

## Northern Minerals company activity update

Northern Minerals Limited (ASX: NTU) (**Company**) is pleased to update shareholders on the Company's current corporate and project development activities.

The Company's Browns Range Heavy Rare Earth project, located in the heart of Western Australia's remote Kimberley region, remains the only project that has successfully exported a commercial quantity of heavy rare earths outside of China, when it initially commenced production of a mixed heavy rare earth carbonate in 2018.

The R&D testwork recommenced in August 2020, with the partial restart of operations following a five-month disruption due to Commonwealth biosecurity measures in response to COVID-19, which required the plant to be placed into care and maintenance.

Northern Minerals chief executive officer Mark Tory said beneficiation testwork on Browns Range ore was continuing, and Northern Minerals planned to restart the hydrometallurgical plant testwork in the December quarter as part of the three-year pilot assessment of the economic and technical feasibility of a commercial, larger scale development at Browns Range extracting rare earths from hard rock xenotime ore.



### Exploration

Northern Minerals is finalising plans for an exploration program to drill approximately 16,500 metres across its Browns Range tenements before the end of June 2021.

The Company has allocated a budget of up to \$5 million for the program in Financial Year 2021 and anticipates drill rigs being mobilised to site in October to test greenfields targets across the tenement holding as well as follow-up on previous drilling at the Dazzler and Banshee deposits.

The exploration program is focused on increasing the Mineral Resource and the life of mine potential at Browns Range. These results, along with the findings from Pilot Plant testwork, will feed into a new feasibility study to evaluate the potential for a commercial, larger scale heavy rare earths production project in the Kimberley.

### Powering Technology.

Northern Minerals  
Level 1  
675 Murray Street  
West Perth WA 6005

PO Box 669  
West Perth WA 6872  
northernminerals.com.au  
info@northernminerals.com.au

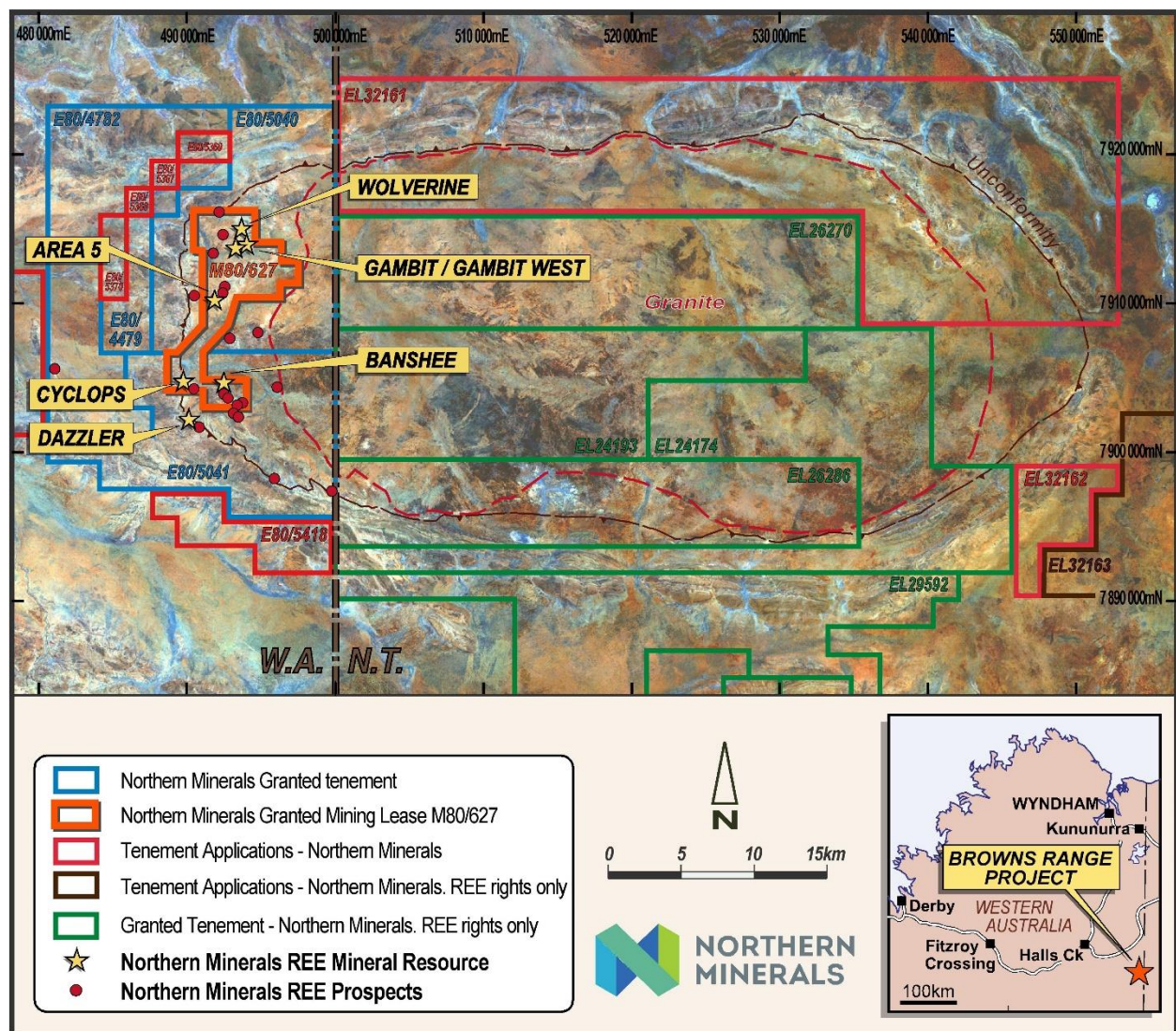
ASX: NTU  
T: +61 8 9481 2344  
F: +61 8 9481 5929  
ABN: 61 119 966 353

“This significant commitment to exploration in the next 12 months will underpin the Company’s ongoing ambition to realise the potential of Browns Range beyond the Pilot Plant Project, which if successful would create significantly greater opportunities for the Company, the State and Australia in the global context of producing these critical, strategic minerals within our borders,” Mr Tory said.

Northern Minerals’ 2,381km<sup>2</sup> land holding in the Kimberley is either 100% owned or the Company has acquired 100% rights to rare earth minerals extraction from tenements covering the Browns Range Dome geological feature.

“Our exploration team has identified numerous high priority targets, buoyed by the recent discovery at Dazzler that confirmed the prospectivity of the area and are specifically targeting mineralisation associated with the unconformity.

“Finding Dazzler lookalikes will be a priority for exploration for the next 12 months, as its grades are up to 3-times the total Browns Range resource grade. If we can find a few more of these it will help us realise the current strategy to increase mine life to 20-plus years.”





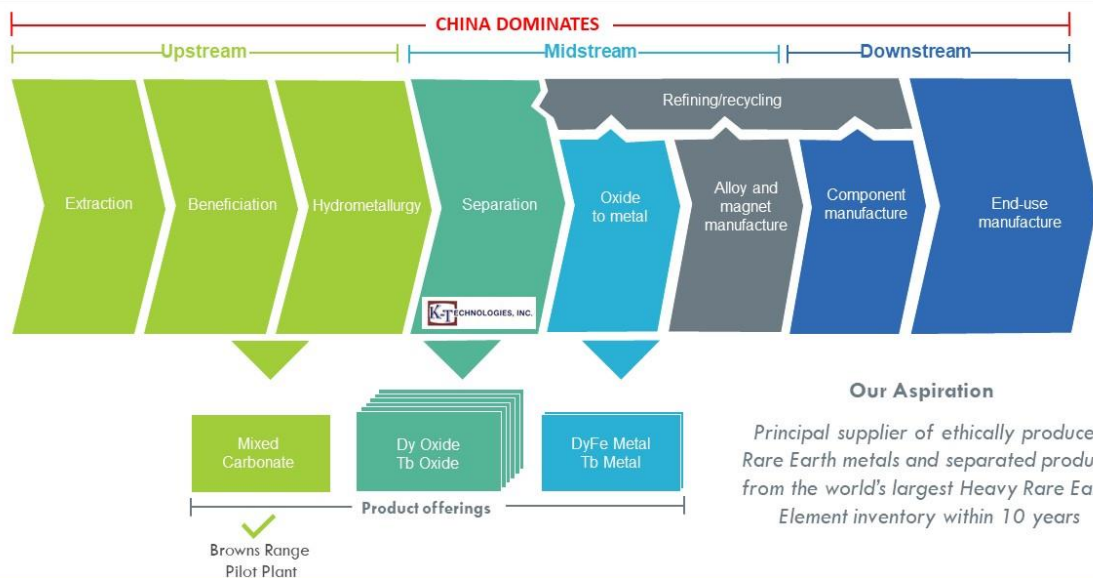
## Ore sorting

All the mechanical equipment and structure for the ore-sorting system has been procured, the majority of which has been delivered to Browns Range in preparation for construction commencing. Subject to Northern Minerals Board approval to procure the electrical equipment in the September 2020 quarter, commissioning of the system is expected to be completed by the end of the March quarter 2021.

The system concentrates ore feed to the beneficiation circuit by selecting ore and rejecting waste based on x-ray transmission detection. Previous ore sorting laboratory testwork on Browns Range ore identified the potential to increase the feed grade to the beneficiation plant by more than double, which in turn has the potential to materially reduce capital and operating costs.

“Once we have the ore sorting system commissioned, we will be able to run additional testwork at Browns Range on stockpiles of mined ore to reconfirm the results achieved in the laboratory testwork of this equipment. These results will provide valuable data around efficiency of the ore-sorting system which can be fed into a full scale feasibility study update,” Mr Tory said.

## Rare earth magnet supply chain



Northern Minerals (ASX:NTU)

## Product separation

Browns Range has produced a mixed heavy rare earth carbonate for export to off-take partners for further processing.

Processing this carbonate material into individual separated oxides (for example dysprosium oxide or terbium oxide) currently occurs predominantly in China. With the aim of developing an alternative supply chain for heavy rare earth oxides, Northern Minerals continues to progress studies into separation technologies most suited to separating the material produced at Browns Range.

This includes traditional solvent extraction (SX) technologies and variants thereof, as well as the alternative CIX/CIC technology from K-Technologies, Inc. (K-Tech) in the USA.

The previously announced K-Tech scoping study is progressing well with testwork advancing in at K-tech's facilities in Florida, USA, albeit slower than planned due to the constraints associated with COVID19. This work will result in development of a CIX/CIC process flowsheet with associated capital and operating cost estimates.

"While the K-Tech scoping study using CIX/CIC continues to progress well and initial testwork has produced positive results we are also looking at the traditional SX separation techniques. If we can prove-up the economics of downstream separation of our mixed heavy rare earth carbonate to individual oxides it will be an important step in the development of an alternative supply chain for heavy rare earth oxides and will significantly increase both the value of the products we are producing as well as the number of potential end-customers we can target for off-take agreements," Mr Tory said.

### Debt pay-down

Northern Minerals announced on 24 August 2020 it had reached a settlement agreement with the ATO on its R&D claims for the financial years ended 30 June 2017, 2018 and 2019. The result of that agreement was a net refund of \$9,921,638 payable to the Company on or about 18 September 2020, in addition to resolving the potential previous liability of \$9 million owed to the ATO.

The Company also announced on 21 August 2020 it had issued 66,666,667 fully paid ordinary shares to a nominee of Lind Global Macro Fund, LP (Lind) as a result of the conversion into shares of \$1,200,000 of the face value of the replacement convertible security, which had now been redeemed in full.

The Company's updated indicative debt position as at 31 August 2020 (excluding any accrued but unpaid interest), comprised of the liabilities totaling \$6.1 million, representing less than a third of the \$19.2 million outstanding when Northern Minerals announced a reduction in its debt to Sinosteel on 16 June 2020 (details included in table below).

"Northern Minerals strengthened balance sheet will enable us to invest in exploration as well as complete our Pilot Plant testwork program, including the ore sorting work, to be fully informed for the planned commercial feasibility study on the full-scale mining and processing operation. Our aim is to further strengthen our balance sheet and be debt free by the end of calendar year 2020", Mr Tory said.

Creditor	Amount Owing	Repayment Date
Sinosteel (EPC contract)	A\$2.1 million	23 October 2020
JHY Investments Pty Ltd (convertible notes)	A\$4.0 million	31 December 2020
<b>Total</b>	<b>A\$6.1 million</b>	

#### For further information:

Mark Tory  
Chief Executive Officer  
Northern Minerals  
+61 8 9481 2344

#### For media and broker enquiries:

Michael Cairnduff  
Director  
Cannings Purple  
0406 775 241  
mcairnduff@canningspurple.com.au

### About Northern Minerals:

Northern Minerals Limited (ASX: NTU) (Northern Minerals or the Company) is one of a few producers of heavy rare earth element dysprosium outside of China via production from the Browns Range Heavy Rare Earth Project in northern Western Australia.

The Company commenced the production of heavy rare earth carbonate in late 2018 as part of a three-year pilot assessment of economic and temporarily technical feasibility of a larger scale development at Browns Range. In March 2020, the operation was placed into care & maintenance as a result of COVID-19 and has partially restarted operations in August 2020.

The work program provides the opportunity to gain production experience and surety of supply for our offtake partner, thyssenkrupp, as well as allowing the assessment of various project enhancement initiatives including ore sorting and the separation of the product into individual rare earth oxides.

Through the development of its flagship project, the Browns Range Project (the Project), Northern Minerals aims to build the Western Australian operation into a significant world producer of dysprosium outside of China.

The Project is 100% owned by Northern Minerals and has several deposits and prospects containing high value dysprosium and other HREs, hosted in xenotime mineralisation.

Dysprosium is an essential ingredient in the production of DyNdFeB (dysprosium neodymium iron-boron) magnets used in clean energy, military and high technology solutions.

For more information: [northernminerals.com.au](http://northernminerals.com.au).



ASX Code:	NTU	Market Capitalisation:	A\$137.3m
Issued Shares:	4,291m	Cash (as at 30 June 2020):	A\$6.7m