

INVESTOR PRESENTATION

September 2013



ARAFURA
RESOURCES LIMITED

ABN 22 080 933 455



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The information in this presentation that relates to exploration results, mineral resources or ore reserves is based on information compiled by Mr Richard Brescianini BSc (Hons). Mr Brescianini is a Member of the Australian Institute of Geoscientists and he has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code)”. Mr Brescianini consents to the inclusion in this presentation of the matters based on his information in the form and context in which it appears.

Mr Brescianini is a full-time employee of Arafura Resources.



AGENDA

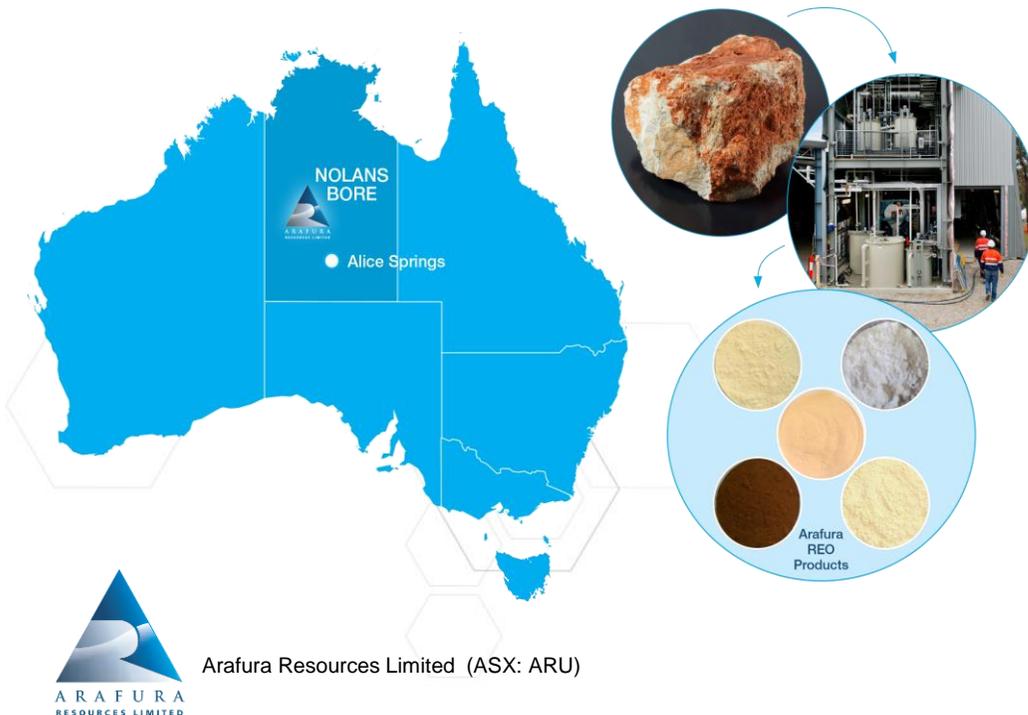


1. Arafura Resources – snapshot
2. Rare Earths market – long term, sustainable growth
3. Arafura positioned to be a major global supplier of Rare Earths
4. Flagship Nolans Project
5. The Nolans Project Base Case
6. Optimising the Project
7. Strategic partnerships
8. Arafura on track to achieve production
9. Reduced funding requirements
10. Investment proposition



1a. COMPANY SNAPSHOT

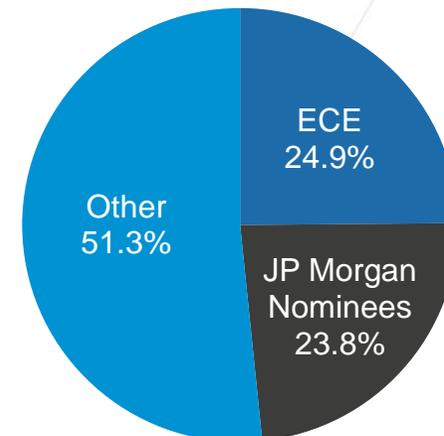
Arafura Resources is an Australian company with a world-class Rare Earths project in the Northern Territory – the Nolans Project



Key statistics	
ASX Code:	ARU
Shares on offer:	441.3 million
Options:	10.7 million
Market Cap @ 9.9 c:	A\$43.7 million
1-year range:	6.2 – 24.5 cents
Cash at 31/06/13:	A\$32.2 million
Debt:	nil

Share price data and Market Cap as at 20/09/2013

Shareholder register



1b. EXPERIENCED BOARD AND MANAGEMENT



Ian Kowalick – Non-Executive Chairman

Appointed 1 February 2012. Ian has worked in technical and project consulting, economic and business analysis for resource, banking and investment companies. Previously held the most senior management position in the South Australian public sector.



Gavin Lockyer – Managing Director

Over 20 years' international experience in finance and mining. Held positions in senior investment banking, finance, treasury, derivatives and accounting.



Chris Tonkin – Non-Executive Director

25+ years' experience as a senior business executive. Proven track record in structuring and arranging complex financings for companies and projects in Australia and internationally across all major industry sectors.



Shasha Lu – Non-Executive Director

Based in Nanjing, China. Responsible for business development opportunities in China. Former Executive Director & CEO of Hong Kong East China Non-Ferrous Metal Resources Co. Ltd (part of ECE).



Terry Grose – Non-Executive Director

30 years' experience as a senior executive, consultant & director. Joined Wesfarmers Ltd in 1985 as a Business Development Manager and later moved to Hong Kong as Executive Director of a computer software company.



Peter Sherrington – CFO and Company Secretary

Over 20 years' experience in professional & corporate roles. Has held senior finance & commercial positions in many ASX & public unlisted entities. Has also worked in public practice for 10 years in business services and corporate advisory.



Richard Brescianini – GM Exploration & Development

Over 25 years' public and private experience in the minerals industry, including BHP Minerals and the NT Government's Geological Survey.



Neil Graham – GM Operations & Technology

Over 25 years' international experience in the chemical industry encompassing design, construction and commissioning of installations. Chartered engineer, most recently worked with Orica.



John Ganser – GM Projects

Over 30 years' experience in minerals and metals industry, including Rio Tinto, BHP Billiton, Iluka Resources, Hatch, SKM, GHD and Calibre Projects.



Brian Fowler – GM Northern Territory & Sustainability

40+ years in the mining industry, including in environmental & safety management, community engagement, permitting/approvals & land access. Exploration & production/operation phase experience. Previously with Newmont Australia & Normandy Mining.

2a. REO MARKET – LONG TERM SUSTAINABLE GROWTH

Attractive long-term growth profile, driven by industrial sector, ongoing technology innovation and ‘green energy’

Rare Earths represent a sustainable, long-term growth investment opportunity

Supply, demand and pricing provide a strong base for attractive investment

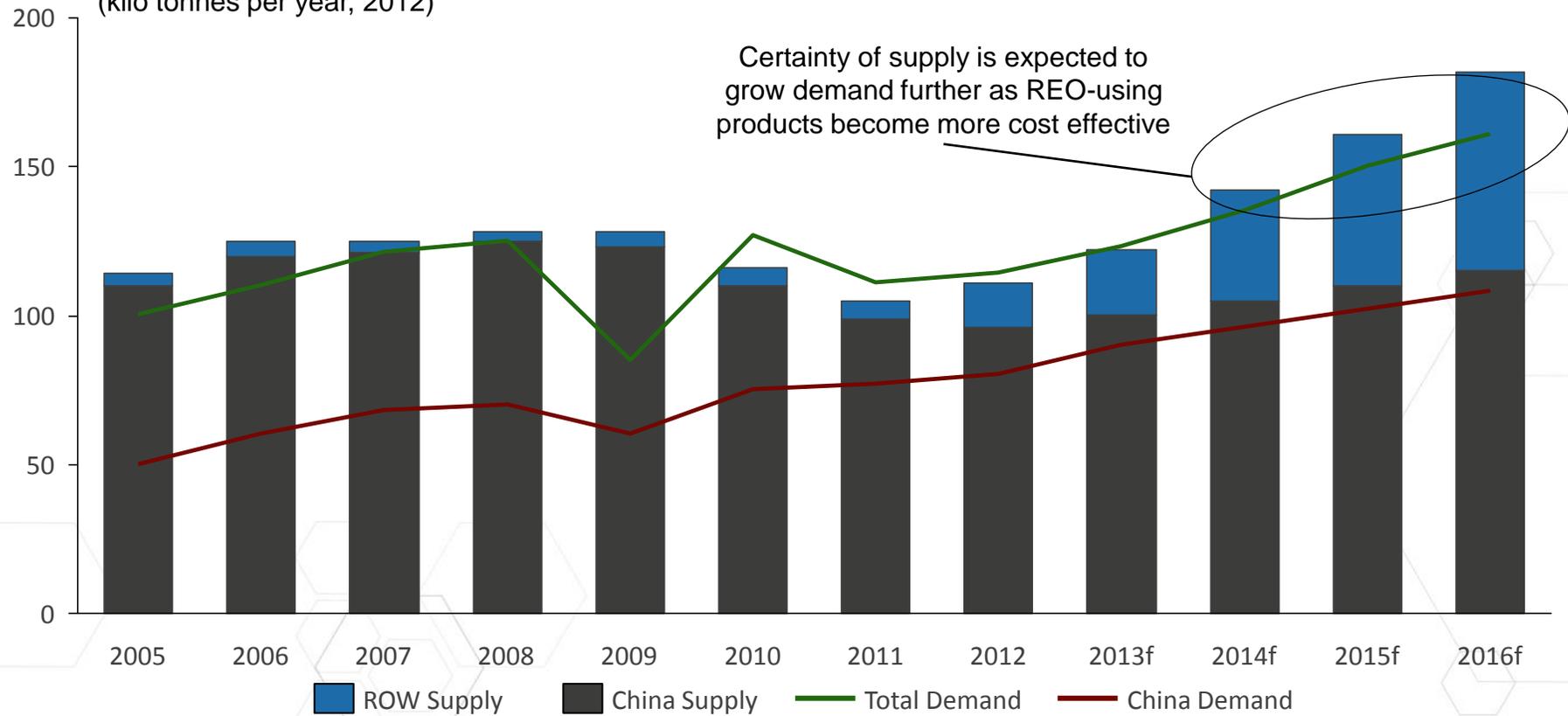
Growth in demand is driven by technology advancements and clean energy

Strong demand for ‘Critical Rare Earths’ reported by the US Department of Energy

Very few new producers set to join the global supply chain in the next decade.
Demand/supply imbalance = shortfall

2b. GROWING GLOBAL DEMAND FOR RARE EARTHS

Global demand and supply of Rare Earths
(kilo tonnes per year, 2012)



Source: IMCOA



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2c. GLOBAL IMBALANCE – DEMAND vs SUPPLY



- China is the largest Rare Earths producer, with over half of the world's Reserves
- Concerns about ongoing Chinese supplies – export restrictions & domestic stockpiling
- Grade depletion of Chinese resources
- Few projects worldwide advanced enough to enter production within next decade



- 2013 global REO demand -115,000-125,000t
- Global demand forecast to grow at 6-7% p.a. between 2013 and 2022
- Demand driven by technology innovation and the industrial and clean energy sectors
- 'Critical Rare Earths' remain in high demand, but short supply

Key outcomes of this imbalance:

- Global supply shortfall
- Rare Earths prices expected to strengthen
- Significant opportunities for advanced stage Rare Earths companies to enter the global supply chain

3. ARAFURA – POSITIONED TO BE A MAJOR GLOBAL SUPPLIER

Rationale:

- ▲ **Project size** – Potential to supply 10% of global Rare Earths demand
- ▲ **Project life** – Ore Reserves support a 22-year mine life
- ▲ **Composition** – Nolans Bore resource contains high concentrations of ‘Critical Rare Earths’ (neodymium, europium, terbium, dysprosium and yttrium)
- ▲ **Stage of development** – Well advanced, with Base Case established and Feasibility underway. Arafura identified as a strong candidate to follow Lynas and Molycorp into production
- ▲ **Location** – Australia has a strong established resources economy, with minimal sovereign risk and geographically well positioned to supply key growth markets



Ce Oxide



HRE Oxide



La Oxide



Nd/Pr Oxide



SEG Oxide



4a. FLAGSHIP NOLANS PROJECT – HIGHLIGHTS



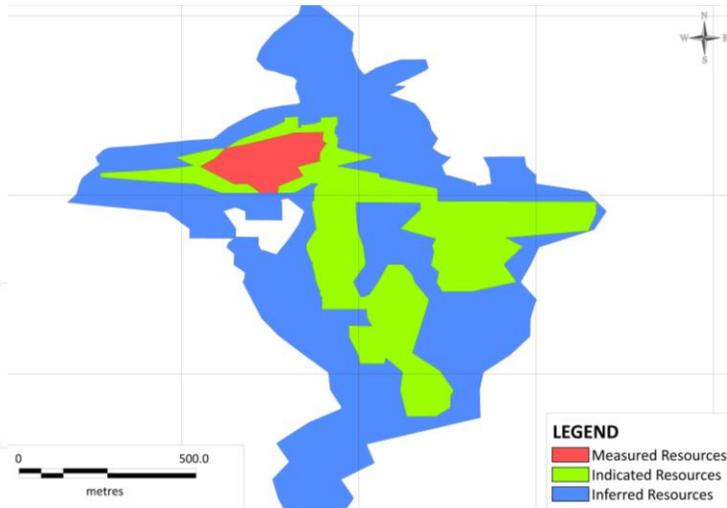
- ▲ Nolans Project – underpinned by a **world-scale, low-risk resource** at Nolans Bore
- ▲ Project status – **well advanced** with Feasibility in progress
- ▲ Potential to supply **10% of the world’s rare earths demand**
- ▲ Significant **JORC Ore Reserves** established
- ▲ **Five REO products** separated to 99% purity
- ▲ Project **Base Case established** – robust project economics confirmed
- ▲ **Initiatives underway** to significantly **reduce capital and operating costs and optimise** economics
- ▲ **Chinese expertise leveraged** through strategic partnerships

4b. NOLANS BORE MINERAL RESOURCES



Resources	Tonnes (million)	Rare Earths % REO	Tonnes REO	Phosphate % P ₂ O ₅	Uranium % U ₃ O ₈
Measured	4.3	3.3	144,000	13	0.03
Indicated	21	2.6	563,000	12	0.02
Inferred	22	2.4	511,000	10	0.02
TOTAL	47	2.6	1,217,000	11	0.02

1% REO cut-off grade



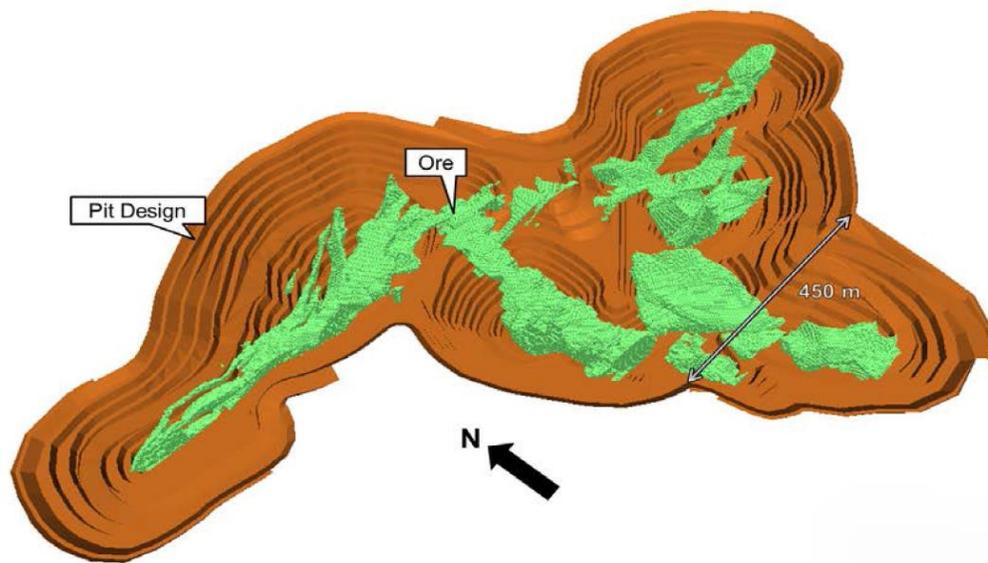
- ▲ **1.22 million tonnes** of in-situ REOs
- ▲ **REO Low resource risk** via extensive drilling and detailed material type studies
- ▲ Mineralisation **at surface** and **open at depth**, below 220m
- ▲ **Very high neodymium** content – 20.58% of Rare Earths mix



4c. NOLANS BORE ORE RESERVES



Reserves	Tonnes (million)	Rare Earths % REO	Tonnes REO	Phosphate % P ₂ O ₅	Uranium % U ₃ O ₈
Probable	24	2.8	672,000	12	0.02



- ▲ Independently prepared Ore Reserves support a **22-year mine life**
- ▲ Amenable to **low-cost open cut** mining & standard beneficiation techniques
- ▲ **Very high conversion rate (95%)** from Mineral Resources
- ▲ Significant **Reserves upside** – potential to upgrade and convert 21Mt of Inferred Resources
- ▲ Few Rare Earth projects have Ore Reserves

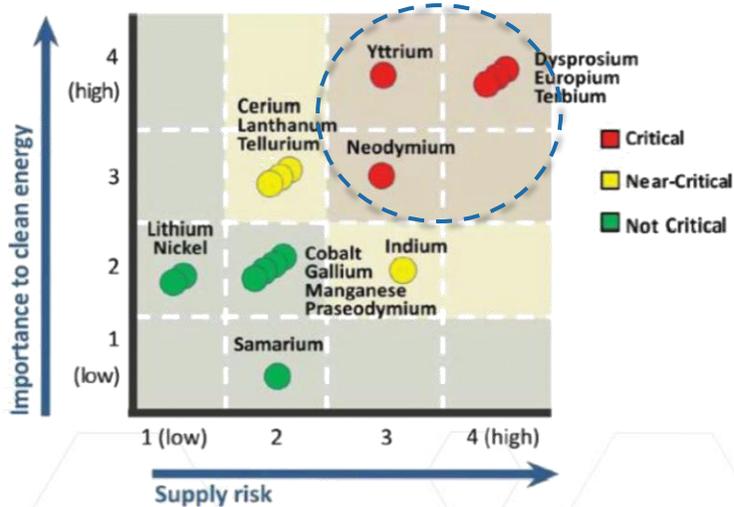


4d. FUTURE SUPPLIER OF 'CRITICAL REOs'



'Critical Rare Earths' Europium, Terbium, Dysprosium, Neodymium & Yttrium demand high prices: Nolans has strong representation in all 'Critical Rare Earths' and will derive significant revenue from Neodymium & Europium

Short-Term (0–5 years) Criticality Matrix

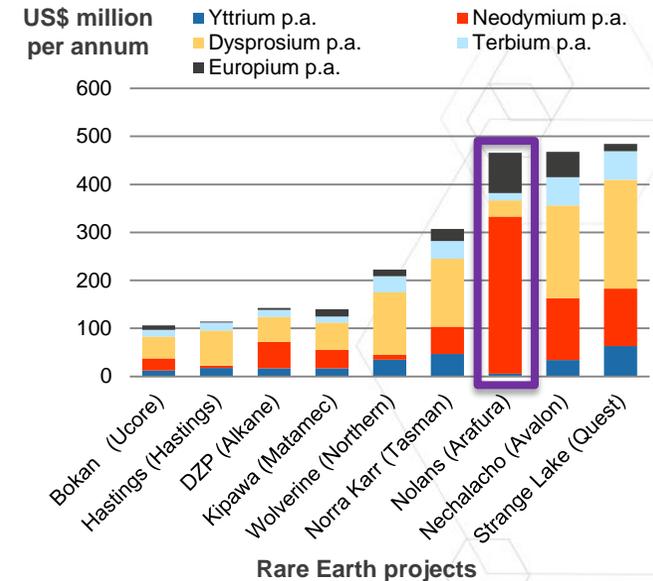


Source: US Department of Energy – Critical Materials Strategy, December 2011.

Rare Earth Prices – US\$

REO	\$/kg
Europium	\$1,075.00
Terbium	\$925.00
Dysprosium	\$530.00
Praseodymium	\$114.50
Neodymium	\$79.50
Gadolinium	\$46.50
Yttrium	\$21.50
Samarium	\$9.00
Cerium	\$6.55
Lanthanum	\$6.25

Forecast revenues from 'Critical Rare Earths'



Rare Earths composition and forecast annual production derived from company material. Assumes no recovery losses and fully separated REO products. Rare Earth prices as at 12/09/13



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5. NOLANS PROJECT BASE CASE



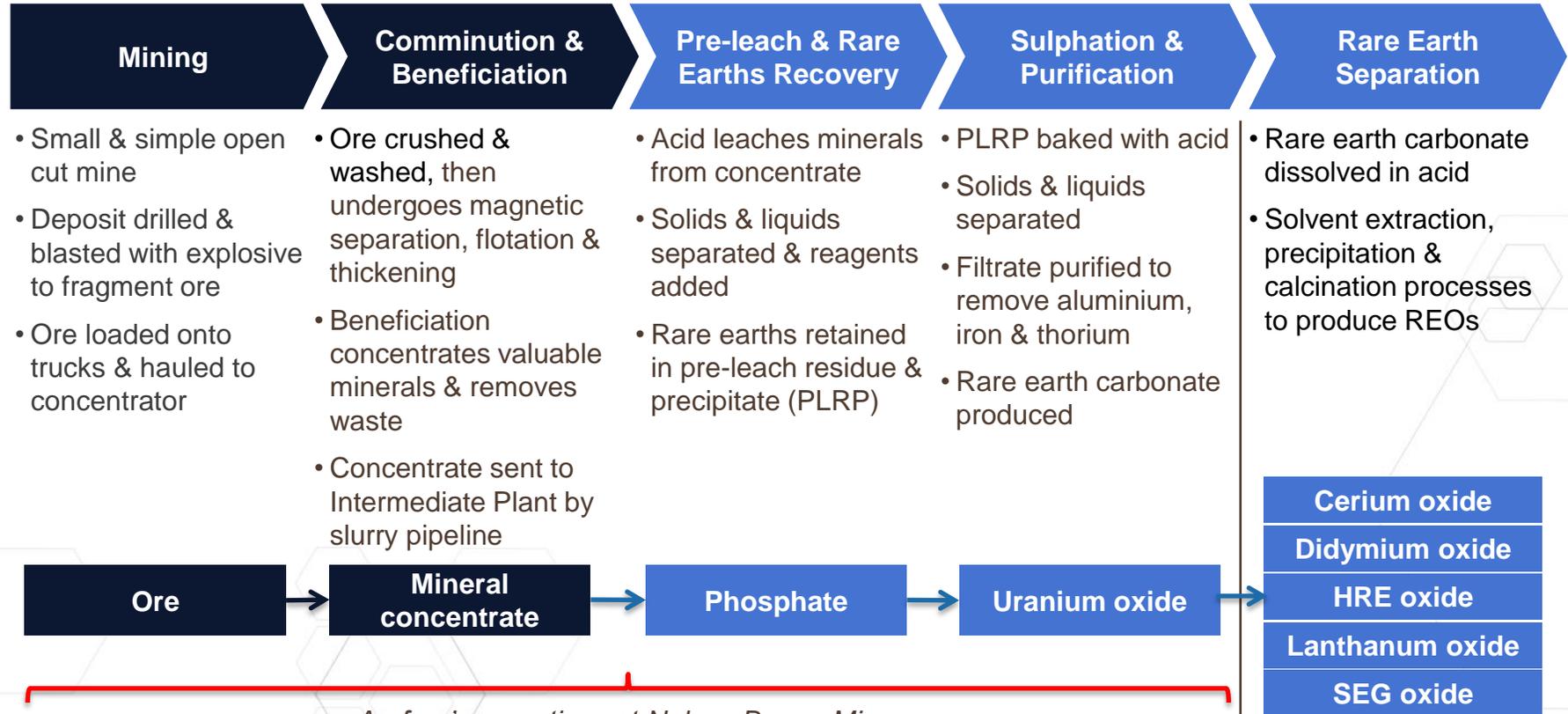
- ▲ Established in August 2012
- ▲ Project economics over 20 years
- ▲ **NPV of A\$4.3 billion** (10% discount rate)
- ▲ **IRR of 30%** (after tax & capital payback)
- ▲ Capital payback within 4 years of operation
- ▲ Capital cost of A\$1.9 billion
- ▲ Operating cost of A\$20.55/kg of REO

The Base Case reinforced the strong commercial appeal of the Nolans Project. A number of initiatives are underway to materially reduce costs and further enhance project economics.

6a. OPTIMISING THE NOLANS PROJECT (1 of 2)



Five stages to produce five key REO products and strategic co-products



Arafura's operations at Nolans Bore – Mine, Concentrator & Rare Earths Intermediate Plant

Arafura's offshore operations – Rare Earths Separation Plant



6b. OPTIMISING THE NOLANS PROJECT (2 of 2)

Arafura is targeting capital cost reductions of at least A\$500 million

Current initiatives:

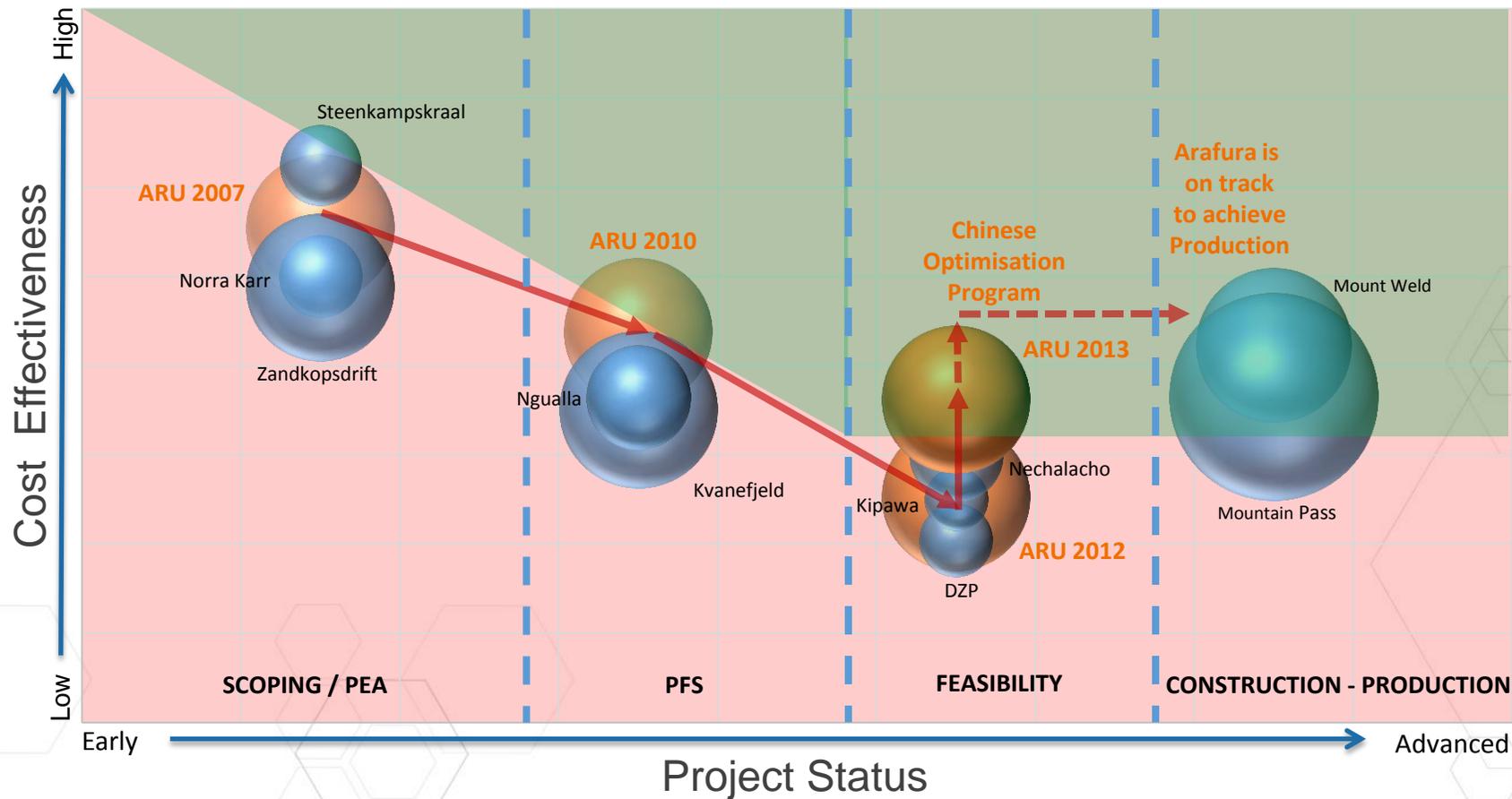
- ▲ Relocation of Intermediate Chemical Processing from Whyalla (SA) to Nolans Bore (NT)
 - Aided by the discovery of an extensive aquifer system close to Nolans Bore
 - Savings of A\$160m in capital and A\$1.60/kg of REO in operating costs
 - Additional transport, logistics and environmental benefits
- ▲ Trade-Off Study assessing alternative processing options and plant configurations
- ▲ Assessment of suitable locations for Rare Earths Separation (estimated savings of A\$250m)
- ▲ Technical Review and Optimisation Program with Chinese rare earth experts
 - Involves identifying process and technology enhancements, and other opportunities to further reduce capital and operating costs

7. STRATEGIC PARTNERSHIPS



- ▲ ECE (East China Mineral Exploration & Development Bureau) is a **major shareholder** and **important long-term strategic partner for Arafura**
 - Supportive relationship with Arafura since 2009
 - Equity increased to 24.86% via SPP (A\$10 million) in 2012
- ▲ Via ECE introductions, Arafura has commenced work with Chinese Rare Earth experts on a **Technical Review and Optimisation Program**, to optimise processes and identify opportunities to reduce project capital and operating costs
- ▲ MOU signed with Shanghai Stock Exchange-listed **Shenghe Resources Holding Co.**
- ▲ **Key advantages** of a long-term strategic partnership with Shenghe:
 - Access to specialised technical and industrial experience in Rare Earths
 - Reducing the timeline for project commercialisation
 - Supply chain exposure and co-funding opportunities
- ▲ LOIs with **ThyssenKrupp** and **South Korean multinational** advancing towards commercialisation

8a. ON TRACK TO ACHIEVE COMMERCIAL PRODUCTION



Sphere size proportional to forecast annual production.
Project Status derived from company material.



8b. PEER COMPARISON



Arafura is undervalued compared to peers and thus represents the opportunity for strong value growth

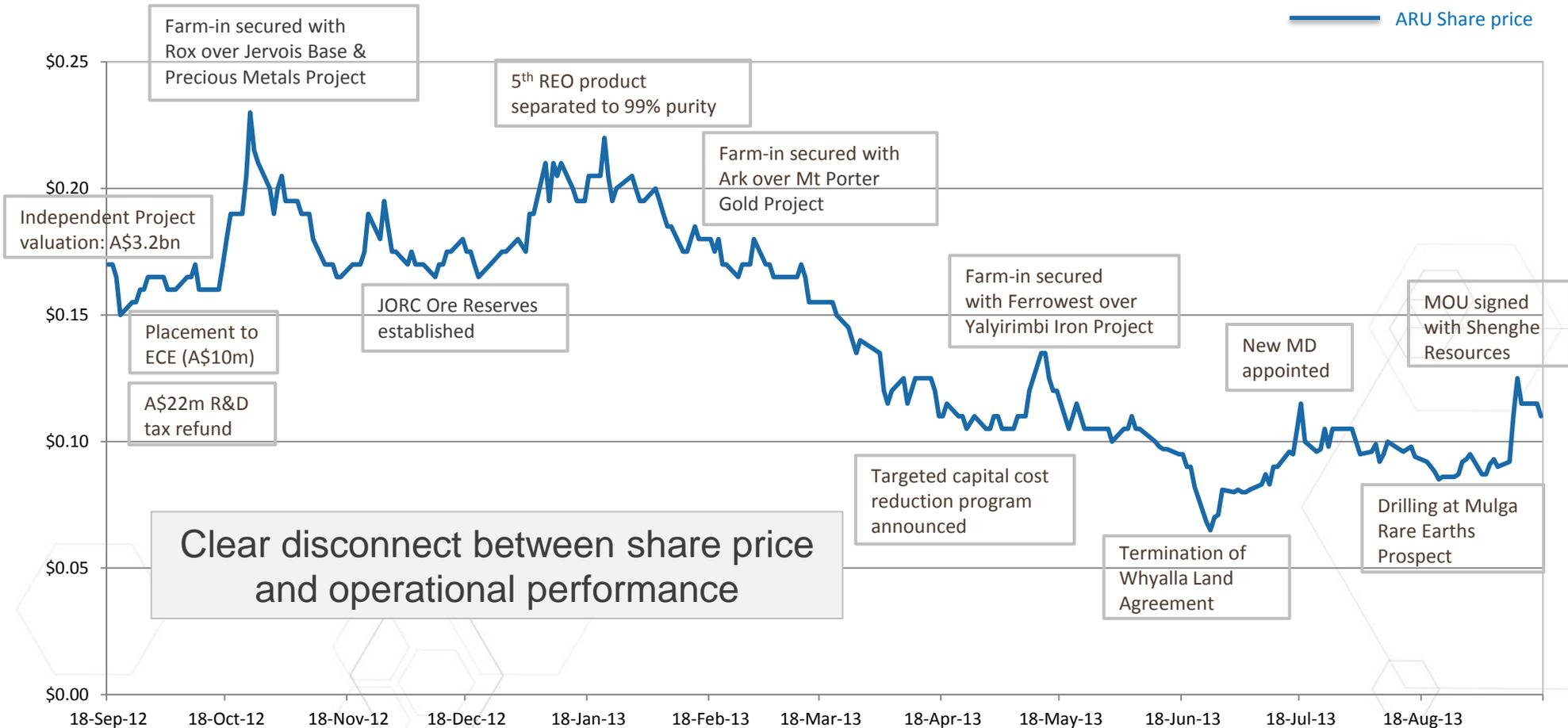
Company	Listing	Location	Mining Method	Project Stage	REO Offtake LOI / MOU	Market Cap (A\$m)	EV (A\$m)	TREO Resources (Mt)	TREO Reserves (Mt)	Forecast REO Production (tpa)	EV/Tonne Resources (US\$/tonne)	Avg. Grade %
Arafura	ASX: ARU	Australia	Open Pit	Feasibility	✓	46	14	1.2	0.7	20,000	12	2.6%
Lynas Corp	ASX: LYC	Australia	Open Pit	Commissioning	✓	794	1,103	1.5	1.1	22,000	735	9.8%
Molycorp	NYSE: MCP	USA	Open Pit	Commissioning	✓	1,365	2,493	2.0	1.1	40,000	1,247	6.6%
Alkane Resources	ASX: ALK	Australia	Open Pit	Feasibility	✓	147	83	0.7	0.3	4,910	119	0.9%
Avalon Rare Metals	TSX: AVL NYSE: AVL	Canada	Underground	Feasibility	–	103	88	1.8	0.2	8,000	49	1.4%
Rare Element Resources	NYSE: REE TSX: RES	USA	Open Pit	PEA	–	128	96	1.4	0	9,430	69	2.7%
Frontier Rare Earths	TSX: FRO	South Africa	Open Pit	PEA	✓	34	(10)	0.9	0	20,000	(11)	2.2%
Quest Rare Minerals	TSX: QRM	Canada	Open Pit	PEA	–	48	39	0.3	0	12,100	130	1.4%
Greenland Minerals & Energy	ASX: GGG	Greenland	Open Pit	PEA	–	160	152	6.5	0	23,000	23	1.1%
Mean		(excl. ARU)				347	506	1.9	0.3	17,430	295	1.6%
Median		(excl. ARU)				138	92	1.5	0.1	16,050	94	1.8%



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Source: Cashel House and company material

8c. DISCONNECT BETWEEN SHARE PRICE & OPERATIONAL PERFORMANCE



9. FUNDING REQUIREMENTS SIGNIFICANTLY REDUCED



- ▲ Targeting total capital **costs reduction of at least A\$500 million**:
 - **Immediate savings** identified through project reconfiguration (c. A\$410 million)
 - **Further substantial savings** expected from project optimisation initiatives
- ▲ **Potential elimination of previously announced funding** (A\$30 million) required to complete Feasibility

With targeted cost reduction measures underway, Arafura is confident in its position and ability to advance the Nolans Project towards financing and commercialisation

10. STRONG INVESTMENT CASE



- ▲ Nolans Rare Earths Project – **world-scale and well advanced**
- ▲ Potential to supply **10% of global rare earths products** this decade
- ▲ **JORC Ore Reserves** established
- ▲ **Five REO products** separated to 99% purity
- ▲ **Chinese expertise leveraged** through strategic partnerships
- ▲ **Optimisation program** underway – working towards a lean and cost-efficient project
- ▲ **Undervalued** compared to peer companies
- ▲ Highly experienced and committed **Board and Management** team





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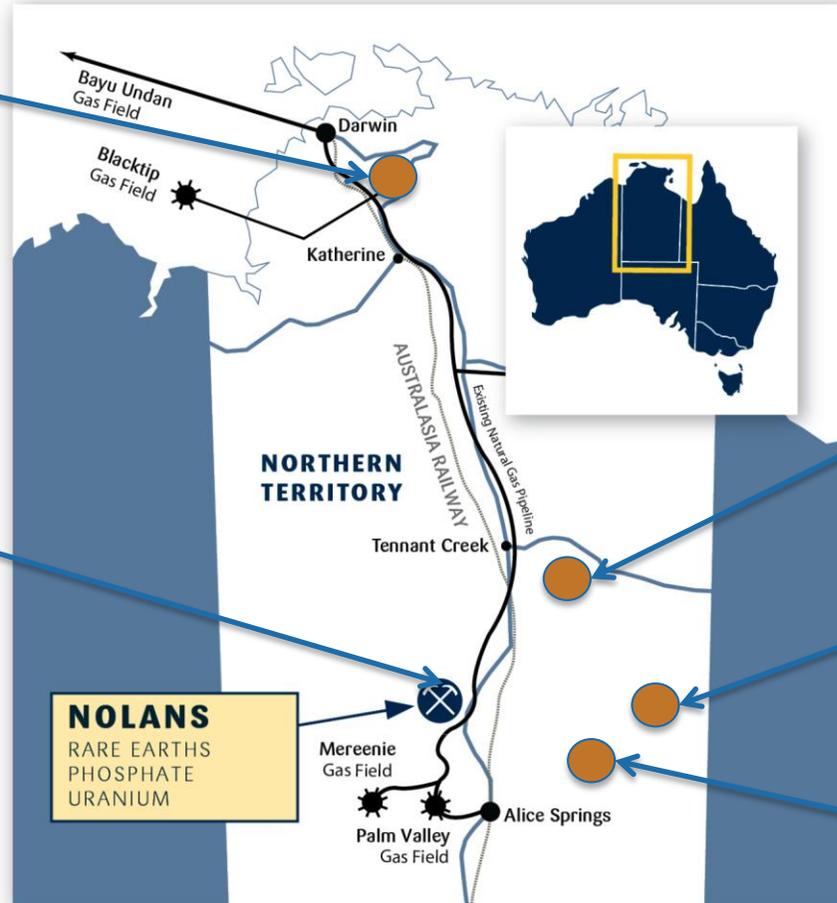


EXPLORATION PORTFOLIO



Mt Porter
• Gold – Ark Mines farm-in

Aileron-Reynolds
• REEs
• Iron – Ferrowest farm-in



NOLANS
RARE EARTHS
PHOSPHATE
URANIUM

Kurinelli
• Gold

Jervois
• Base & precious metals –
Rox Resources farm-in
• Iron-Vanadium

Hammer Hill
• Base metals

