

Browns Range Powering Forward

Low Emission and Technology Minerals Conference

NOVEMBER | 2016 | ASX: NTU

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Compliance Statement

The information in this presentation that relates to the Mineral Resource Estimates of the Wolverine deposit is extracted from the report entitled "Increased Mineral Resource delivers more good news" dated 23 February 2015 and is available to view on the Company's website (www.northernminerals.com.au). The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

The information in the announcement that relates to the Mineral Resource Estimates of the Cyclops and Banshee deposits is extracted from the report entitled "Further Increase in Brown Range Mineral Resource" dated 15 October 2014 and is available to view on the Company's website (www.northernminerals.com.au). The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

The information in the announcement that relates to the Mineral Resource Estimates of the Gambit, Gambit West and Area 5 deposits is extracted from the report entitled "Wolverine Total Resource Doubled in a Major Upgrade of Browns Range HRE Mineral Resource Estimate" dated 26 February 2014 and is available to view on the Company's website (www.northernminerals.com.au). The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

The information in the announcement that relates to Ore Reserves is extracted from the report entitled Increased Ore Reserve for Browns Range created on 2 March 2015 and is available to view on the Company's website (northernminerals.com.au). The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

The information in this report that relates to Exploration Results or Exploration Targets is based on information compiled by Mr Robin Wilson, a full-time employee of Northern Minerals, a Competent Person, who is a member of the Australasian Institute of Mining and Metallurgy. Robin Wilson 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 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Wilson consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The potential quantity and grade of the Exploration Target is conceptual in nature. There has been insufficient exploration completed in the areas of the Exploration Target and it is uncertain if further exploration will result in the

The information in the announcement that relates to production targets is extracted from the report entitled "DFS positions Browns Range Project as next dysprosium supplier" dated 2 March 2015 and is available to view on the Company's website (northernminerals.com.au). The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the production targets in the relevant market announcement continue to apply and have not materially changed.

TREO = Total Rare Earth Oxides – La_2O_3 , CeO_2 , Pr_6O_1 , Nd_2O_3 , Sm_2O_3 , Eu_2O_3 , Gd_2O_3 , Tb_4O_7 , Dy_2O_3 , Ho_2O_3 , Er_2O_3 , Tb_2O_3 ,

Corporate Overview



Major shareholders	As at 11 Nov '16	Forecast 31 Dec '16
Australian Conglin International Investment Group	32.7%	26.8%
Huatai Mining	15.9%	31.0%
Jien Mining	4.4%	3.6%
Board & Management	3.0%	2.5%
Remaining Top 20	16.3%	13.5%
Other	27.3%	22.4%

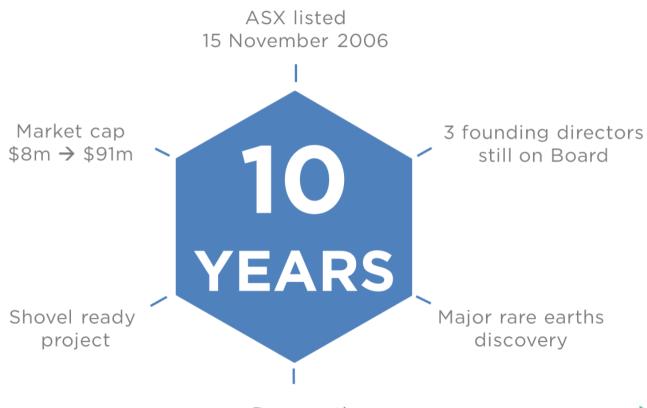
Market capitalisation \$91M

(at 11 November 2016 @ \$0.15)

Ordinary Shares	608M
Unlisted Options and Performance Rights	28M
Cash (11 November 2016)	\$10.5M
Tranche 2 & 3 funds due Nov/Dec 2016	\$18M
Debt (11 November 2016)	\$1.1M



Focussed and Resilient



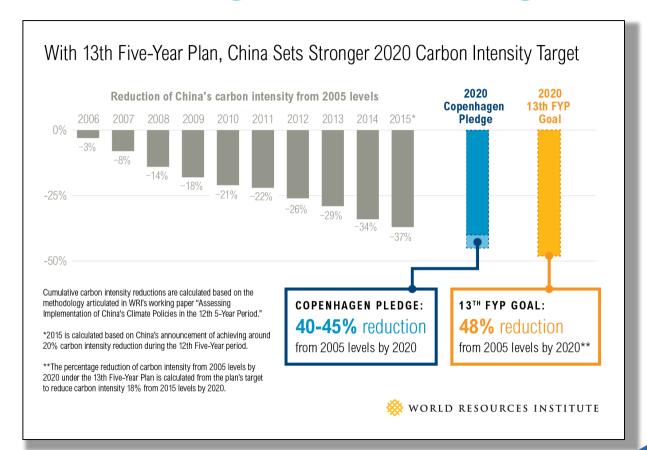
Rare earths focus since 2010

This is not acceptable to current or future generations





Climate change is the No. 1 global issue



Permanent magnets explained



- NdDyFeB permanent magnets are used by major electric vehicle and wind turbine makers
- Dysprosium enhances magnetic properties at higher temperatures
- Permanent magnets account for 25% of rare earth demand in tonnes and 80% in value
- As a result of climate change policies, higher electric car and wind turbine take up increases permanent magnet market demand
- Electric vehicle sales expected to grow from 1.2 million in 2015 to
 >20 million by 2020
- Alternatives to rare earth magnets have been explored, however timeframe for commercialisation >10 years



Chinese carmakers to dominate EV production















































EV growth = Dysprosium demand

40M

EV vehicles pa By 2040 35%

of total car sales by 2040

CLIMATE

Policies driving EV growth motivation

COMPARE

EV & conventional vehicle costs comparable by 2022

LEADTIME

EV makers have rare earth magnets set in forward plans

INTENSITY

At least 2% Dy in EV permanent magnets

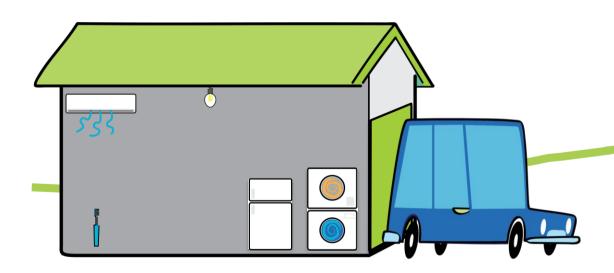
DEMAND

All points to increased Dy demand



50% of all energy is consumed by motors

You've probably used half a dozen before you even get in a car





The focus of the future is making motors more efficient

Powering Technology.

Recent news stories





Will permanent magnets save the rare earth industry?

November 7, 2016 Paul Dvorak: O Comments

Rare earths market stirs at last

Minjng Journal

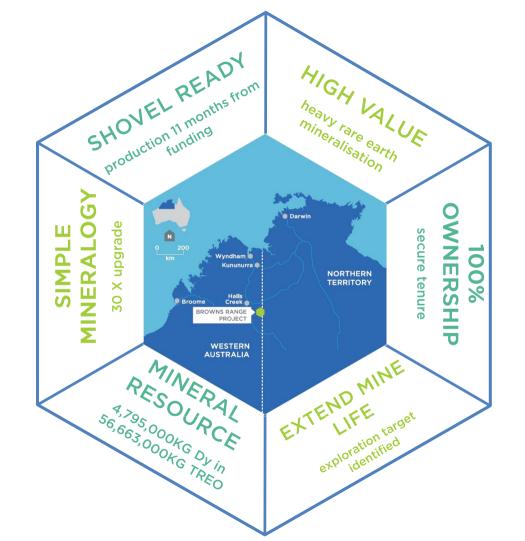
Rare earths set for boost

Lithium may still be the talk of energy metals town, but rare earth elements are set for a resurgence in the next 24 months, according to the latest report from an economics group.

12 October 2016

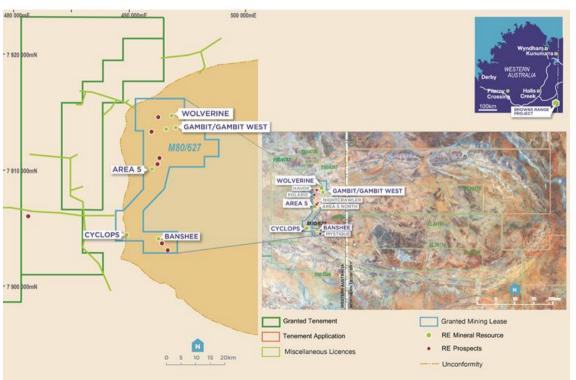


Positioned for success





Browns Range Dome: under explored



The dome is a massive geological feature covering 1,500km² and stretching

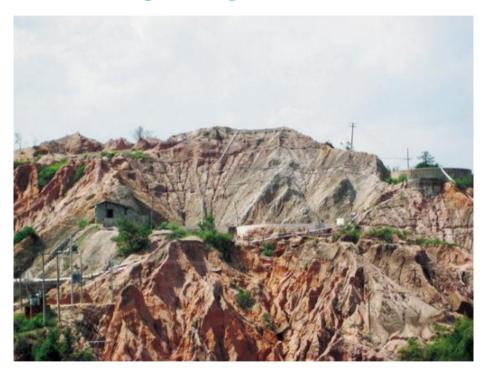
60km x 30km most of which hasn't been effectively explored

Exploration Target*

4.3 - 9.3Mt at 0.25-0.51% TREO for 10,625 - 47,825t contained TREO

^{*} The potential quantity and grade of the Exploration Target is conceptual in nature. There has been insufficient exploration completed in the areas of the Exploration Target and it is uncertain if further exploration will result in the estimation of a Mineral Resource.

Ionic clay deposits are not sustainable



Declining grades

Declining acceptance

This is the only competition that Browns Range has



Three stage approach to full scale production

Stage 1 TEST PILOT PLANT

Stage 2 DEVELOP PROJECT

Stage 3
BUILD FULL SCALE

- 10% of full scale capacity
- Production 11 months from funding
- Low capital cost
- Develop mining, processing & offtake experience

- Reduce mining cost modify mining method
- Boost production increase head grade
- Develop premium productyttrium rejection
- Increase reserve drilling

- 585,000tpa operation
- 1,500,000kg TREO in a premium product
- Significant dysprosium supplier
- Initial 11 year life with significant upside

measured . sustainable . achievable



Funding secured, pre-commitment work under way on Pilot Plant

- \$30 million equity investment secured from Huatai Mining following FIRB approval
- \$12 million received to date
- Second and third tranches of \$9 million each due before the end of November and December respectively
- \$3.4 million pre-commitment works program underway for development of Browns Range Pilot Plant including:
 - Mine planning:
 - Drilling;
 - Water supply;
 - Engineering design, and
 - Extension to accommodation camp





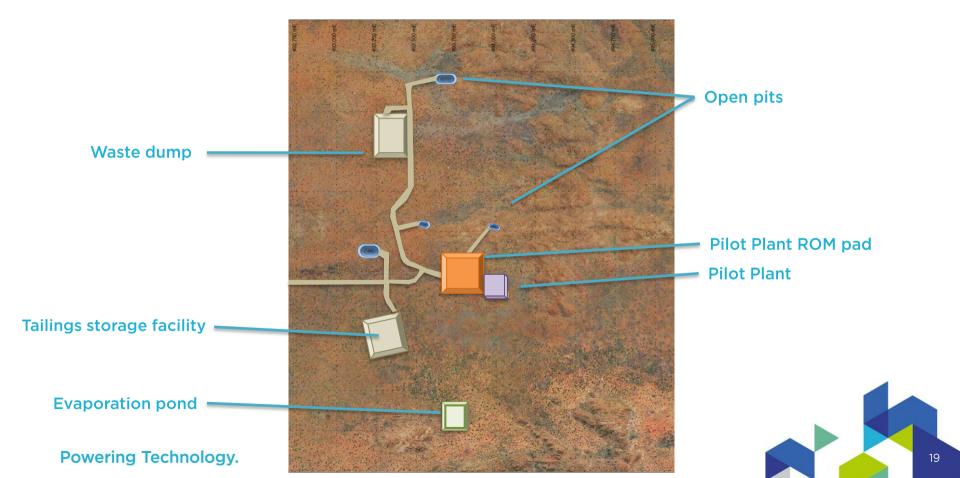
Why a continuous pilot plant at Browns Range?



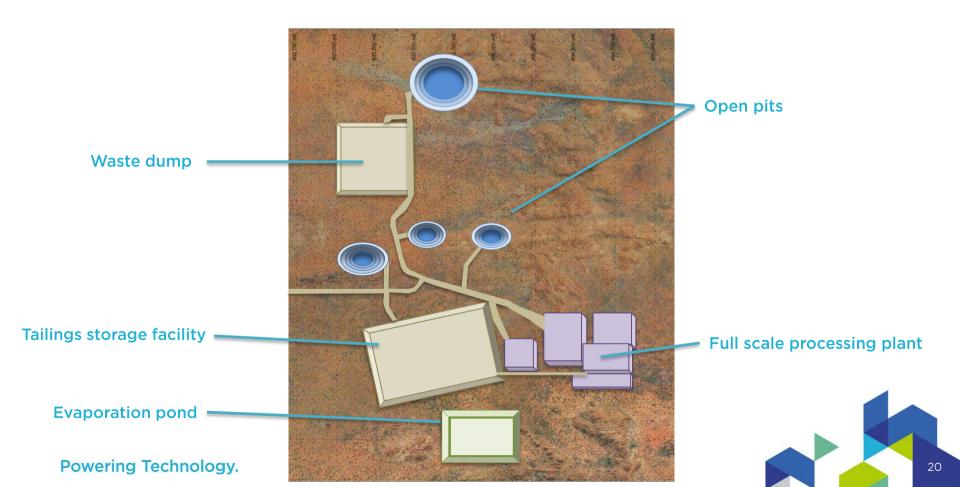
Browns
Range
Pilot
Plant
Key
Metrics



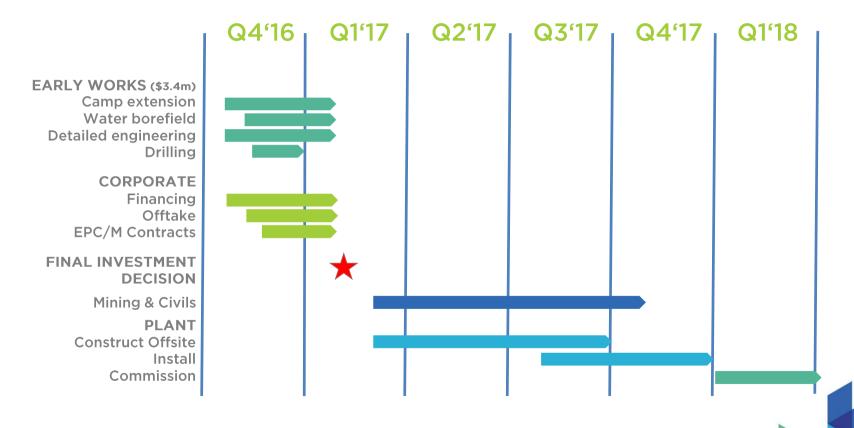
Browns Range Pilot Plant



Browns Range Full Scale Operation



Browns Range Pilot Plant timeline



Rapidly approaching our goal to become the first significant dysprosium producer outside of China



APPENDICES



The right leadership

A wealth of knowledge and experience to take Northern Minerals from developer to the next dysprosium producer

BOARD OF DIRECTORS

Conglin Yue - Executive Chairman

 Long standing relationship with a number of major steel producing companies in China.

George Bauk - Managing Director / CEO

 25 years' global resource industry experience in senior operational and corporate roles, with particular focus on rare earths, lithium and nickel

Kevin Schultz - Deputy Chairman

 Mining Engineer/Geologist with 40 years record achievement from mineral discovery and appraisal, through to mine development.

Adrian Griffin - Non Executive Director

 Significant expertise in mine management and production with corporate experience as MD and Chairman of listed resource companies.

Colin McCavana - Non Executive Director

• More than 35 years' global management experience in the construction and operation of resources projects.

Yanchun Wang - Non Executive Director

• Strategic investor for a number of Chinese companies.

EXECUTIVE MANAGEMENT TEAM

Robin Wilson - Exploration Manager

• Geologist, with 25 years' experience in Australia and Africa including the discovery of the Browns Range Project.

Robin Jones - Chief Operating Officer

 More than 25 years' experience, in Australia, Africa and Asia with success in taking projects from scoping study through to production.

Mark Tory - CFO / Company Secretary

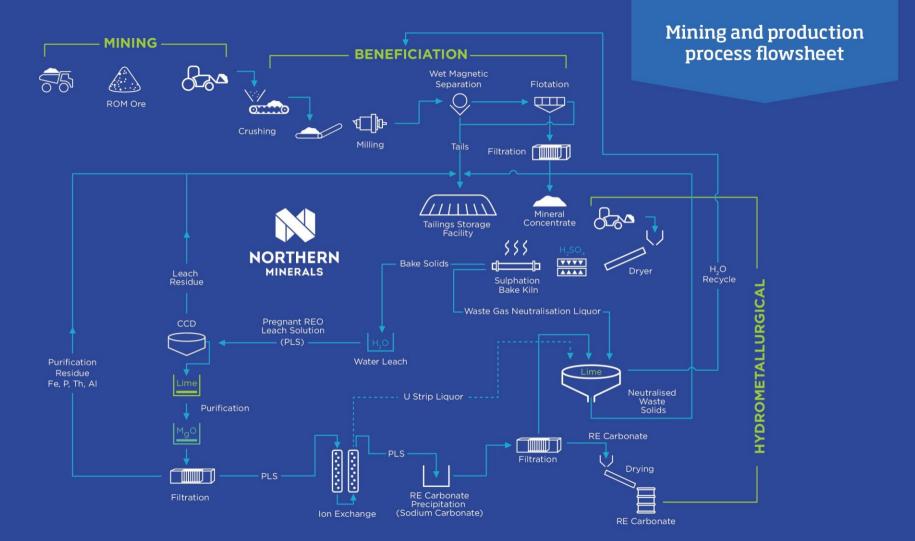
 More than 25 years' experience in the management (operational and finance) of mining companies both national and international.

Bin Cai - Alternate Director

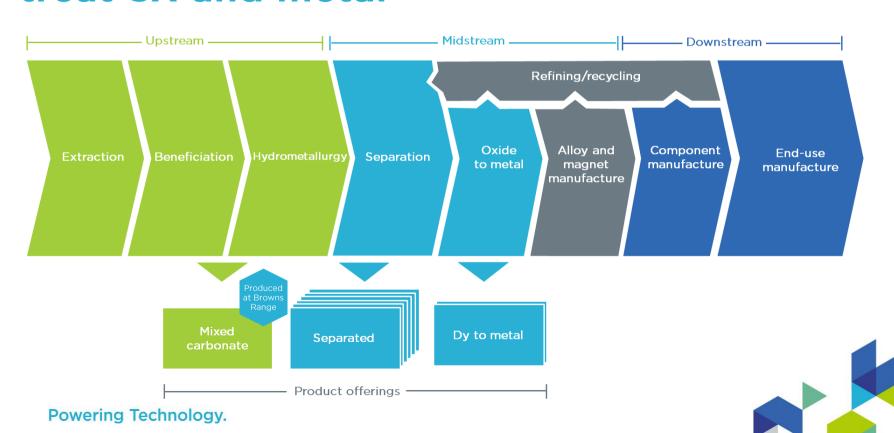
 Experience with the China Investment Bank, along with global resource investment.



Powering Technology.



Expanding the product offering: toll treat SX and metal



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Mineral Reserve and Resource

Probable Ore Reserve (March 2015)

			TREO		Dy ₂ O ₃		Y ₂ O ₃		Tb₄O ₇	
Deposit	Classification	Ore Tonnes	kg/t	kg contained	kg/t	kg contained	kg/t	kg contained	kg/t	kg contained
TOTAL ¹	Probable	3,750,000	7.03	26,375,000	0.61	2,294,000	4.07	15,266,000	0.09	335,000

Global JORC compliant Mineral Resource Estimate (February 2015)

Deposit	Category	Mt	TREO %	Dy ₂ O ₃ kg/t	Y ₂ O ₃ kg/t	Tb₄O ₇ kg/t	HREO %	TREO kg
	Indicated	4.69	0.70	0.59	3.95	0.09	87	32,862,000
Total ¹	Inferred	4.28	0.56	0.46	3.15	0.07	87	23,802,000
	Total ¹	8.98	0.63	0.53	3.56	0.08	87	56,663,000

The Mineral Resource is inclusive of the Ore Reserves

Note: The Mineral Resource is a complete summation of individual resources reported at Wolverine, Gambit, Gambit West, Area 5, Cyclops and Banshee The Ore Reserve is a complete summation of the individual Ore Reserves reported at Wolverine, Gambit, Gambit West, Area 5

 $^{^{1}\}text{-Rounding may cause some computational discrepancies (TREO (metal) tonnes estimated from Mt x TREO%)}$ $\text{TREO} = \text{Total Rare Earth Oxides} - \text{La}_{2}\text{O}_{3}, \text{ CeO}_{2}, \text{ Pr}_{6}\text{O}_{11}, \text{ Nd}_{2}\text{O}_{3}, \text{ Sm}_{2}\text{O}_{3}, \text{ Eu}_{2}\text{O}_{3}, \text{ Gd}_{2}\text{O}_{3}, \text{ Tb}_{4}\text{O}_{7}, \text{ Dy}_{2}\text{O}_{3}, \text{ Ho}_{2}\text{O}_{3}, \text{ Er}_{2}\text{O}_{3}, \text{ Tm}_{2}\text{O}_{3}, \text{ Yb}_{2}\text{O}_{3}, \text{ Lu}_{2}\text{O}_{3}, \text{ Yb}_{2}\text{O}_{3}, \text{ Lu}_{2}\text{O}_{3}, \text{ CeO}_{2}, \text{ Th}_{2}\text{O}_{3}, \text{ Eu}_{2}\text{O}_{3}, \text{ CeO}_{2}, \text{ Th}_{2}\text{O}_{3}, \text{ Eu}_{2}\text{O}_{3}, \text{ CeO}_{2}, \text{ Th}_{2}\text{O}_{3}, \text{ Eu}_{2}\text{O}_{3}, \text{$



Pilot plant: targeted production

- Mixed RE carbonate (REC) produced
- Product specification available for REC
- REC samples validated by several downstream separators
- REC suitable for solvent extraction separation
- Low thorium and uranium levels

REO contained in mixed RE carbonate	Annual production (000s kgs)
Lanthanum	5.8
Cerium	15.2
Praseodymium	2.8
Neodymium	10.6
Samarium	11.4
Europium	2.4
Gadolinium	34.8
Terbium	6.7
Dysprosium	49.4
Holmium	13.5
Erbium	39.3
Thulium	5.6
Ytterbium	33.1
Lutetium	4.5
Yttrium	337.6
Total TREO produced	573.0

Figures may not add due to rounding TREO = Total Rare Earth Oxides- Total of Dy_2O_3 , La_2O_3 , CeO_2 , Pr_6O_1 , Nd_2O_3 , Sm_2O_3 , Eu_2O_3 , Gd_2O_3 , Tb_4O_7 , Ho_2O_3 , Er_2O_3 , Tm_2O_3 , Yb_2O_3 , Lu_2O_3 , Y_2O_3