

## **Arafura Resources**

Nolans: A Source of High-Value Magnet Feed (NdPr) Rare Earths

Mines and Money Asia April 2017



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



## **Company Snapshot**





- ▲ ASX listed company developing the Nolans Rare Earths Project in Australia
- ▲ Nolans 100% owned, **no debt**, uncomplicated ownership and capital structure
- ▲ Afforded major project status by Northern Territory and Australian governments
- ▲ Project approvals well advanced with no major risks identified
- ▲ Currently finalising project feasibility study ore to oxides
- ▲ Focus on **strong growth, high-value** magnet-feed rare earths (REs)
- ▲ Nolans will be **one of the world's largest** suppliers into this market

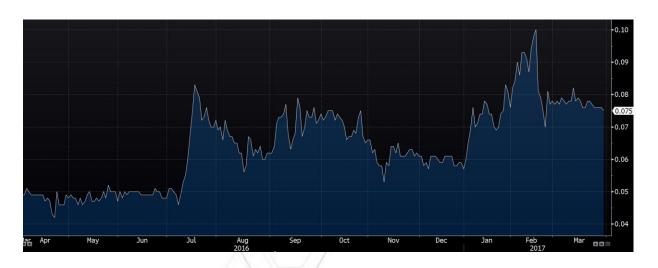




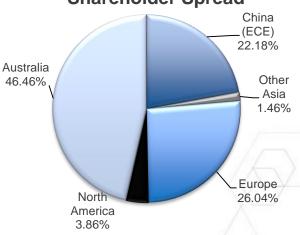


ASX Code	ARU		
1-year range	4.1 – 10.5 cents		
Market Cap 494.7m shares @ 7.6c	A\$37.6 million*		
Cash at 28/02/17	A\$12.2 million		
Debt	Nil		

\*Excludes 6.3m employee options @ 10.5c expiry September 2018



### **Shareholder Spread**



- ▲ East China Exploration & Development Bureau a SOE based in Nanjing
- ▲ Europe − JPM Nominees 23% mainly German private investors
- ▲ Approximately 7,000 retail investors
- ▲ Board & Management < 1%



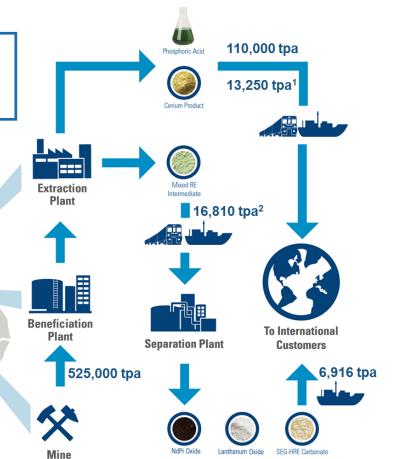
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### **Nolans – A Clear Path to Market**





- ▲ Low cost operation
- ▲ Close to vital infrastructure: energy, water & transport



**Separated RE Products** 

CAPEX: US\$680m<sup>3</sup>

OPEX: US\$6.23/kg TREO<sup>3</sup>

- ▲ Targeting RE offtake customers in:
  - Japan
  - ▲ Germany
  - Korea
  - ▲ USA
- A Phosphoric acid sales targeted for Asian region

- 1. Containing 7,096 tpa TREO
- 2. Containing 6,978 tpa TREO
- Based on 14,000 tpa TREO production from 23 years of mining and processing Measured and Indicated Mineral Resources as per slide 14. CAPEX includes offshore Separation Plant. OPEX includes credits for phosphoric acid.



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# Marketing and Funding Strategy



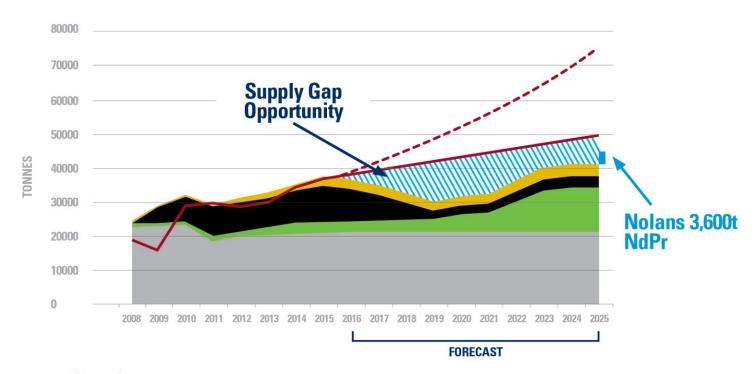


## The NdPr Market Opportunity



### NdPr Oxide Supply & Demand

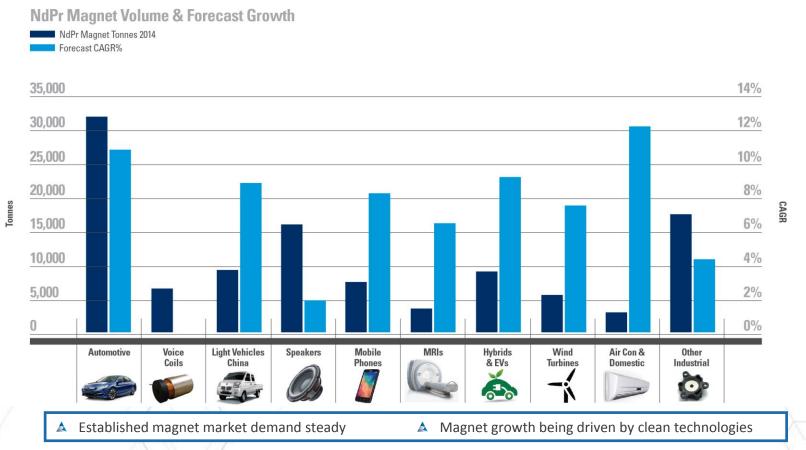






## **Established Markets Steady – Growth is in New Applications**









## **Arafura's Marketing Strategy and Products**





- ▲ 2017 focus is on cementing offtake alliances with strategic partners
- △ 95% of revenue to be derived from customers in Japan, Germany, Korea and the USA
- **Equity will remain primary source of funds in short term**
- Debt finance will be a significant enabler to attract project funding
- ▲ 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

ECA

• JOGMEC/ JBIC, Hermes/ KFW, KORES/ EXIM and others

Offtake

• Trading houses, NdPr magnet alloy manufactures and strategic end users

**Funding** 

Banks aligned with targeted ECAs





## **Targets for 2017-18**







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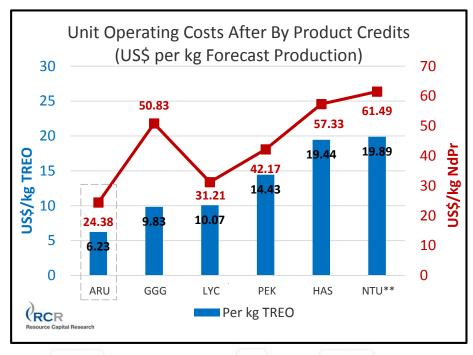
To take advantage of the pending NdPr supply shortfall we will complete the following:

- ▲ Final piloting results to be reported throughout 2017
- ▲ Fast track where possible detailed design to Bankable Feasibility status
- △ Obtain environmental approval 2017
- ▲ Formalise offtake arrangements 2017
- △ Ongoing engagement strategic partner(s) debt and equity
- ▲ Fund current operations through to Project Finance avoiding complex debt/equity or bond structures

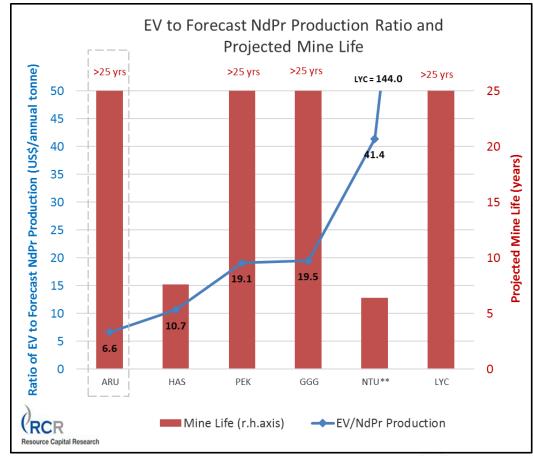


## Value Proposition





Source: Resource Capital Research Pty Ltd (AFSL licence number 325340) Please refer to Appendix B for further information.





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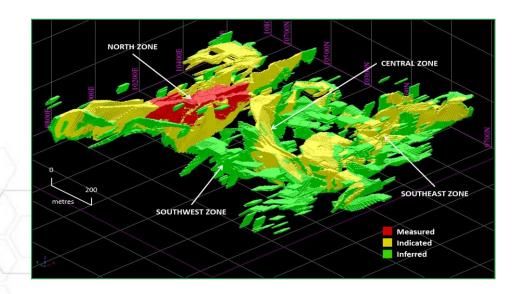






Resources	Tonnes (million)	Rare Earths TREO %	Tonnes TREO	Phosphate P <sub>2</sub> O <sub>5</sub> %	Uranium U₃O <sub>8</sub> lb/t
Measured	4.9	3.2	158,000	13	0.54
Indicated	30	2.7	816,000	12	0.44
Inferred	21	2.3	489,000	10	0.36
TOTAL	56	2.6	1,462,000	12	0.42

<sup>1%</sup> TREO cut-off grade. Numbers may not compute exactly due to rounding. 1 lb/t  $U_3O_8 = 0.0454\% \ U_3O_8$ .









### **Key Assumptions**

- Enterprise Value ("EV") is based on market capitalisation as at February 3 2017 less reported cash on hand, plus reported debt, as at December 31 2016.
- Exchange rate of AUD1 = USD 0.76.
- Forecast operating data for development projects based on published company reports and project updates.
- NTU is a heavy rare earth deposit with dysprosium ("Dy") being the dominant projected revenue stream. NTU\*\* analysis is calculated using a Neodymium and Praseodymium Oxide ("NdPr") grade equivalent, calculated based on the NTU Dy grade, adjusted for a Dy/ NdPr price ratio of 4.77.
- Mine life is based on Measured and Indicated mineral resource
- PEK NdPr production adjusted to 75% of project production and HAS 91%, to reflect the relevant underlying project interest.
- LYC: NdPr production based on annualised "ready for sale production volumes" and operating costs based on annualised operating, staff and administration costs reported in Q2, Q3 and Q4 of CY2016. LYC reported in these quarters that NdPr production is at 90 to 100% of "full design rates".
- "TRFO" = Total rare earth oxide

#### **ASX-Listed Peer Group Companies**

Code	Company Name	Project	Location	Project Interest (%)
ARU	Arafura Resources Ltd	Nolans	NT	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%
NTU	Northern Minerals Limited	Browns Range	WA	100%
LYC	Lynas Corporation Limited	Mt Weld	WA & Malaysia	100%

