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# QUARTERLY ACTIVITIES REPORT June 2021



**NORTHERN  
MINERALS**

**ASX:NTU**

## HIGHLIGHTS

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- Ore sorting system for Browns Range Heavy Rare Earths Pilot Plant successfully commissioned;
- With ore sorter in place Northern Minerals enters an important phase of Pilot Plant testwork to inform the commercial-scale beneficiation plant feasibility study;
- Long term commitment to exploration reinforced with Board approval in place for \$10 million exploration budget for 2021-22;
- Plans for second phase of exploration drilling finalised, including extensional and greenfields targets, with RC rig now working at Browns Range.



Figure 1: Sunset at Browns Range

Northern Minerals Limited (ASX: NTU) (Company) is pleased to update shareholders on its activities for the quarter ending 30 June 2021.

## ORE SORTING SYSTEM COMMISSIONED

Northern Minerals has successfully completed the installation and commissioning of the ore sorting system at the Brown's Range Heavy Rare Earths Pilot Plant.

Previous bench-scale tests of the technology on Browns Range ore identified potential to more than double the feed grade to the mill, significantly reducing capital and operating costs.

With the ore sorter in place, the company is now carrying out further testwork on large bulk ore samples to validate the technical and economic benefits to the Pilot Plant operation.

Acquiring this larger scale data set will allow for the more reliable application of forecast economic improvements in processing the broader Mineral Resource endowment.

This will be a critical input into the current feasibility study to produce and market a mixed heavy rare earth concentrate from the proposed commercial-scale beneficiation plant at Browns Range.

During the quarter the Company expended approximately \$1.8 million on production and development activities.



Figure 2: CEO Mark Tory on site inspecting the now commissioned ore sorting system.

## SECOND PHASE DRILLING PROGRAM COMMENCED

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Reinforcing Northern Minerals' long-term commitment to exploration across the Browns Range Dome, the Board has approved a budget of up to \$10 million for 2021-22.

Detailed planning for the second phase drilling campaign was finalised in the June quarter, with the RC drill rig arriving at Browns Range at the beginning of July.

This highly anticipated campaign will follow-up positive results from extensional and greenfields RC drilling in the first phase of the campaign completed in late 2020.

The Company is aiming to drill up to 12,000 metres in the September and December quarters, including follow-up holes on the Banshee prospect.

The current drilling will also include further investigation of the Toad prospect, discovered at the end of 2020, as well as the Gambit and Gambit West Deposits and Rogue Prospect. Greenfields targets Ripcord, Pulse and Quicksilver will also be investigated.

Combined results from the 2020-21 RC drilling campaigns will support the scope of the current feasibility work for the commercial-scale beneficiation plant.



**Figure 3 - Initial results from the second phase RC drilling are expected at end of the September quarter, pending laboratory capacity.**

During the quarter the Company expended approximately \$1.0 million on exploration and evaluation activities.

## EXPLORATION TEAM BOLSTERED

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With the Board committing a \$10 million budget to exploration for 2021-22 to boost the Mineral Resource inventory at Browns Range, Northern Minerals has in parallel invested in its internal capability.

The Company has made two senior appointments within the exploration team. Mr Simon Pooley has been recruited as General Manager, Geology, while Mr Kurt Warburton has been promoted to the position of Exploration Manager.

Mr Pooley is a geologist with more than 30 years' experience and has helped lead a number of mining projects through the transition from exploration to construction, then ultimately into sustainable production.

Mr Warburton is a geologist with more than 20 years' experience in exploration and mining roles. He has been a valued member of the Northern Minerals team for the past 10 years in the roles of Senior and Principal Geologist.

## CORPORATE PROFILING ACTIVITY

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Northern Minerals CEO Mark Tory led a site visit to Browns Range in June, hosting a group of senior representatives from corporate finance, mining analyst and technical media firms.

The site visit coincided with the commissioning of the ore sorting technology and launch of the second phase exploration campaign.

Mr Tory facilitated the opportunity to build a greater understanding of what has been achieved at Browns Range to date, and to build awareness of the Company's objectives with its current feasibility study to produce and market a mixed heavy rare earth concentrate from the proposed commercial-scale beneficiation plant at Browns Range.

## PAYMENTS TO RELATED PARTIES OF THE ENTITY AND THEIR ASSOCIATES

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Payments made during the quarter and included in items 6.1 and 6.2 of Appendix 5B – Mining exploration entity quarterly cash flow report are detailed below:

Aggregate amount of payments to related parties and their associates included in cash flows from operating activities total \$144,000.

This comprises of payments of Non-executive Directors remuneration for services. There were no payments to related parties and their associates included in cash flows from investing activities.

**Authorised for release by the Board.**

### For further information:

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## 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 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 partially restarted operations in August 2020.

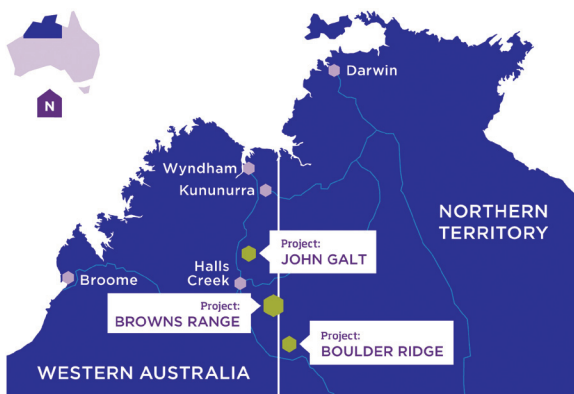
The work program provides the opportunity to gain production experience for supply to our offtake partner, thyssenkrupp, as well as allowing targeted pilot plant testwork and the assessment of various project enhancement initiatives including ore sorting and the separation of the product into individual 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\$188.9m
Issued Shares:	4,846m	Cash (as at 30 June 2021):	A\$19.9m

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## TENEMENT REPORT

Project	Location	Tenement Id	State	Status	Holder Application	Interest
Browns Range WA	Browns Range	E80/4479	WA	Granted	Northern Minerals	100%
	Browns Range	E80/4782	WA	Granted	Northern Minerals	100%
	Browns Range	E80/5040	WA	Granted	Northern Minerals	100%
	Browns Range	E80/5041	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	E80/5260	WA	Application	Northern Minerals	100%
	Browns Range	E80/5261	WA	Application	Northern Minerals	100%
	Browns Range	E80/5367	WA	Application	Northern Minerals	100%
	Browns Range	E80/5368	WA	Application	Northern Minerals	100%
	Browns Range	E80/5369	WA	Application	Northern Minerals	100%
	Browns Range	E80/5370	WA	Application	Northern Minerals	100%
Browns Range	E80/5418	WA	Application	Northern Minerals	100%	
Browns Range NT	Browns Range	EL24193	NT	Granted	Northern Star Resources	Ree Rights Only
	Browns Range	EL24174	NT	Granted	Northern Star Resources	Ree Rights Only
	Browns Range	EL26270	NT	Granted	Northern Minerals	100%
	Browns Range	EL26286	NT	Granted	Northern Star Resources	Ree Rights Only
	Browns Range	ELA32161	NT	Application	Northern Minerals	100%
	Browns Range	ELA32162	NT	Application	Northern Minerals	100%
John Galt	John Galt	E80/4298	WA	Granted	Northern Minerals	100%
	John Galt	E80/4967	WA	Granted	Northern Minerals	100%
	John Galt	E80/5070	WA	Granted	Northern Minerals	100%
	John Galt	E80/5230	WA	Granted	Northern Minerals	100%

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Project	Location	Tenement Id	State	Status	Holder Application	Interest
Boulder Ridge	Boulder Ridge	EL29594	NT	Granted	Northern Minerals	100% (Excluding Gold Rights))
	Boulder Ridge	ELA24849	NT	Application	Northern Minerals	100% (Excluding Gold Rights)
	Boulder Ridge	ELA24935	NT	Application	Northern Minerals	100% (Excluding Gold Rights)
Gardiner-Tanami NT	Boulder Ridge	EL24177	NT	Granted	Northern Star Resources	Ree Rights Only
	Boulder Ridge	EL25171	NT	Granted	Northern Star Resources	Ree Rights Only
	Tanami	EL23932	NT	Granted	Northern Star Resources	Ree Rights Only
	Tanami	EL25009	NT	Granted	Northern Star Resources	Ree Rights Only
	Ware Range	EL26498	NT	Granted	Northern Star Resources	Ree Rights Only
	Ware Range	EL26541	NT	Granted	Northern Star Resources	Ree Rights Only
	Pargee	EL27367	NT	Granted	Northern Minerals	100%
	Tanami	EL29592	NT	Granted	Northern Star Resources	Ree Rights Only
	Tanami	EL29593	NT	Granted	Northern Star Resources	Ree Rights Only
	Tanami	EL29595	NT	Granted	Northern Star Resources	Ree Rights Only
	Tanami	ELA29619	NT	Application	Northern Star Resources	Ree Rights Only
	Tanami	ELA29621	NT	Application	Northern Star Resources	Ree Rights Only
	Tanami	EL26635	NT	Granted	Northern Star Resources	Ree Rights Only
	Boulder Ridge	ELA28868	NT	Application	Northern Star Resources	Ree Rights Only
	Boulder Ridge	ELA30132	NT	Application	Northern Minerals	100%
	Boulder Ridge	EL27590	NT	Granted	Northern Star Resources	Ree Rights Only
	Tanami	ELA32163	NT	Application	Northern Star Resources	Ree Rights Only
	Tanami	ELA32164	NT	Application	Northern Star Resources	Ree Rights Only
Rabbit Flats	Rabbit Flats	ELA25159	NT	Application	Northern Star Resources	Ree Rights Only
	Rabbit Flats	ELA25160	NT	Application	Northern Star Resources	Ree Rights Only

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