



Arafura Resources Limited

Up and coming supplier of NdPr to permanent magnets used in the growing clean energy industry

October 2017

Investor Presentation

Important Notice

This presentation has been prepared by Arafura Resources Limited (**Arafura Resources**). It is of a summary form only and therefore contains general background information which may not be complete. It should be read in conjunction with and full review made of Arafura Resources' disclosures and releases lodged with the Australian Securities Exchange (**ASX**) and available at www.asx.com.au.

This presentation contains certain statements which may constitute "forward-looking statements." Such statements are only expectations or beliefs and are subject to inherent risks and uncertainties which could cause actual values, results or performance achievements to differ materially from those expressed or implied in this presentation. No representation or warranty, express or implied is made by Arafura Resources that any forward-looking statement contained in this presentation will occur, be achieved or prove to be correct. You are cautioned against relying upon any forward-looking statement. Except for statutory liability which cannot be excluded, each of Arafura Resources and its related body corporates and their officers, employees and advisers expressly disclaims any responsibility for the accuracy or completeness of the material contained in this presentation and excludes all liability whatsoever (including in negligence) for any loss or damage which may be suffered by any person as a consequence of any information in this presentation or any error in it or omission from it. Arafura Resources accepts no responsibility to update any person regarding any inaccuracy, omission or change in information in this presentation or any other information made available to a person, nor any obligation to furnish the person with any further information.

This presentation does not constitute an offer of any securities in Arafura Resources, in any jurisdiction, nor an invitation to apply for such securities, in any jurisdiction. This presentation does not provide investment advice or financial product advice. You should obtain professional advice and carry out your own independent investigations and assessment of the information in this presentation (including any assumptions) before acting.

Information in this presentation which is attributed to a third-party source has not been checked or verified by Arafura Resources.

The information in this presentation that relates to Exploration Results or Mineral Resources is based on information compiled by Mr Kelvin Hussey BSc (Hons). Mr Hussey 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 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code)". Mr Hussey consents to the inclusion in this presentation of the matters based on his information in the form and context in which it appears.

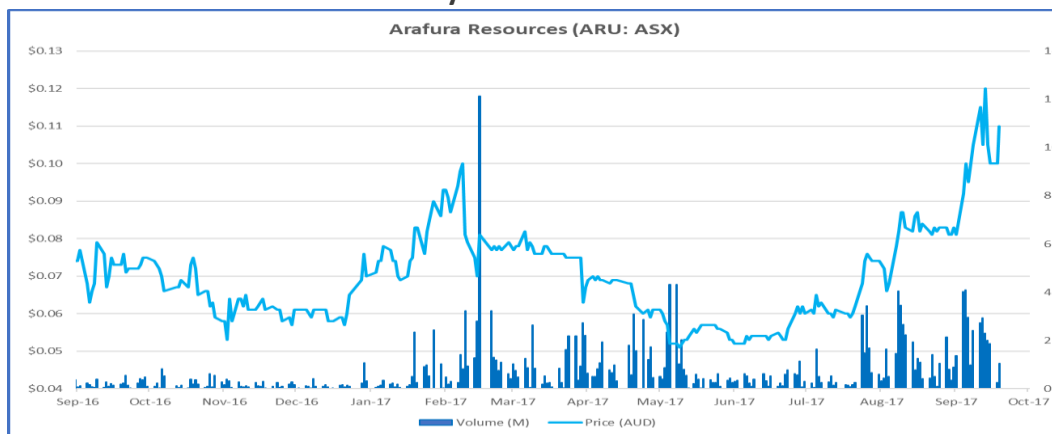
Mr Hussey is a full-time employee of Arafura Resources.

Investment Highlights & Capital Structure

3

- ASX listed company developing the **Nolans Rare Earths Project** in the Northern Territory, **low geopolitical risk, 30+ year** mining and chemical processing operation
- Nolans is one of the **largest and richest deposits of Neodymium-Praseodymium (NdPr)** rare earths in the world and its forecast operating costs are in the **lowest quartile**
- NdPr is the critical raw material used in the production of **high-strength permanent magnets** used extensively in the **automotive, clean energy, electronics and healthcare sectors**
- Arafura has the capability of meeting **5-10% of global demand for NdPr**
- Nolans has been afforded **major project status** by the Northern Territory and Australian governments
- Nolans is in **advanced feasibility and environmental assessment**

ASX Code	ARU
Share Price (26-Sept-17)	A\$0.11
Issued Shares	546.9m
Market Cap	A\$60.2m
Cash (26-Sept-17)	A\$12.2m
Debt	Nil
Enterprise Value	A\$48.0m



Top 5 Shareholders	
JP Morgan Nominees	21.63%
ECE Nolans Investment Co	20.06%
HSBC Custody Nominees	2.72%
Citicorp Nominees	2.14%
BNP Paribas Nominees	0.87%

4

The NdPr Market

Secure Supplier of NdPr to Permanent Magnets Used in Clean Energy

- **NdPr is a key component** in the manufacture of high-strength NdFeB permanent magnets used in electric vehicles (EVs), wind turbines, portable electronic devices, and many industrial applications
- NdPr accounts for 26.4% of Nolans rare earths composition by volume and **85% by value**
- China has generally controlled the production of NdPr but recently analysts are forecasting for **China to become a net importer**
- Structural changes are being implemented in China to **weed out illegal operators, close unsustainable operations**, and push bigger players to consolidate
- EVs use approximately **1.7 kg of permanent magnets per vehicle**, which includes the permanent magnets in the electric drive motors

NdPr Snapshot – Clean Energy Applications

6

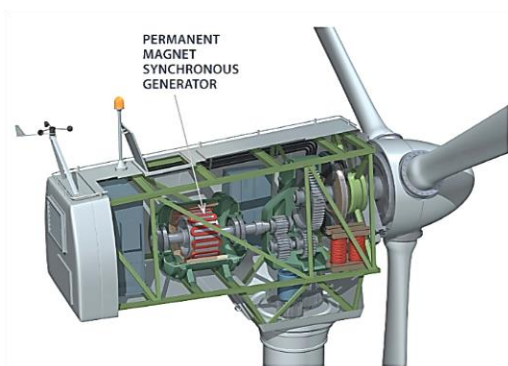
EV Drivetrain: 1kg of NdPr



Electric Vehicles: 41 million by 2040 each containing 1.7kg of NdPr



Wind Turbines: Up to 150kg of NdPr per MW



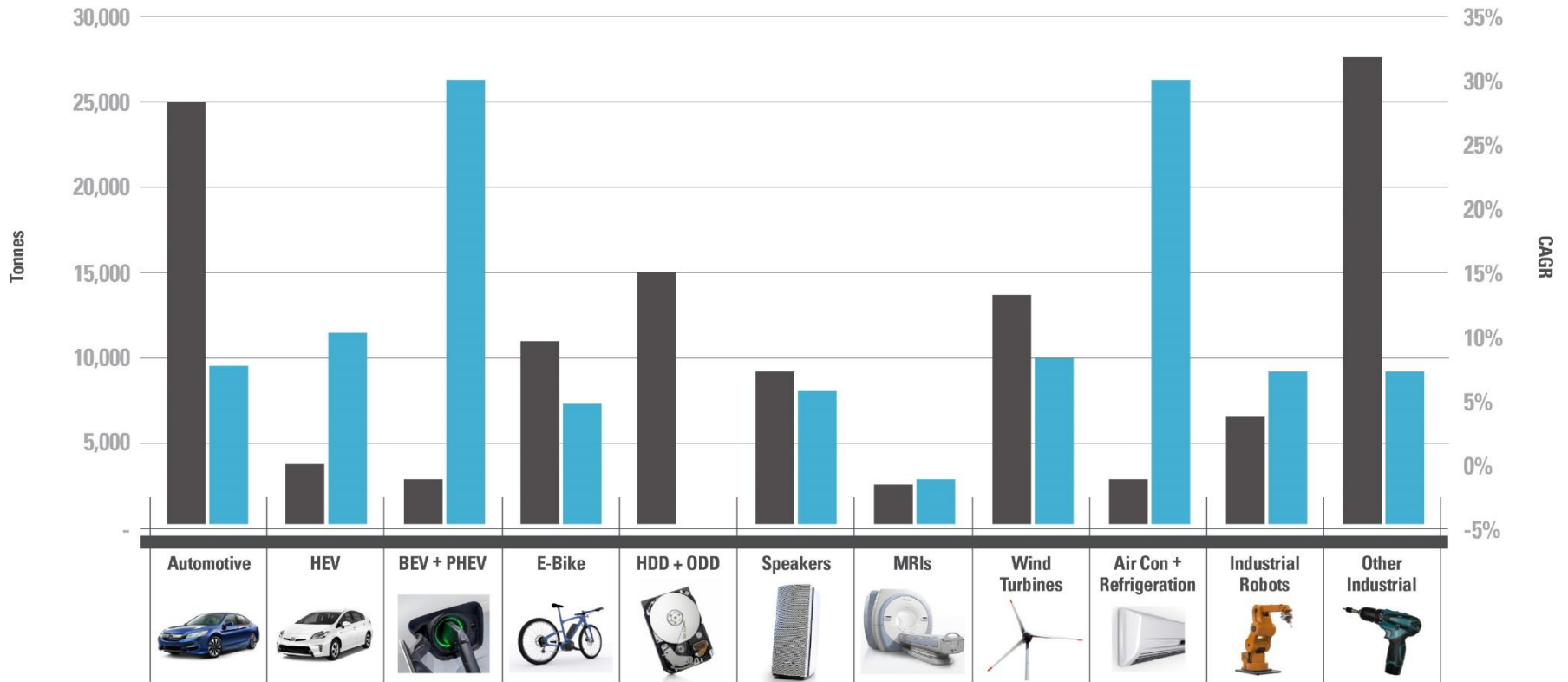
Electric Bicycles: 30 million in 2017 each containing 0.1kg of NdPr



Established Markets & Growing Applications

NdPr Magnet Volume & Forecast Growth

■ NdPr Magnet Tonnes 2016
■ Forecast CAGR% 2025



Source: Adamas Intelligence, Arnold Magnetic Technologies, Japanese industry participants, Roskill

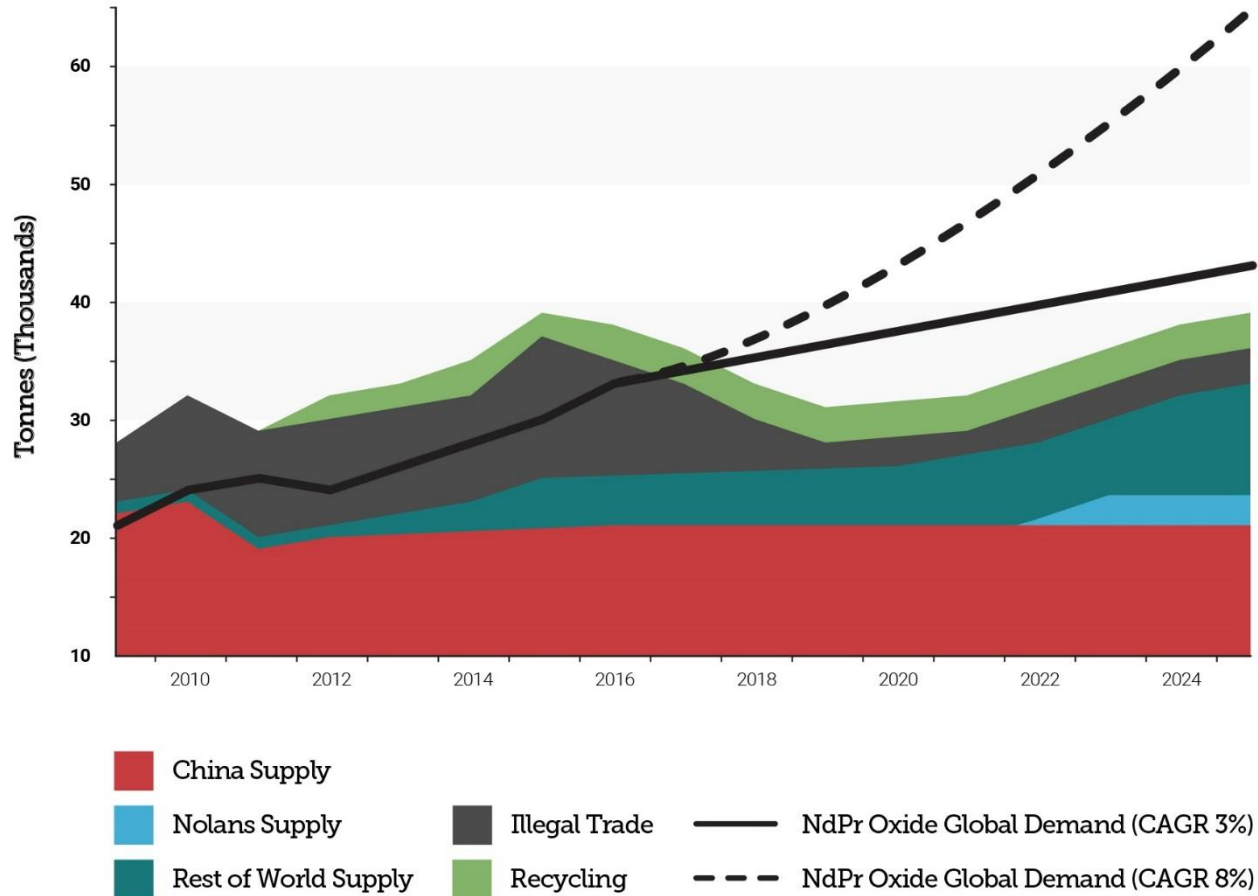
Automakers EV Growth Strategy

Manufacturer	PMSM	AACIM	NOTES
Audi	✓		25% of US sales from EVs by 2025
BMW	✓		EV range to extend to Series 3 and X4 for next generation of models
BYD	✓		World's largest manufacturer of EVs
Ford	✓		40% EVs by 2020
General Motors	✓	✓	Alliance with Lyft to create an integrated network of on-demand autonomous vehicles. China accounts for one-third of GM's total production
Honda	✓		Targeted two-thirds of sales by 2020. Honda Daido Steel heavy Dy free magnets
Hyundai	✓		26 hybrid, plug-in, fuel cell and EV models by 2020
Mitsubishi	✓		Electric powered SUVs
Nissan/Renault	✓		10% EVs by 2020
Tesla X & S		✓	Independent manufacturer – disruptive technology?
Tesla 3	✓		Mass market affordable EV
Toyota	✓		Gasoline to hydrogen fuel by 2050
Volkswagen	✓		25% EVs by 2025

PMSM = Permanent Magnet Synchronous Motor
AACIM = Asynchronous AC Induction Motor

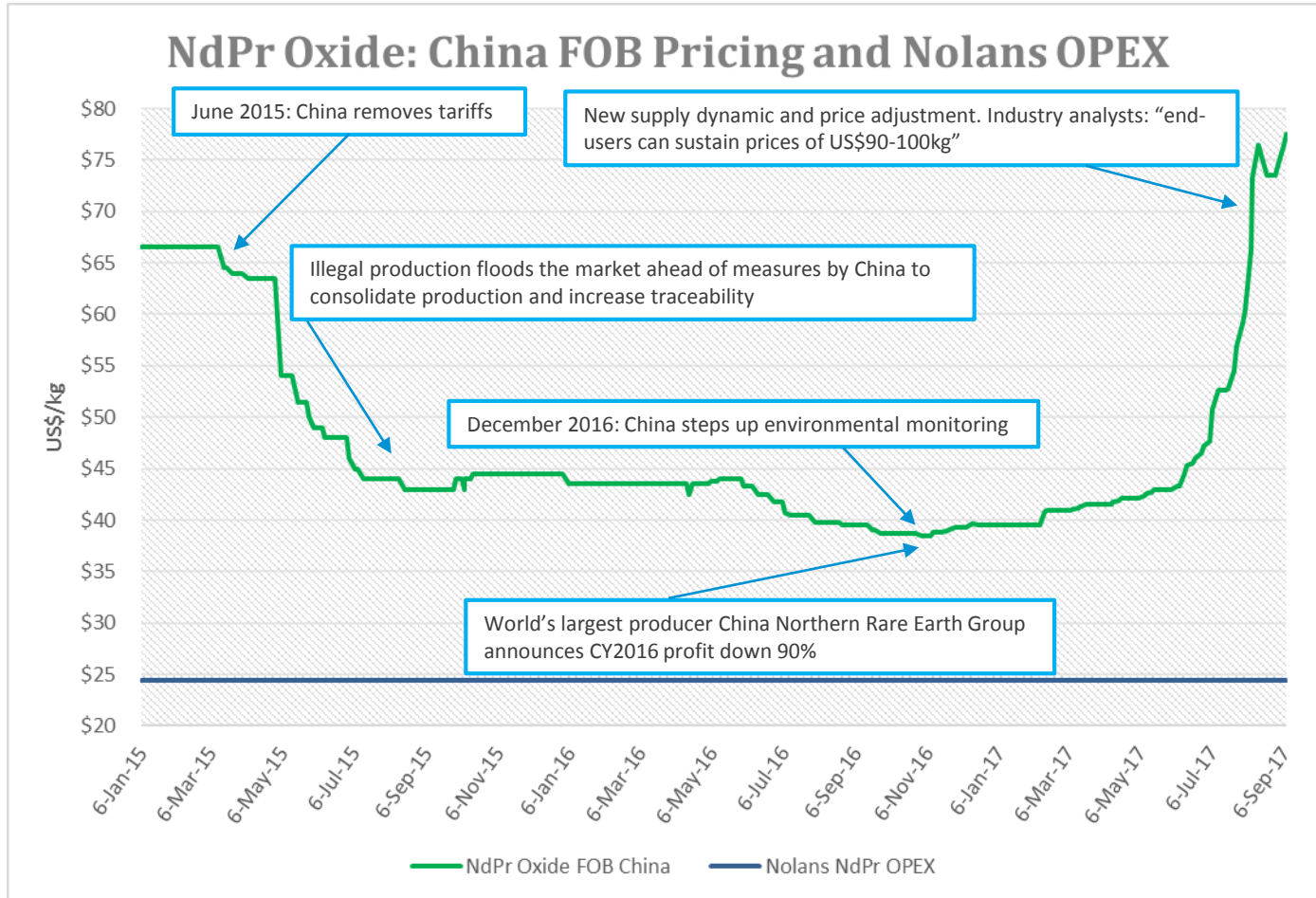
The NdPr Supply Opportunity

NdPr Oxide Supply & Demand



Source: ACREI, Adamas Intelligence, corporate filings and presentations, IMCOA, rare earth end users, Roskill

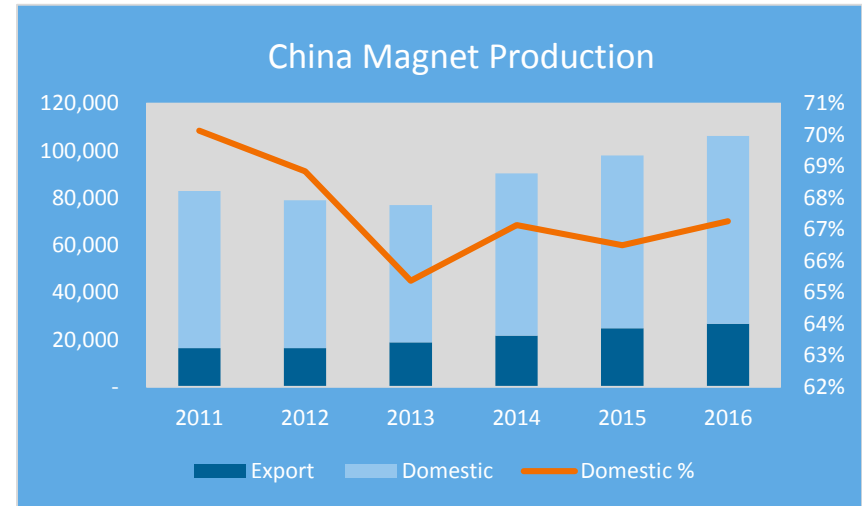
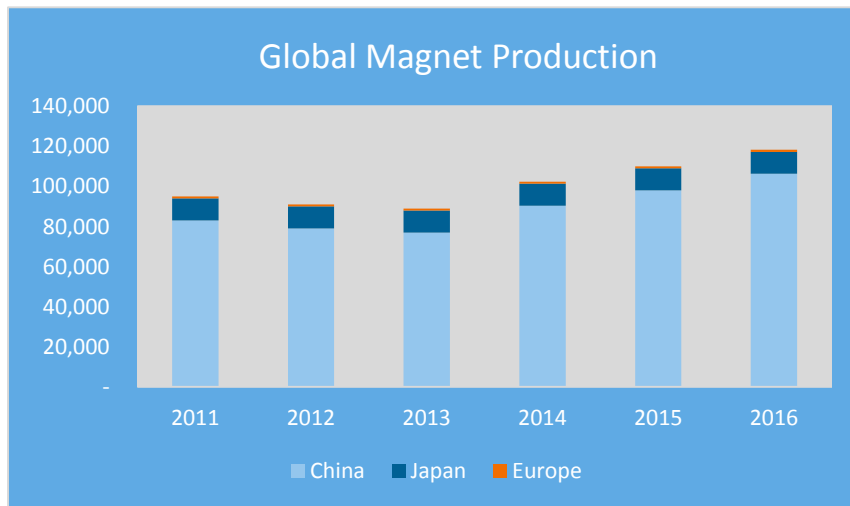
Emerging Supply Dynamic – NdPr Price Trend



Source: Independent price reporting agency

Emerging Demand Dynamic – China 2025 Strategy

- Steady increases in global magnet production 2014 to 2016, NdPr price movement indicates **continued growth for 2017**
- **China’s domestic consumption will increase** as it pursues clean energy objectives
- “China 2025 Strategy” exploits existing industrial capabilities, integration and movement along the supply chain
- To maintain magnet production growth China will require **increased volumes of NdPr raw materials**, which conflicts with **currently constrained feedstock for local NdPr production**



Source: ACREI, Argus Metals and industry sources

Non-China Supply Peer Comparison

12

- Non-China NdPr supply will be constrained by the **sector's historical inability to attract capital**
- Nolans is one of the world's largest and more advanced undeveloped NdPr projects which provides investors with a **compelling investment opportunity in a low-risk jurisdiction**
- Nolans has the potential to provide meaningful NdPr production in the **lowest cost quartile** due to its NdPr enrichment and advanced project development status

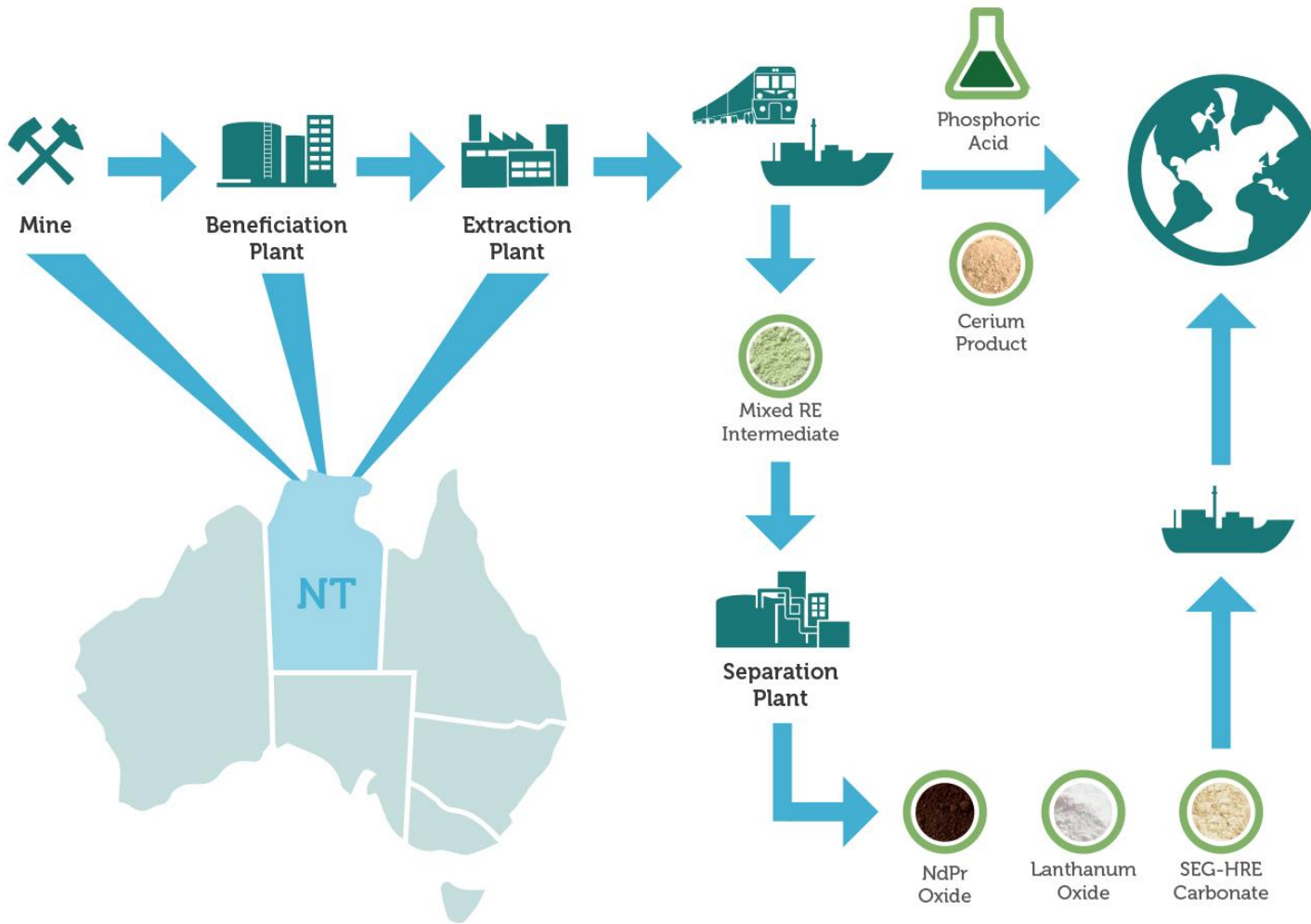
Asset	Nolans	Mount Weld/LAMP	Yangibana	Ngualla	Kvanefjeld
Owner	Arafura Resources	Lynas Corporation	Hastings Technology Metals	Peak Resources	Greenland Minerals and Energy
Country	Australia	Australia / Malaysia	Australia	Tanzania	Greenland
Status	Development	Production	Development	Development	Development
Contained NdPr (kt)	255	242	44	210	907
NdPr "enrichment" (%)	26.4%	23.3%	32.3%	21.2%	17.7%
Annual NdPr Production (kt)	3.6	5.2	2.8	2.8	5.3
OPEX (US\$/kg NdPr)	\$34.72	\$31.93	\$39.90	\$32.24	\$63.20
OPEX (US\$/kg NdPr) - after by-product credits	\$24.40	\$31.93	\$39.90	\$32.24	\$50.80

Source: Resource Capital Research Pty Ltd (AFSL 325340), see Appendix C for notes and assumptions used in the preparation of the Peer Comparison

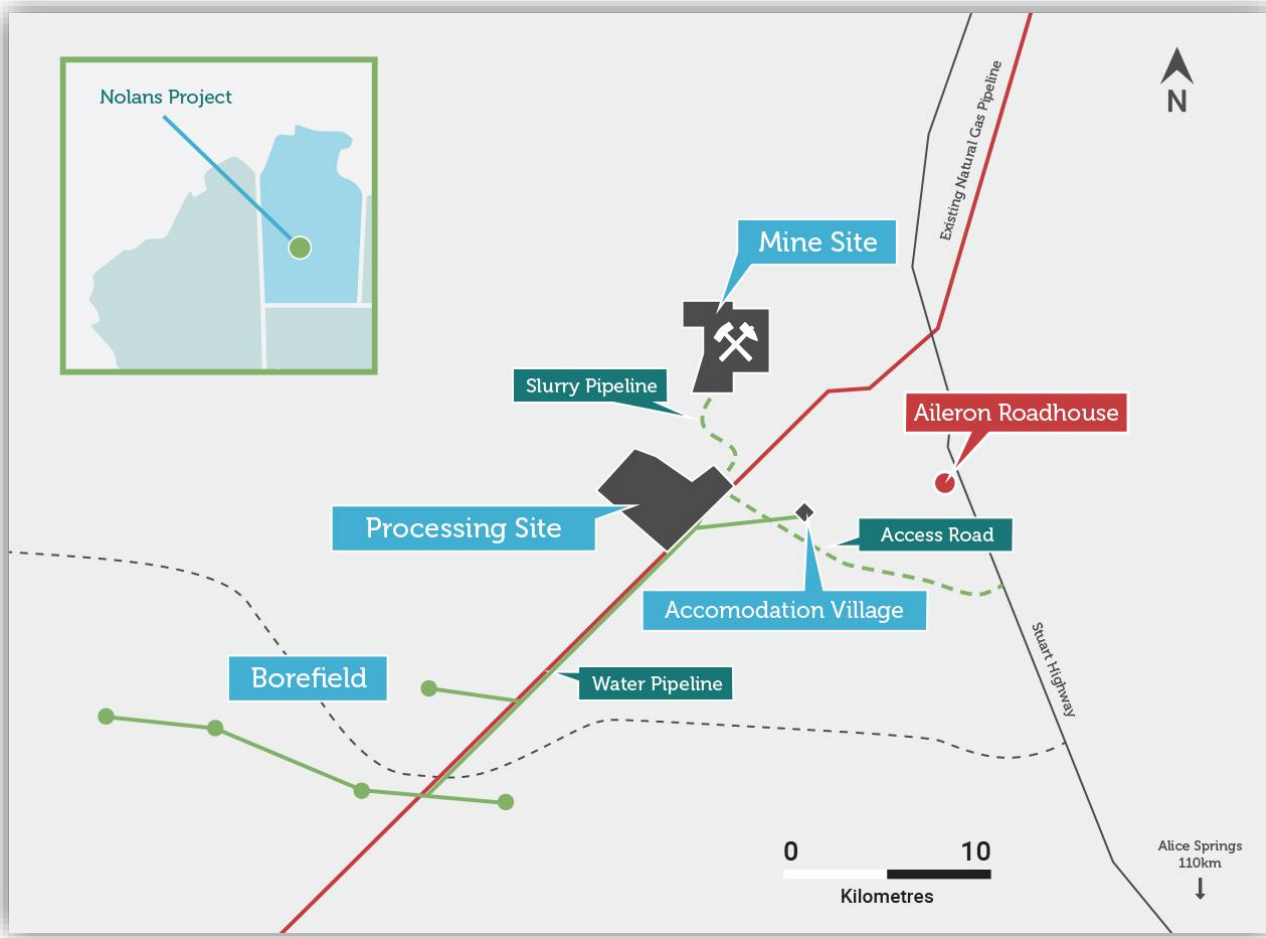
13

The Nolans Project

Project Configuration



Close To Key Infrastructure



- Stuart Hwy – **10 km east**
- Alice Springs railyard, airport and other services – **135 km south**
- Amadeus gas pipeline – **adjacent to processing site**
- Water supply – **30 km south**
- Tailings and process wastes **remain at site**

Project Metrics

16

- **Ultra competitive operating costs**
US\$6.23/kg TREO or US\$24.38/kg NdPr oxide – lowest amongst peers
- Phosphoric acid recovered to **reduce commodity risk**
- **High rare earths recovery**
- NdPr oxide price **US\$72/kg** FOB China

Refer Arafura ASX release 7 June 2017 for additional and qualifying information on the Mineral Resources that underpin the production target and provides the material assumptions on which the production target is based

The Company confirms that all material assumptions underpinning the forecast financial information derived from its 14,000 tpa TREO production target and the production target itself, continue to apply and have not materially changed since the 7 June 2017 ASX release

Based on 14,000 tpa TREO production processing Measured and Indicated Mineral Resources as per Appendix A

Mining & Processing		
ROM feed (tpa)	525,000	
Mine life (years)	30+	
Recovery (ROM to final product)	Total RE	76%
	NdPr	75%
	La	75%
	SEG-HRE	68%
Production		
TREO equivalent (tpa)	14,000	
NdPr oxide (tpa)	3,600	
La oxide (tpa)	2,660	
SEG-HRE carbonate (tpa TREO equivalent)	660	
Phosphoric Acid (tpa MGA)	110,000	
Financial		
Capital cost (US\$m)	\$680	
Operating cost (US\$m pa)	\$125	
Operating cost (US\$/ kg TREO)	\$8.89	
Operating cost (US\$/ kg TREO; less credit phos acid)	\$6.23	
Operating cost (US\$/ kg NdPr; less credit phos acid)	\$24.38	

Pilot Scale Work Completed In 2017

✓ PHASE 1 **Beneficiation**



Beneficiation Pilot Plant

✓ PHASE 2 **Phosphate Extraction**



Phosphoric Acid Regeneration Circuit

✓ PHASE 3 **Bulk Pre-Leach**

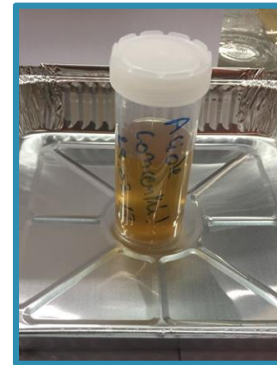
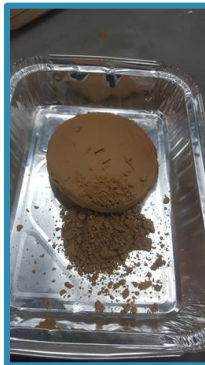


Bulk Pre-Leach Pilot Plant



TREO Grade	7.0%
TREO Recovery	>80%
NdPr Oxide Grade	1.8%
NdPr Oxide Recovery	>82%
P ₂ O ₅ Grade	29%
P ₂ O ₅ Recovery	>90%
Al ₂ O ₃ Grade	<3.2%
Fe ₂ O ₃ Grade	<1.9%
Mass Pull	55%

High-Phosphate Concentrate



Rare Earth & Phosphoric Acid Products



NdPr-Rich Pre-Leach Residue

Piloting & Final Feasibility

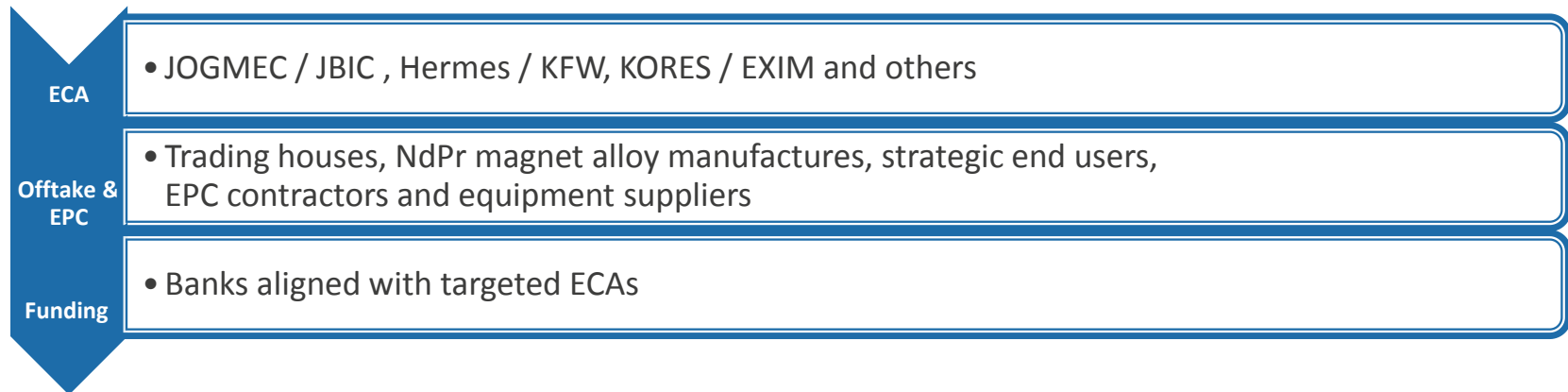


18



Project Funding Strategy

- Reduced domestic institutional investor interest
- Underperformance (or failure) of non-Chinese producers and volatility in rare earth prices has resulted in reduced institutional equity investor interest in the rare earth sector
- **Equity will remain primary source of funds in short term (i.e. project development phase)**
- Debt finance will be a significant part of project funding and an enabler to attract project equity
- **ECAs, MLAs and banks to be targeted, linked to offtake arrangements with customers in key markets and procurement opportunities for construction**
- Tripartite approach leveraging the link to NdPr magnet production to secure appropriate finance



Summary

Attribute	Arafura
High growth and high value NdPr magnet focus	✓
NdPr production planned to coincide with projected supply gap	✓
Located in a jurisdiction with low geopolitical risk and with strategic support	✓
Long-life, low-risk resource with planned output that supports >30 years of production	✓
Close to vital transport, energy and water infrastructure	✓
Efficient, high recovery flowsheet proven from mine to market: final piloting phase commenced	✓
Regulatory approvals well advanced: environmental, water, Native Title	✓
Lowest production cost to remain competitive in a cyclical downturn	✓



Contact:

Level 3, 263 Adelaide Terrace
Perth, WA, 6000, Australia

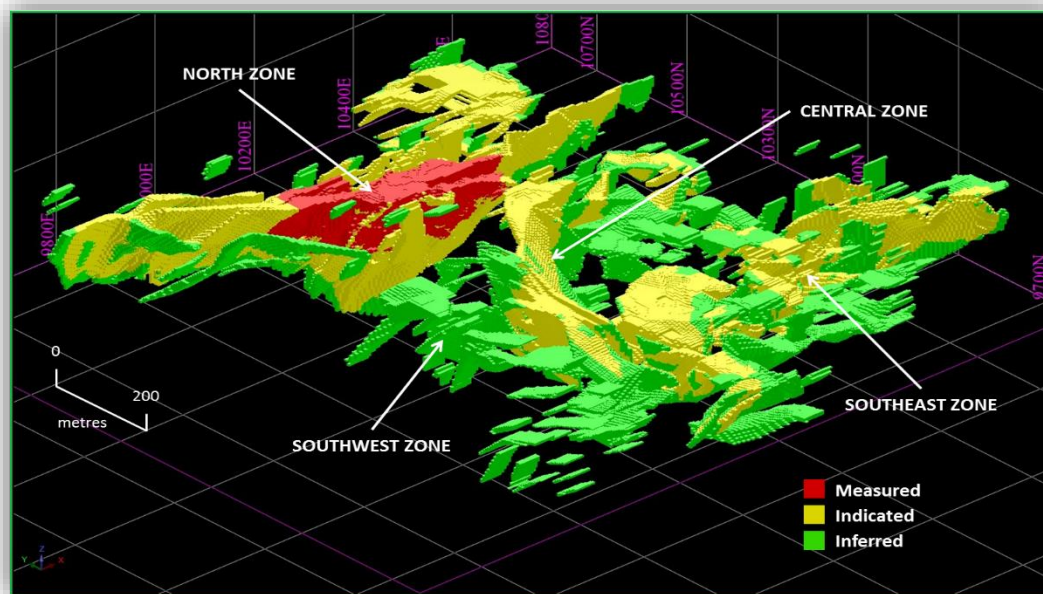
T: +61 8 6210 7666

E: arafura@arultd.com

Appendix A: Mineral Resources

RESOURCES	TONNES M	RARE EARTHS TREO %	PHOSPHATE P ₂ O ₅ %	NdPr Enrichment %
Measured	4.9	3.2	13	26.1
Indicated	30	2.7	12	26.4
Inferred	21	2.3	10	26.5
TOTAL	56	2.6	11	26.4

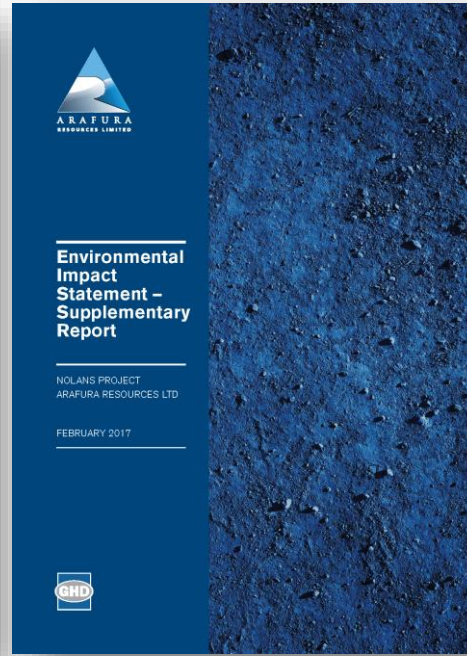
1% TREO cut-off grade. Numbers may not compute exactly due to rounding. "NdPr enrichment" is the proportion of TREO comprising Nd₂O₃ and Pr₆O₁₁.



Appendix B: Environmental Assessment In Progress



Draft EIS submitted May 2016



EIS Supplement submitted February 2017

Public and government review May-August 2016
609 comments from 20 stakeholder groups

Further information
may be required
by EPA

Proponent prepares and submits Supplement to EIS (timeframe under proponent's control)

Supplement circulated for government review and comment within 14 days

Assessment Report is prepared for EPA within 35 days of receiving Supplement

EPA provides Assessment Report to proponent and Environment Minister. Environment Minister provides the Assessment Report to Responsible Minister

Assessment complete*

Arafura is currently at this stage in the EIS process

Remaining steps in Northern Territory Environmental Impact Assessment process

No major risks identified

Appendix C: Peer Comparison

Notes and assumptions used in the preparation of the Peer Comparison

- Exchange rate of AUD1 = USD 0.795.
- Forecast operating data for development projects based on published company reports and project updates. ARU operating expense includes provision for staff and administration costs.
- NdPr “enrichment” (%) is based on published company reports and project updates for rare earth element distribution for mineral resources or reserves where applicable.
- Contained NdPr (kt) is based on reserves or Measured and Indicated mineral resources where no reserves quoted.
- Contained NdPr (kt) and Annual NdPr Production (kt) is presented on a project basis. NdPr production has not been adjusted to reflect the relevant underlying project interest for PEK (75%) and HAS (91%).
- LYC Annual NdPr Production (kt) is based on total reported “ready for sale production volumes” for the year ending 30 June 2017. Operating costs are based on total operating costs, staff and administration cashflows reported for the 12 month period ending 30 June 2017. Operating cashflows have been converted at an average exchange rate of AUD1= USD 0.755 for that year.

ASX-Listed Peer Group Companies

Code	Company Name	Project	Location	Project Interest
ARU	Arafura Resources Ltd	Nolans	NT	100%
LYC	Lynas Corporation Ltd	Mt Weld/LAMP	WA & Malaysia	100%
HAS	Hastings Technology Metals Ltd	Yangibana	WA	91%
PEK	Peak Resources Ltd	Ngualla	Tanzania	75%
GGG	Greenland Minerals and Energy Ltd	Kvanefjeld	Greenland	100%

Source: Resource Capital Research Pty Ltd (AFSL 325340)