



A new source of heavy rare earths is coming...

MAY | 2016 | ASX: NTU

**powering technology
for a better future**

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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 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 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.

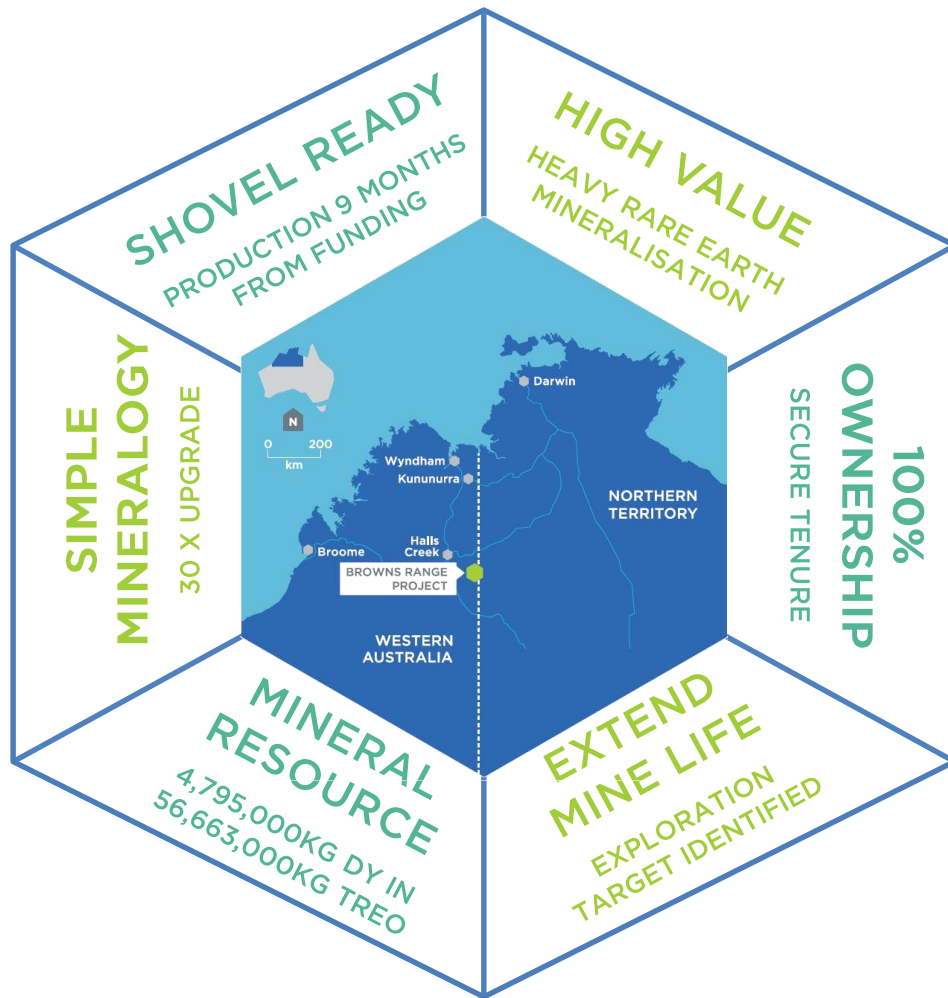
The information in this report that relates to Exploration Results or Exploration Targets is based on information compiled by Mr Robin Wilson, a full-time employee of Northern Minerals, a Competent Person, who is a member of the Australasian Institute of Mining and Metallurgy. Robin Wilson has sufficient 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 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_{11} , Nd_2O_3 , Sm_2O_3 , Eu_2O_3 , Gd_2O_3 , Tb_4O_7 , Dy_2O_3 , Ho_2O_3 , Er_2O_3 , Tm_2O_3 , Yb_2O_3 , Lu_2O_3 , Y_2O_3
HREO = Heavy Rare Earth Oxides - Total of Sm_2O_3 , Eu_2O_3 , Gd_2O_3 , Tb_4O_7 , Dy_2O_3 , Ho_2O_3 , Er_2O_3 , Tm_2O_3 , Yb_2O_3 , Lu_2O_3 , Y_2O_3



Positioned for success



Three stage approach to full scale production

Stage 1

TEST PILOT PLANT

- 60,000tpa capacity
- 52% TREO mixed RE carbonate
- 590,000kg pa TREO for 3 years, including 49,000kg Dy
- Production 9 months from funding

Stage 2

DEVELOP PROJECT

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

Stage 3

BUILD FULL SCALE

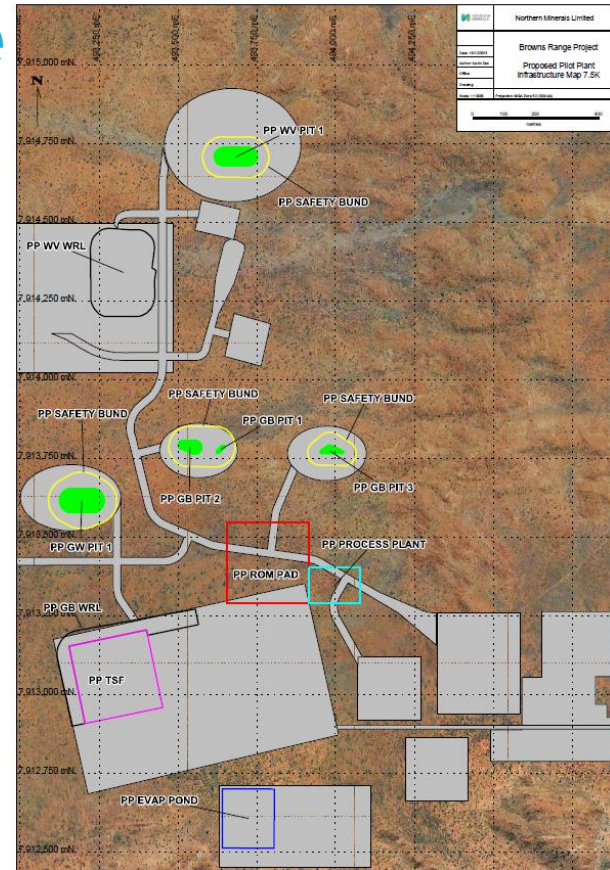
- 1,500,000kg TREO in a premium product
- Develop based on stage 1 and 2 successful outcomes
- 11 year life, with exploration target indicating significant opportunity to increase

Why a continuous pilot plant at Browns Range?



Pilot plant: Browns Range

- 180,000t @ 1.19% TREO, campaign mined from multiple open pits
- 3 year operation producing 49,000kg dysprosium in 590,000kg TREO contained in a mixed RE carbonate per annum
- Two stages of processing on site: beneficiation 60,000tpa and hydrometallurgical 3,200tpa feed
- TREO recovery: 90% beneficiation and 92% hydrometallurgy
- Road transport via Halls Creek to/from Wyndham or Darwin port
- AUD\$26M capital estimate including contingency - beneficiation and hydrometallurgy
- 9 month construction timeline from funding
- 10% throughput of full scale project
- 15% output of full scale project



Stage 1: in the final phase

Financing

Obtaining and evaluating term sheets

Build

Detailed engineering design to be completed by end of June

Approvals

Utilise existing approvals on a smaller scale

Sales

Offtake negotiations advancing to binding sales agreement



1.2 BILLION €

deal between German Govt and automakers to spend on electric vehicles



5 million

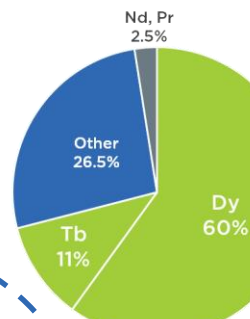
China's target of hybrid and electric vehicles on the road by 2020

RARE EARTH MARKET

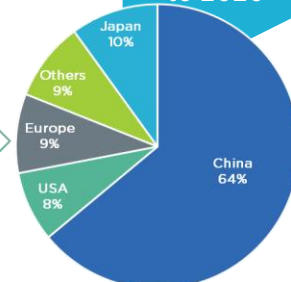
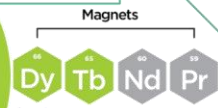


Paris Agreement under United Nations Framework Convention on Climate Change

- Universal agreement to keep global warming below 2°C.
- 174 countries and EU signed



Breakdown of value contribution - Browns Range Project



NdFeB magnet market consumption by region 2014

Source: Adamas Intelligence, "Rare Earth Market Outlook: Supply, Demand, and Pricing from 2014 - 2020" report

Permanent magnets key driver for the rare earth market



NdDyFeB magnets



Argus (Metal Pages) forecasts dysprosium prices to double in 12 months to **US\$400/kg**



NORTHERN MINERALS

Magnets drive demand

Permanent magnets

- The engine room for growth
- Accounts for ~25% of the rare earth demand in tonnes
- Accounts for ~80% of rare earth demand in value

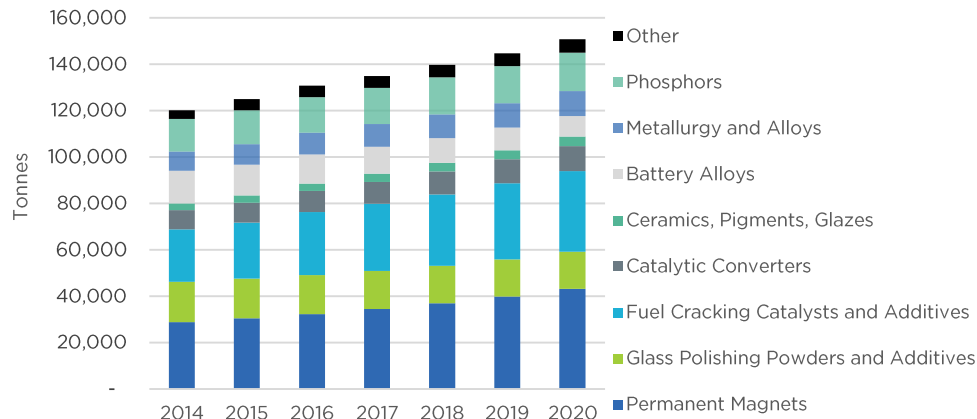
Dysprosium

- Critical in high end permanent magnets, limited substitutes
- Allows optimal performance under load i.e. at high temperatures in applications such as:
 - Electric and hybrid vehicles 2-10kg* per car
 - Standard vehicles 1kg* per car
 - Wind turbines ~550kg* per MW
 - Industrial applications e.g. air conditioner compressors and fan drives , torque coupled drives

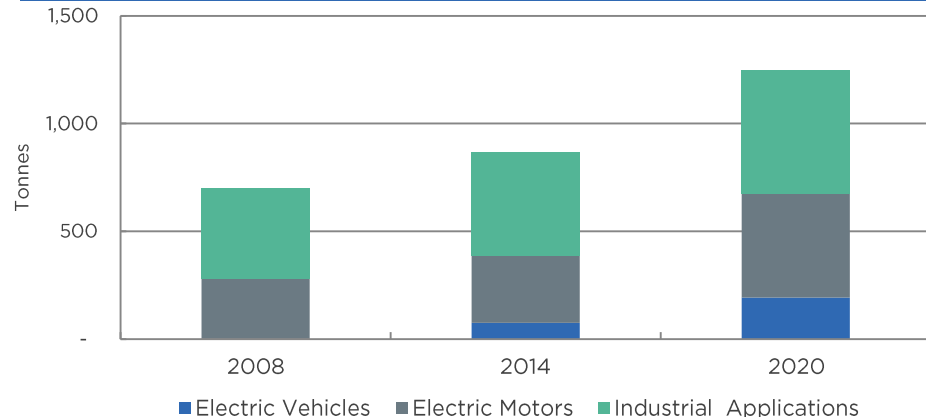
*Weight of permanent magnet per unit

Powering Technology.

Forecast global TREO demand by application



Forecast dysprosium demand - some high growth categories

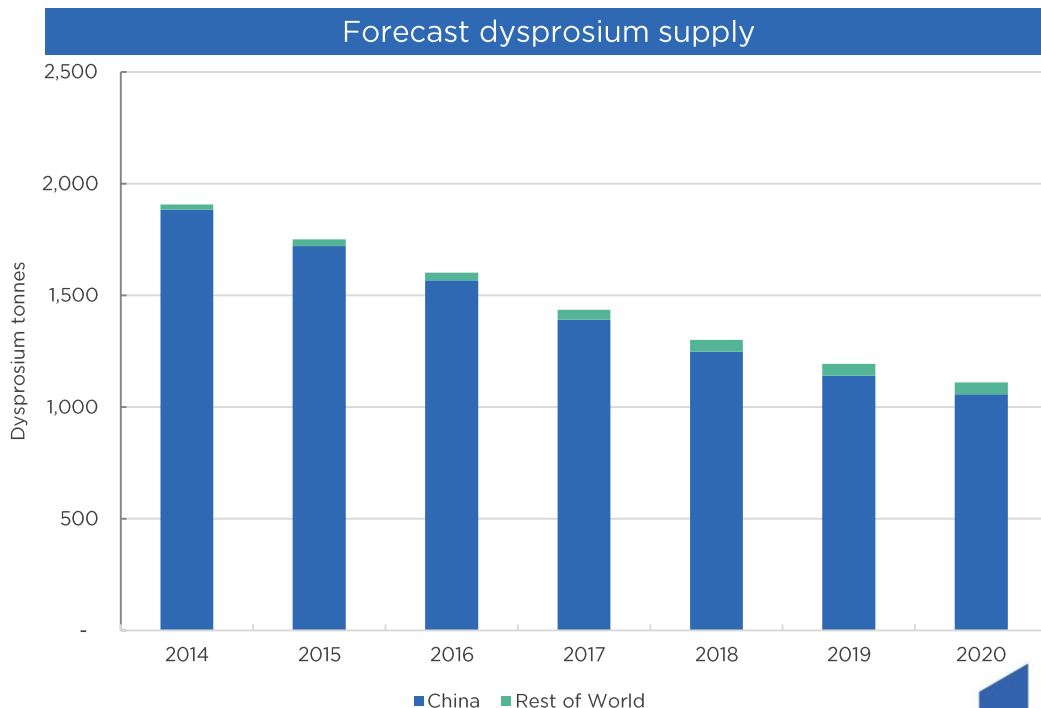


Source: Rare Earth Market Outlook Update: Supply, Demand, and Pricing from 2014 through 2020, Adamas Intelligence, June 2015

Dysprosium supply facing headwinds

Dominant supplier China

- Ionic adsorption clay deposits in the south
- Availability of quality reserves has deteriorated
- Strong focus on improving environmental standards and reducing supply from illegal mining and processing
- Wage escalation in China ~6% pa
- Continued appreciation of the RMB
- SOE reforms – reduced ability to subsidise loss-making industries



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



**NORTHERN
MINERALS**

APPENDICES

Corporate overview

Market capitalisation
\$38M

(at 2 May 2016 @ \$0.078)

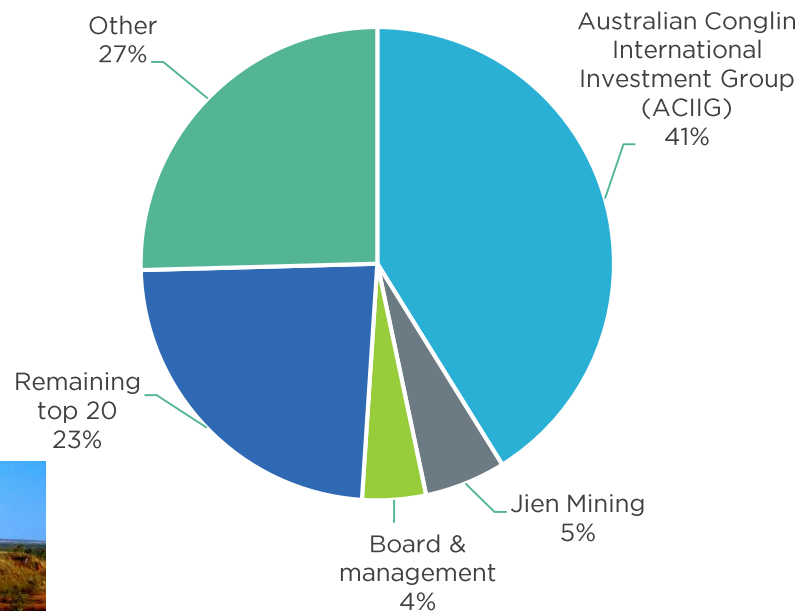
Ordinary Shares	489M
Unlisted Options and Performance Rights	29M
Cash (31 March 2016)	\$0.74M
Debt (31 March 2016)	\$2.3M



Browns Range Project

Powering Technology.

Major shareholders



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 – Project Manager

- 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

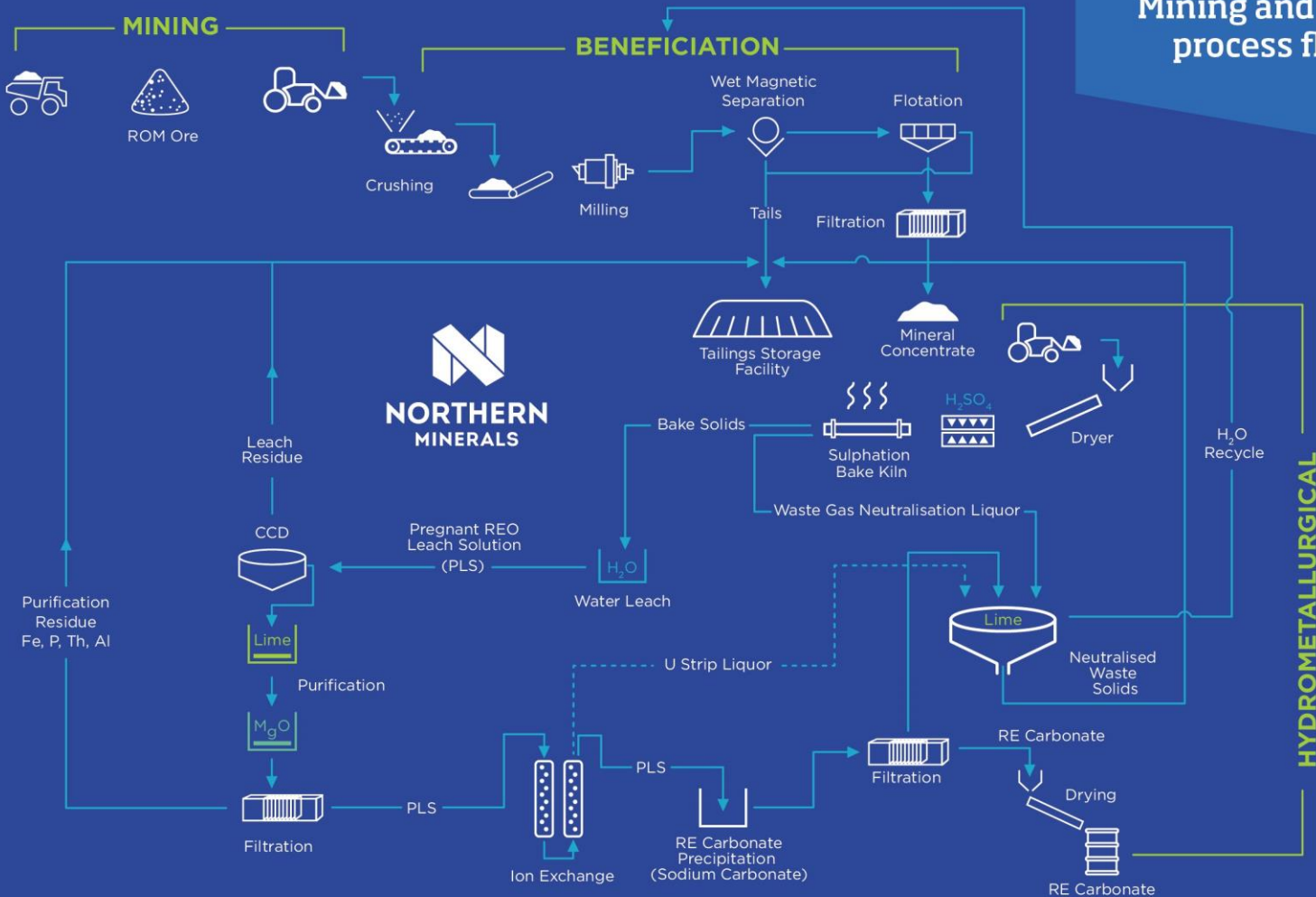
- More than 25 years' experience in the management (operational and finance) of mining companies both national and international.

Bin Cai – Alternate Director

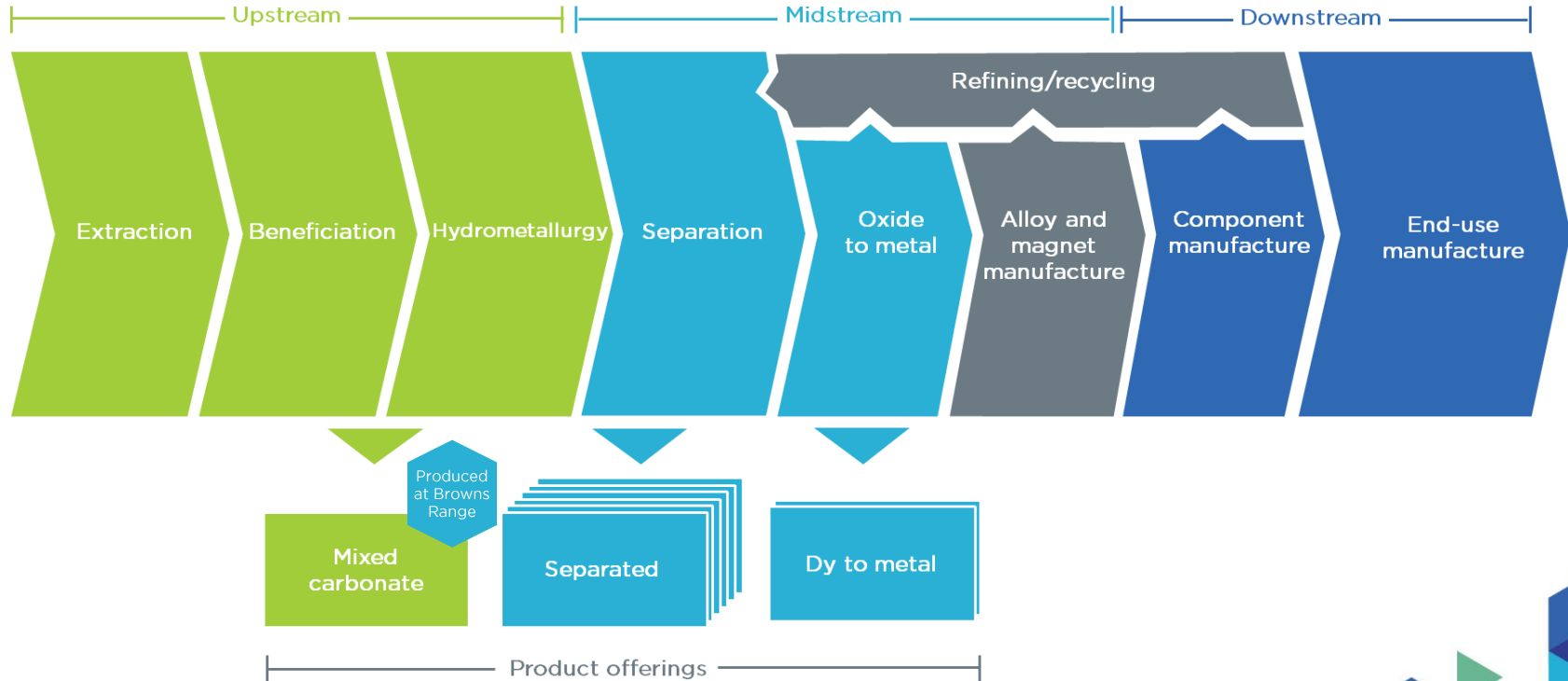
- Experience with the China Investment Bank, along with global resource investment.



Mining and production process flowsheet



Expanding the product offering: toll treat SX and metal



Mineral Reserve and Resource

Probable Ore Reserve (March 2015)

			TREO		Dy ₂ O ₃		Y ₂ O ₃		Tb ₄ O ₇	
Deposit	Classification	Ore Tonnes	kg/t	kg contained	kg/t	kg contained	kg/t	kg contained	kg/t	kg contained
TOTAL¹	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	Tb ₄ O ₇ kg/t	HREO %	TREO kg
Total¹	Indicated	4.69	0.70	0.59	3.95	0.09	87	32,862,000
	Inferred	4.28	0.56	0.46	3.15	0.07	87	23,802,000
	Total¹	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 - Rounding may cause some computational discrepancies (TREO (metal) tonnes estimated from Mt x TREO%)

TREO = Total Rare Earth Oxides – La₂O₃, CeO₂, Pr₆O₁₁, Nd₂O₃, Sm₂O₃, Eu₂O₃, Gd₂O₃, Tb₄O₇, Dy₂O₃, Ho₂O₃, Er₂O₃, Tm₂O₃, Yb₂O₃, Lu₂O₃, Y₂O₃;

HREO = Heavy Rare Earth Oxides – Total of Sm₂O₃, Eu₂O₃, Gd₂O₃, Tb₄O₇, Dy₂O₃, Ho₂O₃, Er₂O₃, Tm₂O₃, Yb₂O₃, Lu₂O₃, Y₂O₃

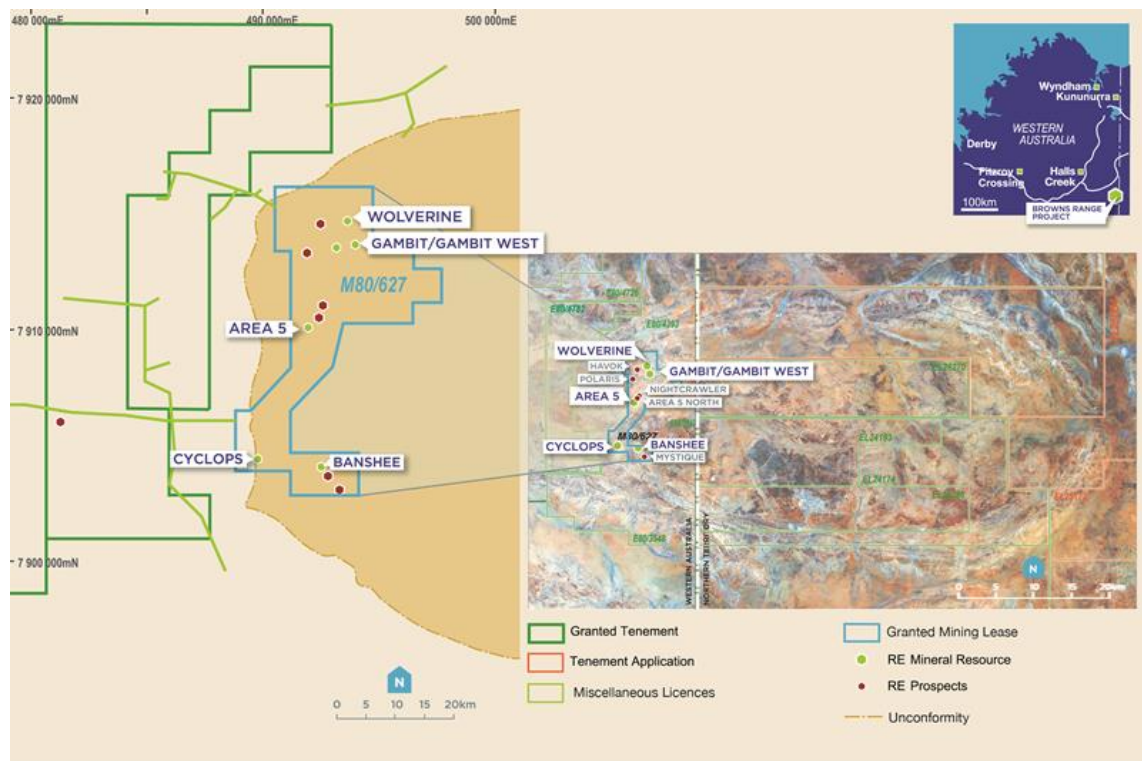
Pilot plant: targeted production

- 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	10.8
Cerium	27.3
Praseodymium	3.9
Neodymium	19.3
Samarium	11.7
Europium	2.3
Gadolinium	33.2
Terbium	6.5
Dysprosium	48.6
Holmium	12.8
Erbium	37.7
Thulium	5.3
Ytterbium	32.1
Lutetium	4.3
Yttrium	334.7
Total TREO produced	590.0

Figures may not add due to rounding
TREO = Total Rare Earth Oxides- Total of Dy₂O₃, La₂O₃, CeO₂, Pr₆O₁₁, Nd₂O₃, Sm₂O₃, Eu₂O₃, Gd₂O₃, Tb₄O₇, Ho₂O₃, Er₂O₃, Tm₂O₃, Yb₂O₃, Lu₂O₃, Y₂O₃

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