

1 May 2012

The Manager Company Announcements Office Australian Securities Exchange 4th Floor, 20 Bridge Street SYDNEY NSW 2000

### **INVESTOR PRESENTATION – APRIL 2012**

Attached please find an Investor Presentation which provides an update on the Company's projects.

Hastings representatives will be presenting at:

### Proactive Investors One2One Forum Radisson Blu Hotel Cnr Pitt & O'Connell Street Sydney 4.30pm on 2 May 2012.

Investors interested in discussing the Company's projects should contact the Technical Director, Steve Mackowski, on + 61 2 9078 7674.

Guy Robertson Company Secretary

Register for the Proactive Investors One2One Forum on

http://www.proactiveinvestors.com.au/register/event\_details/42

# Investor Presentation Supplying Critical Metals For New Technologies

**April 2012** 



www.hastingsraremetals.com



### **Important Information**

All currency amounts are in AUD\$ unless stated otherwise.

### Disclaimer

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#### Future matters

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Those intentions, expectations, future plans, strategy and prospects may or may not be achieved. They are based on certain assumptions, which may not be met or on which views may differ and may be affected by known and unknown risks. The performance and operations of the Company may be influenced by a number of factors, many of which are outside the footrol of the Company. No representation or warranty, express or implied, is made by the Company, or any of its directors, officers, employees, advisers or agents that any intentions, expectations or plans will be achieved either totally or partially or that any particular rate of return will be achieved.

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#### Competent Person's Statement

The information in this presentation that relates to Mineral Resources is based on information compiled by Simon Coxhell. Mr. Coxhell is employed as a consultant to the Company and a member of the Australian Institute of Mining and Metallurgy. Mr. Coxhell has sufficient experience relevant to the styles of mineralisation and types of deposits which are covered in this presentation and to the activity which they are 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' ("**JORC Code**"). Mr. Coxhell consents to the inclusion in this presentation of the matters based on his information in the form and context in which it appears.

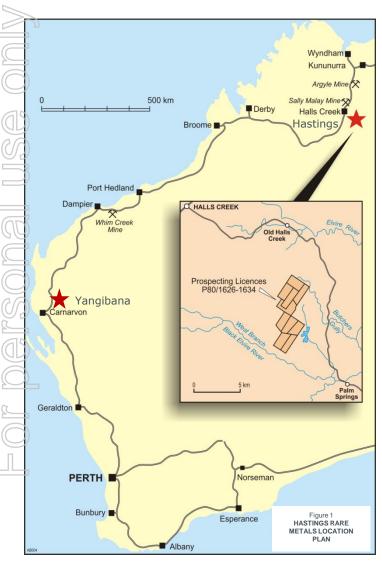
### **Exploration Targets**

The terms "Target" or "Exploration Target" where used in this presentation should not be misunderstood or misconstrued as an estimate of a Mineral Resource as defined in the JORC Code and therefore the terms have not been used in this context. Exploration Targets are conceptual in nature, there has been insufficient exploration to define a Mineral Resource and it is uncertain further exploration will result in the determination of a Mineral Resource.

### **US** disclosure

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## Hastings Overview

Hastings Rare Metals Limited (HAS) has two Rare Earth Projects in WA, both recognised by GeoScience Australia as key REO deposits. Both deposits remain open at depth and along strike.

### Hastings Project 100%

- Hastings Project (WA) is Australia's largest Heavy Rare Earth project\*, and includes significant Dysprosium and Yttrium, with Niobium and Zirconium byproducts.
- 2011 drilling defined JORC-compliant Indicated and Inferred Resources totalling:

36.2 million tonnes @2102ppm (0.21%) Total Rare Earth Oxides (**TREO**)including 85% Heavy Rare Earth Oxides (**HREO**)

3546ppm (0.35%) Nb<sub>2</sub>O<sub>5</sub>

8913ppm (0.89%) ZrO<sub>2</sub>

- Over \$10m previously spent on the project
- Historical metallurgical results from pilot plant tests show recoveries of around 75% for Dysprosium and Yttrium, 80% for Niobium and Zirconium
- Metallurgical test work is ongoing on samples prepared from the 2011 drilling programme

### Yangibana Project 60%

- Yangibana Project (WA) (206 sq. km under Exploration Licences) average grades of circa all 1.7%-2.0% TREO with high proportion of Neodymium (24%)
- \* HREO projects defined as > 35% HREO:TREO

Hastings Projects, Western Australia



### **Board Members**

## **Board & Advisers**

### David Nolan (Chairman)

Mr Nolan is a corporate lawyer with over 13 years experience advising on corporate acquisitions, capital raisings and financing for mining companies. Mr Nolan leads the Sydney corporate advisory practice of Mills Oakley Lawyers and was previously a senior adviser at the London Stock Exchange. Mr Nolan has extensive experience advising on corporate governance and legal compliance for small to medium cap listed companies.

### Steve Mackowski (Technical Director)

Mr Mackowski joined Hastings after serving at rare earths company Arafura Resources Ltd as General Manager Project Development & Technology. Mr Mackowski is a qualified engineer in mineral processing with over 30 years technical and operational experience in rare earths, uranium, industrial minerals, nickel, kaolin and iron ore. He has also worked at a number of major mining companies including, Iluka, TiWest, WMC, Comalco, Hamersley Iron and Mary Kathleen Uranium Ltd.

### **Tony Ho (Non-Executive Director)**

Mr Ho is an experienced company director having held numerous executive directorships and chief financial officer roles including Brazin Ltd. Mr Ho is currently a non-executive Director of Dolomatrix International Limited and a non-executive Director of rare earths and uranium development company Greenland Minerals and Energy Limited. He is also the non-executive Chairman of Apollo Minerals Limited.

### Guy Robertson (Chief Financial Officer/Company Secretary)

Mr Robertson is an experienced Company Director with over 25 years experience as a CFO and Company Secretary for mining exploration companies. Mr Robertson's previous roles include Finance Director of Jardine Lloyd Thompson, Chief Operating Officer of Collier Jardine Asia Pacific and General Manager of Franklins Limited.

### **Advisory Board**

### **Tony Grey**

Mr Grey is a corporate advisor and professional company director specialising in the provision of strategic advice. His corporate career spans numerous appointments including a diverse range of highly successful rare metal companies. He is presently the Chairman of International Ferro Metals Limited and a Director of International Potash Corporation. He is the former Managing Director of Pancontinental Mining Limited and Chairman of Kingsgate Consolidated Limited. He was also the former Chairman of the World Nuclear Association (previously called the Uranium Institute).

### **Dr. Tony Mariano**

Dr. Mariano is a geological consultant to the rare metal and rare earth mineral industry and is considered the preeminent authority on the geology and mineralogy of rare earths, niobium, tantalum, and other rare metals. Dr. Mariano has a PhD in geology from Boston University, has consulted to the United Nations, the United States Government, many of the world's rare metal and rare earth explorers and developers including Union Carbide Corporation and Molycorp Inc., and has authored and co-authored many technical publications on rare earths. During his time with Molycorp, Dr. Mariano spent time evaluating the Hastings Project.



## Hastings Project A Highly Experienced Project Team

### Steve Mackowski (Technical Director)

Mr Mackowski joined Hastings after serving at rare earths company Arafura Resources Ltd as General Manager Project Development & Technology. Mr Mackowski is a qualified engineer in mineral processing with over 30 years technical and operational experience in rare earths, uranium, industrial minerals, nickel, kaolin and iron ore. He has also worked at a number of major mining companies including, Iluka, TiWest, WMC, Comalco, Hamersley Iron and Mary Kathleen Uranium Ltd.

**ANSTO** (Australian Nuclear Science Technology Organisation) - flow sheet developers for Lynas, Arafura Resources and recently concluded the successful development of the flow sheet and pilot plant for Dubbo Zirconia (Alkane).

Jacobs Engineering – A world leader in process and project development

AMMTEC – Analytical laboratory and technical services

**NAGROM** – Mineral processing and metallurgical testing

SGS – Laboratory and environmental services

### Andy Border (Exploration Manager)

Mr Border is a geologist with over 30 years experience in the exploration and mining industry covering a wide range of commodities and projects from grass-roots exploration through to development and mining. Previous exploration roles include evaluation of significant gold, copper, rare metals and industrial mineral projects. Andy has been managing the exploration efforts together with Simon Coxhell.

For persor



# **Capital Structure**

ASX Code - HAS	
Ordinary Shares	125.26 million
Unlisted Options	15m at 40 cents
Unlisted Options	37m at 25 cents
Unlisted Options	20.6m at 15 cents
Cash at hand (12 April 2012)	A\$4 million approx.

Trading Summary	
Market Capitalisation (12 April 2012)	A\$17.5m
Last Price	14c

Тор 20	59%
Kongoni	19%
Singapore investment funds	12%
Japanese REE fund	6.4%
Board/Management	7%





### **Rare Earths and Rare Metals**

**Periodic Table of the Elements** 

1A 1 <b>H</b>												© 2009		about.com Imenstin			8A 2 <b>He</b>
1.00794 Hydrogen	2A											3A	4A	5A	6A	7A	4.002602 Helium
3 Li 6.941 Lithium	4 <b>Be</b> 9.012182 Beryllium					Ear		<b>`</b>		are		5 <b>B</b> 10.811 Boron	6 <b>C</b> 12.0107 Carbon	7 <b>N</b> 14.0067 Nitrogen	8 <b>O</b> 15.9994 Oxygen	9 <b>F</b> 18.9984032 Fluorine	10 <b>Ne</b> 20.1797 Neon
11 Na 22.989769 Sodium	12 Mg 24.3050 Magnesium	3В 🔰		5B	ng <sub>6B</sub>	7B	30	<b>)</b> — 8B —		tals	2B	13 AI 26.9815386 Aluminum	14 Si 28.0855 Silicon	15 P 30.973762 Phosphorus	16 <b>S</b> 32.065 Sulfur	17 CI 35.453 Chlorine	18 Ar 39.948 Argon
19 K 39.0983 Potassium	20 <b>Ca</b> 40.078 Calcium	21 Sc 44.955912 Scandium	22 <b>Ti</b> 47.867 Titanium	23 V 50.9415 Vanadium	24 <b>Cr</b> 51.9961 Chromium	25 Mn 54.938045 Manganese	26 Fe 55.845 Iron	27 <b>Co</b> 58.933195 Cobalt	28 <b>Ni</b> <sup>58.6934</sup> Nickel	29 Cu 63.546 Copper	30 Zn 65.38 Zinc	31 <b>Ga</b> 69.723 Gallium	32 Ge 72.64 Germanium	33 <b>As</b> 74.92160 Arsenic	34 Se 78.96 Selenium	35 <b>Br</b> 79.904 Bromine	36 <b>Kr</b> 83.798 Krypton
37 <b>Rb</b> 85.4678 Rubidium	38 <b>Sr</b> 87.62 Strontium	39 <b>Y</b> 88.90585 Yttrium	40 <b>Zr</b> 91.224 Zirconium	41 <b>Nb</b> 92.90638 Niobium	42 Mo 95.96 Molybdenum	43 Tc [98] Technetium	44 <b>Ru</b> 101.07 Ruthenium	45 Rh 102.90550 Rhodium	46 Pd 106.42 Palladium	47 Ag 107.8682 Silver	48 Cd 112.411 Cadmium	49 <b>In</b> 114.818 Indium	50 <b>Sn</b> 118.710 Tin	51 <b>Sb</b> 121.760 Antimony	52 <b>Te</b> 127.60 Tellurium	53   126.90447 lodine	54 Xe 131.293 Xenon
55 <b>Cs</b> 32.9054519 Cesium	56 <b>Ba</b> 137.327 Barium	57-71 Lanthanides	72 <b>Hf</b> 178.49 Hafnium	73 <b>Ta</b> 180.94788 Tantalum	74 W 183.84 Tungsten	75 <b>Re</b> 186.207 Rhenium	76 <b>OS</b> 190.23 Osmium	77 <b>Ir</b> 192.217 Iridium	78 Pt 195.084 Platinum	79 Au 196.966569 Gold	80 Hg 200.59 Mercury	81 <b>TI</b> 204.3833 Thallium	82 Pb 207.2 Lead	83 <b>Bi</b> 208.98040 Bismuth	84 Po [209] Polonium	85 At [210] Astatine	86 <b>Rn</b> [222] Radon
87 <b>Fr</b> [223] Francium	88 <b>Ra</b> [226] Radium	89 103 Actinides	104 <b>Rf</b> [267] Rutherfordium	105 <b>Db</b> [268] Dubnium	106 Sg [271] Seaborgium	107 <b>Bh</b> [272] Bohrium	108 <b>HS</b> [270] Hassium	109 Mt [276] Meitnerium	110 <b>DS</b> [281] Darmstadtium	111 <b>Rg</b> [280] Roentgenium	112 Cp [285] Copernicium	113 Uut [284] Ununtrium	114 <b>Uuq</b> [289] Ununquadium	115 Uup [288] Ununpentium	116 <b>Uuh</b> [293] Ununhexium	117 <b>Uus</b> [294] Ununseptium	118 <b>Uuo</b> [294] Ununoctium
	Lantha Act	anides	57 La 138.90547 Lanthanum 89 AC [227] Actinium	58 Ce 140.116 Cerium 90 Th 232.03806 Thorium	59 Pr 140.90765 Praseodymium 91 Pa 231.03588 Protactinium	60 Nd 144.242 Neodymium 92 U 238.02891 Uranium	61 Pm [145] Promethium 93 Np [237] Neptunium	62 Sm 150.36 Samarium 94 Pu [244] Plutonium	63 Eu 151.964 Europium 95 Am [243] Americium	64 Gd 157.25 Gadolinium 96 Cm [247] Curium	65 <b>Tb</b> 158.92535 Terbium 97 <b>Bk</b> [247] Berkelium	66 Dy 162.500 Dysprosium 98 Cf [251] Californium	67 Ho 164.93032 Holmium 99 Es [252] Einsteinium	68 Er 167.259 Erbium 100 Fm [257] Fermium	69 Tm 168.93421 Thulium 101 Mcd [258] Mendelevium	70 Yb 173.054 Ytterbium 102 No [259] Nobelium	71 Lu 174.9668 Lutetium 103 Lr [262] Lawrencium
			Alkali Metals	Alka Ea		Basic Metal	Haloge	n Noble	e Gas <mark>No</mark>	n Metal	Rare Earth			ansition Metal			



## Value Drivers

HAS leads the way in valuable REE mix with HREE (Dysprosium and Yttrium) at Hastings and LREE (Neodymium) at Yangibana. These are classified as "critical" rare earths by the US Department of Energy (December 2010)

**Dysprosium** has been highlighted as being among the highest priority and most critical strategic metals now consumed world-wide for **high technology, clean energy applications and military**. The December 2010 report by the US Department of Energy named dysprosium as the single most critically threatened strategic metal to the United States. This situation has also been recognised in Europe and Asia.

**Yttrium** The most important use of yttrium is in making **phosphors**, such as the red ones used in television and tablet displays and in LEDs. Other uses include the production of electrodes, electrolytes, electric filters, lasers and superconductors.

**Neodymium** oxide is widely considered one of the three rare earth oxides with critical supply shortages looming in the **high performance magnet industry**.

### Also at Hastings

**Niobium** and tantalum commonly occur in the associated minerals columbite  $(Fe,Mn)Nb_2O_5$  and tantalite  $(Fe,Mn)Ta_2O_5$ . Main source of niobium however is pyrochlore  $NaCaNb_2O_6F$ . Niobium is an important alloying element in steels and Fe-Ni-Co based **superalloys**. Lesser use in diverse areas such as camera lenses and coating of glass for computer screens.

**Zirconium** occurs predominantly as the silicate mineral zircon  $ZrO_2$ . Used mostly in **ceramics**, foundry applications, opacifiers and **refractories**. Main growth areas are advanced ceramics and auto-exhaust catalysts. Significant use in nuclear energy industry in fuel rods and reactor vessel construction.

**Tantalum** occurs in wide range of minerals but any tantalum-bearing concentrate is commonly termed tantalite. Highly corrosion resistant and refractory. Used in cutting tools, mobile phones, high temperature alloys and furnace parts to computer hard drive discs.



### Implications of Substitution and Recycling on Future Growth

t Rare Earths Cerium Lanthanum **Dysprosium** Yttrium

Uses

Industrial Commodities Glass polishing Crude Oil cracking Rechargeable batteries





Neodymium Praseodymium Industrial Necessities Magnets used in wind turbines, electric / hybrid cars and hi-speed rail systems Energy efficient lights

Hi-Tech and Clean Energy **High Efficiency Magnets** Phosphors (LCD's) Military applications

**Heavy Rare Earths** 





### Market Direction Lower Prices

Recent prices have driven substitution. Proposed high volumes of new capacity will drive down prices and promote strong competition

Sustained good growth but recycling will occur soon at end of lifecycle in larger units

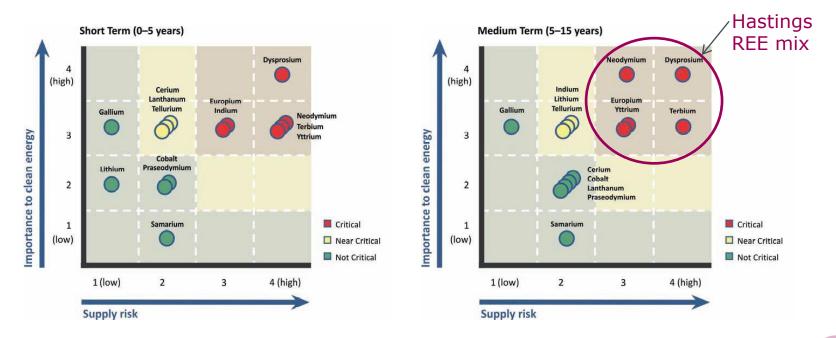
Prolonged high demand with no substitution or recycling due to high value applications but low use per item

**Higher Prices** 



# Heavy Rare Earths in Serious Undersupply

Critical Supply Matrix (US Department of Energy, December 2010)



- Hastings project includes significant resources of Dysprosium and Yttrium while Yangibana contains Neodymium, three of the critical rare earths (CREO).
- The Hastings project mineralisation contains 85% HREO to TREO the highest percentage of all advanced exploration projects\*.

<sup>\*</sup> Defined as projects with formally defined mineral resources or reserves under the guidelines of a relevant scheme such as the JORC code or NI43-101



## **Rare Earth Price History**



- Continued restrictions on exports and shortfall in supply/demand will support long term high HREO prices
- Further supply from new producers will threaten LREO prices and volume

\* Source: Metal Pages price average for the respective period. N.B prices are for a nominal 99% REO product, except for Europium which is reported at 99.9%

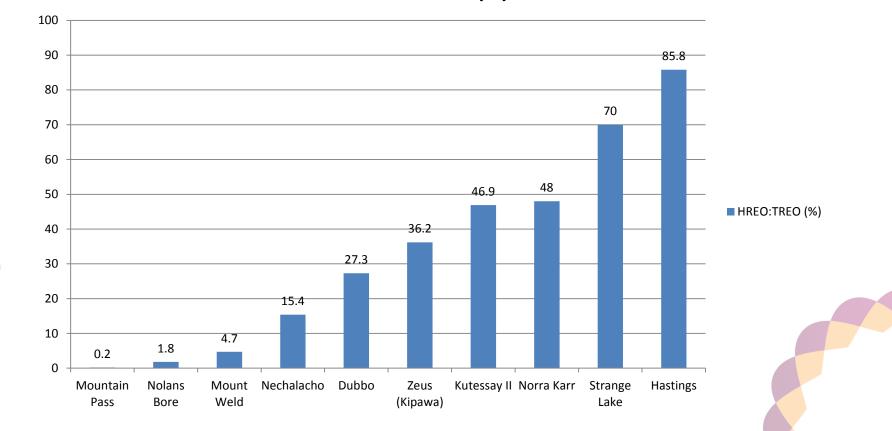


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## Hastings Project HREO Ratio – A Clear Advantage

HREO:TREO (%)



12



### Hastings Project Value Distribution

								alue	Dist	-	
2		HAST (H/	INGS AS)		A KARR SM)		IGE LK RM)	NECHA (A)	LACHO /L)		BBO LK)
D	\$/kg China		In Situ		In Situ		In Situ		In Situ		In Situ
Oxides	FOB*	% Dist	\$/kg	% Dist	\$/kg	% Dist	\$/kg	% Dist	\$/kg	% Dist	\$/kg
Lanthanum	28	1.6	0.45	10.1	10.44	7.5	2.10	17.1	4.80	22.9	6.42
Cerium	27	6.0	1.63	23.9	21.01	15.0	4.05	39.5	10.60	43.2	11.66
Praseodymium	135	0.9	1.22	-	-	-	-	4.9	6.65	4.7	6.36
Neodymium	135	3.5	4.69	5.0	6.75	5.0	6.75	19.2	25.96	1.7	2.24
Samarium	88	2.2	1.43	2.5	1.76	2.5	2.20	3.8	3.33	0.3	0.22
Total LREO Value/kg			9.92		32.57		15.10		51.42		26.90
Europium	3020	0.1	4.31	-	-	-	-	0.5	13.55	0.1	2.69
Terbium	2220	1.1	25.35	0.3	7.08	-	-	0.4	8.98	0.4	7.92
Dysprosium	1170	8.8	103.53	6.0	70.00	1.3	14.67	1.8	21.34	2.4	27.72
Gadolinium	148	3.6	5.28	4.0	5.04	-	-	3.1	4.61	2.6	3.77
Yttrium	145	53.2	77.26	37.8	54.80	55.0	79.74	7.8	11.26	18.6	26.96
Total HREO Value/kg			215.73		137.72		94.41		59.24		69.06
Total TREO Value/kg			225.65		170.29		109.51		111.16		95.96

pricing as at end March 2012

- The Hastings deposit has the highest in situ value per kg of REO versus its HREO peers
- The Hastings deposit has the least exposure to any potential decline in Light Rare Earth Oxides (LREO) prices
- Lynas TREO Value \$84.61/kg (as at end March 2012)



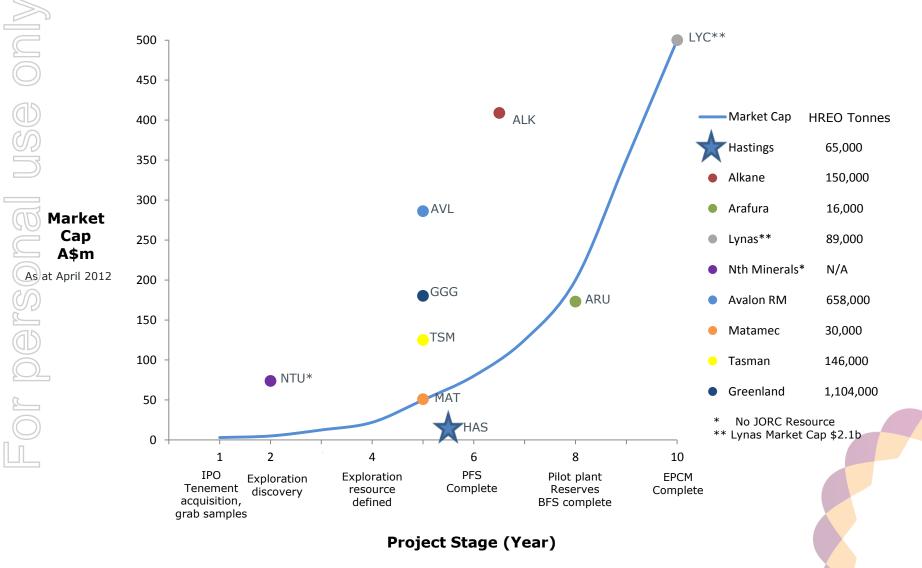
## Hastings Project Positioning

Advanced Rare Ear	th projects, sorted	l by conta	ained ton	nes of HRE	D		
Deposit	Company	Status	Con'd t	Resource	%	%	HREO:TREO
			HREO	mt	TREO	HREO	%
HREO PROJECTS	(>35% HREO:TR	EO)					
Strange Lake	QRM	Inf	408,280	50.80	1.15	0.80	70.0
Norra Karr	TSM	Inf	145,745	60.50	0.51	0.24	48.0
Lemhi Pass	UREE	Inf	155,509	70.75	0.52	0.22	42.1
HASTINGS	HAS	Ind/Inf	65,269	36.20	0.21	0.18	85.8
Zeus (Kipawa)	MAT	Ind/Inf	29,733	16.31	0.50	0.18	36.2
Kutessay II	RUU	Inf	19,947	16.27	0.26	0.12	46.9
LREO PROJECTS (	<35% HREO:TR	EO)					
Kvanefjeld	GGG	Ind/Inf	1,103,802	861.00	1.07	0.13	12.0
Nechalacho	AVL	Ind/Inf	658,035	315.00	1.36	0.21	15.4
Dubbo	ALK	Ind/Inf	150,368	70.20	0.79	0.21	27.3
Mount Weld	LYC	M/Ind/Inf	88,578	23.94	7.93	0.37	4.7
Nolans Bore	ARU	M/Ind/Inf	15,514	30.30	2.80	0.05	1.8
Mountain Pass	MCP	M/Ind/Inf	4,000	20.00	8.47	0.02	0.2
Sartarfoq	HUD	Inf	4,667	14.10	1.51	0.03	2.2
Cummins Range	NAV	Inf	4,014	11.15	1.08	0.04	3.3

### Hastings is the 4<sup>th</sup> largest HREO project in the world and the largest in Australia



### Market Cap v Project Stage



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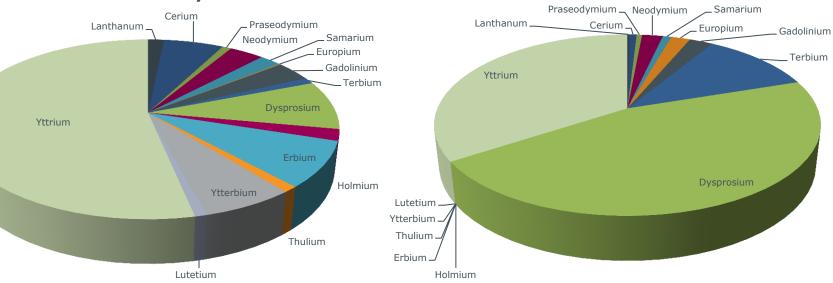
# Hastings Project Rare Earth Distribution

**Distribution of REOs by \$ Value** 

	Rare Earth Distribut												outi		
	La₂O₅	Ce₂O₅	Pr₂O₅	<mark>●</mark> Nd₂O₅	Sm₂O₅	<mark>●</mark> Eu₂O₅	Gd₂O₅	● Tb₂O₅	<mark>●</mark> Dy₂O₅	Ho₂O₅	Er₂O₅	Tm₂O₅	Yb₂O₅	Lu <sub>2</sub> O <sub>5</sub>	● Y <sub>2</sub> O₃
Grade ppm	34	127	19	73	46	3	75	24	186	43	173	22	139	18	1120

Critical Rare Earths (US Department of Energy December 2010)





- Hastings has highest HREO to TREO of all advanced projects\* at 85%
- Significant value contained in Y and Dy component

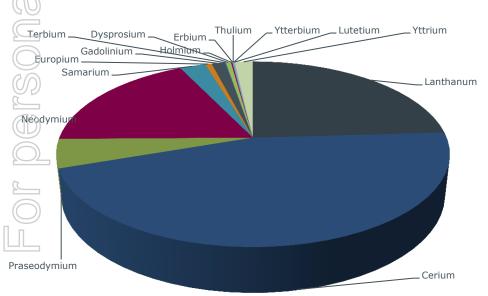
\* Defined as projects with formally defined mineral resources or reserves under the guidelines of a relevant scheme such as the JORC code or NI43-101



# Lynas Project Rare Earth Distribution

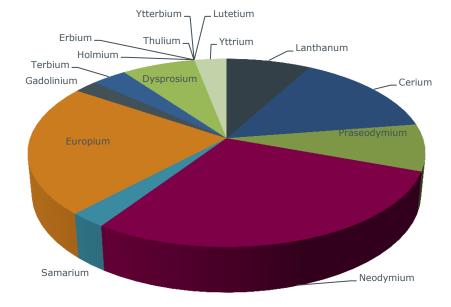
									Ra	re l	Ear		Dis			
0	)	La₂O₅	Ce <sub>2</sub> O <sub>5</sub>	Pr <sub>2</sub> O <sub>5</sub>	Nd₂O₅	Sm₂O₅	Eu2O5	Gd₂O₅	Tb₂O₅	Dy <sub>2</sub> O <sub>5</sub>	Ho₂O₅	Er <sub>2</sub> O <sub>5</sub>	Tm₂O₅	Yb <sub>2</sub> O <sub>5</sub>	Lu <sub>2</sub> O <sub>5</sub>	Y₂O₃
	Grade ppm	24090	45650	5040	18030	2520	630	1260	13	560	13	13	0	13	0	1770

Source: (Lynas Corporation website)

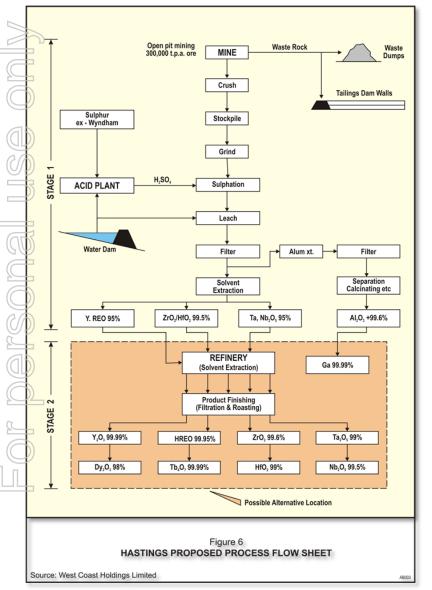


### **Distribution of REOs by Volume**

**Distribution of REOs by \$ Value** 







## Hastings Project Processing Testwork

- West Coast Holdings (WCH) undertook significant amounts of processing test work in the 1980s culminating in the establishment of a pilot plant at the Warren Springs laboratory in UK.
- 100 tonnes of oxidised mineralisation was sent to UK and test work was proceeding well when WCH entered receivership and the pilot plant was halted.
- Hastings has commenced validation and verification processing test work with a number of experienced rare earth processing groups in Australia. Optimisation test work will follow to reflect the changes in market conditions from 1990 to today.
- Previously optimised metallurgical test work resulted in extraction efficiencies of around 75% for Dysprosium and Yttrium, and 80% for Nb and Zr.
- Financial assessment of product suite and form is underway to reflect current and future market requirements

Flow Sheet (1990) to be verified and validated



# Hastings Project Previous Exploration

Early exploration for uranium highlighted radiometric anomalies.

UNOCAL (previously parent company of Molycorp) (1982-85) carried out exploration including detailed mapping, sampling, trenching and 19 drillholes.

Defined the "Niobium Tuff" as the rare metal-rare earth bearing horizon.

Mineralogical studies at CSIRO confirmed fine-grained nature of mineralisation.

West Coast Holdings (WCH) took over management and drilled a further 23 holes.

Intensive metallurgical testwork undertaken including establishing a pilot plant at Warren Springs laboratory in the UK (1989).

Testwork progressed positively but WCH fell into receivership and testwork and reporting was not completed.

Various resource estimates carried out during the progress of exploration.





# Hastings Project *Resources*

In 2011 Hastings drilled 51 reverse circulation holes (7443m) and 8 diamond drill tails (HQ3) (739m).

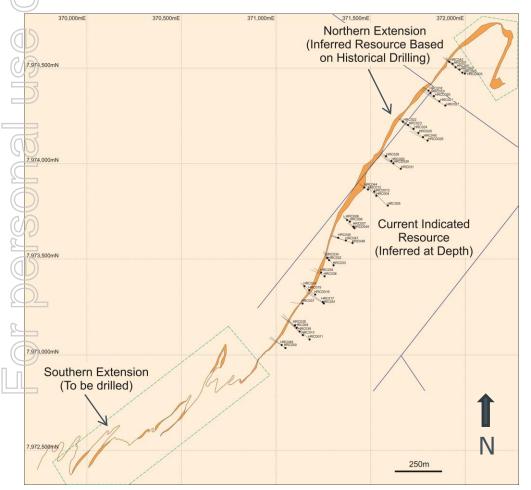
This tested the central 1.8km of strike to a maximum depth of 290m.

This enabled a detailed interpretation and resource estimation to be carried out, leading to the establishment of JORCcompliant resources of:

页 Eens/zone	Category	Oxide/ Primary	Tonnes	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
6				ZrO <sub>2</sub>	Nb2O5	Ta2O5	Ga2O5	HfO <sub>2</sub>	TREO	HREO	Dy205	Y2O3
Main	Indicated	Oxide	1,400,000	8860	3507	183	113	322	2151	1828	190	1132
	Indicated	Primary	25,400,000	8914	3547	182	110	318	2100	1802	186	1120
H/Wall	Indicated	Primary	300,000	9080	3625	183	104	311	2130	1772	185	1096
Total	Indicated		27,100,000	8913	3545	183	110	318	2103	1803	186	1120
Nth Extension	Inferred	Oxide	250,000	8860	3507	182	113	322	2151	1828	190	1132
6	Inferred	Primary	2,100,000	8914	3547	183	110	318	2100	1802	186	1120
Main Deep	Inferred	Primary	6,750,000	8914	3547	183	110	318	2100	1802	186	1120
Total	Inferred		9,100,000	8914	3547	183	110	318	2100	1802	186	1120
TOTAL			36,200,000	8913	3546	182	110	318	2102	1802	186	1120



## Hastings Project Significant Potential to Increase Resource

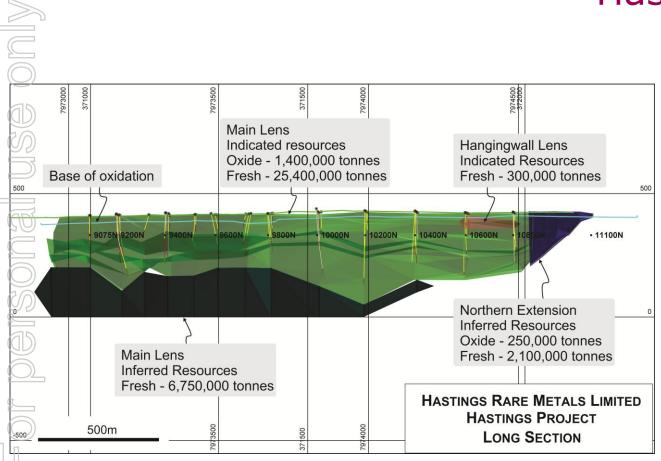


- Current Indicated resources confined to central 1.9km of sub-cropping mineralisation
- Inferred Resources at depth below Indicated Resources and around the northern fold closure
- Southern Extension locally returns high scintillometer readings over significant widths (to 40m) and warrants drilling (strike length of 750 metres)
- Long mine life potential > 30 years

Hastings Project – Resource and Target Areas



# Hastings Project *Resources*



- Indicated and Inferred Resources extend to the base of the south – plunging syncline at the north end and to a maximum depth of around 400m
- Mineralisation remains open at depth down to the base of the syncline
- Mineralisation remains open to the south where it becomes tightly folded but can be traced for at least a further 750m

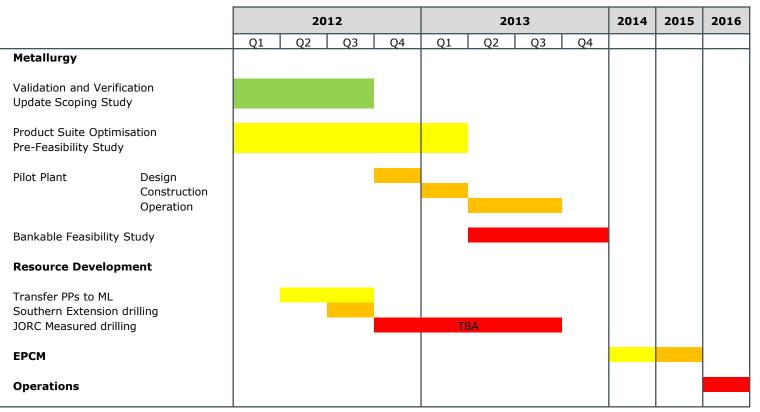


## Hastings Project Path Forward and significant milestones

- Validation and Verification of previous metallurgy (Mid Year)
- Scoping Study to confirm economics
- Define Southern Extension Opportunity
- Optimisation of product suite (End of Year)
- Pre-feasibility study (Early 2013)
- Pilot plant (Early 2013)
- Bankable Feasibility study (End of 2013)



## Hastings Project Schedule



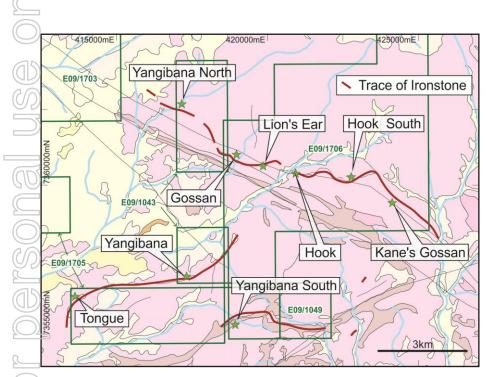


# Yangibana Project *History*

- Known mineralisation is associated with long linear, narrow ironstone outcrops
- Early exploration based on elevated radio metrics assessed the ironstones for uranium, but also base metals
- Rock chips returned elevated rare earth values and the ironstones were drilled in the late 1980s
- 80 reverse circulation holes tested the ten main outcropping bodies
- Almost all holes intersected shallow oxidised mineralisation over widths from 2 to 6m
- Rare earth values associated with the mineral monazite
- Rare earths are heavily biased to LREO, with HREO averaging 600ppm
- However, the deposit contains unusually high neodymium values, averaging 4000ppm Nd2O5
  - Drilling and resource estimation tested only 2.2km of the potential strike length of the main mineralised zone that exceeds 7km within Hastings' ground
  - Subsequent surface sampling has returned TREO values up to 19.4%, with an arithmetic average of 56 samples taken from four areas in 2008 being 2.84%TREO



# Yangibana Project Previous Exploration



Yangibana – REO Mineralisation zones

RC DRILL	ING	RESULTS	INCLUDED

Prospect	m	%TREO
Yangibana North	7	2.21
	8	2.78
	4	1.83
	6	2.40
Gossan	3	2.12
The Lion's Ear	4	1.80
	4	2.05
	4	2.73
	3	1.78
	4	1.77
Hook South	2	1.65
Kane's Gossan	8	1.43
	5	1.18
Yangibana	2	1.25

### **ROCK CHIP SAMPLES INCLUDED**

Prospect	No of Samples	Av. %TREO grade
Yangibana North	22	3.88
Hook	5	1.00
Kane's Gossan	9	3.22
Yangibana	10	1.50
Yangibana South	15	1.97



# Yangibana Project Proposed Exploration

The obvious initial target is to pattern drill the exposed ironstone outcrops and the intervening ground along strike, with only 2.2km of the main mineralised zone tested to date. This zone has a strike length of around 7km within Hastings' ground.

Closer spaced drilling over the 7km of strike could define resources of up to 10 million tonnes of oxidised mineralisation at grades comparable to those indicated by previous drilling

All previous drilling has tested only the oxidised portion of these linear structures. Deeper drilling is required to determine whether the grades within the oxidised portion of the lenses are enriched or whether similar grades extend to depth in the primary zone

The Yangibana ironstones are known to be of ferrocarbonatite composition. They are presumably sourced from a large ferrocarbonatite body at some depth. Widespread fenitisation (K-feldspar alteration) of the surrounding granites has been identified by previous explorers and the Geological Survey of Western Australia (GSWA)

 The GSWA is undertaking mapping in the Yangibana region and is very positive regarding the potential for a large buried rare earth-bearing body to be present in this area

Ongoing discussions with GSWA will lead to a detailed programme to evaluate this potentially large target

AIU0



# Hastings Project Advantages of Hastings Project

Indicated JORC resource of >30 years operations at 1m tonnes per annum – potential to expand and to double outputs

4<sup>th</sup> largest HREO Project in the world, largest in Australia

85% Heavy Rare Earths as a percentage of TREO

Historic pilot plant operation for the critical initial extraction circuit

Experienced team of management, process developers and project engineers in place

Schedule savings in Exploration and Metallurgy Development are significant compared to other potential HREO developers (4-5 years).



## **Contact Details**





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