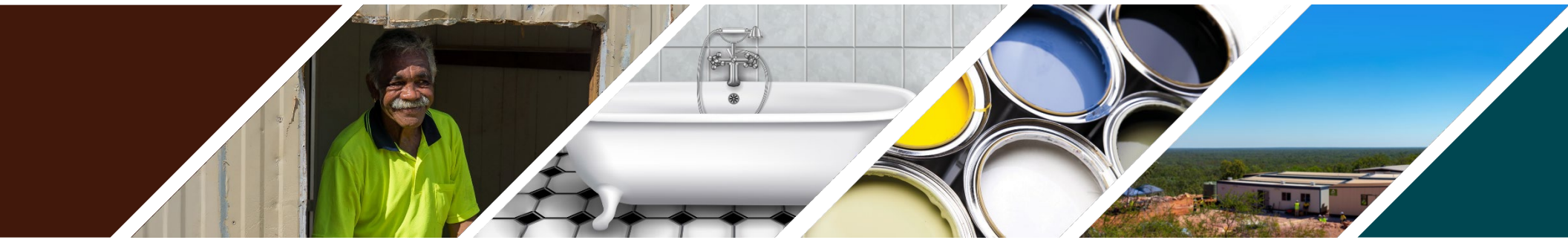
Thunderbird Mineral Sands Project

Kimberley Mineral Sands - Bankable Feasibility Study



24 March 2022

Notice and Disclaimer

Summary information in relation to Sheffield

This Kimberley Mineral Sands Joint Venture Bankable Feasibility Study (KMS BFS) contains summary information about Sheffield Resources Limited (ACN 125 811 083) (Company or Sheffield), its affiliates and their activities which is current as at the date of this KMS BFS, unless otherwise indicated. The information in this KMS BFS remains subject to change without notice, and Sheffield is not responsible for updating, nor does it undertake to update, it. This KMS BFS should be read in conjunction with the announcement "Thunderbird BFS Results, Financing and Project Update" dated 24 March 2022 and 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.

Industry data

Certain market and industry data used in connection with or referenced in this KMS BFS, 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

Information and documentation which forms the basis of the KMS BFS in relation to Mineral Resources, Ore Reserves and metallurgy and process design has previously been reported as detailed below. 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, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. In the case of this announcement entitled "Thunderbird BFS Results, Financing and Project Update" dated 24 March 2022 , 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.

Competent Persons Statement

The information in this KMS BFS that relates to the Ore Reserves is based on, and fairly represents, information and supporting documentation prepared by Mr Per Scrimshaw, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Scrimshaw is employed by Entech Pty Ltd 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 Scrimshaw consents to the inclusion in this KMS BFS of the matters based on his information in the form and context in which it appears.

The information in this KMS BFS that relates to the Mineral Resources is based on, and fairly represents, information and supporting documentation prepared by Mrs Christine Standing, a Competent Person who is a Member of the Australian Institute of Geoscientists (AIG) and the Australasian Institute of Mining and Metallurgy (AusIMM). Mrs Standing is a full-time employee of Optiro Pty Ltd and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which she 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'. Mrs Standing consents to the inclusion in this KMS BFS of the matters based on her information in the form and context in which it appears.

The information in this KMS BFS that relates to Exploration Results is based on, and fairly represents, information and supporting documentation prepared by Mr Seb Gray, a Competent Person who is a Member of Australian Institute of Geoscientists (AIG). Mr Gray is an employee of Sheffield Resources Ltd 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 Gray consents to the inclusion in this KMS BFS of the matters based on his information in the form and context in which it appears.

The information in this KMS BFS that relates to the Thunderbird Mineral Resource is based on, and fairly represents, information and supporting documentation prepared under the guidance of Mr Mark Teakle, a Competent Person who is a Member of the Australian Institute of Geoscientists (AIG) and the Australasian Institute of Mining and Metallurgy (AusIMM). Mr Teakle is a former employee of Thunderbird Operations Pty Ltd 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 Teakle consents to the inclusion in this KMS BFS of the matters based on his information in the form and context in which it appears.

The Competent Persons for reporting of Mineral Resources, Ore Reserves and Exploration Results in the relevant original market announcements are listed below. The Company confirms that the form and context in which the Competent Persons' findings are presented have not been materially modified from the relevant original market announcement.

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 estimates of Mineral Resources, Ore Reserves and Exploration Results, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

Estimates of Mineral Resources and Ore Reserves and Exploration Results

This KMS BFS contains estimates of Ore Reserves and Mineral Resources and information that relates to exploration results.

The Mineral Resources and Ore Reserves have been extracted from Sheffield's ASX releases;

"THUNDERBIRD ORE RESERVE UPDATE" 24 March 2022

"SHEFFIELD DOUBLES MEASURED MINERAL RESOURCE AT THUNDERBIRD" 5 July 2016

"HIGH GRADE MAIDEN MINERAL RESOURCE AT NIGHT TRAIN" 31 January 2019

"MINERAL RESOURCE AND ORE RESERVE STATEMENT" 24 September 2019

"THUNDERBIRD ORE RESERVE UPDATE" 31 July 2019

"THUNDERBIRD ORE RESERVE UPDATE" 16 March 2017

The exploration results have been extracted from Sheffield's ASX releases;

"NEW LARGE HIGH GRADE DISCOVERY SOUTH OF THUNDERBIRD" 13 November 2018

"EXCEPTIONAL RESULTS CONFIRM MAJOR DISCOVERY AT NIGHT TRAIN" 9 October 2018

A copy of these announcements is available at http://www.sheffieldresources.com.au/irm/content/asx-announcements1.aspx?RID=398 or www.asx.com.au.

Bankable Feasibility Study ("BFS")

This KMS BFS may also contain information that relates to a previous Bankable Feasibility Study. This information was extracted from the following ASX releases by Sheffield:

"THUNDERBIRD BFS DELIVERS OUTSTANDING RESULTS" 24 March, 2017

"THUNDERBIRD BFS RESULTS, FINANCING AND PROJECT UPDATE" dated 24 March 2022

"BFS UPDATE MATERIALLY IMPROVES PROJECT ECONOMICS" 31 July 2019

Other Extracted Information

In addition to those ASX releases referred to above, this document contains information extracted from the following ASX releases:

"QUARTERLY ACTIVITIES REPORT" and "APPENDIX 5B CASHFLOW REPORT" 25 January 2022

"BINDING OFFTAKE SECURED FOR THUNDERBIRD ZIRCON CONCENTRATE" 8 June 2021

"SHEFFIELD AND YANSTEEL EXECUTE BINDING JV AGREEMENTS" 6 January 2021

"TRANSFORMATIONAL THUNDERBIRD JOINT VENTURE" 11 August 2020

"MINING LEASE GRANTED OVER THUNDERBIRD MINERAL SANDS PROJECT" 26 September 2018

"NAIF COMPLETES THUNDERBIRD STRATEGIC ASSESSMENT" 19 November 2021

"JOINT VENTURE COMPLETION AND BOARD RESTRUCTURE" 12 March 2021

"FIRB ENABLES $130M THUNDERBIRD INVESMENT BY YANSTEEL" 15 December 2020

"NATIVE TITLE AGREEMENT SIGNED BY TRADITIONAL OWNERS" 1 November 2018

"FEDERAL ENVIRONMENTAL APPROVAL GRANTED FOR THUNDERBIRD" 28 September 2018

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Notice and Disclaimer

Not financial product advice

This Kimberley Mineral Sands Bankable Feasibility Study (KMS BFS), and the information provided in it, does not constitute, and is not intended to constitute, investment or financial product advice (nor tax, accounting or legal advice). This KMS BFS should not be relied upon as advice to investors or potential investors and has been prepared without taking account of any person's individual investment objectives, financial situation or particular needs. Any investment decision should be made based solely upon appropriate due diligence. Before making an investment decision, prospective investors should consider the appropriateness of the information having regard to their own investment objectives, financial situation and needs and seek legal, accounting and taxation advice appropriate to their jurisdiction. Recipients of this KMS BFS are advised to consult their own professional advisers. An investment in any listed company, including Sheffield, is subject to significant risks, both known and unknown and including (without limitation) risks of loss of income and capital. A number of risks are beyond the control of Sheffield.

Effect of rounding

A number of figures, amounts, percentages, estimates, calculations of value and fractions in this KMS BFS are subject to the effect of rounding. Accordingly, the actual calculation of these figures may differ from the figures set out in this KMS BFS.

Financial data

All currency amounts are in Australian Dollars ($ or A$) unless otherwise stated.

Future performance, forward-looking statements and key risks

This document is to be read in conjunction with the information contained in the “Thunderbird Ore Reserve Update”, “Thunderbird BFS, Financing and Project Update” and “KMS Executes EPC Construction and Offtake Agreements” announcements dated 24 March 2022.

The “Thunderbird BFS, Financing and Project Update” announcement dated 24 March 2022 discloses risk factors relevant to Sheffield, Kimberley Mineral Sands Pty Ltd and the Thunderbird Mineral Sands Project which are relevant to making an assessment of this KMS BFS.

This KMS BFS 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 Project and the future operation of Sheffield, the Thunderbird Project and the Kimberley Mineral Sands Joint Venture.

To the extent that this KMS BFS 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.

Any forward-looking statements are also based on assumptions and contingencies which are subject to change without notice and which may ultimately prove to be materially incorrect, as are statements about market and industry trends, which are based on interpretations of current market conditions. Investors should consider the forward-looking statements contained in this KMS BFS in light of those disclosures and not place reliance on such statements. The forward-looking statements in this KMS BFS are not guarantees or predictions of future performance and may involve significant elements of subjective judgment, assumptions as to future events that may not be correct, known and unknown risks, uncertainties and other factors, many of which are outside the control of Sheffield. As a result, there can be no assurance that actual outcomes will not materially differ from these forward-looking statements. The forward-looking statements are based on information available to Sheffield as at the date of this KMS BFS. Except as required by law or regulation, Sheffield undertakes no obligation to provide any additional or updated information or update any forward-looking statements, whether as a result of new information, future events or results or otherwise.

Indications of, and guidance on, future performance are also forward-looking statements, and include statements in this KMS BFS regarding anticipated mine life, expected or indicative costs, indicative revenues, indicative production outputs and anticipated production dates. To the maximum extent permitted by law, Sheffield, and its respective directors, officers, employees, advisers, agents, affiliates and intermediaries (together, "Relevant Parties") disclaim any obligation or undertaking to release any updates or revisions to the information to reflect any change in expectations or assumptions, or any change in events, conditions or circumstances on which any such information or statement is based. Nothing in this KMS BFS will, under any circumstances (including by reason of this KMS BFS remaining available and not being superseded or replaced by any other KMS BFS or publication with respect to Sheffield or the subject matter of this KMS BFS), create an implication that there has been no change in the affairs of Sheffield since the date of this KMS BFS.

To the maximum extent permitted by law, the Relevant Parties make no representation or warranty (express or implied) as to the fairness, accuracy, reliability, currency, reasonableness or completeness of the contents of this KMS BFS or any other information (whether written or verbal) that the Relevant Parties otherwise provide to the recipient. The recipient may not rely on the contents of the KMS BFS or any information in it in making any decision to invest or acquire an interest in Sheffield. To the maximum extent permitted by law, the Relevant Parties are not liable for any direct, indirect or consequential loss or damage suffered (whether foreseeable or not) by any person (whether arising from negligence or otherwise) as a result of relying on this KMS BFS or the information in it, any errors therein or omissions therefrom, or any other written or oral communications transmitted to the recipient in the course of its evaluation of the Thunderbird Project, or otherwise in connection with this KMS BFS or the information in it.

Investment risk

As noted above, an investment in Sheffield securities is subject to investment and other known and unknown risks, a number of which are beyond the control of Sheffield. Sheffield (nor its related bodies corporate) does not guarantee any particular rate of return or the performance of the Company, Kimberley Mineral Sands Pty Ltd or the Thunderbird Project, nor does it guarantee the repayment of capital from Sheffield or any particular tax treatment. Prospective investors should make their own enquiries and investigations regarding all information in this KMS BFS, including but not limited to the assumptions, uncertainties and contingencies which may affect future operations of Sheffield and the Thunderbird Project and the impact that different future outcomes may have on Sheffield and the Thunderbird Project.

Not an Offer

This KMS BFS is for information purposes only and does not constitute or form any part of any offer or invitation to sell or issue, or any solicitation of any offer to purchase or subscribe for, any securities in the Company in any jurisdiction. This KMS BFS and its contents must not be distributed, transmitted or viewed by any person in any jurisdiction where the distribution, transmission or viewing of this document would be unlawful under the securities or other laws of that or any other jurisdiction.

Kimberley Mineral Sands

Key Objectives - Bankable Feasibility Study

- Achieve initial direct capital expenditure within previous Thunderbird 2019 BFSU estimate
- Improve Project NPV and IRR
- Financing strategy balances appropriately leveraged project financing and equity availability
- Leverage off offtake & JV partner (Yansteel) downstream ilmenite processing capability and strategy
- Utilise existing commercial relationships to inform BFS assumptions with executed and negotiated agreements
- Mitigate construction and operation execution risk via completion of early works programs and trial mining activities
- Maintain Thunderbird “ready to mine” project approvals status
- Engage with key stakeholders to enhance project outcomes

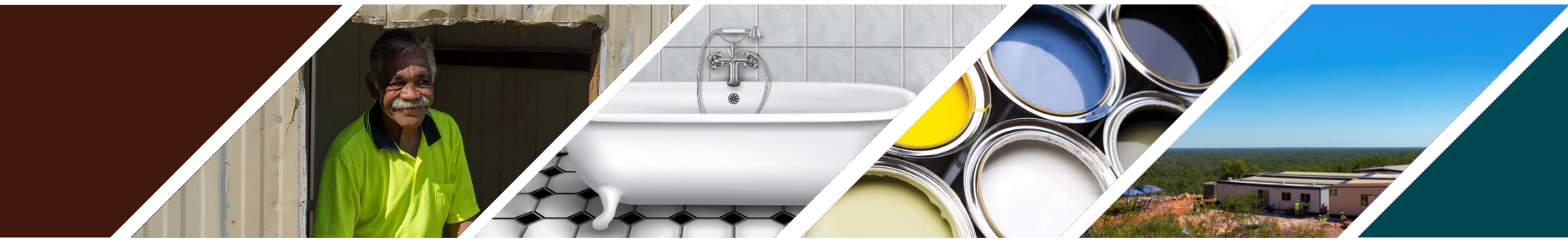
BFS Contributors & Partners

ATC Williams	• Tailings Management
entech.	• JORC 2012 Ore Reserve
GR	• Process and non process infrastructure design; CAPEX estimation
INC ROBBINS	• Bulk Metallurgical test work and analysis
Infinity Corporate Finance	• BFS financial modelling
MBS ENVIRONMENTAL	• Environmental Approval and assessments
Optiro	• Resource Estimation
srk consulting	• Independent Technical Expert Review
TZMI	• Independent Technical Expert Review • Independent Market Study

SECTION I

Kimberley Mineral Sands

BFS Summary Outcomes



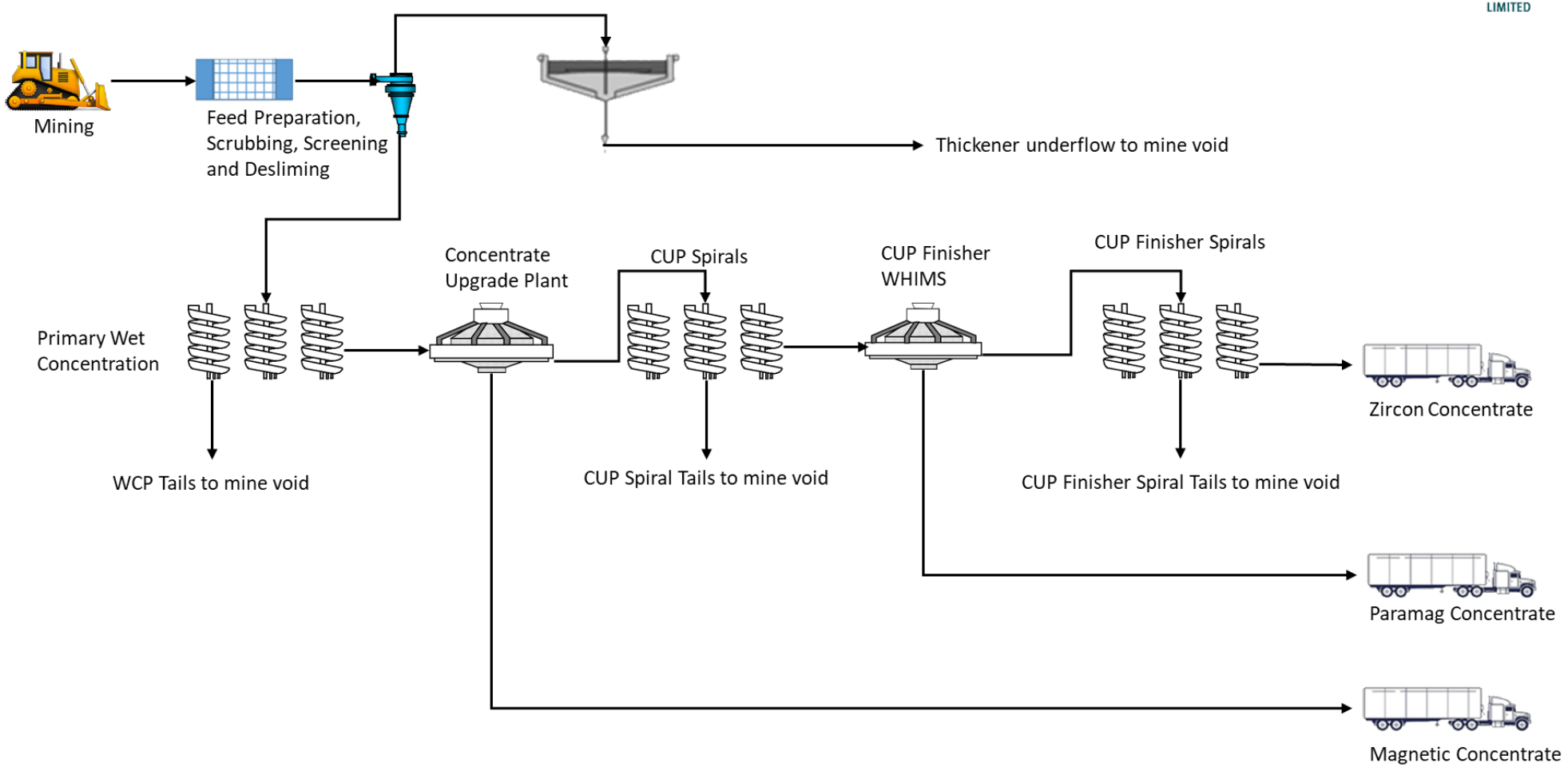
Kimberley Mineral Sands
Bankable Feasibility Study Outcomes

Metric	2022 BFS	2019 BFSU[1]	2017 BFS[2]
NPV_8 post-tax	**A$1.28B**	A$0.98B	A$0.62B
IRR post-tax	**27.5%**	24.0%	20.6%
Project Capital (Stage 1)	**A$361m[4]**	A$392m	A$463m
Total Funding Requirement (Stage 1)	**A$484m**	A$478m	A$579m
Life of Mine (LOM) Revenue	**A$16.8B**	A$15.1B	A$13.6B
LOM Operating Costs	**A$7.7B**	A$7.2B	A$7.6B
EBITDA	**A$8.1B**	A$6.8B	A$5.1B
Revenue to Cost Ratio (Year 1 - 10)[3]	**2.4**	2.3	2.1
Capex Payback (Stage 1&2; years)	**5.00**	5.25	6.00
Product sales (avg kt pa; all products)	**1,424**	1,163	775
Process Rate (Stage 1; tonnes per hr)	**1,085**	1,085	788
Mine Life	**36 years**	37 years	42 years
Long Term Average FX Rate (A$/US$)	**0.75**	0.75	0.75
Long Term Zircon Price - FOB (TZMI)	**US$1,516**	US$1,469	US$1,387

- Robust Stage 1 & 2 economics
- Simple flowsheet with ilmenite circuit and LTR removed
- Significant improvements in key metrics 2022 BFS vs 2019 BFSU
- Initial project capital reduced
- Long life project set to deliver significant benefits to all stakeholders

Note:
1. ASX Announcement *"BFS Update Materially Improves Project Economics"* 31 July 2019
2. ASX announcement : "*Thunderbird BFS Delivers Outstanding Results" 24 March 2017*
3. *Excludes royalties and taxes*
4. *Includes approximately $36m expended to March 2022*

Thunderbird Flowsheet (Stage 1)

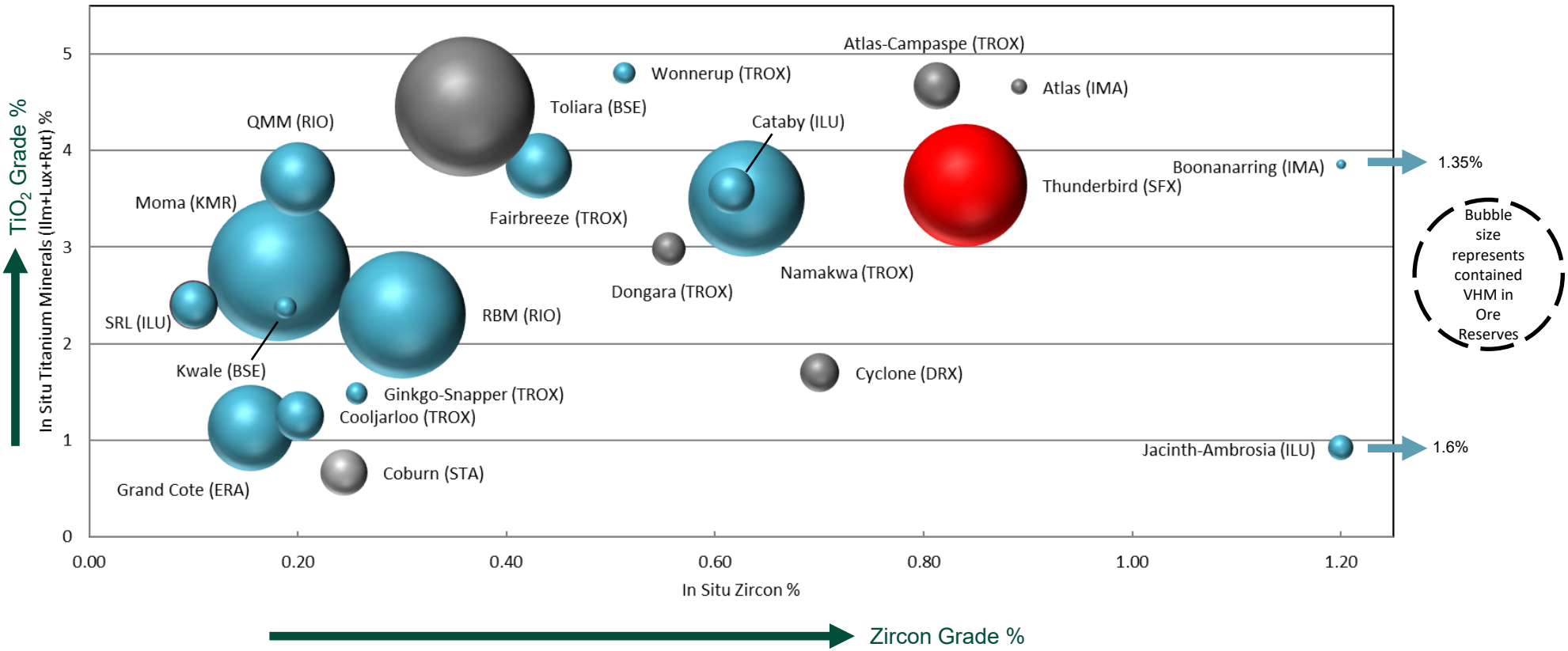


- Low risk, simple flowsheet focussed on delivery of concentrate products to market
- Removal of LTR – avoiding value chain duplication and leveraging off Yansteel's downstream capacity to process a range of ilmenites
- Substantial capital and operating cost removal (less energy, less infrastructure)
- Offtake secured on a take or pay, market based pricing structure for ~80% of Stage 1 product revenue
- Magnetic Concentrate offtake includes an initial 5 year fixed price period for 38.5% TiO_2 content; negotiated market pricing Year 6 onwards
- Stage 2 design assumes upsizing and/or duplication of Stage 1 flowsheet elements

Thunderbird – large, high grade ore body … in a low risk jurisdiction

Ore Reserves and Grade for selected mineral sands deposits [1,2,3]

- Large, mature mineral sands deposits globally typically show accelerating grade depletion trend with each new published Ore Reserve update
- The highest grade and most significant zircon producing mine, Jacinth-Ambrosia (Iluka) is nearing the end of its mine life
- The Zulti-South Project (currently on hold) is required to sustain RBM in the medium term
- Increasing throughput and production rates at mature operations are accelerating the depletion of Ore Reserves and mine life

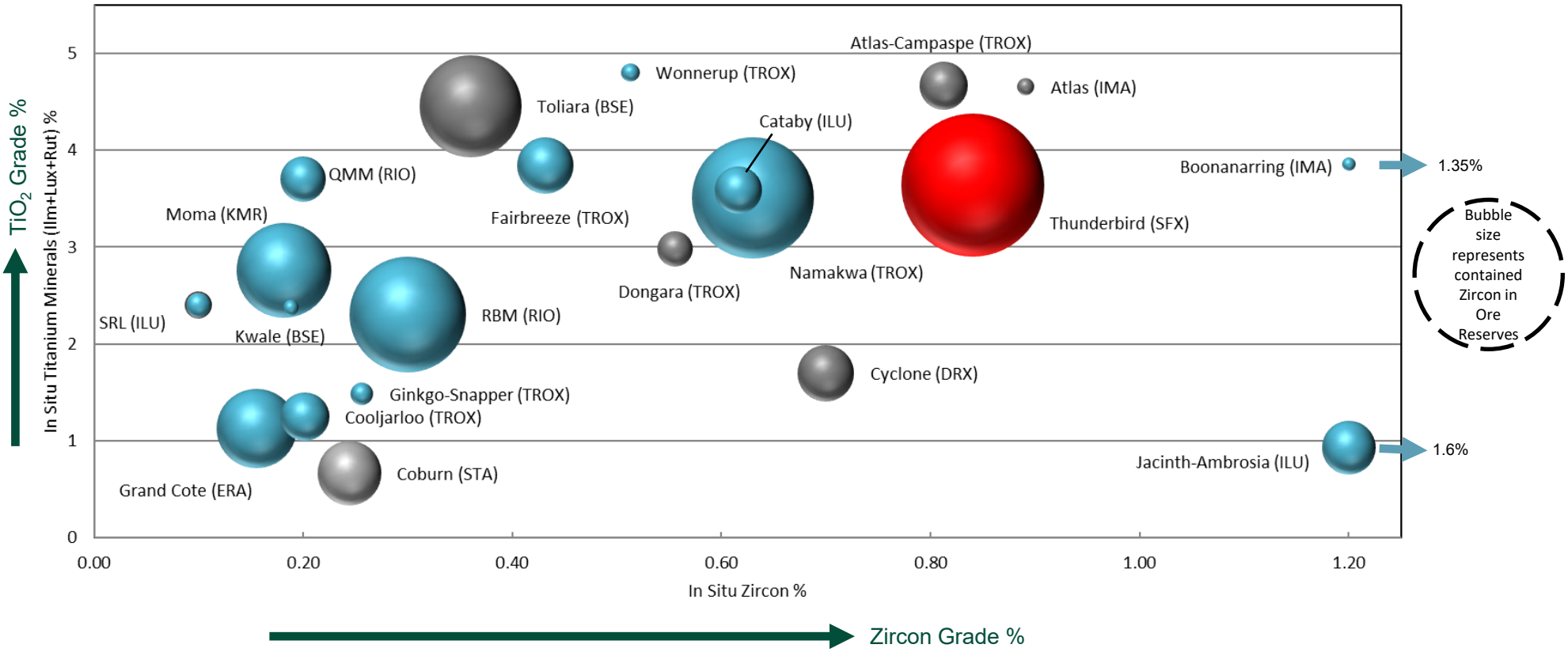


Note:
1. Thunderbird Ore Reserve as published on the ASX on 24 March 2022. Thunderbird Ore Reserves ranked against latest published Ore Reserves of current mineral sands operations and projects under investigation globally. Accordingly, for the operating projects, no account is made for any volumes of product already produced
2. Blue bubbles are operating mines, grey bubbles are Ore Reserves reported but the project is not operating
3. Data compiled by Sheffield from public sources. This analysis does not illustrate the variance in product value between rutile, leucoxene and ilmenite

Thunderbird – the world's largest zircon reserve … in a low risk jurisdiction

Contained zircon in Ore Reserves and Grade for selected mineral sands deposits [1,2,3]

- Thunderbird Ore Reserve contains ~ 6.4Mt of zircon
- The highest grade and most significant zircon producing mine, Jacinth-Ambrosia (Iluka) is nearing the end of its mine life
- The Zulti-South Project (currently on hold) is required to sustain RBM in the medium term
- Increasing throughput and production rates at mature operations are accelerating the depletion of Ore Reserves and mine life

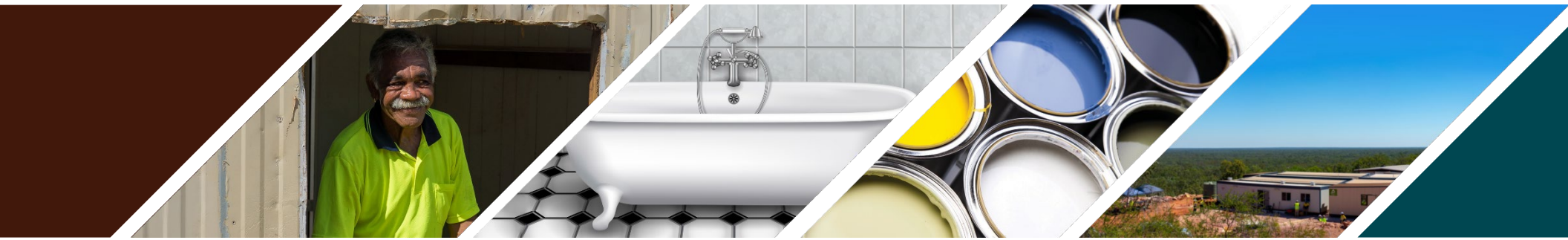


Note:

1. Thunderbird Ore Reserve as published on the ASX on 24 March 2022. Thunderbird Ore Reserves ranked against latest published zircon contained in Ore Reserves of current mineral sands operations and projects under investigation globally. Accordingly, for the operating projects, no account is made for any volumes of product already produced
2. Blue bubbles are operating mines, grey bubbles are Ore Reserves reported but the project is not operating
3. Data compiled by Sheffield from public sources. This analysis does not illustrate the variance in product value between rutile, leucoxene and ilmenite

SECTION II

Financial Information



Total Funding Requirement – Stage 1

Sheffield Resources LIMITED

Stage 1 funding requirement is estimated at approximately A$484 million

Cost estimates based on tendered pricing, definitive engineering and agreed by independent technical experts

Stage 1 upfront capex

Description	Amount (A$m)
Wet Concentrator Plant	64.4
Concentrate Upgrade Plant	26.7
Plant Area Infrastructure & Power Reticulation	17.9
Process Water Systems	11.7
EPCM, Commissioning & Indirects	49.9
Processing	**170.6**
Village Infrastructure	23.3
Mine Access Road	27.7
General Infrastructure	**51.0**
Ops Readiness, village services, G&A and first fills	60.3
Site prep and infrastructure, tailings dam & borefield	31.9
Mining services mobilisation	14.6
Owners Costs	**106.8**
Contingency	**32.8**
Stage 1 Upfront Capex	**361.2**

Estimated total funding requirement

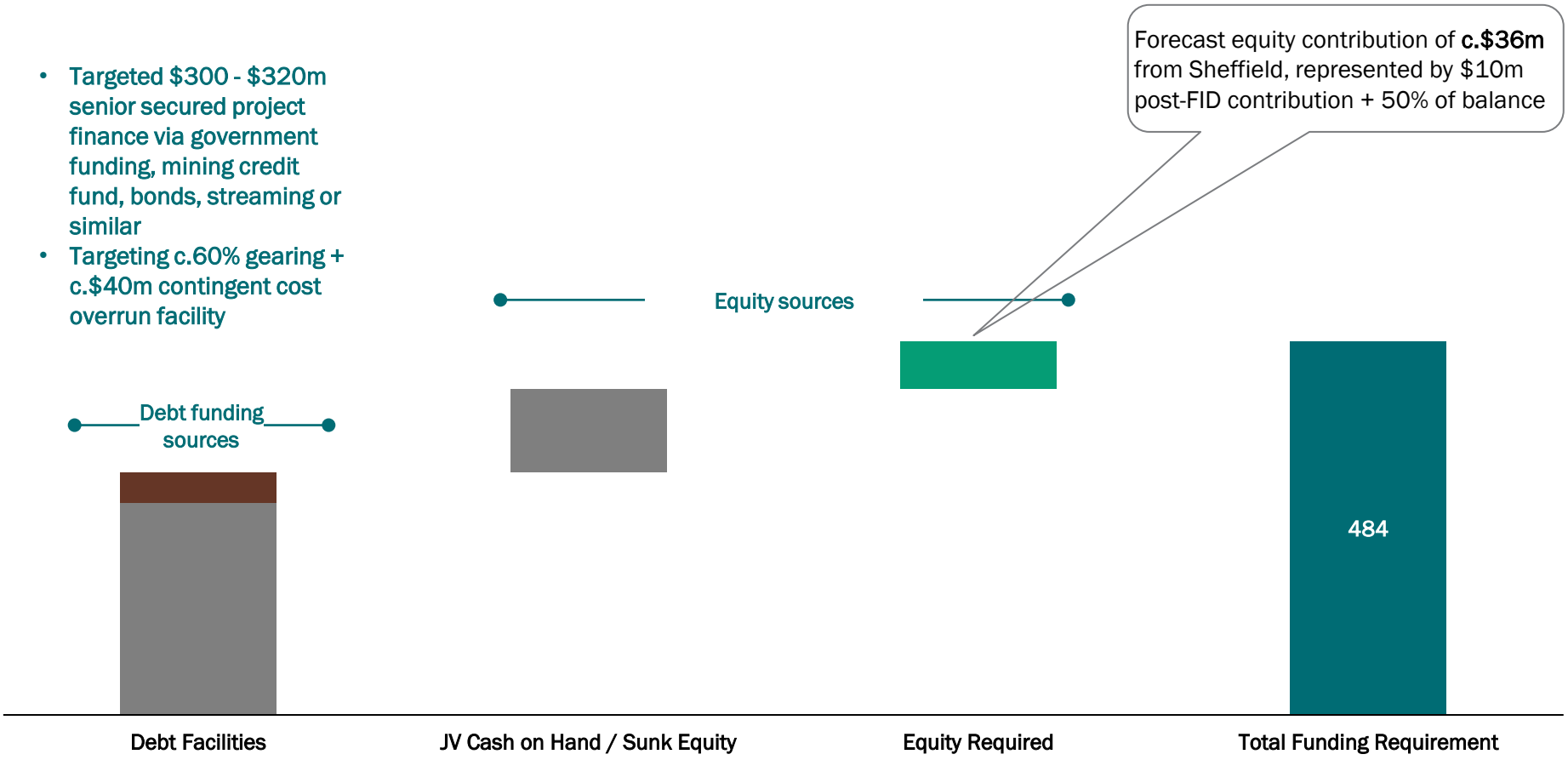
Description	Amount (A$m)	Comments
Processing	170.6	
Infrastructure	51.0	
Owners Costs	106.8	
Contingency	32.8	
Stage 1 Upfront Capex	**361.2**	• Includes 10% contingency
Working Capital	20.4	• Indicative provision during start-up & commissioning
Financing Costs	62.1	• Interest during construction, commitment & upfront fees, advisory & legal fees, independent technical expert costs
Cost Overrun Facility	40.0	• Estimate on direct capex
Total Other Funding Requirements	**122.5**	
Total Uses	**483.7**	

Note:
1. GRES EPC scope encapsulates the A$170.6 of processing costs forecast to be committed
2. Totals may not add to the rows above due to rounding

Proposed Funding Sources – Stage 1

Targeted project financing sources via NAIF and commercial debt tranche with due diligence underway

- Targeted $300 - $320m senior secured project finance via government funding, mining credit fund, bonds, streaming or similar
- Targeting c.60% gearing + c.$40m contingent cost overrun facility



Note:
1. Targeted senior secured project finance facilities are indicative, non-binding and subject to due diligence, approvals and definitive documentation.
2. Equity requirement remains subject to ITE consent and lender review of Base Case Financial Model upon financial closing.

Proposed Project Finance Strategy

KMS targeting senior secured financing package with NAIF and a commercial debt tranche

NAIF Overview

- Northern Australia Infrastructure Facility ("NAIF") is a corporate Commonwealth entity that was established under the NAIF Act 2016 to provide assistance for the construction of infrastructure to benefit Northern Australia
- NAIF have completed non-binding strategic assessment to provide project financing[1]
- Due diligence process approaching completion, supported by SRK & TZMI as commissioned independent technical experts
- Financing subject to due diligence, approvals, documentation and customary conditions precedent
- Indicative commercial terms remain incomplete and confidential

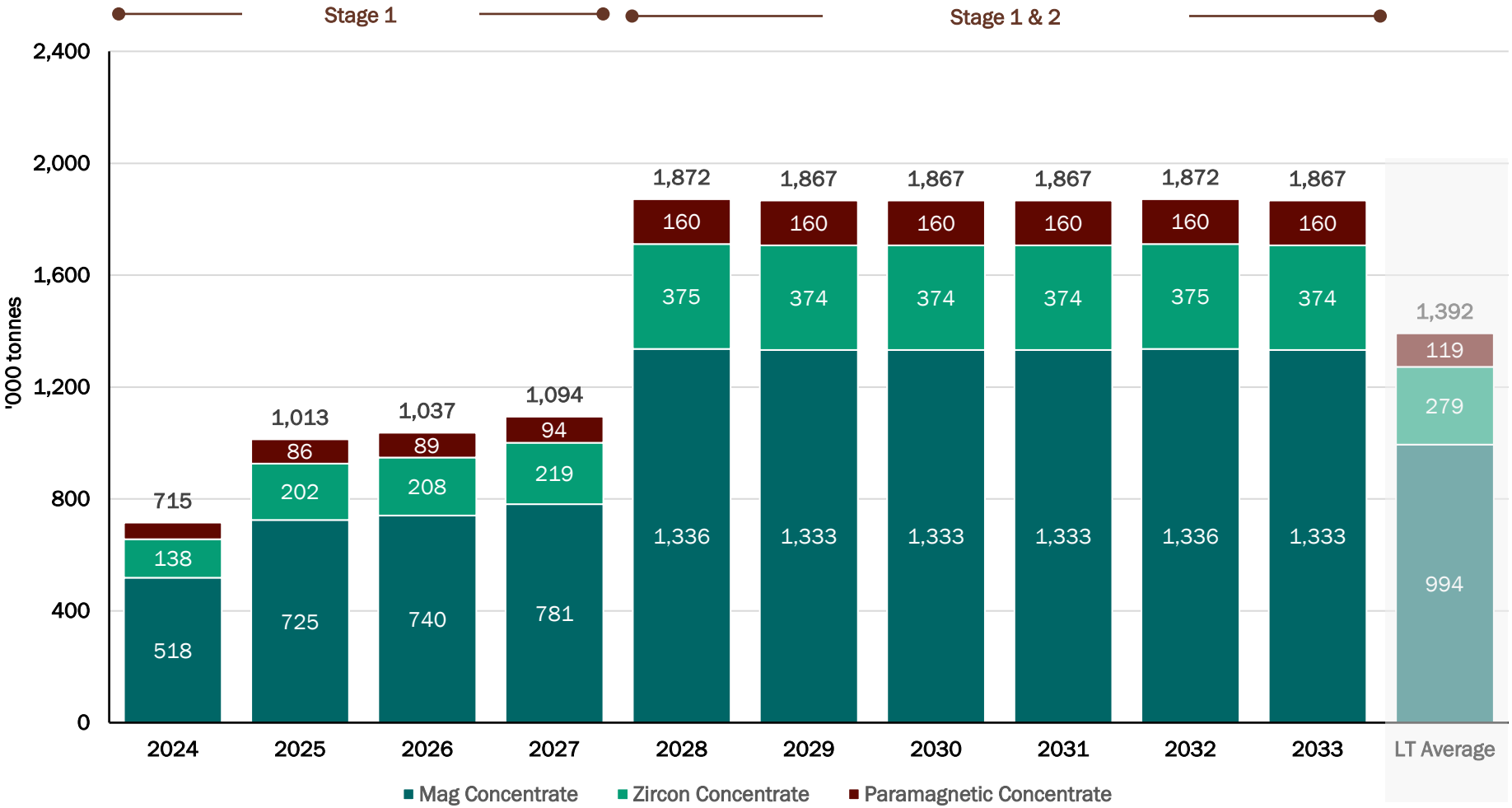
Commercial debt tranche

- Supported by corporate advisers Cutfield Freeman & Co, KMS have sought expressions of interest for a commercial debt tranche
- Expressions of interest sought from mining credit funds, senior secured bond issuers and royalty/streaming providers
- Due diligence process and term sheet negotiations are underway, leveraging off SRK & TZMI as nominated independent technical experts
- Commercial debt tranche selection and definitive documentation targeted for completion by mid-2022, subject to finalisation of due diligence and customary conditions precedent
- Indicative commercial terms remain incomplete and confidential

Note:
1. Refer ASX Announcement "NAIF Completes Thunderbird Strategic Assessment" 19 November 2021

Targeted Production Volumes

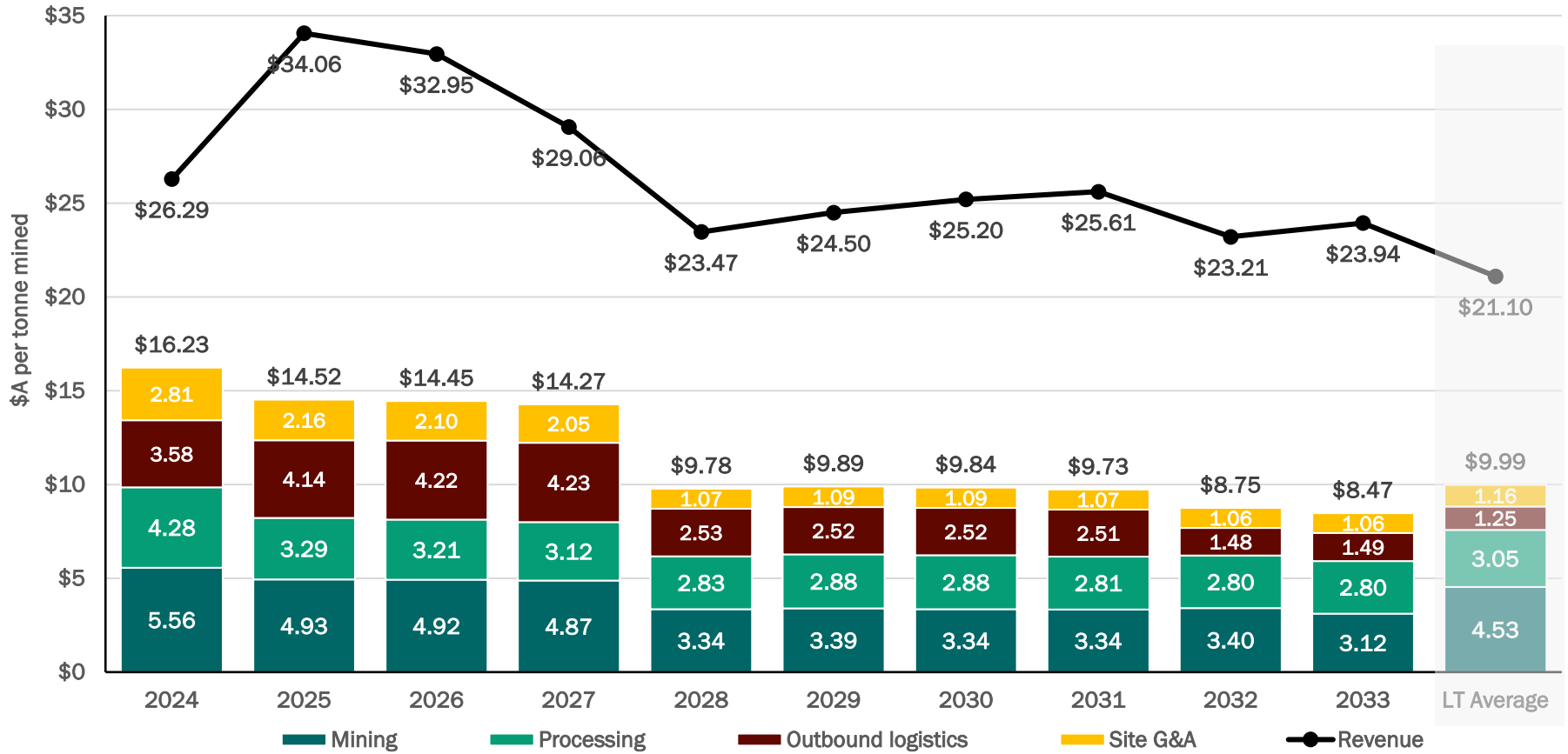
Production volumes average 1.4mt per annum for all products over a 36 year mine life



Note:
This page sets out production profile information for Stage 1 and Stage 2 of the Thunderbird Project. Actual volumes produced will be subject to a number of risks and uncertainties and therefore may vary from this current, indicative profile

A Strong Cash Operating Margin

Revenue and Site Cash Costs A$ per tonne of Ore Mined (Production Years)

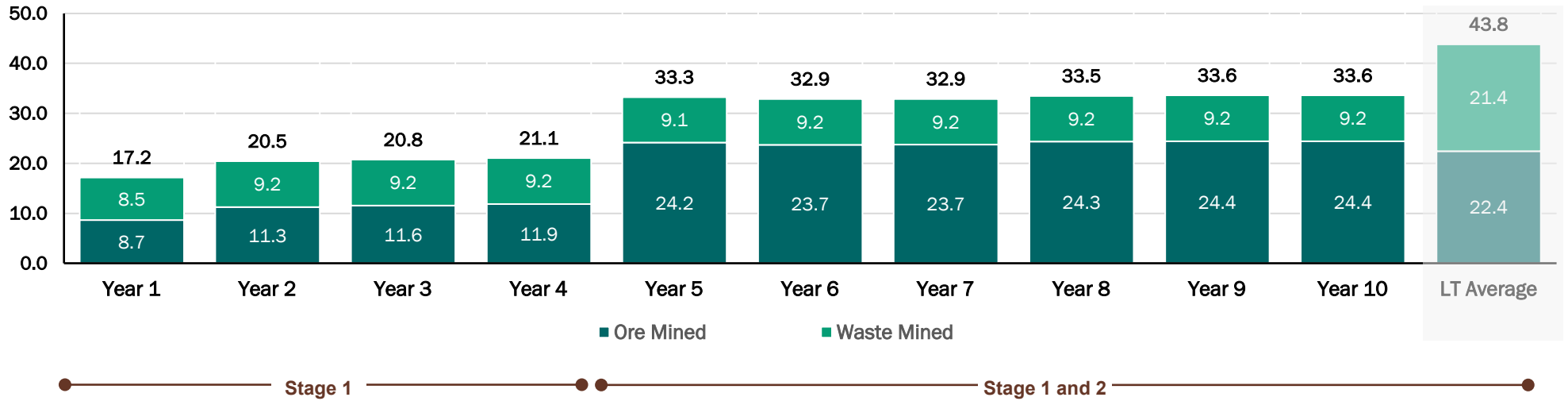


- Very strong cash margin with revenue to cost ratio above 2:1
- Leveraged to zircon production
- Stage 2 (Year 5 onwards) expected to deliver significantly reduced unit costs

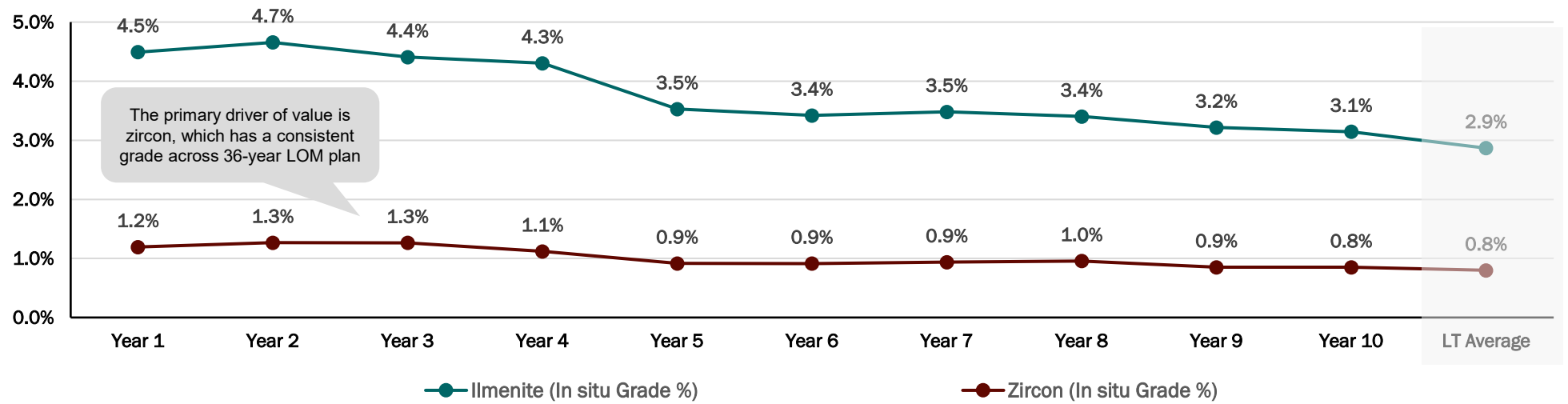
Note:
This page sets out the unit cash operating costs and revenues for the first 10 years of the Thunderbird Project. Such information is derived from the financial model prepared by KMS. Such estimates are based on, among other things, a detailed mine plan, negotiated contracts with key suppliers. Actual outcomes will be subject to a number of risks and uncertainties and therefore may vary from this current, indicative profile

Material Mined and Grade Profile

Material Mined – Ore & Waste (Mt)



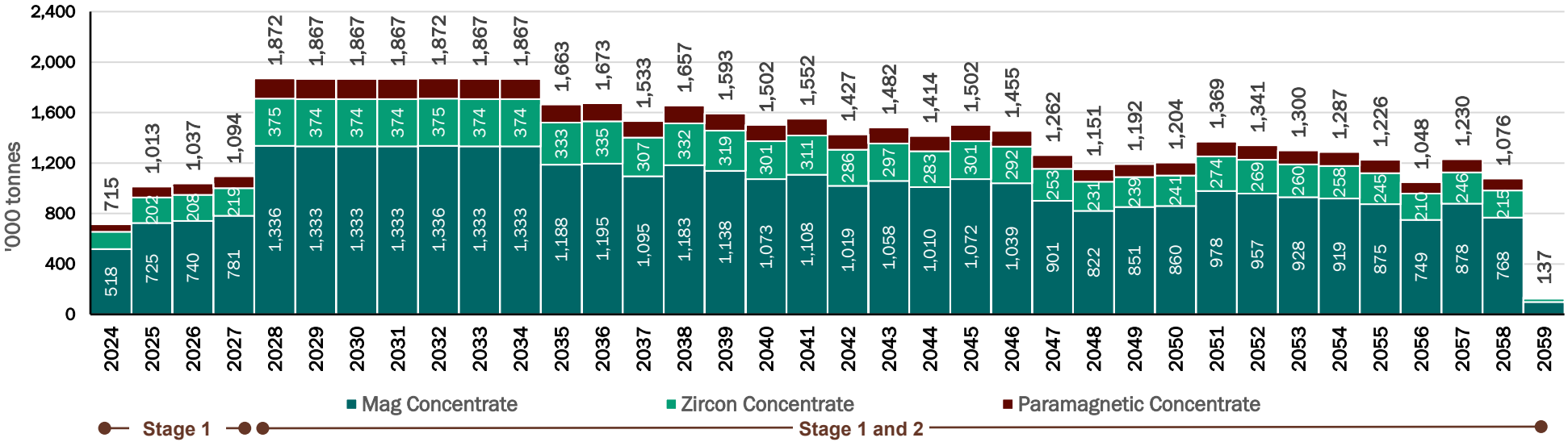
Insitu Grade (as % of Ore Mined)[1]



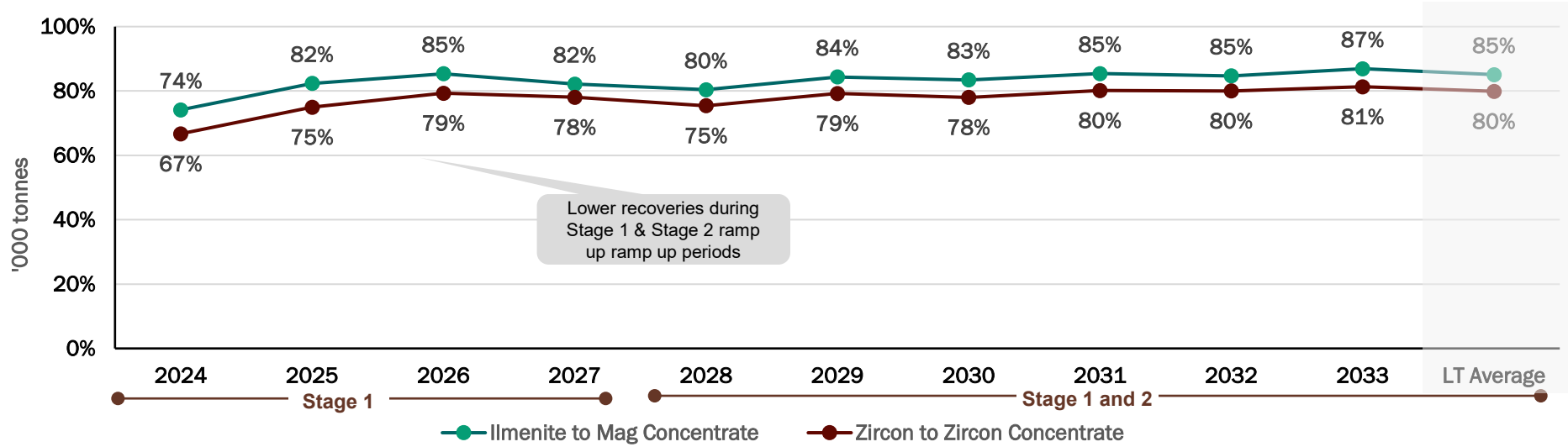
Note:
1. Insitu grade is calculated as the product of HM grade and the percentage of ilmenite, zircon or leucoxene contained within the HM

Production and Recoveries

Final Products – life of mine (kt)

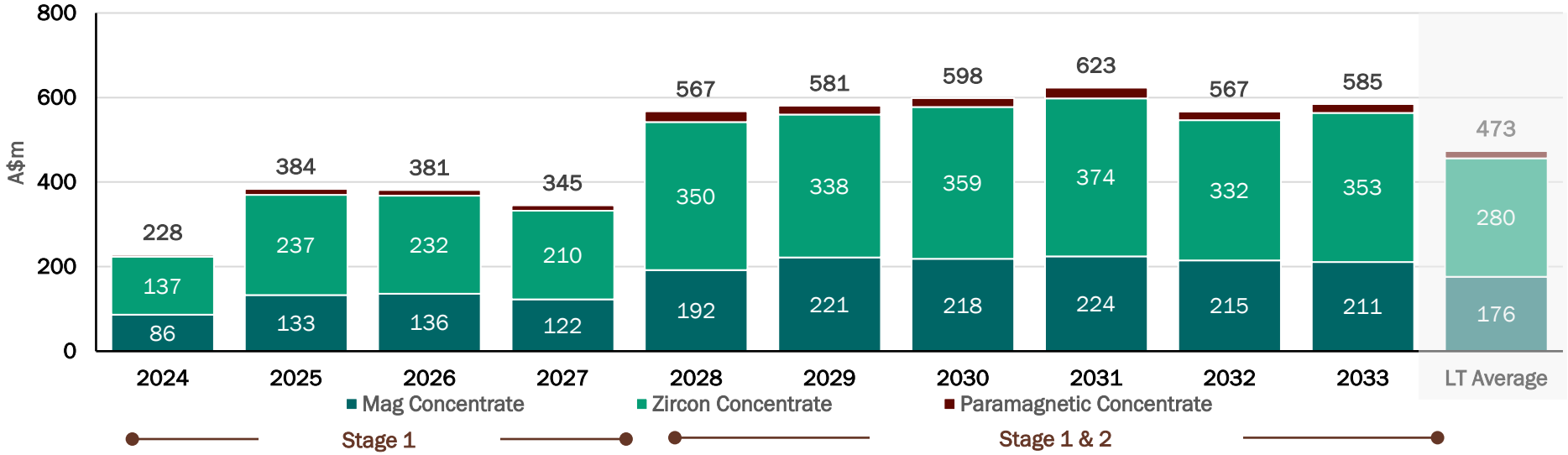


Overall Recoveries (%)

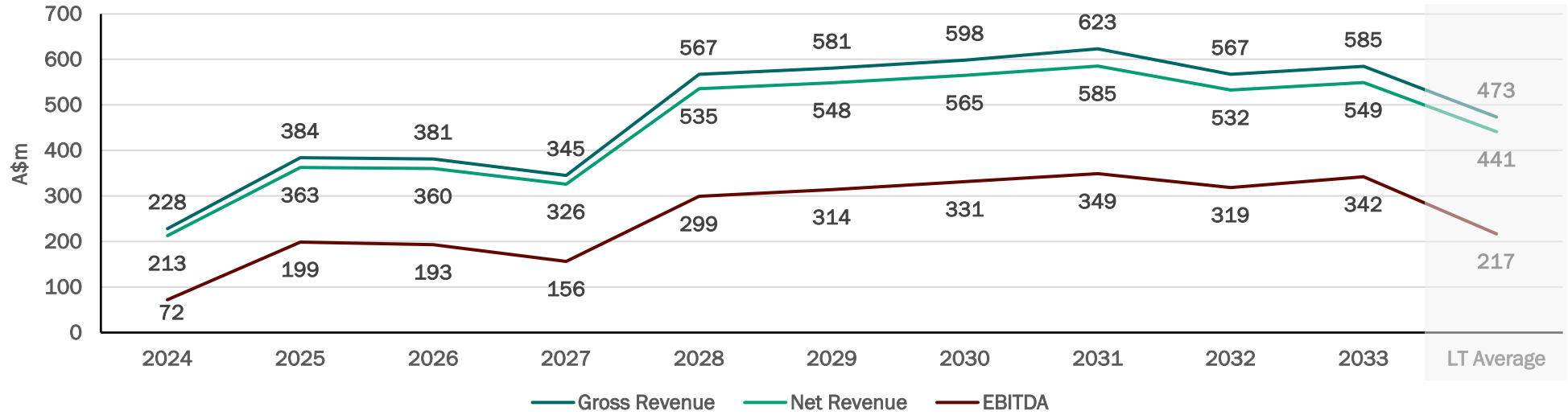


Revenue and EBITDA

Total Gross Revenue by Product



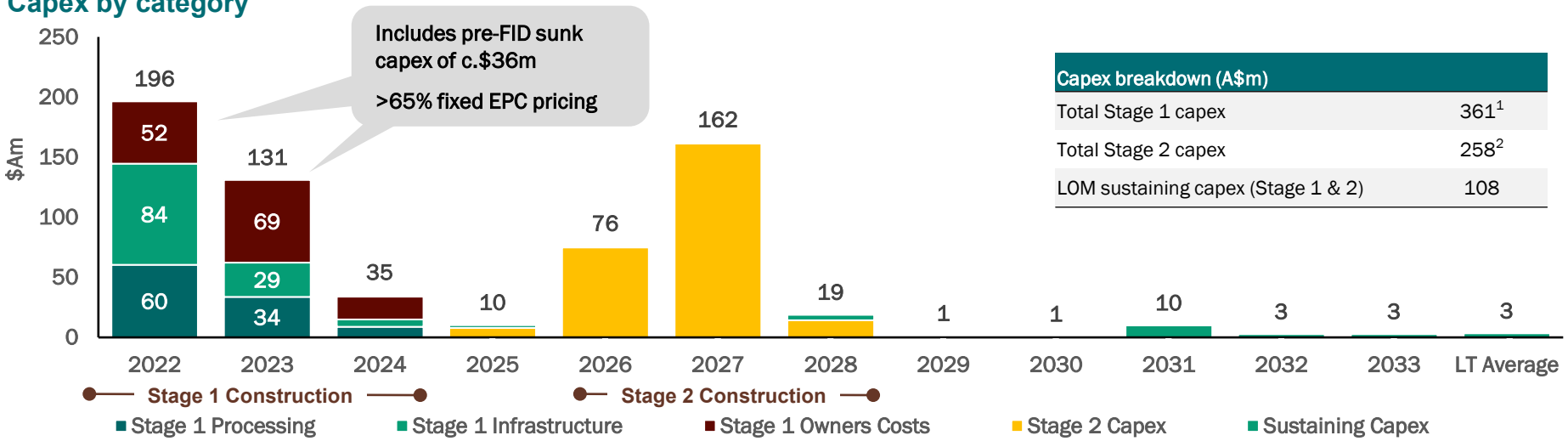
Revenue and EBITDA[1]



Note:
1. Net revenue calculated as gross revenue less royalties

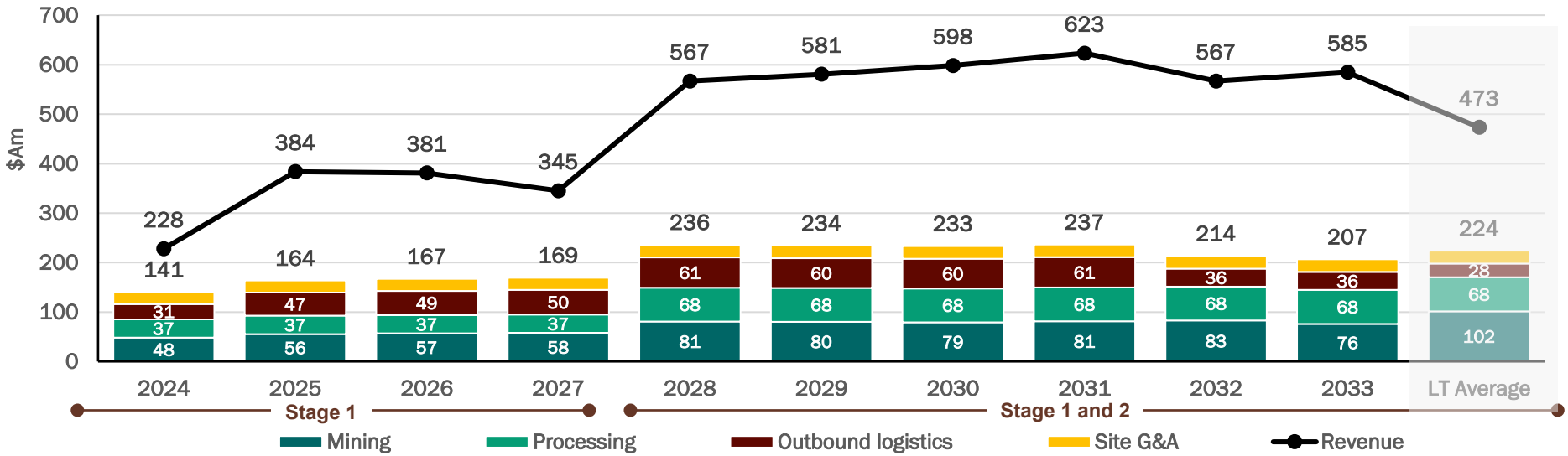
Capex and Operating Margins

Capex by category



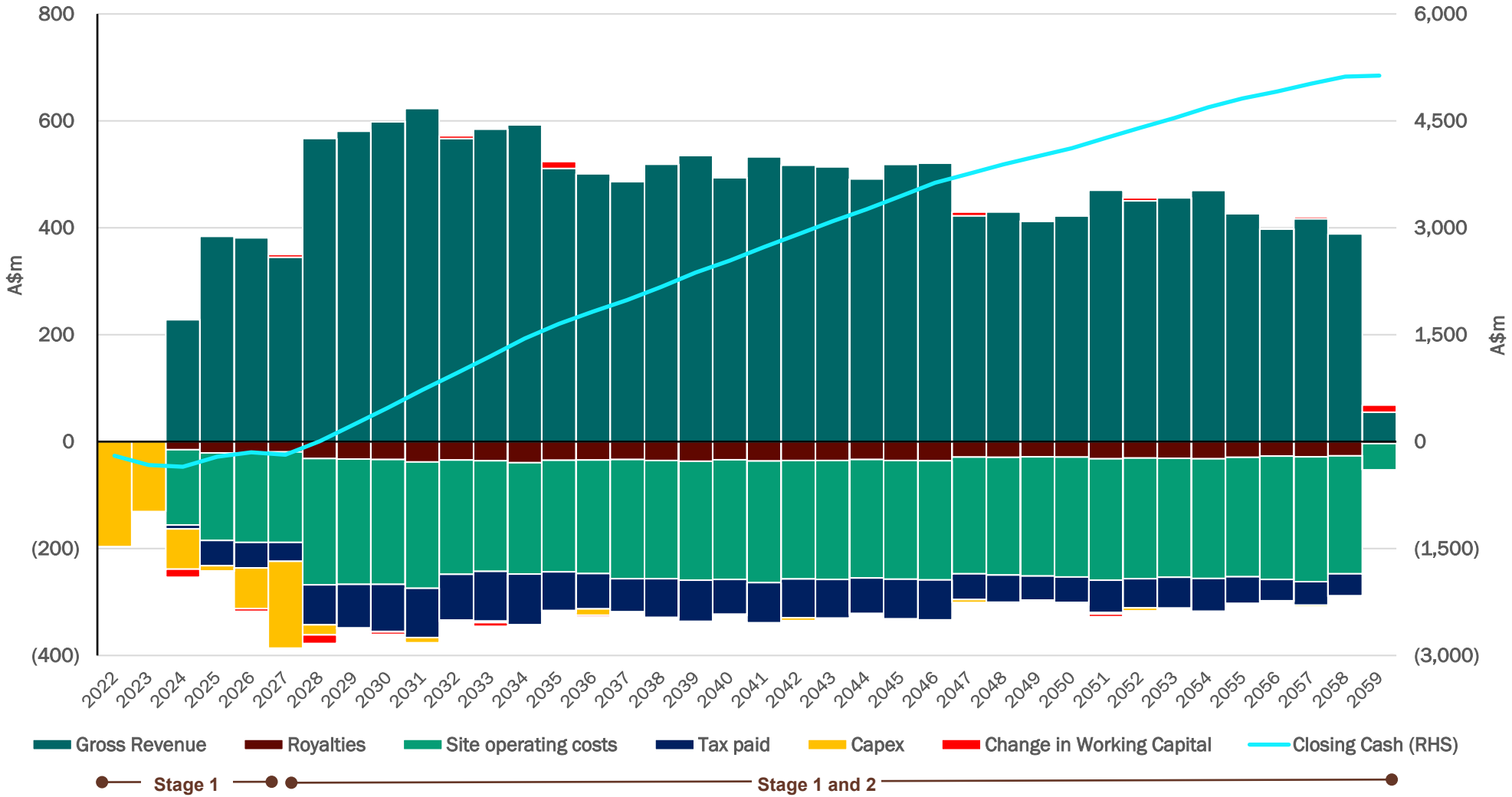
Capex breakdown (A$m)	
Total Stage 1 capex	361[1]
Total Stage 2 capex	258[2]
LOM sustaining capex (Stage 1 & 2)	108

Site Operating Costs & Revenues



Note:
1. Excludes project finance related funding requirements
2. Based on management estimate using BFS Stage 1 capex, inclusive of 25% contingency

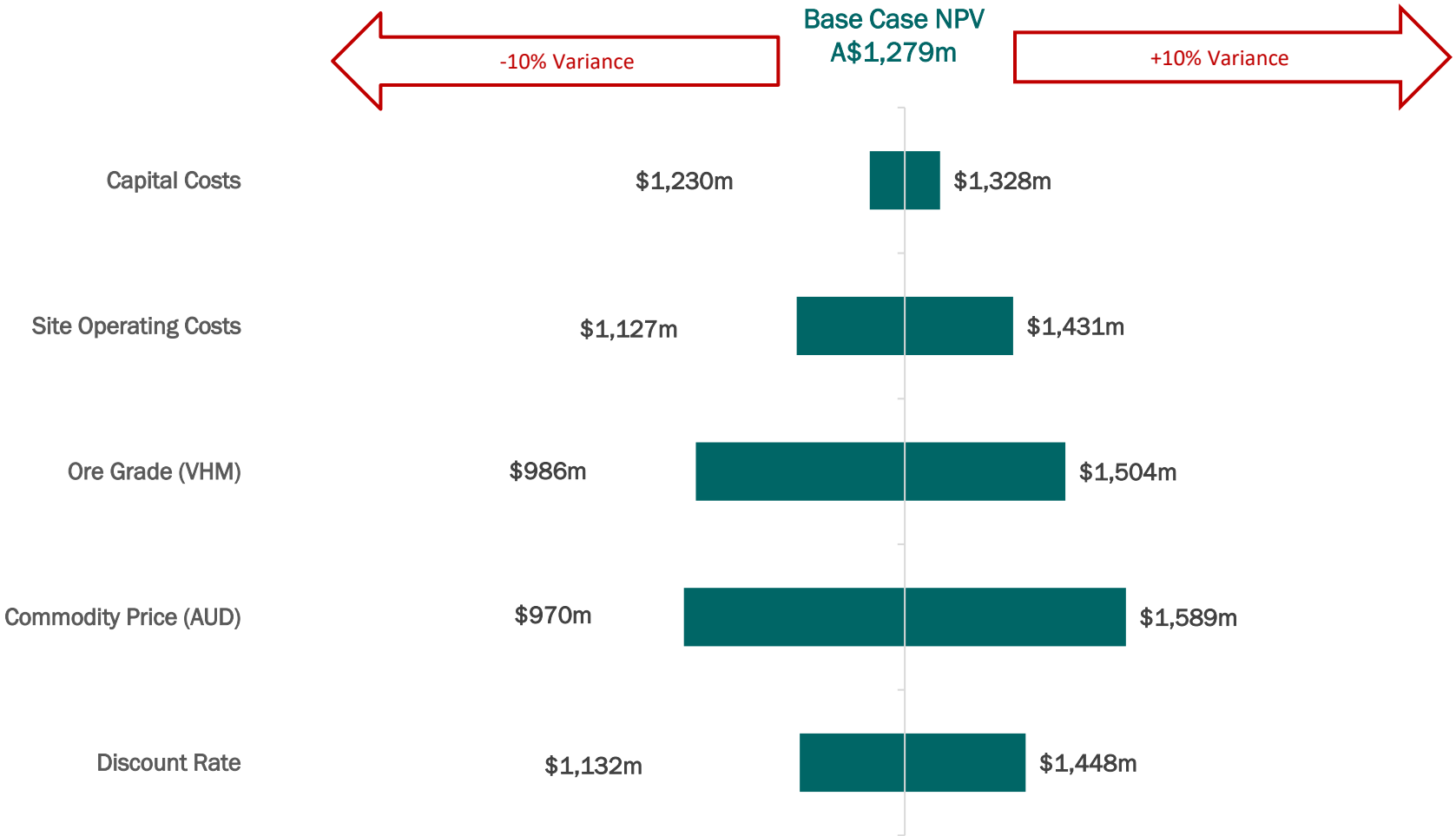
Kimberley Mineral Sands – Cash Flows



Note:
1. Free cash flow calculated as gross revenue, less royalties, site operating costs, tax paid, capex, change in working capital & other working capital related items.

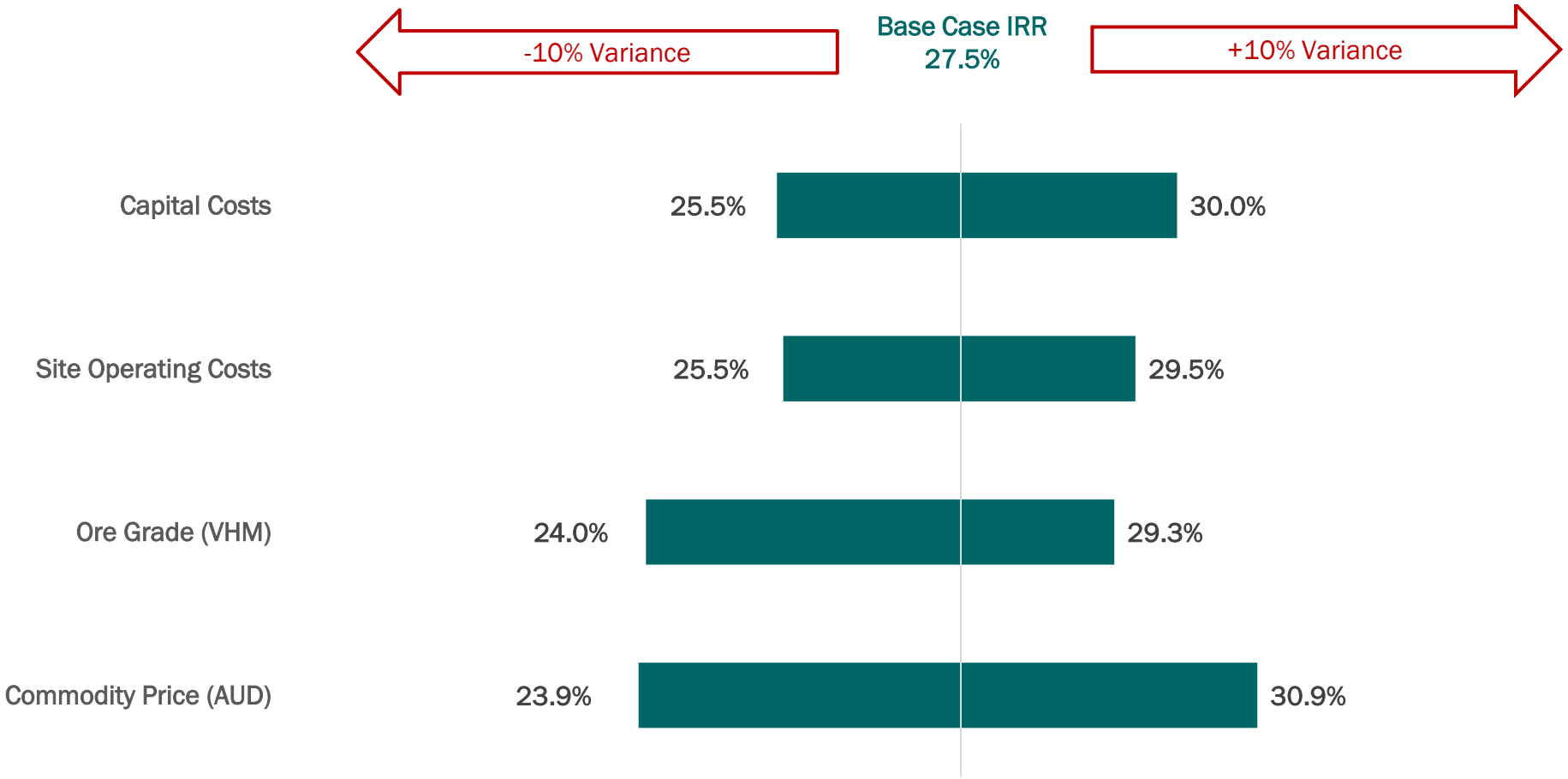
Sensitivity Analysis – NPV Outcomes (A$m)

Pre-finance, post-tax NPV_8 of A$1.28B compared to 10% shifts in key variables



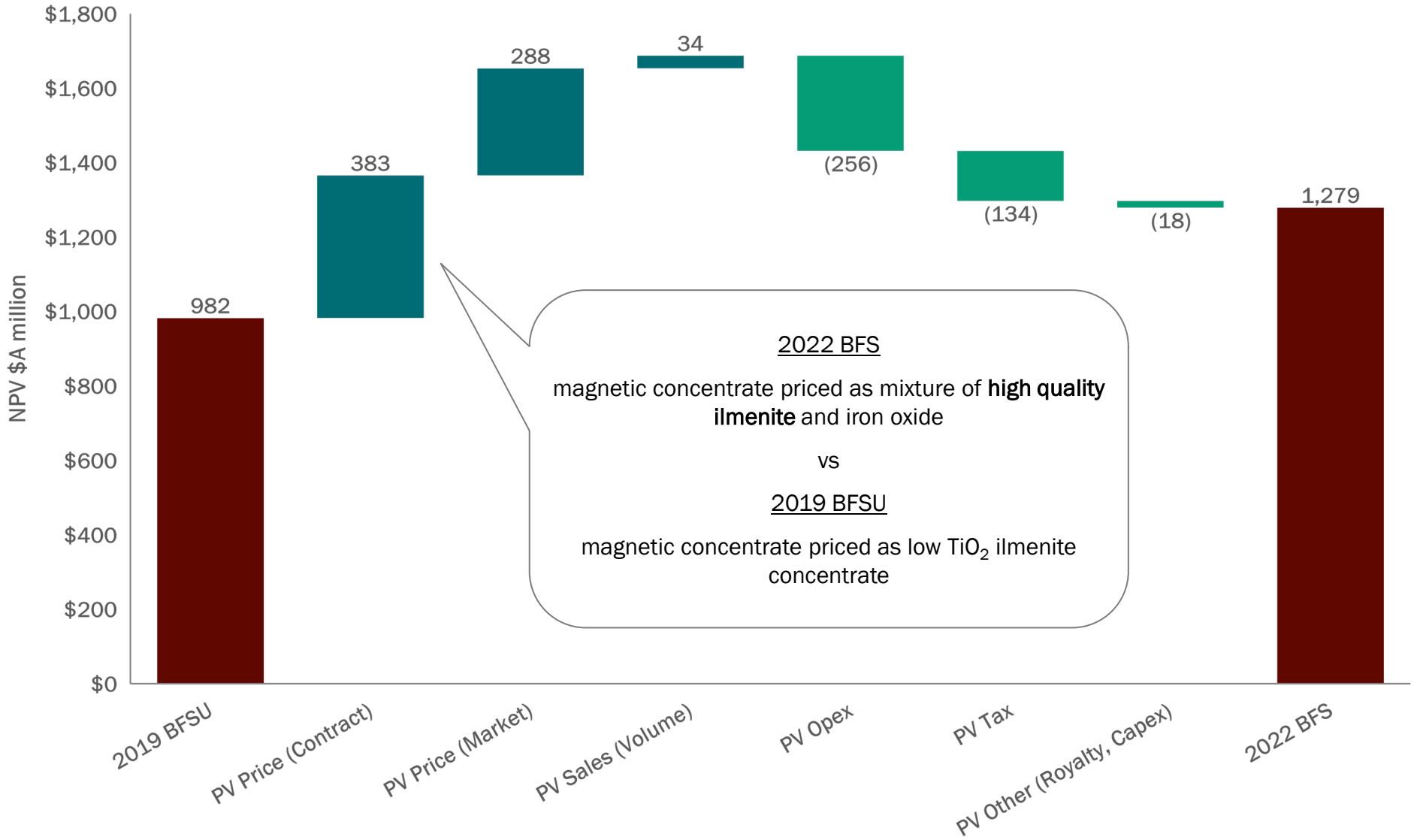
Sensitivity Analysis – IRR Outcomes (%)

Pre-finance, post-tax IRR of 27.5% compared to 10% shifts in key variables



Life of Mine Project Economics – Stage 1 & 2

Strengthening market outlook and improved offtake contracting basis providing NPV growth, offset by mine operating, labour cost and logistics volume increase



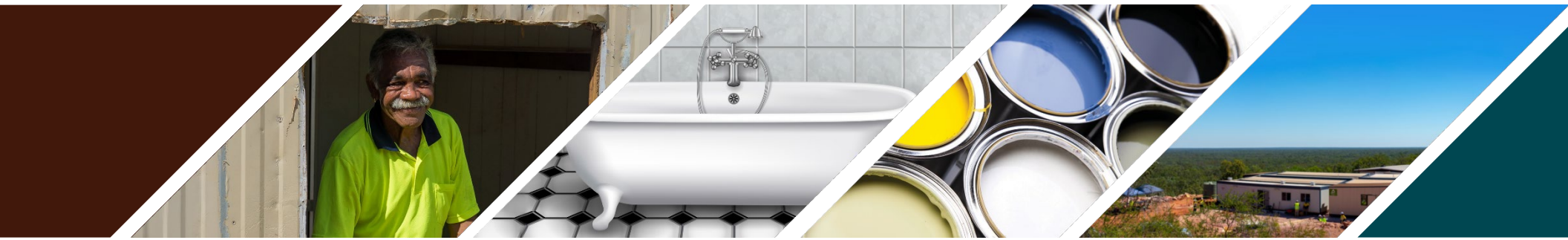
Royalty Regime and Fiscal Assumptions

Key royalty and fiscal arrangements are outlined below

	Arrangement or Calculation
State government royalty	• WA State government royalty of 5% of Total Sales Revenue
Native title royalty & Miscellaneous Licence Access	• Calculated as a percentage of Total Sales Revenue (confidential terms – in line with market standard range)
Company tax	• Australian corporate tax rate of 30% applies • Sheffield has available tax losses of approximately A$70m as at 30 June 2021

SECTION III

Thunderbird Development Pathway



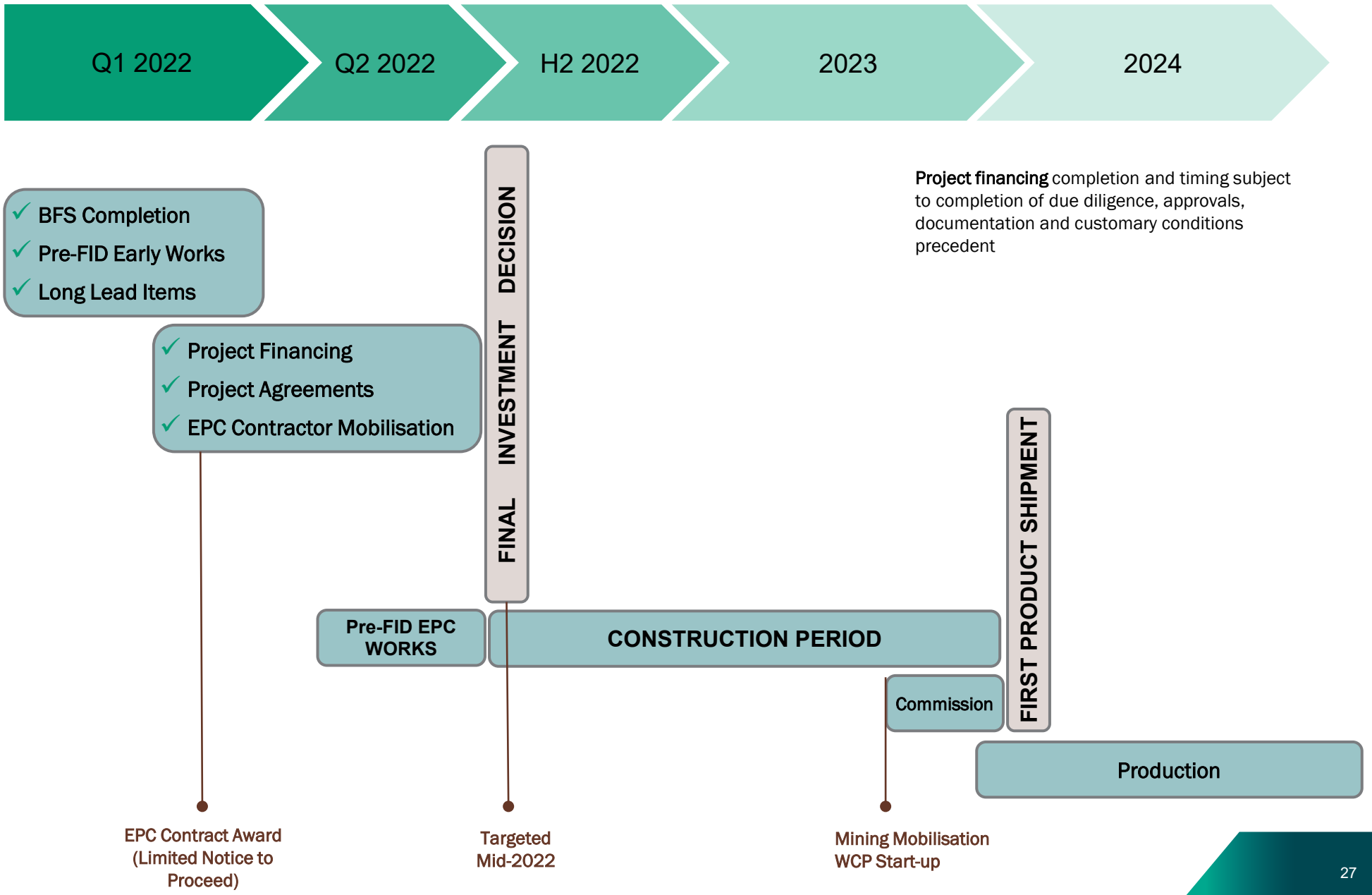
Thunderbird Project Development Strategy

- The large scale of the Thunderbird ore body allows for multiple stages of development, with shared infrastructure from Stage 1
- **Stage 1** – Typical dry mining, concentrator and magnetic/non-magnetic separation all associated site and port infrastructure (includes 10% contingency)
- **Stage 2** – Duplication of Stage 1 with incremental increase in associated site infrastructure (includes 25% contingency)

	Stage 1	Stage 2 (year 5 of operations)
Timing	• Ready to mine • First production expected in Q1 2024	• Following full ramp up of Stage 1 • First production expected in year 5
Scope	• Mining Unit Plant (MUP), Wet Concentrator Plant (WCP), Concentrate Upgrade Plant (CUP) • Power, gas storage, port, road and non-process related infrastructure • Accommodation village • Logistics and infrastructure	• Duplication of Stage 1 Mining and Processing scope • Power station and gas storage increase • Accommodation increase
Total development capital	**A$361m**[1] • Stage 1 direct capital expenditure	**A$258m** • KMS estimate based on BFS Stage 1 to be confirmed prior to Stage 2 final investment decision • Funding sources may include free cash flow and/or debt refinance package

Note:
1. Excludes project finance related funding requirements (cost overrun provision, interest charges during construction and financing fees) during construction

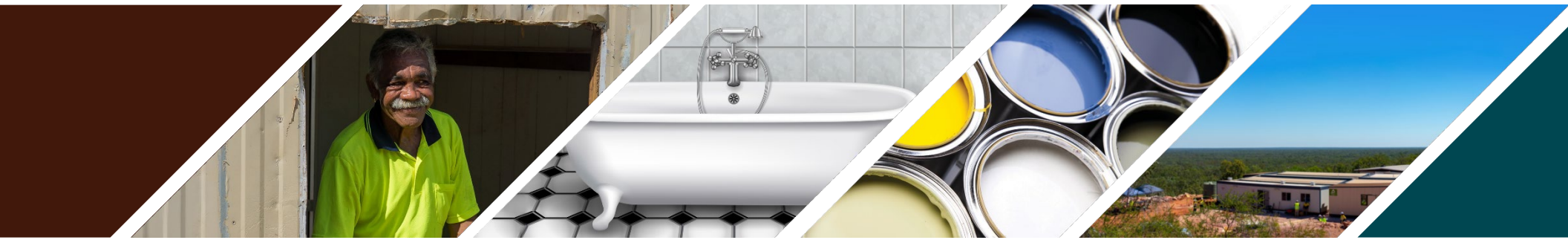
Stage 1 Development & Commissioning Timeline



Project financing completion and timing subject to completion of due diligence, approvals, documentation and customary conditions precedent

SECTION IV

Thunderbird Project Overview



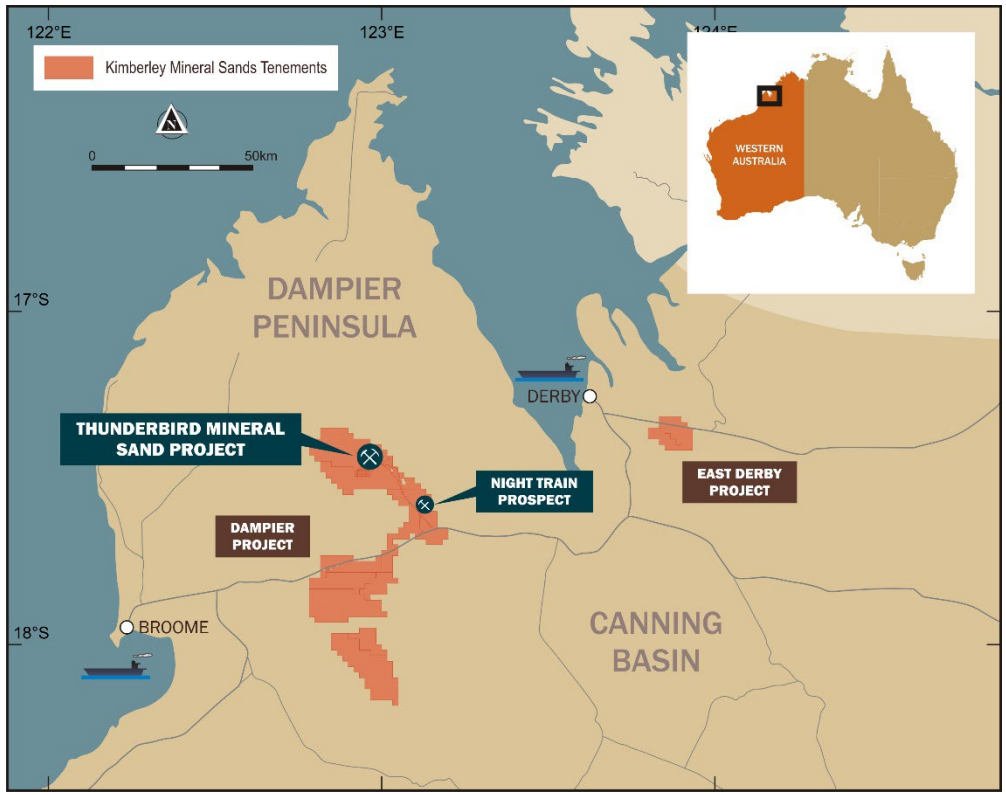
Thunderbird - Location

Thunderbird is a large scale, high grade zircon-focused project in a Tier 1 mining jurisdiction

Western Australia is a Tier 1 Jurisdiction

- Located on the Dampier Peninsula in northern Western Australia
- Large-scale, high grade, zircon focused mineral sands project
- Environmental low risk location on existing pastoral property
- One of the best mining jurisdictions in the world with a history of mining and existing skilled workforce[1]
- Existing infrastructure supporting Project development
  - 148km from Broome, international airport, Port facilities and support services
  - 146km from Derby, domestic airport, Port facilities with existing ship loader and mining industry support services
  - Thunderbird is connected to both ports via the sealed major national highway
- Proximity to offtake partners provides competitive shipping costs
- Underexplored Mineral Sand Province, with KMS holding a large dominant land tenure positioned along 120km highly mineralised trend[2]

Location

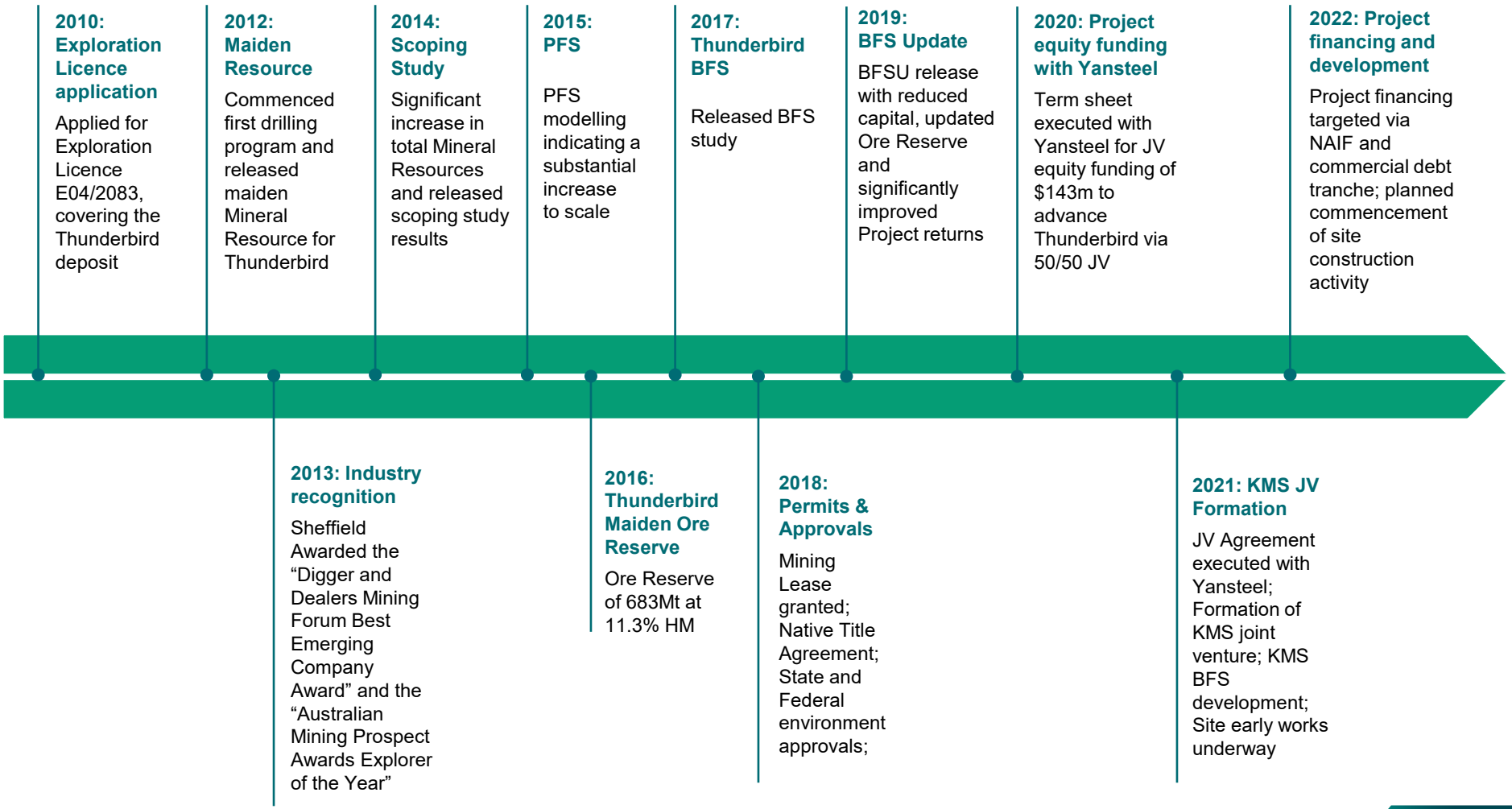


Note:
1. Fraser Institute Survey of Mining Companies, 2020
2. Refer to ASX announcement 31 January 2019 titled *"High Grade Maiden Mineral Resource at Night Train"*

Evolution of Thunderbird

From grassroots exploration through to commercial development stage

Timeline

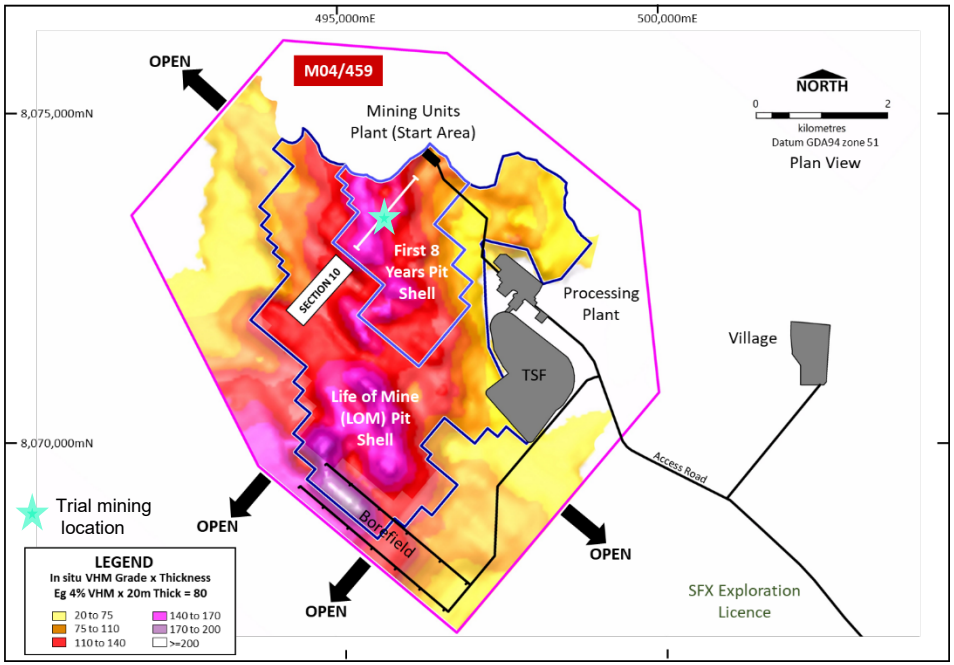


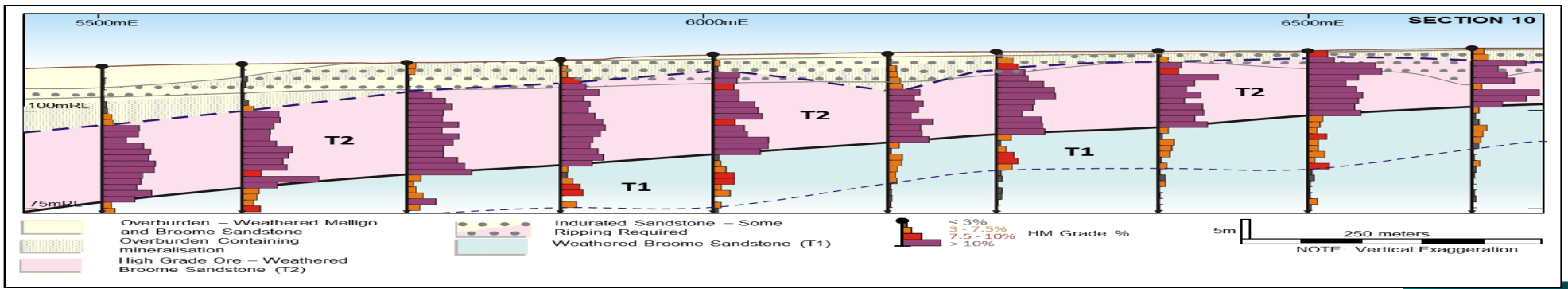
Thunderbird is a High Grade, Thick Deposit

Deposit exhibits strong continuity and high Valuable Heavy Mineral ("VHM") grades

- Thunderbird is the first significant mineral sand deposit to be discovered in the Canning Basin, typical of an off-shore, sub-wave base style deposit
- Valuable heavy minerals ("VHM") contained within the deposit include ilmenite, zircon, leucoxene and rutile
- Mineralisation occurs as a flat, thick, broad sheet-like body striking northwest and dipping shallowly under cover at c. 4 degrees to the SW
  - Contains a continuous high grade zone up to 43m in thickness
  - Extends from surface to a maximum known depth of 155m over an area at least 11km by 7km
- The Mineral Resource estimate of **1,050Mt at 12.2% HM, 0.93% zircon and 3.3% Ilmenite**[1] is based on drill hole data collected comprising:
  - 670 holes drilled for a total of 37,076m with 24,388 samples assayed for HM, slimes and oversize
  - 20 sonic core holes and 5 Bauer bulk sample holes
  - The heavy mineral is fine to medium grained with a zircon D_{50} of 57 microns and titanium minerals D_{50} of 67 microns
- High grade zone remains open in multiple directions

Thunderbird Site Layout Over Image of VHM Grade x Thickness (>7.5% HM)





Note:

1. ASX Announcement dated 5 July 2016 titled *"Sheffield doubles measured Mineral Resource at Thunderbird"*

Thunderbird JORC Compliant Ore Reserve

>70% conversion of Mineral Resource in Ore Reserve demonstrates high quality of Thunderbird

- Ore Reserve[1] estimate was prepared by Entech Pty Ltd, an experienced and prominent mining engineering consultancy with appropriate mineral sands experience and industry knowledge. Based on the 2016 Thunderbird Mineral Resource estimate[2]
- Modifying factors applied to convert to Proved and Probable Ore Reserve including commodity pricing based upon TMZI long term forecast, conservative mining recovery and cut-off strategy, mineral processing based on conventional mineral sands processing techniques

Thunderbird Deposit Ore Reserves[1]

Pit Stage	Classification	Ore				Ore Valuable HM Grade (In-Situ)			
		Material (Mt)	HM (%)	Oversize (%)	Slimes (%)	Zircon (%)	HiTi Leuc (%)	Leucoxene (%)	Ilmenite (%)
Starter Void	Proved	0.9	15.1	12.4	16.7	1.18	0.35	0.31	4.5
	Probable	0	0	0	0	0	0	0	0
Mid-term Pit	Proved	153	13.7	14.3	16.1	1	0.3	0.29	3.7
	Probable	3	13.9	11.3	14.6	1	0.3	0.3	3.9
LOM Pit	Proved	86	11.4	14.4	16.2	0.88	0.27	0.26	3.0
	Probable	511	10.1	10.6	14.5	0.79	0.26	0.27	2.9
Total	*Proved*	*239*	*12.9*	*14.3*	*16.2*	*0.96*	*0.29*	*0.28*	*3.4*
	Probable	*514*	*10.1*	*10.6*	*14.5*	*0.79*	*0.26*	*0.27*	*2.9*
	Total	**754**	**11**	**11.8**	**15**	**0.84**	**0.27**	**0.27**	**3.1**

- Capital and operating cost estimates informed using executed or negotiated final agreements and in-house estimation
- Scheduling zones defined by Whittle Consulting optimisation software
- A detailed scheduling of land clearing, ore mining, waste mining, tailings storage and other ancillary activities utilized
- Life-of-mine average strip ratio (waste: ore) of 0.82 : 1.00

Note:
1. ASX Announcement dated 24 March 2022 titled *"Thunderbird Ore Reserve Update"*
2. ASX Announcement dated 5 July 2016 titled *"Sheffield doubles measured Mineral Resource at Thunderbird"*

Conventional and Well Tested Mining Techniques

Conventional use of dry mining techniques and equipment currently employed in existing and similar mineral sands operations globally

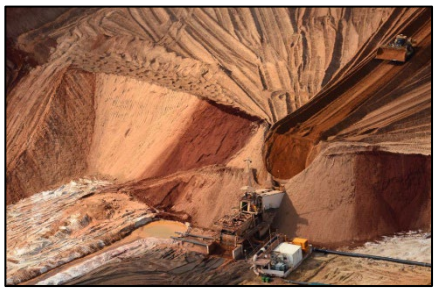
Mining method

- Dry mining via conventional dozer trap mineral sand mining using bulk mining techniques and in-pit feed preparation units
- Topsoil and overburden excavated and transported using truck and excavators
- Oversize material rejected from in-pit Mine Unit Plant ("MUP") will be rehandled by loader to mine void
- Ore will be slurried and pumped to a nearby Wet Concentration Plant ("WCP")
- Mine production rates vary to provide constant target feed rates to the WCP after removal of oversize and slimes
- KMS may engage contractors for mining operations and equipment maintenance
- Entech Pty Ltd completed all mine design and scheduling
- Pit design is based on the geotechnical analysis undertaken by independent consultants
- The dozer trap mining method and costs have been applied to the whole LOM schedule
- Two mining trials in late-2020 and mid-2021 validated mining method and KMS BFS cost assumptions

Vegetation and Topsoil Removal

Removal of Overburden

Dozer Push Mining Unit Plant - Ore



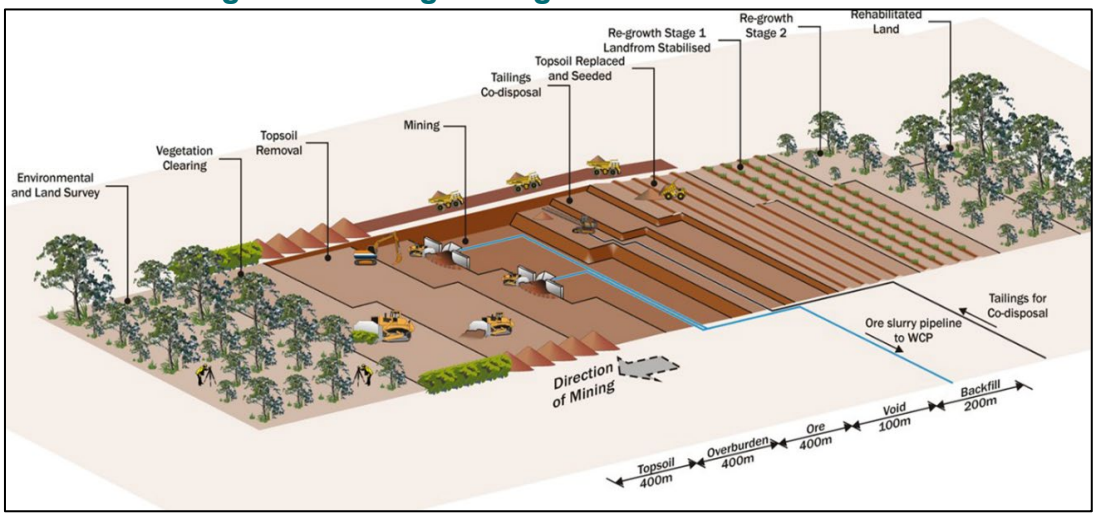
Conventional and Well Tested Mining Techniques

Use of dry mining techniques and equipment currently employed in other mineral sands operations

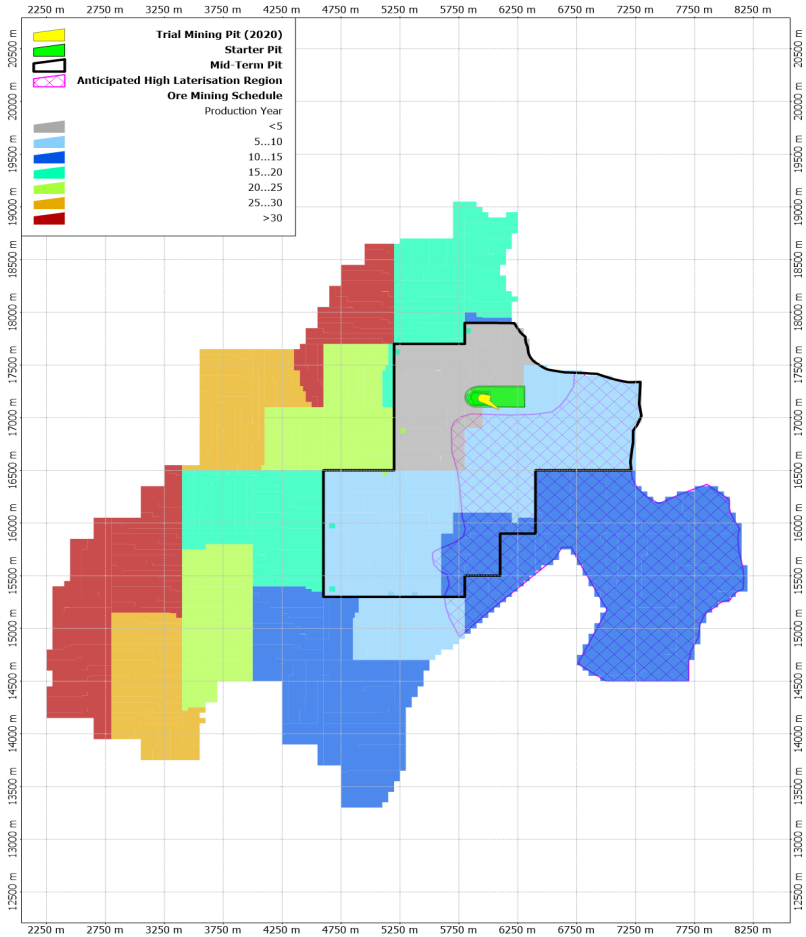
Major mining equipment to be utilised

Class	Description	Max utilisation (hrs/month)	Equipment utilised (#) Year 1 – 4	Year 5 – 10	Year 11 – on
70t Excavator	Hitachi ZX690LC-5	500	1	1	1
120t Excavator	Komatsu PC1250SP-8R	500	1	1	1
200t Excavator	Komatsu PC2000-8	500	0	3	3
100t Loader	CAT 992k	500	1	1	1
100t Truck	CAT 777G	500	4	7	13
100t Bulldozer	CAT D11T CD	450	3	6	6
65t Bulldozer	CAT D10T	500	2	3	4
Grader	CAT 16M	500	1	2	2
Water Cart	CAT 745	500	1	2	3
Service Truck	CAT 745	500	1	1	1

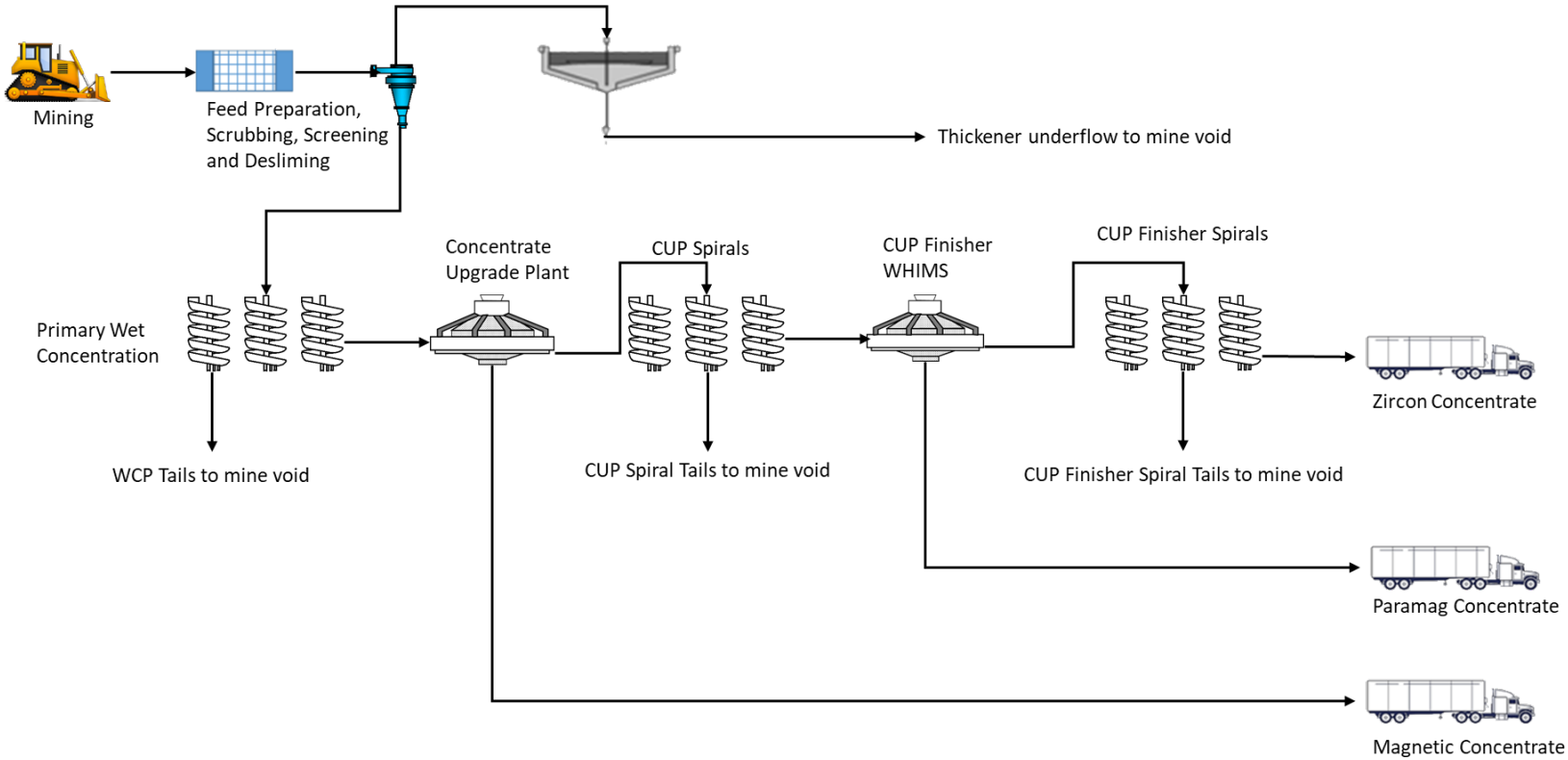
Schematic diagram showing mining method



Plan View of Mine Design



Simple and Conventional Processing Circuit – Stage 1



- Mining provides -12mm feed material at 1,250 and 1,750 dry tph.
- WCP screens -12mm ore to deliver a -2mm sand fraction designed to process up to 1,085 dry tph (duplicated for Stage 2)
- The undersize material whilst described as “slimes” are removed employing a two-stage cyclone separation circuit.
- WCP 7-stage spiral circuit designed to separate heavy minerals from light minerals by gravity separation.
- CUP contains Wet High Intensity Magnetic separation equipment (WHIMS) and spirals. The CUP processes HMC at a design feed rate of 170 tph. (targeting 290tph for Stage 2)
- The magnetic fraction from the CUP is the **Magnetic Concentrate** product.
- The non-magnetic fraction is further upgraded over a 5-stage spiral circuit with light material directed to tailings for co-disposal with WCP tails. Heavy material forms the feed to the non-magnetic finisher circuit.
- A CUP Finisher upgrades the non-magnetic concentrate by further stages of magnetic and gravity separation.
- The magnetic fraction is the **Paramagnetic Concentrate** product
- Further gravity separation via spirals results in the **Zircon Concentrate** product.

Leveraging Yansteel Downstream Capability

- Yansteel is part of Tangshan Yanshan Iron & Steel Co., Ltd, a privately owned Chinese steel manufacturer
- Construction of Yansteel's vertically integrated smelter/pigment complex in China is well advanced
- Yansteel designed the plant to process ilmenite feedstock from various global sources including Australia (Thunderbird)
- Feed preparation plant (FPP) includes fluidised bed roasters and magnetic separation
- Plant design and equipment supply from experienced industry groups on track for completion in 2022
- Pre-treatment process suitable for feedstock sourced from Thunderbird
- Avoids material capital investment at Thunderbird
- Ilmenite is sourced from Thunderbird on arms length market based pricing terms for an ilmenite/iron blend
- Outcome is margin neutral for Thunderbird when compared to LTR installation
- Removal of LTR is NPV and IRR accretive for KMS

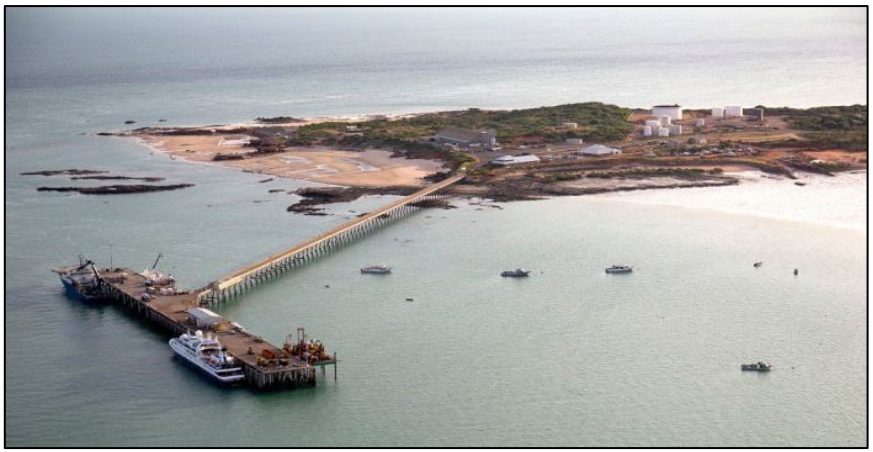
Magnetic separation plant construction activities
Source: Yansteel

Feed storage silo
Source: Yansteel

Well Positioned Near Existing Port Infrastructure

- Thunderbird is located in close proximity to two existing ports
  - Distance to Port of Broome = 148km (115km of national highway)
  - Distance to Port of Derby = 146km (113km of national highway)
- Products to be trucked from mine to port
- Port of Derby:
  - Has existing bulk loading facilities (conveyor and shiploader)
  - Access agreement in place for port storage, wharf and bulk handling facility
  - Transhipped 20-30kms to meet a moored ocean-going vessel (OGV)
  - Barging & transhipment at 500ktpa of bulk products has been successful by previous users
- Port of Broome:
  - Deepwater access port = no transhipment
  - Excellent warehousing and existing stevedoring services available
  - Product moved directly to vessel via “Rototainers”
  - Dedicated route to port bypasses Broome township

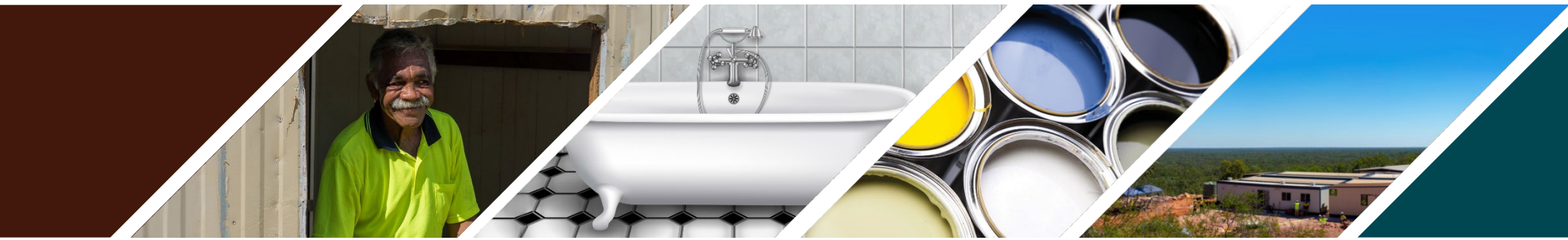
Port of Broome



Port of Derby

SECTION V

Products, Offtake and Markets



Binding Agreements for Thunderbird Product Suite

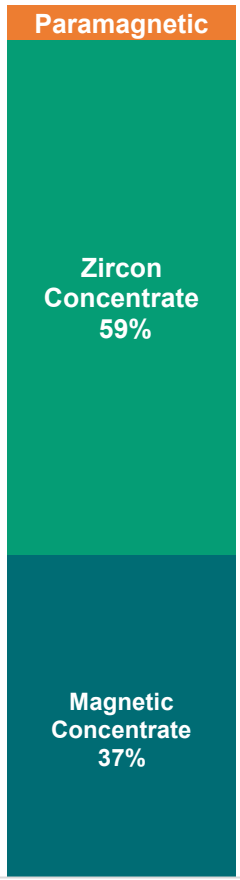
Thunderbird produces three products comprising:

- Zircon Concentrate
  - Zircon concentrate contains ZrO_2 (c. 37% ZrO_2), TiO_2 (c. 25.6% TiO_2) and rare earth oxides
  - Recoverable zircon suited for ceramics (as a blended product), zirconium chemicals industry, foundry and investment castings
  - Binding offtake agreement with 3 leading Chinese zircon processing groups
- Magnetic Concentrate
  - Mixture of ilmenite and titano-haematite than can be separated by reduction and magnetitic separation
  - After separation the ilmenite is ideal as feedstock for chloride slag (TiO_2) production
  - Ilmenite also suitable for direct use in sulfate pigment production
  - After separation the iron oxide can be used in a steel production
  - Iron within the ilmenite is recovered as valuable pig iron during the ilmenite smelting process
  - Life of mine offtake agreement in place with Yansteel for Stage 1.
    - 5 year fixed arm's length price agreement reflective of TiO_2 content
    - Negotiated market price from Year 6 onwards
  - Yansteel has a first right of refusal for all magnetic concentrate produced by KMS
- Paramagnetic Concentrate
  - Material containing ZrO_2, TiO_2 units, and rare earth oxides

Stage 1 offtake summary

Product	Binding Agreement (% of Stage 1)	Offtake Parties
Zircon Concentrate	75%	Multiple leading Chinese processors
Magnetic Concentrate	100%	Yansteel
Paramagnetic Concentrate	Nil	TBA

% LOM Revenue



Product quality

Zircon Concentrate Properties

- Available upgrade step to higher grade zircon
- Samples supplied and approved by a wide range of customers following extensive offtake testing
- Value for ZrO_2, TiO_2 and rare earth oxides[1]
- Approved for investment casting applications
- Low levels of impurities after upgrading

Composition	Range (%)	Typical (%)
$ZrO_2 + HfO_2$	38 – 45	43
TiO_2	14 – 18	16
Fe_2O_3	1.6 – 2.4	2.0
SiO_2	25 – 30	25
Al_2O_3	0.8 – 1.2	1.1

- 75% Binding Offtake in place with 3 Chinese processors
- Target offtake partners are diverse range of processors in China
- Material suited to all zircon applications

Magnetic Concentrate Properties

- Low technical risk to separate into ilmenite and iron oxide
- Ilmenite suitable for chloride slag production
- Produces valuable High Purity Pig Iron (HPPI) co-product
- Low levels of Cr_2O_3, very low CaO and MgO
- Fine to medium grained

Composition	Range (%)	Typical (%)
TiO_2	30 – 47	38.5
Fe_2O_3 (Calc)	45 – 57	45
FeO	4.4 – 6.0	8.0
SiO_2	2.5 – 4.5	4.4
Cr_2O_3	0.05 – 0.15	0.05
MgO	0.15 – 0.25	0.20

- 100% Binding Offtake in place
- Yansteel offtake partner developing integrated business
- Will produce chloride slag and chloride pigment
- Potential value in co-products making ilmenite more attractive

Paramagnetic Concentrate Properties

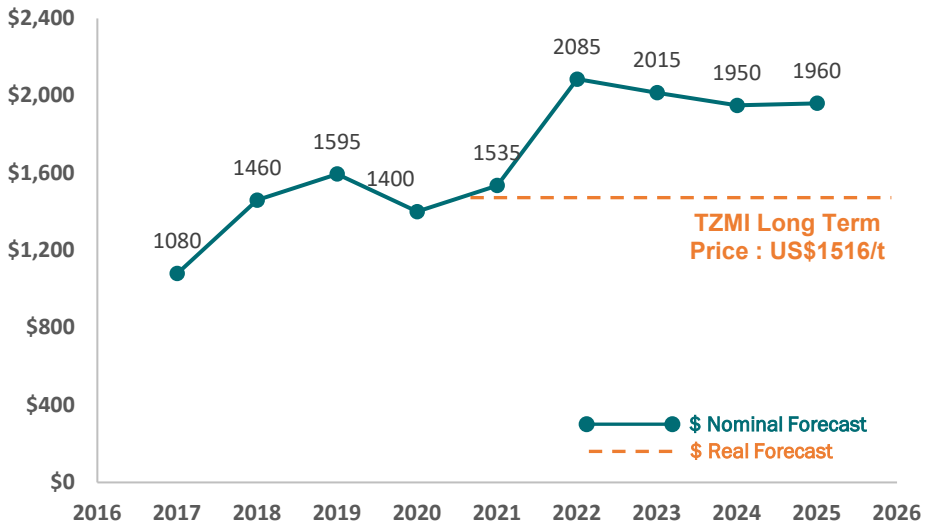
- Co-product from zircon concentrate processing
- Valuable TiO_2, ZrO_2 and rare earth oxides[1]
- Strong demand from potential offtake groups

Composition	Range (%)	Typical (%)
$ZrO_2 + HfO_2$	8 – 15	10
TiO_2	22 – 32	28
Fe_2O_3	30 - 35	33
SiO_2	12 – 20	15
Al_2O_3	1 - 4	3
CeO_2	1.8 – 2.2	2.0

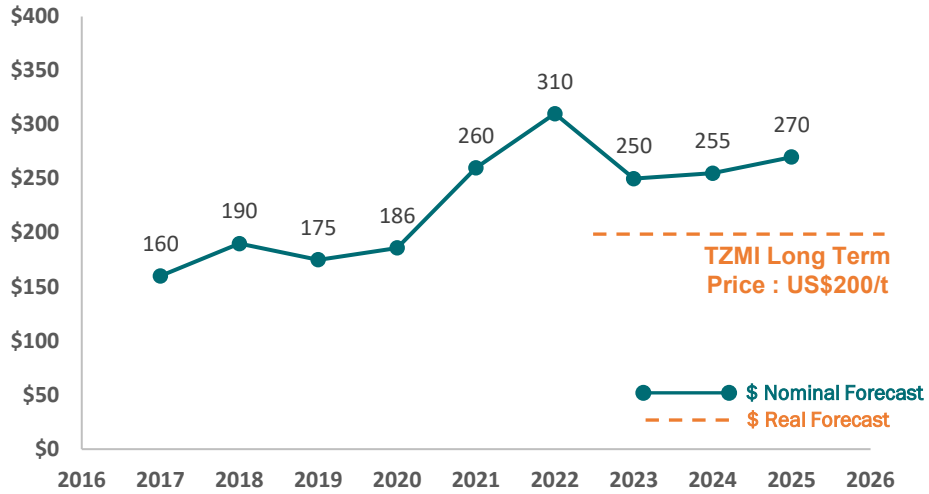
Note:
1. CeO_2 is representative of rare earth oxides

Market Pricing Outlook for Zircon and Ilmenite

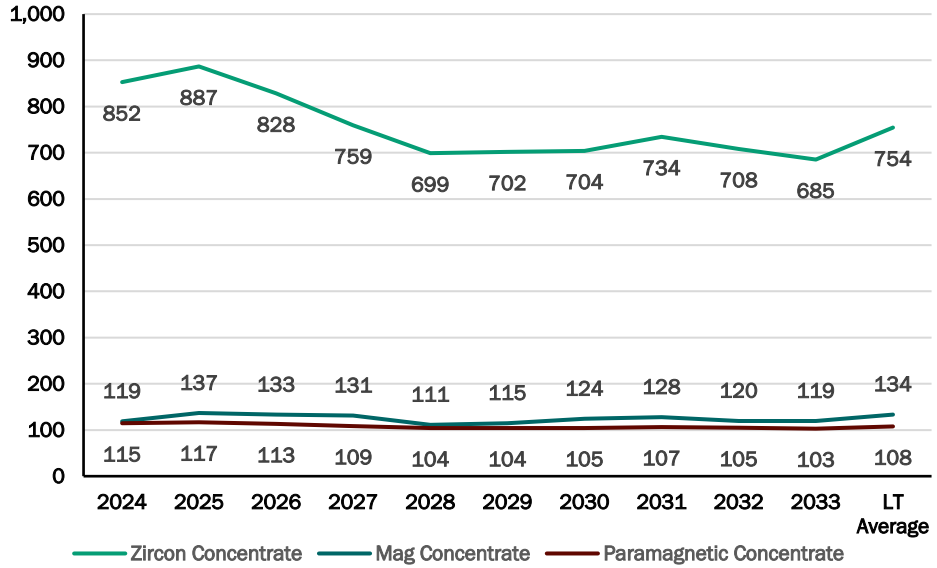
TZMI Historical and Forecast Zircon Prices (US$/t FOB)[1]



TZMI Historical and Forecast Sulfate Ilmenite Prices (US$/t FOB)[1,2]



Forecast Sales Prices – Thunderbird Products (US$/t FOB)[1]

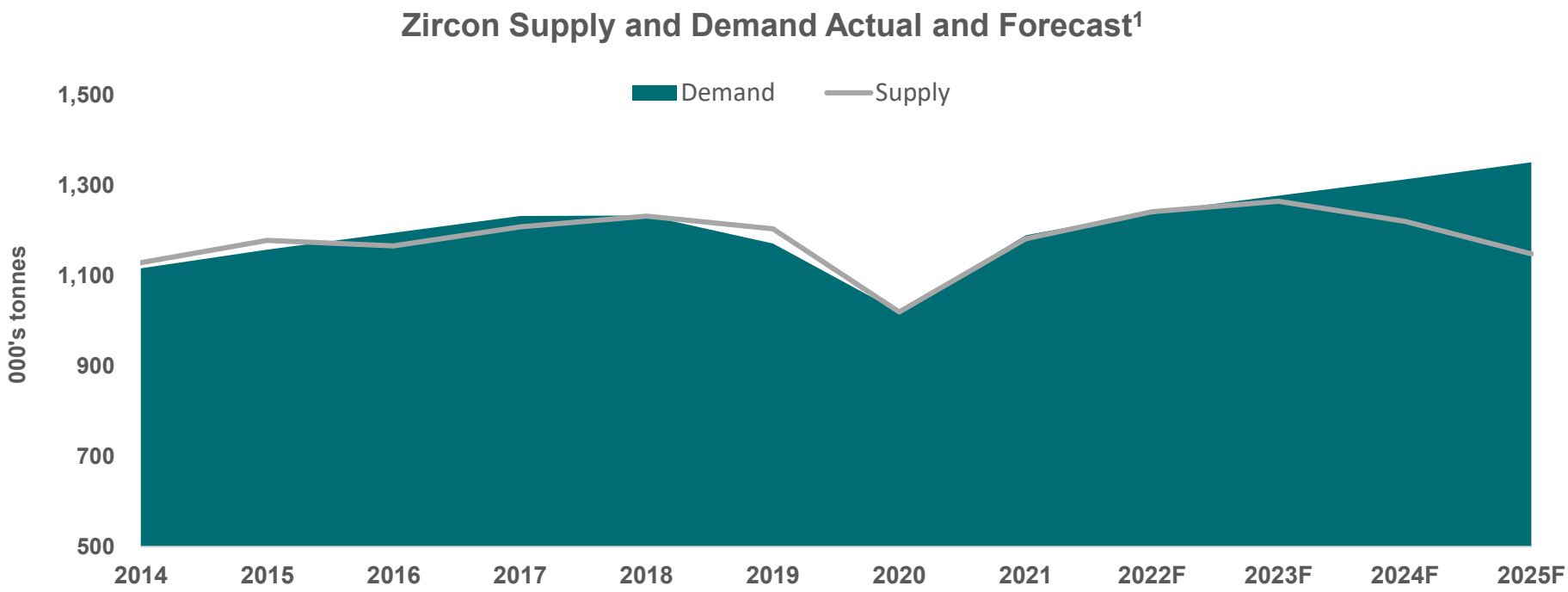


- Zircon prices have significantly increased over the past 12 months and are expected to remain above the long term forecast over the next 3-4 years
- Forecast pricing underpinned by a significant supply gap expected to emerge for zircon (see next page)
- Ilmenite prices increase strongly from Q2 2020 and are expected to remain above the long term forecast over the next 3-4 years
- Forecast pricing supported by baseload pigment demand and growing demand for chloride slag feedstock

Note:
1. Forecasts based on the November 2021 TZMI Market Study Report. Historical data based on TZMI and KMS estimates
2. Ilmenite pricing varies based on the feedstock quality. As a result, the historical pricing in this chart is based on an average of several different feed stocks, and has been sourced from TZMI

Thunderbird – Aligned with emerging zircon supply gap

Forecast zircon supply gap beyond 2022/23



Observations

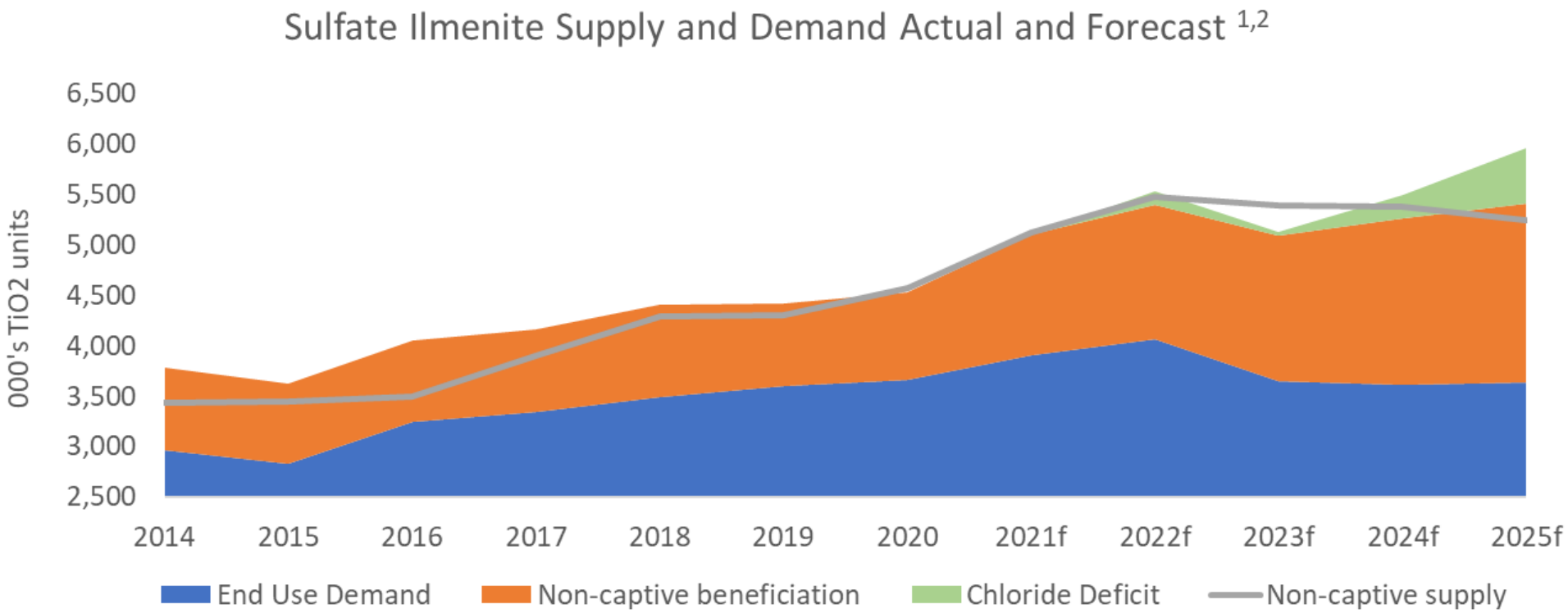
- COVID-19 demand impact significant but less than predicted
- Major suppliers have adjusted supply to match reduced demand
- This supply response eased the pressure on price
- Supply deficit evident from late 2021 onwards impacting on pricing
- Ore Reserve depletion and jurisdictional risks remain
- Mid-term shortfall is supply not demand driven

Note:

1. Sourced from TZMI and Sheffield estimates

Thunderbird – New ilmenite supply is required

New non-captive projects required to meet non-captive demand



Observations

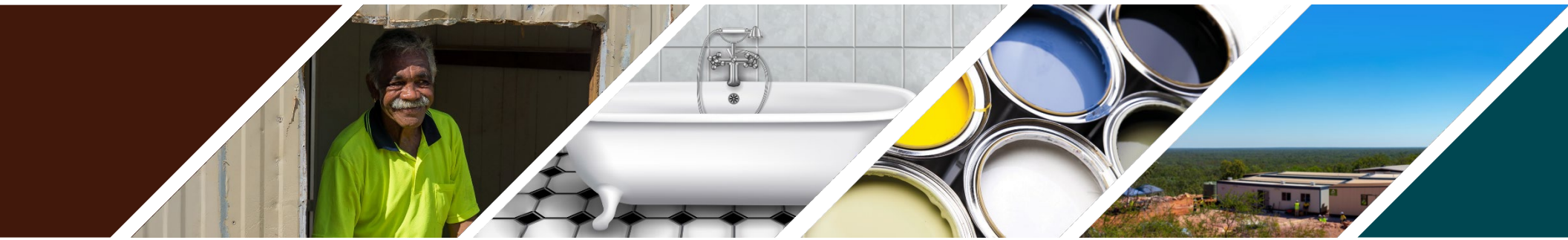
- Sulfate ilmenite demand remained strong during 2020, 2021 and into 2022
- Sulfate pigment provides solid demand base
- New Chinese chloride slag smelters driving increasing beneficiation demand
- Chloride feedstock deficit most likely to be filled by additional chloride slag capacity – driving further ilmenite demand
- Non-captive supply deficit emerges from 2024 unless new projects are developed

Note:

1. End Use includes Sulfate Pigment and Other Sectors that consume sulfate ilmenite without upgrading to slag
2. Sourced from TZMI November 2021 and Sheffield estimates

SECTION VI

Environmental, Social & Governance



Primary Approvals, Leases & Agreements in Place

Fully permitted and construction ready

Party	Topic	Scope	Date Complete	In Place
Dept of Environment & Energy (Cwth)	*Environmental Approval*	Federal Government environmental approval for project	Sep 2018	☑
Department of Water & Environmental Regulation (WA)	*Environmental Approval*	State Government environmental approval for project	Aug 2018	☑
		Approval for mining, processing, sewage facility and waste	Aug 2018	☑
	Licence to Take Water	Groundwater licence for project construction and operations	Oct 2018	☑
Department of Mines, Industrial Regulation & Safety (WA)	*Mining Lease*	• Minor or preliminary works (MoPW) • Tenure for mining and processing • Mining Proposal Stage 1	Sep 2017 Sep 2018 Sep 2019	☑ ☑ ☑
	Miscellaneous Licences	Tenure for infrastructure, roads and accommodation	Jun 2018	☑
Shire of Derby & West Kimberley	*Port of Derby Lease*	Tenure for facilities at Port of Derby	May 2018	☑
Native Title Party	*Aboriginal Heritage Agreements*	Heritage protocols for exploration tenure	Nov 2015	☑
	Native Title Agreements	Agreed terms and conditions for project operations	Oct 2018	☑

Environment

All necessary State and Federal environmental approvals received

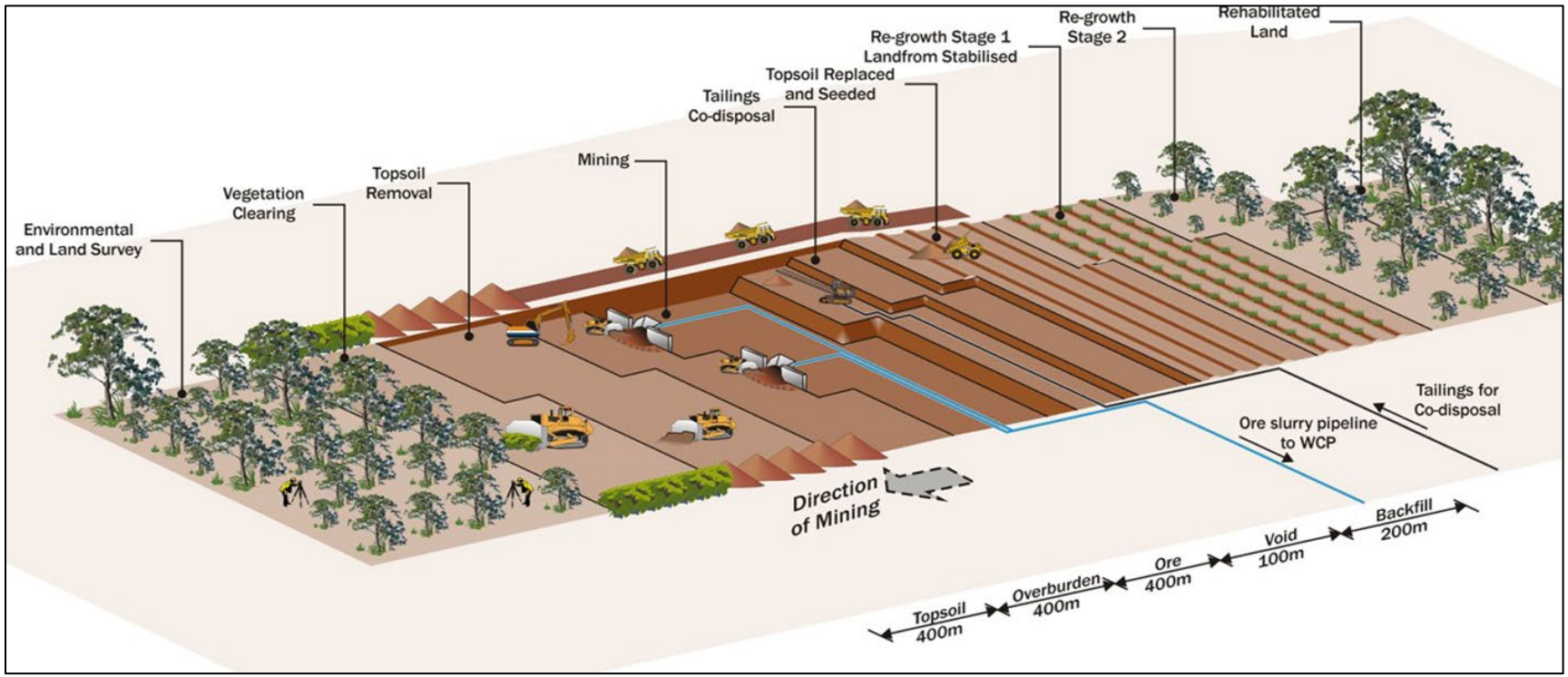
- Strong social licence to operate is supported by full State and Federal environmental approvals following an extensive Public Environmental Review ("PER")
- The PER process required full environmental impact assessment, with detailed public consultation and identification of key environmental concerns for the community. The key issues identified were:
  - Impact on the Greater Bilby
  - Impact on ground water resources
  - Haulage of mineral sands products through Derby
  - Impact of ocean going vessels on marine animals
- The Environmental Protection Authority ("EPA") conducted a detailed review, including a site visit by the EPA Board and two periods of public comment and consultation
- All environmental approvals were received on the following basis:
  - PER concluded all risks can be adequately managed
  - Approvals contain standard industry conditions and controls
  - Specific Greater Bilby management plans in place
  - Environmental offset fund established
  - Restrictions on speeds and travel times for haulage of products to Port of Derby
- Practices to mirror Equator Principles

Thunderbird personnel receive training in Bilby management as part of our Bilby Management Program (2018)

Environment

Continuous Rehabilitation

- Proposed dry mining via conventional dozer trap mineral sand mining
- Topsoil and overburden excavated and transported using truck and excavators
- Topsoil is deposited and seeded following completion of mining within each zone
- Active rehabilitation of mined areas occurs continuously throughout the mine life
- Progressive mining limits active mining to a maximum of 200 hectares
- Continuous rehabilitation limits maximum disturbed area during mine life to 1,300 hectares



Environment

Embracing the Climate Change challenge

- CO_2 baseline Scope 1 emissions estimated in BFS 2017 at 11mt CO_2e (c.40 year life of project)*
- Significant reduction expected following removal of Low Temperature Roaster
- Independent third-party validation of emissions commissioned for 2022 BFS

CO_2 reduction opportunities across a 36 year mine life

- ✓ Introduction of renewable electricity to complement LNG gas generation
- ✓ BFS assumes Thunderbird village accommodation converted to solar/battery solution of 2MW
- ✓ Innovation within the process plant value chain
- ✓ Logistics at the mine site and to port (e.g. electric fleet solutions)
- ✓ Agree 2030 target and target date for net zero emission

Our goals for a Sustainable future

Acceptance	Seek Low Carbon Technology	Invest in Climate Safe Practices	Promote Our Climate Policy
▪ Accept Climate change science	▪ Renewables for power generation	▪ Measure our climate performance	▪ Partner with our local community
▪ Support net-zero global ambitions	▪ Diesel substitution	▪ Consider carbon offsets	▪ Determine net zero emissions pathway
▪ Support our community's goals	▪ Partner with innovative suppliers	▪ Climate Risk Assessments	▪ Engage with our peers, suppliers and customers
		▪ Low-carbon inputs	

Emissions forecast based upon 2017 Public Environmental Review and 2017 (Stage 1 & Stage 2) Bankable Feasibility Study estimates

Our Community Stakeholders

Actively working with community stakeholders to create and maintain a robust relationship

- Central to the Kimberley regional strategy is our social licence to operate
  - **Built over ten years** and based on formal and informal community relations practices
- Strategy focuses on:
  - **Aboriginal engagement** and advancement
  - **Local content employment** and workforce on a **drive-in and drive-out** basis (as opposed to fly-in, fly-out)
  - Low environmental and Aboriginal Heritage impact
  - **Regional economic opportunities** and local business development
- Community engagement practices to date are **built on strong stakeholder, social and community support for Thunderbird** and ensures a positive foundation for project development, land access, construction and project operation
- Achieved through **development and implementation of communication and consultation** strategies which ensure stakeholders to the ports, Traditional Owners, pastoralists, local shires, government authorities, local businesses and local communities are informed and engaged positively
- **Strongly supported by State and Federal Government**, Thunderbird has a 36-year mine life which will see opportunity flow within the Kimberley region for future generations

Kimberley Mineral Sands community consultations (Broome, 2021)

Native Title Agreement

Native Title agreement signed and is irrevocably binding on both Sheffield and the Traditional Owners

- Signed the Co-existence Agreement (Native Title Agreement) for Thunderbird on 31 October 2018
- The Traditional Owners authorised the Named Applicants to sign the Co-existence Agreement for Thunderbird, making it binding on both the Company and the Traditional Owners
- Details of the Co-existence Agreement are confidential, however the final agreement is in line with the Company's commitment to the community and contains:
  - Royalty payments to the Traditional Owners across mine life
  - Local and Aboriginal employment and business commitments
  - Protection for Aboriginal heritage and the environment
- The Co-existence Agreement establishes the framework by which the Company can work with the Traditional Owners to protect Aboriginal heritage and the environment while delivering sustainable employment and business outcomes for Traditional Owners and the wider Aboriginal community
- Joombarn-Buru native title claim formally determined by Federal Court in Oct 2021

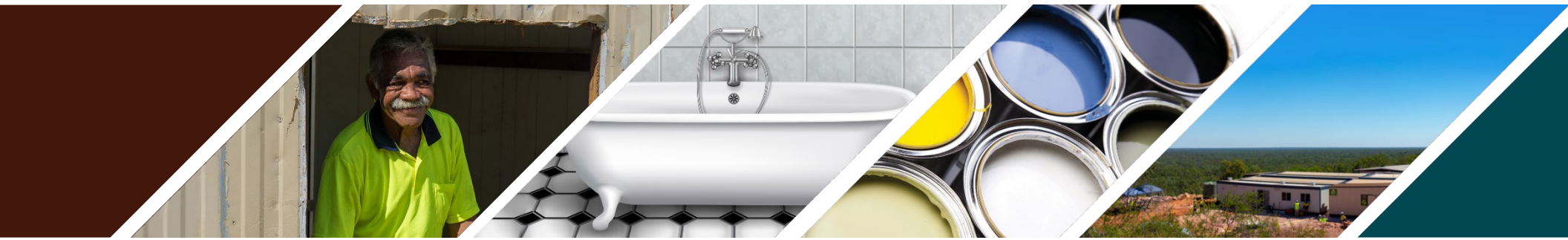
Joombarn-Buru native title claim formally determined by Federal Court (Perth, October 2021)

Aboriginal Employment Strategy

- Previous success in building a strong locally based workforce to be replicated during 36 year operation, particularly in the area of Aboriginal employment
- Strong commitment to training and development which results in ongoing employment
- In addition, key strategy targets include:
  - To achieve 40% Aboriginal employment by year 8 of operations
  - To commit to Aboriginal businesses during construction and operations

APPENDIX A

Ore Reserves, Mineral Resources and Exploration



Thunderbird Ore Reserves

Thunderbird Ore Reserves: Valuable Heavy Mineral in-situ grade[1]

Ore Reserve Category	Ore Tonnes (Mt)	In-situ HM Tonnes (Mt)	HM Grade (%)	Valuable Heavy Mineral Grade (In-situ)[2]				Oversize (%)	Slimes (%)
				Zircon (%)	HiTi Leucoxene (%)	Leucoxene (%)	Ilmenite (%)		
Proved	239	31	12.9	0.96	0.29	0.28	3.4	14	16
Probable	514	52	10.1	0.79	0.26	0.27	2.9	11	15
Total	**754**	**83**	**11.0**	**0.84**	**0.27**	**0.27**	**3.1**	**12**	**15**

Thunderbird Ore Reserves: Mineral assemblage as percentage of HM grade[1]

Ore Reserve Category	Ore Tonnes (Mt)	In-situ HM Tonnes (Mt)	HM Grade (%)	Mineral Assemblage[3]				Oversize (%)	Slimes (%)
				Zircon (%)	HiTi Leucoxene (%)	Leucoxene (%)	Ilmenite (%)		
Proved	239	31	12.9	7.5	2.2	2.2	27	14	16
Probable	514	52	10.1	7.8	2.6	2.6	28	11	15
Total	**754**	**83**	**11.0**	**7.7**	**2.4**	**2.5**	**28**	**12**	**15**

Notes:
1. Ore Reserves are presented both in terms of in-situ VHM grade, and HM mineral assemblage. Tonnes and grades have been rounded to reflect the relative accuracy and confidence level of the estimate, thus the sum of columns may not equal. Ore Reserves reported for the Dampier Project were prepared and first disclosed under the JORC Code (2012). Refer to Sheffield's ASX Announcement dated 24 March 2022 titled "Thunderbird Ore Reserve Update" for further detail. Ore Reserve is reported to a design overburden surface with appropriate consideration for modifying factors, costs, mineral assemblage, process recoveries and product pricing
2. The in-situ grade is determined by multiplying the HM Grade by the percentage of each valuable heavy mineral within the heavy mineral assemblage

Thunderbird Mineral Resources

Thunderbird Mineral Resources: Valuable Heavy Mineral in-situ grade[1]

Cut-off (HM%)	Mineral Resource Category	Ore Tonnes (Mt)	In-situ HM Tonnes (Mt)	HM Grade[2] (%)	Valuable Heavy Mineral Grade (In-situ)[3]				Slimes (%)	Oversize (%)
					Zircon (%)	HiTi Leucoxene (%)	Leucoxene (%)	Ilmenite (%)		
> 3% HM	Measured	510	45	8.9	0.71	0.20	0.19	2.4	18	12
	Indicated	2,120	140	6.6	0.55	0.18	0.20	1.8	16	9
	Inferred	600	38	6.3	0.53	0.17	0.20	1.7	15	8
	Total	**3,230**	**223**	**6.9**	**0.57**	**0.18**	**0.20**	**1.9**	**16**	**9**
>7.5% HM	Measured	220	32	14.5	1.07	0.31	0.27	3.9	16	15
	Indicated	640	76	11.8	0.90	0.28	0.25	3.3	14	11
	Inferred	180	20	10.8	0.87	0.27	0.26	3.0	13	9
	Total	**1,050**	**127**	**12.2**	**0.93**	**0.28**	**0.26**	**3.3**	**15**	**11**

Thunderbird Mineral Resources: Mineral assemblage as percentage of HM grade[1]

Cut-off (HM%)	Mineral Resource Category	Ore Tonnes (Mt)	In-situ HM Tonnes (Mt)	HM Grade[2] (%)	Mineral Assemblage[4]				Slimes (%)	Oversize (%)
					Zircon (%)	HiTi Leucoxene (%)	Leucoxene (%)	Ilmenite (%)		
> 3% HM	Measured	510	45	8.9	8.0	2.3	2.2	27	18	12
	Indicated	2,120	140	6.6	8.4	2.7	3.1	28	16	9
	Inferred	600	38	6.3	8.4	2.6	3.2	28	15	8
	Total	**3,230**	**223**	**6.9**	**8.3**	**2.6**	**2.9**	**28**	**16**	**9**
>7.5% HM	Measured	220	32	14.5	7.4	2.1	1.9	27	16	15
	Indicated	640	76	11.8	7.6	2.4	2.1	28	14	11
	Inferred	180	20	10.8	8.0	2.5	2.4	28	13	9
	Total	**1,050**	**127**	**12.2**	**7.6**	**2.3**	**2.1**	**27**	**15**	**11**

Notes:

1. The Thunderbird Mineral Resources are reported inclusive of (not additional to) Ore Reserves. The Mineral Resource reported above 3% HM cut-off is inclusive of (not additional to) the Mineral Resource reported above 7.5% HM cut-off. All tonnages and grades have been rounded to reflect the relative accuracy and confidence level of the estimate and to maintain consistency throughout the table, therefore the sum of columns may not equal. The Mineral Resource estimate was prepared and first disclosed under the JORC Code (2012). Refer to Sheffield's ASX announcement dated 5 July 2016 titled *"Sheffield Doubles Thunderbird Measured Mineral Resource"* for further detail
2. Total heavy minerals (HM) is within the 38µm to 1mm size fraction and has been reported as a percentage of the total material quantity
3. The Valuable HM in-situ grade is reported as a percentage of the total material quantity and is determined by multiplying the percentage of total HM by the percentage of each valuable heavy mineral within the HM assemblage at the resource block model scale
4. The Mineral Assemblage is represented as the percentage of HM grade. Estimates of mineral assemblage are determined by screening and magnetic separation. Magnetic fractions were analysed by QEMSCAN for mineral determination as follows: >90% liberation; ilmenite 40-70% TiO_2; leucoxene 70-94% TiO_2; high titanium leucoxene (HiTi Leucoxene) >94% TiO_2 and zircon 66.7% ZrO_2+HfO_2. The non-magnetic fraction was analysed by XRF and minerals determined as follows: Zircon ZrO_2+HfO_2/0.667 and HiTi Leucoxene TiO_2/0.94

Night Train Mineral Resources

Night Train Mineral Resources: Valuable Heavy Mineral in-situ grade[1]

Mineral Resource Category	Cut off (HM%)	Ore Tonnes (Mt)	HM Grade (%)	Valuable Heavy Mineral Grade (In-situ)[2,3]				Slimes (%)	Oversize (%)
				Zircon (%)	HiTi Leucoxene & Rutile (%)	Leucoxene (%)	Ilmenite (%)		
Inferred	1.2	130	3.3	0.45	0.18	1.5	0.71	8.7	2.2
Inferred	2.0	50	5.9	0.82	0.33	2.9	1.06	10.2	2.2

Night Train Mineral Resources: In-Situ Tonnes[1]

Mineral Resource Category	Cut off (HM%)	HM Tonnes (Mt)	In-situ Tonnes[4]				
			Zircon (kt)	HiTi Leucoxene & Rutile (kt)	Leucoxene (kt)	Ilmenite (kt)	Total VHM (kt)
Inferred	1.2	4.2	560	220	1,900	900	3,590
Inferred	2.0	3.0	420	170	1,500	540	2,600

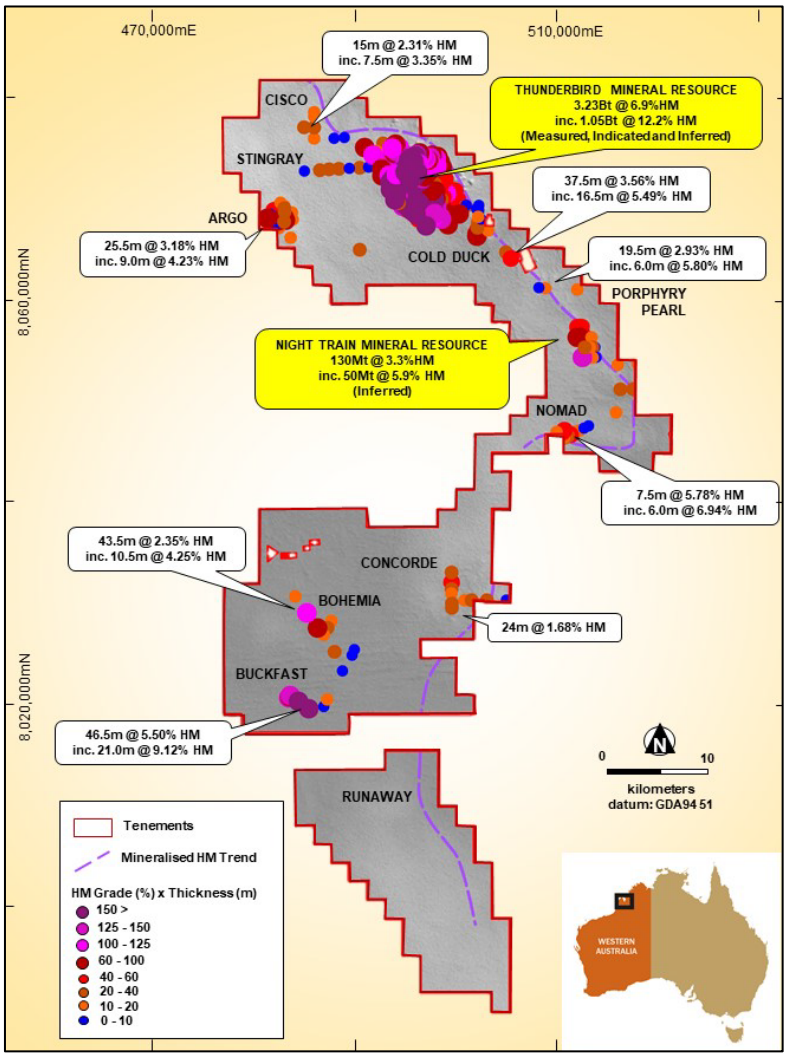
Notes:
1. Refer to ASX Announcement on 31 January 2019 titled *"High Grade Maiden Mineral Resource at Night Train"* for further information, explanations and qualifications. The Mineral Resource estimate was prepared by Optiro Pty Ltd and disclosed under the JORC Code (2012). Total HM is within the 38µm to 1mm size fraction and reported as a percentage of the total material, slimes is the -38µm fraction and oversize is the +1mm fraction. Tonnes and grades have been rounded to reflect the relative accuracy and confidence level of the estimate, thus the sum of columns may not equal
2. In-situ assemblage grade is determined by multiplying the percentage of total HM by the percentage of each valuable heavy mineral within the heavy mineral assemblage at the resource block model scale
3. Estimates of Mineral Assemblage are presented as percentages of the Total Heavy Mineral (THM) component of the deposit, as determined by magnetic separation, QEMSCANTM and XRF for one of 12 composite samples. Magnetic fractions were analysed by QEMSCANTM for mineral determination as follows: ilmenite: 40-70% TiO_2 >90% liberation; leucoxene: 70-90% TiO_2 >90% liberation; high titanium leucoxene (HiTi leucoxene) and rutile combined > 90% TiO_2 liberation, and zircon: 66.7% ZrO_2+HfO_2 >90% liberation. The non-magnetic fraction was submitted for XRF analysis and minerals determined as follows: zircon: ZrO_2+HfO_2/0.667 and high titanium leucoxene (HiTi leucoxene): TiO_2/0.94. HM assemblage determination was by the QEMSCANTM process for 11 of 12 composite samples which uses observed mass and chemistry to classify particles according to their average chemistry, and then report mineral abundance by dominant % mass in particle. For the TiO_2 minerals the following breakpoints were used to distinguish between ilmenite 40% to 70% TiO_2, leucoxene 70% to 90% TiO_2, high TiO_2 leucoxene and rutile > 90%
4. The contained in-situ tonnes for the valuable heavy minerals were derived from information from the in-situ grades and tonnes of the Mineral Resource

Significant Regional Exploration Upside

Strategic value demonstrated through multiple discoveries made along a 120km long trend

- Exploration has delineated 14 zones of significant mineralisation along a 120km long highly mineralised trend
- Maiden high grade Mineral Resource[1] outlined at Night Train
- Three substantial new mineral sands discoveries have been outlined at Buckfast, Bohemia and Concorde
  - Characterised by broad sheet-like geometries, thick intersections
  - Mineral assemblages with high proportions of VHM dominated by leucoxene, altered ilmenite and zircon with low to moderate levels of trash
- Opens up a new 60km long highly prospective corridor south of Thunderbird
- Thick high grade intervals[2] have been intersected, including;
  - 46.5m @ 5.50% HM from 57.0m (NLAC025), including 21.0m @ 9.12% HM from 64.5m (Buckfast)
  - 37.5m @ 5.01% HM from 67.5m (NLAC027), including 25.5m @ 5.74% HM from 75m (Buckfast)
- Numerous zircon-rich targets identified for follow-up drilling

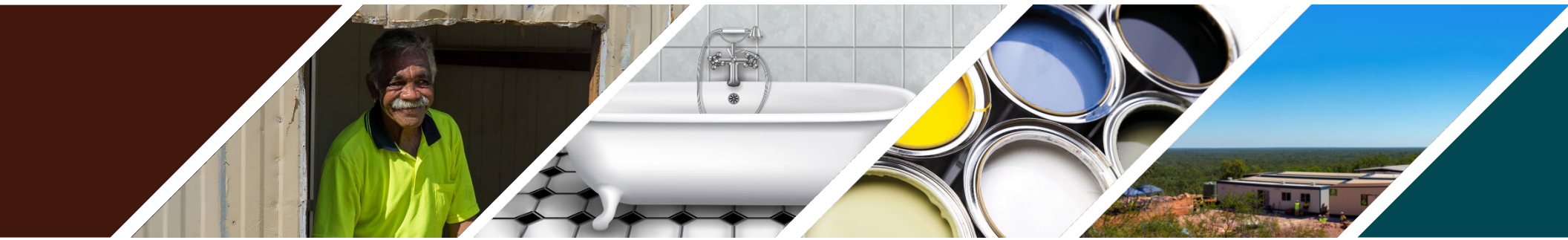
Dampier Project – Regional Plan[1]



Note:
1. Refer to ASX announcement 31 January 2019 titled *"High Grade Maiden Mineral Resource at Night Train"*

APPENDIX B

Corporate Overview



Sheffield Resources Corporate Overview

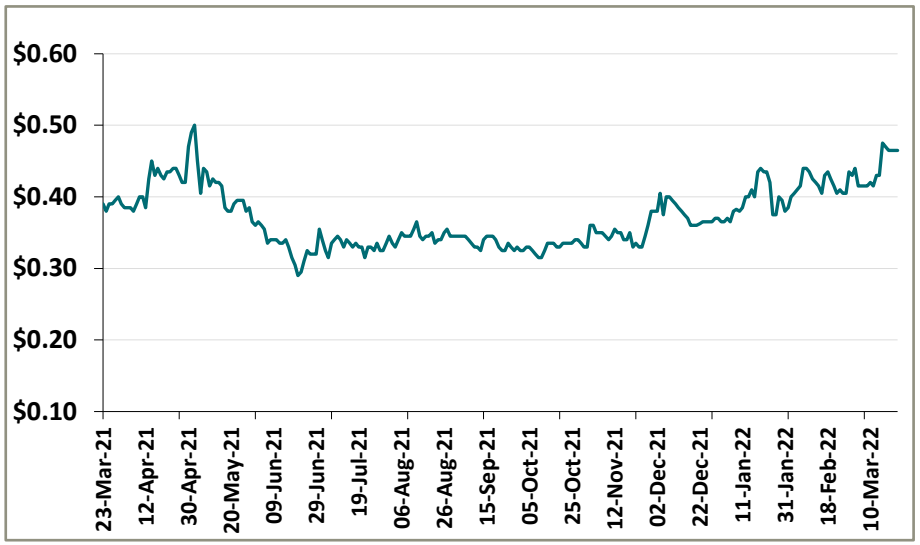
Sheffield Resources is an ASX listed mineral sands developer which has a 50% joint venture interest in the large scale Thunderbird Mineral Sands Project

- Sheffield Resources Limited ("Sheffield" or the "Company") is an ASX listed mineral sands developer and explorer based in Perth, Western Australia (**ASX:SFX**)
- Sheffield is focused on the development of the 50% owned Thunderbird Mineral Sands Project ("Thunderbird" or the "Project") located on the Dampier Peninsula in Northern Western Australia.
- Thunderbird has been developed as a greenfield project since discovery in 2012 and is one of the largest and highest grade zircon rich discoveries in the last 30 years and is one of a few greenfield mineral sands deposits globally in a secure jurisdiction
- Experienced and skilled Board capable of developing and delivering Thunderbird

Capital structure[1]

Item	Unit	Value
Ordinary Shares	*#m*	347
Share Price (as at 23 Mar 2022)[1]	*A$/sh*	0.47
Market Capitalisation	*A$m*	163
Cash Balance (23 Mar 2022)	*A$m*	40
Debt Balance (23 Mar 2022)	*A$m*	-
Enterprise Value	*A$m*	123.0

Share Price Information



Note:
1. Market data as at 23 March 2022 and sourced from ASX market based data and reports published by Sheffield Resources

Sheffield Executive & Board

Bruce Griffin
Executive Chair

- Most recently held the position of Senior Vice President Strategic Development of Lomon Billions Group, the world's third largest producer of high-quality titanium dioxide pigments.
- Held executive management positions in several resource companies, including acting as the Chief Executive Officer and a director of TZ Minerals International Pty. Ltd. (TZMI), the leading independent consultant on the global mineral sands industry, World Titanium Resources, a development stage titanium project in Africa and as Vice President Titanium for BHP Billiton.

Vanessa Kickett
Non-Executive Director

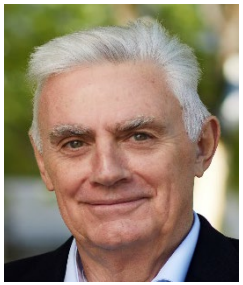
- Extensive experience and involvement with Aboriginal engagement, native title and heritage matters throughout Western Australia.
- Currently Deputy Chief Executive Officer of the South West Aboriginal Land and Sea Council, responsible for the recent implementation and operation of the South West (Western Australia) native title settlement.

Ian Macliver
Non-Executive Director

- Executive Chairman of Grange Consulting Group Pty Ltd & Grange Capital Partners. Prior to establishing Grange, Ian held positions in various listed and corporate advisory companies with experience covering all areas of corporate activity including capital raisings, acquisitions, divestments, takeovers, business and strategic planning, debt and equity reconstructions, operating projects and financial review and valuations.
- Non-Executive Chairman of Western Areas Ltd and Non-Executive Chairman of MMA Offshore Limited.

Mark Di Silvio
Chief Financial Officer & Company Secretary

- Mr Di Silvio is a CPA and MBA qualified finance professional with over 30 years' resources industry experience including operations and project development experience both in Australia and overseas, including project financing, commercial agreement structuring and product offtake agreements
- Held senior finance roles with Woodside Petroleum Limited in Australia and Africa prior to his engagement as CFO with Central Petroleum Limited, and Centamin Plc and Mawson West Limited.



Gordon Cowe
Non-Executive Director

- A qualified mechanical engineer with over 30 years' experience, Gordon has had significant involvement in leading business start-up, planning and delivery of multiple complex projects including Mining & Mineral Processing, Oil & Gas and Resources based infrastructure projects globally.
- Extensive career with leading contractors (including Bechtel and Worley Parsons) and project owners on a wide range of projects.

John Richards
Non-Executive Director

- An economist with more than 35 years' experience in the resources industry; holding various positions within mining companies, investment banks and private equity groups.
- Mr Richards has held previous positions at Normandy Mining Ltd, Standard Bank, Buka Minerals and Global Natural Resources Investments
- Non-Executive Director of Northern Star Limited and Sandfire Resources Limited.