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NORTHERN MINERALS

QUARTERLY ACTIVITIES REPORT

March 2021

ASX:NTU

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HIGHLIGHTS

- Northern Minerals commences feasibility study for commercial-scale beneficiation plant at Browns Range as standalone project
- Share Placement completed to raise A$20 million (before costs) to fund priority work program in 2021
- Northern Minerals added to the All Ordinaries Index from 22 March 2021 in quarterly rebalance by S&P Dow Jones Indices
- Pre-commissioning works for ore sorting system at the Browns Range Pilot Plant progressed in the reporting period and commissioning will commence June quarter
- Production of heavy Rare Earth Carbonate from the Pilot Plant exceeds 210,000kg, with latest shipment ready to be exported to thyssenkrupp from Darwin
- Positive first phase exploration results received from Browns Range and set to be followed-up in second phase drilling in June quarter
- Overall results from first phase assays indicate potential for Resource growth near existing Banshee and Area 5 deposits
- Infill and extension drilling at Dazzler confirmed existing Resource and further growth potential. New greenfield Toad prospect to be further investigated

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Northern Minerals Limited [ASX: NTU] **(Company)** is pleased to update shareholders on its activities for the quarter ending 31 March 2021.

BENEFICIATION PLANT FEASIBILITY

Northern Minerals identified a market opportunity in the March quarter to pursue the development of a full-scale production operation with processing via a standalone commercial-scale beneficiation plant to produce a saleable heavy rare earth xenotime concentrate product.

Several facilities outside of China, including within Australia, have been identified with likely future capability and capacity to process the heavy rare earth xenotime concentrate produced at Browns Range.

Committing to this accelerated pathway to commercial-scale production represents a lower risk approach compared to pursuing a full-scale version of the Browns Range Pilot Plant, which includes both the beneficiation and hydrometallurgical processing circuits.

If approved by the Board, developing the beneficiation plant first could potentially deliver cashflow to the Company in 2023, at least two years earlier than the more complex project.

The Company would then consider funding the additional studies required out of cashflow to assess the feasibility of expanding its processing operations to include the hydrometallurgical plant, and also downstream product separation.

The Company has commenced a feasibility study which is planned to be completed this year to assess the commercial viability of developing the full scale beneficiation plant at Browns Range.

EXPLORATION PROGRAM

In parallel to the feasibility study on the beneficiation plant, Northern Minerals continues its commitment to invest in exploration across its Browns Range tenement package.

The Company plans to complete up to 10,000 metres of drilling in its second phase program before the end of June. This is in addition to the 8,500 metres drilled in the first phase program completed in the December quarter.

Along with follow-up drilling of encouraging results received and announced in this period, several promising new greenfields targets will be drilled in the second phase, due to commence once rigs can access the site now the wet season has passed.

The Company is targeting near-surface, high grade mineralisation to initially grow its Mineral Resource endowment and increase the potential life of mine at Browns Range. These results will feed into the feasibility study for the beneficiation plant.

On 18 January 2021, the Company received assays from 45 drill holes at Dazzler Northwest (7 holes), Dazzler North/Ripcord (16 holes), Dazzler (6 holes), Gambit West (7 holes), Wolverine West (4 holes) and a new prospect named Toad (5 holes).

Toad is approximately 250 metres southeast of the Banshee South prospect and was identified as an area of anomalous surface portable XRF yttrium readings and a uranium radiometric anomaly.

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Best results from Toad were 9m @ 0.54% TREO from 53m in BRR0541 and 11m @ 0.37% from 52m, while at Dazzler North an intercept of 3m @ 0.74% TREO from 8m was returned.

Northern Minerals announced assay results from the remaining 72 holes drilled in the first phase on 17 February 2021.

These results were from Area 5 (18 holes), Banshee South (11 holes), Banshee West (8 holes), Dazzler/ Iceman (25 holes), Toad (3 holes) and regional exploration (7 holes).

Infill and extension drilling results from Dazzler (14m @ 0.76% TREO from 25m and 6m @ 1.41% TREO from 12m) confirmed the mineralisation to the southeast of the main high-grade zone at Dazzler and indicated the potential to increase the existing Dazzler Mineral Resource.

In the Banshee area, widespread low-grade mineralisation intersected at Banshee West (13m @ 0.43% TREO from 23m) and Banshee South (19m @ 0.33% TREO from 11m) suggest a significant mineralised system in this area (Figures 1 and 2).

Similarly, at Area 5 widespread low-grade mineralisation was intersected (6m @ 0.44% TREO from 7m and 2m @ 0.69% TREO from 48m).

Three holes drilled as follow-up to the first five drill holes at the new Toad prospect returned a best intersection of 6m @ 0.78% TREO from 49m.

Full results and additional geological details are available on the ASX platform within the corresponding announcements on 18 January 2021 and 17 February 2021.

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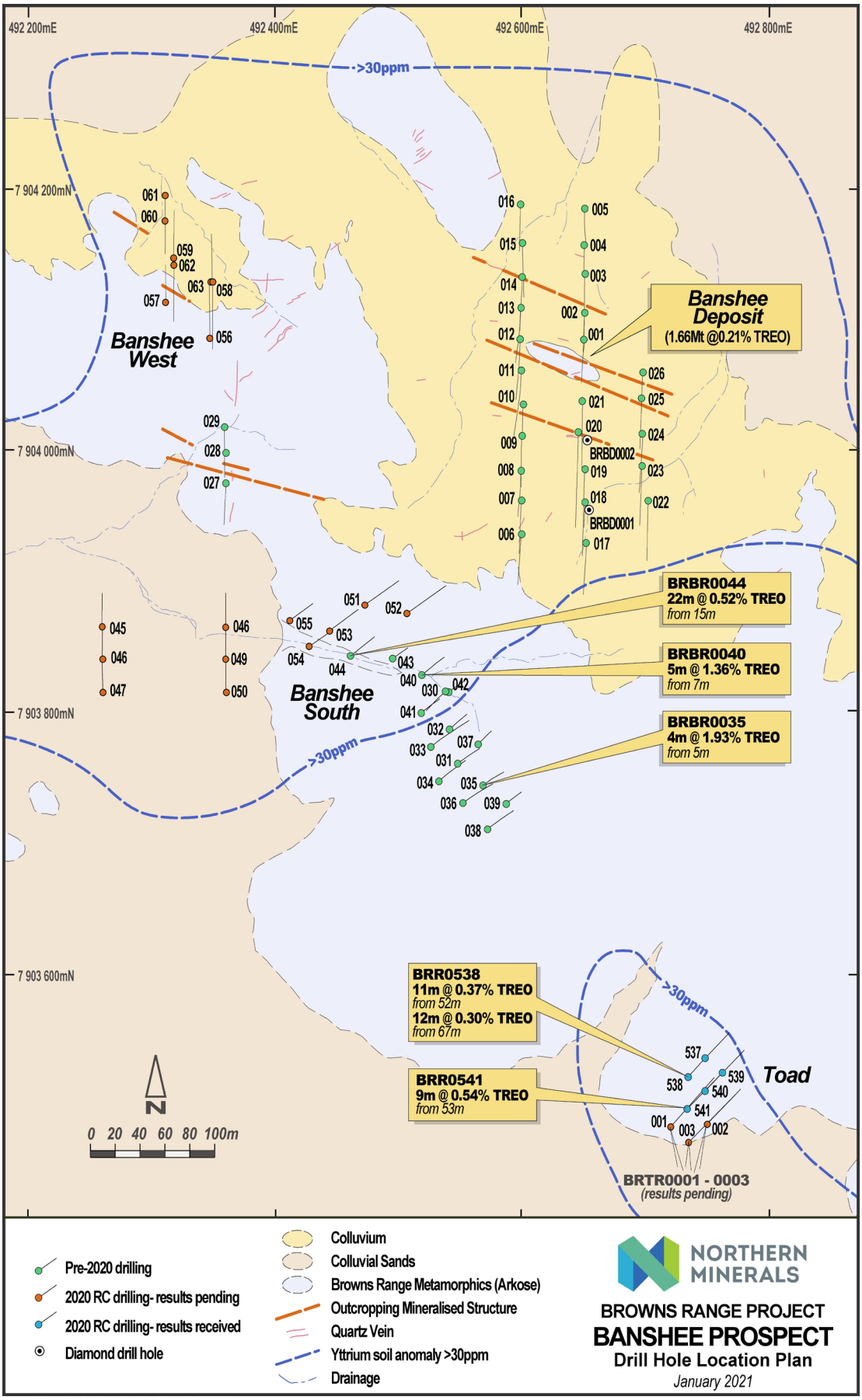

Figure 1: Toad and Banshee drill hole location plan from first phase drilling

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Figure 2: First phase drilling at Browns Range pictured. Rigs will return for second phase drilling in the June quarter once rigs can access the site now the wet season has passed

PILOT PLANT

Production through the Browns Range Pilot Plan continued in the reporting period, with a shipment of 40,406kg of Rare Earth Carbonate (REC) currently awaiting export in Darwin (Figures 3 and 4).

The shipment contains 1,835kg of dysprosium oxide and 233kg of terbium oxide and is ready for delivery to Northern Minerals' offtake partner thyssenkrupp Materials Trading GmbH.

This brings total production of REC from the Pilot Plant to 211,109kg. The REC produced to date contains a total 103,731kg of Rare Earth Oxide, which in turn contains 9,751kg of dysprosium oxide and 1,245kg of terbium oxide.

Construction and installation of the ore sorting circuit at the Pilot Plant is on track for completion in May, with commissioning to commence in the June quarter.

The investment in ore sorting technology is forecast to materially improve feed grade and reduce overall processing costs, subject to further Pilot Plant testwork. Results from this testwork will also feed into the feasibility study for the beneficiation plant.

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Figure 3: Browns Range Pilot Plant and Rare Earth Carbonate bags (foreground)

Figure 4: Rare Earth Carbonate produced at Browns Range, now in Darwin ready for export

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DYSPROSIUM AND TERBIUM DEMAND

Both dysprosium and terbium, the primary payable commodities from Browns Range production, are critical elements in the permanent magnet motors used in E-mobility powertrain applications.

Global light vehicle production is forecast to reach more than 100 million units by 2030 with more than half of expected to be electric, full hybrid and mild hybrid electric vehicles.

The production of E-motors for light vehicles increased from 11 million units in 2019 to 13.9 million units in 2020 and is further expected to increase by 57% to 21.8 million units in 2021.

By 2030, the global light vehicle EV market is forecast to be dominated by permanent magnet motor powertrains with greater than 75% share of the market.

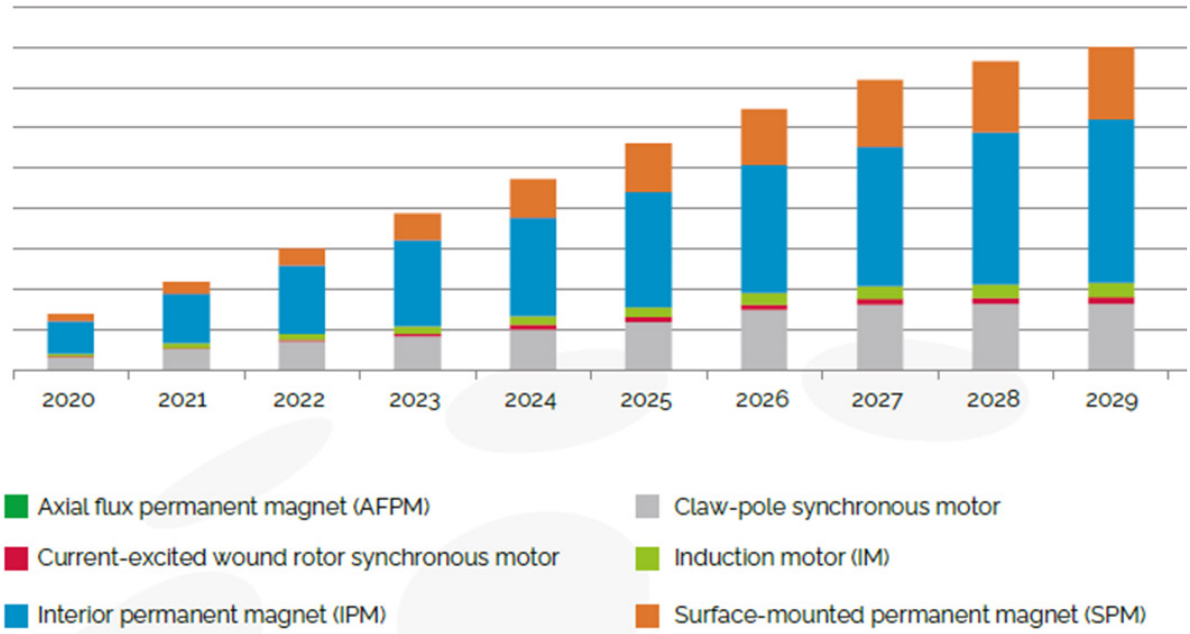

Figure 4: Rare Earth Carbonate produced at Browns Range, now in Darwin ready for export

CORPORATE ACTIVITY

A$20 Million Placement

Northern Minerals announced on 16 February 2021 that it had entered into subscription agreements with various sophisticated and institutional investors in Australia, the United States and Europe to raise A$20 million (before costs) under a private placement.

The Placement was oversubscribed and was priced at a 5.8% discount to the last closing price of A$0.052 on 11 February 2021 and a 6.1% discount to the Company's 10-day trading VWAP (Volume Weighted Average Price).

The placement consisted of the issue of 408,163,267 fully paid ordinary shares and attaching options in two tranches.

Investors received one free attaching unlisted option for every two shares subscribed for, with each option to be exercisable at A$0.074 with an expiry date of 3 years from the date of issue.

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The issue of all ordinary shares and tranche 1 options (153,061, 226) was made using the Company's existing placement capacity under Listing Rule 7.1 and completed on 22 February 2021.

The issue of the tranche 2 options (51,020,408) is subject to the approval of the Company's shareholders at a general meeting of shareholders to be called in the June quarter.

Personnel Share Issue

Northern Minerals also announced on 22 February 2021 it had issued a total of 179,000 ordinary shares to Company personnel as a result of the exercise of performance rights which have vested.

These shares were issued under the exceptions contained in Listing Rule 7.2 and the issue was not subject to shareholder approval.

S&P Dow Jones

S&P Dow Jones Indices announced its March 2021 Quarterly Rebalance of the S&P/ASX Indices on 12 March.

Effective from prior open of trading on 22 March 2021, Northern Minerals was added to the All Ordinaries Index.

RIU Explorers Conference

CEO Mark Tory presented to a sold out RIU Explorers Conference in Fremantle, Western Australia on 18 February 2021. This event forms part of Northern Minerals annual marketing and events calendar.

The presentation updating existing and potential investors on the Browns Range Heavy Rare Earths Project and the HRE market and supply chain is available on the ASX platform.

COMPLIANCE STATEMENT

The information in this report that relates to Exploration Results is extracted from the report entitled "First drilling results indicate potential for Mineral Resource growth at Browns Range" dated 18 January 2021 and "Final results from 2020 drilling firm-up resource growth potential at Browns Range" dated 17 February 2021, are available to view on the company's website (www.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, in the case of estimates of Mineral Resources or Ore Reserves, 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.

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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.

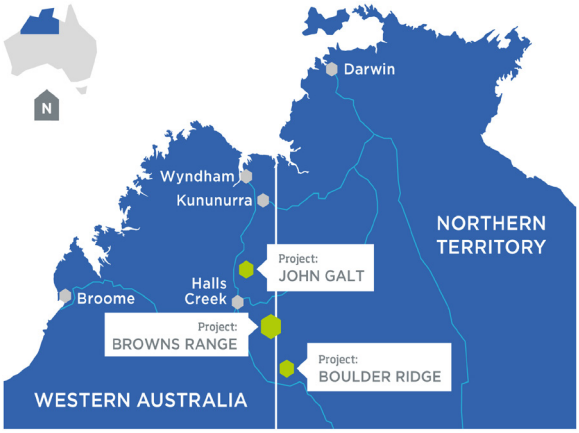
The work program provides the opportunity to gain production experience for supply to our offtake partner, thyssenkrupp, as well as allowing targeted pilot plant testwork and the assessment of various project enhancement initiatives including ore sorting and the separation of the product into individual 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



ASX Code: NTU	Market Capitalisation: A$203.51m
Issued Shares: 4,846m	Cash (as at 31 March 2021): A$24.4m

TENEMENT REPORT

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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	EL32161	NT	Application	Northern Minerals	100%
	Browns Range	EL32162	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%

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Project	Location	Tenement ID	State	Status	Holder Application	Interest
John Galt	John Galt	E80/5070	WA	Granted	Northern Minerals	100%
	John Galt	E80/5230	WA	Granted	Northern Minerals	100%
Boulder Ridge	Boulder Ridge	EL29594	NT	Granted	Northern Minerals	100% (excluding gold rights)
	Boulder Ridge	EL24849	NT	Application	Northern Minerals	100% (excluding gold rights)
	Boulder Ridge	EL24935	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	EL29619	NT	Application	Northern Star Resources	REE rights only
	Tanami	EL26635	NT	Granted	Northern Star Resources	REE rights only
	Boulder Ridge	EL28868	NT	Application	Northern Star Resources	REE rights only
	Boulder Ridge	EL30132	NT	Application	Northern Minerals	100%
	Boulder Ridge	EL27590	NT	Granted	Northern Star Resources	REE rights only
	Tanami	EL32163	NT	Application	Northern Star Resources	REE rights only
	Tanami	EL32164	NT	Application	Northern Star Resources	REE rights only
Rabbit Flats	Rabbit Flats	EL25159	NT	Application	Northern Star Resources	REE rights only
	Rabbit Flats	EL25160	NT	Application	Northern Star Resources	REE rights only