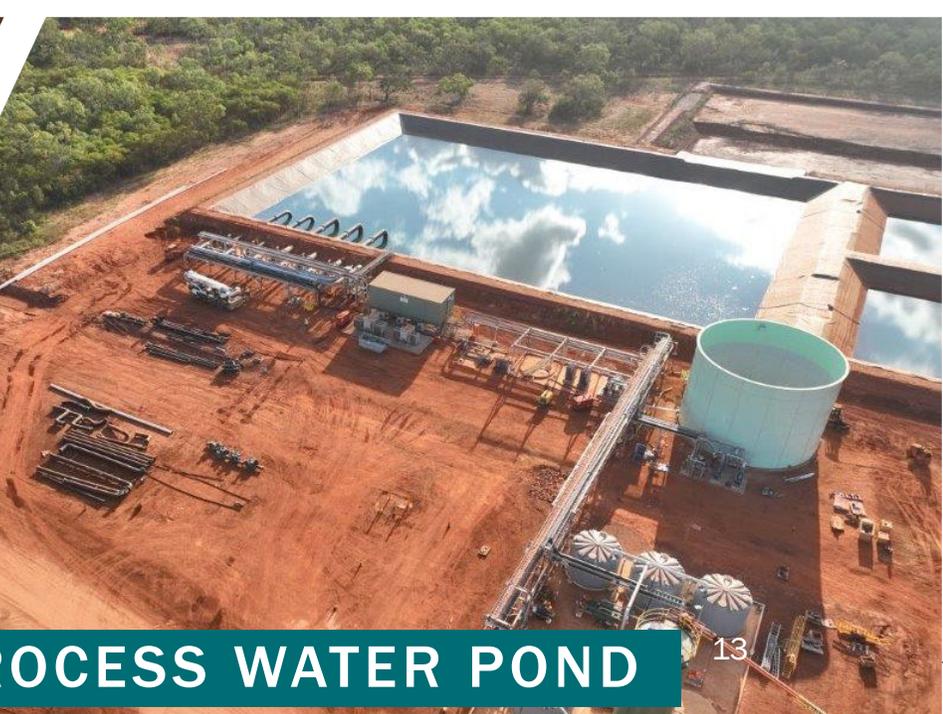
SPIRALS INSTALLED



STORM SURGE POND



LNG TANKS INSTALLED



PROCESS WATER POND

EARLY Q3 2023



WASTE MINING



DMU FABRICATION



PLANT PROGRESS



POWER STATION

LATE Q3 2023



DMU ARRIVAL



TAILINGS & PONDS



PLANT COMPLETE

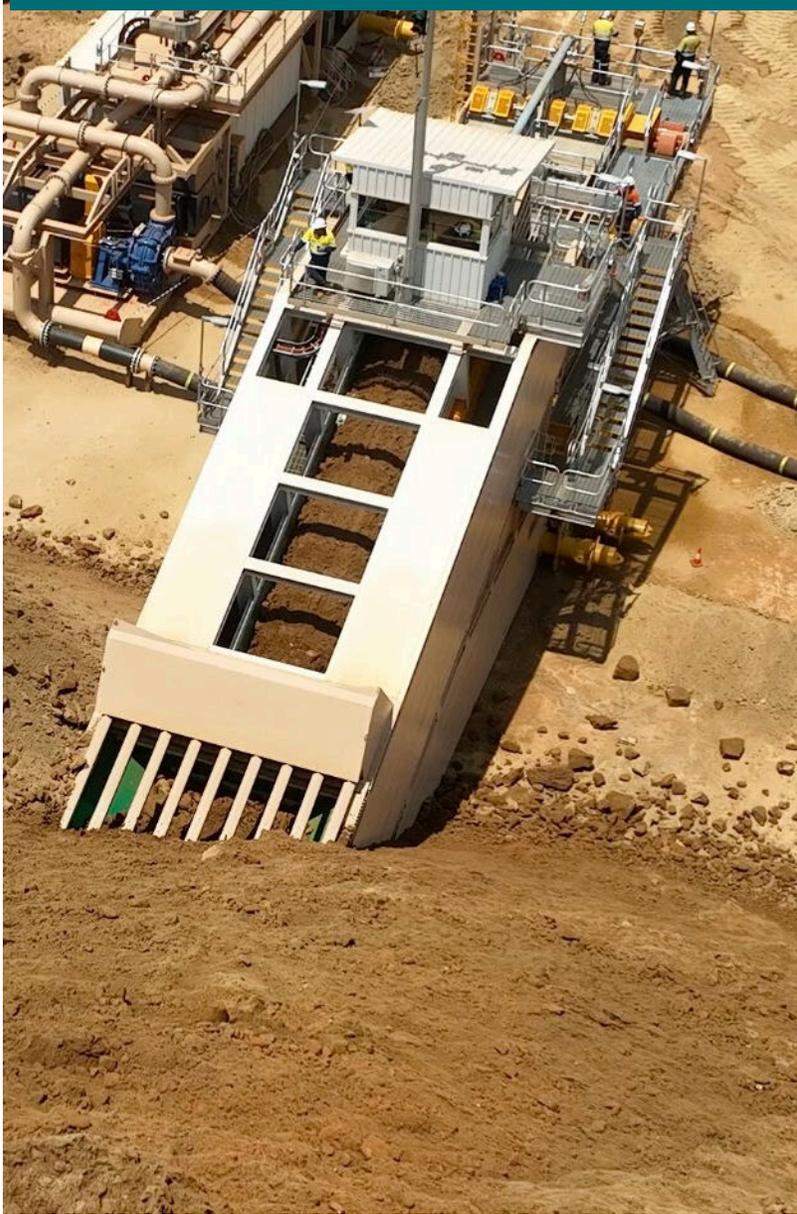


DMU MOVED IN PIT

**Q4 2023 - POWER ON,
READY FOR ACTION**



Q4 2023
FIRST ORE PRODUCTION



Q4 2023

PROCESS PLANT, HMC, ZIRCON CONCENTRATE



MINE



MAG AND PARAMAG CONCENTRATE



TAILINGS STORAGE FACILITY

DE RISKING RAMP UP

Design for Key Risks



Mining fleet and DMU sized for 1800tph vs WCP at 1,085tph

- ++ Main variability is proportion of oversize/undersize
- ++ Sub 12mm ore to WCP can be maintained even with high oversize



Starter pit open in all directions

- ++ Main variability is proportion of oversize/undersize
- ++ Can manage by flexing mining direction



Tailings Dam ~ 2 years

- ++ Removes tight linkage between in-pit tailings and mining



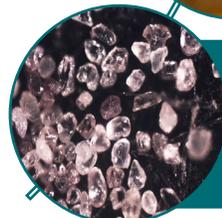
Stormwater Surge Pond

- ++ ~ 2 weeks water supply at full production
- ++ Larger buffer than process water pond + bore field



WCP 10% higher throughput than CUP + HMC stockpile

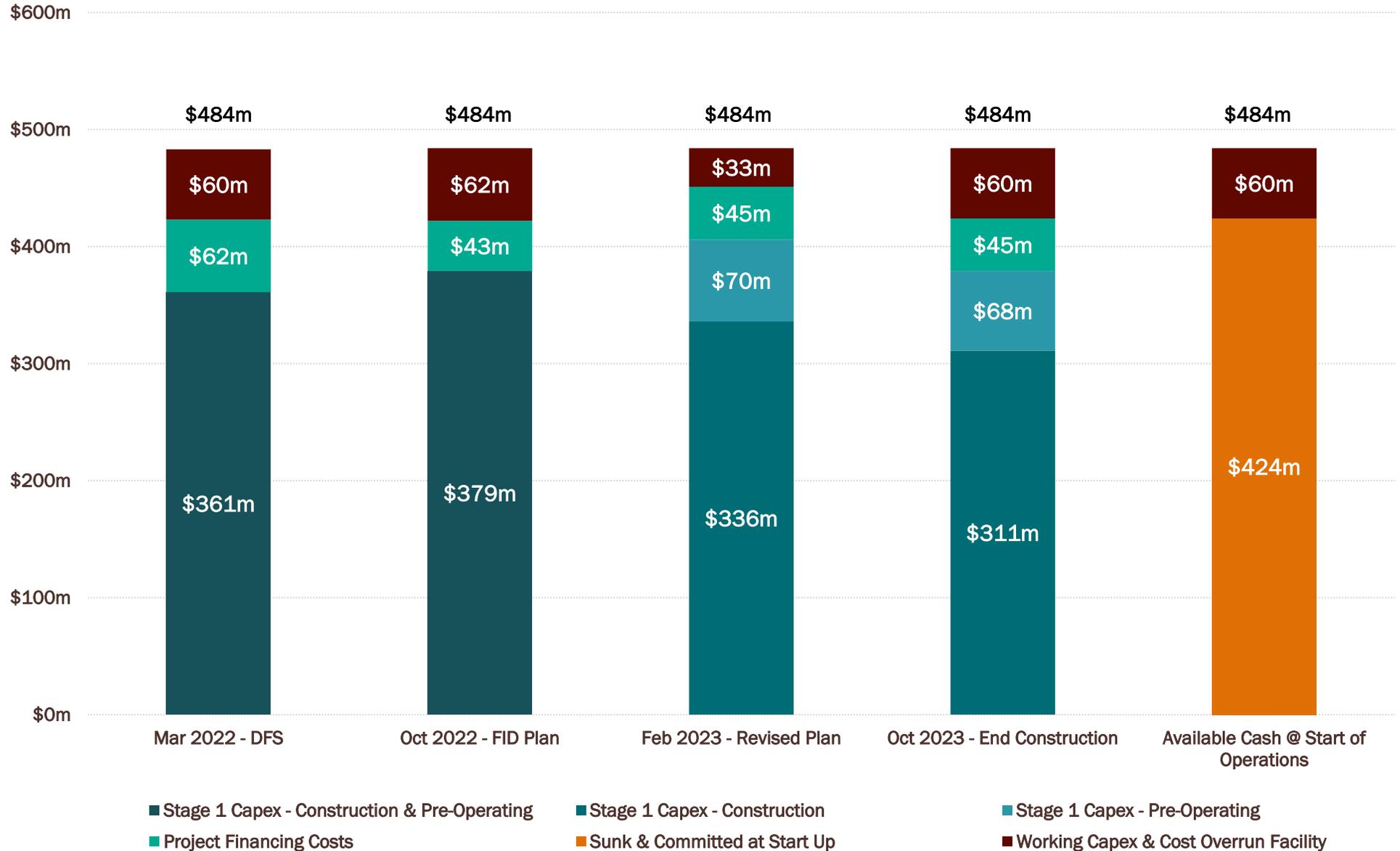
- ++ Use stockpile to main steady CUP throughput
- ++ Offtake partner fully committed to the product and project



Concentrates not final products

- ++ No hard product specification
- ++ Greater flexibility to optimise throughput and yield

DE RISKING RAMP UP – WELL FUNDED



OUTLOOK THROUGH 2024 (2022 BFS ASSUMPTIONS)



Reference:

1. ASX Announcement: "Thunderbird BFS Results, Financing And Project Update" dated 24 March 2022

SOUTH ATLANTIC PROJECT



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SOUTH ATLANTIC PROJECT OVERVIEW

- Investing up to US\$2.5 million to earn an **option to acquire a 20% interest** by paying a further US\$12.5 million
- The project is located in the state of **Rio Grande do Sul in Brazil**
- Continuous sequence of dunes and beach sands extending for 80km
- Four continuous deposits; **Retiro, Estreito, Capão do Meio and Bujuru**
- **Exploration target** for Retiro and Bujuru of 500 to 720Mt @ 3.2 to 4.0% HM¹
- Heavy mineral grades of 3 - 10%, low slimes (<5%) and 2 - 10m thick
- **10,000m drilling campaign** commencing Q4 2023
- Excellent existing infrastructure; ports, roads, power
- Established industrial area – high quality workforce
- High quality local partner



Reference:

1. See ASX Announcement: "\$30m Share Placement and Entitlement Issue To Advance Sheffield Growth Strategy" of 28 February 2023.

FULLY FUNDED TO EXECUTE PROPOSED WORK PROGRAM

A\$24m cash balance at end of Q3 2023, with adequate proceeds to fund work programs extending throughout CY2025



Reference:
 1. See ASX Announcement: “\$30m Share Placement and Entitlement Issue To Advance Sheffield Growth Strategy” of 28 February 2023 for a more detailed summary of the RGM Option Agreement.
 2. First payment of \$US1million for South Atlantic Option paid on 10 March 2023
 3. Assumes part year 2023 (\$1m) plus \$2m p.a. for CY2024 and CY2025

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