## Aluo asn For personal

#### **Rare Earths** WE TOUCH THEM EVERYDAY

J.P. Morgan Australia Corporate Access Days **New York** 

27-28 September 2010



































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#### Rare Earths, we touch them everyday



#### **TODAY'S AGENDA**

- 1. Rare Earths, we touch them everyday
- 2. Rare Earths in short supply the demand and supply equation
- 3. Rare Earths price escalation
- 4. The Lynas Story online in 2011, expansion and beyond





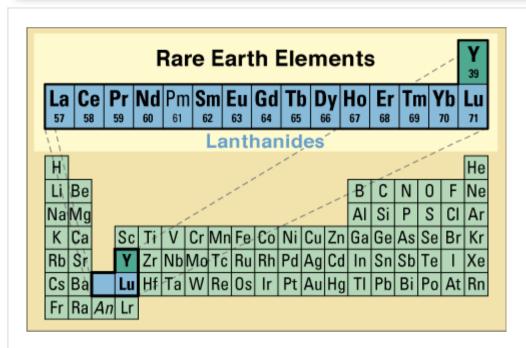




## Rare Earths cannot be substituted in many applications



#### RARE EARTHS: LANTHINIDES PLUS YITTRIUM – UNIQUE PROPERTIES



- Chemical
  - ➤ Unique electron configuration
- Catalytic
  - ➤ Oxygen storage and release
- Magnetic
  - ➤ High magnetic anisotropy and large magnetic moment
- Optical
  - > Fluorescence, high refractive index
- Electrical
  - ➤ High conductivity
- Metallurgical
  - ➤ Efficient hydrogen storage in rare earths alloys









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## Rare Earths underpin new materials technology required to sustain the needs of today's society



#### **Energy efficiency through lower consumption**

#### **Environmental protection** through lower emissions

#### Smaller yet more powerful digital technology



- Compact Fluorescent Lights
- Hybrid vehicle
- Weight reduction in cars



- Wind turbine
- Auto catalytic converter
- Diesel additives



- Flat panel displays
- Disk drives
- Digital cameras







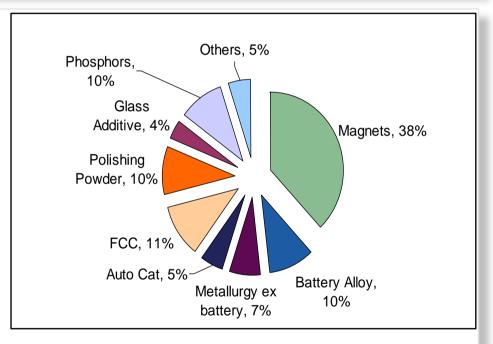






#### **2010 DEMAND FORECAST BY APPLICATION**

Application	Demand (%)	Demand (t)
Magnets	26%	35,000
Battery Alloy	14%	18,600
Metallurgy ex batt	9%	11,700
<ul> <li>Auto catalysts</li> </ul>	7%	9,000
• FCC	16%	21,300
<ul> <li>Polishing Powder</li> </ul>	14%	19,100
<ul> <li>Glass Additives</li> </ul>	6%	7,800
<ul><li>Phosphors</li></ul>	6%	7.900
• Others	4%	5,700
Total	100%	136,100t REO



Total = US\$7.8 billion







Source: Non China market = aggregate of estimated manufacturer demand by application, China Market = IMCOA and China Rare Earths Information Centre.

Note: Totals may not add due to rounding.

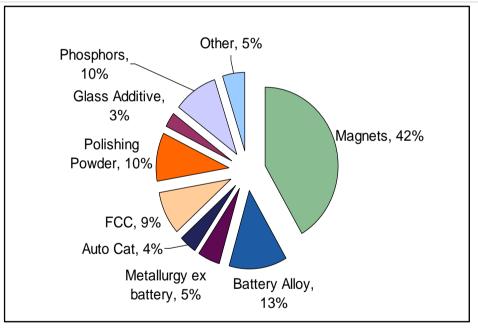






#### GROWTH FORECAST BY APPLICATION 2014 DEMAND FORECAST BY APPLICATION

Application	Growth rate p.a. (%)	Demand (t)
<ul> <li>Magnets</li> </ul>	12%	55,100
<ul> <li>Battery Alloy</li> </ul>	15%	32,500
• Metallurgy ex bat	t 2%	12,700
<ul> <li>Auto catalysts</li> </ul>	8%	12,200
• FCC	4%	24,900
Polishing Powder	r 10%	28,000
<ul> <li>Glass Additives</li> </ul>	0%	7,800
<ul><li>Phosphors</li></ul>	8%	10,800
• Others	8%	6,100
Total	9%	190,100t REO



Total = US\$11.2 billion



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Source: Growth rates from industry participants and Roskill.

Note: Totals may not add due to rounding.



## Looming crisis - Rare Earths supply will be outstripped by demand; 115kt REO in 2010



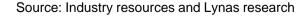
CHINESE SUPPLY SOURCE	<u>:S</u>	NON CHINESE SUPPLY SOURCE	<u>ES</u>
(2010 CAPACITY, REO)  Baotou  By product of iron ore mi Moving to higher grade in lower impurities and Ran Tailing facilities near cap Sichuan Jiangxi Copper to invest	ron, with e Earths acity <b>10,000t</b>	<ul> <li>(2010 CAPACITY, REO)</li> <li>India         <ul> <li>Subsidiary of Indian AEA</li> <li>Toyota Tsusho bought trading firm with Japanese distribution</li> </ul> </li> <li>Russia         <ul> <li>Limited expansion capacity</li> </ul> </li> </ul>	3,000t 4,000t
<ul> <li>Target to increase value</li> <li>Capacity expected to inclinic clay regions</li> <li>Reportedly 14 yrs of reso</li> </ul>	rease <b>35,000</b> t	<ul> <li>By product of Mg production</li> <li>Recycling</li> <li>Magnet swarf</li> <li>Batteries – future potential</li> </ul>	1,500t
<ul> <li>Large amount of illegal n</li> <li>Government action takin</li> <li>Recycling</li> </ul>	nining	<ul> <li>USA – Mountain Pass</li> <li>Reprocessing stockpiles</li> <li>Requires approx.</li> <li>US\$530 million rebuild</li> </ul>	3,000t
Total	103,300t	Total	11,500t



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### Our assumptions show global supply at 170kt by 2014, compared to demand of 190kt



#### 2014 FORECAST SUPPLY ASSUMPTIONS

SUPPLY SOURCES	
<ul> <li>Baotou</li> </ul>	60,000t
• Sichuan	20,000t
<ul> <li>Ionic Clay Regions</li> </ul>	30,000t
Recycling in China	4,000t
China Total	114,000t
<ul> <li>Mount Weld</li> </ul>	22,000t
<ul> <li>Mountain Pass</li> </ul>	20,000t
<ul> <li>Others (India &amp; Russia)</li> </ul>	12,000t
Recycling outside China	1,800t
Outside China Total	55,800t
Grand Total	169.800t

#### **KEY UNDERLYING ASSUMPTIONS**

- Baotou 10% production increase 2010 / 2014
- Sichuan full production quota to be utilised
- Iconic Clay 2010 reduced from 2008 reported levels due to news reports. 2014 reduced to double current production quota (conservative estimate, could be lower)
- Mountain Pass full production (20,000tpa) achieved
- Recycling 20% Nd, Pr & Dy recycled from previous year's magnet production (~30% SWARF losses)



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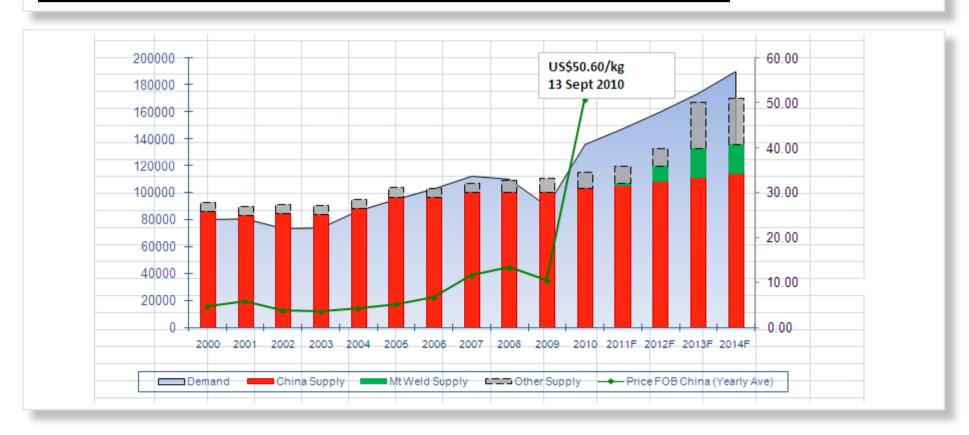




## As supply tightened in 2008 prices increased, in 2009 demand dipped, prices are now soaring



#### **HISTORIC AND FORECAST SUPPLY, DEMAND AND PRICING**











### Applications use different Rare Earths, the supply distribution does not match demand distribution



#### **RARE EARTHS USAGE BY APPLICATION**

Application	La	Се	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Υ	Other
Magnets			23.4%	69.4%			2%	0.2%	5%		
Battery Alloy	50%	33.4%	3.3%	10%	3.3%						
<ul> <li>Metallurgy ex batt</li> </ul>	26%	52%	5.5%	16.5%							
<ul> <li>Auto catalysts</li> </ul>	5%	90%	2%	3%							
• FCC	90%	10%									
<ul> <li>Polishing Powder</li> </ul>	31.5%	65%	3.5%								
<ul> <li>Glass Additives</li> </ul>	24%	66%	1%	3%						2%	4%
• Phosphors	8.5%	11%				4.9%	1.8%	4.6%		69.2%	6
• Ceramics	17%	12%	6%	12%						53%	
• Others	19%	39%	4%	15%	2%		1%			19%	







Note: percentages represent estimated average consumption distribution by application; actual distribution will vary from manufacturer to manufacturer.



#### Elemental Pinch Points based on Lynas estimated Demand and Supply for 2010



### SUPPLY VS DEMAND (REO, SEPARATED PRODUCTS)

#### SUPPLY/DEMAND IMBALANCE (REO, SEPARATED PRODUCTS)

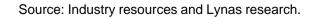
		Demand vs	Supply			
•	Lanthanum	42,800t	28,200t	<ul> <li>Lanthanum</li> </ul>	-14,600t	-34%
•	Cerium	43,500t	38,200t	<ul> <li>Cerium</li> </ul>	-5,300t	-12%
•	Praseodymium	10,600t	6,400t	<ul> <li>Praseodymium</li> </ul>	-4,200t	-40%
•	Neodymium	29,400t	22,400t	<ul> <li>Neodymium</li> </ul>	-7,000t	-24%
•	Samarium	700t	2,800t	<ul> <li>Samarium</li> </ul>	over supply	
•	Europium	410t	330t	<ul> <li>Europium</li> </ul>	-80t	-20%
•	Gadolinium	900t	2,200t	<ul> <li>Gadolinium</li> </ul>	over supply	
•	Terbium	440t	310t	<ul> <li>Terbium</li> </ul>	-130t	-30%
•	Dysprosium	1,800t	1,800t	<ul> <li>Dysprosium</li> </ul>	in balance	
•	Yttrium	7,900t	10,500t	<ul> <li>Yttrium</li> </ul>	over supply	
•	Total	138,450t	113,140t			
		,	,	- i tuituiii	over supply	



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## 2014 Elemental Pinch Points, maximum China supply plus two new resources— shortages remain



#### SUPPLY VS DEMAND (REO, SEPARATED PRODUCTS)

#### SUPPLY/DEMAND ESTIMATED IMBALANCE (REO, SEPARATED PRODUCTS)

	<u>Demand</u>	<u>vs</u> Supply			
<ul> <li>Lanthanum</li> </ul>	57,100t	43,400t	<ul> <li>Lanthanum</li> </ul>	- 13,700t	-24%
<ul> <li>Cerium</li> </ul>	59,000t	66,500t	<ul> <li>Cerium</li> </ul>	Oversupply	
<ul> <li>Praseodym</li> </ul>	nium 16,100t	9,100t	<ul> <li>Praseodymium</li> </ul>	-7,000t	-43%
<ul> <li>Neodymiun</li> </ul>	n 45,400t	31,200t	<ul> <li>Neodymium</li> </ul>	-14,200t	-31%
• Samarium	1,200t	3,500t	<ul> <li>Samarium</li> </ul>	Oversupply	
• Europium	560t	450t	<ul> <li>Europium</li> </ul>	-110t	-20%
Gadolinium	1,400t	2,300t	<ul> <li>Gadolinium</li> </ul>	Oversupply	
<ul> <li>Terbium</li> </ul>	620t	330t	<ul> <li>Terbium</li> </ul>	-290t	-47%
<ul> <li>Dysprosium</li> </ul>	n 2,800t	1,700t	<ul> <li>Dysprosium</li> </ul>	-1,100t	-39%
• Yttrium	10,700t	9,500t	<ul> <li>Yttrium</li> </ul>	-1,200t	-11%
• Total	194,880t (26,900t	•			



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Source: Industry resources and Lynas research.



## Our assumptions show global supply at 170kt by 2014, compared to demand of 190kt



#### **GROWTH FORECAST BY APPLICATION**

#### **2014 FORECAST SUPPLY ASSUMPTIONS**

APPLICATION	GROWTH RATE P.A.	DEMAND	SUPPLY SOURCES	SUPPLY
Magnets	12%	55,100t	<ul> <li>Baotou</li> </ul>	60,000t
Battery Alloy	15%	32,500t	<ul> <li>Sichuan</li> </ul>	20,000t
Metallurgy ex batt	2%	12,700 t	<ul> <li>Ionic Clay Regions</li> </ul>	30,000t
Auto catalysts	8%	12,200t	Recycling in China	4,000t
FCC	4%	24,900t	China Total	114,000t
Polishing Powder	10%	28,000t		,
Glass Additives	0%	7,800t	Mt Weld	22,000t
Phosphors	8%	10,800t	<ul><li>Mt Pass</li></ul>	20,000t
Others	8%	6,100t	<ul> <li>Others (India &amp; Russia)</li> </ul>	12,000t
			<ul> <li>Recycling outside China</li> </ul>	1,800t
			Outside China Total	55,800t
Total	9%	190,100t	Grand Total	169,800t



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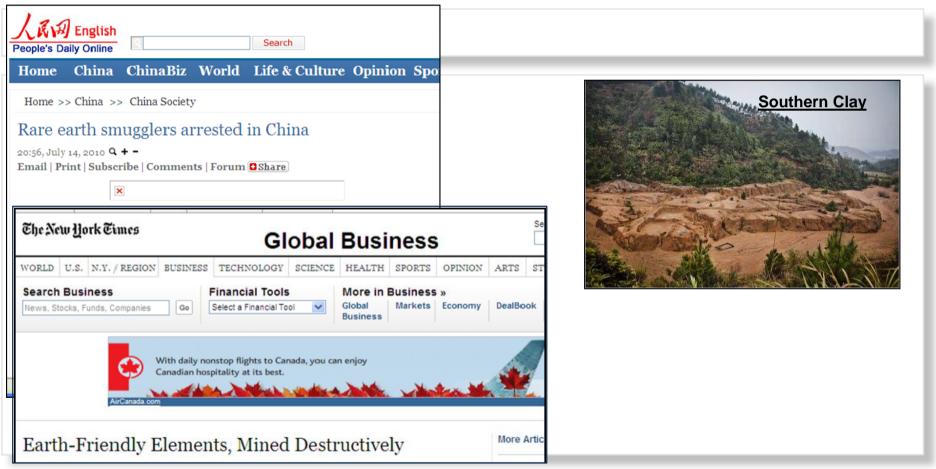




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## Environmental impact not sustainable, illegal smuggling not sustainable











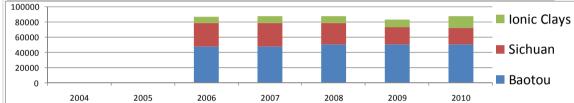


## China aims to improve "return on resources" as well as tackle environmental performance

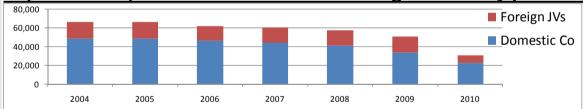


#### **COMPETITION – CHINA POLICY**

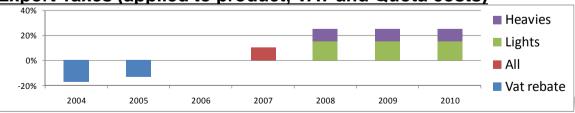
#### **Production Quota (Tonnes REO contained within concentrate)**



#### **Export Quota (Tonnes of Rare Earths bearing commodity product)**



#### **Export Taxes (applied to product, VAT and Quota costs)**



- No prospecting or mining licences for Rare Earths until July 2011.
- China will control its production capacity of Rare Earths between 120,000t and 150,000t until 2015, and will not build any new production capacity without government approval (MIIT).
- Recognition by government of grey exports without quota; 20,000t in 2008.



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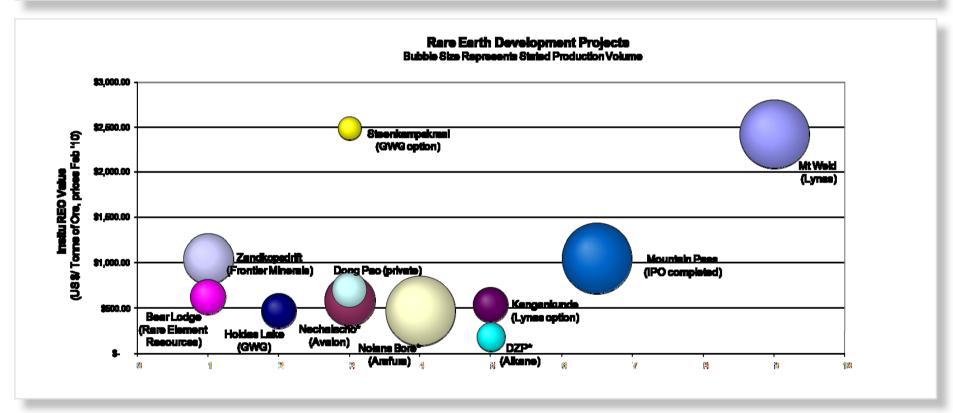




## Lynas is the leader in defined Rare Earths resources in development outside China



#### COMPARING SIZE AND PROGRESS OF GLOBAL RARE EARTHS PROJECTS









Source: the data for non-Mount Weld deposits is based on public statements by the relevant resource holders except for Dong Pao which is based on a company interview, and has not been separately verified by Lynas. \* Represents a polymetallic resource.



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### Lynas will offer the first new source of supply of Rare Earths outside of China - Q3 2011



#### LYNAS VITALS AT A GLANCE

VISION: To be a global leader in Rare Earths for a

sustainable future

**EXCHANGE:** ASX Top 200 Company; code LYC

SHARES: 1,657m on issue

**OPTIONS:** 77m strike range 16c - \$1.15

MARKET CAP: A\$2.2bn as at 13 Sept 2010

**CASH:** A\$405m as at 30 June 2010

**DEBT:** Nil















#### Lynas is on track for production in Q3 2011



#### **KEY MILESTONES TO ENSURE A RELIABLE SOURCE OF RARE EARTHS**

- Lynas raised A\$450 million in the equity markets to fund the completion of its project
- All approvals in Australia and Malaysia in place to complete construction of processing plants
- Mechanical Engineering Design complete
- All major equipment procured
- Construction work is well underway in both Australia and Malaysia
- Mount Weld Concentration Plant due to be commissioned in January 2011
- Lynas Advanced Materials Plant (LAMP) due to be commissioned in July September 2011









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## The products are set for Phase 1; Lynas has product flexibility in phase 2



PHASE 1 11,000t REO PRODUCTS	VOLUMES (tpa)
Ce carbonate	2,600
La carbonate	1,350
Ce / La carbonate	4,000
Nd / Pr oxide	2,700
SEG + Heavy Rare Earths	480
PHASE 2 ADDITIONAL 11,000t REO PRODUC	TS
Ce carbonate, oxide	
La carbonate, oxide	
Ce / La carbonate, oxide, potential for metal	
Nd oxide and Pr oxide, potential for metal	
Separated SEG + Heavy Rare Earths	









#### Rare Earths Mineral Resources at Mount Weld; New Total Resource of 1.416 million tonnes REO



CENTRAL LANTHANIDE DEPOSIT CATEGORY	'000 TONNES	REO %*	TLnO (%)**	Y203(ppm)
Measured	3,550	14.4	14.3	820
Indicated	1,440	8.2	8.1	960
Inferred	4,884	8.6	8.5	1,120
Total	9,880	10.7	10.6	990
DUNCAN DEPOSIT CATERGORY	'000 TONNES	REO %*	TLnO (%)**	Y203(ppm)
Measured	3,650	5.5	5.2	2,700
Indicated	3,560	4.1	3.9	2,460
Inferred	410	4.3	4.1	2,360
Total	7,620	4.8	4.5	2,570
TOTAL RARE EARTHS MINERAL RESOURCE	'000 TONNES	REO %*	TLnO (%)**	Y203(ppm)
Measured	7,200	9.8	9.7	1,770
Indicated	5,000	5.3	5.1	2,020
Inferred	5,290	8.3	8.2	1,210
Total	17,490	8.1	7.9	1,680



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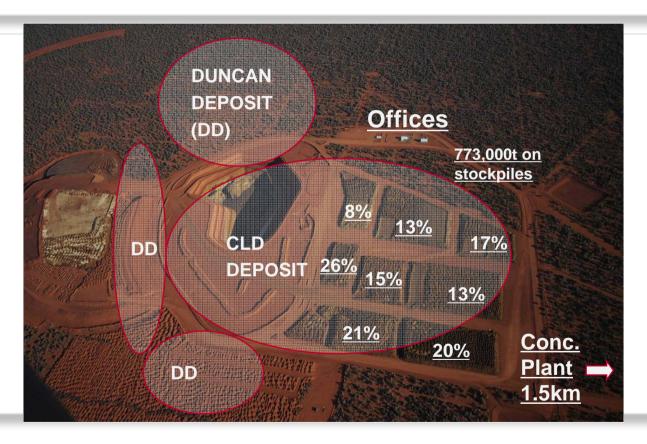
<sup>\*</sup>REO (%) includes all the lanthanide elements plus Yttrium

<sup>\*\*</sup> TLnO (%) includes all the lanthanides elements only (i.e. Yttrium is not included)

## Mount Weld Rare Earths initial mining campaign complete, loss-time-injury-free, on budget



#### MOUNT WELD STOCKPILES WITH RARE EARTH OXIDE PERCENTAGES





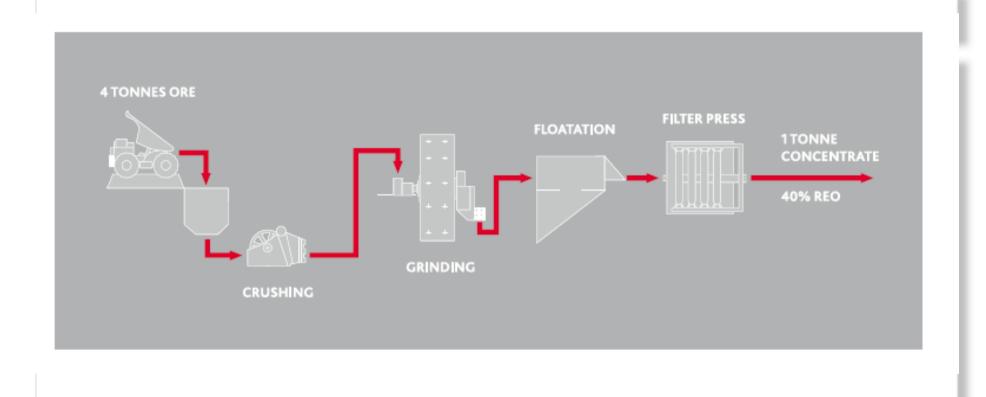






## Schematic - Concentration Plant process at Mount Weld, which has been fully pilot plant tested













## Concentration Plant construction is on schedule to be completed in December 2010



#### FEATURES OF CONSTRUCTION AT THE CONCENTRATION PLANT



Flotation Building under construction









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## Concentration Plant construction is on schedule to be completed in December 2010



#### FEATURES OF CONSTRUCTION AT THE CONCENTRATION PLANT



**Conditional Filter Press** 



**Con Thickner and Concentration Dewatering Area** 







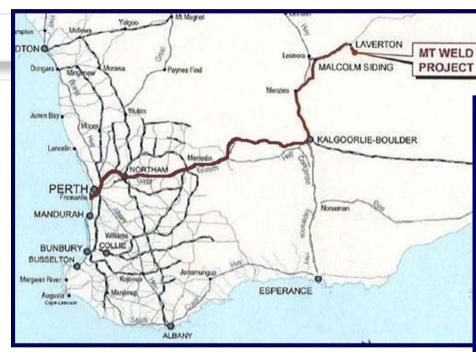


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#### Containers of Rare Earths concentrate will be trucked to Fremantle for shipping to Malaysia



**MALAYSIA** 





PENANG

THAILAND

KELANTAN



• Transportation approx. 9% of total costs







## Lynas will expand the Malaysian processing hub, with the ability to take multiple sources of material



#### PROCESSING HUB WITH EXCEPTIONAL INFRASTRUCTURE

#### INDUSTRIAL INFRASTRUCTURE

**KNOWLEDGE INFRASTRUCTURE** 

#### **GOVERNMENT INFRASTRUCTURE**

Including FDI incentives(12 years tax exemption for pioneer status)





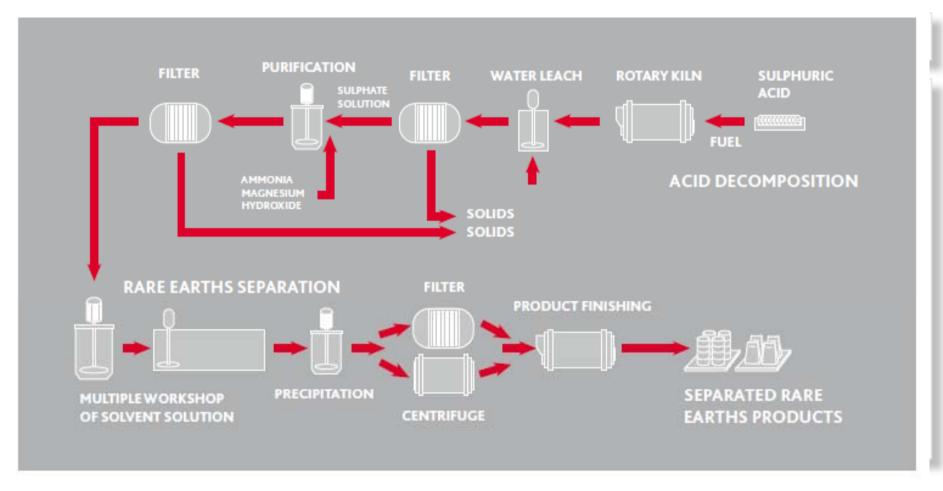






## Schematic - Lynas Advanced Materials Plant core process, which uses mature industry technology













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#### We are industrialising our operations to meet our customers' expectations



#### **FOUR PILLARS UNDERPINNING LYNAS' OPERATIONS**

#### **Marketing and Sales**

Serving long-term customer requirements and commitments, and thus providing input for plant extensions and new facilities.

#### Industrial

Key value drivers are responsible care, customer satisfaction, asset optimisation and growth management.

#### **Research and Technologies**

Working with customers to analyse and develop technologies to enable a cost-effective product offering

#### **Business Excellence**

Providing and optimising services to support cost-effective operations at the processing plants.











## Expansion beyond first production will be driven by customer requirements and commitments



#### **HOW LYNAS WILL COST-EFFECTIVELY EXPAND**

- Lynas plans to at least double production.
- Product range within the Lynas product suite will also be expanded.
- Our customers' requirements and commitments drive our business development strategy.











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### First feed to kiln at the Lynas Advanced Materials Plant is scheduled for Q3 2011



#### **FEATURES OF CONSTRUCTION AT THE LAMP**



**Concrete pour of the Gas Treatment Plant** 



Blinding slab being prepared for concrete





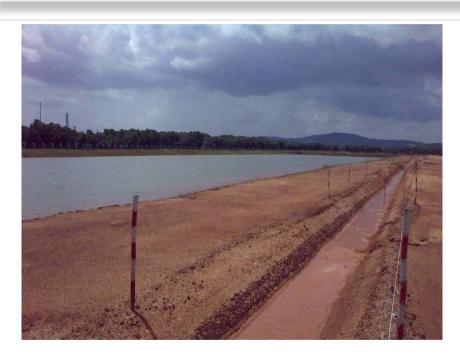




### First feed to kiln at the Lynas Advanced Materials Plant is scheduled for Q3 2011



#### **FEATURES OF CONSTRUCTION AT THE LAMP**



Lynas-constructed stormwater detention pond



**Concrete Batch Plants** 









#### Six customer agreements have been signed



- >US\$200M¹
- Long term 10 year contract
- Cerium, Europium, Terbium & Lanthanum

#### 2nd Customer Agreement - Supply Contract

- ~US\$200M¹
- Long term 5 year contract
- Neodymium & Praseodymium

#### 3rd Customer Agreement - Supply Contract

• ~US\$20M1

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- Long term multiple year contract
- Product from Phase I & Phase II of final separation and product finishing plant in Malaysia

#### **6th Customer Agreement – Supply Contract**

- · Long term multiple year contract
- Product from Phase I & Phase II of final separation and product finishing plant in Malaysia

#### 5th Customer Agreement – Letter of Intent

- ~US\$80M¹
- Long term multiple year contract
- Product from Phase I & Phase II of final separation and product finishing plant in Malaysia

#### 4th Customer Agreement – Letter of Intent

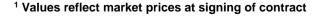
- ~US\$80M¹
- Long term multiple year contract
- Product from Phase I & Phase II of final separation and product finishing plant in Malaysia

#### FOUR SUPPLY CONTRACTS AND TWO LETTERS OF INTENT SIGNED







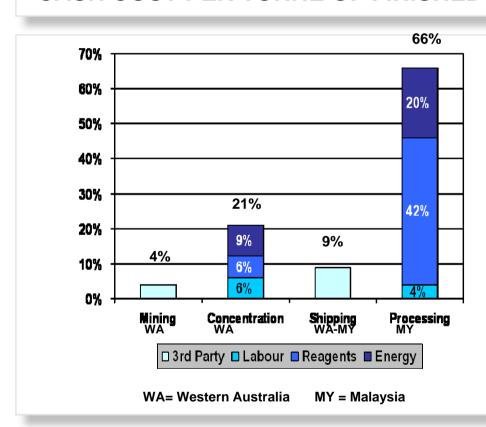




## Operational expenses are dominated by reagent and energy costs



#### CASH COST PER TONNE OF FINISHED REO BY EXPENSE TYPE AND REGION



- Current Budget assumes cash costs of USD 7.00 per kilo ± 10%
- 2/3 of the costs are generated in Malaysia
- Reagents account for nearly 50% of total cash costs
- Followed by energy costs at nearly 30%



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## Lynas' finances are in good shape as at the end of August 2010

CONSTRUCTION AND OTHER	TOTAL	TO DATE	FUTURE SPEND
CAPITAL COSTS	AUD \$M	AUD \$M	AUD \$M
Concentration Plant	61.39	24.77	36.62
Lynas Advanced Materials Plant (LAMP)	232.40	52.06	180.34
Engineering and Project Management Costs	136.40	97.50	38.90
Other Capex including Land in Malaysia	73.08	49.55	23.53
Contingency	25.81	2.79	23.02
Total	529.08	226.67	302.41
DRODUCTION DAMP UP COSTS			FUTURE SPEND
PRODUCTION RAMP-UP COSTS			AUD \$M
Concentration Plant			21.47
Lynas Advanced Materials Plant (LAMP)			26.05
Finance, Admin, Marketing, Technical and Corporate	Overheads (incl. suspension of	costs)	17.60
Total			65.12
TOTAL CASH REQUIREMENTS TO START OF PR	ODUCTION		367.53
Cash on Hand 31 August 2010			376.12
OCBC Facility (RM 50M revolving credit facility + RM	10M overdraft)		21.28
CASH ON HAND PLUS OCBC FACILITY			397.40
HEADROOM + CONTINGENCY			52.89

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## Lynas – online in 2011, delivering Rare Earths globally



Our vision is to be a global leader in Rare Earths for a sustainable future.

We are close to realising this vision.

Lynas will be online in 2011, delivering Rare Earths globally. This is the first new production outside of China.

First phase of production will be 11,000 REO; we intend to double our production by early 2013.











#### NOTE

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#### **RARE EARTHS**

WE TOUCH THEM EVERYDAY – APPENDIX































## New generation, >3MW, wind turbines are using permanent magnet turbines



#### WIND TURBINES ARE A GROWTH DRIVER FOR MAGNETS



- 120GW global wind generation in 2008
- 18% annual growth forecast to 2020 to 700GW
- Turbines scaling to 3MW plus, key differentiator
- Generator technology moving to Permanent Magnets (PM) for larger turbines and offshore
- Lighter, smaller, lower maintenance
- 400 units p.a. in 2008 (2% market)
- Growing to 4,300 units p.a. in 2020 (16% market)
- Each 3MW PM turbine uses 1 ton of neodymium









## The appl

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## The forecast growth of hybrids is a competing application for supply of magnets



#### BROKER FORECASTS FOR HYBRIDS WITH LYNAS REO REQUIREMENTS

Estimated production for	r hvbrid veh	icles (m	nillions o	of units)								
Broker	Date	2010E	2011E	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
Bank of America Merrill Lynch	25-May-10	1.4	1.9	2.2	2.7	3.1	3.8	4.3	4.9	5.5	6.1	6.6
Yuanta	24-May-10	1.4	1.9	2.3	2.4	2.5	2.9	3.3	3.5	3.7	4.2	4.6
Deutsche Bank	3-Nov-09	1.3	1.8	2.7	3.7	4.6	5.6	7.7	10.2	12.7	15.1	17.3
Morgan Stanley	3-Nov-09	0.7	-	1.1	-	-	1.9	-	-	-	-	5.2
Bank of China International	26-Aug-09	0.9	1.2	1.4	1.6	1.9	-	-	-	-	-	-
Mean		1.2	1.7	1.9	2.6	3.0	3.6	5.1	6.2	7.3	8.4	8.4
Median		1.3	1.9	2.2	2.7	3.1	3.8	6.0	4.9	5.5	6.1	5.9
	40,000	-				Total RE	O (t)					
	20,000	23,400t 5,850t										
JP Morgan research		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020









## Lighting is the largest of the phosphor markets, but all are forecast to grow strongly



#### PHOSPHORS: 2008 CONSUMPTION BY APPLICATION AND TECHNOLOGY THREATS

Lighting : 4981t			LCD : 729t			Plasma : 227t		
Red	Green	Blue	Red	Green	Blue	Red	Green	Blue
3850t	1115t	16t	421t	295t	13t	149t	74t	4t
Y/Eu oxide	La/Ce/Tb oxide	Eu oxide	Y/Eu oxide	La/Ce/Tb oxide	Eu oxide	Y/Eu/Gd oxide	Y/Tb/Gd oxide	Eu oxide
<ul> <li>Lighting technology relatively stable</li> <li>Potential Tb decrease by 40% with phosphor technology shift</li> <li>Growth rates ~ 12% p.a.</li> </ul>			<ul> <li>LED back lighting now in market</li> <li>Potential phosphor technology shift may decrease growth</li> <li>OLED threating</li> <li>Growth rates ~ 22% p.a.</li> </ul>			<ul> <li>Technology stable</li> <li>Growth rates ~ 22% p.a.</li> </ul>		



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## It is not about size of resource, it is about getting into production.



#### THE DRIVERS OF THE POTENTIAL SHORTAGE

- Shortage occurs when supply as a function of time can no longer keep up with demand as a function of time.
- The ultimate recoverable resource in the ground is irrelevant in this respect.
- We have reached this point in the Rare Earths industry
  - Current resources are struggling to maintain production
  - Growth forecasts are greater than new supply coming to market
- Mineral scarcity is expected to be an aspect of this industry for at least the next five years
  - There are insufficient well advanced new projects in the pipeline
    - ✓ Lynas Mount Weld





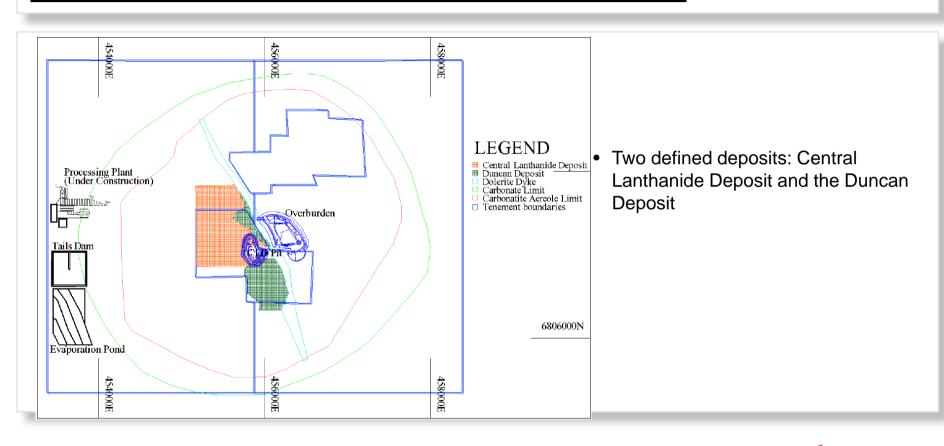




### The current mining operation at Mount Weld is within the Central Zone Pit



#### RARE EARTHS MINERAL RESOURCES AT MOUNT WELD











## Mount Weld current pit floor is 51m below surface, the mine plan pit floor is another 36m down





- Red layer alluvial overburden
- Yellowish layer Rare Earths ore
- Pit extensions to North and West in addition to depth









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