



The Next Major Player in Rare Earths

121 Dubai Conference

November 2024

ASX:PEK
www.peakrareearths.com



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Compliance Statement

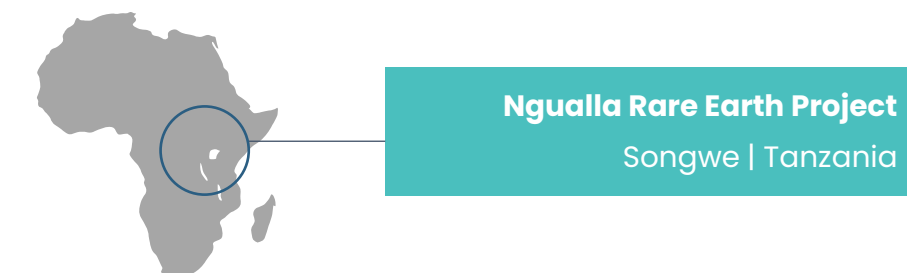
Information in this presentation references the Company’s ASX announcements dated 24 October 2022 “Completion of Ngualla Project BFS Update”, 30 November 2023 “Completion of FEED Study”, and for drilling and exploration results, 5 February 2024 ‘Breccia Zone Trench Samples – Assay Results’, 26 February 2024 ‘Phosphate Bioavailability Test Results’, 4 March 2024 ‘Further Northern Zone Assay Results’, and 20 March 2024 ‘Major High-Grade Fluorspar Discovery’ which are available to view on <https://www.peakrareearths.com/announcements/>. The Company confirms that at this time it is not aware of any new information or data that materially affects the information included in the relevant announcements and that all material assumptions and technical parameters underpinning the estimates in the relevant announcement continue to apply and have not materially changed, save that (i) the 30 November 2023 announcement “Completion of FEED Study” provides new information and updates to estimates in the 24 October 2022 “Completion of the Ngualla Project BFS Update” and (ii) the change to the rare earths price assumptions as set out in the December 2023 Quarterly Activities Report and Review of Operations Section of the December 2023 Half-Year Financial Report. The Company further confirms that at this time the form and context in which the Competent Person’s findings presented in the reserve and resource estimates and exploration result announcements have not been materially modified from the original market announcements.

This presentation is authorised for release by the Company’s Chief Executive Officer.

Peak Rare Earths ... corporate snapshot

Focused on the development of the Ngualla Rare Earth Project with the support of major shareholder, Shenghe

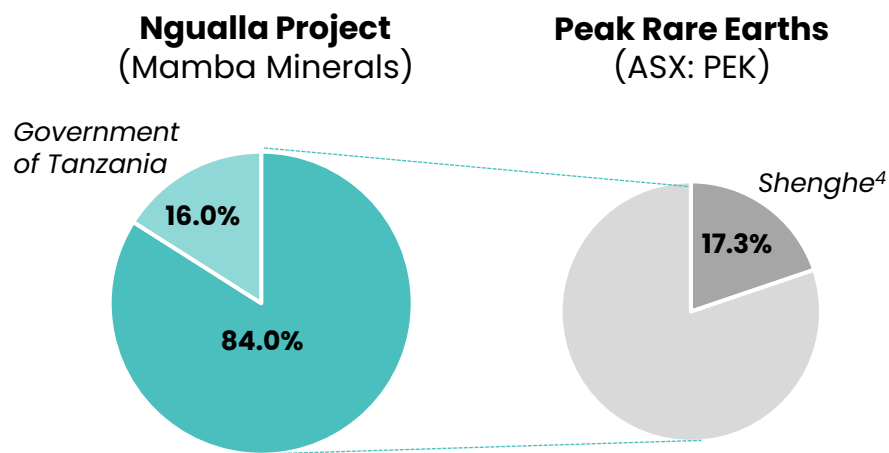
Key assets



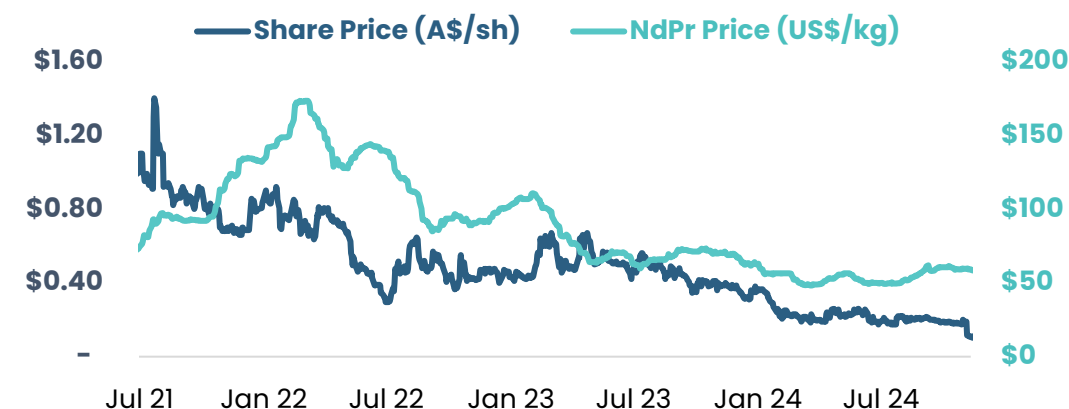
Capitalisation summary (pro-forma)^{1,3}

Ordinary shares on Issue 306.4m	Share Price 13 November 2024 A\$0.110/sh
Market Capitalisation A\$33.7m	Proforma net cash² A\$7.3m

Shareholding structure



Share price performance



1. Reflects completion of Tranche 1 of Placement – see 5 November 2024 ASX Announcement “Equity Placement of \$6m and Planned \$2m SPP”

2. Reflects a cash balance as at 30 September 2024 of A\$3.6m and net proceeds from Tranche 1 of Placement of A\$3.7m

3. An additional 40m shares to be issued and net cash of A\$3.9m to be realised post completion of Tranche 2 of Placement and assuming full subscription of Share Purchase Plan (SPP)

4. Shenghe’s holding will be increased to 19.9% following successful completion of Tranche 2 of the Placement (which requires shareholder approval) and the SPP

Peak ... a compelling investment opportunity

A world-class project with a supportive partner, a full offtake solution and a pathway to development and funding

1.

COMPELLING MARKET OUTLOOK

- ✓ Strong nexus to global decarbonisation
- ✓ Recent rebound in rare earth prices with an increasingly attractive market outlook



2.

WORLD CLASS ASSET

- ✓ High-grade bastnaesite ore with low radioactivity
- ✓ Significant exploration upside and multi-commodity potential



3.

ATTRACTIVE JURISDICTION

- ✓ Rapid transformation of Tanzanian economy with established mining sector
- ✓ Government partnership, strong –in country relationships and a highly supportive community



4.

SUPPORTIVE STRATEGIC PARTNER AND MAJOR SHAREHOLDER, SHENGHE

- ✓ Invested +A\$45m in Peak and currently holds ~17.3%¹
- ✓ Proven-track-record of technical, offtake and support to MP Materials



5.

DERISKED PATHWAY TO DEVELOPMENT

- ✓ FEED Study and BFS Update completed, Framework Agreement executed and Special Mining Licence granted
- ✓ Binding offtake agreement in place with pathway to a complete project funding and development solution



6.

PROVEN LEADERSHIP TEAM

- ✓ Track record in funding and delivering projects
- ✓ Deep Tanzanian, technical and emerging markets experience



Ngualla Rare Earth Project ... a world class project

The Ngualla Project is one of the largest and highest grade undeveloped rare earth deposits in the world, with significant exploration and development upside

High-grade Ore Reserve¹

- TREO – 4.80% and NdPr – 1.02%

Multi-generational

- 214Mt Mineral Resource and initial 24 year life¹

Low radionuclides¹

- U – 15 ppm and Th – 53ppm

World scale

- 16.2ktpa of high-grade rare earth concentrate containing 3.6ktpa of NdPr

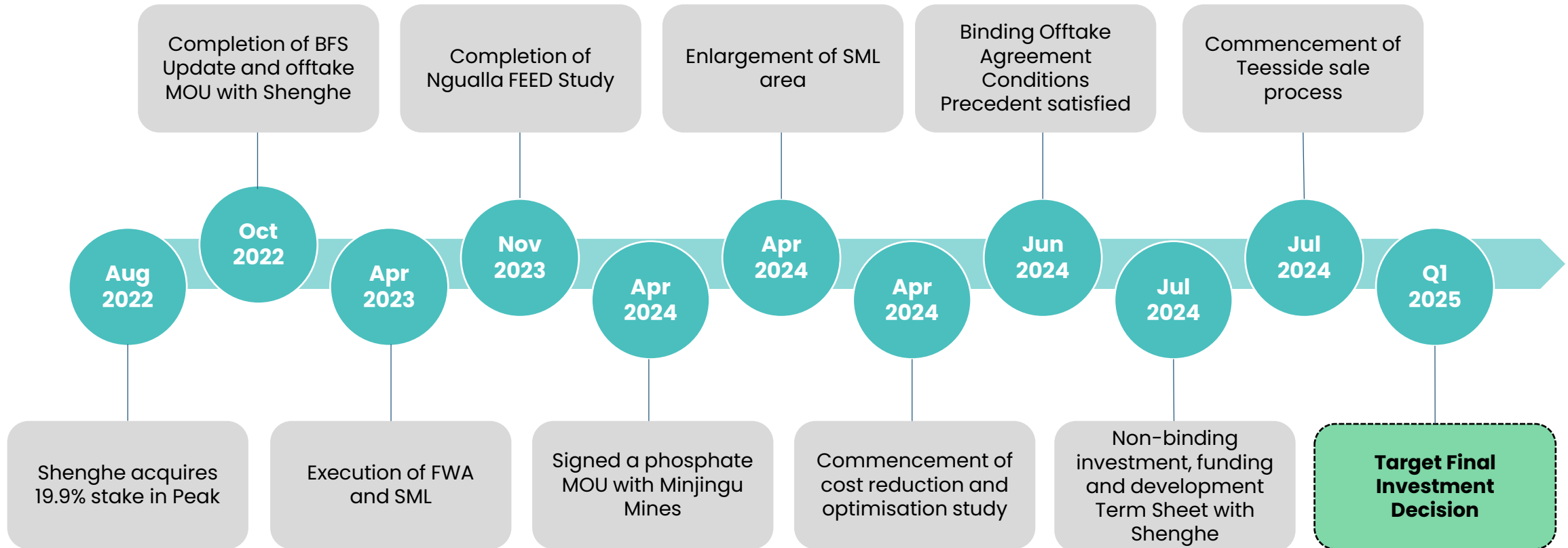
Significant exploration upside

- Includes fluorspar, niobium and phosphate



Recent milestones ... momentum and de-risking

A fully funded solution for the Ngualla Project with multi-commodity optionality and potential near-term liquidity from a sale of Teesside



Tanzanian and rare earth outlook



Tanzania ... open for business

Rising international visibility and a rapidly growing economy

Tanzania economy ... at a glance

- Economic Freedom score of 60.0 – **4th highest in Africa**
- Politically stable – **60 years** since independence
- One of the fastest growing economies in Africa – average GDP growth over last 10 years of **6.1%**
- Unemployment rate of **~3%**
- Recent Moody **upgrade** to a **B2 positive** due to reduced political risk, community engagement and structural reform agenda
- Key logistics hub with proximity to Asia and the Middle East

Recent developments

April 2023: MOU between the Export-Import Bank of the United States (EXIM) and the Government of Tanzania for up to **US\$500m in export financing**

November 2023: **US\$1b contract** executed with China Civil Engineering Construction Corporation (CCECC) to upgrade part of the existing TAZARA railway



Ongoing development of national standard gauge network



Recent completion of 2GW Julius Nyerere Hydropower Station









US Vice President Kamala Harris' Tanzanian visit (March 2023)





Tanzania ... a rapidly growing mining and resources sector

Tanzania continues to attract significant investment from highly reputable international mining companies

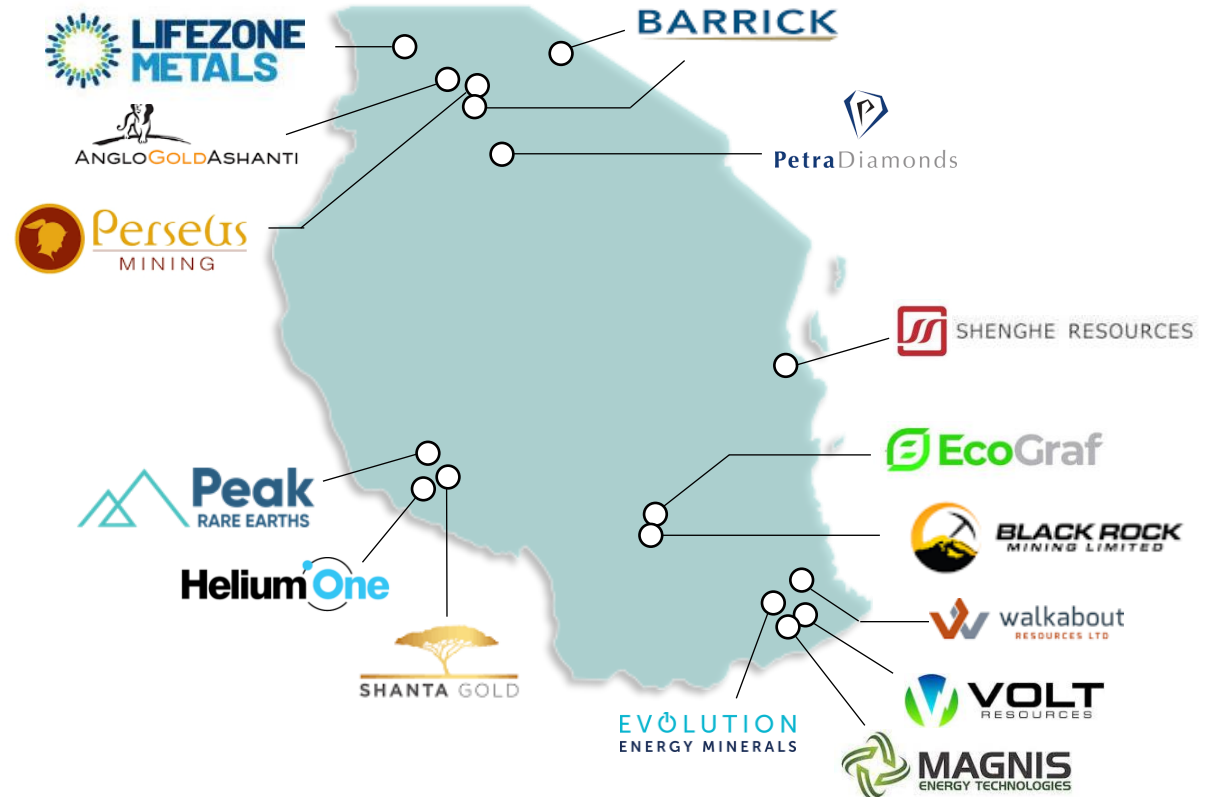
Recent project investments

	Up to US\$40m	 BLACK ROCK MINING LIMITED
	To date US\$90m	 LIFEZONE METALS
 SHENGHE	Proposed ~US\$64m	 Peak RARE EARTHS

Recent company & project acquisitions

 Perseus MINING	April 2024 US\$180m	 ORECORP LIMITED
 SHENGHE	May 2024 ~US\$29m	 NYATI mineral sands

Key mining projects

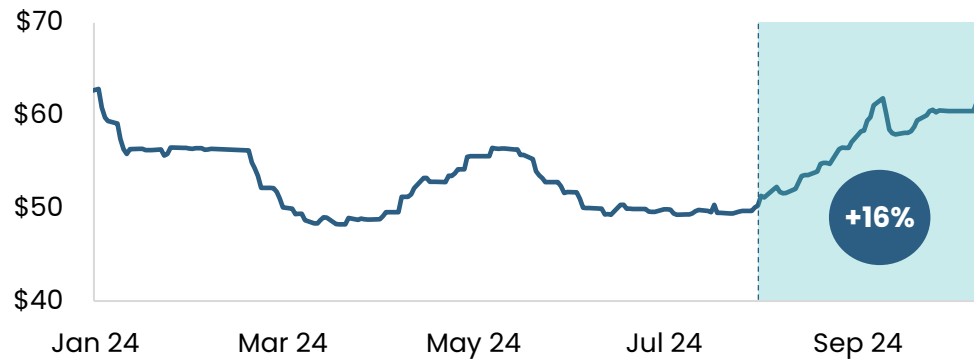


Rare earth outlook ... compelling fundamentals aligned to decarbonisation

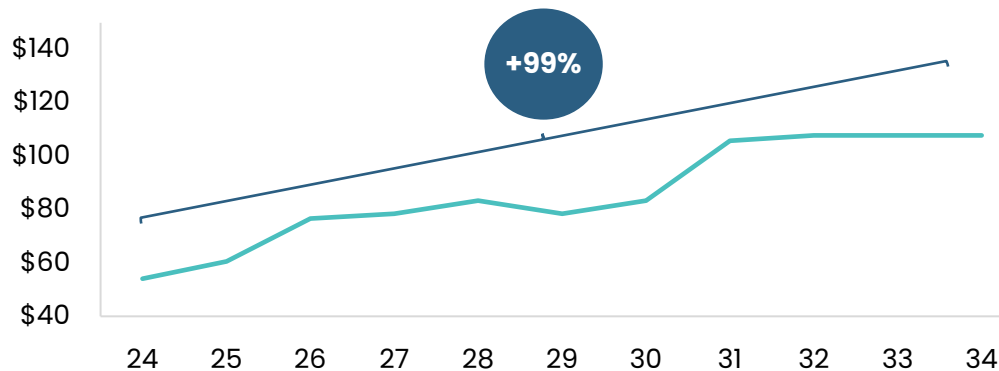
NdPr Oxide price is recovering from temporary headwinds with a return of market sentiment

Appreciating rare earth prices

NdPr Oxide price - actual (US\$/kg)¹

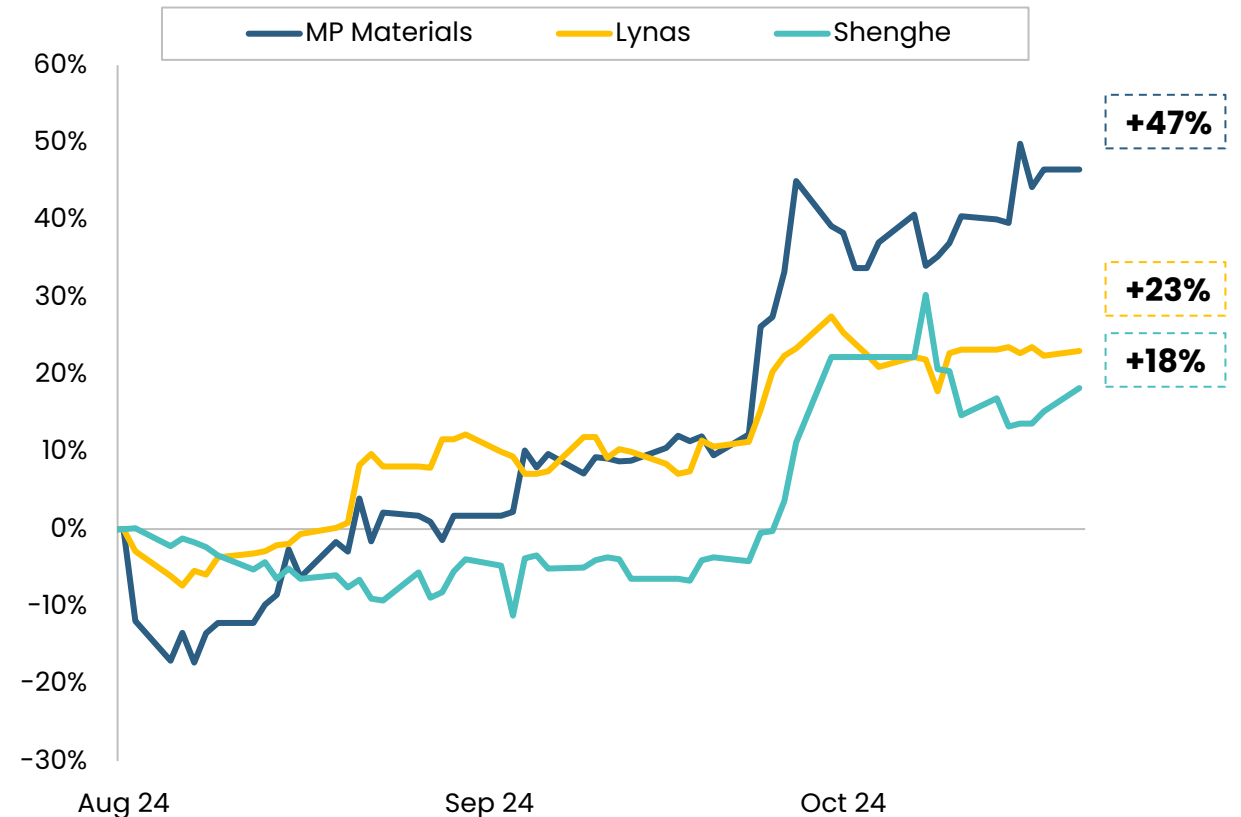


NdPr Oxide price - forecast (US\$/kg)²



Commencement of a rebound in rare earth stocks

Share performance of rare earth producing peers (last 3 months)



Ngualla Project



World-class deposit ... large scale and high-grade ore reserves supporting a long mine life

The Ngualla deposit is one of the world's highest grade undeveloped NdPr deposits

%NdPr (Ore Reserve)

	Operating		Development				
	1.42%	0.99%	1.02%	0.75%	0.55%	0.33%	0.20%
	1. Mt Weld	2. Mountain Pass	3. Ngualla	4. Nolans Bore	5. Longonjo	5. Yangibana	6. Songwe Hill
Owner	Lynas	MP Materials	Peak Rare Earths	Arafura	Pensana	Hastings	Mkango
Location	Australia	USA	Tanzania	Australia	Angola	Australia	Malawi
Mineral	Monazite	Bastnaesite	Bastnaesite	Apatite / Monazite	Monazite	Monazite	Synchysite
Status	Operating	Operating	Development (BFS)	Development (BFS)	Development (PFS)	Development (BFS)	Development (BFS)
Reserve	Proven – 21.2Mt	Proven – 0.3Mt	Proven – 17.0Mt	Proven – 5.0Mt	Proven – 13.3Mt	Proven – 4.9Mt	Proven – 8.2Mt
	Probable – 10.8Mt	Probable – 26.3Mt	Probable – 1.5Mt	Probable – 24.6Mt	Probable – 16.8Mt	Probable – 16.0Mt	Probable – 10.0Mt
	Total – 32.0Mt	Total – 26.6Mt	Total – 18.5Mt	Total – 29.6Mt	Total – 30.1Mt	Total – 20.9Mt	Total – 18.1Mt
Market Cap (A\$m)	7,104	4,807	34	320	150	52	35

Ngualla Project ... snapshot

FEED Study completed in November 2023 reaffirmed its position as the world's premier rare earth development project¹

US\$208m

Post-tax real NPV_{8%} attributable to Peak

18.8%

Post-tax real IRR based on returns to Peak

16.2ktpa REO

Annual production of high-grade, low impurity bastnaesite concentrate

US\$287m

Upfront capital expenditure

24 years

Initial mine life, based on Ore Reserves only

24 months

From FID to first concentrate

Derisked ... the most advanced rare earth development project

Recent non-binding Term Sheet with Shenghe positions Ngualla as the only rare earth project globally with a complete offtake, development and funding solution¹



Key licences in place

Special Mining Licence granted and Framework Agreement executed with the Government of Tanzania



Technically de-risked

Completed BFS Update and FEED studies and further optimisation study underway



Binding offtake

7-year take-or-pay agreement for 100% of concentrate and 50% of any future downstream products



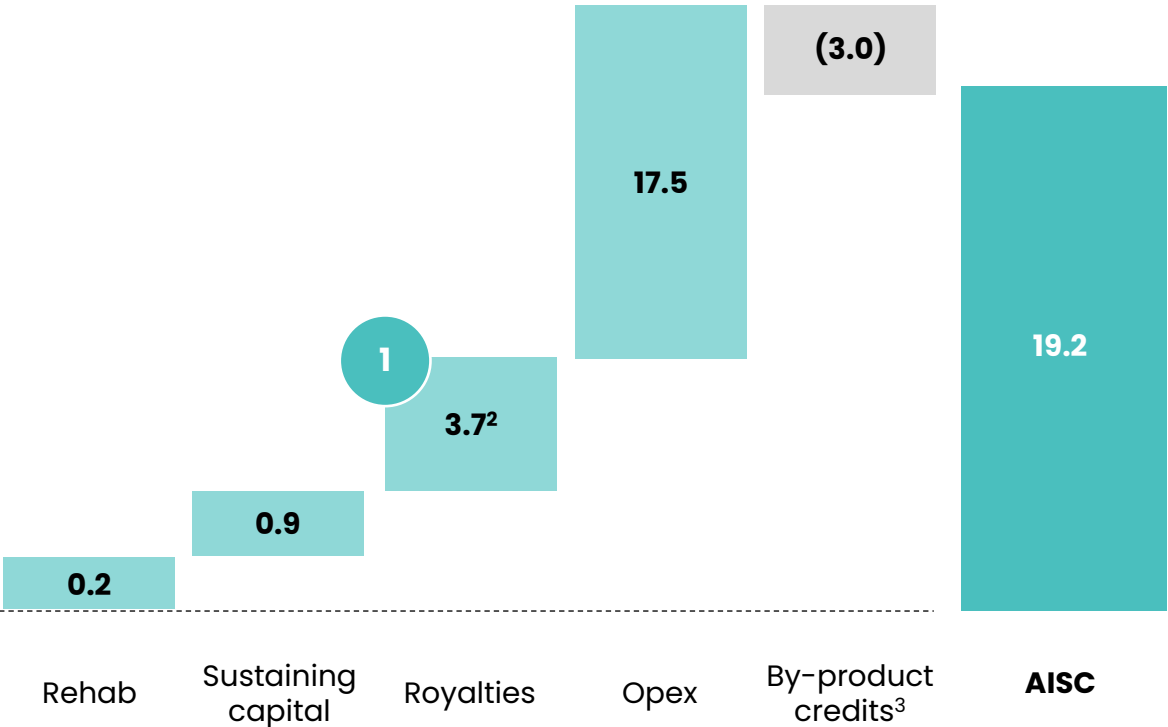
Full project funding solution

No requirement for Peak to contribute any additional development equity funding

Competitive cost profile ... supporting robust margins

An all-in sustaining cost of ~US\$19.2/kg NdPr at US\$100/kg flat pricing supporting attractive margins through rare earth price cycle

All-in sustaining cost breakdown (US\$/kg NdPr)¹



Royalty sensitivity (US\$/kg NdPr)			
NdPr Oxide price (LOM average)	Net price	AISC	Net margin
US\$60/kg	26.48	17.88	21%
US\$80/kg	38.38	18.53	44%
US\$100/kg	49.88	19.25	55%
US\$120/kg	61.03	20.00	62%

¹Based on LOM production of 3.6ktpa of contained NdPr Oxide. Royalty cost depicted is based on AUS\$100/kg flat pricing for NdPr Oxide
²Based on a royalty rate of 6% (on gross revenues) which is consistent with current legislation within Tanzania
³By-product credits are based on a lanthanum oxide price of US\$0.50/kg, a cerium oxide price of US\$0.50/kg, a SEG/heavy price of US\$33.43/kg and a net payability of 49.88%

Peak and Shenghe ... a transformational partnership

Offtake, investment and development agreements with Shenghe underpin an integrated development solution

Shenghe partnership ... key elements



Offtake

Binding offtake agreement in place



Funding

Full project funding solution via Shenghe's A\$96m investment into NGUK as well as project-level debt facility



Project construction and development

Shenghe to participate in tender for project EPCM, EPC or EPS execution package



Technical collaboration

Ongoing optimisation of current flowsheet as well as collaboration around in-country downstream development



We continue to believe that the Ngualla Project is the premier undeveloped rare earth project in the world. This Term Sheet demonstrates our commitment to work with Peak and Mamba Minerals to further optimise the Ngualla Project and to expedite its development and funding

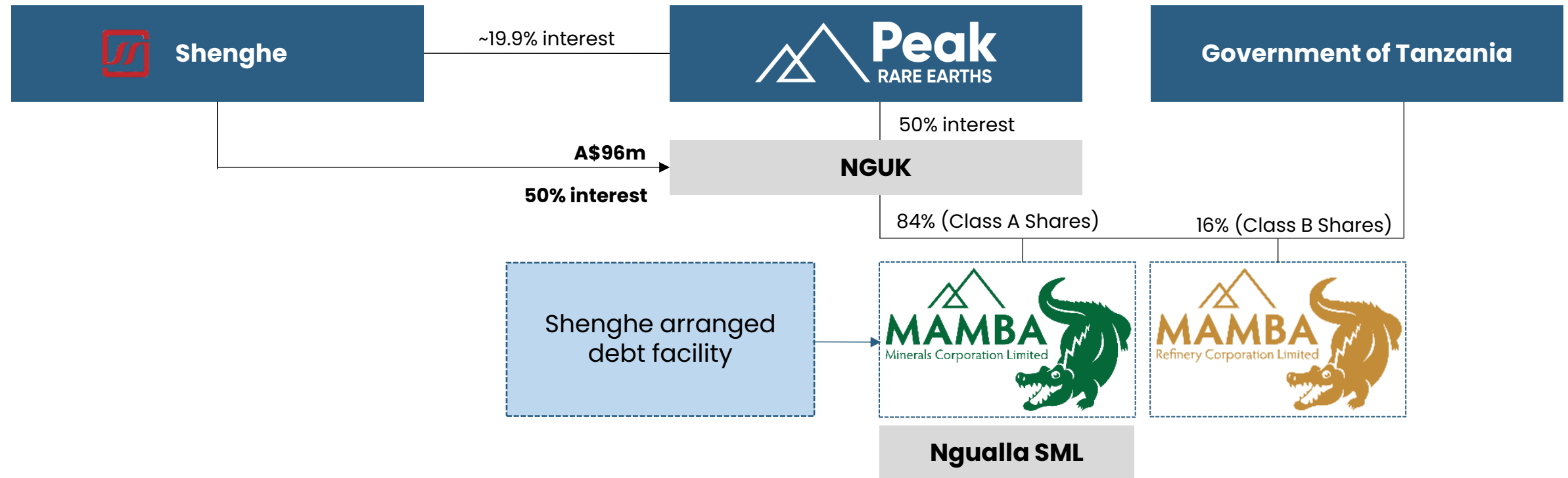
Mr. Huang Ping, Deputy Executive Chairman of Shenghe Resources Holding Co., Ltd

Investment and funding structure ... a fully funded solution

Shenghe to invest A\$96m to subscribe for a 50% stake in Ngualla Group UK Ltd (NGUK)



Implied valuation of A\$0.36/share on a post-transaction basis represents a 100% premium over Peak's pre-announcement share price



Supports a technically enhanced and lower cost Ngualla Project with a fully funded solution and no requirement for Peak to contribute development equity funding

Integrated solution... supported by a well credentialed partner

Shenghe is a well-capitalised and technically strong strategic partner and a key contributor to MP Materials' successful restart of the Mountain Pass Project

Shenghe overview



盛和资源

- ✓ Peak's **largest shareholder** with ~19.9% shareholding
- ✓ Shanghai listed non-SOE with ~**US\$3.1b** market capitalisation
- ✓ **Largest importer of rare earth concentrate** into China
- ✓ Internationally recognised expertise in mining and processing **bastnaesite mineralisation**
- ✓ Recent acquisition of Strandline Resources' **Tanzanian mineral sands project portfolio**

Shenghe overseas rare earths investments



9.2% holding



100% holding



7.7% holding



50% holding



19.9% holding



10.0% holding

Shenghe's role in MP Materials



MP Materials Overview

- NYSE listed with a market capitalisation of ~**US\$3.1b**
- Operates Mountain Pass – world's second largest rare earth mine
- Currently sells a bastnaesite mineral concentrate
 - Exporting ~**40ktpa of concentrate to Shenghe**
- Moving downstream into NdPr Oxide and magnet production
 - Recently produced first NdPr Oxide

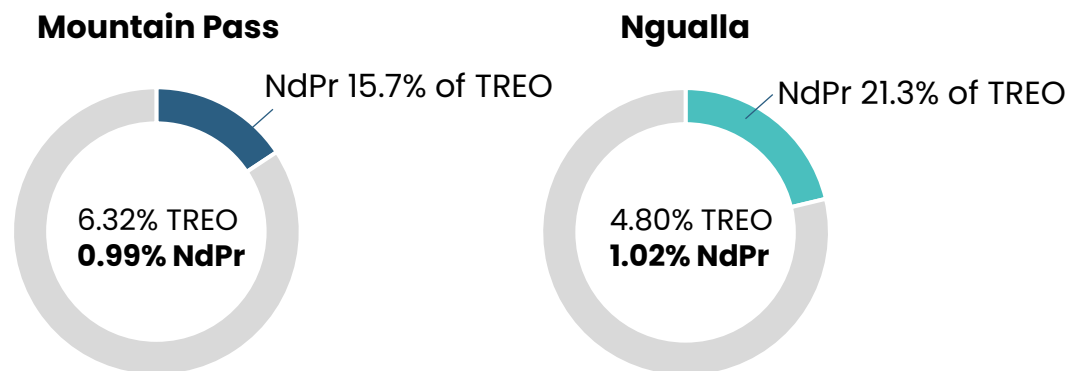
Shenghe's contribution to MP Materials

- Founding investor in restart of mine and **7.7% shareholding**
- ~**US\$80m** in funding support (prepayment)
- Technical support for restart and ramp-up
- 100% offtaker of bastnaesite concentrate

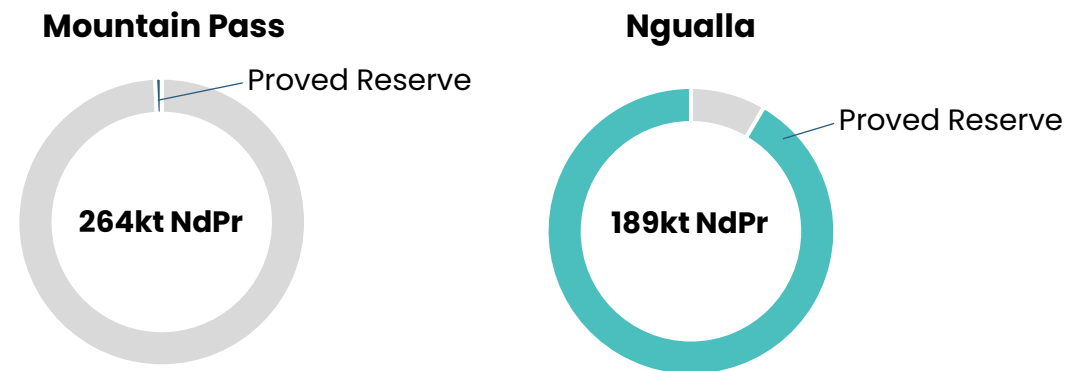
MP Materials ... a comparison with Peak

Peak compares favourably with MP Materials

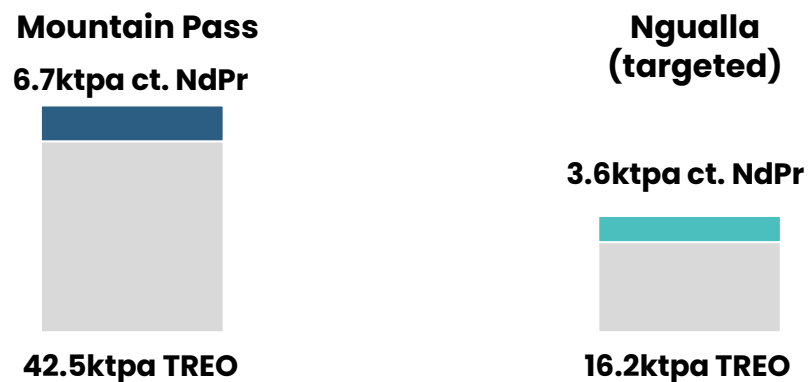
1. Ore Reserve (grade)^{1,2}



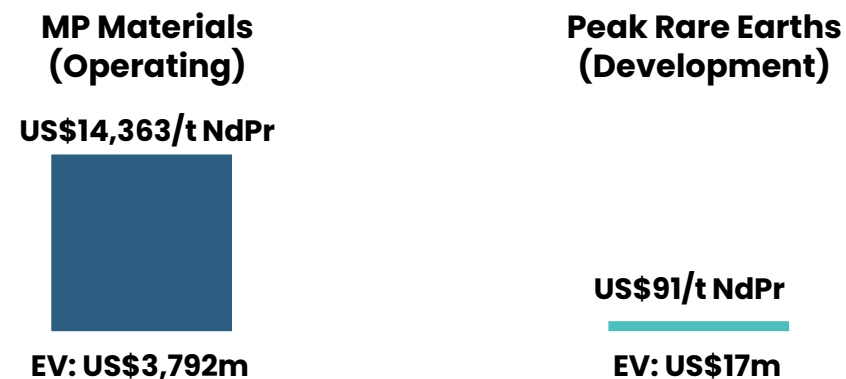
2. Ore Reserve (contained NdPr)^{1,2}



3. Bastnaesite concentrate production^{2,3}



4. Trading – Reserve (EV / Ct. NdPr) multiples⁴



Operating companies will generally trade on higher multiples than development companies. MP Materials has a track-record of profitable operations, while Peak remains a development company

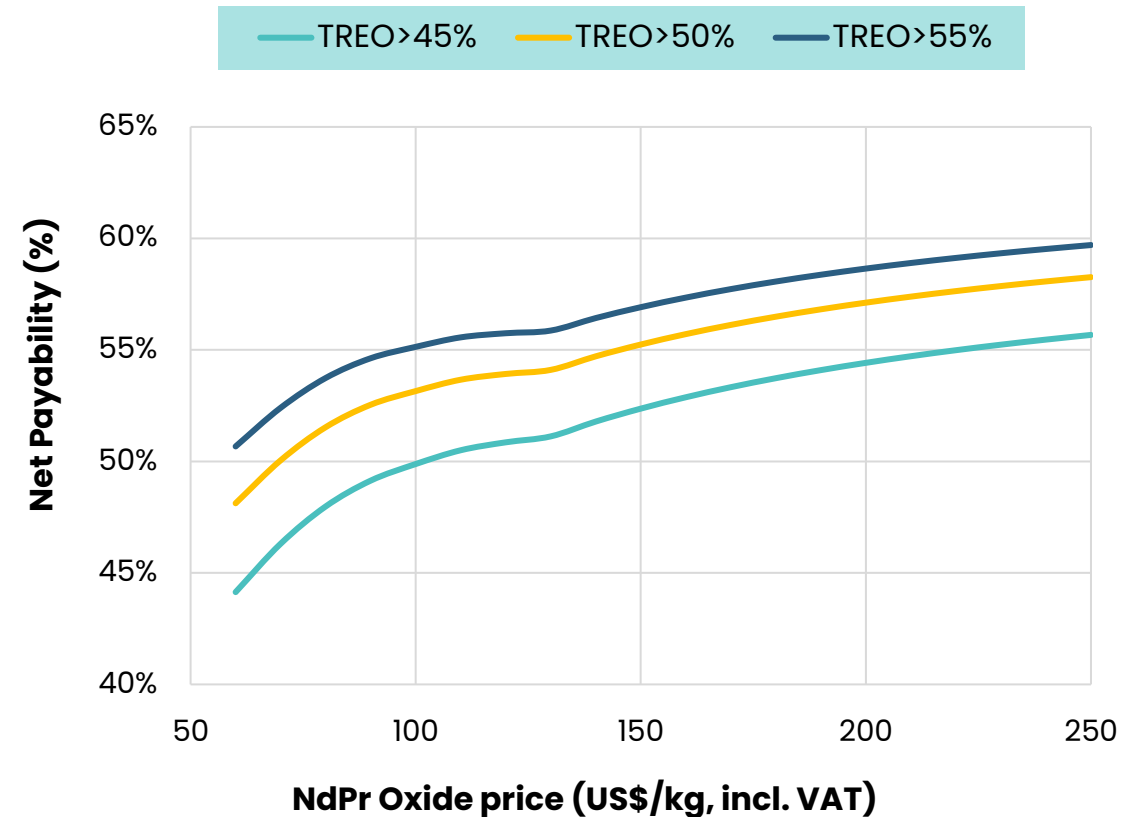
Binding offtake agreement ... 'bankable' with high payability

Binding offtake agreement with Shenghe delivers attractive payabilities across rare earth pricing cycle

Binding offtake agreement – key terms

- ✓ **100% of rare earth concentrate**
- ✓ **Minimum of 50% of intermediate and final rare earth products**
- ✓ **Take or pay arrangements**
- ✓ **Initial term of 7 years**

Net payability of Ngualla concentrate (%)¹



Ngualla Project ... optimisation opportunities

Collaboration with Shenghe on further optimisation and cost reduction opportunities

Optimisation opportunities identified post FEED

1. Building relocation and layout optimisation
2. Optimisation and contract packages
3. Deferral of new airstrip
4. Increased plant availability
5. Re-scope buildings and storage facility
6. More competitive tendering solutions

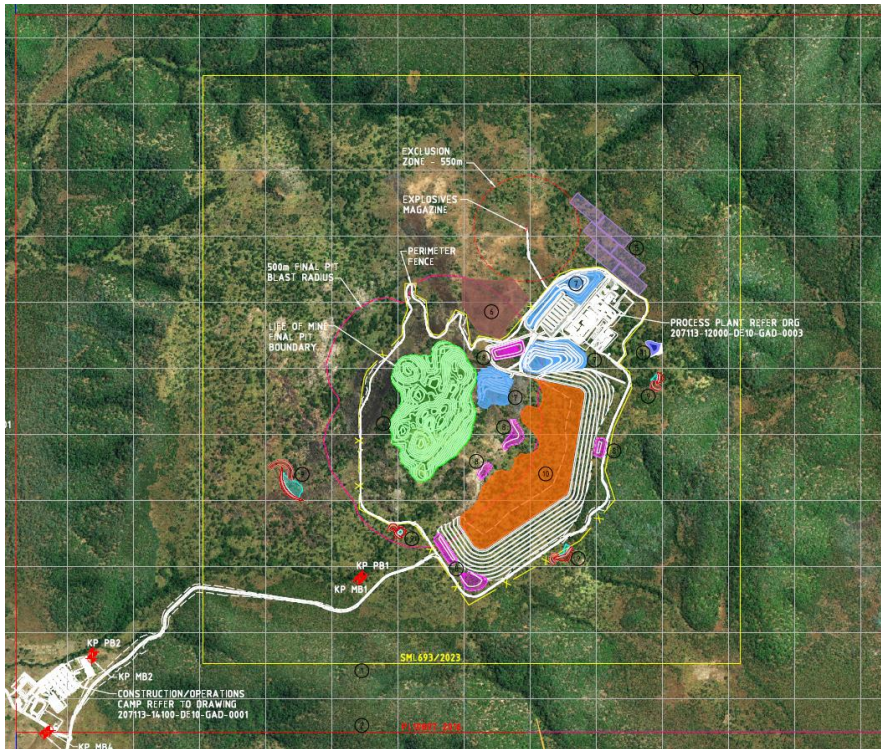
Additional opportunities being progressed with Shenghe

1. Relocation of TSF
2. Adoption of a single stage flotation process
3. Redesign of the process plant
4. Adoption of lower cost plant, equipment and engineering solutions

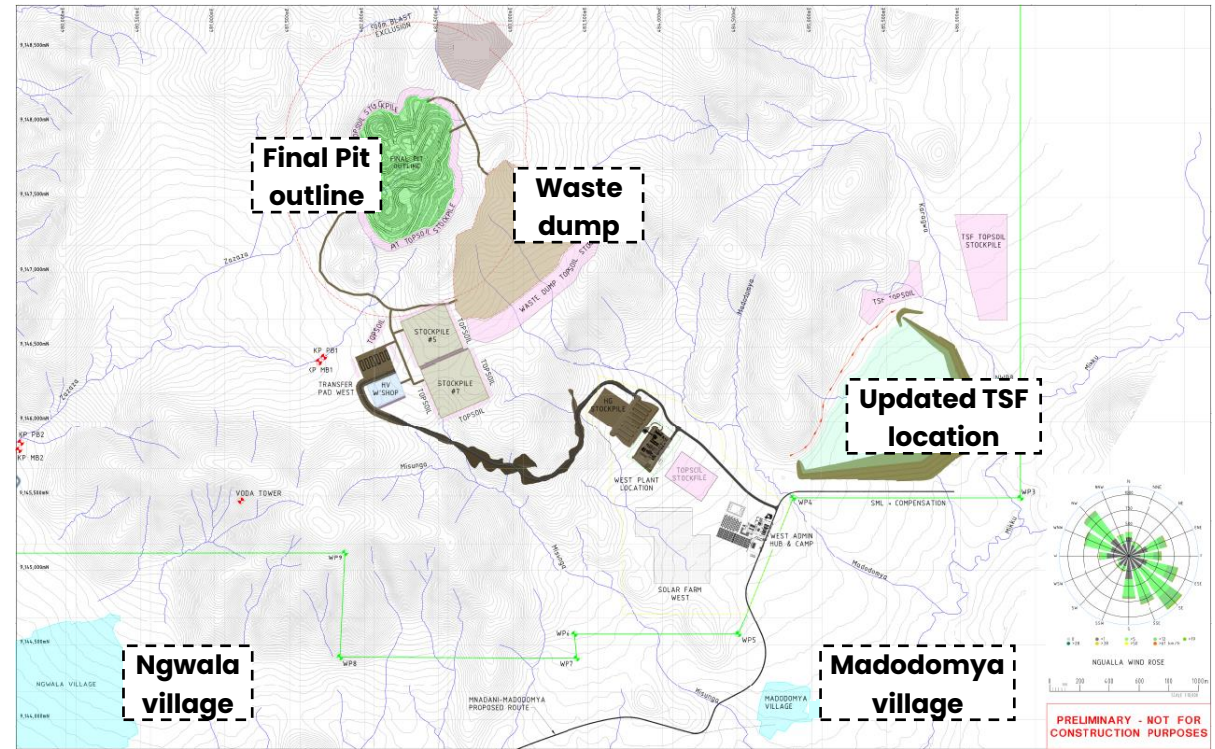
Ngualla Project ... layout enhancements

New layout delivers material reductions in costs and improved safety

1. Previous layout



2. Updated layout



- ✓ Material savings in bulk earthworks
- ✓ Enhanced solar insolation (power plant)

- ✓ Reduced pumping costs
- ✓ Improved safety of TSF

- ✓ Reduced vehicle traffic on hill
- ✓ Land availability for future expansions

Preparing for FID ... early and enabling works

Advancement of Ngualla pre-development activities in preparation for FID

Recently completed work

- ✓ Expansion of Camp capacity (to 50 x pax)
- ✓ Maintenance and enhancement of Southern Access Road
- ✓ Upgrade of IT, communications and safety systems at site
- ✓ Development of new office building at site
- ✓ Geotechnical drilling , water bore testing and development
- ✓ Ore testing and variability analysis
- ✓ TANESCO power connection to Camp

Work in progress

- Extension of existing airstrip
- Development of borrow pits / quarries
- Commencement of pre-strip and early mining activities
- Geophysical survey



Connection to the TANESCO power grid and ongoing maintenance of the Southern Access Road



Songwe Regional Commissioner visit to the Ngualla Camp

'Kazi Wajibu Utu' ... Work, Responsibility and Humanity

Mamba continues to prioritise an active engagement process with nearby communities which underpins social development priorities

Social engagement planning

Historical and ongoing initiatives

- ✓ Construction of teachers houses and classrooms
- ✓ Reconstruction of Ngwala-Kininga Road
- ✓ Funding to local community clinic and provision of resident paramedic
- ✓ Sponsorship of the Mamba Minerals football league, Farmers Day (Nanene) Tournament and inter-school examination competition
- ✓ First aid and snake antivenom training for community

New initiatives for the next 12 months

- ✓ Construction of two classrooms for the new Ngwala Secondary School
- ✓ Development of a police post
- ✓ Commencement of a tree planting campaign aimed at planting 300 trees around schools, health centres and public areas



Annual Ngwala inter-school examination competition



First aid training held at the Ngualla Camp

Indicative timeline ... targeting FID by the end of Q1 2025

First concentrate scheduled for Q1 2027 – 24 months after a Final Investment Decision

Milestone	Date
Signing of non-binding Term Sheet	July 2024
Execution of binding legal agreement with Shenghe	Q4, 2024
Satisfaction of other remaining Conditions Precedent and Financial Close of Shenghe transaction	Q1, 2025
Final Investment Decision (FID)	Q1, 2025
Completion of construction	Q4, 2026
First concentrate	Q1, 2027
Completion of commissioning	Q1, 2027
Ramp-up	Q2, 2027

Critical minerals exploration



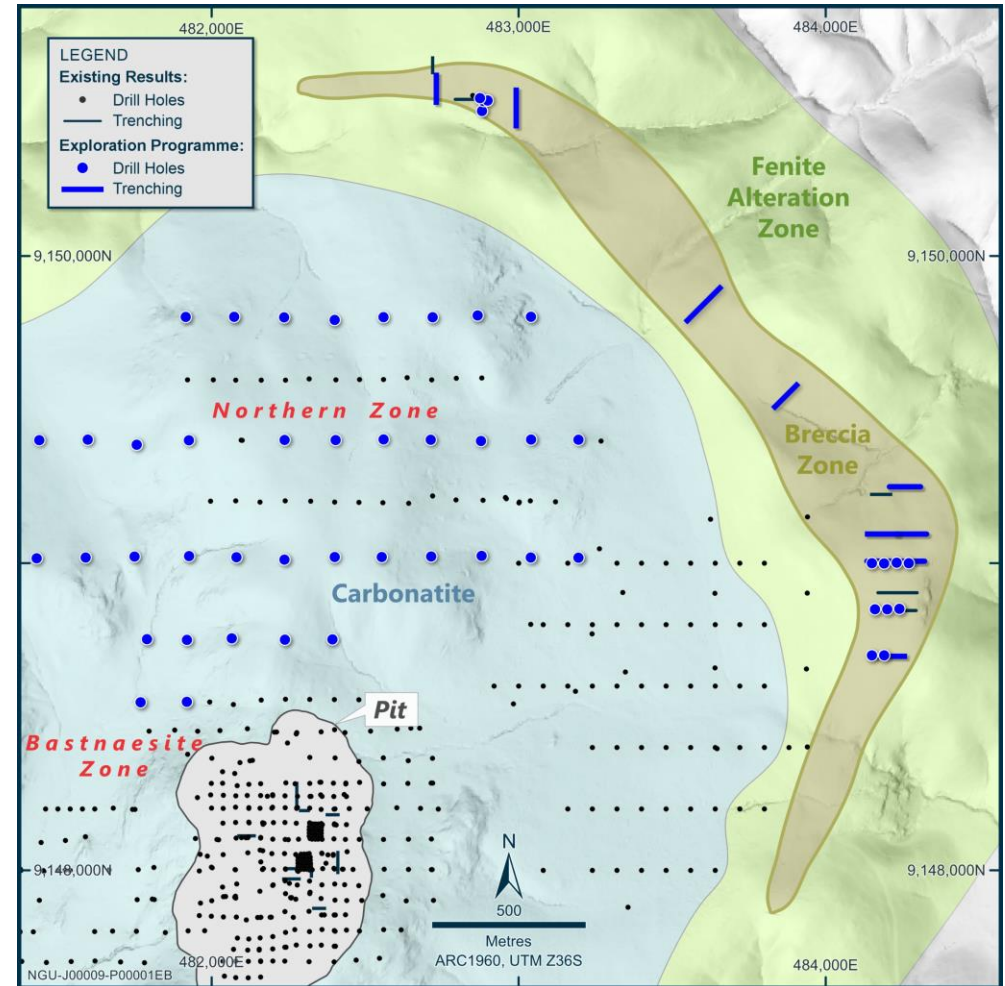
Critical minerals exploration programme ... highly successful

Exploration activities advanced at both the Breccia Zone and Northern Zone including 4,200m of additional RC and DD drilling

Progress to date

- Development of geological model for Northern Zone (SRK)
- Assay of 344 trench samples from Breccia Zone¹
 - Confirmation of widespread fluor spar mineralisation at surface
- 57 drill holes for 4,200m completed and assayed²
 - Widespread phosphate mineralisation across Northern Zone
 - Major high-grade fluor spar discovery within Breccia Zone
- Bioavailability analysis of phosphate from Northern Zone³
 - Confirms potential use as direct-application fertiliser

	Northern Zone	Breccia Zone	Total
RC	44 holes / 3,104m	11 holes / 885m	55 holes / 3,989m
DD	-	2 holes / 211m	2 holes / 211m
Total	44 holes / 3,104m	13 holes / 1,096m	57 holes / 4,200m



Critical minerals exploration ... Northern Zone

Widespread and high-grade phosphate mineralisation¹

Overview

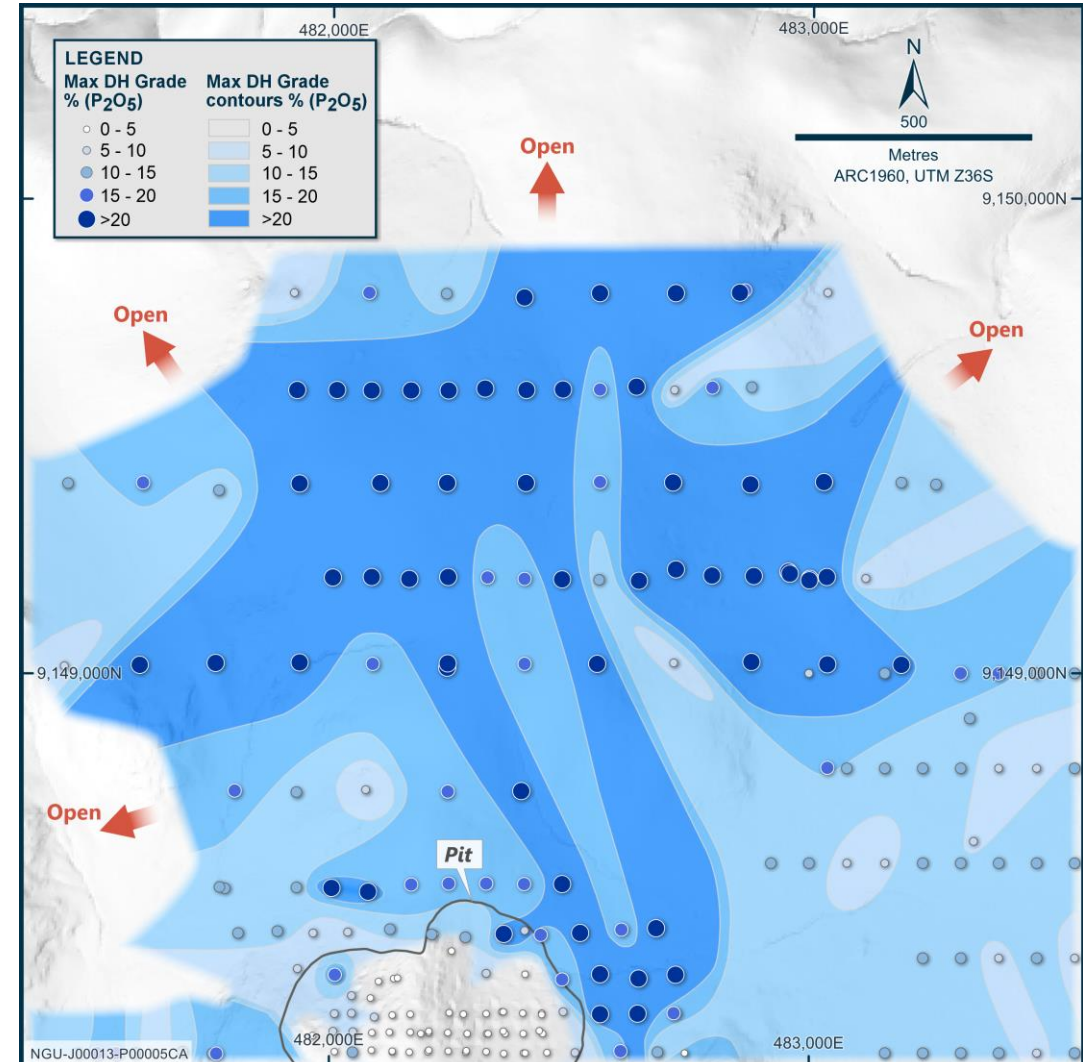
- ~0.7km² area, located 2km North of the Bastnaesite Zone
- Mineralisation currently open in northern and eastern directions
- Widespread, high-grade phosphate mineralisation at surface
- 'High' bioavailability - supports use in fertiliser applications²
- Extensive rare earth and niobium mineralisation
 - Elevated levels of higher-value heavy rare earths (terbium and dysprosium)

Prospective commodities



Drilling summary (to date)

RC:	DD:	Total
75 holes / 5,584 m	2 holes / 190m	77 holes / 5,774 m



Critical minerals exploration ... a near-term phosphate opportunity

Potential to expedite development of phosphate via collaboration with Minjingu Mines and Fertiliser¹

Minjingu Mines & Fertiliser

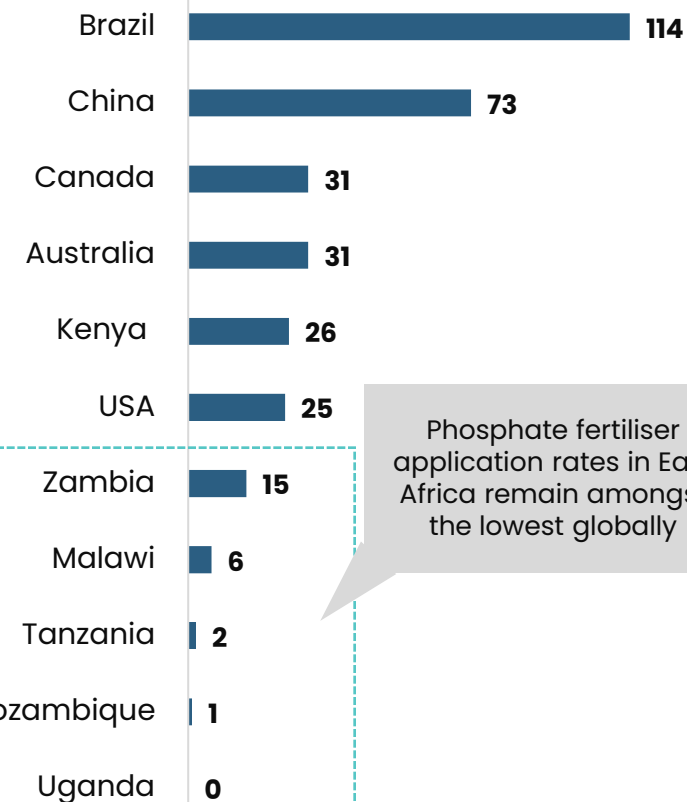


- Operates a Tanzanian phosphate mine
- Produces organic and blended fertilisers
- Distribution network into Southern and East Africa

MOU ... key terms

- Evaluation of collaboration across
 - Mining & beneficiation
 - Offtake & sales arrangements
 - Transport & logistics
 - Potential JV, co-investment & partnering structures
- Joint study group to expedite the development of a low-cost phosphate beneficiation flowsheet
- Initial term – 12 months

Phosphate fertiliser use (kg) / hectare of cropland²



Phosphate fertiliser application rates in East Africa remain amongst the lowest globally

Critical minerals exploration ... Breccia Zone

Recent drilling supports potential of a globally significant fluorspar deposit

Overview

- ~0.4km² area, located 2km North-East of the Bastnaesite Zone
- 3.7km extent, with mineralisation currently open in all directions
- Trenching has confirmed widespread mineralisation at surface¹
- Recent drilling assays have confirmed thick, high-grade intercepts of fluorspar in southern and northern Breccia Zone²
 - Central Breccia Zone remains only lightly tested
- Rare earth / niobium mineralisation associated with fluorspar in the northern Breccia Zone

Prospective commodities



Fluorspar



Rare Earths



Niobium

Drilling summary (to date)

RC:

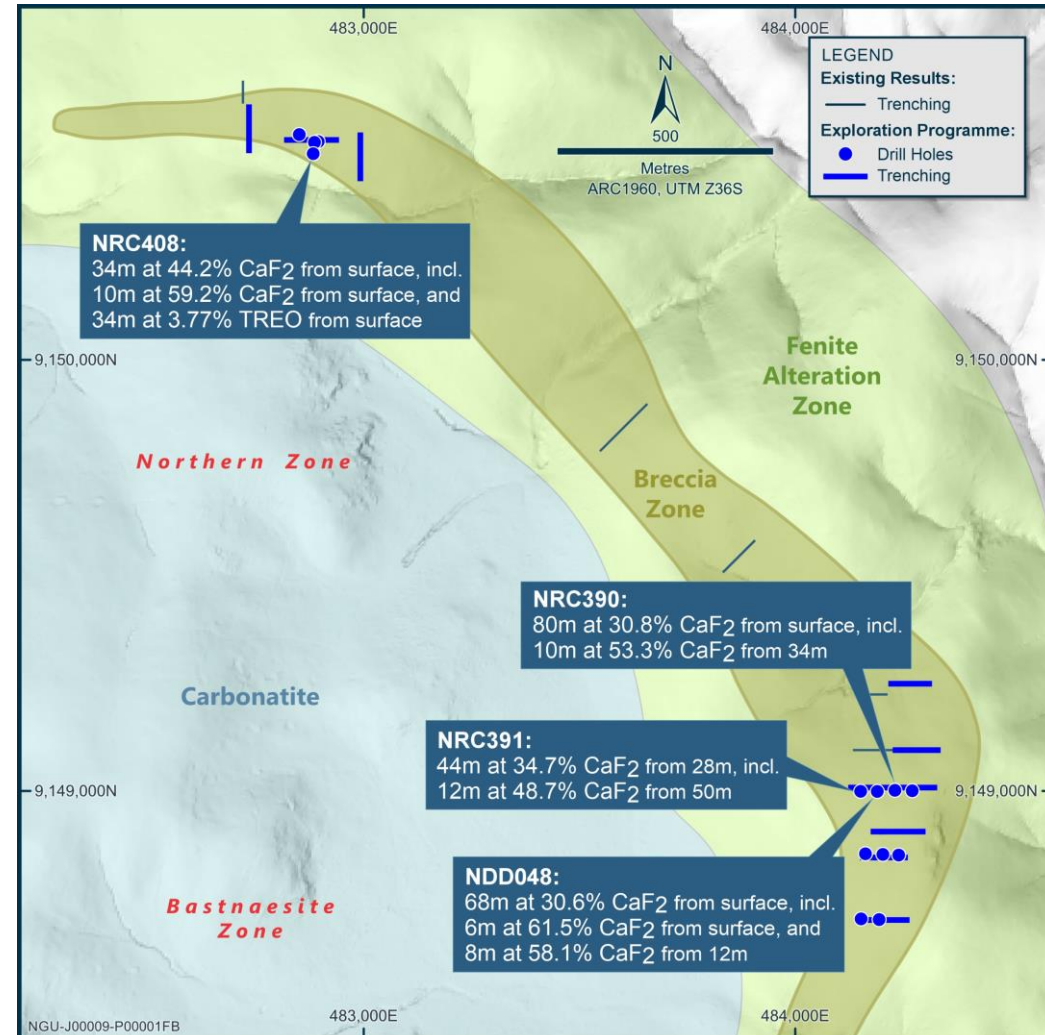
11 holes / 885 m

DD:

2 holes / 211 m

Total

13 holes / 1,096 m



Teesside



Teesside site ... potential for near-term liquidity

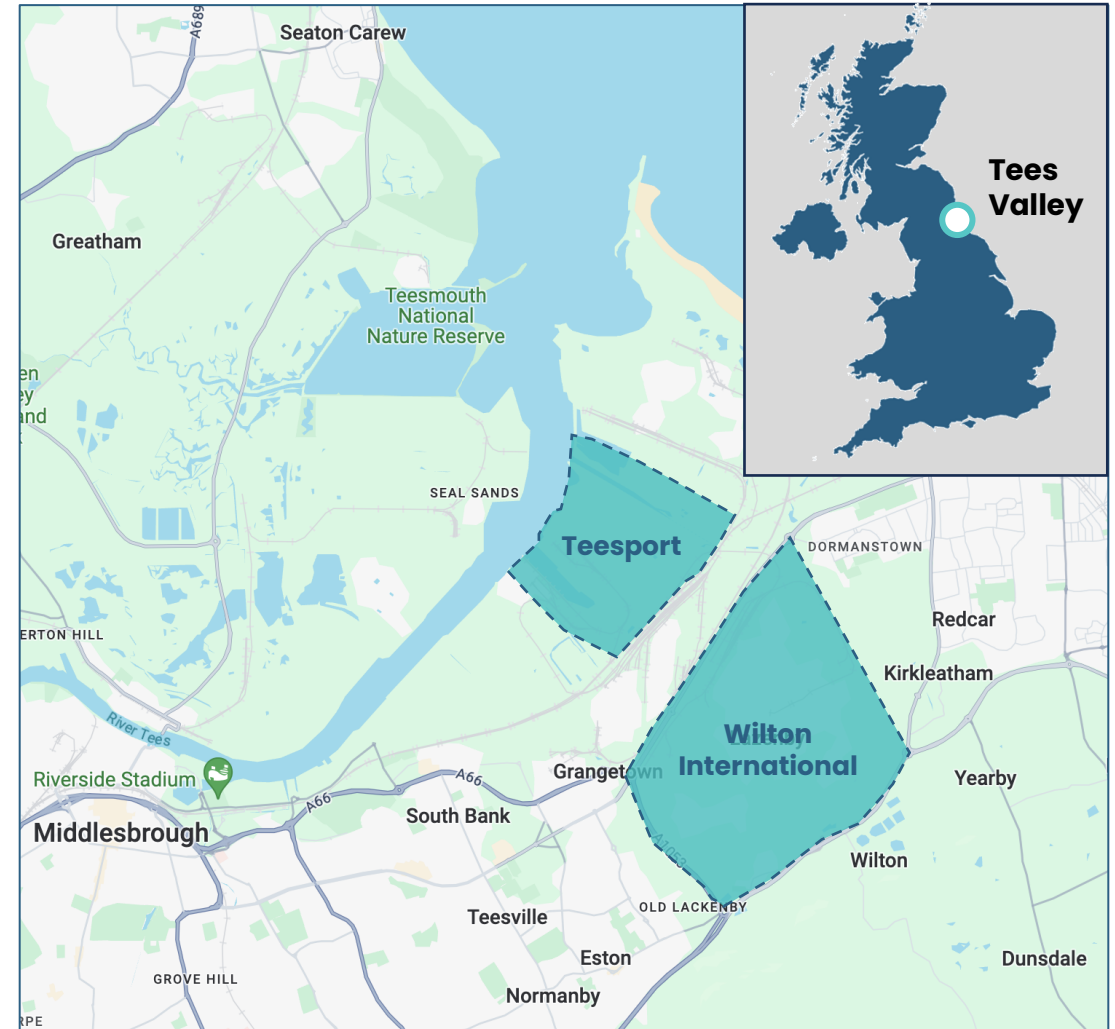
A sales process for Teesside is underway

Teesside ... key attractions

- ✓ 19ha site sitting within Wilton International industrial zone in Tees Valley
- ✓ Within 3km of Teesport deepwater port – UK's third largest site by volume
- ✓ Over-the-fence power, air supply and water treatment facilities
- ✓ "Freeport" status – tax, planning and customs benefits

Current status

- Acquisition of freehold title in March 2024 for £125k
 - Follows the exercise of option for a 250-year lease in May 2021 for £1.9m
 - Supports higher value and greater flexibility around future development & monetisation options for the site
- No longer a core asset given medium-term strategy of developing Tanzanian downstream operations including MREC
- A formal sales process has been initiated following strong inbound interest



Leadership and catalysts



Delivery overseen by ... an experienced and multi-disciplined board

Our board provides deep country, sector, development and funding experience

Board of Directors



Russell Scrimshaw
Executive Chairman



Hon. Abdullah Mwinyi
Non-Executive Director



Ian Chambers
Non-Executive Director



Shasha Lu
Non-Executive Director



Nick Bowen
Non-Executive Director



Hannah Badenach
Non-Executive Director

Previous experience



Execution led by ... an experienced team with a proven track-record

Management has extensive Tanzanian, funding and development experience

Key management



Bardin Davis
Peak CEO &
Director MML¹



Phil Rundell
CFO & Company
Secretary



Johan Coetzee
Head of Operations



Ismail Diwani
MML CEO &
Director MML¹



Patrick Rutabanziba
Senior Tanzania Advisor
& Chairman MML^{1,2}

Previous experience



Peak catalysts ... up to and beyond a Ngualla FID

Peak is in the strongest position in its history with a highly credentialed development partner, fully funded development solution and multi-commodity optionality



Construction

Progress of Early Works

Finalise EPC / EPCM agreement

Commencement of construction



Technical

Completion of optimisation study and revised project costs

Shenghe technical collaboration

Advancement of downstream options



Funding

Sale of Teesside site

Completion of Shenghe investment and debt facility

Completion of Tranche 2 Placement and SPP



Exploration

Further exploration drilling and fieldwork

Potential maiden Resource for Northern Zone

Partnerships targeting other commodities

Appendix



Ore Reserves and Mineral Resources¹ ... world-scale and high-grade

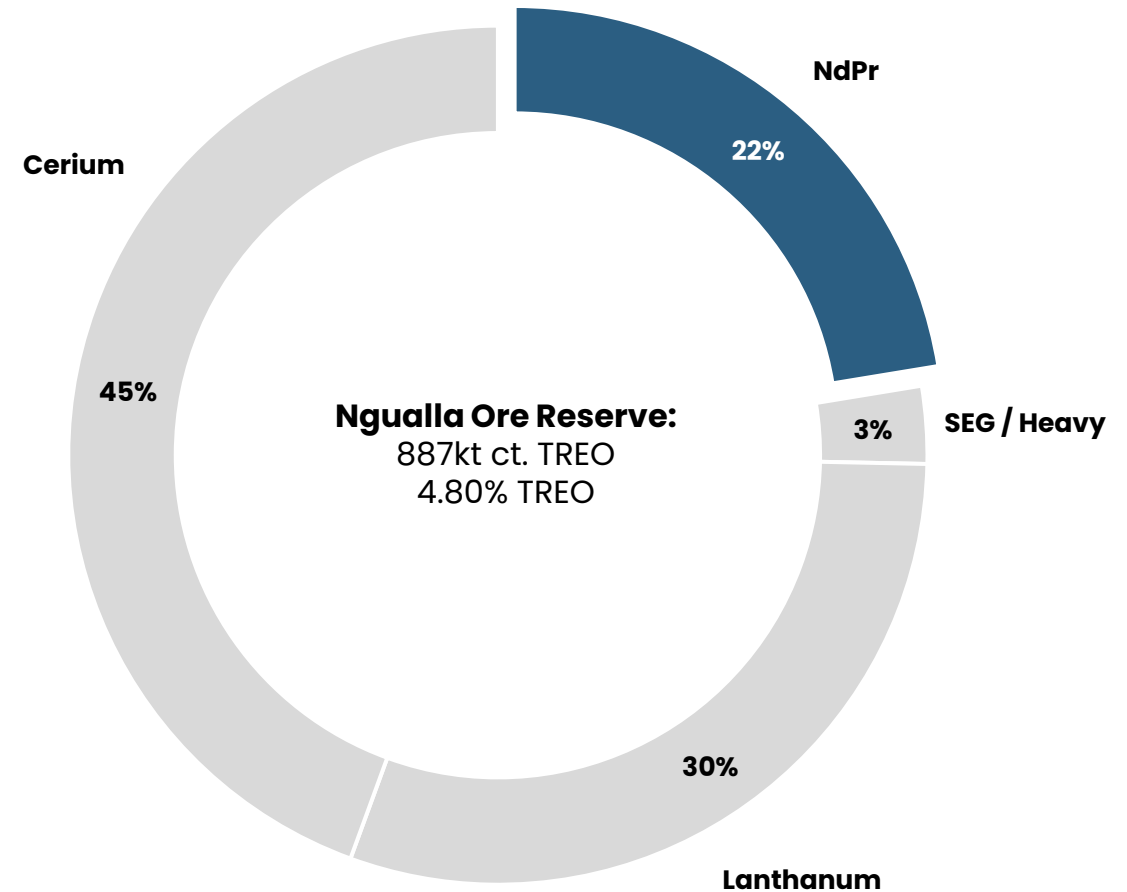
Initial mine life of 24 years supported by high-grade Ore Reserves, which account for less than 20% of Mineral Resources

Ore Reserve (October 2022)¹

Classification	Ore tonnes (Mt)	TREO grade (%)	Contained TREO (kt)
Proved	17.0	4.78%	813
Probable	1.5	5.10%	74
Total	18.5	4.80%	887

Mineral Resource (February 2016)

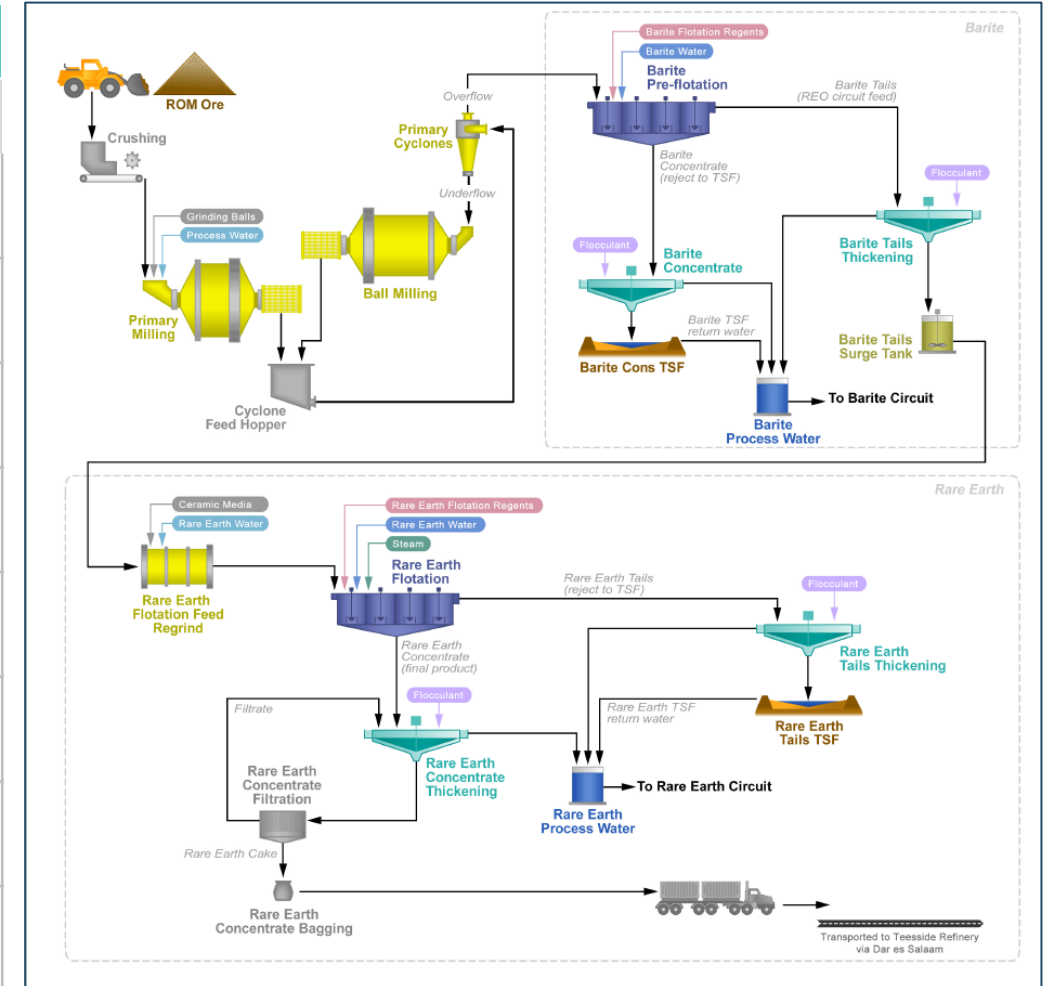
Classification	Tonnage (Mt)	TREO grade (%)	Contained TREO (kt)
Measured	86.1	2.61%	225
Indicated	112.6	1.81%	2,040
Inferred	15.7	2.15%	340
Total	214.4	2.15%	4,620



Process flowsheet overview

The Ngualla Project flowsheet is based on a two-stage flotation process

Summary of process flowsheet	
Stage	Description
Primary crushing	<ul style="list-style-type: none"> Square static grizzly with 500mm apertures Feeder breaker further reduces ore feed to a top size of 200mm
Grinding	<ul style="list-style-type: none"> Open circuit SAG mill and secondary closed loop ball mill Produces a final product with a P80 of 53µm
Barite flotation	<ul style="list-style-type: none"> Rougher flotation stage followed by two stages of cleaning Separates barite from rare earths
Flotation feed regrind	<ul style="list-style-type: none"> Barite tails (containing rare earths) ground to a production P80 of 38µm
Rare earth flotation	<ul style="list-style-type: none"> Rougher flotation stage followed by four stages of cleaning Rare earths are concentrated via collectors and high-pressure steam
Thickening	<ul style="list-style-type: none"> Rare earth concentrate is dewatered to 65% solids (by mass)
Filtration	<ul style="list-style-type: none"> Rare earth concentrate is further dewatered through a filter press Targeted final moisture content of 15% solids (by mass)
Concentrate handling	<ul style="list-style-type: none"> Bagging plant loads concentrate into bulky bags ready for dispatch



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