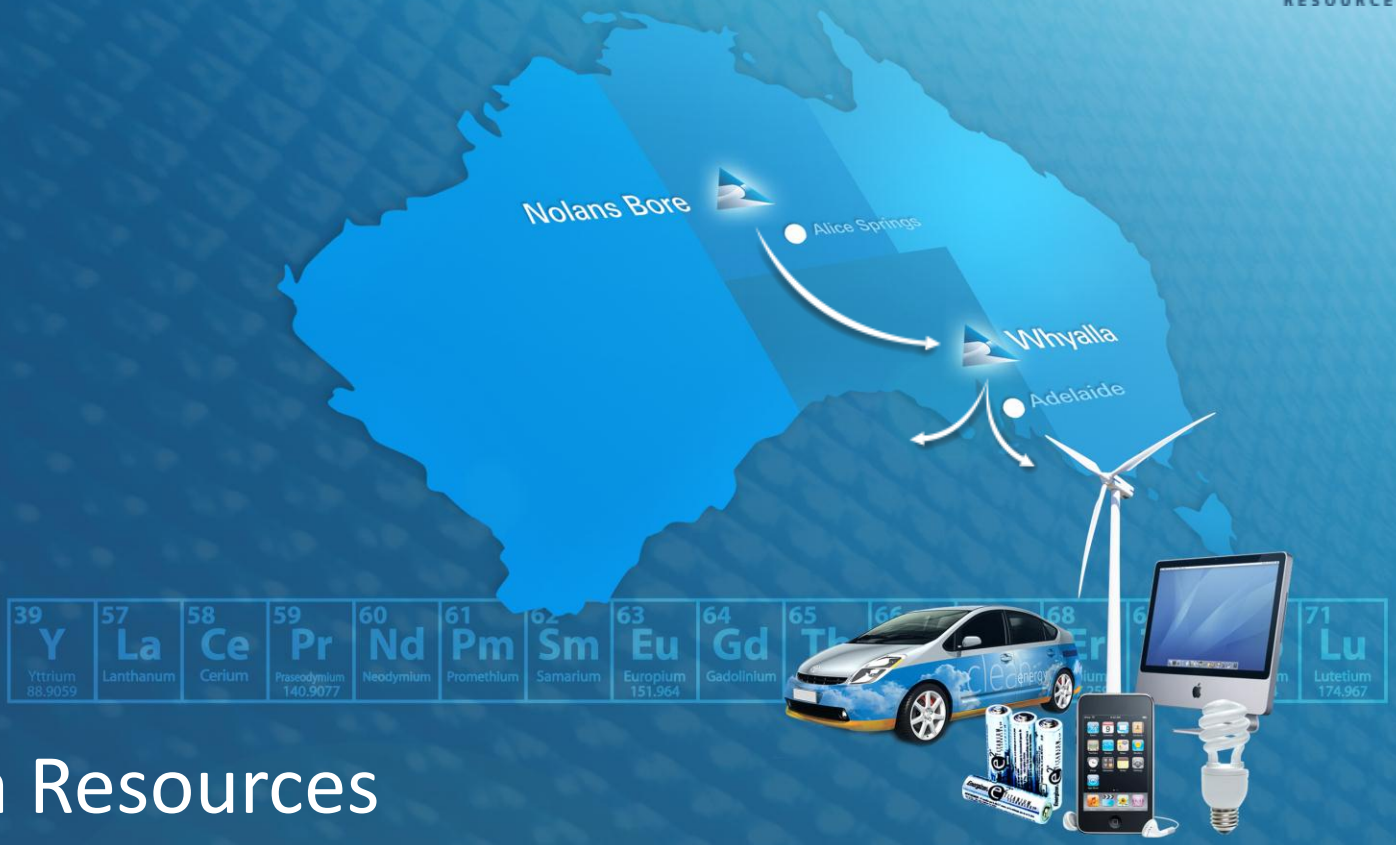
ARAFURA ADDING VALUE IN AUSTRALIA
TO PRODUCE RARE EARTHS
FOR USERS WORLDWIDE

ARAFURA
RESOURCES LIMITED



Arafura Resources

Richard Brescianini – GM Exploration & Development
REE World Technology Metals Summit 2012
February 2012

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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.

Introduction to Arafura

Corporate Summary

- Australian Public Company – formed 1997
- Listed on ASX in 2003 (code ARU)
- Nolans Project for Rare Earths
- Own technology developed
- Bankable Feasibility Study (BFS) in progress

As at 2 February 2012

Market Statistics

Share price	A$0.465
52 Week High / Low	A$1.47 / A$0.34
Shares on issue	368 million
Market capitalization	~A$171 million
Options on issue	~22.6 million

Balance Sheet

Debt - nil

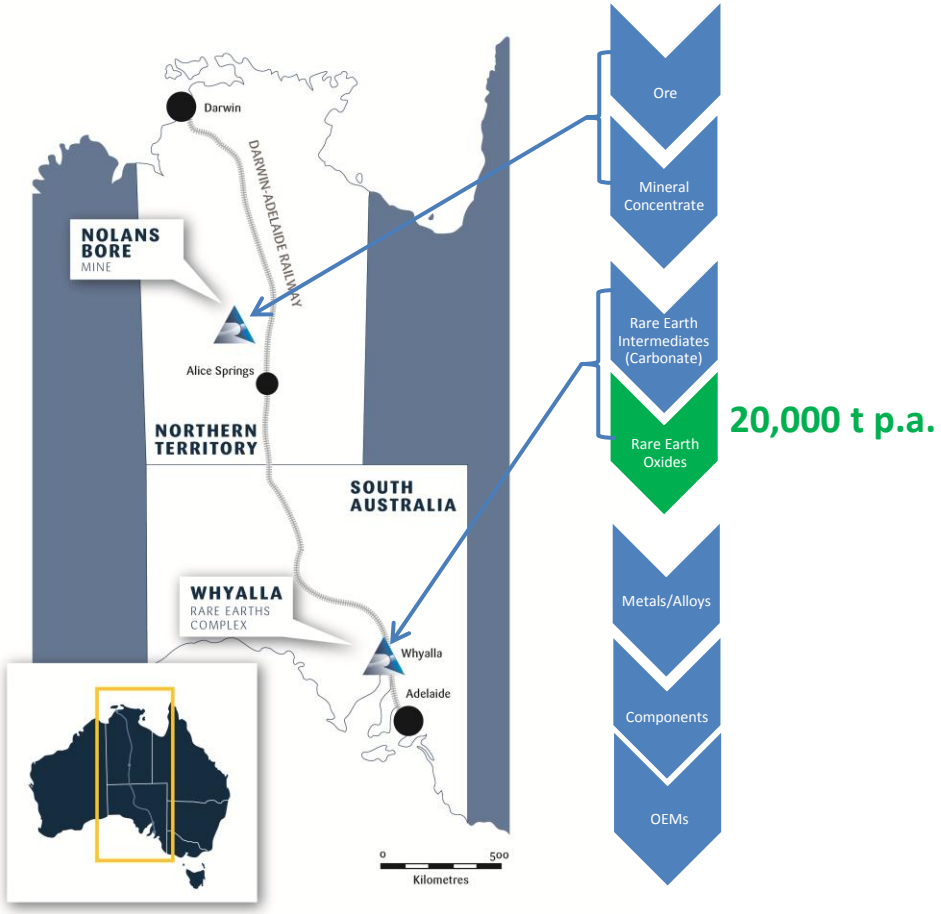
Cash ~A$35.3 million (31 December 2011)

Top Shareholders

JP Morgan Nominees[1]	31.2%
ECE[2]	17.5%
Board & Management	2.5%

1. Substantial German-based shareholding amongst many shareholders
2. East China Mineral Exploration & Development Bureau

- ***Our Vision: 'To be the recognized leading producer of Rare Earths for users worldwide'***
- ***'All Australian' Business Model – mining, chemical processing and own technology to produce <u>Rare Earth Oxides</u>***



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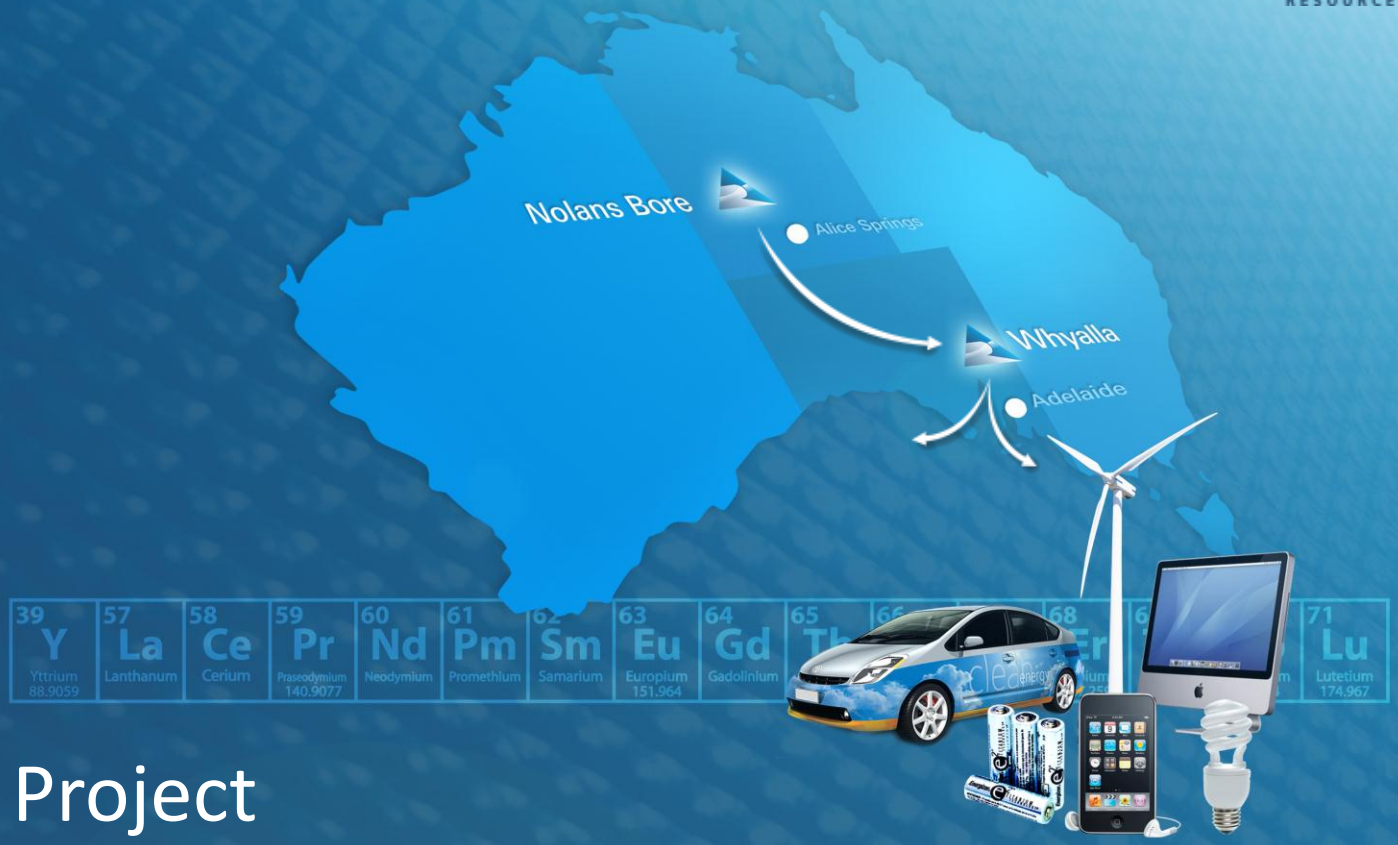


Nolans Project

Nolans Project – Overview

Nolans Project is world scale and strategically significant …..

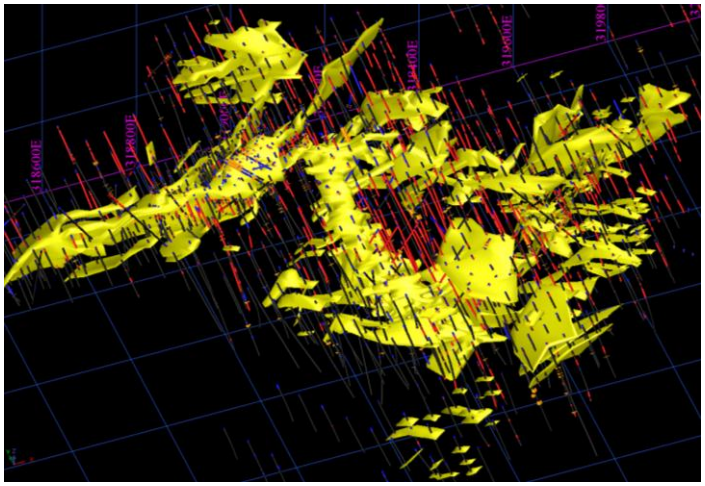
- One of only three well advanced, large-scale Rare Earth projects globally;
- Updated estimate of Identified Mineral (JORC) Resources by end-February;

Total resources for Nolans Project

RESOURCES	TONNES[1] (million)	RARE EARTHS REO %	PHOSPHATE P_2O_5 %	URANIUM U_3O_8 lb/t
Measured	5.1	3.2	13.5	0.57
Indicated	12.3	2.8	13.4	0.43
Inferred	12.8	2.6	12.2	0.40
TOTAL	30.3	2.8	12.9	0.44
CONTAINED METAL		848,000 t	3.9 Mt	13.3 Mlb

1. Using 1% REE cut-off grade

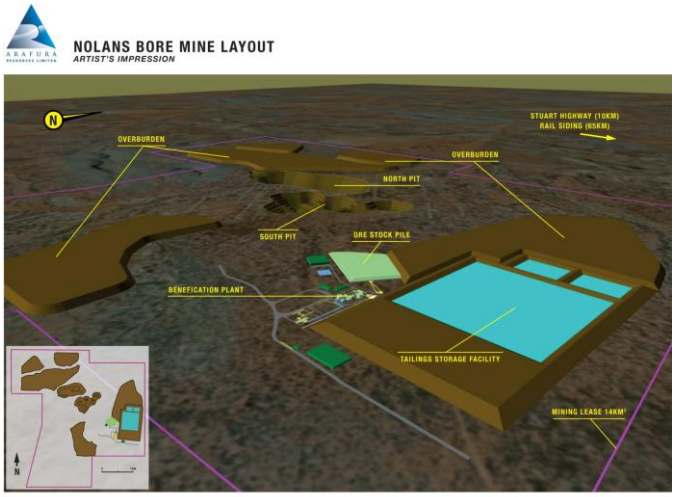
As at November 2008

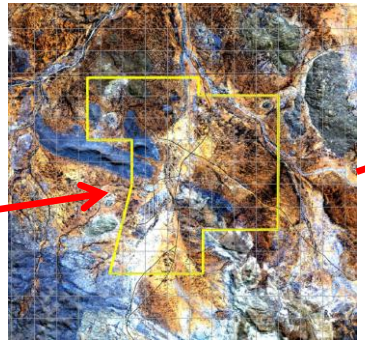


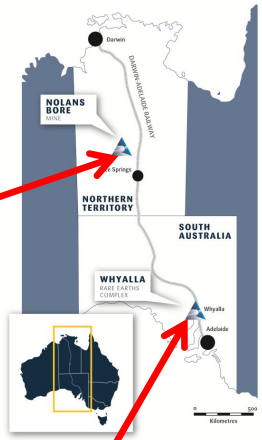
Annual Production			
REO Rare Earths Oxides	**Phosphate Product (as P_2O_5)**	**UO_4 Uranium Oxide**	**$CaSO_4$ Gypsum**
20,000 t	80,000 t (approx)	150 t	500,000 t

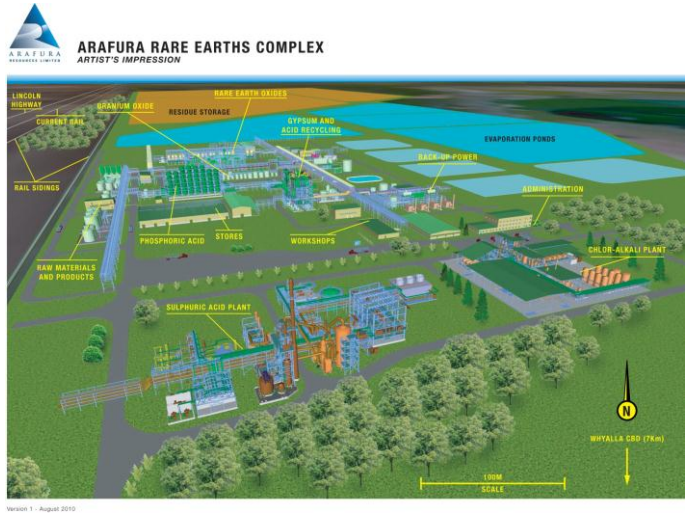
Nolans Project – Overview

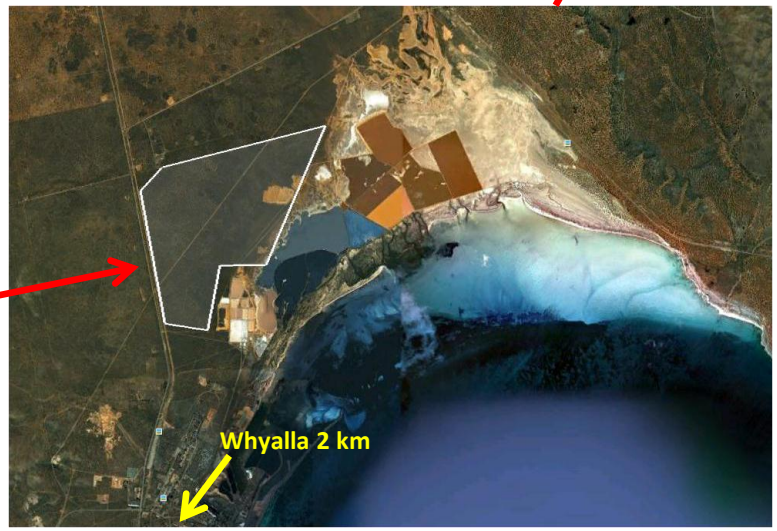
- Australia – low sovereign risk and world-class regulatory environment;
- Excellent locations: Nolans Bore Mine is remote, but not isolated, and is close to infrastructure; Whyalla is a long-standing and well established industrial city.











Nolans Bore Resource – Magnet Feed

The Nolans Bore resource is well aligned with magnet end markets …..

Rare Earth Element	% REO Contained	Volume (tonnes p.a.)	REO Price (US$/kg) 19 Jan 2012	Projected Revenue (US$ millions) p.a.	% Revenue
Lanthanum	19.74%	3,948	$51.00	$201	9.4%
Cerium	47.53%	9,506	$42.50	$404	18.8%
Praseodymium	5.82%	1,164	$165.00	$192	8.9%
Neodymium	21.20%	4,240	$195.00	$827	38.5%
Samarium	2.37%	474	$78.50	$37	1.7%
Europium	0.40%	80	$3,790.00	$303	14.1%
Gadolinium	1.00%	200	$102.50	$21	1.0%
Dysprosium	0.33%	66	$1,410.00	$93	4.3%
Terbium	0.08%	16	$2,810.00	$45	2.1%
Yttrium	1.32%	264	$90.50	$24	1.1%
Others	0.21%	42	-	-	-
Total	100.00%	20,000	$107.35	$2,147	100.0%

Prices noted above are China US$ FOB quoted in Metal Pages on 19 January 2012
Arafura's five REO product groups are highlighted

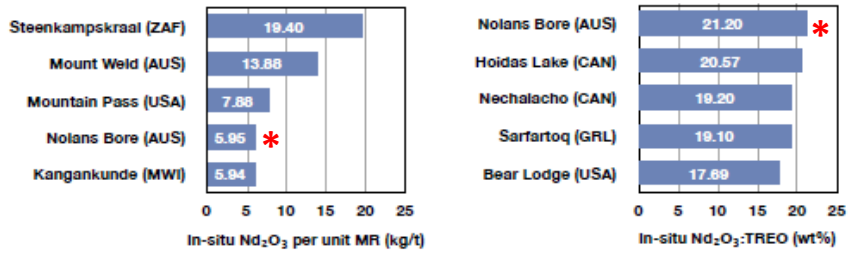


Figure 4.4: Top TMRAREPI projects ranked by relative in-situ quantity & physical distribution of Nd_2O_3 (sources: TMR, company reports).

- Nolans Bore has a higher proportion of desirable "magnet feed" Rare Earths Nd + Pr + Dy compared with other deposits;
- The permanent magnet market is forecast to have strong growth and will be a key driver for the industry;
- Nolans Bore is the only *Technology Metals Research Advanced Project* with top 5 rankings in relative in-situ quantity & physical distribution of Nd_2O_3 – a Critical REO.

Arafura's approach to the Nolans Project

Create value, de-risk and use world class expert assistance …..

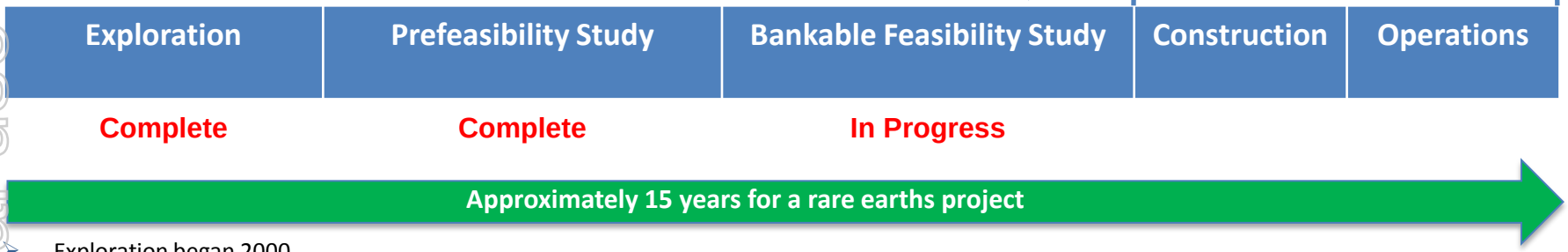
- Engage world class experts to assist in all aspects of the Nolans Project;
- Focus on value-creating *Rare Earth Oxide* production in industry chain;
- Standard design and low risk co-product plants;
- Develop own technology for processing Nolans Bore ore into Rare Earth Oxides;
- Demonstration scale trials of technology to de-risk beyond more normal piloting scale;
- Minimize capital requirements through simplification;
- Improve operability – reduce volumes of raw materials and wastes to manage and reduce operating costs;
- Optimize product quality/mix to maximize margins;
- Position for future developments if value-creating, *e.g.* phosphoric acid.

Project History and Timeline

Already a long way through a lengthy industry development timeline, one of the few advanced world-scale projects …..

Current Status

Timing subject to completion of BFS



- Exploration began 2000
- Maiden JORC resource 2003

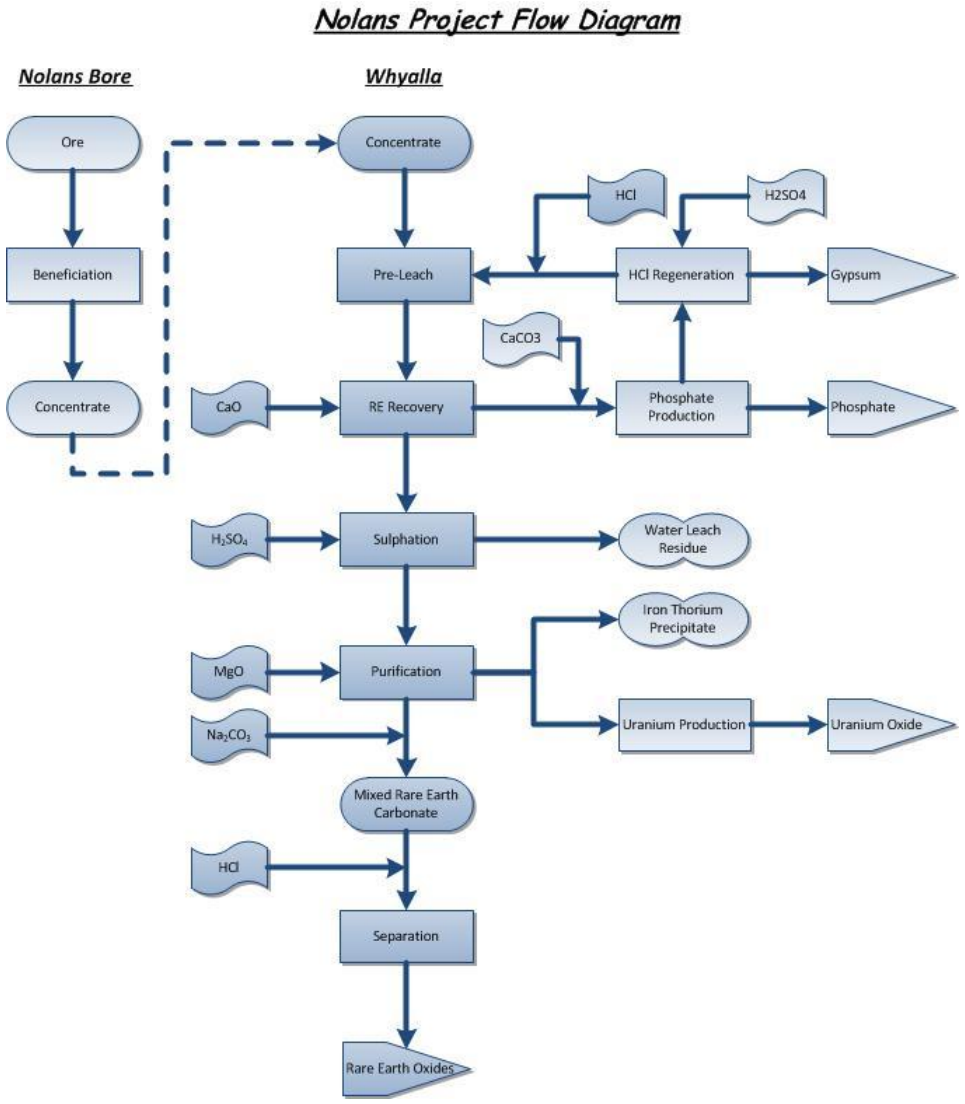
- Technology program began 2004
- Prefeasibility study completed 2007

- Current JORC resource 2008
- Technology piloting 2008-2009
- Whyalla site announced 2010
- Technology demonstration 2010-2011
- Appointment of specialist engineering contractor 2011
- Expanded BFS: Rare Earths focus 2011
- First customer LOI announced 2011
- 52,000m expansion drilling program 2011
- ***Complete optimization***
- ***Finalize design study***
- ***Secure regulatory approvals***
- ***Complete sales contracts with target customers***
- ***Obtain project finance***

Building a Sustainable Business

Arafura is 'going the extra mile' to 'get it right' first time and ensure success .....

- Australian developed & proven flow sheet – not reliant on others;
- Additional flow sheet demonstration programs at scale are underway to de-risk start up & achieve nameplate capacity quickly – see next slide;
- Demonstration programs will also provide potential customers and financiers opportunities to observe and assess our operations for their due diligence;
- Environmental Guidelines of the highest standards have been issued as anticipated. No surprises, most studies completed, or well advanced.



Demonstration Program

The flow sheet has been proven at pilot scale and is now undergoing final demonstration …..

Mixed REO Carbonate Production 2009
ANSTO, Sydney

Water Leach Piloting 2009
ANSTO, Sydney

Sulphation Baking 2009
ANSAC, Bunbury

Gypsum from HCl Regeneration Demonstration Plant 2011 ALS-Ammtec, Perth

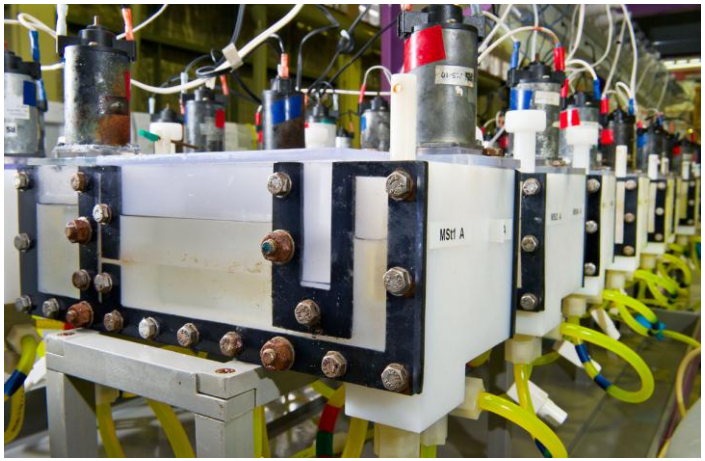
Pre leach Demonstration Plant 2011
ALS-Ammtec, Perth

Sulphation & Purification Demonstration Plant 2012
ANSTO, Sydney

Rare Earth Oxide Production

Three REO products now available for target customer evaluation …..

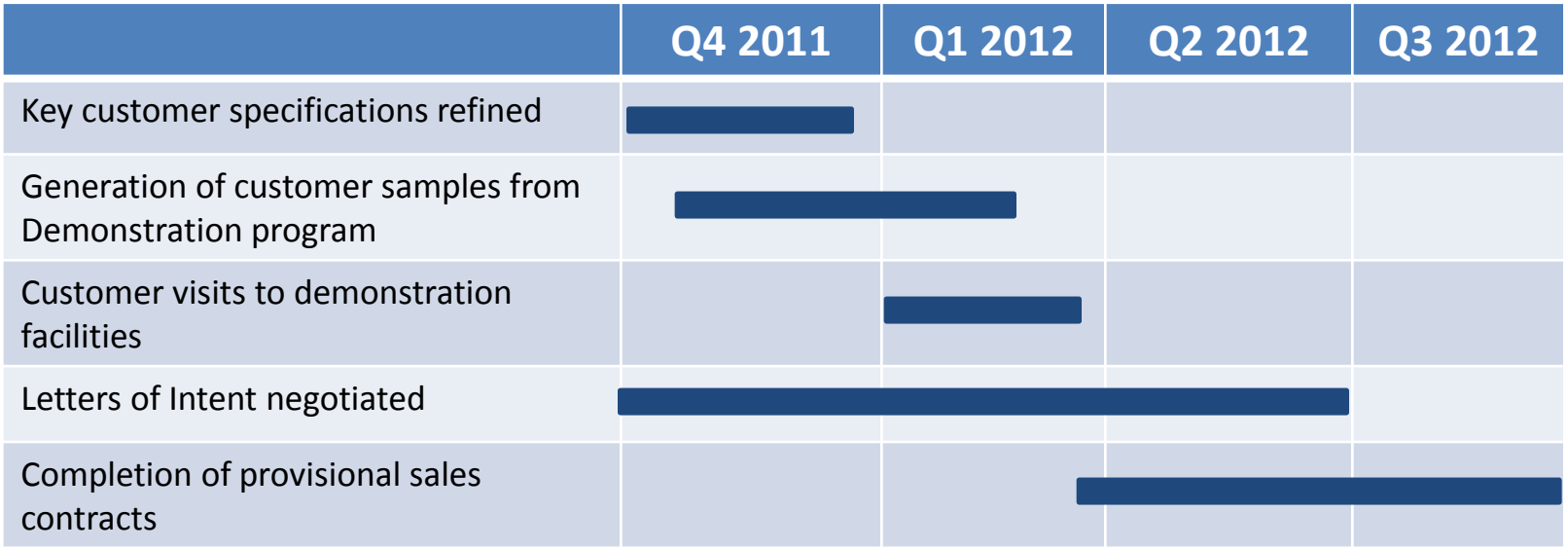
Solvent Extraction Circuit for REO Production 2012
ANSTO, Sydney



Mixer-Settler from Solvent Extraction Circuit 2012
ANSTO, Sydney

Target Customer Program

- Interest in Arafura's REO products is high;
- Arafura has identified target customers worldwide with whom it would like to develop mutual long term relationships. Key geographical regions include Japan, Korea, Europe and the USA;
- First LOI already signed with Thyssen Krupp;
- Arafura is only new supplier with significant volumes available for sale.



Nolans Project – Government Approvals

- Excellent support from Federal, Northern Territory (NT) and South Australian (SA) governments;
- Major project status for Whyalla Rare Earths Complex from SA Government;
- Strong support from local communities in both NT and SA – community engagement ongoing;
- Technology designed to meet highest environmental standards – Environmental Impact Statement (EIS) guidelines issued and studies underway in both locations;
- Rare Earths recognized as a strategic material;
- Significant capital expenditure – will bring direct developments worth over $1 billion in total (Arafura + others) to Australia at Nolans Bore and Whyalla.

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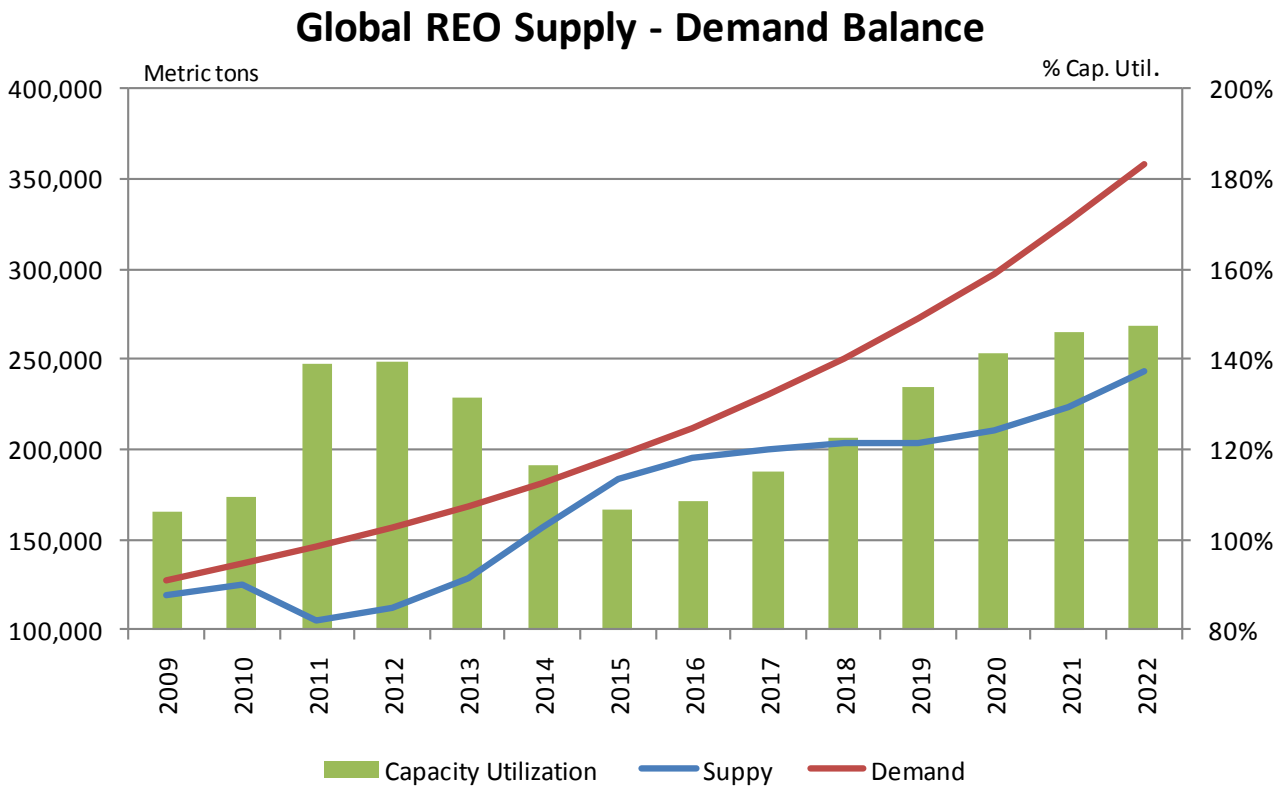
Rare Earths Market

Supply & Demand

- Total Rare Earth Oxide (REO) supply growth does not keep up with demand growth rates in any year!
- Capacity utilizations bottoms out in 2015 at 107%;
- Global demand then requires another ~20,000t of supply (a Nolans Project) each year above current supply forecasts;
- Unclear where the supply will come from;
- On an individual rare earth basis 'Lights' (Ce and La) are most plentiful but are 'snug' at their easiest point, and then short.



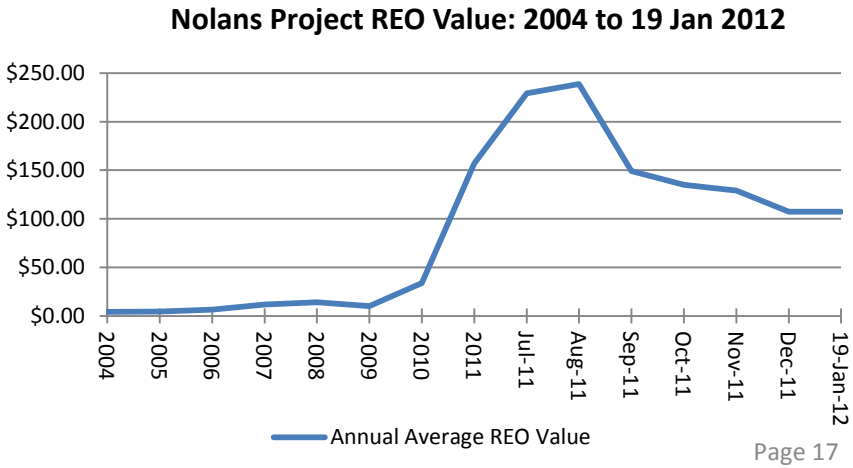
Based on Arafura's research of the market

Price Trends

Prices in real terms have returned to long term levels prior to low price 'Chinese era' .....

- 1990 to 2005: atypical low-priced era driven by unsustainable low-cost Chinese production;
- 2006: prices begin to rise with first Chinese export quotas;
- 2007-2008: prices fall due to soft demand in GFC;
- 2009: prices begin to recover post GFC, demand increases, Chinese supply reduces;
- 2010-2011: prices increase markedly as demand accelerates, Chinese production reduces (closure of polluting and illegal operations), Chinese export quotas tighten;
- 2011H2: prices peak, then adjust from highs, rate of decline has slowed and beginning to 'level out'. Prices still circa 200% above levels 2 years ago;
- 2012+: low priced era is over, prices will follow supply/demand dynamics.

Note: Prices represent purities of 99.90% and 96.0% for the periods 1980-1989 and 1990-June 2011 respectively



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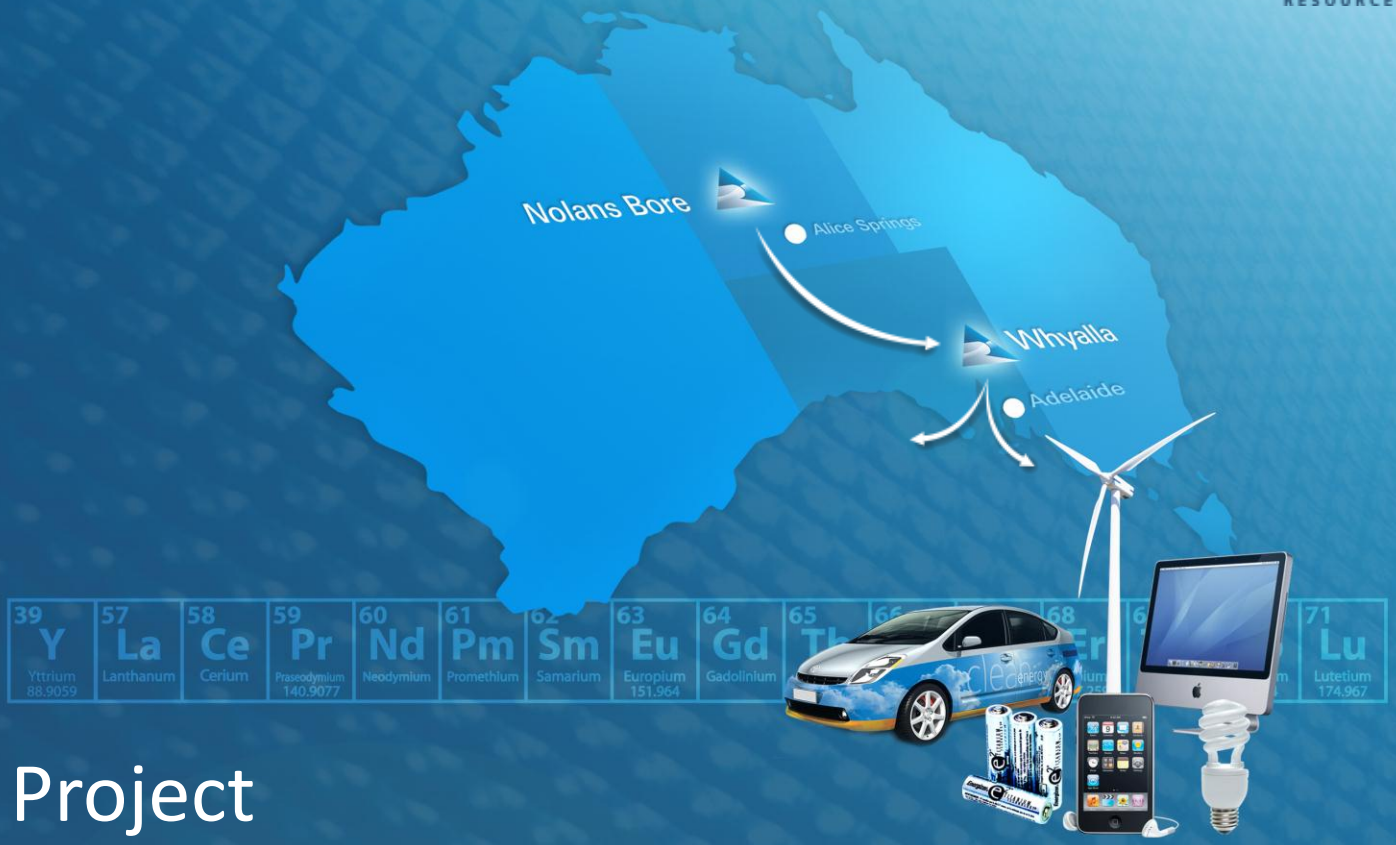


Nolans Project
Value Proposition

Nolans Project – Financial Valuation

High potential value, long-life, multiple revenue streams with upside potential …..

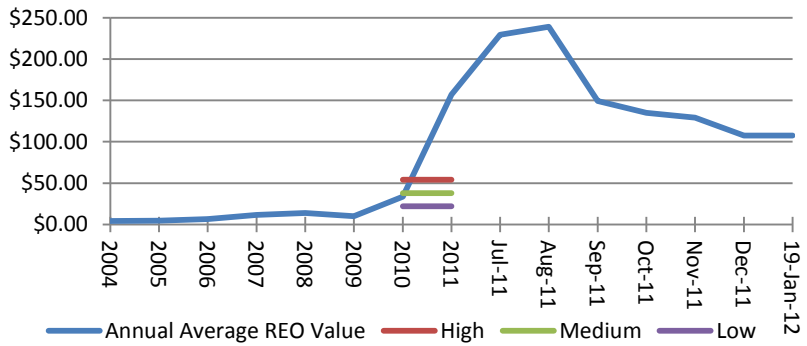
CAPEX @ 0.95	A$950 million		
Sales Revenue	**US$**		
	Low	**Mid**	**High**
REO US$/kg	$22	$38	$54
REO 20,000t US$	$440	$760	$1,080
Co- & By-products (P_2O_5, UO_4, $CaSO_4$)	$115	$115	$115
Total Revenue p.a. US$ million	$565	$885	$1,205
	A$ million		
Total Revenue p.a. @ 0.95	$595	$932	$1,268
Annual OPEX @ 0.95	($376)		
EBITDA p.a.	$219	$556	$892
NPV @ 10% after tax & capital payback	$1,420	$4,050	$6,549
Capital Payback - years	5	4	3

As at October 2010

→ **Current price (19 Jan 2012) US$107.35/kg**

This valuation will be updated via the Bankable Feasibility Study process

Nolans Project REO Value: 2004 to 19 Jan 2012
Comparison to Financial Evaluation Price Levels

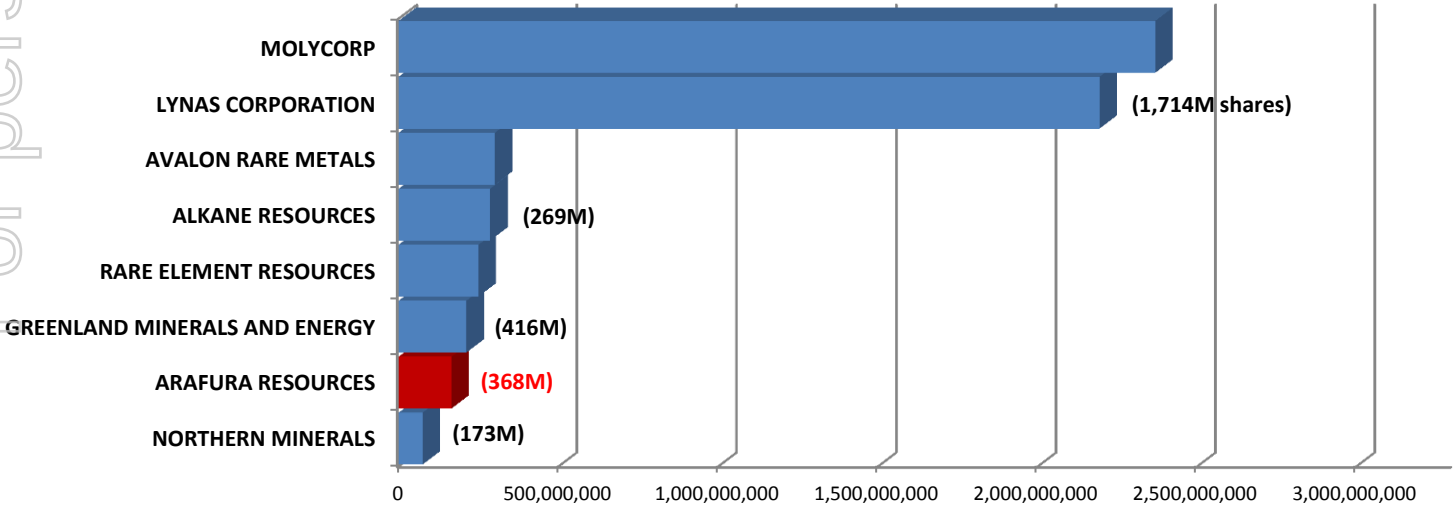


Rare Earth Project Comparisons

Arafura is undervalued compared to industry peers …..

Exploration	Prefeasibility Study	Bankable Feasibility Study	Construction	Operations
Northern Minerals (ASX: NTU)	Greenland Minerals & Energy (40 kt p.a.) (ASX: GGG) Rare Element Resources (10 kt p.a.) (NYSE: REE)	Arafura (20 kt p.a.) (ASX: ARU) Alkane (1.5 kt p.a.) (ASX: ALK) Avalon Rare Metals (10 kt p.a.) (TSX: AVL)	Molycorp (40 kt p.a.) (NYSE: MCP) Lynas (22 kt p.a.) (ASX: LYC)	Molycorp reprocessing (< 5 kt p.a.)

Market Capitalization



Market capitalization as at 24 January 2012 converted to AUD at the prevailing exchange rate

Investment Opportunity

Funding status:

- Cash on hand A$35.3 million with no debt;
- Macquarie Capital (Australia) appointed to advise on funding options;
- Adopting prudent approach in challenging financial markets:
  - Several BFS work streams to slow down pending successful fund raising
  - Critical activities will continue
  - Will result in some delay to project delivery schedule.

Funding sources:

- Consideration is being given to all possible sources:
  - Customers (forward sales) and strategic investments
  - Debt & equity markets
  - Suppliers
  - Sovereign debt markets
  - Other (hybrid, mezzanine etc)

  or a combination of the above;
- Recent examples of customers, strategics and institutional investors that have supported financing of new rare earths projects outside of China.

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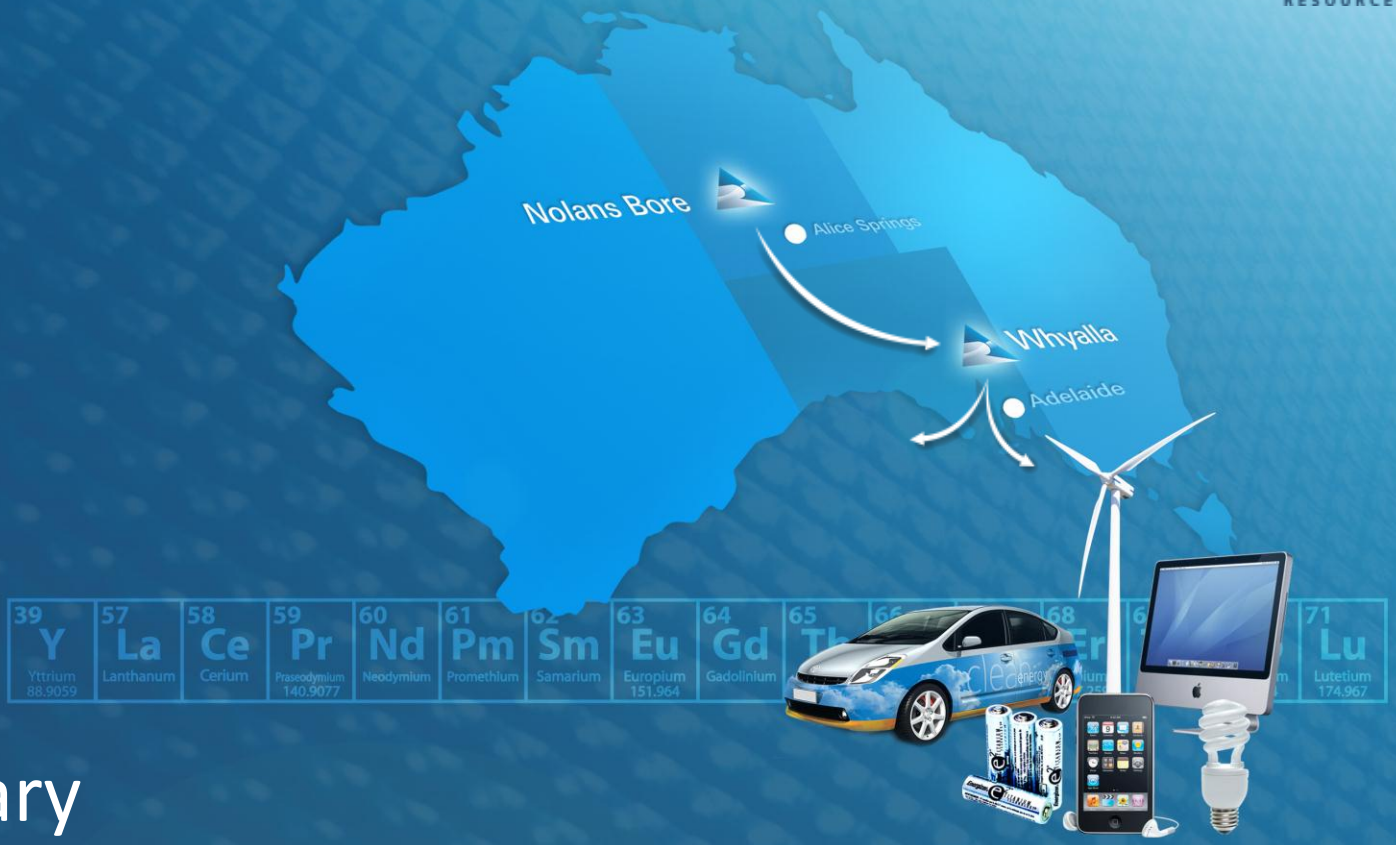

Summary

Summary

A compelling value proposition despite short-term funding challenges …..

- Robust and well regarded 'All Australian' business model;
- World-scale Nolans Project with high value creation potential;
- Nolans Project well advanced and likely to be one of very few new supply sources this decade – with upside potential;
- Significant government and community support – EIS to highest standards underway;
- Australian developed and proven technology. Now going the extra mile (via the BFS and demonstration plant) to optimize, de-risk, get it right first time and ensure success;
- Discussions are in progress with target customers worldwide outside of China;
- 'Undervalued' compared to peers – investment opportunity.

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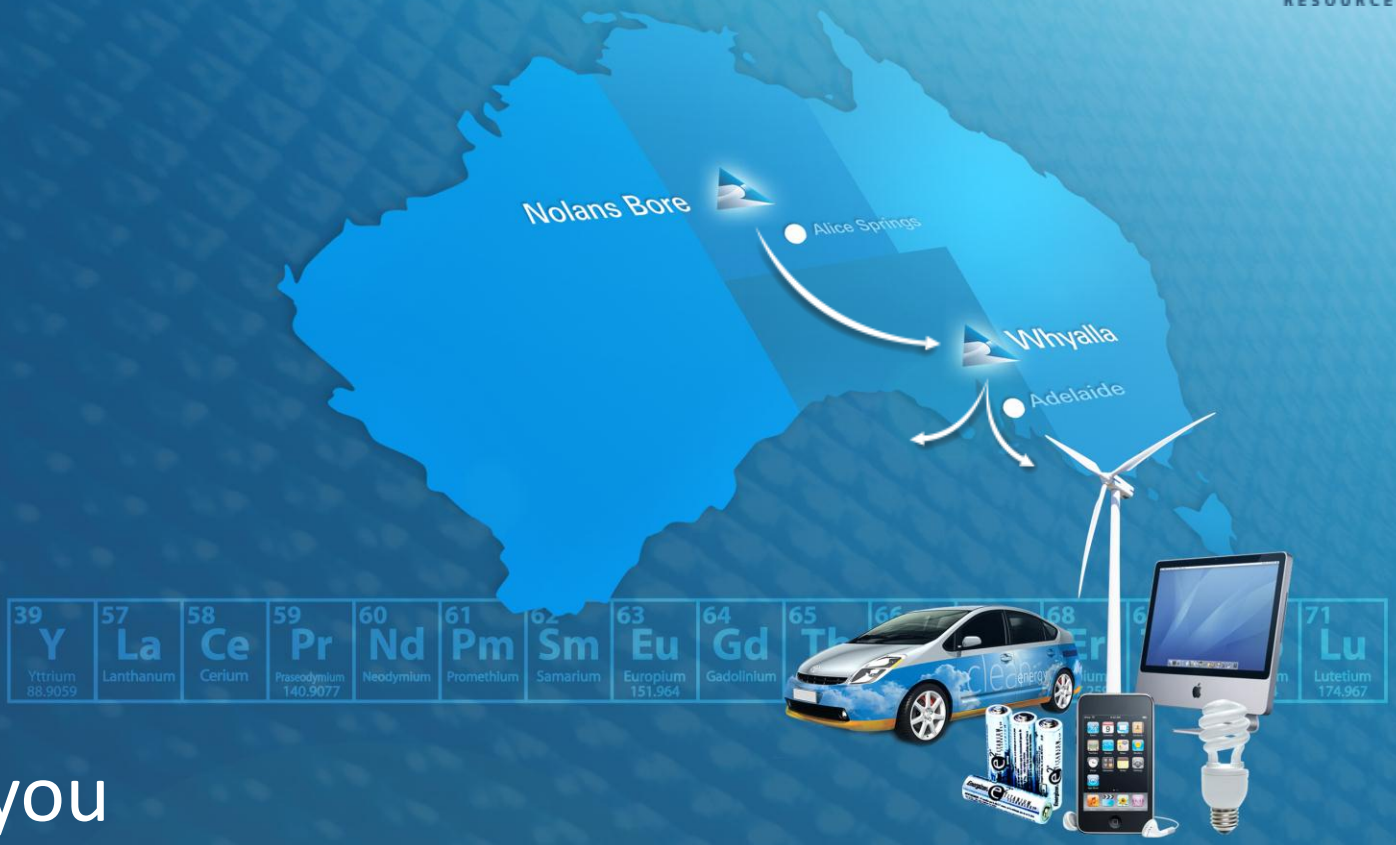

Thank you