# Powering the green transformation

121 Mining Investment APAC Conference

November 2021





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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 announcements dated 22 February 2016, 2 March 2017, 12 April 2017, 28 August 2017, 12 October 2017, 25 August 2021 and 28 October 2021. The ASX announcements are available to view on <a href="https://www.peakresources.com.au/asx-announcements/">https://www.peakresources.com.au/asx-announcements/</a>. 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 undertaking a Bankable Feasibility Study Update and negotiating an Economic Framework Agreement with the Government of Tanzania, and the outcome of one or both, may confirm new information or data that materially affects the information included in the relevant announcement.



### Who we are

# Fully integrated Rare Earth Projects with a completed Bankable Feasibility Study and key mining, environmental and planning approvals in place

# Ngualla Mine & Concentrator... Tanzania



- One of the largest and highest grade undeveloped NdPr deposits
- High-grade of 4.80% REO Reserves
- √ +20 year life-of-mine
- High grade concentrate of 45%
   REO

April 2017.

# Sales and marketing... access to critical markets

Teesside Refinery...
UK





- ✓ Strategic location
- ✓ Skilled labour
- "Plug and play" infrastructure solution
- Nameplate capacity
  - 9,900 11,600tpa of REO equiv.
  - incl. 3,000 3,500tpa of NdPr Oxide

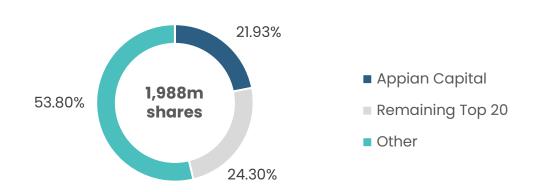


# **Corporate snapshot**

# Positioned to become one of the world's lowest cost, fully integrated rare earth producers

# Shares 1,988 m Share Price¹ 0.08 A\$/sh 52 Week Range 0.031 - 0.155 A\$/sh Market Capitalisation¹ 151 A\$m Cash² 20.6 A\$m Debt² - A\$m

#### **Shareholder Summary**







#### **Recent milestones**

#### Significant de-risking and major milestones achieved within last six months





### Peak's investment thesis

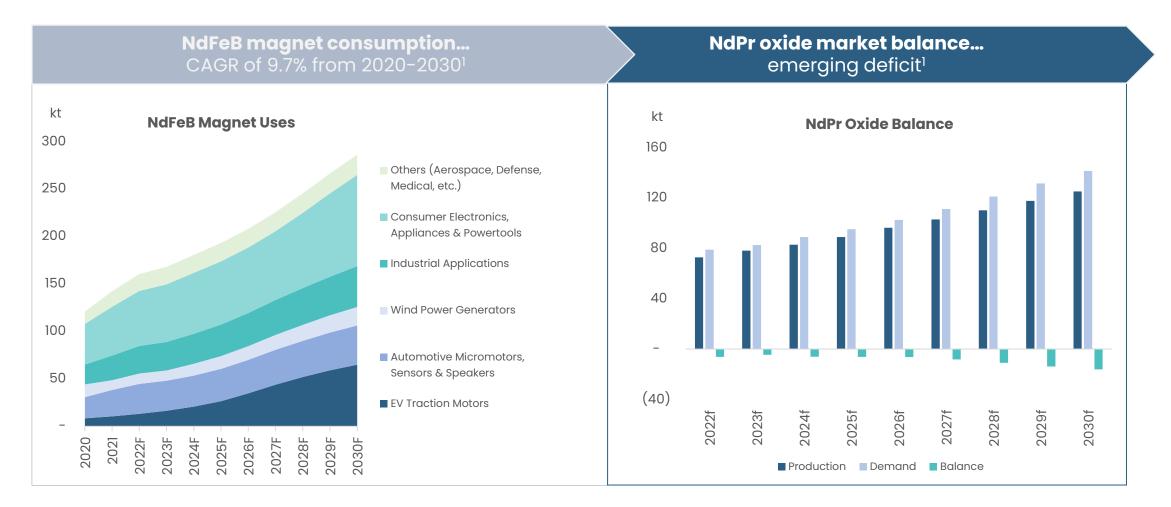
# Differentiated rare earth exposure...world class high-grade deposit with de-risked integrated strategy

1.	Compelling NdPr / market outlook	<ul> <li>Strong nexus to global decarbonisation initiatives</li> <li>Rapid growth in EV and wind turbines</li> <li>Increasing prices and market tightness</li> </ul>
2.	World class high-grade deposit <sup>1</sup>	<ul> <li>High grade (4.8% TREO) with low radionuclides and acid consuming elements</li> <li>+20 year mine life (based on Reserves)</li> <li>Low opex and capex intensity</li> </ul>
3.	Vertically integrated	<ul> <li>Integrated operation from Ore-to-NdPr Oxide</li> <li>Optimised margins across value-chain</li> <li>Reduced reliance on Chinese refiners</li> </ul>
4.	"Plug & Play" refinery solution <sup>2</sup>	<ul> <li>Strategic location with 250-year lease</li> <li>Proximity to infrastructure and utilities</li> <li>Benefits from "Freeport" status</li> </ul>
5.	De-risked execution strategy <sup>1,3</sup> and compelling value	<ul> <li>SML approved by Tanzanian Cabinet with all key approvals in place</li> <li>Flowsheet based on extensive pilot plant work</li> <li>Robust BFS completed in 2017 with BFS update underway</li> <li>Supporting robust economics and returns</li> </ul>
6.	Experienced Board and Management	<ul> <li>Well-rounded Board with combined technical, commercial, governance and Tanzanian experience</li> <li>Management team with extensive international and African mining, marketing and rare earth expertise</li> </ul>



# 1. Compelling market ... emerging deficit

Rapid growth in demand for NdFeB magnets supporting a growing supply-demand deficit for NdPr Oxide





# 1. Compelling market ... the accelerating revolution

# Accelerated transition at both national and industry level towards EV implementation and ICE phase out

#### **National Policies & Recent Investments**

UK



EU



- New ICE sales to be banned from 2030
- Launch of "Driving the Electric Revolution" and an associated £80m investment in electrification technologies
- A commitment of £3.2b funding in Nov 2021 to support EV and offshore wind development
- An additional £350m in funding announced in Oct 2021 to the existing £1b Automotive Transformation Fund
- Recent EV investment commitments
  - Nissan establishing a £1bn EV hub
  - Stellantis £100m investment for its first dedicated battery electric vehicle site
  - Ford establishing a £230m EV factory

- Proposal to ban sale of new ICE from 2035
- Public charging stations to be installed no more than 60km apart on major roads by 2025
- Targeting 3.5m new charging stations by 2030
- Construction of the Tesla Gigafactory in Berlin-Bradenburg
- Auto brands planning to switch entirely to EV's in EU by 2030 – Bentley, Volvo, Ford, Opel & Vauxhall

#### LICA







- March 2021 announcement of US\$174bn EV package
  - 500k charging stations
  - Consumer rebates
  - · Electrification of government fleet

- Targeting 50% EV market share by 2035
- Ban of ICE versions of motorcycles / three-wheelers in some cities
- Continuation of a New EV subsidy until 2022

#### **Global Automotive Industry Targets**



+1m EV capacity



40% EV sales by 2030



ICE phase-out by 2035



100% EV by 2025



ICE phase-out by 2030



ICE phase-out by 2030



ICE phase-out by 2036



ICE phase-out by 2030



70% EV Europe by 2030



ICE phase-out by 2030



15x new BEW in 2025



50% sales EV / hybrids by 2030



ICE phase-out by 2040



<sup>1</sup>Adamasintel report Q3-2020

# 1. Compelling market ... rising projected prices

#### Market tightness and projected deficits to support higher long-term prices

# Historical NdPr Oxide Price, 2N<sup>1</sup> US\$/kg \$120



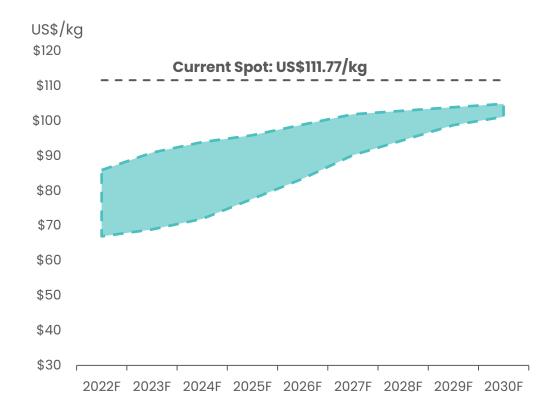




Jan 19

Jan 20

#### Forecast NdPr Oxide price, 2N<sup>2</sup>





Jan 17

Jan 18

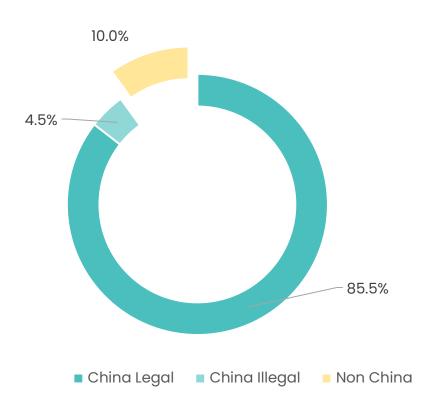
\$30

Jan 21

# 1. Compelling market ... need for diversity of supply

Increasing international focus on the need for diversity of supply and supporting rare earths production outside of China

#### **Global Rare Earth Production**



# Need for Diversity of Supply... Key Points

- China's dominance in supply
- Strategic importance of rare earths
- Rumoured further Chinese consolidation
- Nexus with e-mobility and decarbonisation
- Increasing market tightness
- COVID-19 related supply disruptions
- Rising geo-political and trade tensions

# International Developments... Recent Initiatives

- Australian Government "Resources Technology and Critical Minerals Processing National Manufacturing Priority" road map
- European Union European Commission President, Ursula von der Leyen, warning against over-reliance on China for rare earths
- United States President Biden issuing an executive order to review critical material supply chains including rare earths



# 2. World-Class Project ... Ngualla is large scale and high-grade

Large high-grade Reserves and Resources supporting a low cost and potentially multi-generation project



Location:	Tanzania (~1,000km west of Dar es Salaam and ~150km from Mbeya)
Geology:	Weathered carbonatite with a high-grade bastnasite-rich zone, low in acid consuming elements and radionuclides
Ore Reserves:	18.5Mt grading 4.80% REO for 887kt REO
Mineral Resources:	214.4Mt grading 2.15% REO for 4.61Mt REO
Life of Mine:	+20 years (covering only Ore Reserves)
Mining:	Open Pit with low strip ratio of 1.77
ROM Throughput:	800ktpa dry ore
Annual Production:	37.2ktpa of concentrate (45% TREO grade)
Environmental Certificate:	Received March 2017
Mining Licence:	SML application approved by Tanzanian Cabinet

11

# 2. World-Class Project ... Ngualla's multi-commodity potential

#### Subject to further exploration there is potential for Ngualla to become a multicommodity project

# Fluorspar

- Occurs in the North-East of deposit
- Strikes as high as c.35% Fluorite to date
- Uses chemical, metallurgical and ceramic processes



# Niobium

- Occurs in the North-East of deposit
- Strikes c.1% Nb<sub>2</sub>O<sub>3</sub> to date
- Uses high strength steel alloys and in super conducting materials



# Phosphate

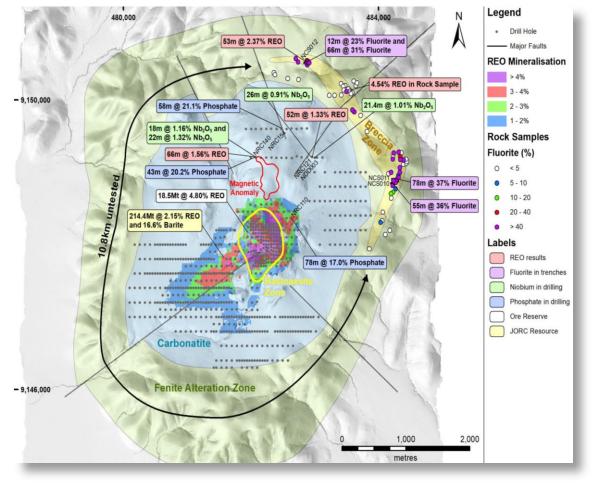
- Occurs in the North-East of deposit
- Strikes c.20% Phosphate to date
- Uses key component of fertilisers





- Occurs within same mineralisation zone as rare earth project – Weathered Bastnaesite contains c.40% BaSO<sub>4</sub>
- Uses petroleum drilling







### 2. World Class Project ... Potential growth options at Ngualla and Teesside

Multi-commodity potential at Ngualla and scope for third party tolling and downstream expansion at Teesside

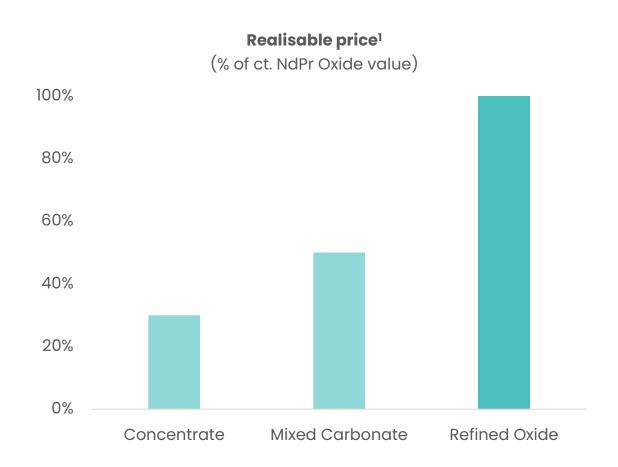
**Monazite Concentrate Commodity Adjacencies Heavy Rare Earths** Ngualla Ngualla contains significant Peak has identified heavy rare The Naualla deposit is highly monazite mineralisation within its earth rich apatite mineralisation prospective for a range of within the Northern region of the commodities including niobium, Southern Rare Earth Zone which could support a direct Ngualla deposit including fluorspar and phosphate concentrate export operation Dysprosium and SEG

Tolling of 3<sup>rd</sup> Party Concentrate Rare Earth Recycling **Downstream Development** Teesside Expansion of the Teesside Development of a Rare Earth Further downstream integration refinery and subsequent tolling recycling facility which extracts into Rare Earth supply chain and/or offtake of 3<sup>rd</sup> party rare including development of alloy metal content from used earth concentrate and/or magnet facilities magnets and other electrical components



# 3. Vertically integrated ... from Ore-to-NdPr Oxide

#### Strategically and financially compelling approach to optimising the value chain



#### 1 ) Optimised supply chain

- Reduced supply chain risks with total control over refinery feed
- Removes reliance upon Chinese oxide refinery / tolling solutions
- Ability to further optimise integrated system for any changes in market conditions

#### 2 Enhanced value

- Greater value capture of contained RE metal in producing refined oxides
- Ability to expand mine and refinery in the future to unlock additional revenue streams (export of concentrate, tolling of 3<sup>rd</sup> party concentrate)

#### ig( 3 ig) Unlocking of strategic partners and funding opportunities

 Unlocks strategic partners i.e. partnership, offtake and funding opportunities aimed at supporting the development of ex-Chinese supply chains



# 4. "Plug & Play" solution ... UK-Teesside Refinery

Strategic location with existing infrastructure and utilities and access to competitively priced reagents

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Wilton Int. Teesside Industrial zone in Tees Valley N-E England

#### Port:

Within 3 km of Teesport deepwater port

Other Infrastructure:

Teesport 3rd largest UK port by volume

Road, rail, air and sea connections

**Utilities:** 

Access to competitively priced chemicals/reagents, water disposal & treatment facilities

Power generated on-site

Workforce & **Government Support:**  Experienced and skilled workforce

Strong community and government support

**Lease Agreement:** 

Size - 19ha site

Term - 250 years

Rent – nominal "peppercorn" payment

**Planning Permission:** 

Granted by regional council

**Status:** 

Implemented in April 2021

"Freeport Status"

Tax, planning and customs benefits

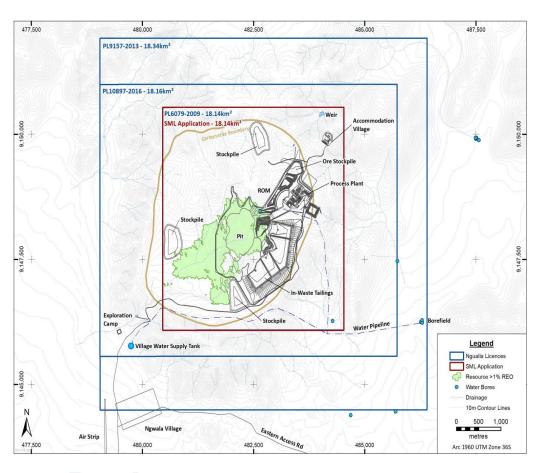




## 5. Re-risked execution... Special Mining Licence application approved

#### The SML application has been approved by the Tanzanian Cabinet

#### Ngualla ... SML and remaining PL



#### **Tanzania**

- Well established mining jurisdiction
- Fourth largest gold producer in Africa
- Pro-business and foreign investment policies under new President Samia Suluhu Hassan
- Significant momentum in mining sector under President Hassan including formal granting of Kabanga Nickel's SML in Oct 2021

#### Ngualla SML ... Specifics

- SML application approved by Tanzanian Cabinet
- Exclusive rights to mine over 18.14km<sup>2</sup> area
- To be issued to PR NG Minerals Ltd ("PR NG"), a 100% Peak subsidiary
- PR NG to transfer the SML to a newly incorporated entity to be owned beneficially
  - 84% by Peak and 16% by the Tanzanian Government
- Remaining Prospecting Licences ("PL") to be retained by PR NG

#### **Next steps:**

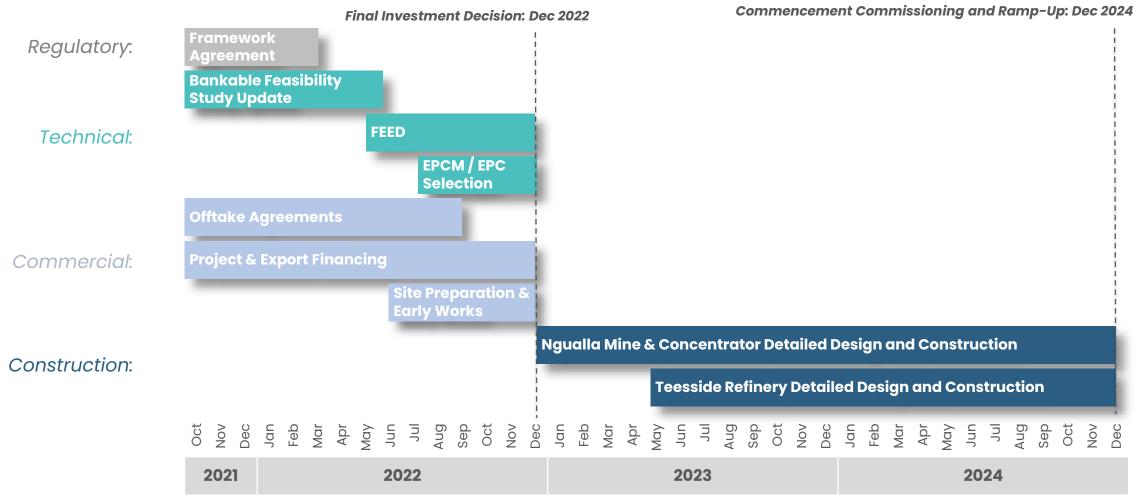
- Finalise Newco Constitution & Shareholders' Agreement
- Formal grant SML and Framework Agreement



16

# 5. De-risked execution... potential timeline

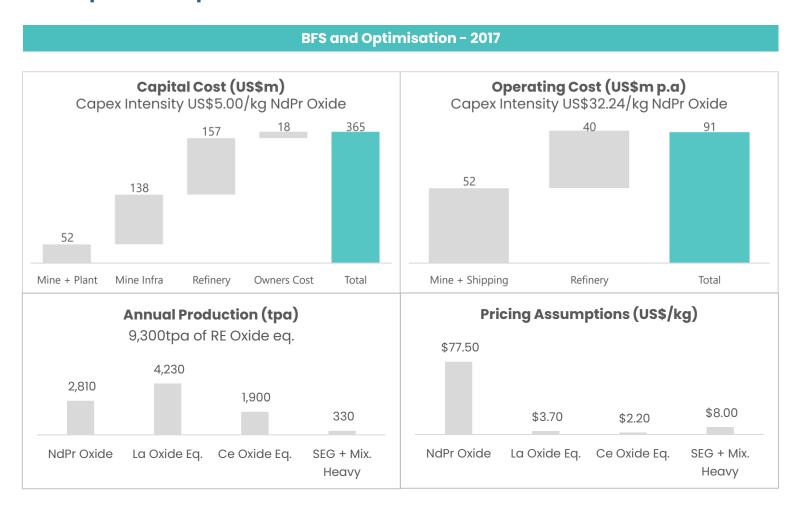
#### Construction is currently targeted to commence by the end of December 2022





### 5. Compelling value proposition ... original BFS and optimisation

Large scale, high-grade deposit with a long mine life and low opex and capex intensity. Final BFS Update expected in June 2022



Financial Dashboard: BFS and Optimisation 2017					
Metric	Post tax & Royalties	Pre tax & Royalties			
IRR	22%	26%			
NPV <sub>8%</sub>	US\$614m	US\$914m			

Ngualla Project Metrics						
Metric	2017 BFS	2021 BFS Update Target				
LOM	26 years	20 years				
Av. Grade	4.8% REO	4.8% REO				
Strip Ratio (x)	1.77x	1.77x				
Av. Throughput	711ktpa	800ktpa				
Av. REO Concentrate	32.7ktpa	37.2ktpa				
Av. Production (REO eq.)	9.3ktpa	9.9 – 11.6ktpa				



# 6. Experienced team ... well-rounded Board of Directors

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



#### **NON-EXECUTIVE CHAIRMAN: 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 ASXlisted Xanadu and Communicare Inc.
- B.Com, Accounting and Finance



#### **MANAGING DIRECTOR: 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



#### NON-EXECUTIVE DIRECTOR: GISELLE COLLINS

- Deep experience across audit, risk, governance and compliance
- Chair of Larrakia Darwin Hotel and a Non-Executive Director of Hotel Property Investments, Cooper Energy and Generation Life and a Trustee of the Royal Botanic Gardens & Domain Trust
- BA Econ, GradDipAppFin, Chartered Accountant (CAANZ), GAICD



#### 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: REBECCA MORGAN**

- Geologist and mining engineer with 19 years of resources industry experience working with major mining houses, consulting groups and explorers globally, including Africa
- Currently Raw Materials Manager for Angolan-focused Minbos Resources
- BSc App Geology (Hons), MSc (Mine Engineering)



# 6. Experienced team ... extensive management experience

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



#### **COMPANY SECRETARY & CFO: PHILIP 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 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



#### **CONSULTING METALLURGIST: GAVIN BEER**

- 30+ years technical and operational experience across rare earth and critical metal sectors
- Previously GM, Metallurgy for Peak between 2015 and 2017, where he was responsible for development and optimisation of current refinery flowsheet
- BSc Extractive Metallurgy



#### **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)



#### **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)

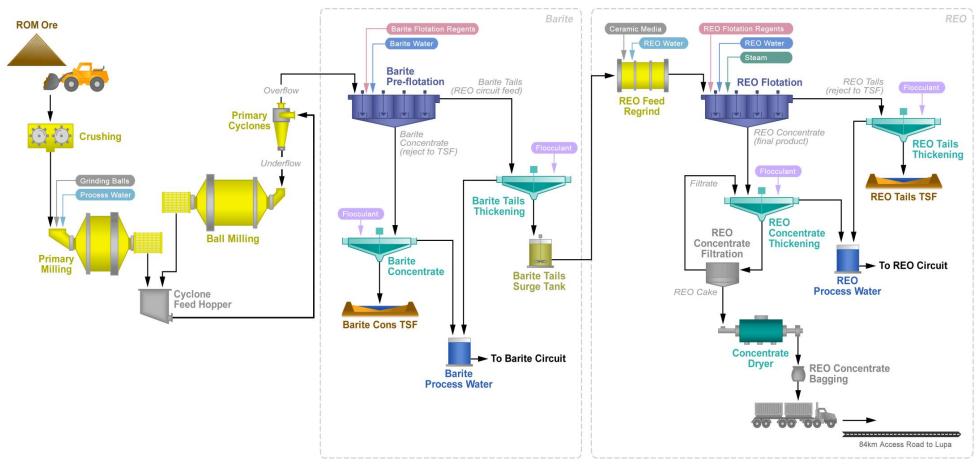






# Appendix I. Ngualla schematic flowsheet

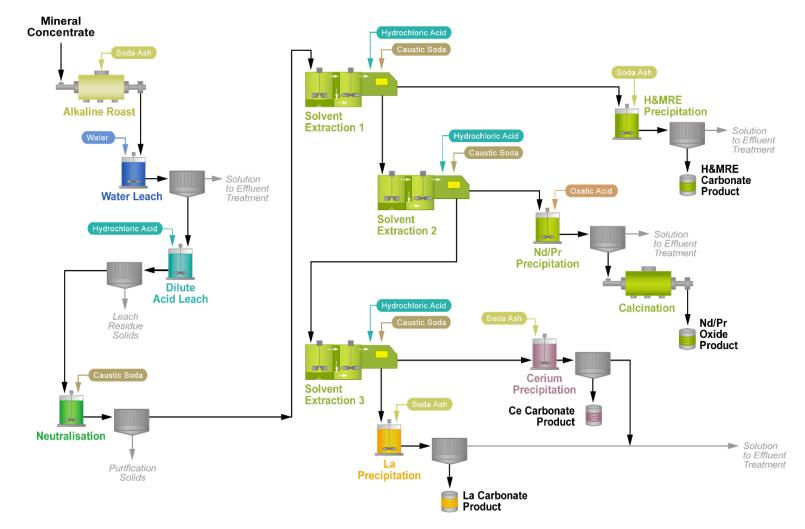
High-grade reserves, minimal blasting required, low strip ratio (1.78 LOM), barite pre-float, REO flotation and production of a 45% high-grade concentrate





# Appendix II. Teesside Refinery schematic flowsheet

Alkali roast followed by solvent extraction... benefits from a high-grade concentrate, low levels of radionuclides and acid consuming elements and avoids the environmental impacts of acid baking





# Contact



+61 8 9200 5360 info@peakresources.com.au

peakresources.com.au

#### Address:

190 St Georges Terrace, Mezzanine Floor, Perth, WA 6000

Postal address:

PO Box 603, West Perth 6872

**ASX: PEK** 

ACN 112 546 700

