

For personal use only



northernminerals

www.northernminerals.com.au



Chamber of Minerals and Energy Rare Earth & Lithium Delegation - Europe

21 May – 1 June 2012

George Bauk
Managing Director/CEO



pathway to production

This presentation has been prepared by Northern Minerals Limited (“Northern Minerals” or the “Company”). It should not be considered as an offer or invitation to subscribe for or purchase any securities in the Company or as an inducement to make an offer or invitation with respect to those securities. No agreement to subscribe for securities in the Company will be entered into on the basis of this presentation.

This presentation contains forecasts and forward looking information. Such forecasts and information are not a guarantee of future performance, involve unknown risks and uncertainties. Actual results and developments will almost certainly differ materially from those expressed or implied. Northern Minerals has not audited or investigated the accuracy or completeness of the information, statements and opinions contained in this presentation. Accordingly, to the maximum extent permitted by applicable laws, Northern Minerals makes no representation and can give no assurance, guarantee or warranty, express or implied, as to, and take no responsibility and assume no liability for, the authenticity, validity, accuracy, suitability or completeness of, or any errors in or omission, from any information, statement or opinion contained in this presentation.

You should not act or refrain from acting in reliance on this presentation material. This overview of Northern Minerals does not purport to be all inclusive or to contain all information which its recipients may require in order to make an informed assessment of the Company’s prospects. You should conduct your own investigation and perform your own analysis in order to satisfy yourself as to the accuracy and completeness of the information, statements and opinions contained in this presentation and making any investment decision.

Information that relates to exploration results has been compiled by the Company and is based on information provided by Robin Wilson, a employee of Northern Minerals who is a member of the Australasian Institute of Mining and Metallurgy. All information of this type is expressed in terms of the 2004 edition of the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves”. 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 2004 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.

All RC drill results quoted in this presentation from Browns Range have been determined using a 0.2% TREO cut off and a maximum of 1m internal dilution.

All diamond drill results quoted in this presentation from Browns Range have been determined using a 0.15% TREO cut off and a maximum of 2m internal dilution.

TREO = Total Rare Earth Oxides – Total of 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

Company Overview

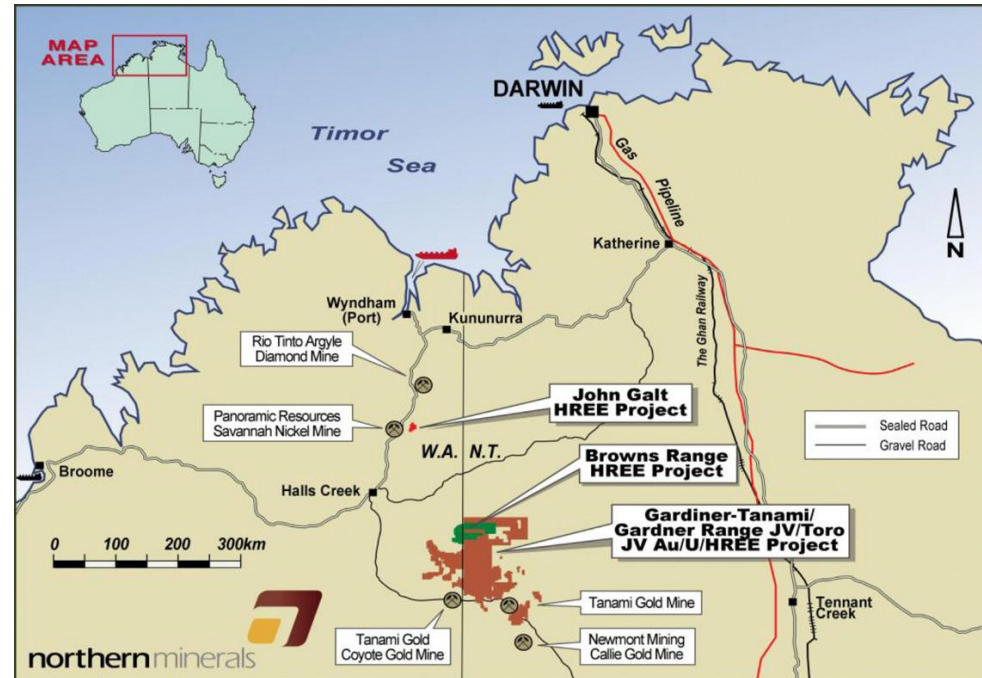
Value Proposition

Rare Earths

- Market
- Browns Range
- Pathway to Production
- John Galt

Gardiner-Tanami Project

In Summary



For personal use only

ASX Codes		
NTU	Ordinary Shares	211.5M*
Listed Options		
NTUOA	\$0.20 expires 30 Sept 2012	8.5M
Unlisted Options		
	Various prices and expiry dates	9.0M
Trading Summary		
	Market Capitalisation (in AUD) (as at 18 May 2012 @ \$0.285)	\$60M
	52 week trading range (in AUD)	\$0.27-\$0.93
	Daily Traded Volume (average over 3 months)	0.3M
Balance Sheet		
	Cash (31 March 2012 in AUD)	\$11.7M
	No Debt	



Major Shareholders	
Conglin Yue	16.2%
Lynas Corporation	7.1%
CQS	5.8%
Board & Management	5.8%

*includes 4.1M restricted shares issued under the share plan

Board & Management

For personal use only



George Bauk

Managing Director / CEO

- 20+ years mining operation and corporate experience
- Former MD Indago Resources, CFO Arafura, WMC



Adrian Griffin

Non Executive Director

- Specialising in mine management and production
- Managing Director Midwinter Resources
- Chairman Potash West



Kevin Schultz

Non Executive Chairman

- Formerly Managing Director – Polaris Metals
- Global industry experience, multi commodity
- Geologist and mining engineer



Dudley Kingsnorth

Non Executive Chairman

- 20+ years experience in the Rare Earth Industry
- MD of IMCOA, Past editor of Roskill REE Report
- Former Chairman of Amex Resources
- Metallurgist



Colin McCavana

Non Executive Director

- Former Managing Director Haddington Resources
- Mine production and operations management experience
- Chairman Reward Minerals

Robin Wilson

Exploration Manager

- Geologist with 20+ years exploration experience
- CRA, Woodside, Tanganyika Gold, Troy Resources



Robert Sills

Commercial Manager

- Experience in marketing, negotiation and commercial
- Arafura Resources, Rio Tinto, Goldcorp

For personal use only

Vision

To become the global benchmark in the production of heavy rare earth elements for the benefit of all our stakeholders

Strategy

- \$90M* concentrator built at Browns Range Project by end of 2014
- To produce and deliver sufficient supplies of HREE for a diverse portfolio of strategic offtakers.

2012 Plan “Pathway to Production”

- Maiden JORC Code Compliant resource
- Ongoing exploration to build mineral inventory
- Complete Pre-Feasibility Study at Browns Range Project
- Advance discussions with potential strategic off-take partners

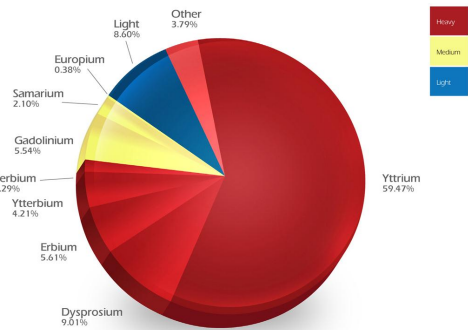
* Includes all project capital



High Value Heavy Rare Earths

Point of difference “Heavies”

Browns Range Project



Distribution of Rare Earths at Browns Range. Wolverine (March 2012)

Over 80% Heavy Rare Earths

Xenotime mineralisation within quartz veins

Xenotime is paramagnetic therefore separation success through the utilisation of magnetic separation

Outstanding Drill Results

Wolverine:

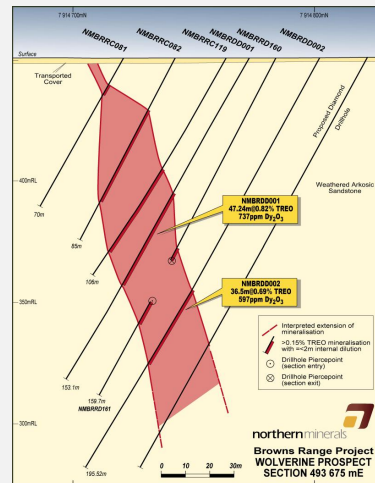
24m @ 2.18% TREO (2,072ppm Dy₂O₃) from 96m (to EOH) including 7m @ 5.35% TREO (5,151ppm Dy₂O₃) from 112m (to EOH) 33m @ 1.53% TREO (1,470ppm Dy₂O₃) from 54m 41m @ 1.01% TREO (881ppm Dy₂O₃) from 24m 28m @ 1.77% TREO (1,619ppm Dy₂O₃) from 114m

Gambit:

11m @ 2.07% TREO (1,943ppm Dy₂O₃) from 35m 18m @ 1.19% TREO (1,130ppm Dy₂O₃) from 51m

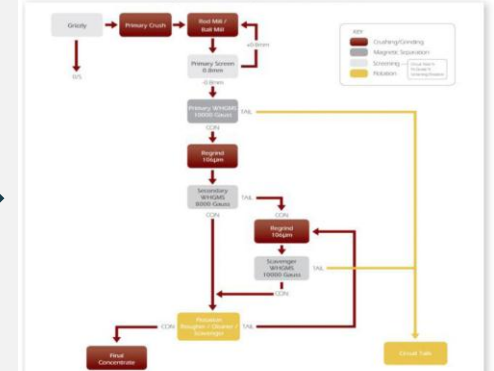
Area 5:

2m @ 13.9% TREO (13,112ppm Dy₂O₃) from 4m



Coupled with a low capital/operating cost

Nagrom Conceptual Flowsheet



Demonstrating a concentrate of >30%



Xenotime

For personal use only

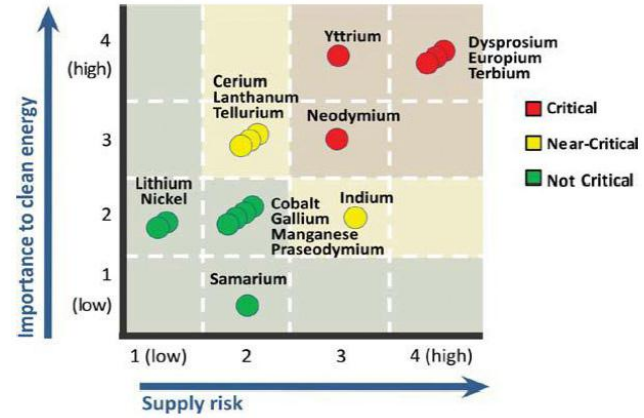
Dysprosium

- Dysprosium identified as “critical” by the US Energy Department.
- Prized for magnetic properties under high temperatures for NdPr permanent magnets
- Security of supply will stimulate more rapid development of clean energy applications. eg wind turbines and electric vehicles

Yttrium

- Northern Minerals HREO projects attracting the attention of global lighting producers.
- Security of supply is essential for national govt’s to fulfill obligations to achieve greater energy efficiency.
- Essential component in a wide range of applications:
 - Phosphors for computer and LED monitors
 - Energy efficient lighting

Short-Term (0–5 years) Criticality Matrix



Source: US Department of Energy – Critical Materials Strategy, December 2011.

President Obama, 13 March 2012

“...rare earth materials, which are used by American manufacturers to make hightech products like advanced batteries that power everything from hybrid cars to cell phones.

We want our companies building those products right here in America. But to do that, American manufacturers need to have access to rare earth materials -- which China supplies. Now, if China would simply let the market work on its own, we’d have no objections. But their policies currently are preventing that from happening. And they go against the very rules that China agreed to follow.

Being able to manufacture advanced batteries and hybrid cars in America is too important for us to stand by and do nothing. We've got to take control of our energy future, and we can't let that energy industry take root in some other country because they were allowed to break the rules.”



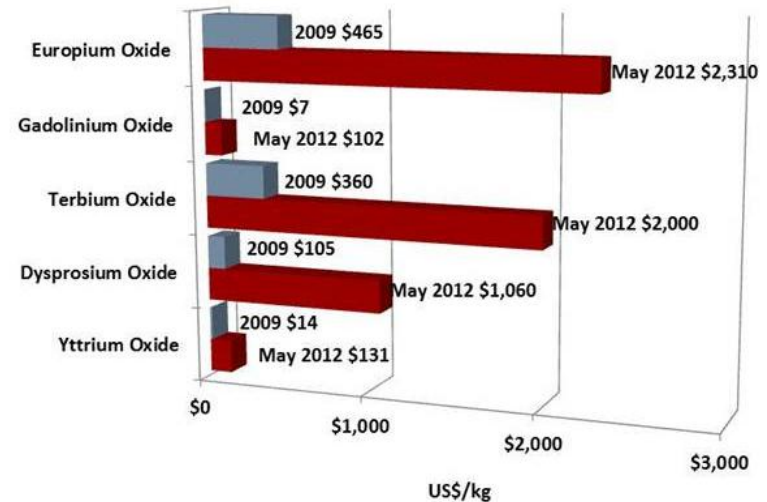
Strong Demand

- Demand driven by high-tech applications in energy generation and efficiency applications
- Strong demand but where's the supply?
- 2012 China export quotas create HREE supply issues with the introduction of 85:15 LREO:HREE split in export quotas

Sustainable Prices

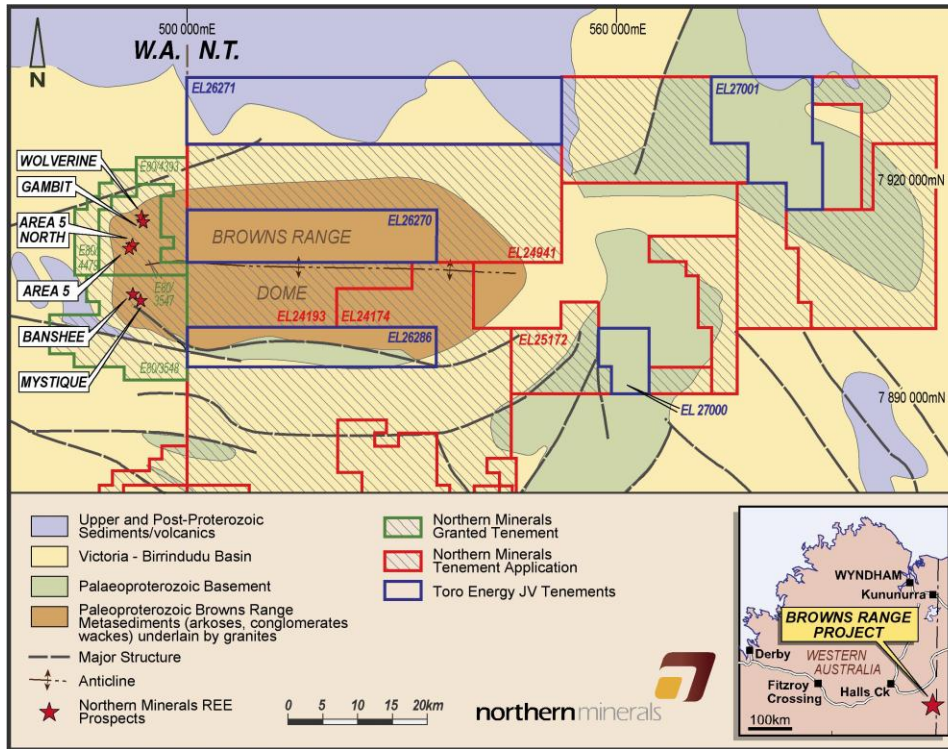
- Despite 2011/12 retreat in LREO prices, HREE prices have remained strong.
- Strong demand
- No supply sources outside China
- Exclusively hi-tech applications.
- Few substitutes
- Price premium is anticipated due to unique HRE supply/demand dynamics for product in tight supply

Comparison of selected average HREO Prices



Source: Metal Pages China FOB REO prices

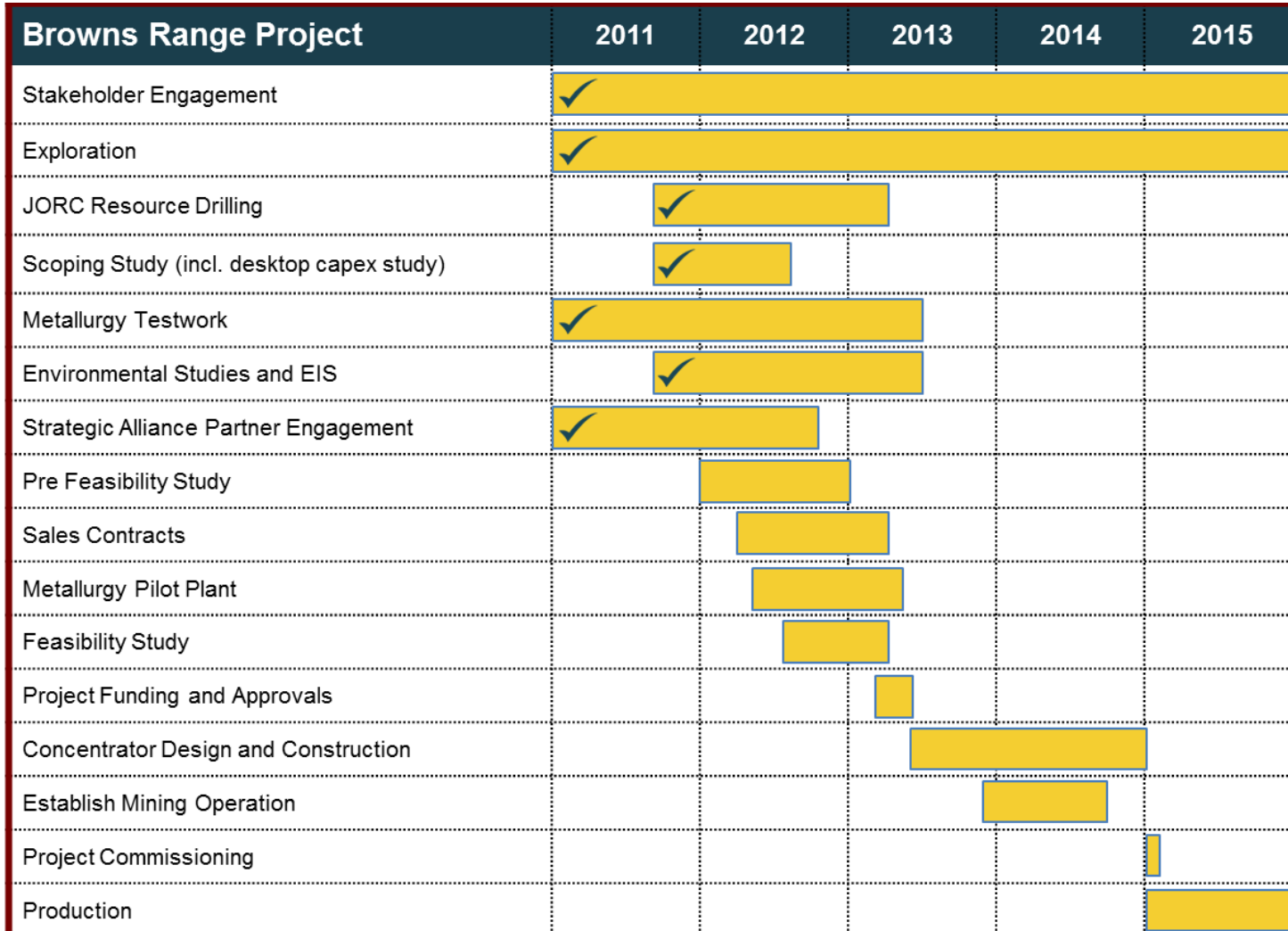
For personal use only



- Northern Minerals 100% ownership and marketing rights (excluding Toro JV)
- Entered into Joint Venture with Toro Energy on 7 tenements in NT to earn up to 80% by completed FS
- Significant new HREE discoveries in 2009 - 2011
- Focus to date on the Western Australian tenements, awaiting Northern Territory approval to begin exploration in the eastern portion of Browns Range Dome

Pathway to Production

For personal use only



Stakeholders Engagement

- Meeting held with Traditional Owners in April to discuss 2012 work program
- Meeting held with KRED (Kimberley Regional Economic Development) to discuss status of project
- 2 Cultural Awareness Workshops were held
- Ochre Training Pty Ltd engaged

Environmental Studies and EIS

- Baseline surveys have commenced
 - Short Range endemic invertebrate fauna
 - Subterranean fauna
 - Vertebrate fauna
 - Flora and vegetation assessment
- A hydrogeological and surface water supply review and strategy was completed in April



For personal use only

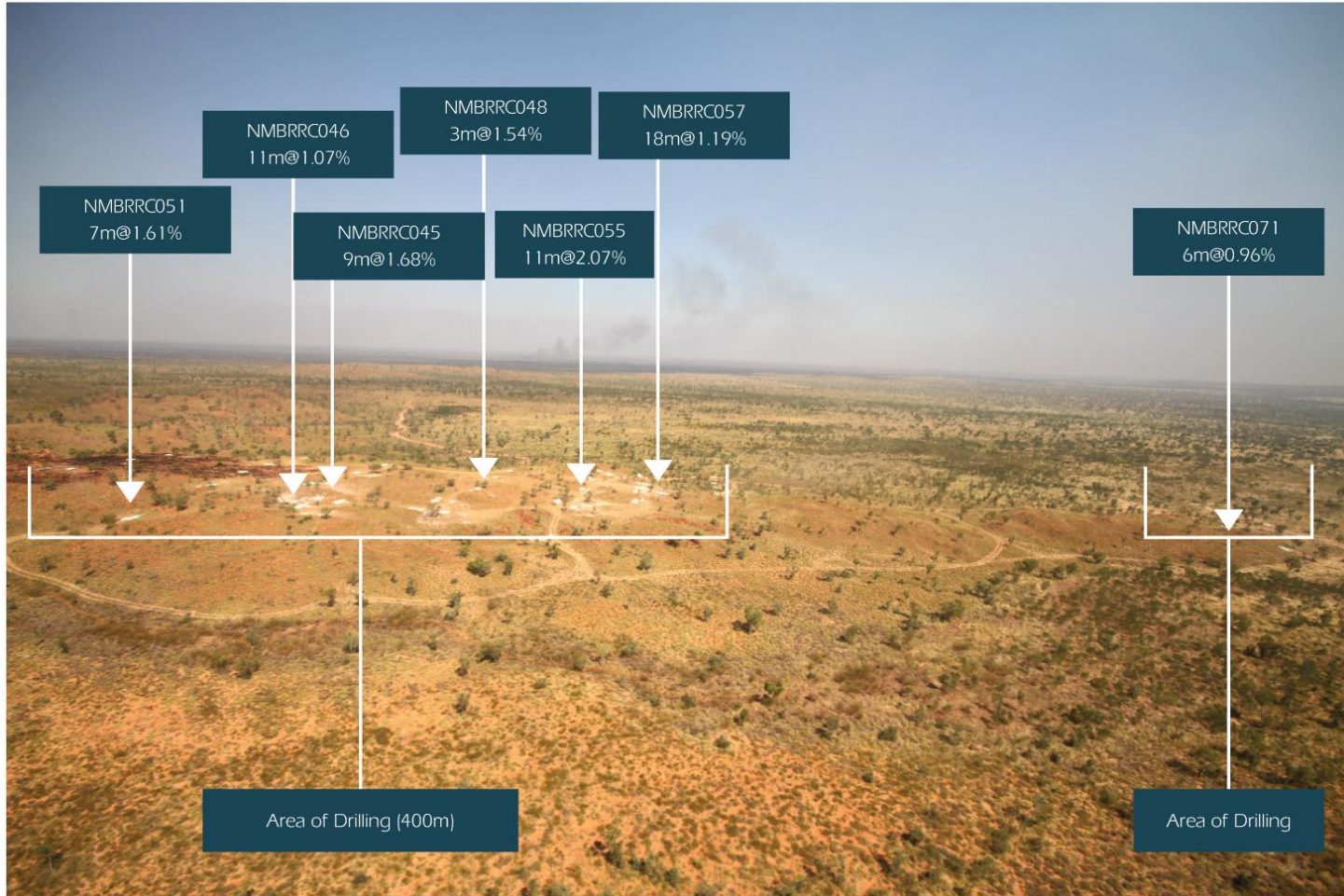
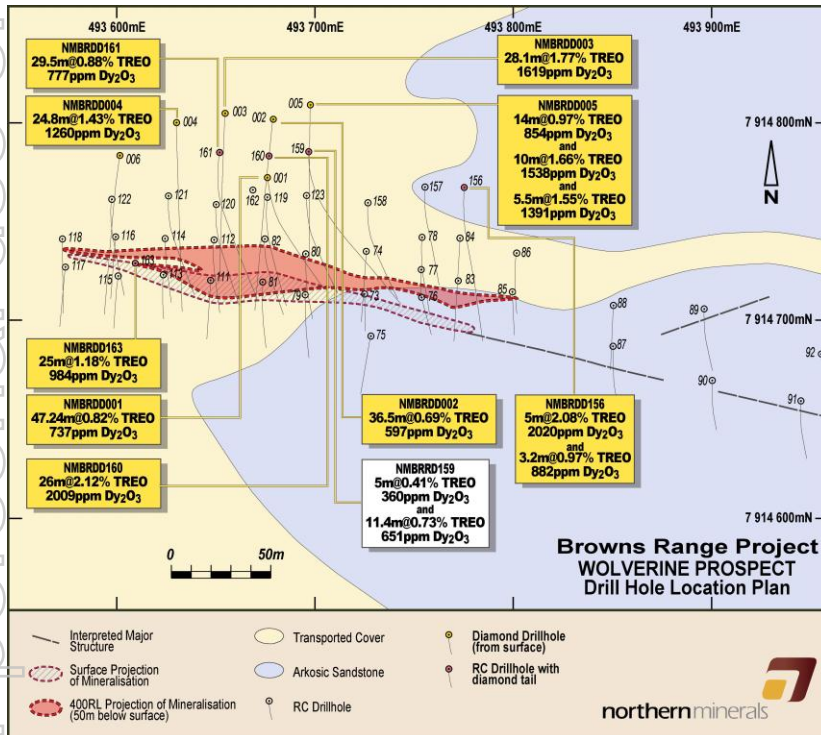


Image looks south

Browns Range – Wolverine

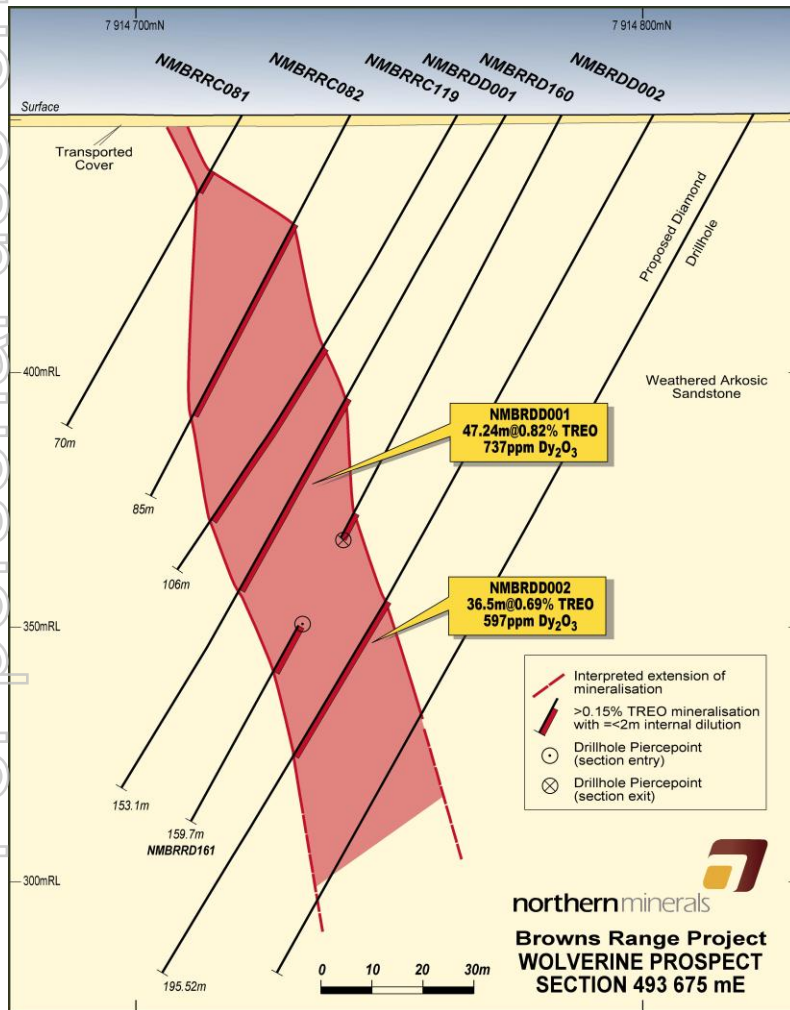


41 RC drill holes and 11 diamond drill holes completed to date – east-west trending mineralised zone encountered on western end of geochemical soil anomaly
Significant widths of HREE mineralisation identified over a strike length of 200m

Best drill intercepts to date:

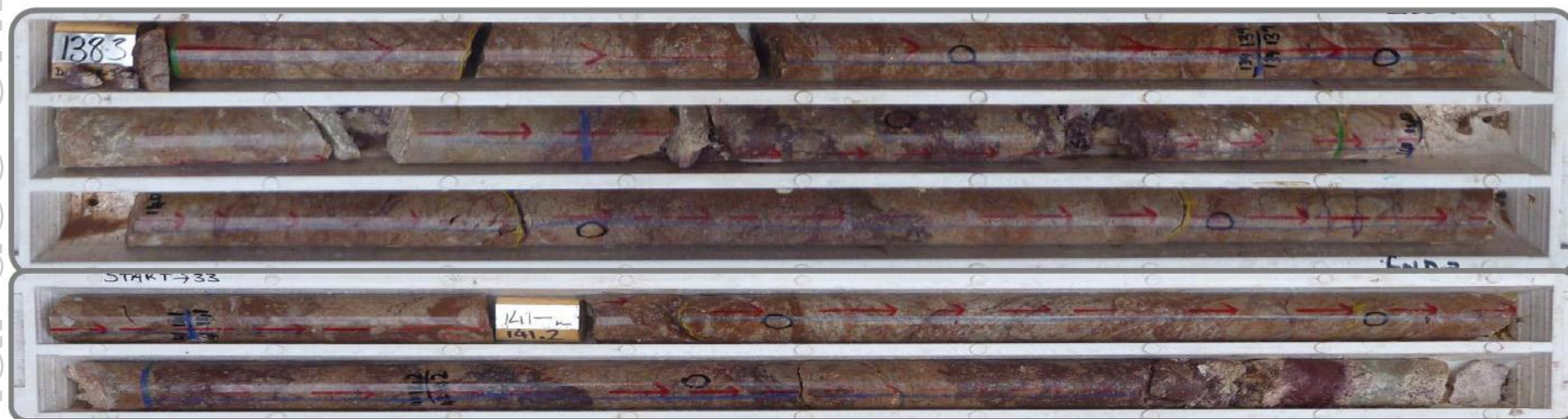
- **24m @ 2.18% TREO** (2,072ppm Dy₂O₃) from 96m (to EOH) including 7m @ 5.35% TREO (5,151ppm Dy₂O₃) from 112m (to EOH)
- **33m @ 1.53% TREO** (1,470ppm Dy₂O₃) from 54m
- **41m @ 1.01% TREO** (881ppm Dy₂O₃) from 24m
- **28m @ 1.77% TREO** (1,619ppm Dy₂O₃) from 114m

Browns Range – Wolverine



- Structurally controlled hydrothermal mineralisation
- Xenotime mineralisation in quartz veined, brecciated, silicified and hematitic arkosic sandstones
- Mineralisation open at depth – tested down to 120m vertical
- Metallurgical test work on bulk RC drill samples completed – successful results at feed grades of 0.25%, 0.5% & 1% TREO

JORC Resource Drilling – Wolverine



- Diamond drilling completed at Wolverine – 11 holes for 1,357m completed in February 2012
- Eleven diamond drill holes feature significant intersections of xenotime mineralisation, including 28m @ 1.77% TREO and 47m @ 0.82% TREO
- Indicates depth extent of mineralisation down to 120m vertical and open at depth
- Further drilling planned to commence at Wolverine and Gambit in May

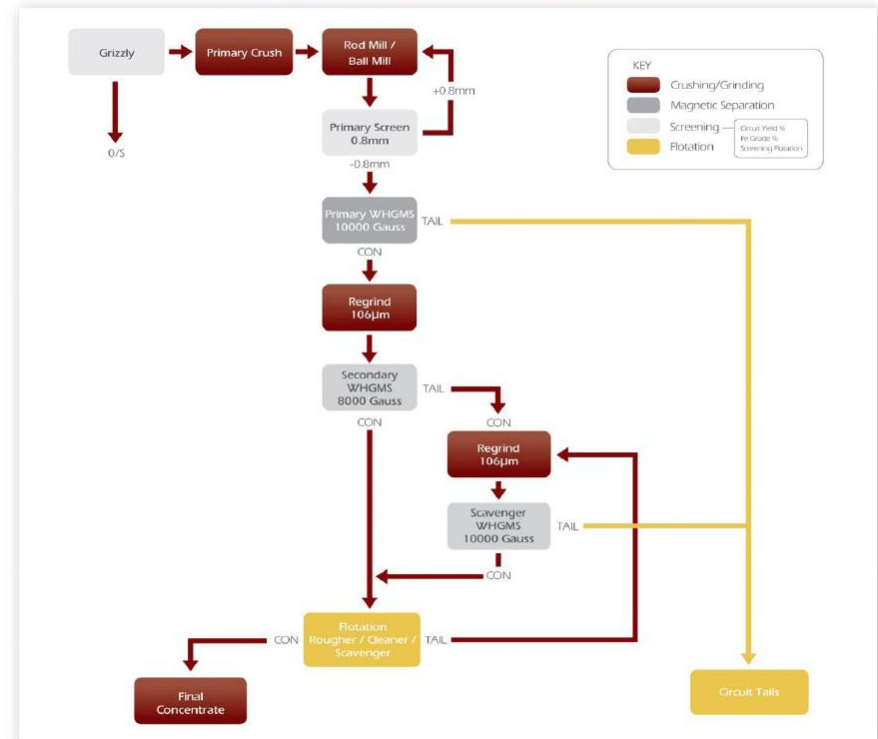
For personal use only

Bateman Engineering have completed a desktop capital study based on a flowsheet

Process Plant	AUD \$51M
Infrastructure	AUD \$12M
EPCM	AUD \$10M
Contingency	AUD \$13M
Working Capital	AUD \$3M
Total	AUD \$89M

Operating Cost estimates have been compiled under review have been determined to be between \$25/t and \$50/t for TREO with grades ranging between 0.25% and 1% respectively

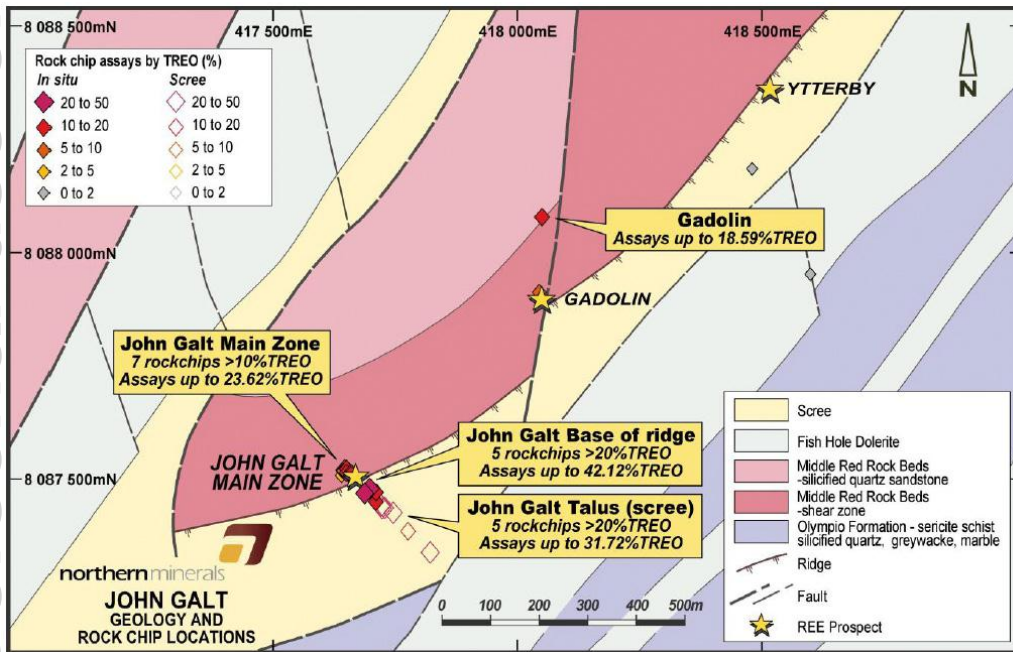
Nagrom Conceptual Flowsheet



NOTE : The desktop capital study which assumed a 0.75Mtpa plant was conducted by Bateman following ongoing JORC resource drilling and metallurgical studies, to produce a conceptual flowsheet. At this stage the company has not yet estimated a JORC resource. Accordingly inferences to production should not be used as a basis for investment decisions about shares in the company.

- Successful testwork by Nagrom of approx 3 tonne of RC drill chips from 3 Browns Range prospects at cut off grades of ~0.25%, ~.50%, 1.0%
- Testwork indicates excellent recovery (>80%) across all cut-off grades
- Results prove that metallurgy is simple and understood, using low cost magnetic separation
- 10kg Mineral Concentrate sample produced to be distributed amongst potential strategic offtake partners for downstream evaluation
- Commenced test work by ANSTO
 - downstream processing including hydrometallurgy





Northern Minerals has option to acquire 100% of the project

Similar mineralisation to Browns Range – high value HREE in xenotime

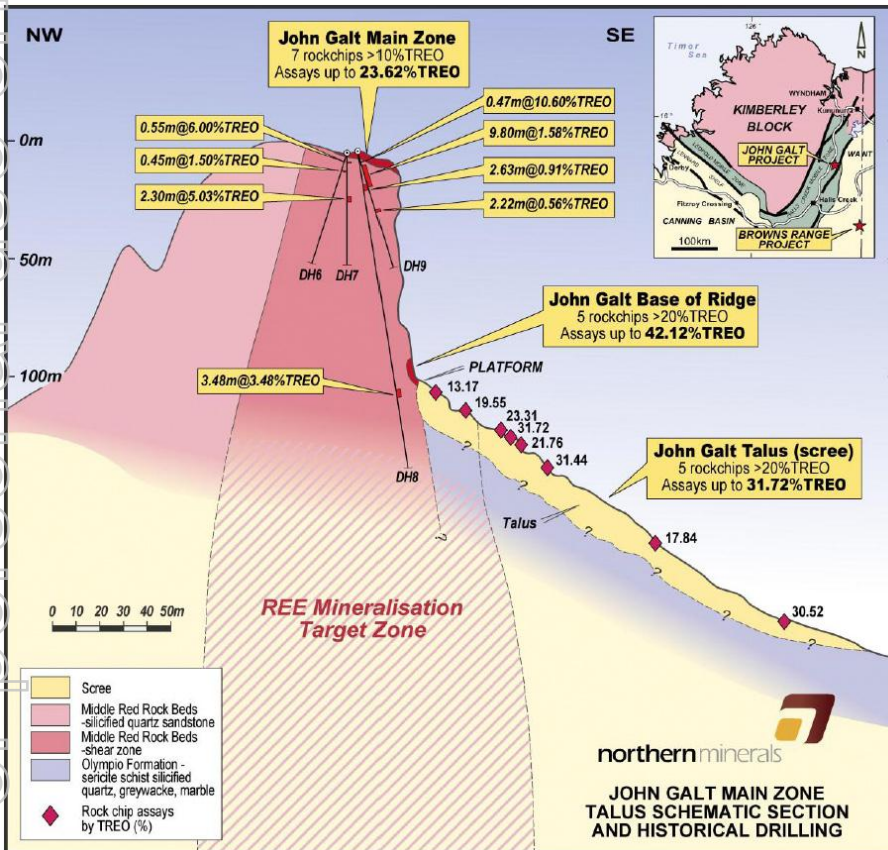
Xenotime-hosted mineralisation identified at three different zones by previous explorers

Historical drilling results# at only zone drilled (Main Zone):

- 9.80m @ 1.58% TREO
- 3.48m @ 3.48% TREO

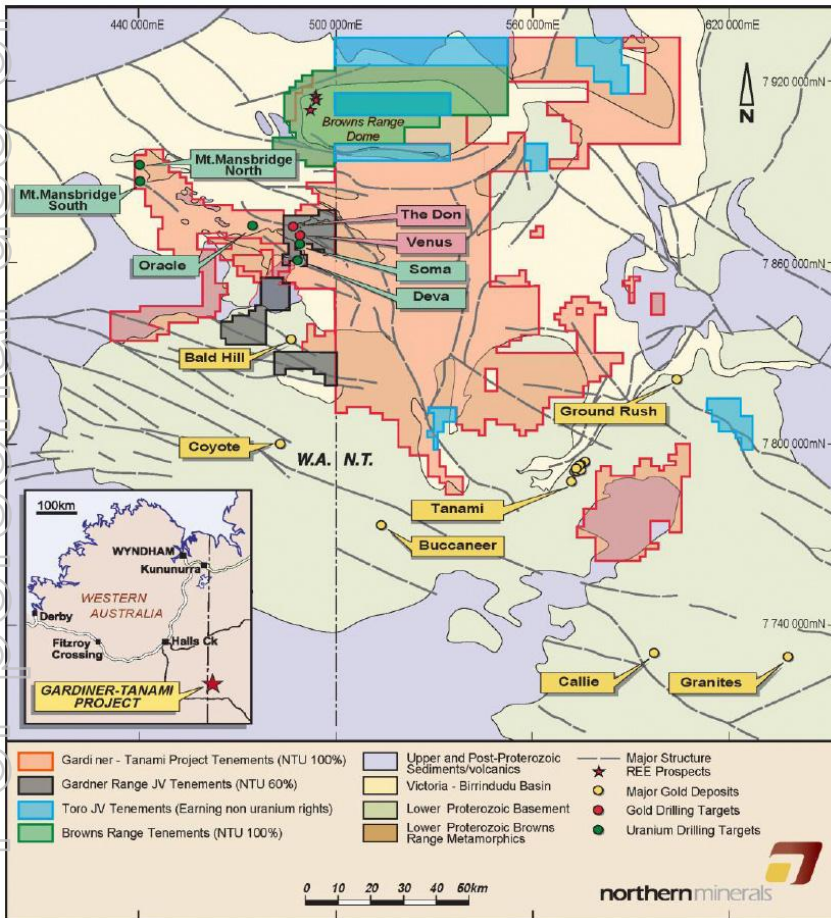
TREO – Total Rare Earth Oxide as calculated by the previous explorer using what was termed the “Yttrium Ratio Method”. In the original work on samples of John Galt Main Zone mineralisation it was found that after assaying for a suite of REE a consistent ratio existed between the total rare earth content and the yttrium content. By assaying the yttrium (Y) content of each sample using XRF techniques it is possible to estimate the total rare earth content, based upon that consistent ratio between Y and TREO. It should be noted that it was estimated that the accuracies range from +/- 15% for high concentrations and +/- 20% for low concentrations.

John Galt HREE Project



- Rock chip samples up to 42% TREO with approximately 95% Heavy REO
- Preliminary metallurgical tests indicate excellent recovery rates (>90%) with potential for concentrate grades >40%
- High grade mineralisation in talus (scree) material - a new exploration target
- Work to commence in Q2 2012 on assessing the potential volume of mineralised talus

Gardiner-Tanami Project – Gold



Project located within Tanami Arunta region – a world-class gold province, with several plus million ounce deposits (Callie ~7m oz, Granites, Tanami)

Gold geochemical soil anomalies defined in the Don-Venus prospect area

Process underway to seek potential investors for the Gardiner-Tanami Project

Contiguous land package covering over 12,000 km²

Strategy

To produce and deliver HREO concentrate in 2015

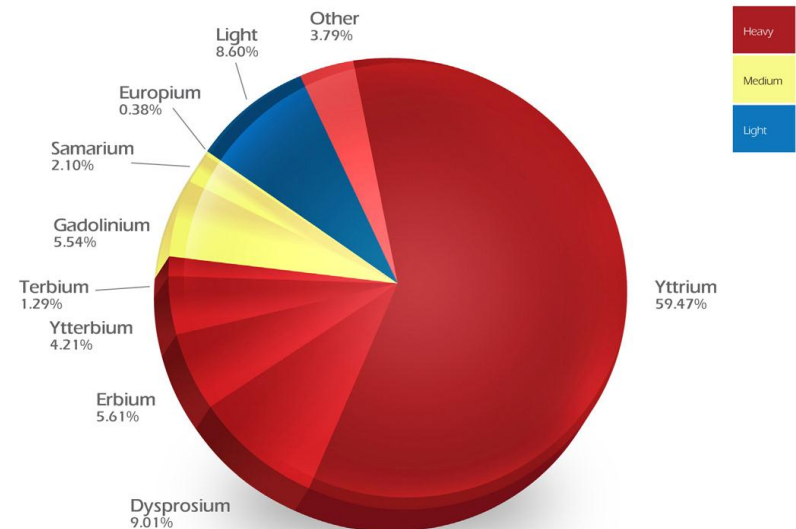
2012 “Pathway to Production”

- Deliver JORC resource at Browns Range
- Ongoing exploration to build mineral inventory
- Complete Pre-Feasibility Study
- Advance HREO strategic off-take partner discussions

Our Advantage

- HREE distribution
- Simple flowsheet (\$90M total capital)
- Superior HREO concentrate grade >30%
- Strong demand and pricing for HREO

Browns Range Project



Distribution of Rare Earths at Browns Range. Wolverine (March 2012)