

ANNUAL GENERAL MEETING PRESENTATION

November 2013



ARAFURA
RESOURCES LIMITED

ABN 22 080 933 455



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



AGENDA



1. Chairman's Address
2. Formal Business
3. Managing Director's Report
4. Questions and Answers



Arafura Resources Limited (ASX: ARU)



Mr Ian Kowalick

Chairman



Arafura Resources Limited (ASX: ARU)

Formal Business



Arafura Resources Limited (ASX: ARU)

RESOLUTIONS



Accounts and Reports – To receive and consider the consolidated financial statements of the Company and its controlled entities for the year ended 30 June 2013 and the reports of the Directors and auditors for the financial year ended 30 June 2013.

	Resolution
1	Remuneration Report
2	Re-election of Chris Tonkin as Director
3	Re-election of Ian Kowalick as Director
4	Election of Terry Grose as Director
5	Approval of issue of Options under Option Plan for purpose of Listing Rule 7.2, Exception 9.



Mr Gavin Lockyer **Managing Director**

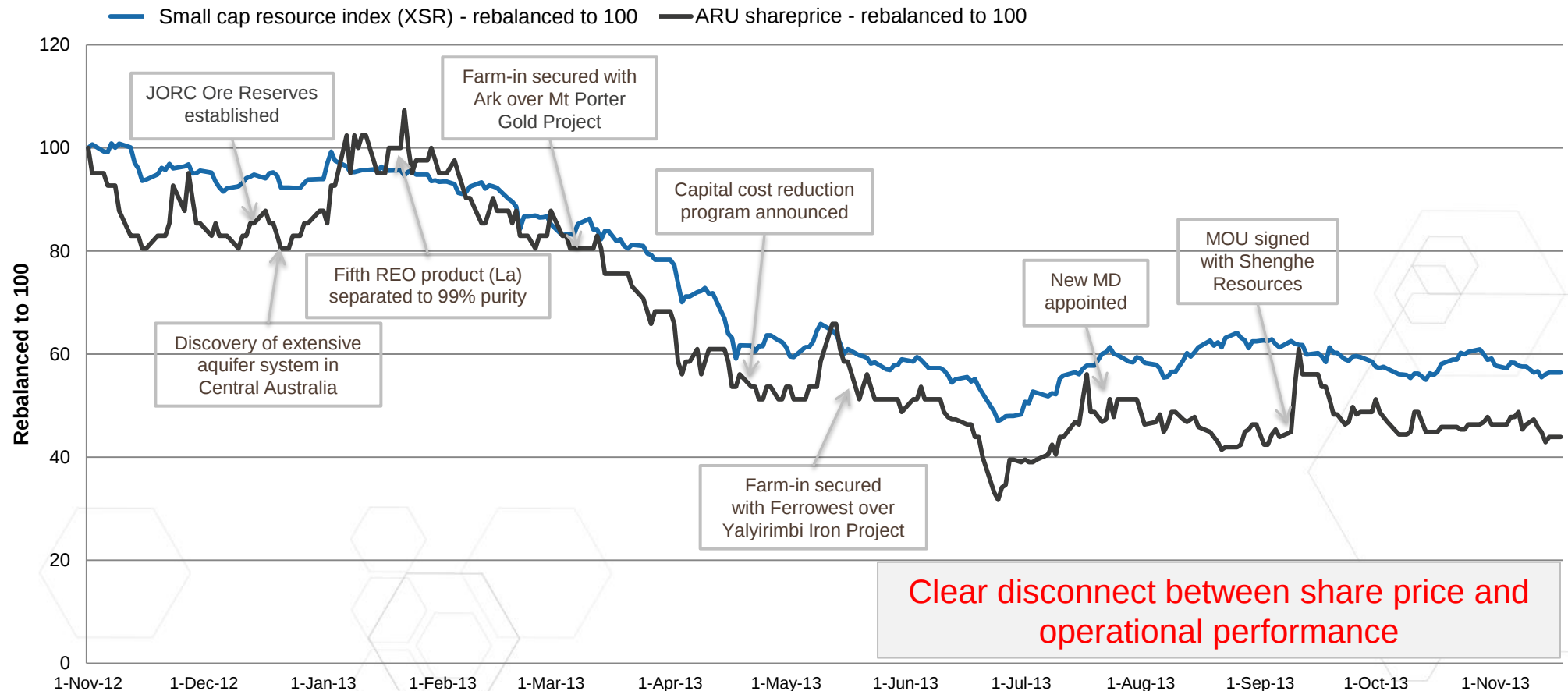


Arafura Resources Limited (ASX: ARU)

SHARE PRICE IMPACTED BY GLOBAL MARKETS



ARU vs ASX Small Resources Index

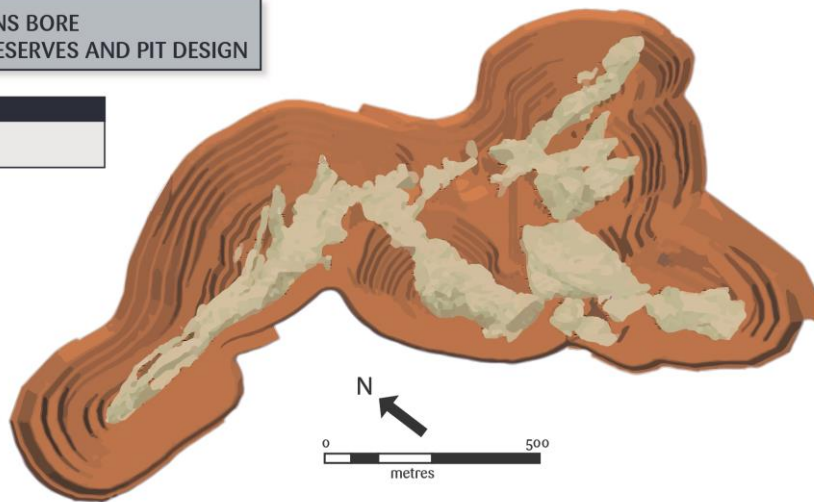
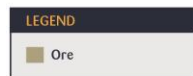


NOLANS BORE ORE RESERVES



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

NOLANS BORE
ORE RESERVES AND PIT DESIGN



- ▲ Ore Reserves support a **22-year mine life**
- ▲ Amenable to **low-cost open cut** mining & standard beneficiation techniques
- ▲ **95% conversion rate** from Mineral Resources
- ▲ Significant **Reserves upside** – potential to upgrade & convert 21Mt of Inferred Resources
- ▲ **Few Rare Earth projects have Ore Reserves**
- ▲ **Low resource risk** – extensive drilling & detailed material type studies
- ▲ Mineralisation **at surface & remains open at depths** below 220m

OPTIMISTIC OUTLOOK FOR RARE EARTH MARKETS



Growth sectors

Hybrid electric vehicle

Wind energy

Automotive emissions control

Oil refining

Electronics and lighting

Rare Earth markets

Magnet motor RE battery

Magnet generator

Automotive catalysts

Refining catalysts

Advanced RE Materials and phosphors

Industry outlook to 2020

Government policy & decrease in battery pack prices expected to drive 10% industry growth in **NdPr** magnets and 7% for **La**. EV's expected to be 7% of the light vehicle market in 2020.

10% annual market growth driven by China, USA and Europe. Demand for large **NdPr** magnets for offshore wind farms is growing.

New global regulations to cut emissions - catalysts market to grow at 5-8% CAGR. Strong demand for **Ce, Nd, Pr, Y**.

Industry operating at capacity and strong outlook for **La**-based FCC catalysts of 3-5% CAGR over the forecast period.

6% CAGR for **Y, Tb, Eu, La, Nd, Pr, Gd** used in electronic applications. Global TV sales, smartphone technology, tablets and digital storage devices to grow significantly to 2020.

Eu, Tb, Y demand growing at 6% CAGR. Ongoing advances in light-emitting diodes (LEDs) could eliminate the need for Tb, and reduce demand for Eu, Y.



Arafura Resources Limited (ASX: ARU)

KEY ELEMENTS TO ACHIEVING COMMERCIALISATION



- ▲ Introductions by Shenghe Resources
- ▲ Offshore procurement
- ▲ Other strategic relationships

**2014-2016
Engineering
and
Construction**

**2014
Financing**

- ▲ Financing linked to off-take
- ▲ Sovereign debt facilities
- ▲ Relationships with ECE, Shenghe Resources & ThyssenKrupp

**2013-2014
Project
Optimisation**

- ▲ Technical review and optimisation program well underway to boost project economics

**Commercialising
the Nolans
Project**

**2014
Off-take
Agreements**

- ▲ MOU with Shenghe Resources
- ▲ LOI with ThyssenKrupp
- ▲ LOI with South Korean multinational

NOLANS PROJECT BASE CASE – A RECAP



- ▲ 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

PROJECT OPTIMISATION – PROCESS RECOVERY

2013-2014
Project
Optimisation



Beneficiation		
	August 2012	November 2013
Total RE Recovery	61%	85%
RE Upgrade	1.7	2
Mass Recovery	41%	42%

Rare Earth Extraction & Separation		
LRE Recovery	83%	92%
SEG Recovery	86%	81%
HRE Recovery	75%	43%
Y Recovery	75%	21%

LREs are La, Ce, Pr & Nd; SEGs are Sm, Eu & Gd; HREs include Tb & Dy

- ▲ Overall Rare Earth recoveries have improved
- ▲ LRE Recovery includes **Nd & Pr** which are the **dominant magnet feed revenue contributors**
- ▲ Further enhancements expected following Chinese optimisation review

PROJECT OPTIMISATION – CAPITAL COSTS

2013-2014
Project
Optimisation



	August 2012	November 2013
Mine & Concentrator	\$346m	\$361m
Transport & Logistics	\$230m	\$30m
RE Complex ^{1,2}	\$1,336m	\$1,113m
Total CAPEX	\$1,912m	\$1,504m

¹August 2012 Base Case: RE Complex located in Whyalla

²November 2013: RE Complex split between Nolans Bore (Intermediate Plant) and international location (Rare Earth Separation Plant)

▲ Mine & Concentrator (Nolans Bore)

- Increased capital costs results in a smaller Intermediate Plant

▲ Intermediate Plant (Nolans Bore)

- Replacement of Hydrochloric Acid with Sulphuric Acid for pre-leach eliminates significant plant
- Changes to the Rare Earth Extraction and Purification circuits have simplified plant design

▲ Rare Earth Separation Plant (international location)

- International relocation of RE Separation into a mature chemical precinct removes requirement to construct Chlor-Alkali plant

▲ Further enhancements expected following Chinese optimisation review

PROJECT OPTIMISATION – OPERATING COSTS

2013-2014
Project
Optimisation



	August 2012	November 2013
Total OPEX	\$20.55/kg REO	\$17.10/kg REO

Process improvements and/or plant reconfiguration/relocation has resulted in:

- ▲ **39% decrease** in mineral concentrate processed
 - Higher grade and improved process recoveries
- ▲ **22% decrease** in acid consumption
 - Primarily hydrochloric acid
- ▲ **34% decrease** in process water consumption
- ▲ **43% decrease** in caustic soda consumption
- ▲ **71% decrease** in Transport & Logistics costs
 - Concentrate and residues management at Nolans Bore

Further enhancements expected following Chinese optimisation review

ENGINEERING & CONSTRUCTION TIMELINE

2014-2016
Engineering
and
Construction



- ▲ Current engineering and design at +/-25% to be completed by June 2014
- ▲ Detailed engineering 2014-2015
- ▲ Construction 2015-2016
- ▲ Finalisation of Chinese Beneficiation Optimisation Studies mid-2014
- ▲ Scope prepared for Chinese RE Extraction Optimisation Studies
- ▲ Review process design / amend for Chinese test results
- ▲ Ongoing discussions with offshore fabricators and RE plant engineers

FINANCING & OFFTAKE PARTNERS

2014
Financing &
Off-take
Agreements



▲ ECE (East China Mineral Exploration & Development Bureau)

Major shareholder (24.86%) & long-term strategic partner for Arafura (since 2009)

▲ Shenghe Resources Holding Co. (Shanghai Stock Exchange-listed)

MOU executed. Conducting scheduled technical reviews, access to rare earths experts, supply chain exposure & co-funding opportunities (currently allocated 4.5% of Chinese REO export quota)

▲ Chinese Rare Earth experts

Engaged to conduct a Technical Review & Optimisation Program, provide RE due diligence expertise for financiers

▲ ThyssenKrupp and South Korean multinational

LOIs signed. Potential off-takers. Assisting commercialisation through German & Korean Government Debt Schemes



Arafura Resources Limited (ASX: ARU)

OUTLOOK & NEXT STEPS



- ▲ **Demand for rare earths remains strong** – forecast to grow ~6-7% annually, driven by the growth in clean technology (magnets) and technology innovation
- ▲ Future **pricing will be influenced by global supply trends**
- ▲ **Arafura positioned to become the next major rare earths producer**
- ▲ Focus for Arafura going forward will remain:
 - Driving project & administration costs down and conserving cash
 - Streamlining flow-sheet processes
 - Continuing to build and formalise strategic partnerships for funding/off-take and technical opportunities
- ▲ **Nolans Project Information Memorandum (+/-25% accuracy) scheduled for H1 2014**

THANK YOU
Questions?



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