Powering the green transformation

Corporate Presentation:

121 Mining Investment London Conference

November 2022

Peak RARE EARTHS

ASX: PEK

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Compliance Statement

Information contained in this presentation relating to financial forecasts, production targets, infrastructure, project execution, cost estimating, metallurgical test work, exploration results, Mineral Resource estimates , Ore Reserve estimates and studies are taken from the Company's ASX announcement dated 24 October 2022 "Completion of Ngualla Project BFS Update" which is available to view on /https://www.peakrareearths.com/announcements/. Further information relating to the Mineral Resource estimates is in the ASX announcements dated 22 February 2016 and 2 March 2017 which are also 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 announcement and that all material assumptions and technical parameters underpinning the estimates in the relevant announcement continue to apply and have not materially changed. The Company confirms that at this time the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements. The Company also advises that it is negotiating an Economic Framework Agreement with the Government of Tanzania, and the outcome of which may confirm new information or data that materially affects the information included in the announcement and this presentation.

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

Peak RARE EARTHS

Corporate Overview

Peak
RARE EARTHS

Peak Rare Earths … focussed on advancing the Ngualla Project

One of the largest and highest grade undeveloped rare earth deposits in the world, with significant exploration and development upside

High-grade Ore Reserve:
TREO - 4.80% and NdPr - 1.02%

Multi-generational:
214Mt Mineral Resource and initial 24 year life

Compelling project economics[1]:
$NPV_{8\%}$ of US$1,483m and IRR of 37.3%

Significant development upside:
Includes monazite, HRE, niobium and phosphate

[1]Based on BFS Update for the Ngualla Project released on 24 October 2022

Corporate snapshot

Peak is an ASX-listed development company with a market capitalisation of ~A$97m

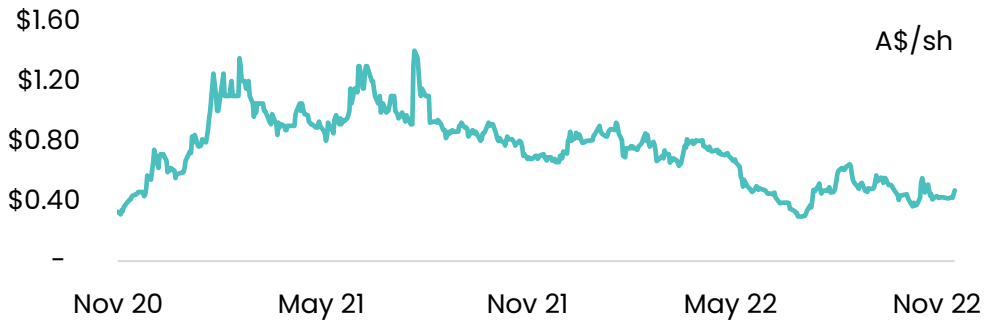
Recent milestones

- ✓ Adoption of sequenced development strategy
- ✓ Strategic collaboration MOU with Shenghe Resources
- ✓ Completion of BFS Update for the Ngualla Project
- ✓ Advancement of FWA negotiations with Government of Tanzania

Key financials

Cash on hand (30 Sept 2022): **A$5.2m**	Debt (30 Sept 2022): -

Share price history



Capital structure

Ordinary shares on Issue: **207.3m**	Share Price (21 Nov 2022): **A$0.47/sh**
Market capitalisation: **A$97.4m**	Enterprise value: **A$92.2m**

Peak RARE EARTHS

Why rare earths?

Rare earths are critical to the EV transformation

Rare earths – key investment considerations

Nexus to decarbonisation

Rapid growth supported by accelerated demand for EV and wind turbines

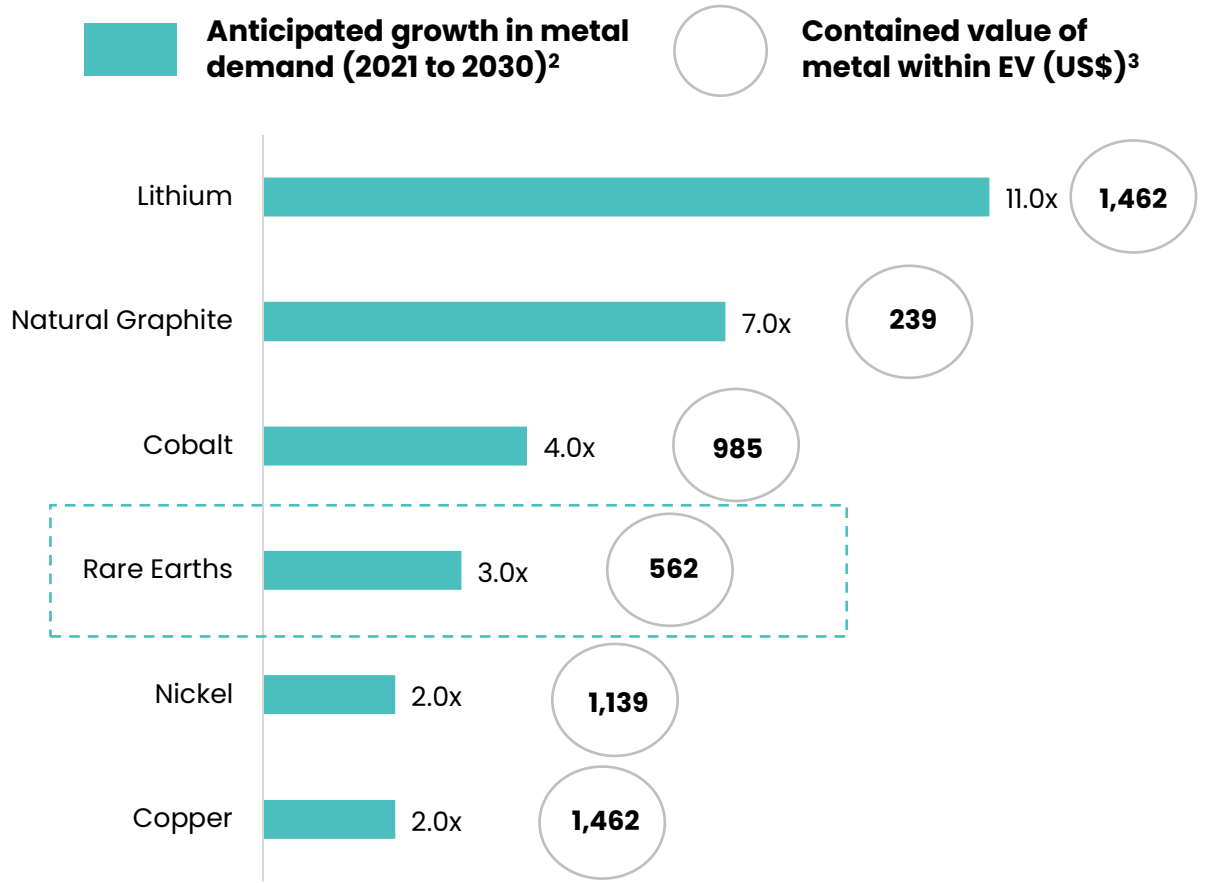
Limited substitution technologies

Rare earth magnet motors >5x magnetic strength[1] relative to induction motors

Price elasticity

Rare earths relatively small proportion of overall cost of an EV

Rare earths within EVs



[1]'Current progress and future challenges in rare-earth-free permanent magnets', Acta Materialia (2018)
[2]UBS Battery Materials Report 2021
[3]AlixPartners North American Light Vehicle Raw Materials Index

Peak's investment thesis

A world class high-grade deposit with de-risked sequenced strategy

1. Compelling market

- ✓ Strong nexus to global decarbonisation initiatives
- ✓ Rapid growth in EV and wind turbines
- ✓ Rising prices and market tightness

2. Attractive mining jurisdiction

- ✓ Rapid transformation of Tanzanian economy
- ✓ Established mining sector
- ✓ FWA grants prioritised under the current President

3. World-class asset

- ✓ High grade and low radionuclides
- ✓ Multi-generational (24 years based on Reserves)
- ✓ Significant exploration and development upside

4. De-risked sequenced development strategy

- ✓ Reduced upfront capex and funding requirements
- ✓ Lower commissioning and technical risk
- ✓ Optionality around the future location of a refinery

5. Supportive strategic partner and offtaker (Shenghe)

- ✓ Highly experienced across rare earth value chain
- ✓ Offtake MOU for 75-100% of Ngualla production
- ✓ Technical support and potential project investment

6. Strong ESG credentials

- ✓ Committed to ESG best practices
- ✓ Strong community investment and relationships
- ✓ Significant job creation and revenue generation

Peak RARE EARTHS

Sequenced development … reduced capex and enhanced optionality

Initial development of the Ngualla Project as a standalone concentrate operation, with future optionality around potential downstream development

Sequenced development

- A staged development and integration approach:
  - Ngualla initially developed as a standalone concentrate operation
  - Independent feasibility study to be commissioned on a Tanzanian MREC refinery
  - Retain optionality around downstream development and integration, which could include the production of MREC and/or refined oxides
- Rationale for a sequenced approach:
  - ✓ Ability to produce a high-grade mineral concentrate
  - ✓ Rapidly increasing demand for high-grade bastnaesite concentrate
  - ✓ Reduced commissioning and execution risk
  - ✓ Lower upfront capital and funding requirement
  - ✓ Alignment with the Government of Tanzania's policy of maximising in-country processing and value addition where feasible
- MP Materials, the largest rare earth company outside of China, has also adopted a sequenced development strategy

Downstream development pathways

Mineral Concentrate (Ngualla Project)
Mine and beneficiation (flotation) plant
Payability ~60%[1]

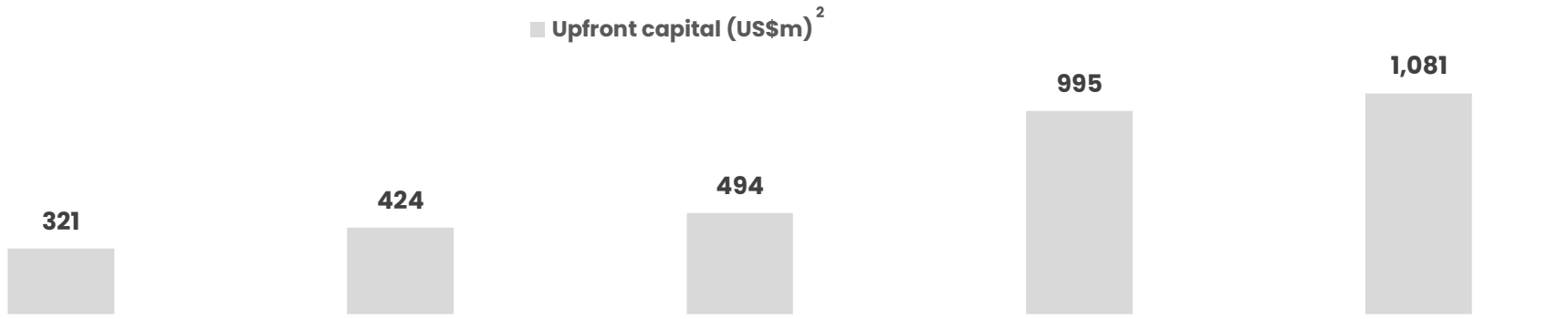
Mixed Rare Earth Carbonate (MREC)
Cracking and leaching plant
Payability ~80%[1]

Refined Oxides (e.g. NdPr Oxide)
Solvent extraction plant
Payability 100%

[1]Based on internal benchmarking of Ngualla concentrate as well as discussions with prospective offtakers

Sequenced development … attractive capital intensity

Sequenced development results in lower capital relative to other rare earth developers as well as reduced development schedule and execution risk



	Rare earth peer project	1.Ngualla	2.Yangibana	3.Longonjo / Saltend	4.Nolans	5.Dubbo
Project overview	Owner	Peak Rare Earths	Hastings	Pensana	Arafura	ASM
	Stage	BFS	BFS	PFS	BFS	BFS
	Product	Mineral concentrate	Mixed carbonate	NdPr Oxide	NdPr Oxide / Phos. acid	NdPr Oxide (and other)
	Production (NdPr Oxide / ct. NdPr)	3,613[1]	3,400[1]	4,500	4,400	1,342
	Latest cost estimate[2]	24 Oct 2022	21 Feb 2022	16 Mar 2022	11 Nov 2022	7 Dec 2021
Development requirements	Development duration[3]	23 months	27 months	20 months	31 months	~24 months
	Mine + flotation plant	✓	✓	✓	✓	✓
	Cracking + leaching plant	×	✓	✓	✓	✓
	Solvent extraction plant	×	×	✓	✓	✓
	Reagent plant(s)	×	✓	×	✓	✓

[1]Contained NdPr within concentrate /carbonate
[2]Sources: Peak – BFS Update (24 Oct 2022), Hastings – Yangibana Project Update (21 Feb 2022), Pensana – Project Delivery Update (16 Mar 2022), Arafura – Nolans Project Update (11 Nov 2022), ASM – Dubbo Project Optimisation (7 Dec 2022)
[3]Defined as duration from FID to completion of commissioning per disclosed schedule

Shenghe partnership … offtake, strategic and technical co-operation

The recently signed Shenghe MOU supports the accelerated development of the Ngualla Project[1]

Offtake
- 75% - 100% of production from the Ngualla Project
- Initial 7 year term

Technical support
- Potential to cover both mining and beneficiation
- Shenghe has significant expertise across RE value chain

Project investment
- Potential project level investment by Shenghe
  - At a mutually agreed valuation

Other
- Standstill provisions in place
- Board seat subject to 10% shareholding
- Potential collaboration beyond Ngualla Project

Shenghe overview

- ✓ Peak's single largest shareholder with 19.9% shareholding
- ✓ Large Chinese rare earth group with operations spanning value chain
- ✓ Shanghai listed with market capitalisation of US$3.8b
- ✓ Single largest importer of rare earth concentrate into China
- ✓ Strong expertise in mining and processing bastnaesite mineralisation
- ✓ Key strategic partner and ~8% share of MP Materials (NYSE:MP; market cap US$5.8b), the largest rare earth company outside of China
- ✓ Other overseas interests include a 90% holding in Vietnam Rare Earth Company Limited and a 9% holding in Greenland Minerals Limited (ASX:GGG)

Shenghe's strategic partnership with MP Materials

- ✓ Sole-offtaker of bastnaesite concentrate from Mountain Pass
- ✓ Ongoing technical support
- ✓ Previously provided financing support (prepayment) to support restart

[1]MOU is non-binding with Peak and Shenghe having agreed to negotiate in good faith a binding offtake agreement. See ASX announcement 19 October 2022

MP Materials … also pursuing a sequenced development

Shenghe a key strategic partner to MP through the restart of its Mountain Pass Mine

MP Materials overview

- NYSE listed with a market capitalisation of ~US$5.8b
- Operates the Mountain Pass Mine – the second largest rare earth mine in the world
- Currently produces and sells a bastnaesite mineral concentrate
- Going downstream to NdPr Oxide and magnet production

Stage 1: Restart of Mountain Pass Mine
Successfully completed Q4, 2017

Stage 2: Bastnaesite concentrate export
Currently exporting ~40ktpa REO to Shenghe

Stage 3: Retrofit and restart of existing Mountain Pass Refinery
Targeting first production by 2023 (~6,000tpa NdPr Oxide)

Stage 4: Magnet & alloy production
Targeting magnet production by 2025

Shenghe's contribution to MP Materials

- ✓ Founding investor in restart of mine and a 7.7% shareholding
- ✓ Provided ~US$80m in funding support (prepayment) for restart
- ✓ Provided technical support for restart and ramp-up
- ✓ 100% offtaker of bastnaesite concentrate from MP Materials

MP MATERIALS

盛和资源 SHENGHE RESOURCES

Technical support from Shenghe has enabled:

- ✓ Optimised reagent selection and dosage
- ✓ Improved temperature control
- ✓ Increased concentrate grade
- ✓ Increased overall recovery
- ✓ An increase in overall production throughput of 3.2x[1]
- ✓ **2021 production the highest in the 70-year site history[2]**

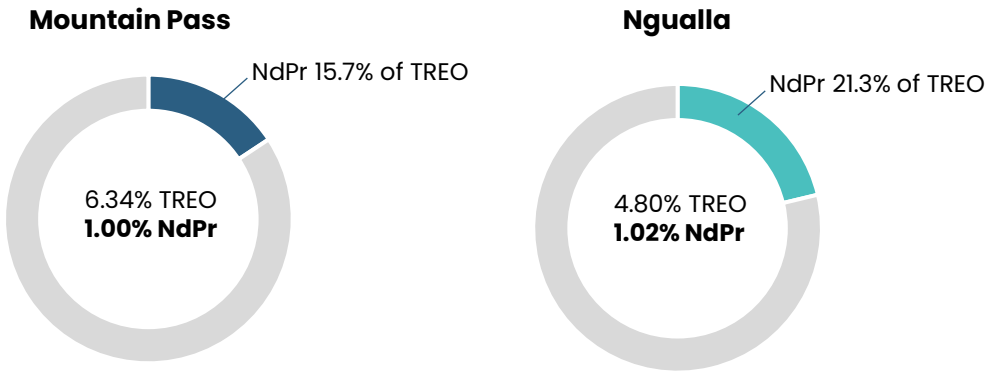
Peak RARE EARTHS

[1]MP Materials 2021 Annual Report
2All-In Summit Presentation – 31 October 2022, Slide 9

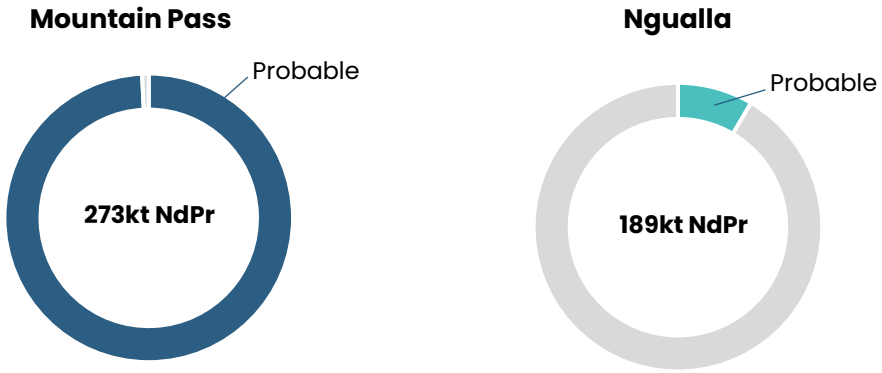
MP Materials … a comparison with Peak

Peak compares favourably with MP Materials but trades at a substantial discount

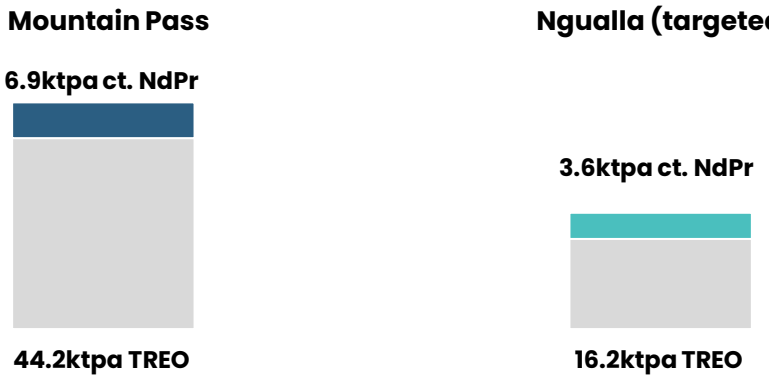
1. Ore Reserve (grade)[1]



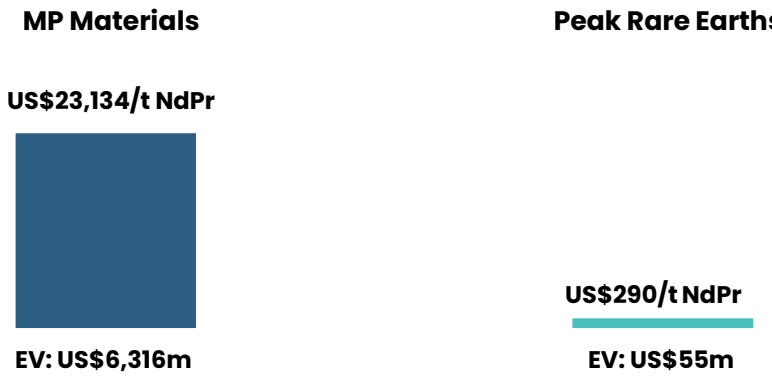
2. Ore Reserve (contained NdPr)[1]



3. Bastnaesite concentrate production[2]



4. Trading - Reserve (EV / Ct. NdPr) multiples[3]



[1]MP Materials Source – 2021 Annual Report
[2]MP Materials production based on annualised YTD
[3]MP Materials EV based on market capitalisation (as at 15 November) of US$6,066m, cash of US$428m and debt of US$678m (per Sept quarter results), Peak EV based on market capitalisation of A$87m (as at 15 November), cash of A$5m, debt of A$0m (per Sept quarterly) and FX of $0.67:1

Rare Earth Outlook

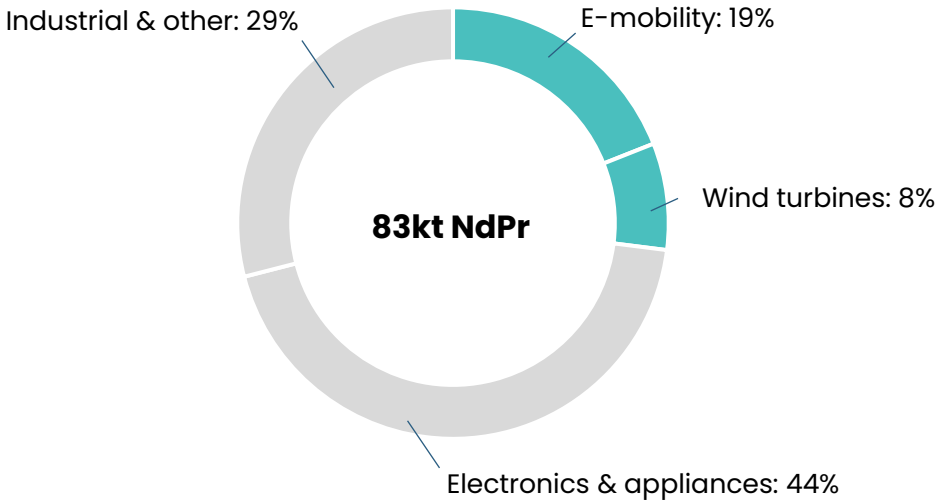
Peak
RARE EARTHS

NdPr Oxide … growing nexus to global decarbonation

NdPr Oxide demand anticipated to grow at over 8% through to 2035 given rapid growth in EV uptake and wind energy deployment

NdPr Oxide demand - 2022[1]

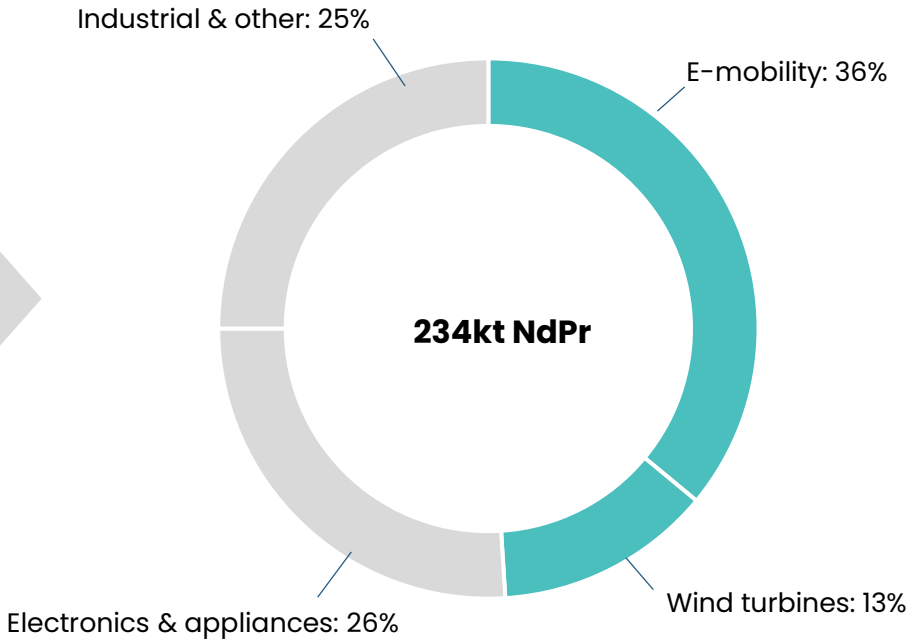
Key demand drivers – discretionary household spending & consumer confidence, broader industrial activity and growth



~8% CAGR

NdPr Oxide demand – 2035F[1]

Key demand drivers – decarbonisation and EV transition, renewable energy, hi-tech growth



[1]Adamas Intelligence – Rare Earth Magnet Market Outlook to 2030 (October 2021)

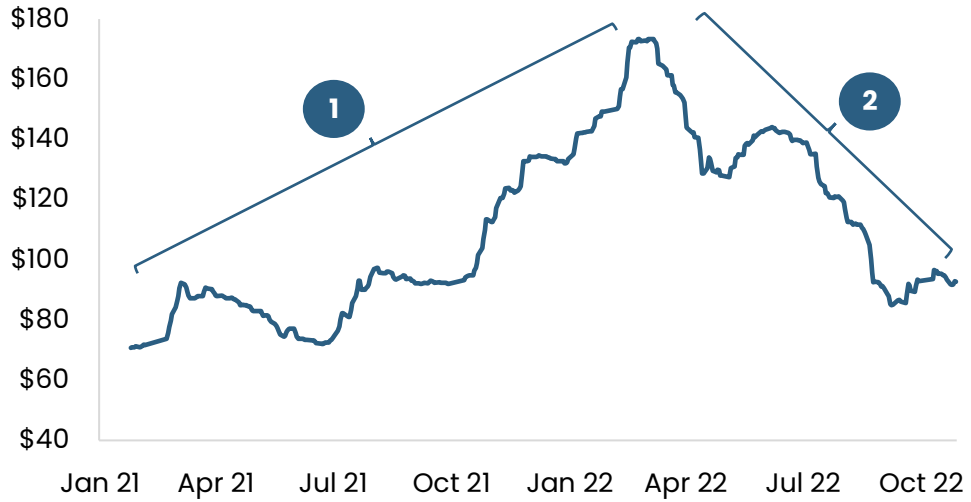
NdPr Oxide price … growing momentum

NdPr Oxide price has seen sustained increases through 2021 and 2022, although facing several temporary headwinds

Price drivers

1	✓	Depletion of Chinese domestic rare earth feedstock
	✓	Rising capital and operating costs
	✓	Chinese rare earth sector consolidation
	✓	Crackdown on illegal mining within China
	✓	Growth in EV and green energy sectors
	✓	Reduced rare earth exports from Myanmar
	✓	Increasingly stringent EHS standards within China
2	✗	Auto industry bottlenecks & microchip shortages
	✗	COVID restrictions and lockdowns within China
	✗	Faltering consumer confidence and reduced spend

NdPr Oxide price (US$/kg)[1]



Current price	**US$92/kg**
YTD average price	**US$131/kg**
12-month average price	**US$130/kg**
12-month high	**US$173/kg**

[1]Asian Metal

Peak RARE EARTHS

Rare earth market … rising prices and market deficits

Outlook for NdPr Oxide price supported by decarbonisation and rapid growth in EVs and wind turbines

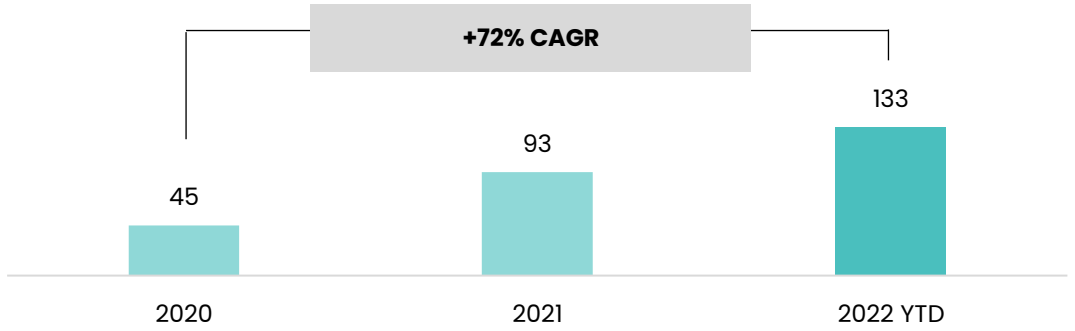
Key demand drivers for NdPr Oxide

- ✓ Global commitment to decarbonisation
- ✓ Rapid growth in EVs and direct drive wind turbines
- ✓ Growing deficit in rare earth concentrate
- ✓ Chinese mine production quotas
- ✓ Chinese rare earth consolidation
- ✓ Global supply chain disruptions

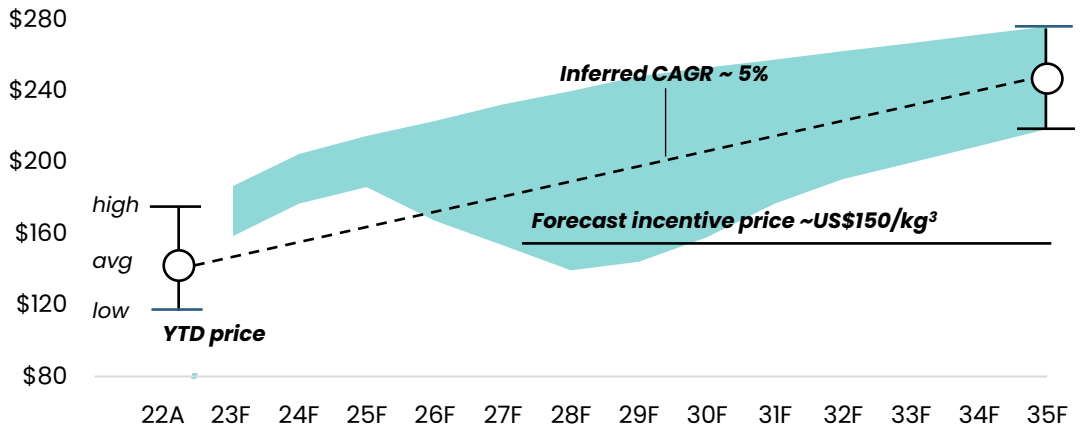
Ngualla bastnaesite concentrate

- ✓ Price for Ngualla concentrate price closely tied to NdPr Oxide price
- ✓ Over 92% of the Ngualla basket value is attributable to NdPr Oxide

Historical / current NdPr Oxide price, annual average[1] (US$/kg)



Forecast NdPr Oxide price[2] (US$/kg)



[1]Asian Metal
[2]Independent rare earth market study completed for Peak by Adamas, Q2 2022. Shaded area represents the range covering 'downside', 'base' and 'upside' price scenarios
[3]Adamas Intelligence – 'As Anchors Cut Free, NdPr Oxide Price Set to Sail Higher' (25 Oct 2022)

Concentrate market … growing global demand for high-grade bastnaesite concentrate

Increasing surplus of refining capacity and rising competition for feedstock

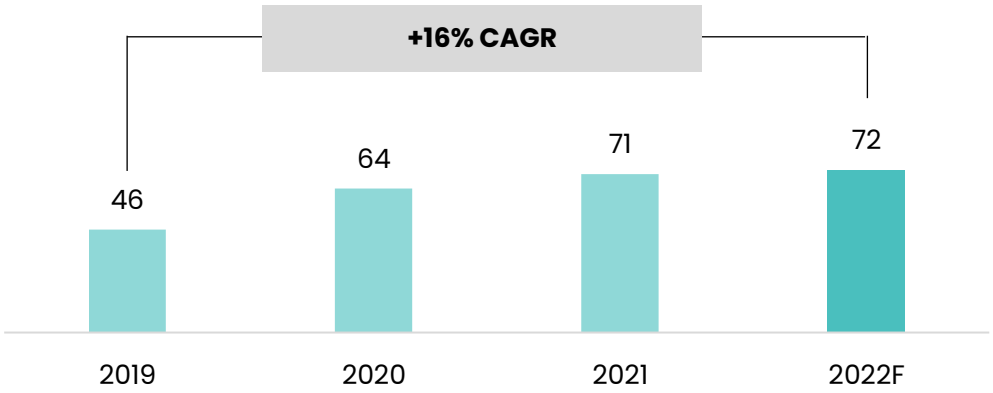
Key demand drivers for concentrate

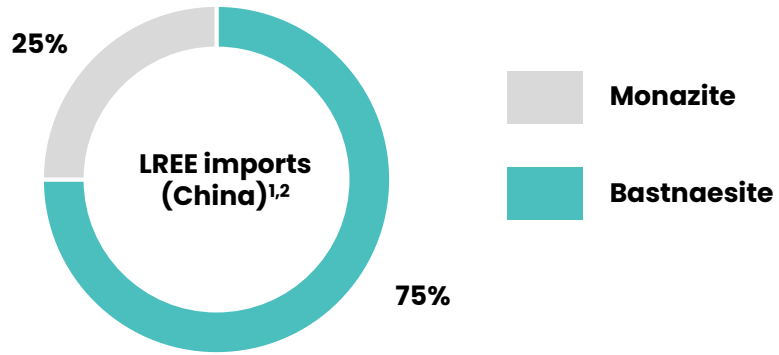
- ✓ Accelerating depletion and declining quality of primary rare earth feedstock both within and outside of China
- ✓ Increasing crack-down on illegal (unlicenced) rare earth mining within China
- ✓ Restrictive rare earth mining quotas within China
- ✓ Growing surplus of refining capacity and demand for feedstock
- ✓ MP Materials near-term downstream integration into production of refined oxides, removing ~15% of global supply of rare earth concentrate

Ngualla bastnaesite concentrate

- ✓ **High NdPr ratio (22-23%)** – amongst the highest within the current market
- ✓ **Low in radionuclides** – avoids regulatory constraints in shipping faced by other projects and Value-In-Use penalties from customers for waste management
- ✓ **Bastnaesite mineralogy** – dominant rare earth mineralogy globally
- ✓ **Low acid-consuming minerals** – weathered zone within Ngualla deposit naturally leached of calcite and dolomite which otherwise consume acid within rare earth refinery process

China import of bastnaesite mineral concentrate[1]
(ktpa dry)





[1]China import data
[2]Based on YTD imports

Ngualla BFS Update

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The Ngualla Rare Earth Project

BFS Update confirms the world-class status of the Ngualla Rare Earth Project

US$1,483m

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

37.3%

Post-tax real IRR based on returns to Peak

16.2ktpa REO

Annual production of high-grade, low impurity bastnaesite concentrate

US$321m

Upfront capital expenditure

24 years

Initial mine life, based on Ore Reserves only

24 months

From FID to first concentrate

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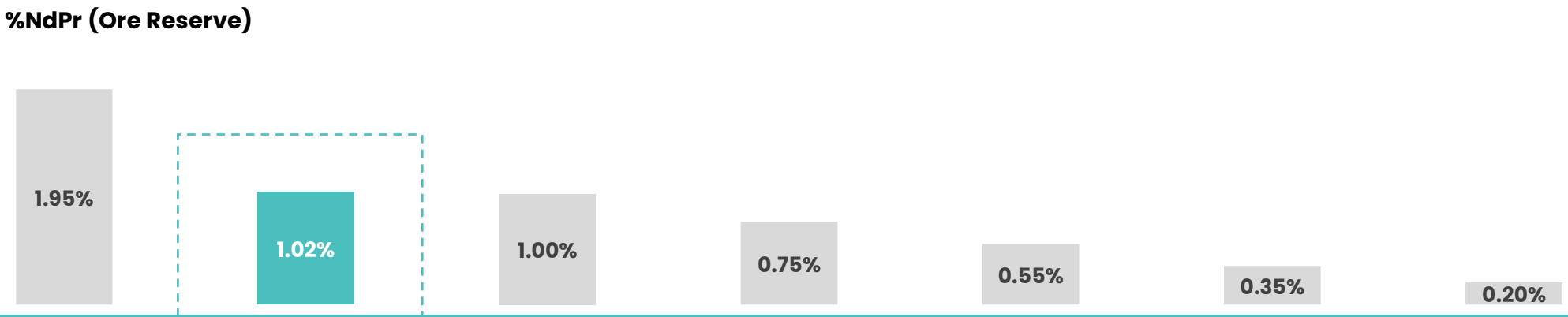
Ore Reserves … peer comparison

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



	1. Mt Weld	2. Ngualla	3. Mountain Pass	4. Nolans Bore	5. Longonjo	5. Yangibana	6. Songwe Hill
Owner	Lynas	**Peak Rare Earths**	MP Materials	Arafura	Pensana	Hastings	Mkango
Location	Australia	**Tanzania**	USA	Australia	Angola	Australia	Malawi
Mineral	Monazite	**Bastnaesite**	Bastnaesite	Apatite / Monazite	Monazite	Monazite	Synchysite
Status	Operating	**Development (BFS)**	Operating	Development (BFS)	Development (PFS)	Development (BFS)	Development (BFS)
Reserve	Proven – 13.7Mt Probable – 5.0Mt Total -18.6Mt	**Proven – 17.0Mt** **Probable – 1.5Mt** **Total – 18.5Mt**	Proven – 0.1Mt Probable – 30.1Mt Total – 30.1Mt	Proven – 5.0Mt Probable – 24.6Mt Total – 29.5Mt	Proven – 13.3Mt Probable – 16.8Mt Total – 30.1Mt	Proven – 4.7Mt Probable – 12.0Mt Total -16.7Mt	Proven – 8.2Mt Probable – 10.0Mt Total -18.1Mt

Sources: Lynas Ore Reserve – 2022 Annual Report; Lynas NdPr % - Ore Reserve Update August 2018; MP Materials Ore Reserve and NdPr % - 2022 Annual Report; Arafura Ore Reserve and NdPr % - Arafura website; Pensana Ore Reserve and NdPr % - Company Update October 2022; Hastings Ore Reserve and NdPr % - Ore Reserve Update July 2021; Mkango Ore Reserve and NdPr % - BFS (July 2022)

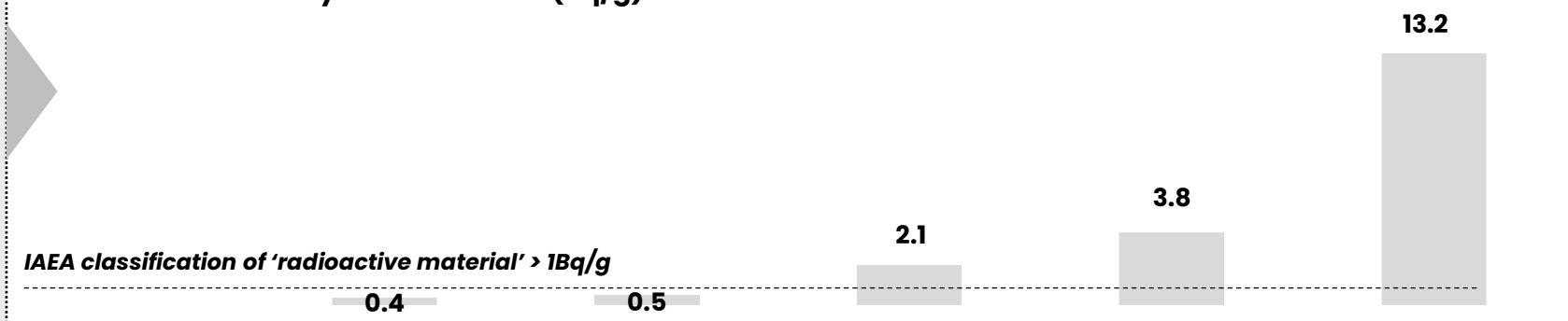
Radionuclides … peer comparison

The Ngualla deposit has low levels of radionuclides and will avoid transportation and waste management challenges faced by peers

Why is radionuclide content important?

- *Restrictions on transporting radioactive materials*
- *Radioactive leach residue waste must be stored on site or treated and disposed*
- *Rare earth concentrate with higher radioactivity will incur refinery Value-in-Use penalties*
- *Radioactive deposits may require additional monitoring and safety controls*

Natural radioactivity concentration (Bq/g)



	1. Ngualla	2. Browns Range	3. Yangibana	4. Longonjo	5. Nolans Bore
Owner	Peak Rare Earths	Northern Minerals	Hastings	Pensana	Arafura
Mineral	Bastnaesite	Xenotime	Monazite	Monazite	Apatite
Thorium (ppm)	53	27	450	850	2,700
Uranium (ppm)	15	35	25	25	180

Sources: Northern Minerals – 'DFS positions Browns Range Project as next dysprosium supplier' (2 March 2015); Hastings – Yangibana Rare Earths Project Technical Note – Radionuclides; Pensana – From Rift Valley (previous owner) announcement – 'Initial drilling programme has commenced on Longonjo REE Project' (24 January 2014); Arafura – 'Radiation Fact Sheet'

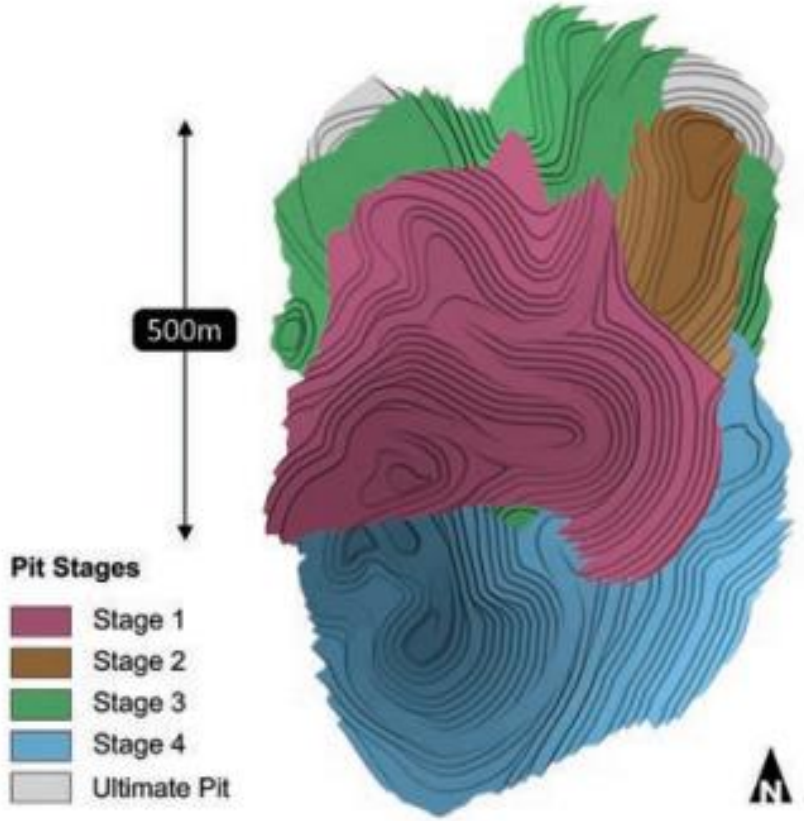
Mine design and operation … near surface with a low strip ratio

Predominantly “free dig” with minimal requirement for blasting and initially targeting a high grade (>5% TREO) zone

Highlights

- ✓ Close to surface and low strip-ratio (1.77x LoM)
- ✓ Small mine-pit footprint (cross-sectional pit design 500m by 1,000m)
- ✓ Minimal blasting
- ✓ Staged pit design
- ✓ High grade ore (>5% TREO) mined in first 6 years
- ✓ Owner-operator model selected for initial basis of design however contract mining model to be further evaluated through FEED

Metric	Unit	Years 1-6	LOM
Annual total material mined	ktpa	3,145	2,152
Annual ore mined	ktpa	1,224	787
Strip ratio	x	1.7x	1.7x
Grade mined	%	5.40%	4.80%



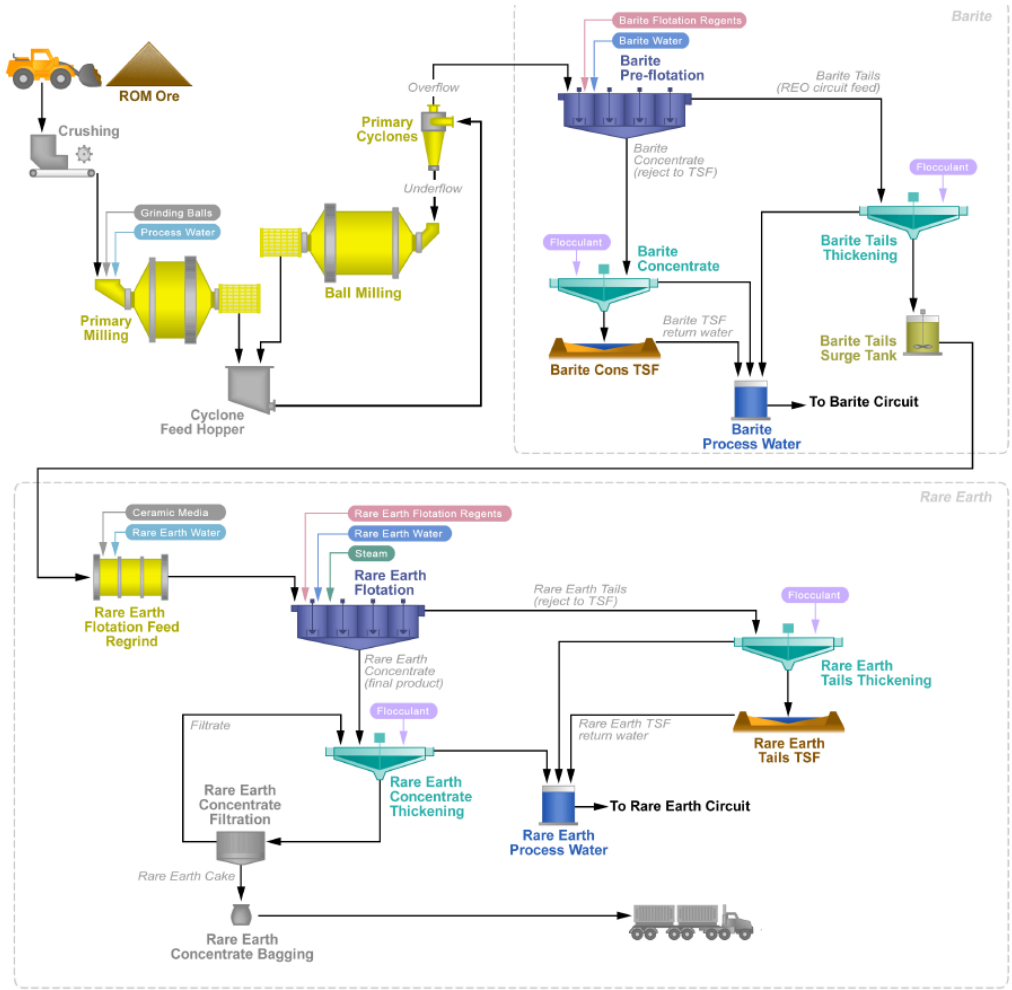
Peak RARE EARTHS

Beneficiation plant … supported by a robust flowsheet

Flowsheet backed by extensive technical studies and pilot plant testwork

Highlights

- ✓ 10+ years of development and optimsiation
- ✓ Comprehensive pilot plant campaign completed at ALS (Perth) on 56 dry tonnes of Ngualla ore as part of 2017 BFS
- ✓ Two-stage flotation rejects barite prior to rare earth float
- ✓ 'Off-shelf' equipment and reagent selection
- ✓ Initially targeting a 45% TREO concentrate and opportunity to potentially increase grade to be explored during FEED

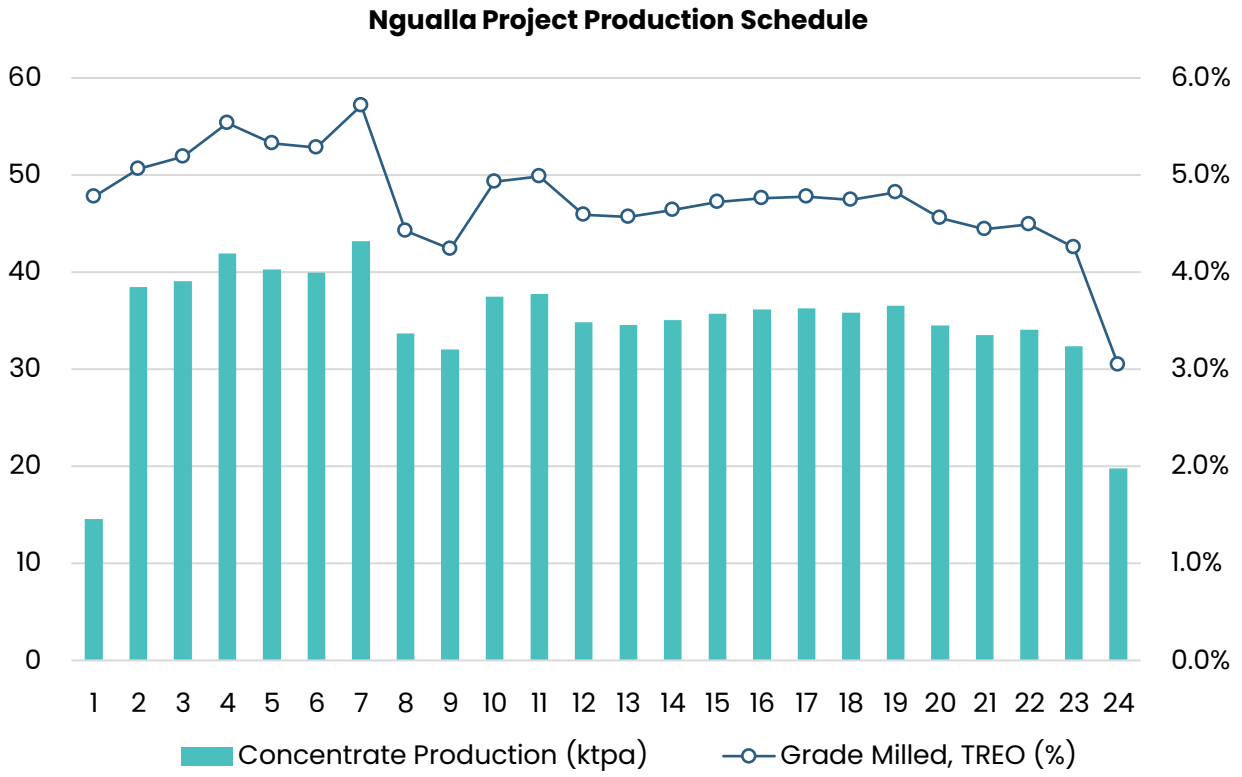


Peak RARE EARTHS

Production profile … an initial 24 year life supported by Ore Reserves

Initial processing of high-grade ore supports higher production profile through ramp up and first 6 years of operation

	Unit	Years 1-6	LOM
Annual tonnes milled	ktpa	800.7	794.8
Average grade milled	%	5.4%	4.8%
Average REE recovery	%	42.7%	42.7%
Concentrate production	ktpa dry	40.5	36.0
Concentrate grade	%	45.0	45.0
Concentrate production	ktpa TREO	18.2	16.2
NdPr % (of concentrate basket)	%	22.6	22.3
Production – Ct NdPr Oxide	ktpa NdPr	4.1	3.6

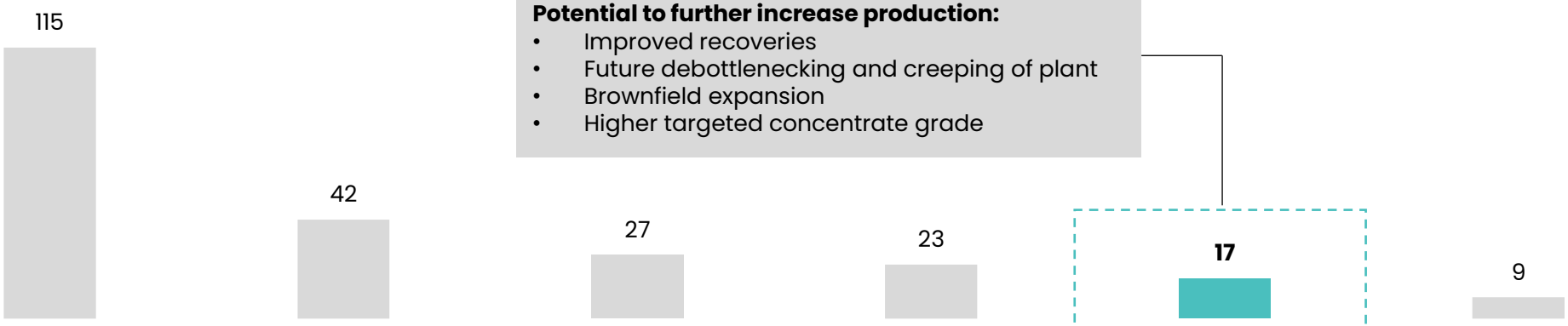


Peak RARE EARTHS

Peer benchmarking … globally significant source of production

Ngualla will be one of the largest rare earth mines outside of China

Indicative Production Capacity (ktpa REO)[1]
Current mines in operation



Potential to further increase production:
- Improved recoveries
- Future debottlenecking and creeping of plant
- Brownfield expansion
- Higher targeted concentrate grade

	1.Bayan Obo	2.Mountain Pass	3.Mt Weld	4.Dechang	5.Ngualla	6.Dulcao
Owner:	Baotou Steel	MP Materials	Lynas	Sichuan JCC	**Peak Rare Earths**	Shenghe
Location:	China	USA	Australia	China	**Tanzania**	China
Region:	Inner Mongolia	California	Western Australia	Sichuan	**Mbeya**	Sichuan
Mineral:	Bastnaesite (~65%) / Monazite (~35%)[2]	Bastnaesite	Monazite	Bastnaesite	**Bastnaesite**	Bastnaesite

[1]Production Sources: Bayan Obo production from company disclosure Jan 2022; Mountain Pass production from 2021 annual report; Lynas production from company website; Dechang production from 2020 China production quota allocation; Dalucao production from Shenghe April 2021 quarterly production report
[2]China's Rare Earth Ore Deposits and Beneficiation Techniques, Ling Zhi Li & Xiaosheng Yang (2014)

Capital costs … low intensity and reduced funding requirements

Standalone development of Ngualla supports lower capex and reduced funding requirements

Key points

- Broader global and sector inflationary pressure
- Upfront capex from 2017 BFS (Ngualla only) increased by 44% after adjusting for 14% expansion in targeted production capacity
- Contributing factors include:
  - Change to an EPCM execution model (EPC previously assumed)
  - Refurbishment of existing airstrip
  - Increased spend on tailings dam (+US$13m) which has incorporated Global Industry Standards on Tailings Management (GISTM) design principles
  - Rise in shipping, energy and steel prices

Potential capex saving opportunities (to be evaluated through FEED)

- ✓ Deferral and/or optimisation of regrind mill and slurry heating of RE float feed
- ✓ Combined scope of works for road, airstrip, and quarry operations
- ✓ Use of owner-operated team for bulk earthworks

Capital cost item	US$m	% of total
Plant	95.7	30
Services	35.0	11
Accommodation camp	25.0	8
Tailings	18.2	6
Mining	16.5	5
Regional roads & infrastructure	11.4	4
Access roads	11.0	3
Earthworks	9.3	3
Airstrip	5.7	2
Other	12.6	4
Direct cost subtotal[1]	**240.5**	**75**
EPCM	32.6	10
Owners Cost	14.3	4
Contingency	33.4	10
Total upfront cost	**320.7**	**100**
Upfront Capex Intensity (US$/kg TREO):		**19.8**

[1]Direct costs include US$20.6m in growth allowances that have been added to the bare (neat) cost quantities.

Competitive operating costs … supporting robust margins

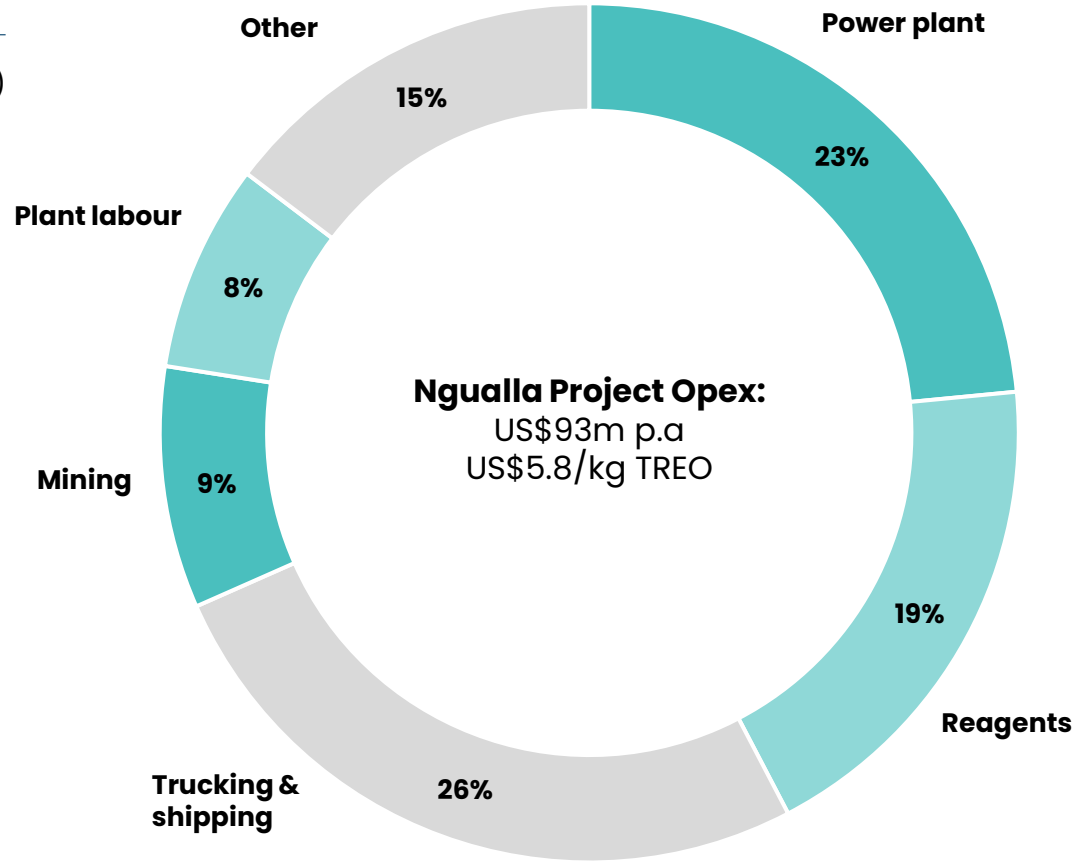
A Life-of-Mine operating cost of US$5.8/kg TREO supporting attractive margins and upside associated with rising rare earth prices

Key points

- Opex incorporates freight cost to customers (pricing terms assumed to be CIF)
- Power plant cost includes BOO fee for power plant construction
- Key opex cost trends from 2017 BFS:
  - Diesel +114%
  - Concentrate transport / shipping + 106%
  - Sodium silicate (reagent) + 115%
  - Sodium hydroxide (pearl) + 112%

Potential opex saving opportunities (to be evaluated through FEED)

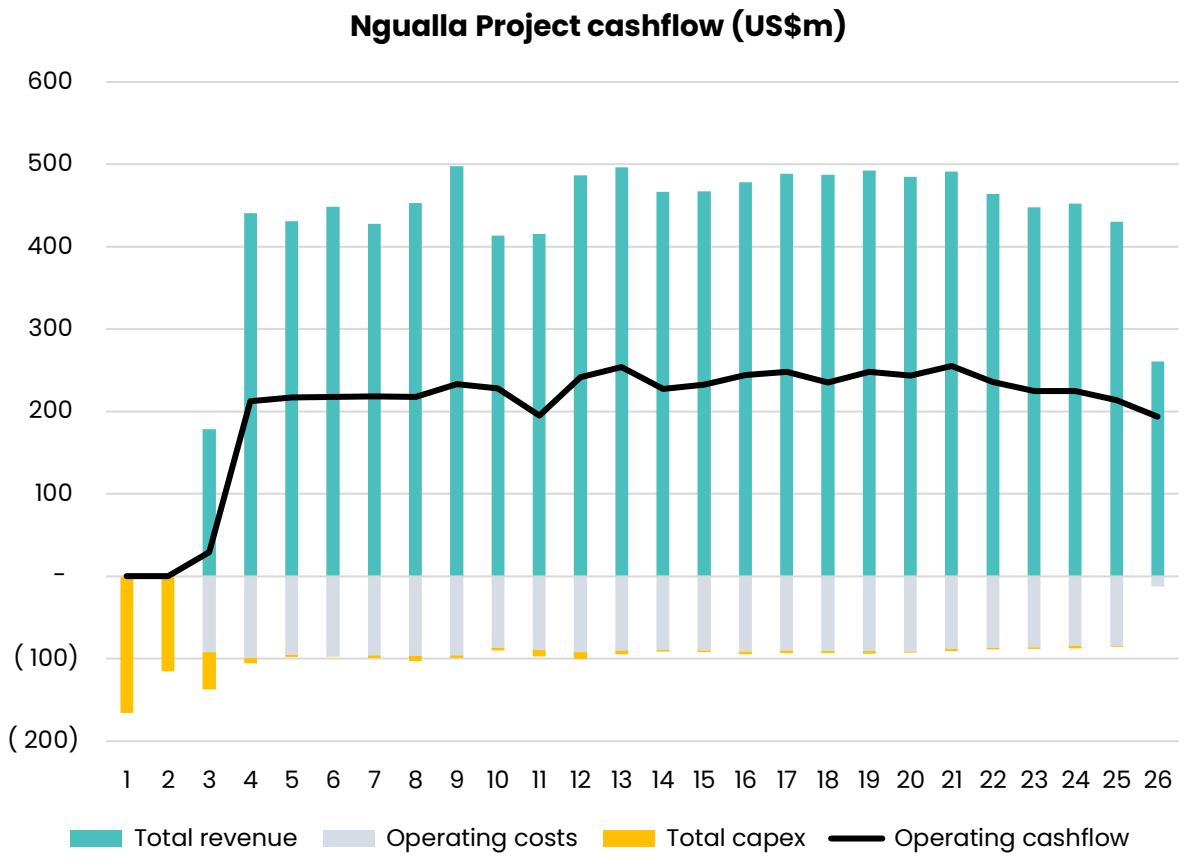
- ✓ Use of column flotation within beneficiation plant
- ✓ Reagent selection and dosage optimisation
- ✓ Potential use of contract mining
- ✓ Combined supply tender for power plant and fuel supply



Financial analysis … compelling economics and returns

The Ngualla Project is forecast to generate a ~US1.5b NPV and a ~37% IRR under the Adamas Base Pricing Scenario

Financial Metric	Unit	Value
Average annual revenue	US$m pa	538
LOM net operating cash flow	US$m	6,597
Average annual operating cash flow	US$m pa	276
Average annual EBITDA	US$m pa	448
Peak $NPV_{8\%, real}$	US$m	1,483
Peak $NPV_{10\%, real}$	US$m	1,156
IRR (post tax, royalties and FCI)	%	37.3%
Equity payback period	years	4.0
Commodity Price assumptions	**Unit**	**Value**
NdPr oxide (LOM average)	US$/kg	231.88
Net payability	%	60.9%

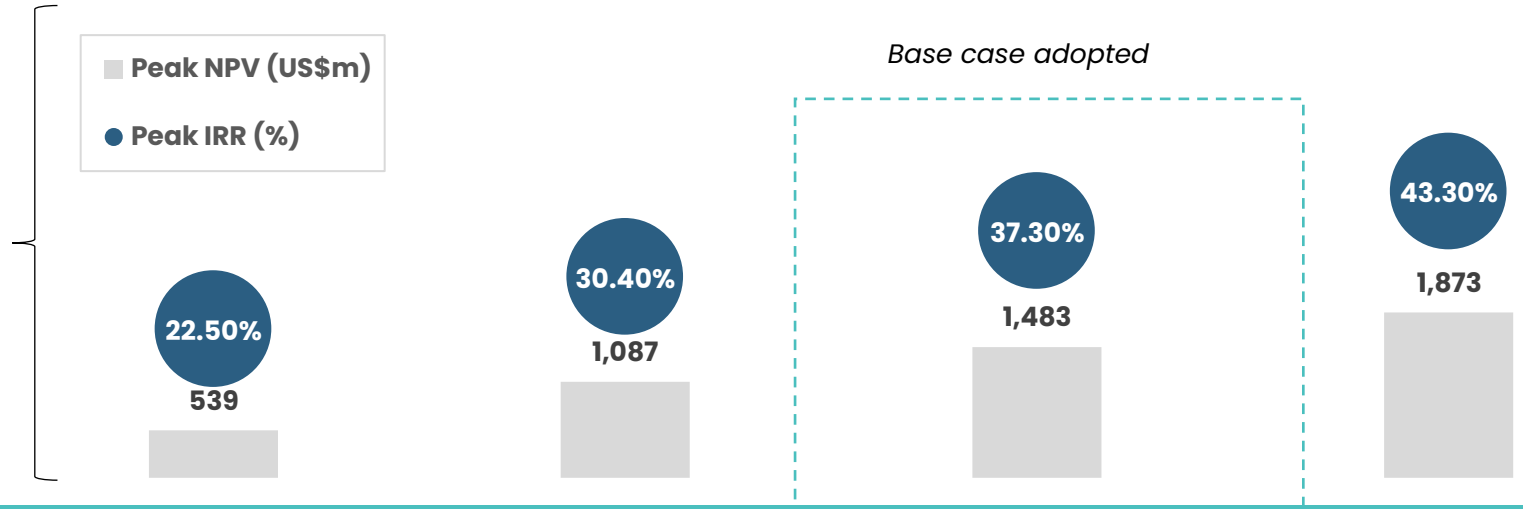


Scenario analysis … robust financial outcomes

Scenario analysis supports robust economics and returns at YTD pricing and substantial upside under the Adamas Upside pricing scenario

Adamas projects three pricing scenarios based on different adoption / growth rates of EV and corresponding demand for NdPr Oxide[1]

'Average YTD' based on average spot price for rare earth oxides through 2022 (as at 1 September 2022)

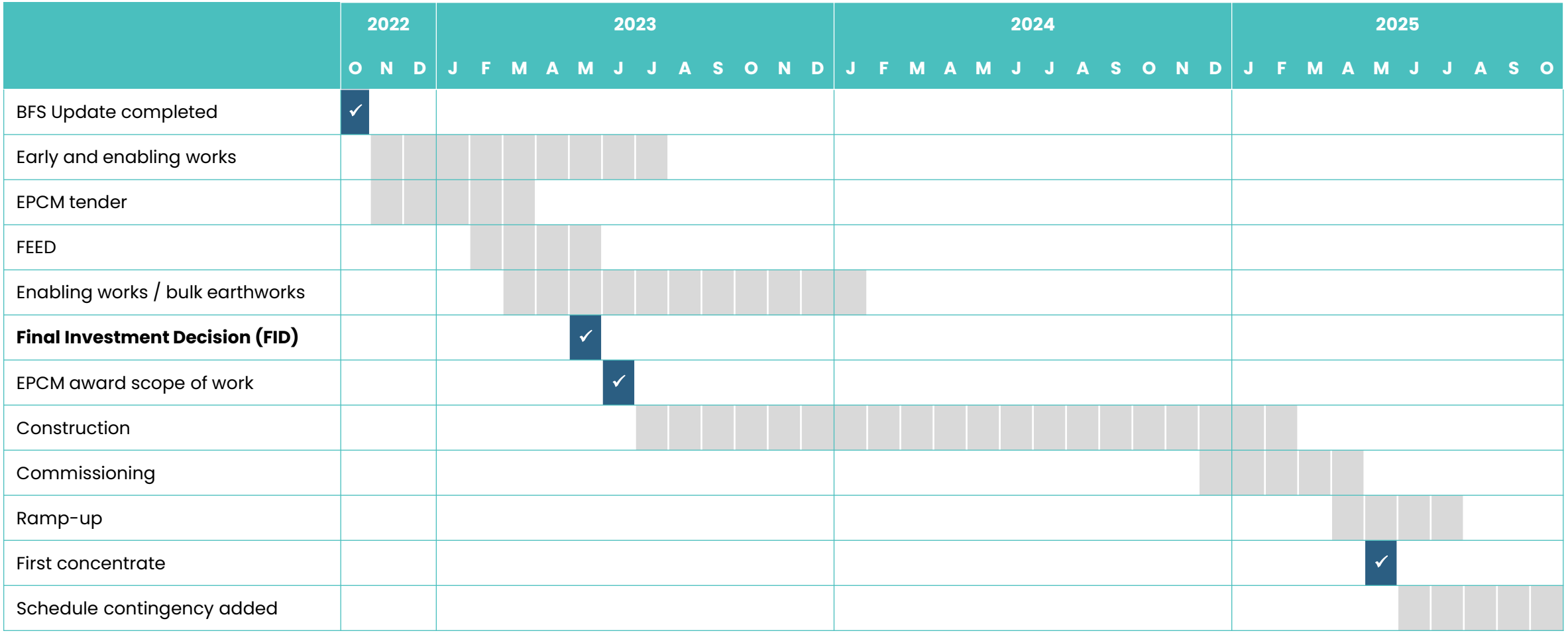


Financial Metric	Unit	Average YTD	Adamas Price Scenarios		
			Downside	Base	Upside
NdPr price (2026–30)[2]	US$/kg	138.80	153.92	**195.70**	237.48
NdPr price (LOM)[2]	US$/kg	138.80	198.73	**231.88**	265.03
Average net payability[3]	%	56.1%	59.5%	**60.9%**	61.8%
Average annual revenue	US$m pa	301	453	**538**	623
Average annual EBITDA	US$m pa	212	363	**448**	553

[1]Based on independent rare earth market study completed for Peak by Adamas, Q2 2022.
[2]NdPr Oxide prices are inclusive of VAT (of 13%)
[3]The net price received for Ngualla concentrate is calculated by deducting the various refining and offtake charges from the theoretical basket value of the Ngualla concentrate, as well as a deduction of VAT (of 13%). 'Net payability' is calculated as the price received for Ngualla concentrate divided by the basket value of Ngualla concentrate.

Indicative timeline … targeting Final Investment Decision by May 2023

First concentrate scheduled for May 2025, 24 months after a Final Investment Decision



Future opportunities … optionality and upside

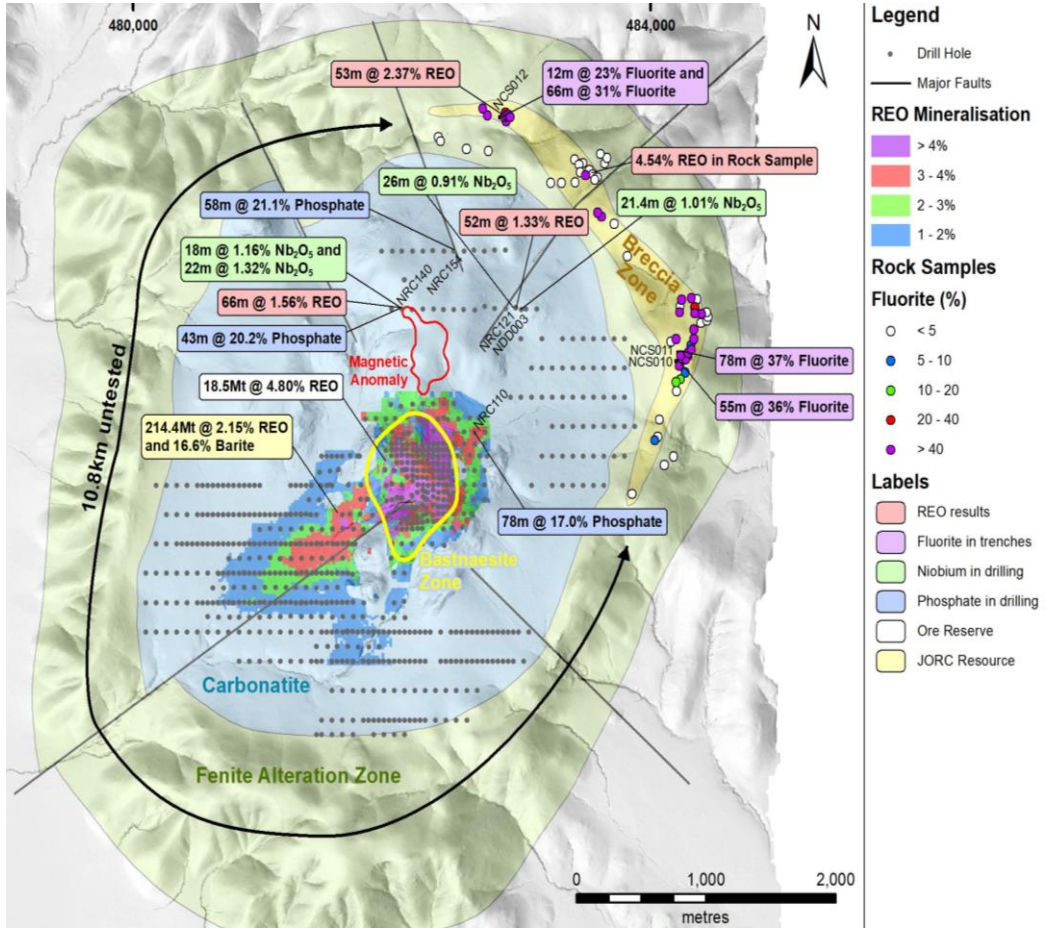
Future opportunities include further downstream processing / refining and development of other commodities

Teesside and further downstream refining

- Independent study on technical, economic and environmental feasibility of a Tanzanian refinery to be commissioned in partnership with the Government of Tanzania
- To assess the potential to develop MREC and refined oxides
- Outcomes of study will support future development pathway around downstream integration

Other development opportunities

- ✓ Monazite within Southern Rare Earth Zone
- ✓ Heavy rare earths within Northern Zone
- ✓ Other commodities within Ngualla deposit including niobium, phosphate and fluorspar



Tanzania Update

Peak
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Tanzania … a rapidly developing mining sector

Mining and resources sector to play a critical role in the Government achieving its stated growth targets

Mining & resources snapshot

- 4th largest gold producer in Africa
- Under-explored and highly prospective across rare earths, graphite and other critical minerals
- Increased focus on foreign investment, granting mining licenses and finalising Framework Agreements
    - Framework Agreement with Shell and Equinor on a US$30-40b LNG project
    - Host Government Agreement supporting the $3.5b East African Crude Oil Pipeline
    - BHP's US$100m earn-in agreement over the Kabanga Nickel Project announced 10 January 2022[1]

Recent SML / FWA grants within Tanzania

Company	Commodity	Grant
Kabanga Nickel[1] (Kabanga Project)	Nickel / Copper / Cobalt	3 Nov 2021
OreCorp (Nyanzaga Project)	Gold	13 Dec 2021
Black Rock Mining (Mahenge Project)	Graphite	13 Dec 2021
Strandline (Fugoni Project)	Mineral Sands	13 Dec 2021
Petra Diamonds (Williamson Mine)	Diamonds	13 Dec 2021

[1]BHP will invest up to US$100m into the Kabanga Nickel Project, currently owned by private British mining company Kabanga Nickel, to earn up to 18% of the project

Peak in Tanzania … our long-standing commitment and senior team

Peak has spent ~US$45m on exploration, technical studies and community initiatives

Peak's history in Tanzania

May 2008	Peak enters Tanzania via acquisition of Pan African Resources
Sep 2008	Peak acquires 80% of Ngualla Phosphate Project
Aug 2010	Rare earths discovered at Ngualla Project
Dec 2012	Scoping Study
Mar 2014	Preliminary Feasibility Study and maiden Ore Reserves
Apr 2017	Bankable Feasibility Study
Oct 2022	**Bankable Feasibility Study Update**

Key in-country team members

NON-EXECUTIVE DIRECTOR: HON. ABDULLAH MWINYI

- Member of Tanzanian Parliament since 2007
- Chairman of Swala Oil and Gas (Tanzania) Plc
- Lawyer by profession
- LLB, LLM

COUNTRY MANAGER: ISMAIL DIWANI

- Background in accounting and government relations
- Commenced with Peak in 2015
- B.BusAdmin, CPA (Tanzania)

COMMUNITY LIASON OFFICER: MARY DUNCAN

- Background in community development
- Commenced with Peak in 2015
- Previously at St John's University
- Masters, Community Development

SENIOR ADVISER: PATRICK RUTABANZIBA

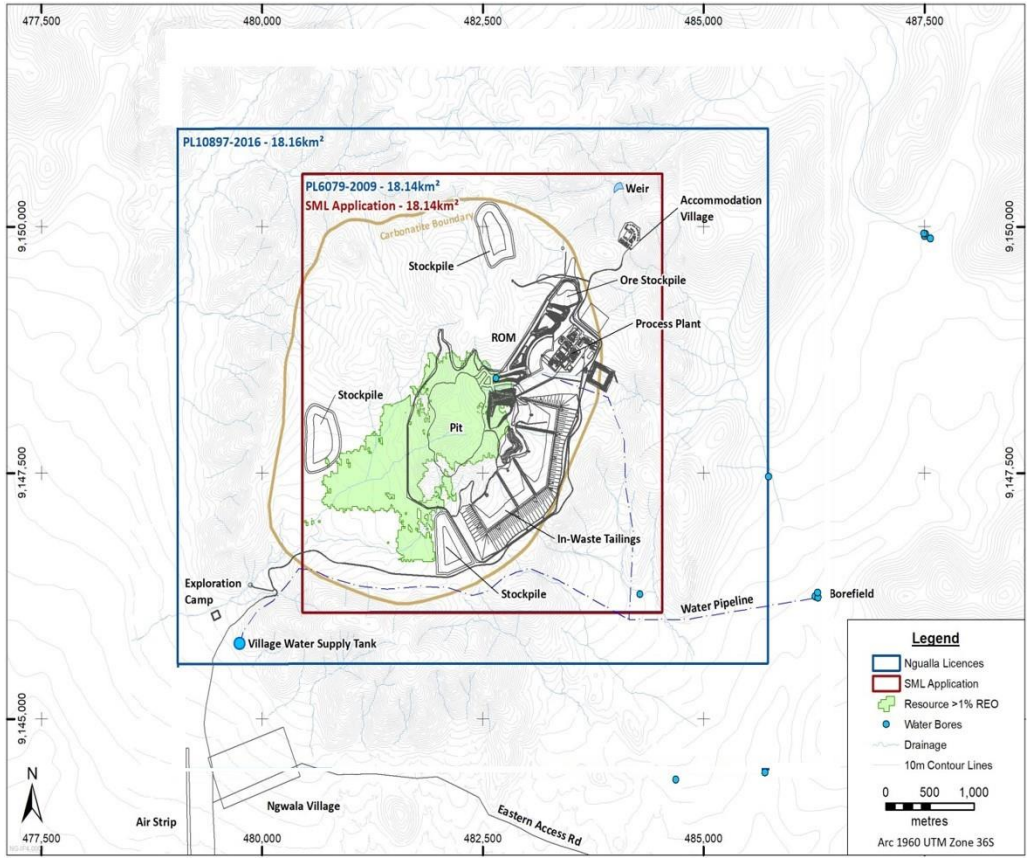
- Country Chair of PanAfrican Energy Tanzania Ltd
- Founding member of African Energy Policy Research Network
- Former Permanent Secretary, Minister of Energy & Minerals
- B.Sc (Chemical Engineering), M.Sc (Chemical Engineering)

Peak RARE EARTHS

Tanzanian approvals … Framework Agreement close to being finalised

The SML application was approved by the Tanzanian Cabinet in July 2021 and Framework Agreement negotiations are well advanced

Ngualla Special Mining Licence (SML) and Prospecting Licence



Ngualla SML - specifics

- SML application approved by Tanzanian Cabinet
- Exclusive rights to mine over 18.14km^2 area
- SML and Prospecting Licence to be held via a newly incorporated entity to be owned beneficially
  - 84% by Peak
  - 16% by the Tanzanian Government

Next steps

- Execution of Framework Agreement and formal grant of SML
- Finalise NewCo Constitution & Shareholders' Agreement

A '*Kazi Wajibu Utu*' development approach … Work, Responsibility and Humanity

The Ngualla Project will be developed in partnership with the Government of Tanzania and the local community

Social investment and community

- Long standing relationship (14+ years) with local Ngwala community
- Peak actively engaged in a wide range community development projects, including:
  - School Development Program
  - Construction of duplex teacher houses
  - Community programs and initiatives
- Community infrastructure development as part of project includes water supply, Southern Access Road, development of airstrip and construction of medical clinic

Government & social

- ✓ Government of Tanzania a partner in the Ngualla Project by virtue of its 16% Free-Carried Interest (FCI)
- ✓ US$5.6b in revenue delivered to the Government over the life of the Ngualla Project
- ✓ +800 direct and +3,000 indirect jobs during construction
- ✓ +225 direct and +1,000 indirect jobs during operations

Peak RARE EARTHS

Appendices

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BFS Update

Ore Reserves and Mineral Resources … world-scale and high-grade

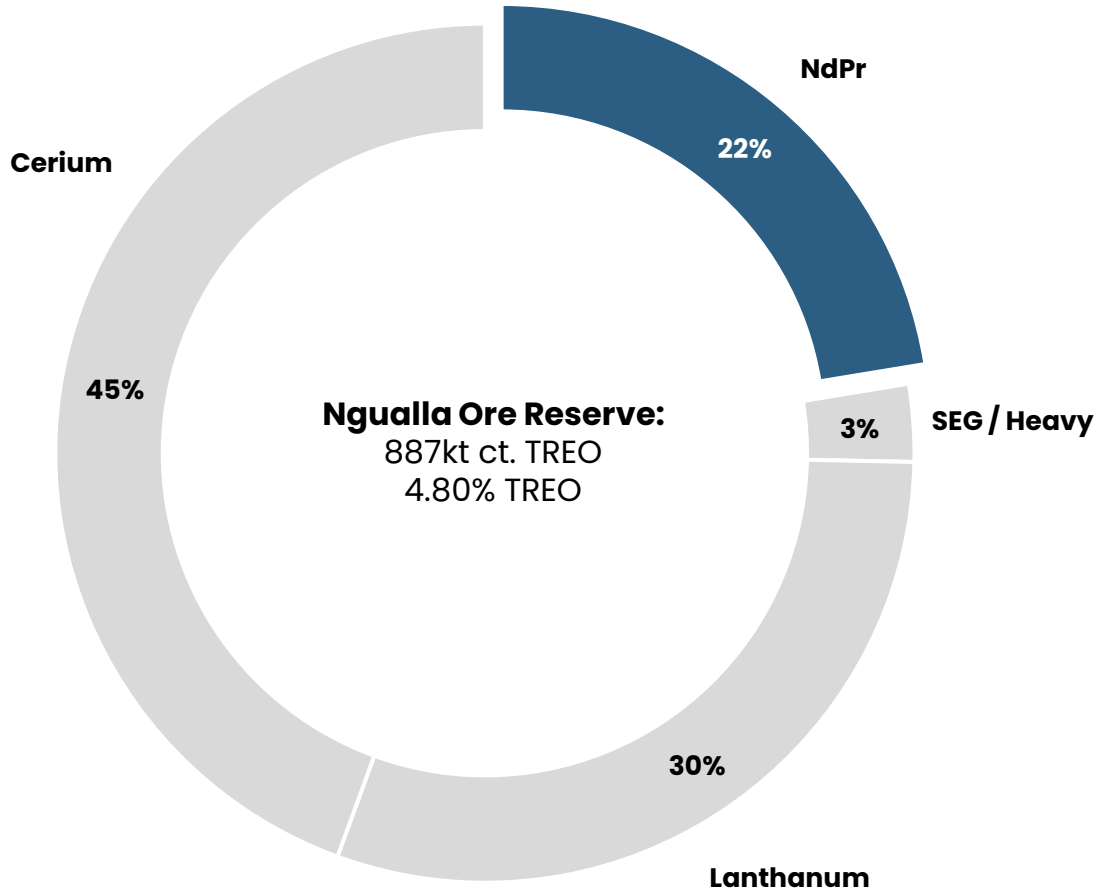
Initial mine life of 24 years supported by high-grade Ore Reserves, which account for less than 20% of Mineral Resources

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)

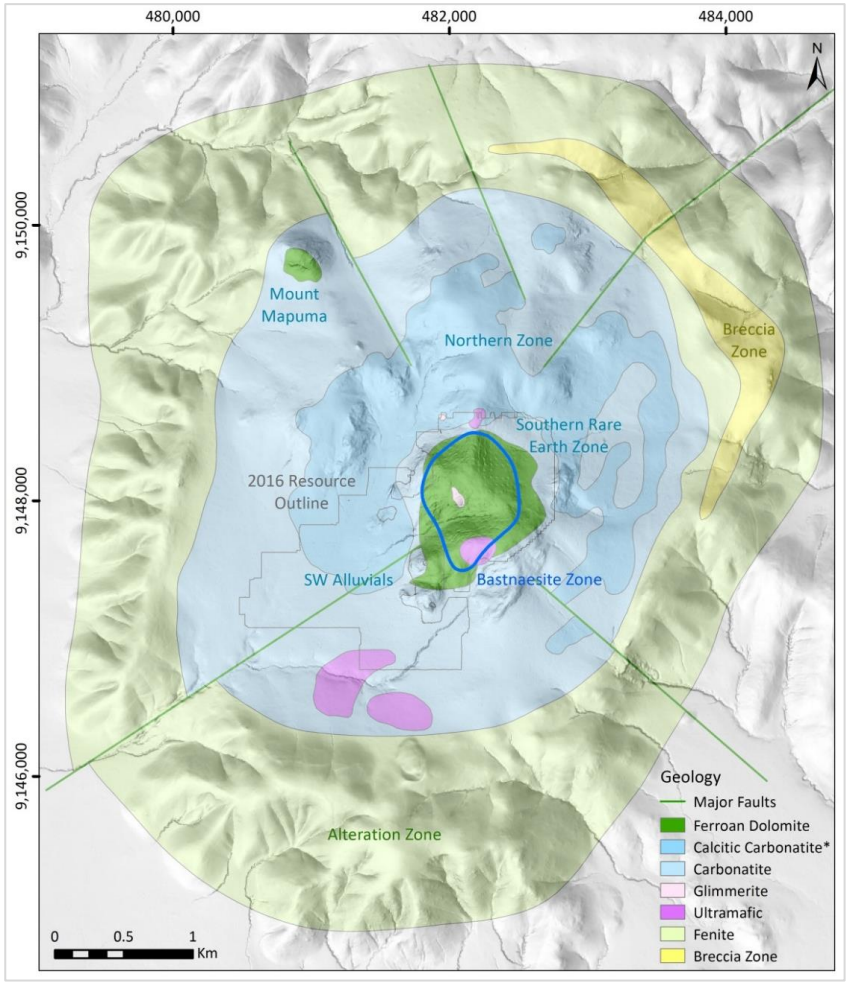
Classification	Tonnage (Mt)	TREO grade (%)	Contained TREO (kt)
Measured	86.1	2.61%	225
Indicated	112.6	1.81%	2,040
Inferred	15.7	2.15%	340
Total	**214.4**	**2.15%**	**4,620**

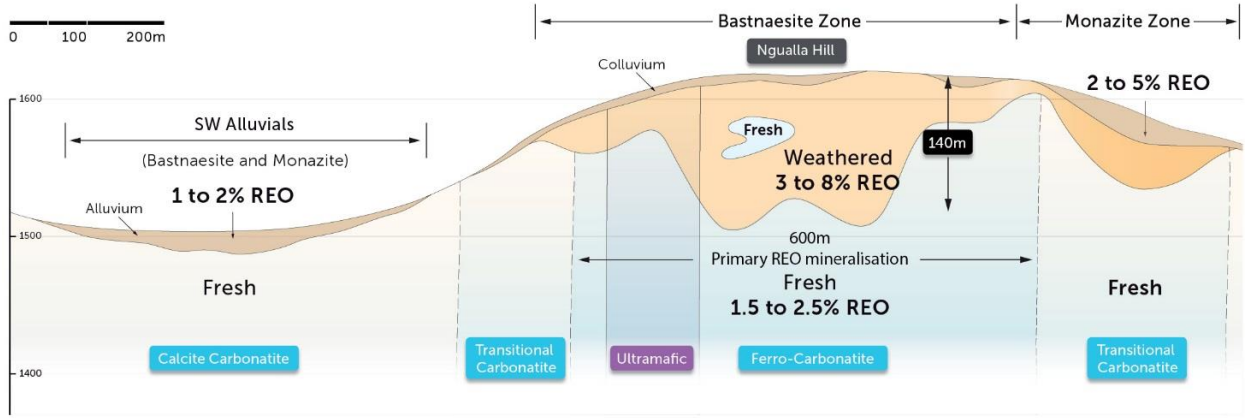


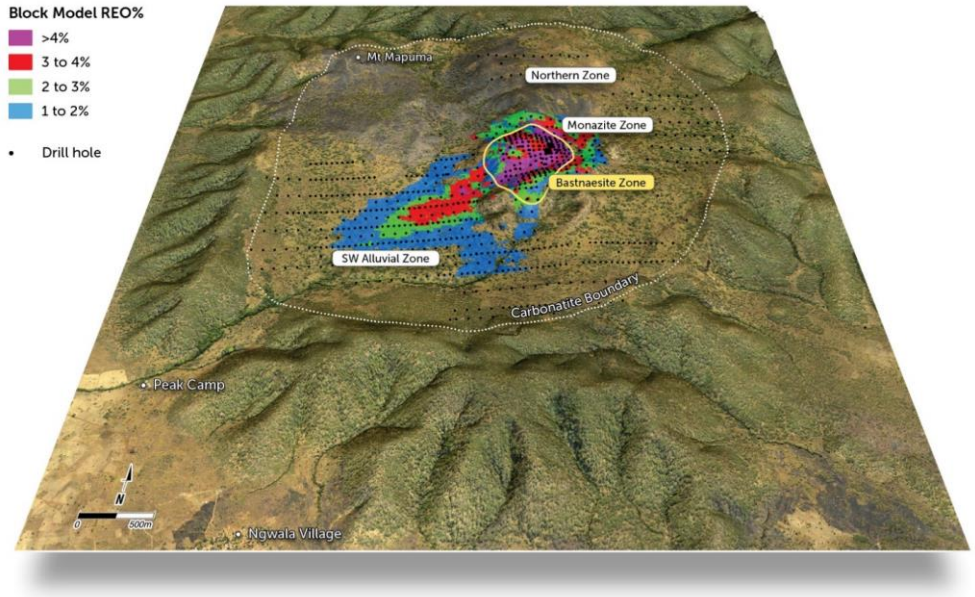
[1]Ore Reserve is based on Ngualla's 'Weathered Bastnaesite Zone' which will be the initial target for mining. Based on the following rare earth oxide prices (net of payability): Neodymium US$49.6/kg, Praseodymium US$46.8/kg, Lanthanum US$0.7/kg, Cerium US$0.8/kg, Samarium US$1.1/kg, Europium US$15.9/kg, Gadolinium US$20.0/kg, Terbium US$666.4/kg, Dysprosium US$205.2/kg, Holmium US$69.0/kg, Erbium US$18.1/kg, Ytterbium US$8.1/kg, Lutetium US$403.8/kg and Yttrium US$3.2/kg

Ngualla … significant resource endowment with exploration upside

Project initially targeting high-grade weathered bastnaesite zone







Peak RARE EARTHS

Logistics and infrastructure … supporting the Project and its community

Development of infrastructure will support a multi-generational project and deliver benefits to the local community

Logistics

- ✓ Trucking to port (predominantly sealed highways)
- ✓ Dar es Salaam Port a major East African port
- ✓ Future potential to utilise nearby rail in the future

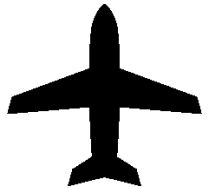
Water

- ✓ Water supplied from nearby bore field
- ✓ Additional sources of water for the development of Ngwala village

Roads

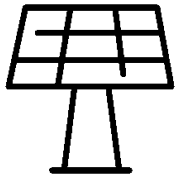
- ✓ Development of 6.5km internal access road
- ✓ Further upgrade of Southern Access Road to the Ngualla site which will also service the local community

Airstrip



- ✓ Staged development of existing airstrip
- ✓ Supports movement of workers to and from site
- ✓ Benefits to local community

Power



- ✓ 10.8MW solar-battery-diesel hybrid power station
- ✓ Potential to access national grid in coming years with ~40% of total electricity supplied by hydropower

Accommodation and ancillaries

- ✓ 800+ person accommodation camp to support construction and operations
- ✓ Medical clinic to support staff and local community

Peak RARE EARTHS

Environmental considerations … committed to international best practice

ESIA for the Ngualla Project has been updated

Environmental and Social Impact Assessment (ESIA)

- ✓ Original ESIA completed in 2016 in partnership with International Finance Corporation (IFC); a member of the World Bank and a previous shareholder in Peak
- ✓ Updated as part of BFS Update to reflect an increase in targeted production capacity (of 14%)
- ✓ Environmental management consulting group Dhamana and Tanzanian environmental engineering consulting group PaulSam Geoengineering engaged to support update
- ✓ ESIA update included collection of additional baseline data from the Ngualla site
- ✓ Updated ESIA submitted to National Environment Management Council (NEMC) in May 2022 with formal approval of changes received on 16 June 2022
- ✓ Peak continues to ensure that its environmental management strategy follows best practice global standards

Key focus areas of updated ESIA

Cultural Heritage:

- Cultural heritage site north east of mine site identified as part of ESIA
- Ongoing community consultation around conservation of site
- Mine site layout modified to ensure buffer zone around cultural site

Radiation Management:

- Ngualla ore contains trace levels of Th (54ppm) and U (15ppm) which are favourably low compared to other rare earth deposits
- Ngualla concentrate able to be transported as 'General Cargo' with no need to placard shipments as radioactive goods

Tailings Management:

- Global firm Knight Piesold engaged as part of BFS Update
- GISTM principles incorporated into tailings design and operation
- Tailings to be constructed in stages using material from ROM waste

Leadership

Experienced team … well-rounded Board of Directors

Broad mix of technical, commercial, governance, legal and Tanzanian experience

EXECUTIVE CHAIRMAN: RUSSELL SCRIMSHAW

- Highly experienced natural resources executive and company chair
- Founding director and Deputy CEO of Fortescue Metals, and previous Chairman of Sirius Minerals Pl
- Chairman of Garvan Research and Vice-Chairman of Ignition Wealth
- B.Com, Accounting and Finance

NON-EXECUTIVE DIRECTOR: TONY PEARSON

- Experienced natural resources executive and company director
- Chair of ASX-listed Cellnet, Trustee of the Royal Botanic Gardens & Domain Trust and a Non-Executive Director of ASX-listed Xanadu and Communicare Inc.
- B.Com, Accounting and Finance

NON-EXECUTIVE DIRECTOR: GILES STAPLETON

- Experienced barrister with significant experience across corporate, commercial, property, equity and family law
- Prior experience in banking, property and funds management, including as Head of Investment Management at Valad Property Group
- LLB (Hons)

NON-EXECUTIVE DIRECTOR: HON. ABDULLAH MWINYI

- Member of Tanzanian Parliament since 2007, and previously a Member of the East African Legislative Assembly (2007 – 2017)
- Chairman of Swala Oil and Gas (Tanzania) Plc
- Lawyer by profession and a founder of the firm Asyla Attorneys
- LLB, LLM

NON-EXECUTIVE DIRECTOR NOMINEE: SHASHA LU[1]

- Deep experience across rare earth supply chain; currently President of Shenghe Resources Pte
- Previously Non-Executive Director of Arafura Rare Earths and Executive Director and Deputy CEO of Globe Metals & Mining
- Visiting scholar at Geneva University which included work for WHO
- PhD, Medicine (Tianjin University), GAICD

[1]Subject to shareholder approval at AGM (to be held on 30 November 2022)

Experienced team … extensive management experience

International and African mining, development, commercial, marketing and rare earth expertise

CEO: BARDIN DAVIS

- 20+ years investment banking and corporate experience in mining and energy sectors
- Former roles include CFO of UPC/AC Renewables Australia, Head of Resources & Energy Group, Asia-Pacific for HSBC and Head of Metals and Mining Asia for Macquarie Capital
- BAg Econ (1st Class Hons), GradDipAcc, MAppFin, GAICD

COMPANY SECRETARY & CFO: PHIL RUNDELL

- 30+ years accounting experience and 10+ years secretarial and compliance experience
- Former Partner at Coopers & Lybrand (now PwC) and Director at Ferrier Hodgson
- B.Com, CA

HEAD OF TECHNICAL SERVICES: MARK GODFREY

- 40+ years metallurgical experience across numerous large mining companies including Glencore, Newcrest, MMG, Rio Tinto and BHP
- Extensive experience in feasibility studies, pilot plant test work, flow sheet optimisation and project commissioning
- BSc (Chemical Engineering)

HEAD OF MARKETING: ANDREA CORNWELL

- 25+ years marketing experience across numerous commodities
- Most recently VP Marketing for South 32, based in Singapore
- Prior roles with Vale, Anglo American, Shell and BHP
- B IntBus, MBA

HEAD OF OPERATIONS: LELLO GALASSI

- 20+ years managing and developing large international mining projects in the Democratic Republic of Congo, Guinea, South Africa, Chile, Guyana, Spain, Australia & Canada
- Previous roles with Sabina Gold & Silver, ICL, Rio Tinto, Freeport McMoran and Phelps Dodge
- MSAE, Aerospace Engineering & Computational Fluid Dynamics

COUNTRY MANAGER: ISMAIL DIWANI

- Background in accounting, government relations and administration
- Commenced with Peak in 2015, and has held several regulatory, commercial and leadership roles
- B.BusAdmin, CPA (Tanzania)

Peak RARE EARTHS

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