

**ASX
RELEASE**

23 October 2014

ARAFURA PRESENTS AT NT MAJOR PROJECTS CONFERENCE

Australian Rare Earths company **Arafura Resources Limited (ASX: ARU)** (“Arafura” or the “**Company**”) is pleased to advise that Managing Director, Gavin Lockyer, today delivered a presentation at the 5th Annual Northern Territory Major Project Conference in Darwin.

Mr Lockyer’s presentation “Nolans Rare Earths – A Major Project for the Territory” is appended to this announcement.

- ENDS -



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**AN EMERGING
RARE EARTHS
PRODUCER
FOR USERS
WORLDWIDE**

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NOLANS RARE EARTHS – A MAJOR PROJECT FOR THE TERRITORY

October 2014

Gavin Lockyer
Managing Director



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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.



COMPANY SNAPSHOT



- ▲ ASX listed company developing the **Nolans Rare Earths Project** in Australia
- ▲ Focused strategy targeting full-scale production **this decade**
- ▲ **Strategic partnerships** enhance access to RE expertise
- ▲ **Demonstrated process** from resource to separated REO products

ASX Code	ARU
Market Cap @ 8c	A\$35.3 million
1-year range	5.5 – 10.5 cents
Cash at 30/09/14	A\$21.1 million
Debt	nil



Material types

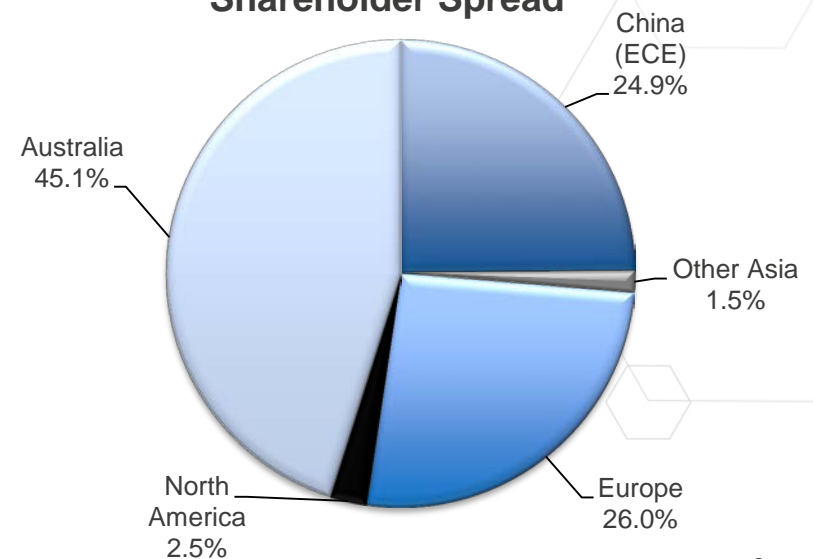


Final REO products



Arafura Resources Limited (ASX: ARU)

Shareholder Spread



KEY MESSAGES



- ▲ Focused strategy for **first production this decade**
- ▲ World-leading **magnets leverage** to drive high-value growth
- ▲ World scale project with **robust economics on realistic assumptions**
- ▲ Developing a **new industry in the Territory** for secure, long-term supply of rare earths
- ▲ Significant **logistics & infrastructure requirements**
- ▲ Risk mitigation through strategic alliances – **the key to Project Execution**



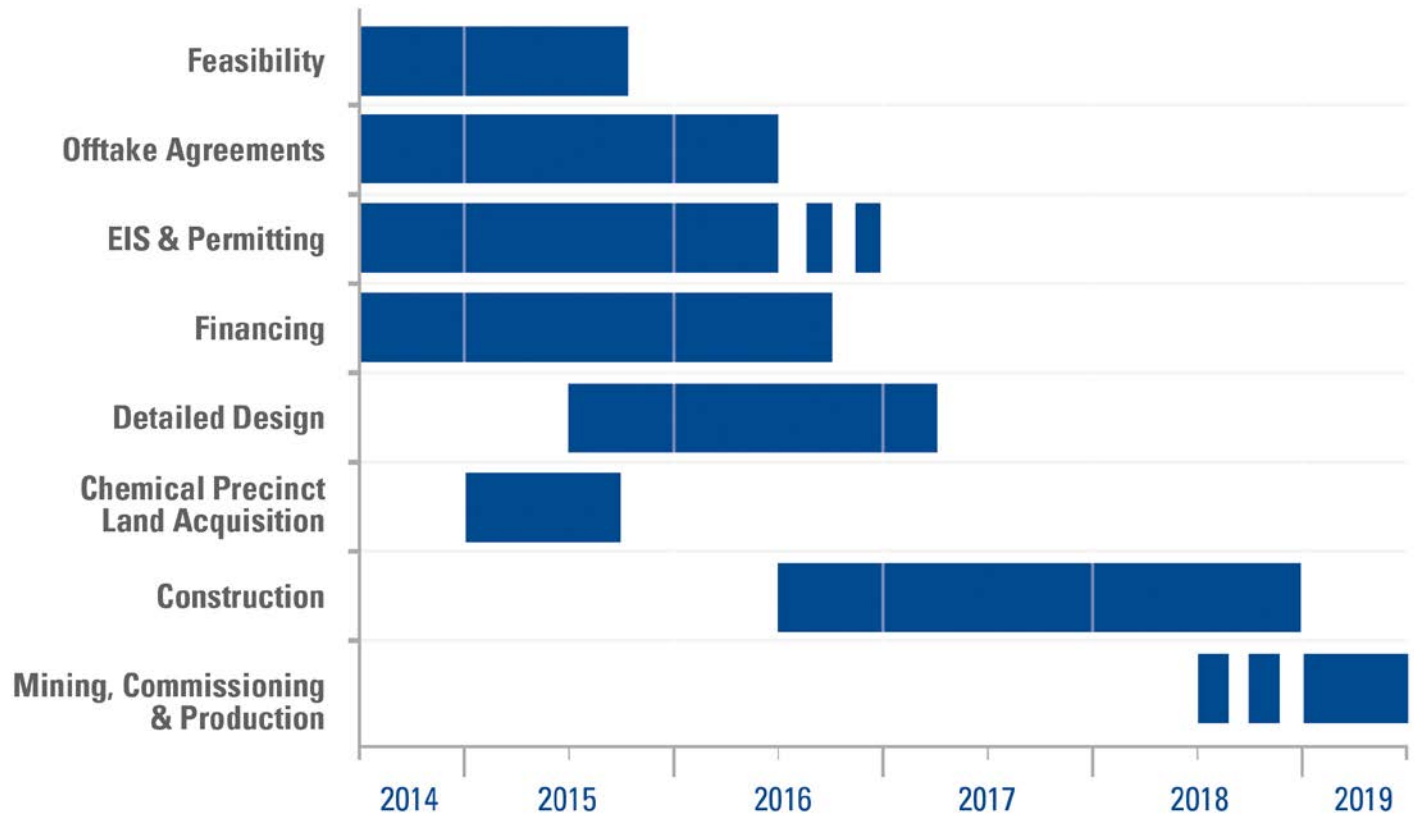
FOCUSED STRATEGY FOR FIRST PRODUCTION THIS DECADE



▲ Extensive development program has **significantly de-risked** project

▲ Moving forward with confidence **towards commercialisation**

▲ Concurrent **offtake & funding initiatives** well advanced

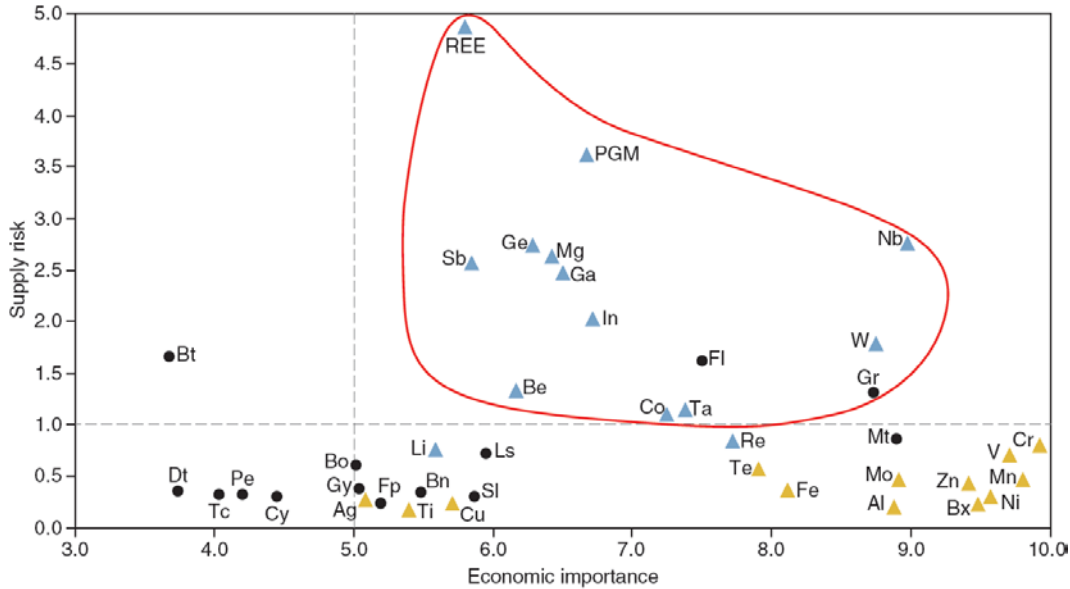


*Estimates of times are indicative only and are subject to change
Arafura reserves the right to vary the timetable without notice*

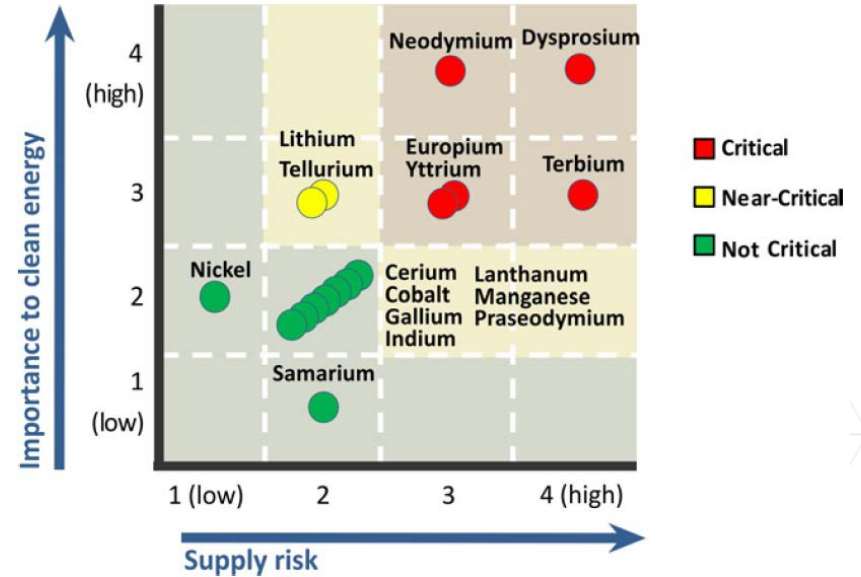


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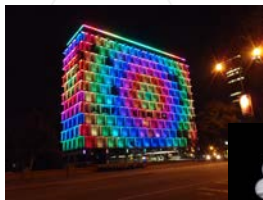
RARE EARTHS IN TIGHT SUPPLY



EU: Economic Importance & Supply Risk
 European Commission, July 2010: Critical Raw Materials for the EU



USDOE: Medium-Term (2015-2025) Criticality Matrix
 US Department of Energy, December 2011: Critical Materials Strategy



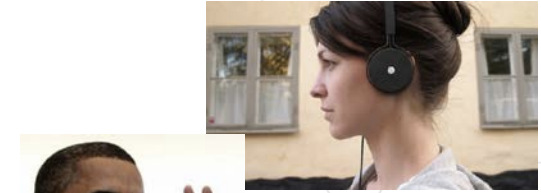
Fluorescent lamps



Arafura Resources Limited (ASX: ARU)



Consumer Electronics



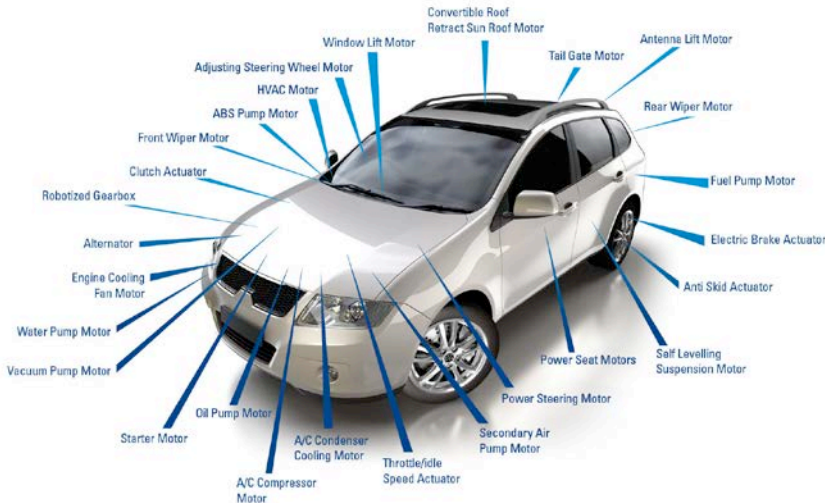
Headphones

WORLD-LEADING MAGNET LEVERAGE



RARE EARTHS MARKET

- ▲ 2013 global RE demand ~115,000 tonnes
- ▲ Global demand forecast to grow at **6-7% p.a.** between 2014 and 2020
- ▲ Demand driven by technology innovation, and industrial and clean energy sectors
- ▲ Global market valued at **US\$3-5 billion**



MAGNET LEVERAGE

- ▲ Nolans has the **highest magnet leverage** of any RE project in the world through NdPr product
 - ▲ 77% contribution to projected revenue
- ▲ “Neo” magnets used in many applications including:
 - ▲ Automotive sector
 - ▲ Consumer electronics
 - ▲ Wind turbines
- ▲ Permanent magnet market forecast to be worth **US\$20 billion** in 2018

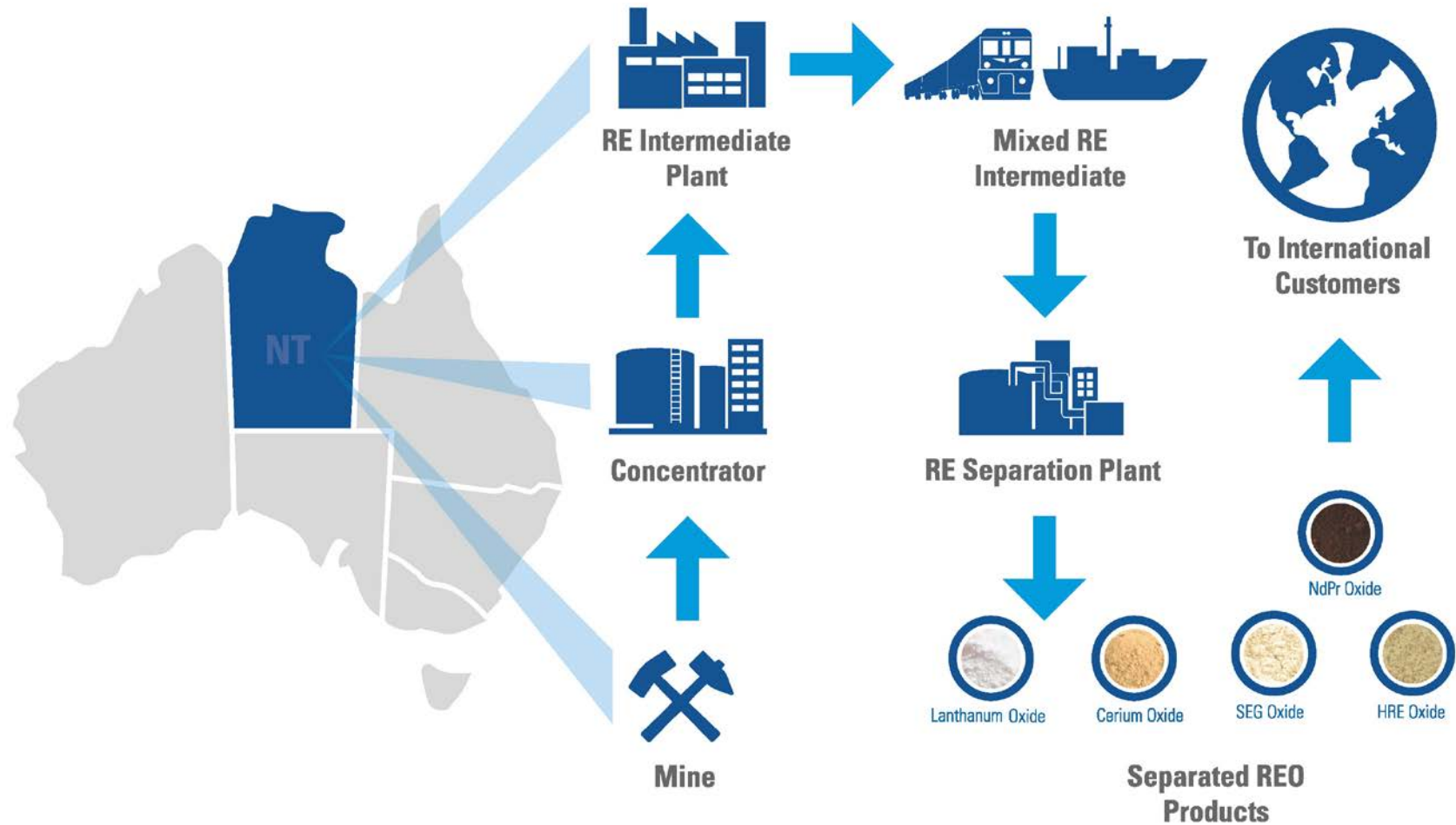
NOLANS PROJECT HIGHLIGHTS



- ▲ Underpinned by a **world-scale, low-risk resource** in the Territory
- ▲ Close to **vital infrastructure** – transport, water, gas, power, workforce, logistical and service support
- ▲ Potential to supply **10% of the world's magnet feed demand**
- ▲ Project status – **well advanced** with feasibility in progress
- ▲ Resource composition geared to **high demand magnet feed REs**
- ▲ **Five REO products** separated to 99% purity (La oxide, Ce oxide, **NdPr oxide**, SEG oxide, HRE oxide)



FROM MINE TO MARKET

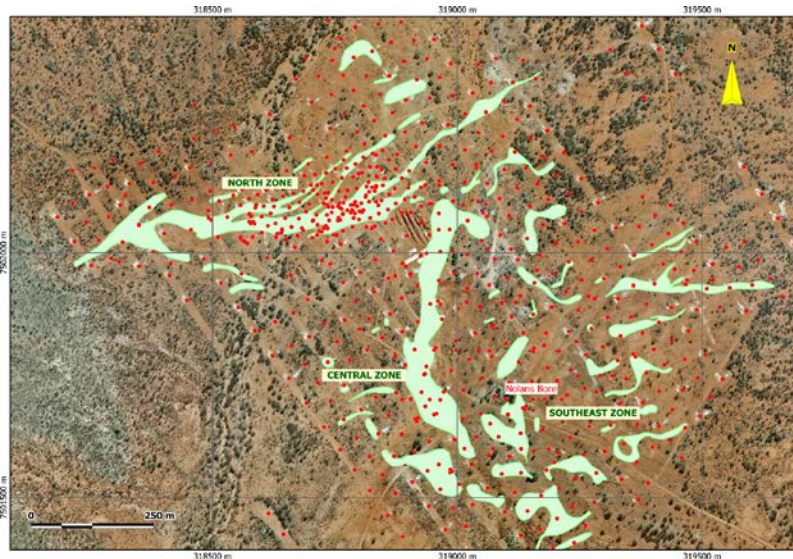


A WORLD SCALE, LOW-RISK RESOURCE



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

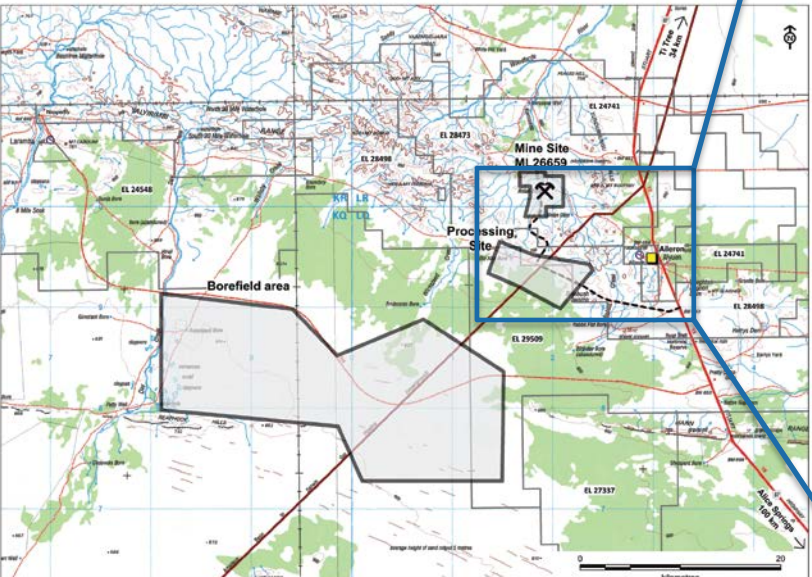
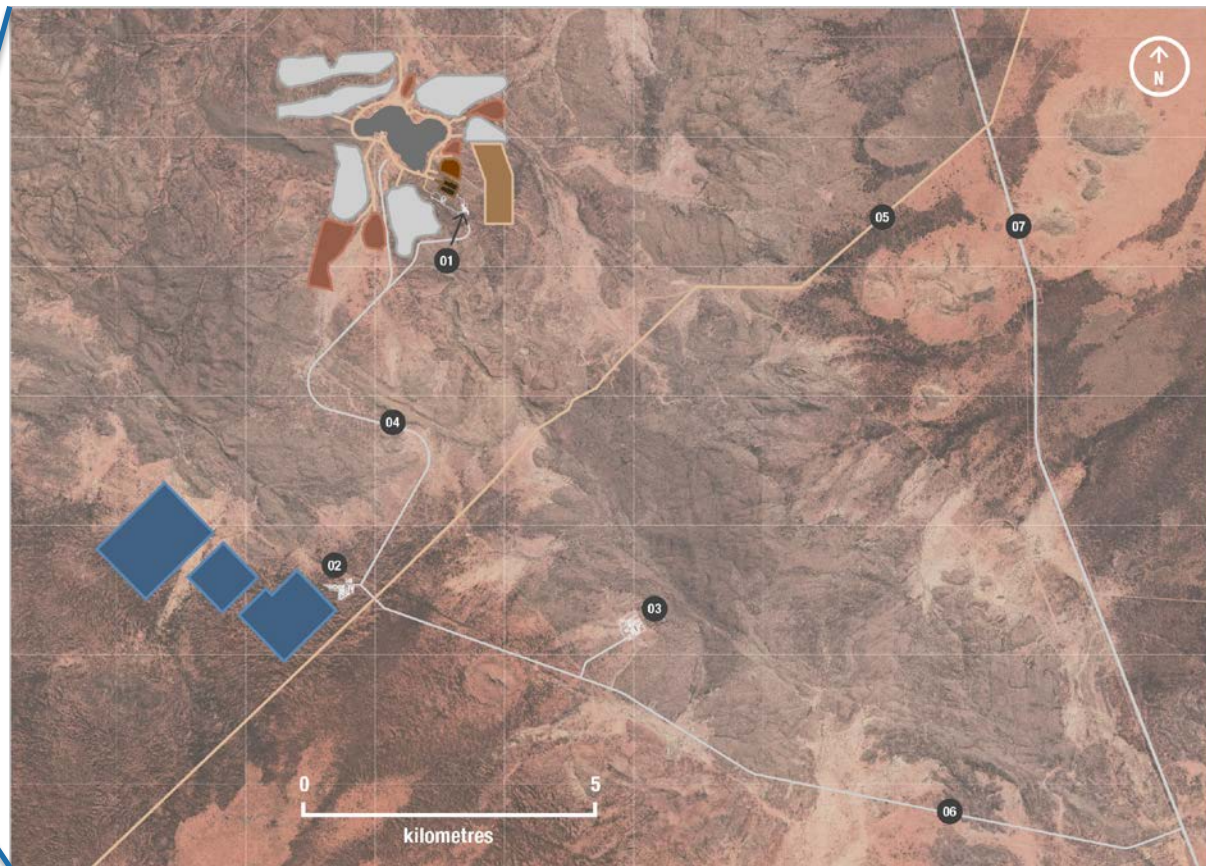
1% REO cut-off grade



- ▲ **Premium NdPr** content – 26.5% of RE mix
- ▲ **Low resource risk** – extensive drilling and detailed material type studies
- ▲ **Expansion potential** – resources at surface and open at depths below 220 m
- ▲ Amenable to **low-cost open cut mining** and standard beneficiation techniques. Average mining rate of 7.2 Mtpa to produce 0.9 Mtpa of plant feed.
- ▲ Financial evaluation based on 20 years of 20,000 tpa REO equivalent output from **mining of Measured & Indicated resources**



NOLANS SITE



LEGEND

MINE SITE

- Pit
- ROM Pad
- Long Term Stockpile
- Overburden
- Waste Dump
- TSF
- 01 Concentrator

PROCESSING SITE

- RSFs & Evaporation Ponds
- 02 RE Intermediate Plant
- 03 Accommodation Village
- 04 Slurry Pipeline
- 05 Gas Pipeline
- 06 Access Road
- 07 Stuart Highway



Arafura Resources Limited (ASX: ARU)

CONCENTRATING & INTERMEDIATE PROCESSING

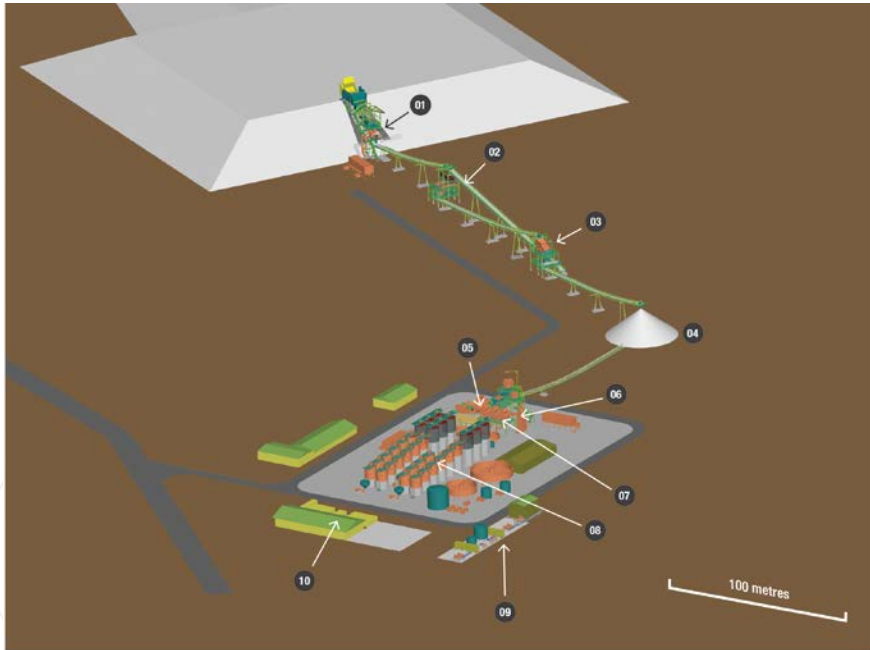


MINE & CONCENTRATOR

CAPEX	A\$217.1 million
OPEX	A\$4.50/kg REO

RE INTERMEDIATE PLANT

CAPEX	A\$964.2 million
OPEX	A\$7.84/kg REO



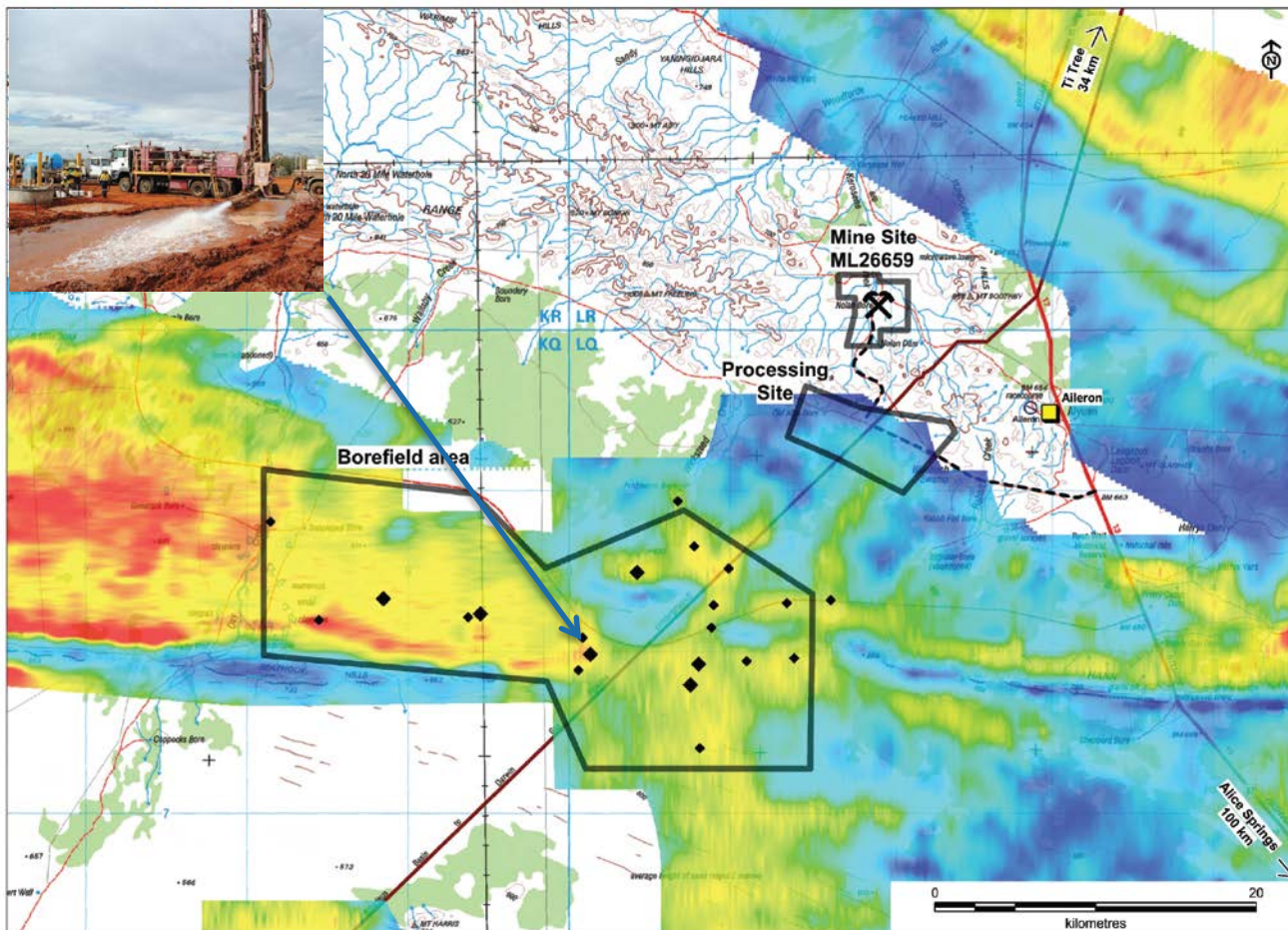
- LEGEND**
- 01 Primary Crusher
 - 03 Screen
 - 05 Grinding Mill
 - 07 Magnetic Separation
 - 09 Reagents
 - 02 Secondary & Tertiary Crusher
 - 04 Crushed Ore Stockpile
 - 06 Re-grind Mill
 - 08 Flotation
 - 10 Workshop



- LEGEND**
- 01 Acid Plant
 - 03 DSP
 - 05 Impurity Removal
 - 07 Product Packing
 - 09 Workshop
 - 11 Pre-Leach
 - 02 Power Station
 - 04 Hydroxide Dissolution
 - 06 Hydroxide Conversion
 - 08 Water Leach
 - 10 Control Room
 - 12 Reagents
 - 13 Acid Bake



POWER & WATER

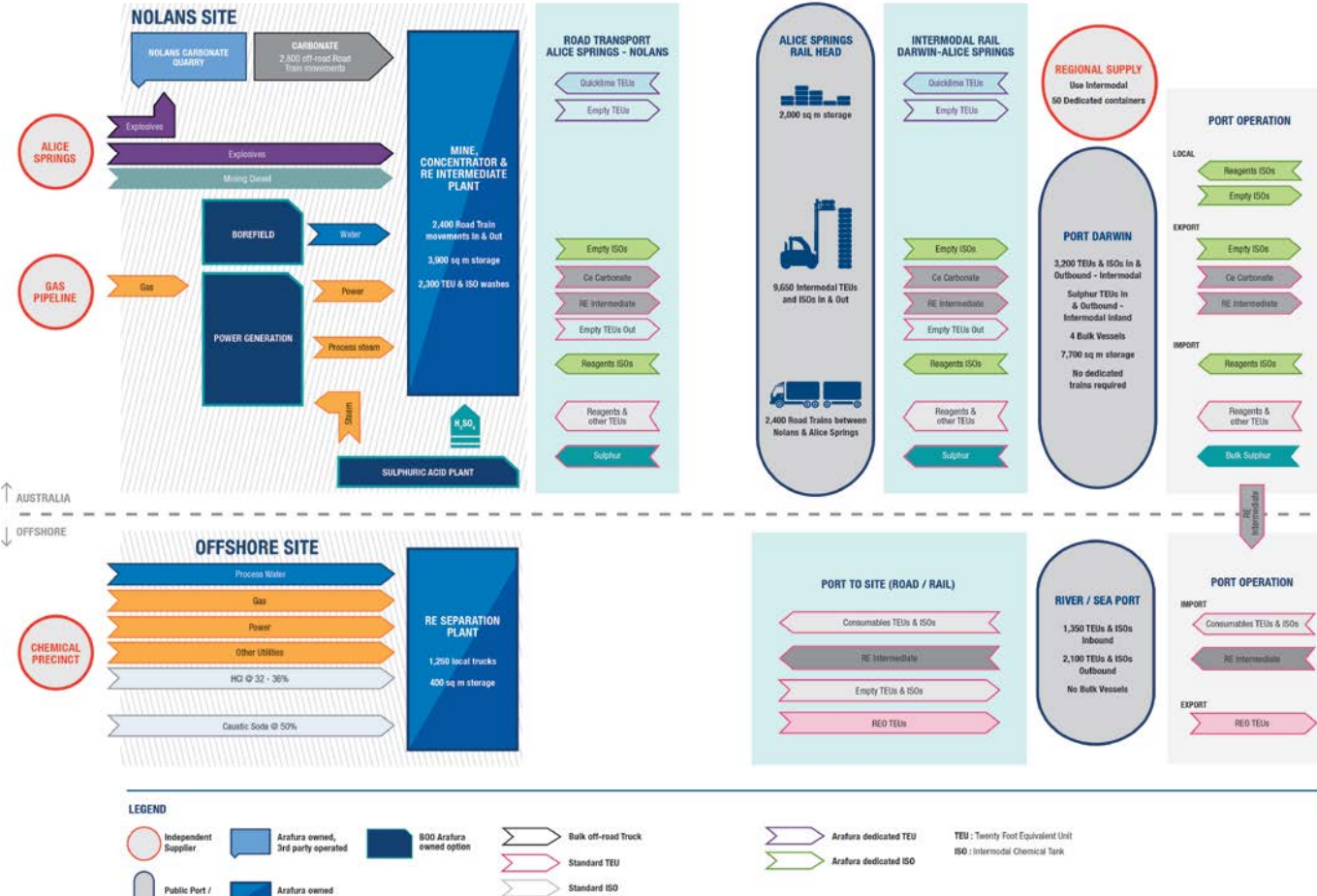


Individual water bores are shown as diamonds. Airborne geophysical colour image indicates high potential areas (red = high potential; blue = low potential) for buried groundwater aquifers

- ▲ Arafura has defined an **extensive, high-yielding groundwater system** SW of Nolans Site that offers a viable alternative and preferred supply to Ti Tree WCD
- ▲ Capacity to service the **life of Nolans operation** (4.0-6.2 GI per annum) from several borefields
- ▲ **Community benefit** – water to Alyuen and Aileron
- ▲ **Groundwater extraction licence application lodged** with Department of Land Resource Management
- ▲ Nolans Site power demand estimate 18.5 MW – gas turbine from **natural gas pipeline**, and steam turbine from **sulphuric acid plant**



LOGISTICS FLOWSHEET – NORTHERN TERRITORY & OFFSHORE



TRANSPORT & LOGISTICS	
CAPEX	A\$21.3 million
OPEX	A\$1.54/kg REO

- ▲ **Logistics simplified** by reduction in hazardous and dangerous good volumes and movements
- ▲ **Excellent existing transport infrastructure** for road and rail close to Nolans Site
- ▲ Will explore **opportunities to outsource** where possible e.g. sulphuric acid production, power generation, water treatment, accommodation village
- ▲ **Utilise existing infrastructure** at Alice Springs, Aileron Roadhouse



OFFSHORE REFINING (RE SEPARATION)



RE SEPARATION PLANT	
CAPEX	A\$205.4 million
OPEX	A\$1.79/kg REO

- ▲ Three offshore sites identified for RE Separation
- ▲ Arafura has fully costed a USA Gulf Coast chemical precinct location for an RE Separation Plant
 - ▲ Cost-competitive access to key reagents & utilities a priority
 - ▲ Discussions initiated with regulators & business stakeholders
 - ▲ CAPEX & OPEX estimates to +/-25%
 - ▲ Based on Arafura's RE separation process development testwork at ANSTO

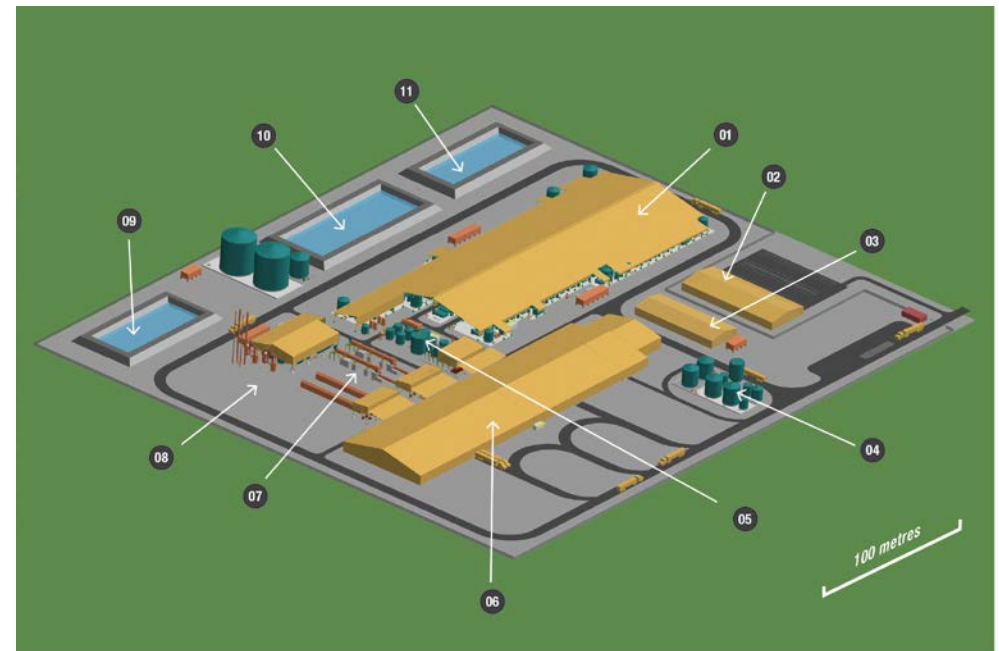


NdPr Oxide SEG Oxide HRE Oxide Lanthanum Oxide Cerium Oxide

Final REO products



Arafura Resources Limited (ASX: ARU)



LEGEND

- 01 SX
- 02 Administration
- 03 Operations Centre
- 04 Reagents
- 05 Dissolution
- 06 Warehouse
- 07 Calcination
- 08 Laydown Storage
- 09 Storm Water
- 10 SX Event Pond
- 11 Waste Water

ROBUST PROJECT ECONOMICS ON REALISTIC ASSUMPTIONS



	US\$m pa	A\$m pa
Sales Revenue		
REO equivalent 20,000 tonnes (less Royalty & Selling Expenses)	638	
Total Revenue (A\$1 = US\$0.897)	638	712
OPEX		
Mine & Concentrator		(90)
RE Intermediate Plant		(156)
RE Separation Plant		(35)
Transport & Logistics		(31)
Total OPEX		(312)
EBITDA		400
CAPEX (excluding deferred CAPEX)		1,408
NPV @ 10% after tax & capital payback		2,045
IRR after tax & capital payback	21.4%	
After tax payback period	Year 5 of operations	
OPEX A\$/per kg REO	15.67	

- ▲ The Nolans Project generates a **NPV of A\$2,045 million** and an **IRR of 21.4%**
- ▲ The NPV has been calculated on an after-tax basis with a 10% discount rate
- ▲ The Nolans Project generates an after-tax payback of capital **within five years of operations**
- ▲ Direct spend by Arafura on the Nolans Project and exploration in the Territory since 2003 exceeds **A\$100 million**

KEY DIFFERENTIATOR – RISK MITIGATION



▲ Key risks identified and mitigation strategies implemented

▲ Project Funding

- ▲ Alignment with strategic parties – producers, trading houses, investment banks, ECAs, customers, end users, supportive major shareholder

▲ Cost & Schedule Blow Outs; Ramp-Up

- ▲ Flowsheet validation & optimisation in China
- ▲ Alliance with Chinese RE producer Shenghe Resources

- ▲ Arafura’s Technical Committee

▲ Processing

- ▲ Extensive and detailed development testwork, including piloting

▲ Radioactivity

- ▲ Contained & managed at Nolans Site

		CONSEQUENCE				
		1 Insignificant	2 Minor	3 Moderate	4 Major	5 Critical
LIKELIHOOD	A Almost Certain					
	B Likely			Processing		
	C Possible			Product Price Marketing	Cost and Schedule Blowouts Ramp-up	Project Funding
	D Unlikely		Native Title Community	Radioactivity Environmental OH&S	Study Funding	
	E Rare		Resource	Reagent Supplies		

■ LOW
 ■ MODERATE
 ■ MANAGEMENT ATTENTION
 ■ PRIORITY ACTION



EXECUTION



Financial markets have changed permanently – a feasibility study defined by JORC or other technical bodies does not guarantee successful financing

Current Focus

- ▲ Using experts – no western organisation has successfully designed, built & operated a modern RE plant in twenty years
- ▲ Reduce costs – CAPEX / OPEX down by 25% – Overheads down by 40%
- ▲ EIS – advancing our licence(s) to operate
- ▲ Sales contracts & continue our established customer qualification process
- ▲ Project finance



KEY MESSAGES – A RECAP



- ▲ Focused strategy for **first production this decade**
- ▲ World-leading **magnets leverage** to drive high-value growth
- ▲ World scale project with **robust economics on realistic assumptions**
- ▲ Developing a **new industry in the Territory** for secure, long-term supply of rare earths
- ▲ Significant **logistics & infrastructure requirements**
- ▲ Risk mitigation through strategic alliances – **the key to Project Execution**



NOLANS DEVELOPMENT REPORT



- ▲ Detailed description of the Company's plans to develop the Nolans Rare Earths Project
- ▲ 120+ pages fully referenced
- ▲ Released September 2014
- ▲ Download from www.arultd.com



Arafura Resources Limited (ASX: ARU)

THANK YOU
Questions?



ARAFURA
RESOURCES LIMITED

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