



# NORTHERN MINERALS

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## Quarterly Activities Report

SEPTEMBER 2016

The focus this quarter has been facilitating the fulfilment of the next stage of the \$30 million equity funding agreement with Huatai Mining, to allow pre-commitment works for the Browns Range pilot plant operation to begin ahead of a final investment decision in early 2017.



Northern Minerals (ASX: NTU) is focussed on the delivery of the heavy rare earth element, dysprosium. NTU has a large landholding in WA and the NT that is highly prospective for this element.

Through the development of the Browns Range Project, NTU aims to be the first significant world producer of dysprosium outside of China. Dysprosium is an essential ingredient in powering clean energy technology applications such as hybrid cars and wind turbines. A key feature of the Project is its xenotime mineralisation which facilitates a relatively simple and cost effective processing flowsheet to produce a dysprosium rich mixed RE carbonate.

Corporate Overview



## Highlights:

- ◆ Funding Subscription Agreement signed with Huatai Mining Pty Ltd to raise \$30 million at an average price of over 13 cents per share.
- ◆ Initial \$3 million received in September quarter from Huatai Mining, with the remaining \$27 million to be paid in three tranches during the December quarter.
- ◆ Browns Range Pilot Plant received Project Management Plan approval from WA Department of Mines and Petroleum.
- ◆ Binding tenement sale agreement signed with Northern Star Resources (ASX: NST) to sell exploration licences in the Tanami Region of the Northern Territory for \$1.25 million in cash.



## Browns Range Project Update

Northern Minerals continues to progress the staged development of its 100% owned, dysprosium-rich Browns Range heavy rare earth Project, located south east of Halls Creek in the Tanami region of Western Australia and the Northern Territory.

The Company has the opportunity to become the first significant dysprosium producer outside of China through the development of the high grade Browns Range Project. Northern Minerals is in a unique position to capitalise on the growing demand for the rare earth elements used in the production of neodymium iron-boron magnets (rare earth permanent magnets) commonly used in the production of motors for electric vehicles and generators for direct drive wind turbines.

Northern Minerals achieved a number of significant milestones during the September quarter, with perhaps the most critical being the signing of an agreement with Huatai Mining Pty Ltd to raise a total of \$30 million through the issuing of 230 million shares at an average price of more than 13 cents per share.

Huatai Mining, an Australia entity, is a related body corporate of Taizhong Energy Australia Pty Ltd, which is the local investment arm of Chinese coal producer Shandong Taizhong Energy Co. Ltd.

During the quarter, Northern Minerals worked through an extensive due diligence process with Huatai Mining, which involved a full review of the Company's legal, tax and technical information as well as a site visit to the project.

Importantly, this major capital raising has allowed Northern Minerals to commence pre-commitment works for the development of the Pilot Plant at Browns Range, post the completion of the quarter, including mine planning, drilling, water supply, engineering design and the extension of the accommodation camp.



## PROJECT FUNDING

The Subscription Agreement with Huatai Mining announced on 2 August, provided staged funding tranches to Northern Minerals subject to the satisfaction of a number of conditions precedent, including Shareholder approval and clearance through the Foreign Investment Review Board process.

On signing of the agreement, Northern Minerals received \$200,000 through issuing 2 million shares at 10 cents per share to Huatai Mining, which was followed by a subsequent payment of \$2.8 million through the issue of an additional 28 million shares at 10 cents per share, announced on August 12.

Northern Minerals called a General Meeting of Shareholders on 29 September, where the Huatai Mining transaction was approved with a majority of more than 99% voting in favour. This meeting ratified the previous issue of shares to Huatai Mining and provided approval for the issue of shares to fulfil the remaining \$27 million of funding outlined in the agreement.

On 17 October, the Company announced that the Foreign Investment Review Board had no objection to the \$30 million equity investment by Huatai Mining, which resulted in Northern Minerals satisfying all conditions precedent for the funding agreement to be fulfilled.

The final \$27 million is scheduled to be received in three equal tranches during the December quarter through the issue of a further 200 million shares at a price of 13.5 cents per share.

## APPROVALS

Northern Minerals received approval during the quarter from the WA Department of Mines and Petroleum for its Browns Range Project Management Plan, which is a key milestone in the overall approvals process towards the commencement of mining operations.

The Department of Mines and Petroleum provided the approval following an assessment of the plan against the requirements under section 42 of the Mines Safety and Inspection Act 1994 and regulations 3.12 and 3.13 of the Mines Safety and Inspection Regulations 1995.

This approval was an amendment to the Project Management Plan previously approved for the full scale Browns Range operation in late 2015 – the Pilot Plant will be approximately 10% of the size of the full scale operation.

Northern Minerals is well advanced with work on the additional subordinate approvals required for the Pilot Plant operation.



## Corporate

On the completion of the \$30 million equity investment transaction outlined above, Huatai Mining will hold approximately 31% of Northern Minerals and become the Company's largest shareholder, with other substantial holder Australian Conglin International Investment Group close behind with a 27% stake.

Also, as part of the investment agreement, Huatai Mining will be entitled to nominate two directors to the Board of Northern Minerals, with Mr Nan Yang being the first representative appointed as a Non-Executive Director following receipt of the first \$9 million tranche.

The ongoing fulfilment of scheduled funding under the agreement with Huatai Mining keeps Northern Minerals on track for a final investment decision and construction commencement in early 2017 and facilitates the Company's strategy to deliver the Pilot Plant at Browns Range before the end of the 2017 calendar year.

Also during the September quarter, Northern Minerals entered into a binding tenement sale agreement with Northern Star Resources to sell a package of non-core exploration licences in the Tanami region of the Northern Territory for consideration of \$1.25 million in cash.

The package included 12 granted exploration licences covering 3,350 square kilometres as well as an additional 3,360 square kilometres subject to exploration licence applications.

Northern Star will pay a further \$1.5 million in cash upon establishment of a 1 million ounce Inferred Mineral Resource on the tenements, while Northern Minerals will retain the rare earths rights on all of the ground.

The terms of the agreement also include Northern Star gaining gold exploration rights at Northern Minerals' Boulder Ridge project, while Northern Minerals will acquire the rights to rare earth elements in four exploration licences which Northern Star has agreed to acquire from Toro Energy Limited.

Subsequent to the end of the quarter, Northern Minerals received its \$1.76 million R&D rebate from the Australian Government. This has been used to extinguish the debt of \$1.3 million with Innovative Funding.

- ENDS -



### For further information:

George Bauk  
Managing Director/CEO  
Northern Minerals  
+61 8 9481 2344

### For media and broker enquiries

Andrew Rowell / Michael Cairnduff  
Cannings Purple  
+61 8 6314 6300

## About Browns Range

The Browns Range Project is internationally considered a best in class, shovel ready deposit with well understood mineralogy. Northern Minerals plans to develop the Browns Range Project in three stages. Stage one will be the development of Pilot Plant operation; Stage Two the development of the project to bankable feasibility study level; and Stage Three the building of the project to full scale production.

The proposed pilot plant, at a scale of 10% of the planned full scale operation, has a designed front end of 60,000 tonnes per annum crushing beneficiation circuit and a 3,100 tonnes per annum hydrometallurgical plant aimed at producing 570 tonnes per annum of TREO in a mixed rare earths carbonate, including 49 tonnes per annum of dysprosium.

The pilot plant is scheduled to operate for three years, in which time a decision to commit to the full scale operation will be taken, which if approved would take two years to construct.

### Three stage approach to full scale production





**Information required by listing rule 5.3.3**

Project	Location	Tenement ID	State	Change of Status in Quarter	Status	Holder Application	Interest
	Browns Range	E80/4479	WA		Granted	Northern Minerals	100%
	Browns Range	E80/4725	WA		Granted	Northern Minerals	100%
	Browns Range	E80/4726	WA		Granted	Northern Minerals	100%
	Browns Range	E80/4806	WA		Granted	Northern Minerals	100%
	Browns Range	E80/4883	WA		Granted	Northern Minerals	100%
	Browns Range	E80/4782	WA		Granted	Northern Minerals	100%
	Browns Range	M80/627	WA		Granted	Northern Minerals	100%
	Browns Range	L80/76	WA		Granted	Northern Minerals	100%
	Browns Range	L80/77	WA		Granted	Northern Minerals	100%
	Browns Range	L80/78	WA		Granted	Northern Minerals	100%
	Browns Range	L80/79	WA		Granted	Northern Minerals	100%
Browns Range NT	Browns Range	EL24193	NT		Granted	Northern Minerals	100%
	Browns Range	EL24174	NT		Granted	Northern Minerals	100%
	Browns Range	EL24941	NT		Application	Northern Minerals	100%
	Browns Range	EL26270	NT		Granted	Toro Energy Limited	Acquiring REE rights
	Browns Range	EL26286	NT		Granted	Toro Energy Limited	Acquiring REE rights
John Galt	John Galt	E80/4298	WA		Granted	Northern Minerals	100%
	John Galt	E80/4671	WA		Granted	Northern Minerals	100%
	John Galt	E80/4779	WA		Granted	Northern Minerals	100%
	John Galt	E80/4967	WA	Granted		Northern Minerals	100%
Boulder Ridge	Boulder Ridge	EL24177	NT		Granted	Northern Minerals	100%
	Boulder Ridge	EL25171	NT		Granted	Northern Minerals	100%
	Boulder Ridge	EL29594	NT		Granted	Northern Minerals	100%
	Boulder Ridge	EL24849	NT		Application	Northern Minerals	100%
	Boulder Ridge	EL24935	NT		Application	Northern Minerals	100%



	Boulder Ridge	EL28868	NT		Application	Northern Minerals	100%
	Boulder Ridge	EL30132	NT		Application	Northern Minerals	100%
	Boulder Ridge	EL27590	NT		Granted	Toro Energy Limited	Acquiring REE rights
<b>Gardiner-Tanami NT</b>	Tanami	EL23932	NT		Granted	Northern Minerals	100%
	Tanami	EL25009	NT		Granted	Northern Minerals	100%
	Ware Range	EL26498	NT		Granted	Northern Minerals	100%
	Ware Range	EL26541	NT		Granted	Northern Minerals	100%
	Pargee	EL27367	NT		Granted	Northern Minerals	100%
	Tanami	EL29592	NT		Granted	Northern Minerals	100%
	Tanami	EL29593	NT		Granted	Northern Minerals	100%
	Tanami	EL29595	NT		Granted	Northern Minerals	100%
	Tanami	EL23933	NT		Application	Northern Minerals	100%
	Ware Range	EL24179	NT		Application	Northern Minerals	100%
	Ware Range	EL24947	NT		Application	Northern Minerals	100%
	Ware Range	EL25003	NT		Application	Northern Minerals	100%
	Ware Range	EL25004	NT		Application	Northern Minerals	100%
	Tanami	EL25172	NT		Application	Northern Minerals	100%
	Tanami	EL29619	NT		Application	Northern Minerals	100%
	Tanami	EL29621	NT		Application	Northern Minerals	100%
	Tanami	EL26635	NT		Granted	Toro Energy Limited	Acquiring REE rights
<b>Rabbit Flats</b>	Rabbit Flats 1	EL25157	NT		Application	Northern Minerals	100%
	Rabbit Flats 2	EL25158	NT		Application	Northern Minerals	100%
	Rabbit Flats 3	EL25159	NT		Application	Northern Minerals	100%
	Rabbit Flats 4	EL25160	NT		Application	Northern Minerals	100%
	Rabbit Flats 5	EL23935	NT		Application	Northern Minerals	100%
<b>Kurundi</b>	Kurundi	EL29616	NT		Granted	Horn Resources	100% REE rights only





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## Contact:

George Bauk  
Managing Director/CEO

Mark Tory  
Chief Financial Officer/  
Company Secretary  
Northern Minerals  
+ 61 8 9481 2344

## Directors:

Conglin Yue  
Executive Chairman  
Kevin Schultz  
Deputy Chairman  
George Bauk  
Managing Director / CEO  
Colin McCavana  
Non-executive Director  
Adrian Griffin  
Non-executive Director  
Yanchung Wang  
Non-executive Director  
Bin Cai  
Alternate Director

## Management

Robin Wilson  
Exploration Manager  
Robin Jones  
Project Manager  
Mark Tory  
Chief Financial Officer/  
Company Secretary

## About Northern Minerals

Northern Minerals Limited (ASX: NTU) is a heavy rare earth (HRE) company focussed on the production of dysprosium and yttrium, elements which are in short supply globally.

With a relatively simple and low cost processing flowsheet, Northern Minerals can produce a high grade mixed rare earth oxide product which is highly sought after in international markets to power clean energy and high end technology applications.

Level 1, 675 Murray Street,  
West Perth WA 6005  
PO Box 669, West Perth WA 6872  
T + 61 8 9481 2344 | 1800 643 228  
F + 61 8 9481 5929

[northernminerals.com.au](http://northernminerals.com.au)