



**NORTHERN
MINERALS**

Browns Range Project Pre-Feasibility Study

George Bauk, Managing Director / CEO



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The information in the announcement that relates to Mineral Resources is extracted from the report entitled “Wolverine Total Resource Doubled in a Major Upgrade of Browns Range HRE Mineral Resource Estimate” created on 26 February 2014 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 the announcement that relates to Ore Reserves is extracted from the report entitled “Maiden Ore Reserve for the Browns Range Project” created on 24 June 2014 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 “PFS confirms value and technical strength of Browns Range” dated 24 June 2014 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.

The information in the announcement that relates to forecast financial information is extracted from the report entitled ““PFS confirms value and technical strength of Browns Range” dated 24 June 2014 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 forecast financial information in the relevant market announcement continue to apply and have not materially changed.

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

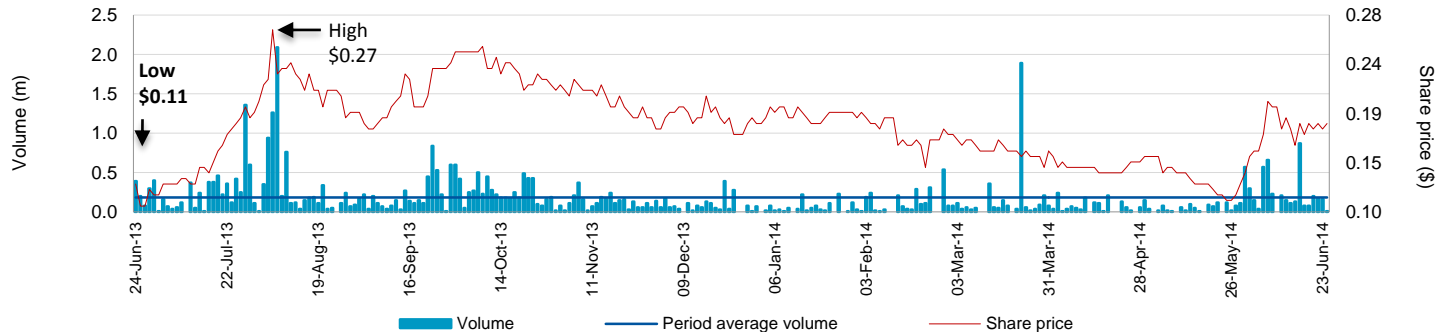
Capital Structure

ASX Code: NTU	
Ordinary Shares	440M
Listed Options (NTUOB)	67M
Unlisted Options and Performance Rights	21M
Market Capitalisation (at 24 June 2014 @ \$0.185*)	\$81M*
Cash (31 May 2014)	\$7.1M*

Major Shareholders	
Australia Conglin International Investment Group	45.1%
Other Board and Management	4.0%
Unlisted Option and Performance Rights	75.1%

* All in Australian Dollar denominations

NTU 12 Month Price and Volume



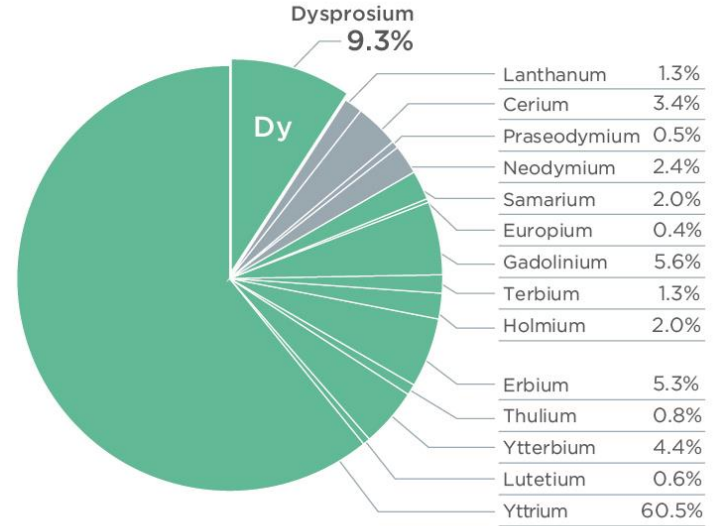
Recent Achievements

Co-existence Agreement finalised and mining lease granted

Pre-feasibility Study completed

Maiden Ore Reserve announced

Environmental assessment lodged



Average LOM TREO distribution

Strategic management & leadership

Confidence

Values

Integrity

Rare earth operational experience

Commitment

Conglin Yue

Initiative

Knowledge

George Bauk

International mining knowledge

Relationships

Kevin Schultz

Honesty

Our people

Mark Tory

Develop

Results

Colin McCavana

Management

Executive

Board

Bin Cai

SPIRIT

Yanchun Wang

Success

Financing & capital raising

Engagement

Robert Sills

Deliver

Robin Wilson

Leadership

Adrian Griffin

Global development & construction experience

Professionalism

Robin Jones

Experience

Expertise in commodity trading

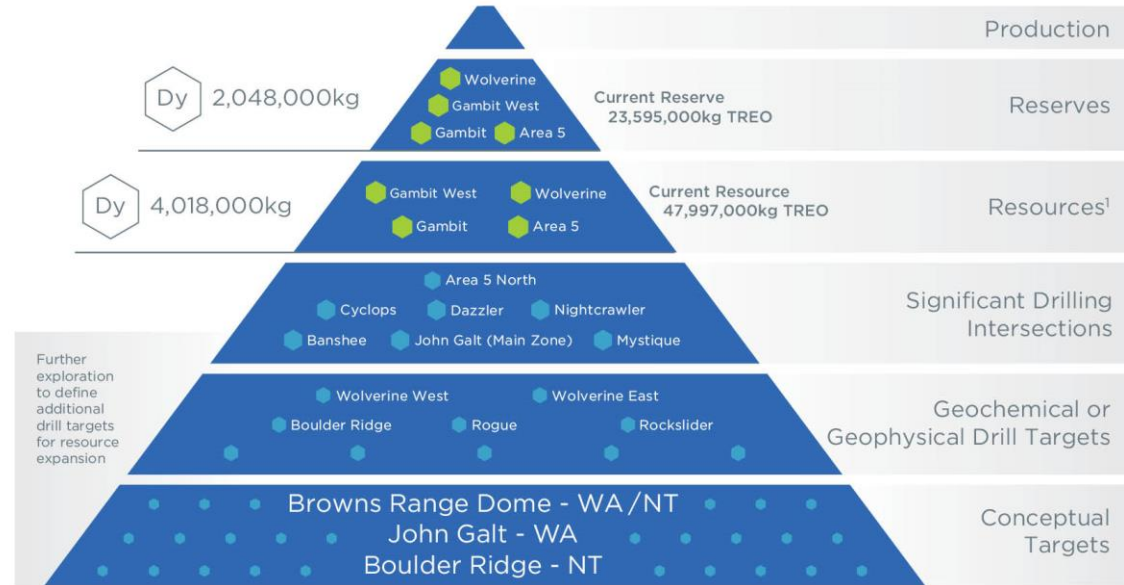


PFS Highlights



Foundations for Growth

- ◆ JORC compliant Ore Reserve in under 3 years
- ◆ Over 74,000m of drilling underpinning Mineral Reserve/Resource
- ◆ Additional prospects and targets show potential for resource expansion
- ◆ Significant landholding NT and WA



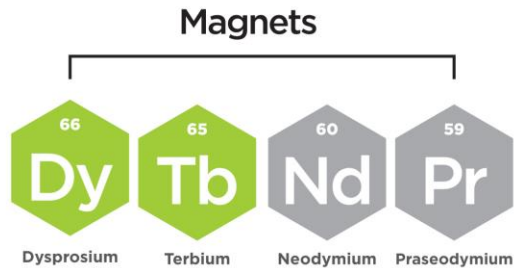
¹ The Mineral Resource is inclusive of the Ore Reserves



Heavy Rare Earth Uses



NdFeB Permanent Magnets



Rare Earths Essential for Hybrid & Electric Vehicles
Toyota Prius
~11kg of rare earths



The rare earth marketing landscape



LRE supply resolved focus shifting to new reliable sources of HRE



HRE suppliers reporting upward pressure in demand



Chinese government stockpiling HRE while prices are relatively low



Lynas and Molycorp shifting to production phase



Producers forecasting increased HRE prices in 2016



Shortcomings of illegal mining becoming apparent - glut of unmarketable product in Europe



Industry consolidation ongoing in China, creating import market for non-integrated producers



Increasing demand for environmentally responsible sources of rare earths

Supply, Demand and Revenue

- ◆ NdFeB magnet sector forecast to grow 8-12% between 2014 and 2020
- ◆ Project's production will meet most of the non-China, or Rest of World (ROW) demand for dysprosium and yttrium

2020 Demand and Supply Forecast						
Rare Earth Oxide	Global		ROW			Browns Range
	Demand kg	Supply kg Excl. NTU	Demand kg	Supply kg Excl. NTU	Deficit kg	Supply kg
Dysprosium	1,150,000	1,175,000	375,000	70,000	305,000	291,000
Terbium	625,000	250,000	200,000	25,000	175,000	43,000
Yttrium	10,000,000	8,000,000	3,500,000	650,000	2,850,000	1,872,000

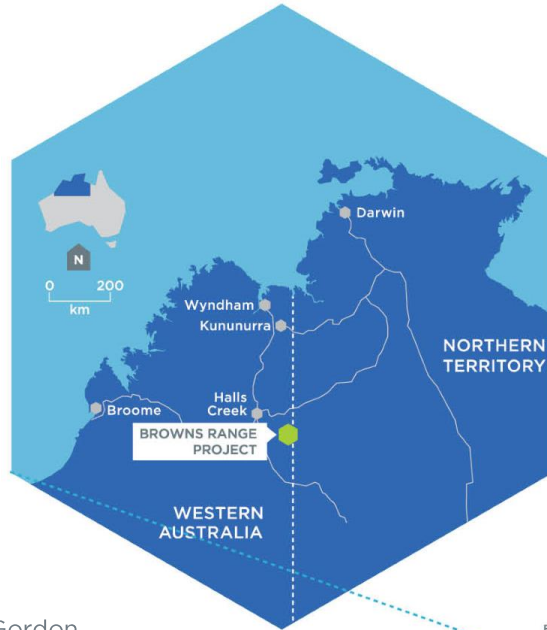
Source: Curtin-IMCOA May 2014 and NTU

Powering Technology.

\$3.4B
total LOM
revenue

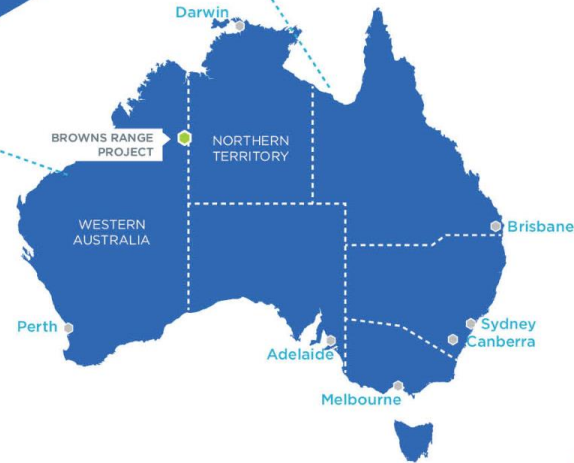
\$173M
average annual
operating free
cash flow during
full operation

Project Location



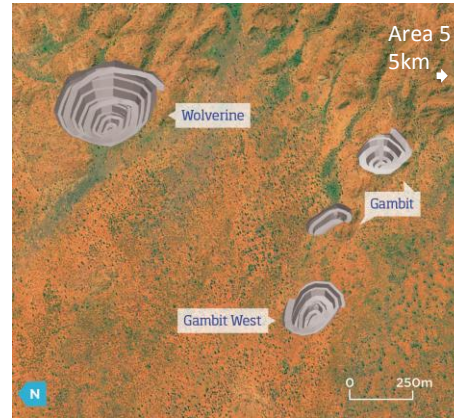
Western Australia, ranked as the world's most attractive investment destination by the Fraser Institute Survey of Mining Companies, 2013.

The Project is located within the Gordon Downs pastoral lease in the Shire of Halls Creek, Western Australia, approximately 50km southeast of the Yaruman Community at Ringer Soak, and within the registered native title claim of the Jaru People.



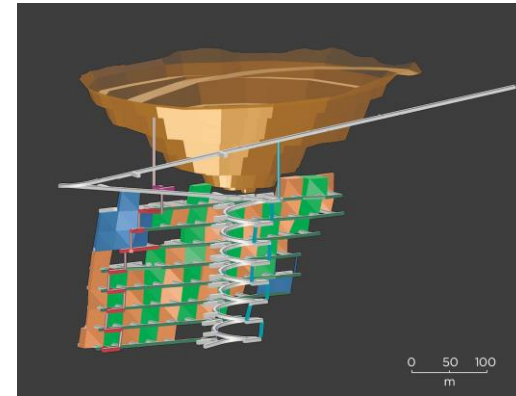
Mining

- Open cut all four deposits
- Years 1 to 6 from Ore Reserves
- Years 7 to 10 from Inferred Resource mainly from Wolverine UG below 325m
- Wolverine and Gambit West to progress UG
- Mining cost (annual average over LOM) \$33.3M
- \$145/kg Dy operating cost



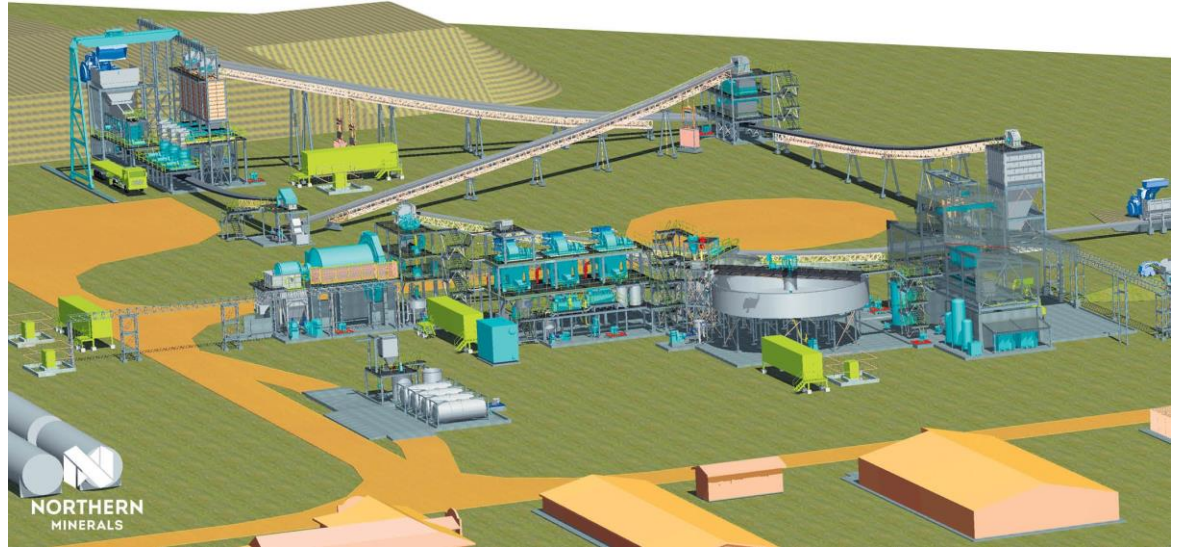
Pit Layouts - Wolverine, Gambit and Gambit West

Layout for the Wolverine Underground Mine - oblique view, looking approx. north-east



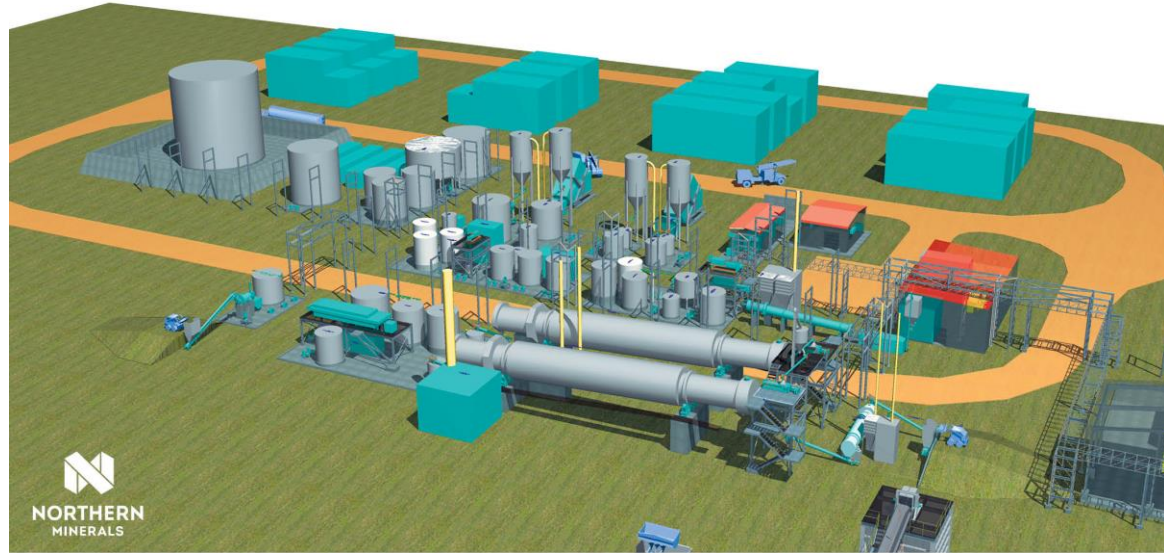
Beneficiation Plant

- ◆ 585,000tpa @ 0.66% TREO
- ◆ 17,045tpa mineral concentrate @ 20% TREO
- ◆ 92.5% Dy recovery
- ◆ 89% TREO recovery
- ◆ \$83/kg Dy operating cost

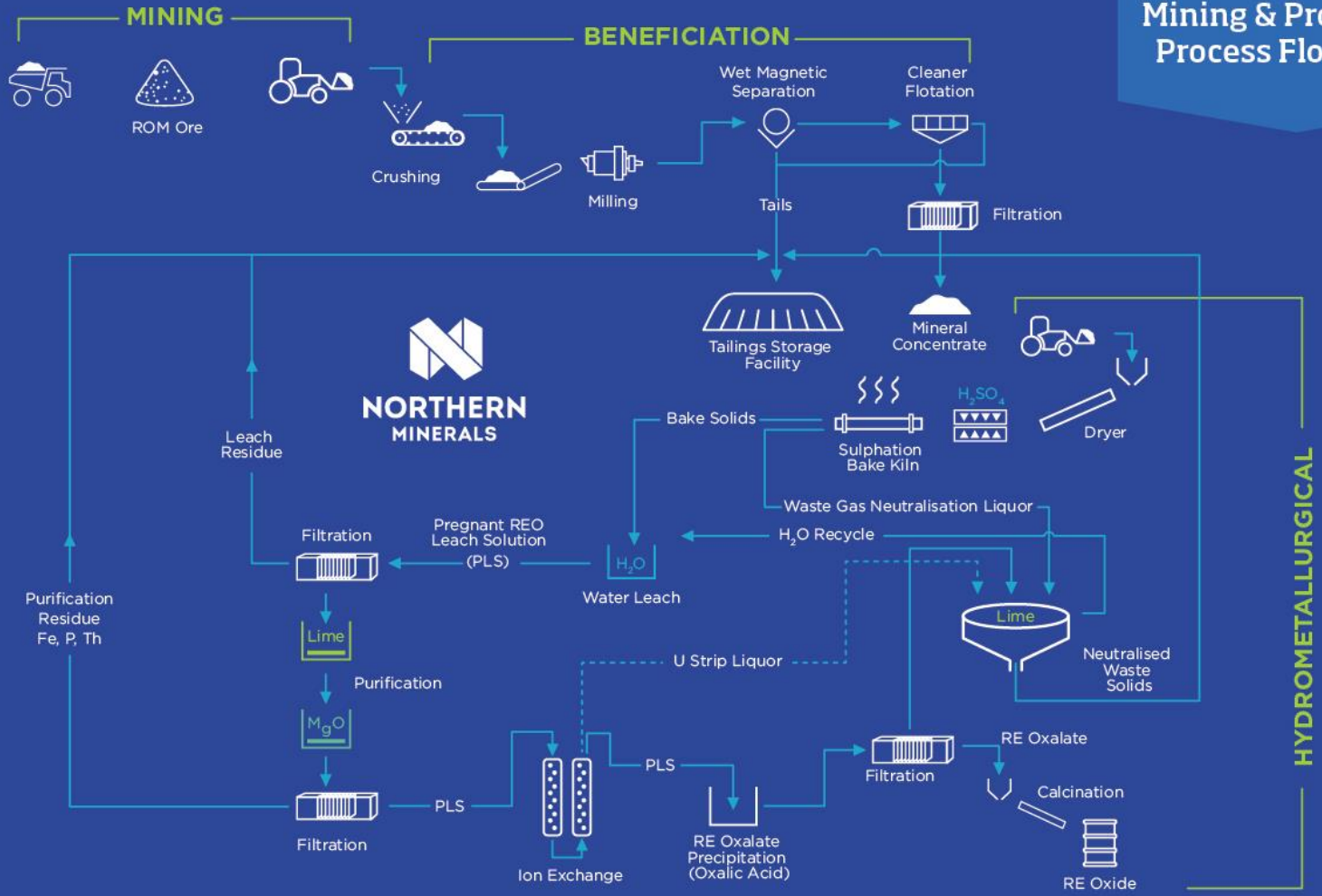


Hydrometallurgical Plant

- ◆ 17,045tpa mineral concentrate @ 20% TREO
- ◆ 90% Dy recovery
- ◆ 88% TREO recovery
- ◆ 279,000kg Dy annual production
- ◆ 3,200,000kg @ 92% TREO annual production
- ◆ \$170/kg Dy operating cost

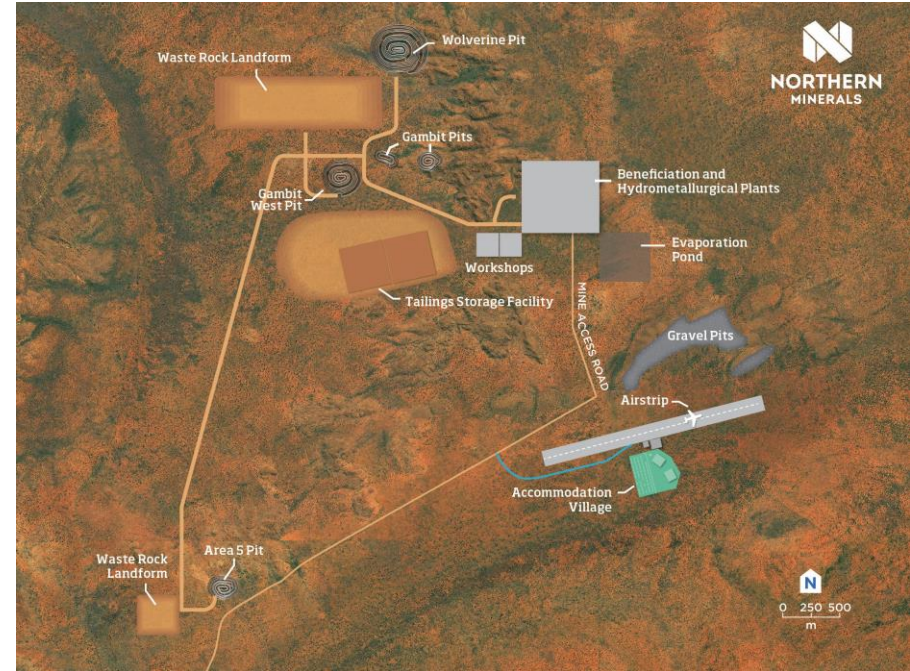


Mining & Production Process Flowsheet



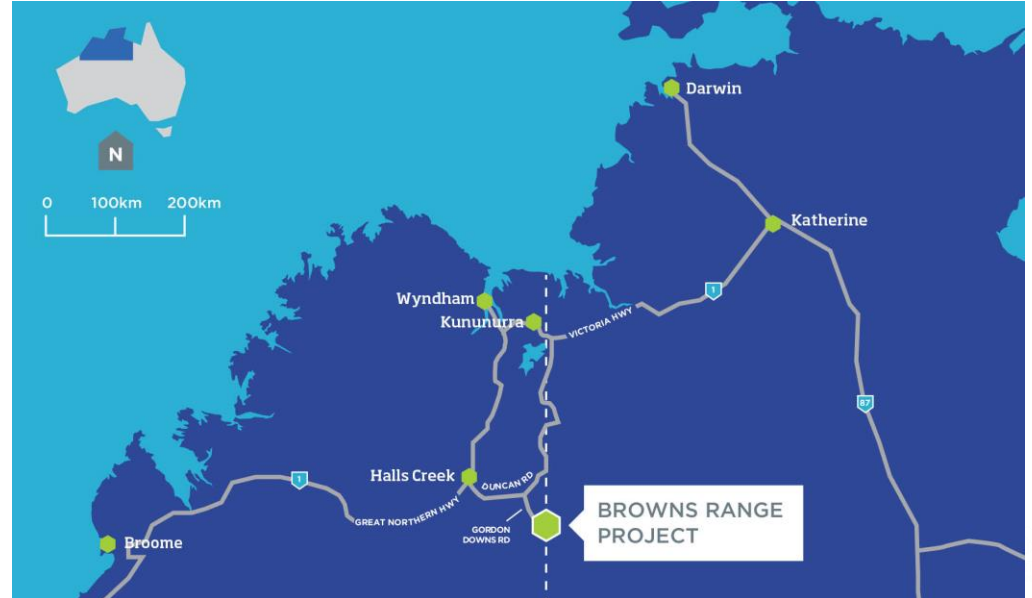
Infrastructure

- Accommodation village, peak 325 people
- 1.8km airstrip
- Diesel generators 9.6MW
- 1.32GL per annum groundwater supply
- Above ground Tailings Storage Facility
- Bulk consumable and reagent storage facilities



Road Transport Routes

- ◆ 5 triple or 7 double road trains each day
- ◆ Improve safety and serviceability, 2 month maximum outage
- ◆ Duncan and Gordon Downs roads upgrade - \$22.9M
- ◆ Project access road 57km - \$5.5M
- ◆ Wyndham and Darwin Ports



Licence to Operate

Native
Title

Environmental

Community
Engagement

Indigenous
Employment

Co-Existence Agreement
Signing - June 2014

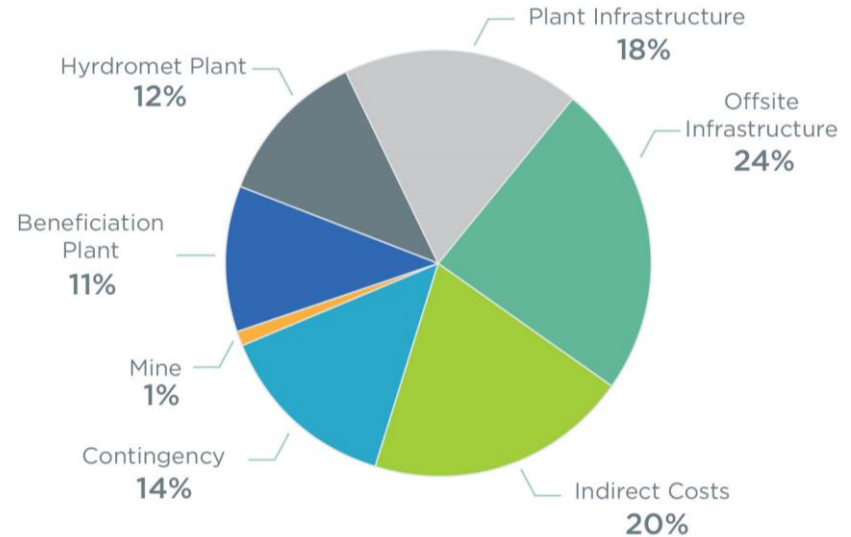


Cultural Awareness Training
- Smoking Ceremony



Pre-production Capital Cost Estimate

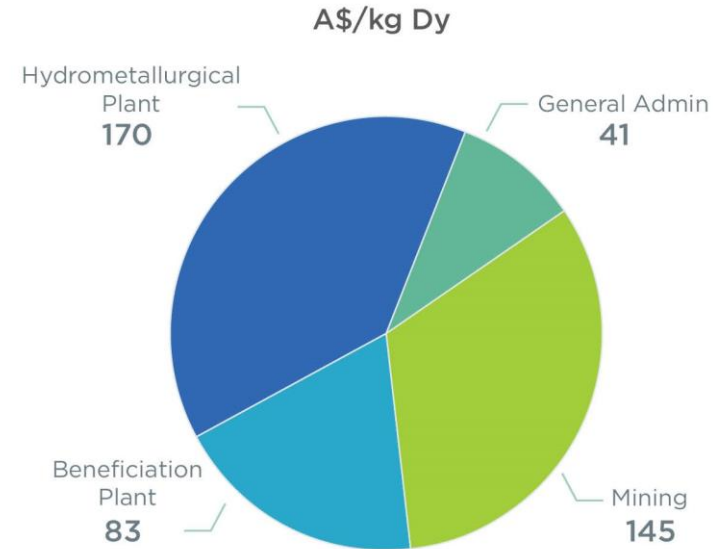
Cost Area	A\$M
Mine	\$3.1
Beneficiation Plant	\$35.6
Hydrometallurgical Plant	\$37.8
Plant Infrastructure	\$56.6
Offsite Infrastructure	\$73.8
Direct Costs Sub-Total	\$206.9
Indirect Costs	\$63.5
Contingency	\$43.3
Total Project Pre-Production Capital	\$313.7



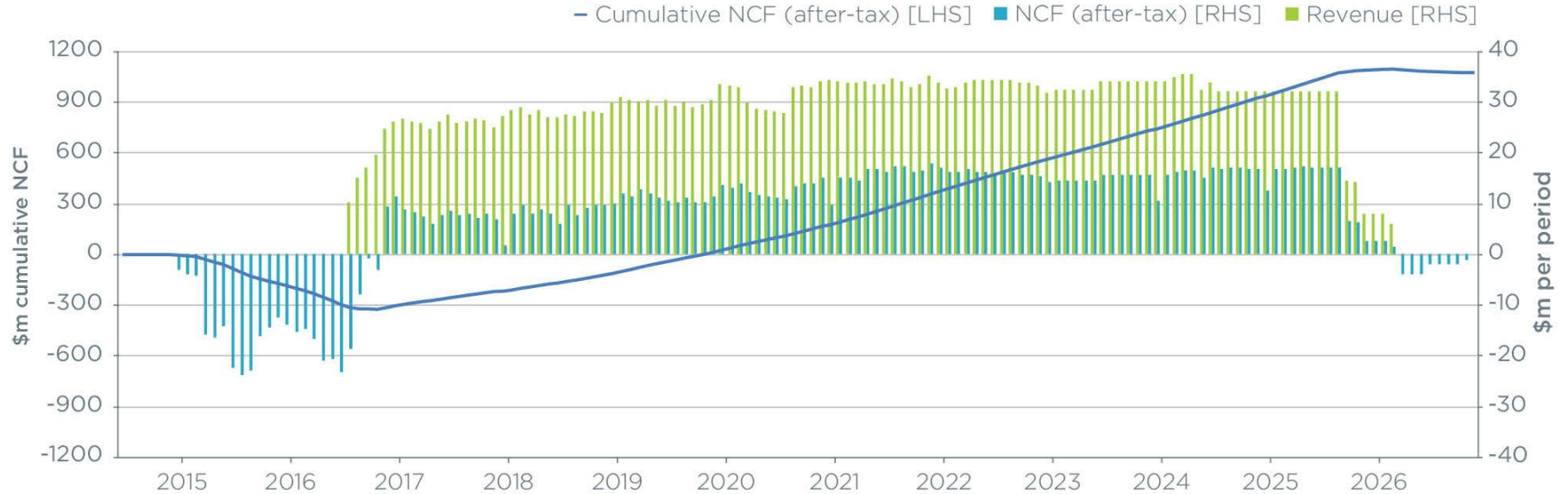
Operating Costs by Expense Area

(585,000tpa plant throughput)

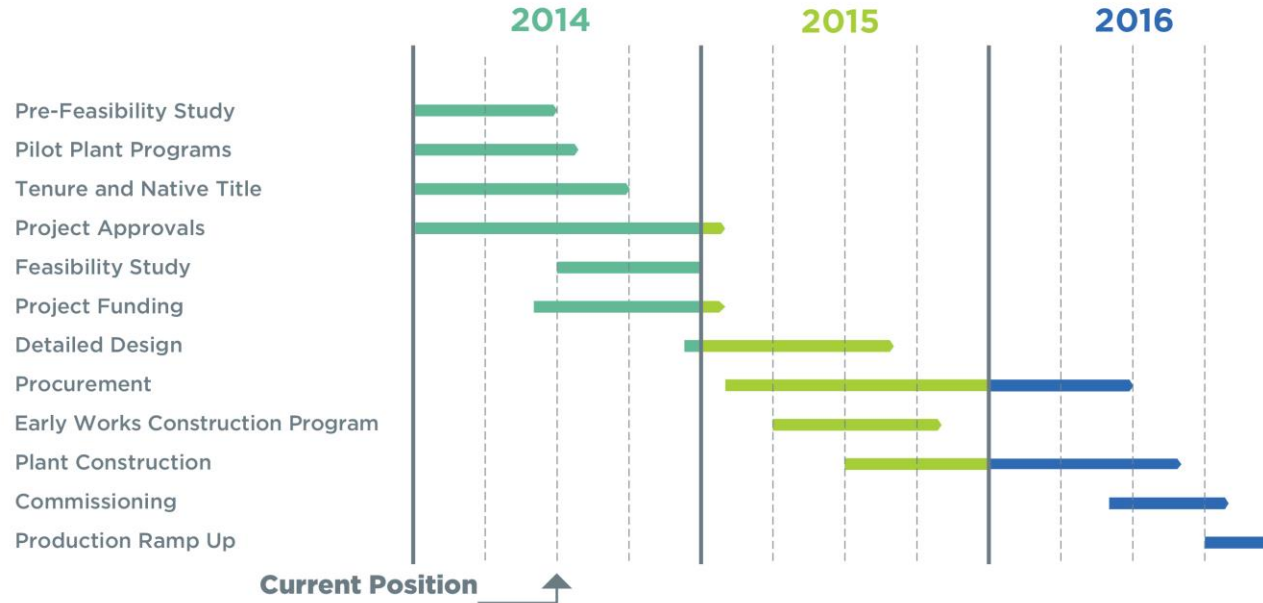
Average Annual Operating Cost By Expense Area Over LOM	A\$/a	A\$/kg Dy
Mining (Average over LOM)	\$33.3	\$119
Labour	\$19.4	\$70
Power	\$14.3	\$51
Reagents & Consumables	\$39.2	\$140
Maintenance	\$6.1	\$22
General & Administration	\$9.7	\$35
Product Transport	\$0.5	\$2
Total Annual Operating Costs	\$122.5	\$439
By-product Revenue	\$102.8	\$368
Operating Cost Excluding Royalties (Net by-product revenue)	\$19.7	\$71



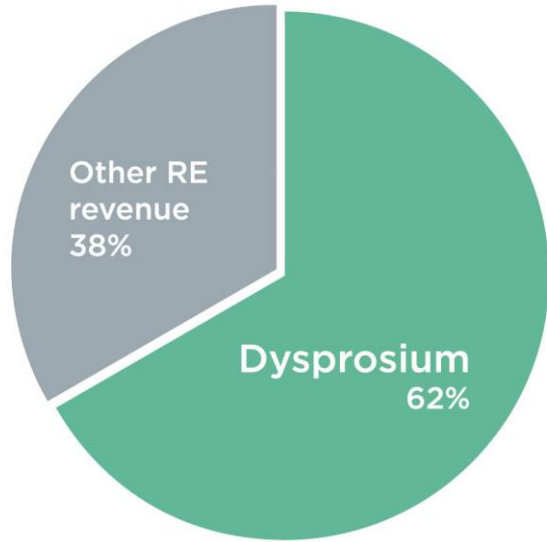
Cash Flows of LOM



Pathway to Production



Browns Range: The new Dy mine



Robust Economics
NPV of \$446M

10 Year Mine Life

**Mining Lease
and Native Title**

**Pathway to Production
for 2016**

APPENDICES

The Right Leadership

A wealth experience and knowledge to strategically guide Northern Minerals to the next dysprosium miner

BOARD OF DIRECTORS

Conglin Yue – Executive Chairman

- Long standing relationship with a number of major steel producing companies in China.
- Chairman of Conglin Baoyuan International Investment Group, a Chief Executive Officer of Huachen and a Director of the Chinese University of Political Science and Law.

Kevin Schultz - Deputy Chairman

- Mining engineer with global experience across multiple projects and commodities.
- 40 years record of achievement from mineral discovery and appraisal, through to mine development.
- Previously MD of Polaris Metals.

Adrian Griffin - Non Executive Director

- Significant expertise in mine management and production.
- Strong background in development of extraction technology – pioneer of lateritic nickel processing.
- Corporate experience as MD and Chairman of listed resource Companies.

George Bauk - Managing Director / CEO

- 25 years' global resource industry experience in senior operational and corporate roles, with particular focus on rare earths and nickel.
- Strong background in strategic management and business planning, building teams and capital/debt raising
- Former MD of Western Metals.

Colin McCavana - Non Executive Director

- More than 35 years global management experience in the construction and operation of resources projects.
- Specific expertise in mining and mineral recovery development.
- Former MD of Haddington Resources Limited, currently chairman of Reward Minerals Ltd.

Yanchun Wang - Non Executive Director

- Strategic investor for a number of Chinese companies.
- Vice-Chairman of Conglin Baoyuan International Investment Group and a director of Huachen.



The Right Management

Relevant range of experience and expertise to develop and commercialise the Browns Range Project

EXECUTIVE MANAGEMENT TEAM

Robin Wilson – Exploration Manager

- Geologist, with 20 years experience in Australia and Africa.
- Successful exploration record across a range of commodities, including gold, nickel, copper, uranium and REE.
- Previous exploration experience with CRA, Woodside, Troy Resources, Tanganyika Gold

Robert Sills – Marketing Manager

- Experience in developing commodity opportunities with multinational corporations including REE end users and intermediaries.
- Specialised and highly sought after expertise in REE commercial market.
- Previous roles with Rio Tinto, Arafura Resources and Gold Corporation

Bin Cai – Executive Manager Asia Pacific, Alternate Director

- Experience with the China Investment Bank, along with global resource investment.
- Managing Director of Australia Conglin International Investment Group, Director of Orion Metals Limited and Carpentaria Exploration Limited.
- Northern Minerals Alternate Director for Mr Conglin Yue and Madam Wang.

Robin Jones – Project Manager

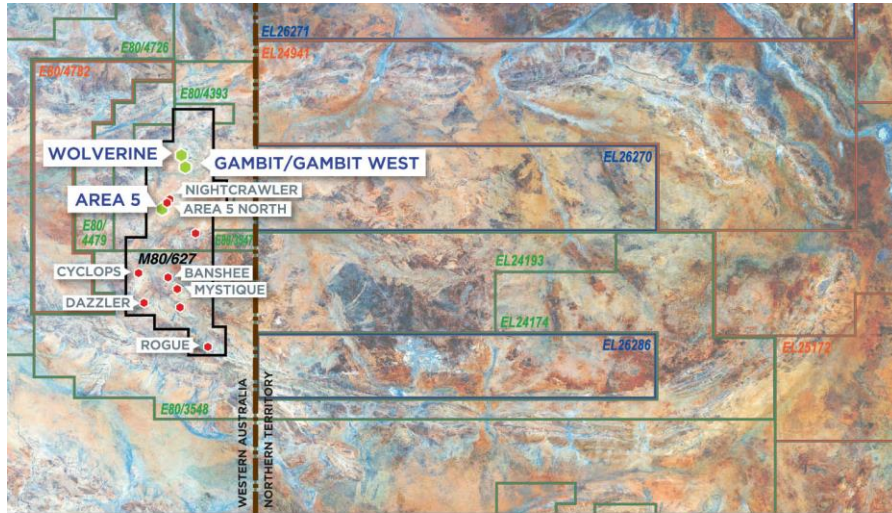
- More than 20 years experience, in Australia, Africa and Asia.
- Highly experienced resource project developer, with success in taking projects from scoping study through to production.
- Previously led project development with Mega Uranium, CopperCo, Aquarius Platinum and Impala Platinum.

Mark Tory – CFO / Company Secretary

- More than 20 years experience in the management (operational and finance) of mining companies both national and international.
- Previous experience includes MD Crescent Gold, and various roles with Anglo American, Homestake Gold and Deloitte.
- Capital raising and debt financing experience.



Browns Range Dome



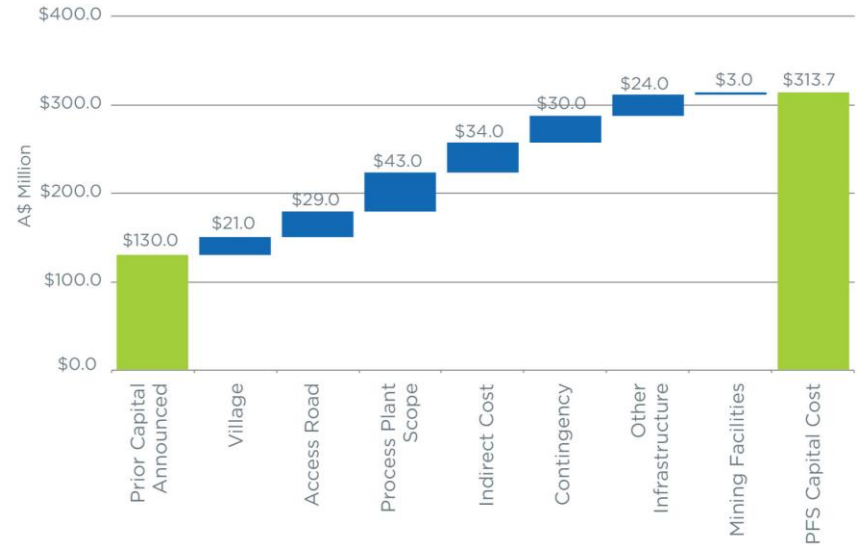
- Northern Minerals Granted Tenement
- Northern Minerals Tenement Application
- Toro Energy/Northern Minerals JV Tenements
- Mining Lease
- Northern Minerals RE Mineral Resource
- Northern Minerals RE Prospects



The dome is a major geological feature covering 1,500km²
60km x 30km
HRE mineralised faults/breccias probably developed during late stages of doming

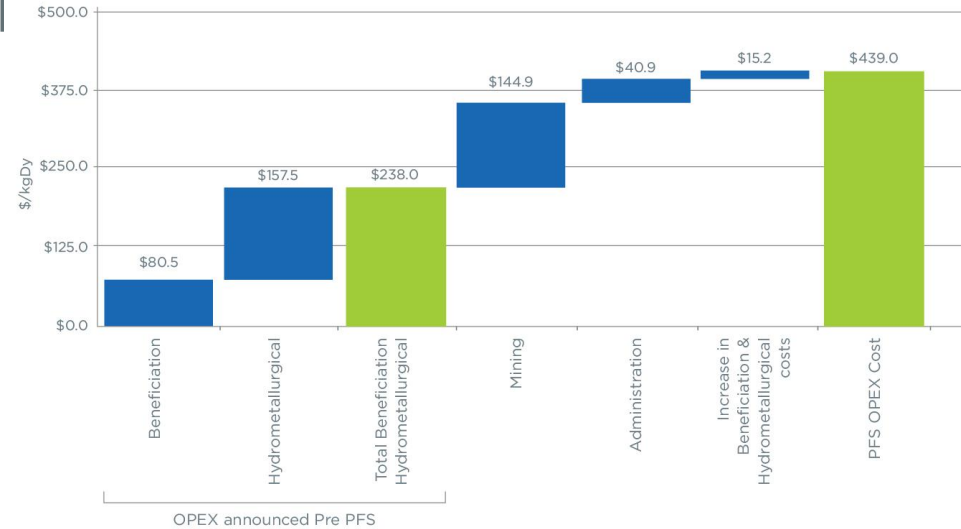
Previous Capital Comparison

- ◆ **Indirect cost:** construction indirect, NTU's cost, first fill consumables, equipment spares, EPCM and commissioning
- ◆ **Other infrastructure:** TSF, water supply, airstrip, building and other infrastructure
- ◆ **Prior capital announced:** beneficiation and hydrometallurgical plant costs previously announced
- ◆ **Project plant scope:** additions and improvements to the process plant flowsheets



Previous OPEX Comparison

- Beneficiation and hydrometallurgical plant costs relate to previously announced operating costs of relevant plant
- Mining and administration estimate generated from PFS not previously released
- Increase in beneficiation and hydrometallurgical is the net differential between desktop study and PFS operating costs



Delivering on Strategy

2010

- Identified HRE mineralisation at Browns Range
- Acquisitions included John Galt and Browns Range NT
- Completed first metallurgical test on Browns Range

2011

- Drilling confirms HRE at Wolverine, Gambit and Area 5
- Flowsheet developed, low capital costs
- Pathway to production schedule developed

2012

- Initial JORC resource at Wolverine
- HRE Oxide >92% purity produced, expanding project scope
- MoU signed for offtake with Sumitomo Corporation

2013

- Funding strategy initiatives in place
- JORC resource upgrade of 165%
- Lodged mining lease application

2014

- JORC increase in resource 47,977,000kg
- Native title signed and mining lease granted
- Maiden JORC Reserve and PFS delivers robust economics



Probable Ore Reserve

Deposit	Classification	Ore Tonnes	TREO		Dy ₂ O ₃		Tb ₄ O ₇		Y ₂ O ₃	
			kg/t	kg Contained	kg/t	kg Contained	kg/t	kg Contained	kg/t	kg Contained
OPEN PIT										
Wolverine	Probable	863,000	5.30	4,574,000	0.47	407,000	0.07	62,000	3.14	2,712,000
Gambit West	Probable	185,000	10.92	2,021,000	0.90	167,000	0.12	23,000	5.97	1,105,000
Gambit	Probable	47,000	9.94	467,000	0.85	40,000	0.11	5,000	6.11	287,000
Area 5	Probable	317,000	3.03	960,000	0.20	63,000	0.03	10,000	1.42	450,000
UNDERGROUND										
Wolverine	Probable	1,894,000	7.58	14,348,000	0.67	1,260,000	0.10	192,000	4.42	8,379,000
Gambit West	Probable	103,000	11.89	1,225,000	1.08	111,000	0.14	14,000	7.09	730,000
TOTAL²	Probable	3,409,000	6.92	23,595,000	0.60	2,048,000	0.09	306,000	4.01	13,663,000

² - Rounding may cause some computational discrepancies

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



Mineral Resource Estimate

Deposit	Category	Mt	TREO	Dy ₂ O ₃	Tb ₄ O ₇	Y ₂ O ₃	HREO	TREO	Dy ₂ O ₃
			%	Kg/t	Kg/t	Kg/t	%	Kg	Kg
Wolverine	Indicated	2.66	0.89	0.78	0.12	5.17	89	23,705,000	2,075,000
	Inferred	1.8	0.81	0.67	0.1	4.45	87	14,564,000	1,206,000
	Total¹	4.46	0.86	0.74	0.11	4.88	88	38,269,000	3,300,000
Gambit West	Indicated	0.27	1.26	1.07	0.14	7.06	90	3,424,000	289,000
	Inferred	0.12	0.64	0.54	0.07	3.67	85	753,000	65,000
	Total¹	0.39	1.07	0.91	0.12	6.04	89	4,177,000	355,000
Gambit	Indicated	0.05	1.06	0.92	0.12	6.62	97	533,000	46,000
	Inferred	0.06	1.2	1.01	0.15	6.8	95	671,000	61,000
	Total¹	0.11	1.13	0.97	0.13	6.72	96	1,204,000	107,000
Area 5	Indicated	1.38	0.29	0.18	0.03	1.27	69	3,953,000	248,000
	Inferred	0.14	0.27	0.17	0.03	1.17	70	394,000	24,000
	Total¹	1.52	0.29	0.18	0.03	1.26	69	4,347,000	274,000
Total¹	Indicated	4.37	0.72	0.61	0.09	4.07	83	31,615,000	2,666,000
	Inferred	2.12	0.77	0.64	0.09	4.25	86	16,382,000	1,357,000
	Total¹	6.48	0.74	0.62	0.09	4.13	84	47,997,000	4,018,000

¹Rounding may cause some computational discrepancies

Cut off at 0.15% TREO

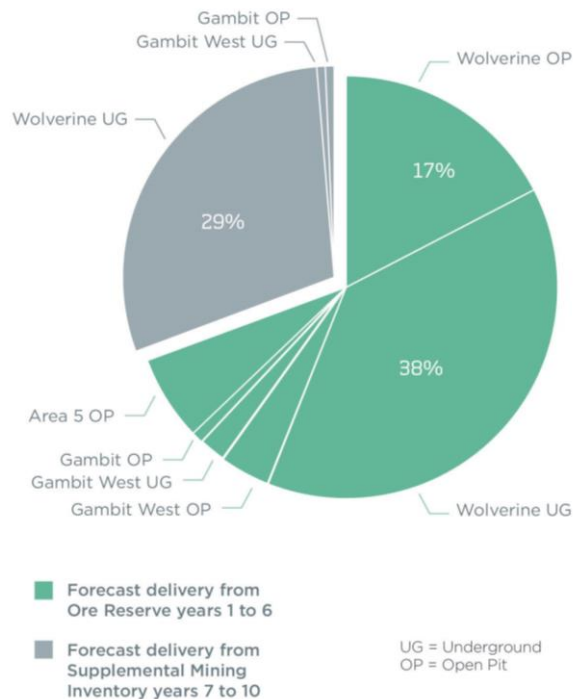
TREO = Total Rare Earth Oxides - Total of La₂O₃, CeO₂, Pr₆O₁₁, Nd₂O₃, Sm₂O₃, Eu₂O₃, Gd₂O₃, Tb₄O₇, Dy₂O₃, Ho₂O₃, Er₂O₃, Tm₂O₃, Yb₂O₃, Lu₂O₃, Y₂O₃

HREO = Heavy Rare Earth Oxides— Total of Sm₂O₃, Eu₂O₃, Gd₂O₃, Tb₄O₇, Dy₂O₃, Ho₂O₃, Er₂O₃, Tm₂O₃, Yb₂O₃, Lu₃, Y₂O₃



Distribution of Feed Type and Source

- ◆ Years 1 to 6 from Ore Reserve
- ◆ Years 7 to 10 from Inferred Resource at Wolverine UG below 325m
- ◆ Total mined tonnes LOM 5,037,000



Production Forecast

Rare Earth Oxide	Unit	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7-10	Total
Dysprosium	kg	263,000	303,000	301,000	276,000	292,000	300,000	965,000	2,696,000
Lanthanum	kg	36,000	39,000	39,000	39,000	41,000	41,000	137,000	369,000
Cerium	kg	97,000	105,000	104,000	104,000	109,000	108,000	368,000	992,000
Praseodymium	kg	15,000	16,000	16,000	16,000	17,000	17,000	56,000	151,000
Neodymium	kg	69,000	75,000	74,000	74,000	77,000	77,000	262,000	707,000
Samarium	kg	58,000	63,000	62,000	62,000	65,000	65,000	218,000	589,000
Europium	kg	13,000	14,000	14,000	14,000	14,000	14,000	48,000	129,000
Gadolinium	kg	160,000	173,000	170,000	171,000	178,000	178,000	604,000	1,632,000
Terbium	kg	38,000	43,000	42,000	41,000	43,000	43,000	138,000	385,000
Holmium	kg	56,000	60,000	59,000	60,000	62,000	62,000	209,000	565,000
Erbium	kg	151,000	164,000	161,000	162,000	169,000	169,000	572,000	1,544,000
Thulium	kg	23,000	25,000	25,000	25,000	26,000	26,000	87,000	235,000
Ytterbium	kg	124,000	135,000	133,000	134,000	139,000	139,000	471,000	1,271,000
Lutetium	kg	18,000	19,000	19,000	19,000	20,000	20,000	66,000	179,000
Yttrium	kg	1,652,000	1,927,000	1,945,000	1,831,000	1,872,000	1,917,000	6,371,000	17,511,000
Total TREO Produced	kg	2,767,000	3,156,000	3,157,000	3,022,000	3,117,000	3,169,000	10,565,000	28,950,000

Figures may not add due to rounding
 Based on LOM of 9.67 years.
 TREO = Total Rare Earth Oxides- Total of Dy₂O₃, La₂O₃, CeO₂, Pr₆O₁₁, Nd₂O₃, Sm₂O₃, Eu₂O₃, Gd₂O₃, Tb₄O₇, Ho₂O₃, Er₂O₃, Tm₂O₃, Yb₂O₃, Lu₂O₃, Y₂O₃
 By-product Oxides- Total of La₂O₃, CeO₂, Pr₆O₁₁, Nd₂O₃, Sm₂O₃, Eu₂O₃, Gd₂O₃, Tb₄O₇, Ho₂O₃, Er₂O₃, Tm₂O₃, Yb₂O₃, Lu₂O₃, Y₂O₃

