NORTHERN MINERALS

Powering Technology.

Quarterly Activities Report

SEPTEMBER 2019

Northern Minerals is one of a few heavy rare earth producers outside China. Commissioning of the Browns Range Heavy Rare Earth Pilot Plant Project in the East Kimberley region of Western Australia continued during the quarter as the Company assesses the technical and economic feasibility of a full scale operation.

Current Projects

Northern Minerals Limited (ASX:NTU; Northern Minerals or the Company) is focused on production from the Browns Range Heavy Rare Earth Pilot Plant Project in northern Western Australia. Through the development of its flagship project, the Browns Range Project (the Project), Northern Minerals is the first and only meaningful producer of dysprosium outside of China.

The pilot plant is continuing to assess the technical and economic feasibility of a full-scale commercial operation. Northern Minerals is continuing to increase output from the pilot plant to steady state to assess the quality of the rare earth carbonate produced. Test work has identified areas of new knowledge that have been applied to the pilot plant.

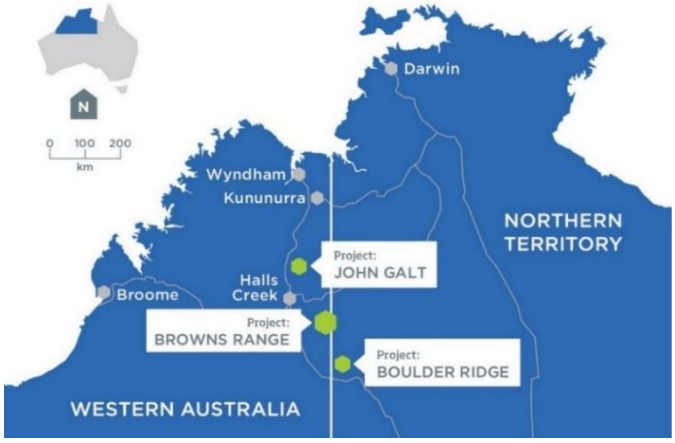
Corporate Overview

Highlights:

- Pilot plant at Browns Range is continuing commissioning with steady state continuous production targeted for the end of CY2020
- The prices of Dysprosium and Terbium have softened within the quarter, with the Dy price up 24% YTD and the Tb price up 16% YTD
- Final assays from the RC program undertaken at Dazzler and Iceman returned the best ever results from Browns Range including
    - 52m @ 4.15% TREO from 20m including 18m @ 11.48% TREO from 22m.
- $51 million Federal/State Government funded Browns Range access road initial works commenced
- New offtake agreement with thyssenkrupp executed in August 2019 for all stockpiled and future heavy rare earth carbonate from the Browns Range Pilot Plant Project
- The ore sorting project commenced during the quarter with an ore sorting machine selected and ordered
- Separation scoping study underway with US-based K-Technologies, Inc.
- Ms Xiaohua Liu resigned from the Board during the quarter.

Browns Range Project Update

The Company has constructed and is operating a pilot scale project aimed at assessing the technical and economic feasibility of a full-scale commercial operation. The testwork program has commenced and first pilot plant production of rare earth carbonate was achieved in the December quarter 2018. At the end of the September 2019 quarter, a total of 89,891kg of Rare Earth Carbonate had been produced to test the pilot plant operation and to collect data to feed back into the processing flowsheet.



The Company will continue to ramp up output from the pilot plant to steady state to assess the quality of the rare earth carbonate produced. The Company expects that incremental steps will be made from new knowledge from the testwork program to adjust both the rate of production and the quality of product.

Work on the Browns Range access road (Duncan Road and Gordon Downs Road) commenced during the quarter, following the allocation of $51 million in funding by the WA State Government in the FY2020 Budget. The three-year staged project will allow for improved access to Browns Range and potentially allow for production to run continuously once completed.

Further drilling at the Dazzler deposit has highlighted the potential of the deposit as a future high-grade ore source for Browns Range. Drilling at Iceman was not as successful, with the immediate prospectivity downgraded however a new zone of mineralisation was identified between the two prospects.

Figure 1: View of the Browns Range Pilot Plant beneficiation circuit

Browns Range Pilot Plant

The Browns Range Pilot Plant Project has been developed in order to assess the economic and technical feasibility of a larger scale development. As this is the first xenotime-hosted rare earth development anywhere, it is important that the Company fully understands and tests the metallurgical processes before committing to a full-scale development.

As such, 271 individual R&D projects have been planned for the three-year pilot plant stage. Experiments were conducted on most areas of the plant, including fine grinding, magnetic separation, flotation, leaching, purification and ion exchange, with a focus on improving the efficiency and operation of the sulphation bake kiln.

While the Company is targeting full-scale steady state production by in H1 2020, the variable nature of the R&D program means that the Company is unlikely to be in a position to forecast production rates during the program.

A number of enhancement initiatives, put on hold due to financing restrictions earlier in the year, recommenced during the quarter. This includes significant changes to the kiln including; seals, feed system, materials of construction, and mechanical devices designed to limit scaling in the kiln to improve availability and throughput.

Ore sorting

During the September quarter, the Company commenced the front-end engineering design for the ore sorter system as well as selecting and paying a deposit on a Steinert ore sorter machine. Approvals are being sought for the installation and operation of the ore sorter, with plans to have it commissioned by mid-2020.

New offtake agreement signed

After the termination of an offtake agreement with Lianyugang Zeyu New Materials Sales Co., Ltd (JFMAG) during the current quarter for breach of contract, Northern Minerals entered into a new offtake agreement with thyssenkrupp Materials Trading Gmbh (thyssenkrupp) for 100% of offtake from the Browns Range Pilot Plant Project.

In the agreement, all heavy rare earth carbonate will be purchased by thyssenkrupp from the Pilot Plant Project, with future flexibility for the Company to supply heavy rare earths as separated products.

Importantly, the agreement also allows for the sale of the mixed heavy rare earth carbonate product as well as separated rare earth oxides, if Northern Minerals decides to move to product separation during the Pilot Plant Project.

Commencing immediately, the offtake agreement includes all stockpiled product from current and future Pilot Plant Project production.

Rare earth separation Scoping Study commences

A Scoping Study was commenced during the quarter to investigate the possibility of applying separation technology on intermediate mixed rare earths materials produced at Browns Range. The possibility will allow Northern Minerals to produce separated rare earth oxides that currently require separation in China—including dysprosium oxide and terbium oxide.

The Company has partnered with US company K-Technologies, Inc (**K-Tech**) to assess the suitability of separating Browns Range intermediate mixed rare earth materials with their proprietary technology. If successful, the possibility will allow Northern Minerals to produce individual rare earth oxides.

K-Tech is focused on multiple possible separation processes which involve continuous ion exchange (**CIX**), continuous ion-chromatography (**CIC**) and other related advanced separation methodologies. The low-cost and environmentally safe separation and purification methodologies employed by K-Tech have been tested and confirmed across multiple global industries, including applications in phosphates, potash, and rare earths.

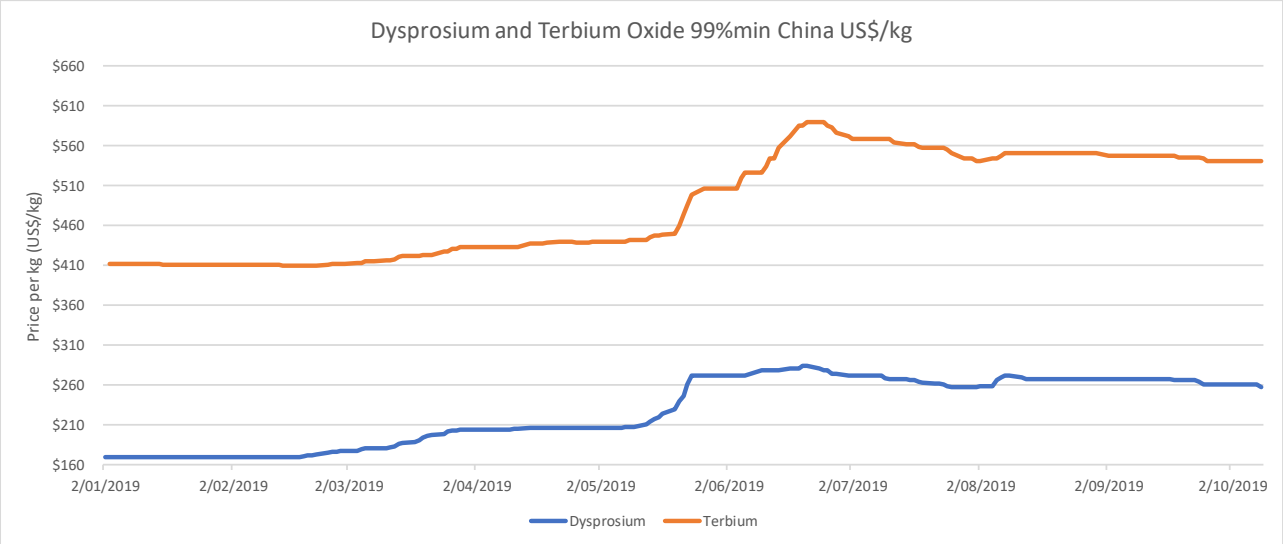
The bench scale separation and purification testwork of the Scoping Study will be undertaken at K-Tech's Florida laboratory, which will identify yield potential of the targeted rare earth elements from the intermediate mixed rare material and the estimated operating and capital costs.

Initial results of the testwork are expected in the December quarter.

Softening trend for the dysprosium and terbium prices

During the September quarter, the Company reported softening price trend in both the dysprosium and terbium prices, with the Dy price per kilogram increasing by circa 54% year to date from January to September and the Tb price up 31% over the same period. Prices have fallen in the month of October.

Figure 2: Dysprosium and Terbium pricing – year to date



Source: Asian Metals

Dazzler drill results shine

Final assays from the reverse circulation (RC) program undertaken at Dazzler and Iceman during the June quarter included the best ever drill intersect at Browns Range, with 52m @ 4.15% TREO from 20m including 18m @ 11.48% TREO from 22m, and 20m @ 0.62% TREO from 16m including 4m @ 1.91% TREO from 22m.

Further drilling commenced in September 2019, including: 3,797m infill and exploration RC drilling in the Dazzler-Iceman area and 641m exploration RC drilling at four other prospects. First assay results are expected October 2019.

A new discovery southeast of Dazzler has also produced promising results.

Assay results returned to date from drilling at Dazzler were mostly from exploration drilling to the southeast of the deposit towards the Iceman prospect, and from two infill drill holes successfully completed into the Dazzler resource.

Table 1 – Dazzler Prospect RC drilling – Significant assay results (>=2m @ 0.15% TREO or equivalent, and a maximum of 2m continuous internal dilution. No top cut has been applied)

Hole Id	Drill target	Width (m)*	From (m)	To (m)	Dy_2O_3 (ppm)	Assay grade (% TREO)
BRDR0035	Dazzler Infill	52	20	72	3,831	4.15
		Incl 18	22	40	10,731	11.48
BRDR0023	Dazzler Infill	20	16	36	527	0.62
		Incl 4	22	26	1,736	1.91
BRDR0023	Dazzler Infill	2	45	47	97	0.22
BRDR0023	Dazzler Infill	2	50	52	76	0.21
BRDR0021	Dazzler Extension	1	11	12	301	0.43%
BRDR0022	Dazzler Extension	3	76	79	129	0.46
BRDR0026	Dazzler Extension	2	72	74	208	0.36
BRDR0030	Exploration	1	6	7	470	0.48
BRDR0030	Exploration	1	11	12	589	0.63
BRDR0030	Exploration	11	30	41	300	0.42
BRDR0031	Exploration	1	27	28	357	0.99
BRDR0032	Exploration	11	16	27	178	0.31
BRDR0036	Exploration	1	3	4	695	0.72
BRDR0036	Exploration	4	7	11	543	0.68

"*" Downhole widths only

All other drill holes from Dazzler not reported in the table above had no significant assay results (i.e. nothing >2m @ >0.15% TREO).

There were no significant assay results from the five RC drill holes completed at the Iceman prospect.

The RC drilling to the southeast of Dazzler and northwest of Iceman has highlighted a new mineralised zone, with four drill holes (BRDR0030, 0031, 0032 & 0036) intersecting significant mineralisation. Mineralisation is currently open along strike to the northwest and southeast. Mineralisation at the new prospect occurs in a similar geological setting as at Dazzler and Iceman, associated with the unconformity between the younger Gardiner Sandstone unit and the underlying, older Browns Range Metamorphics.

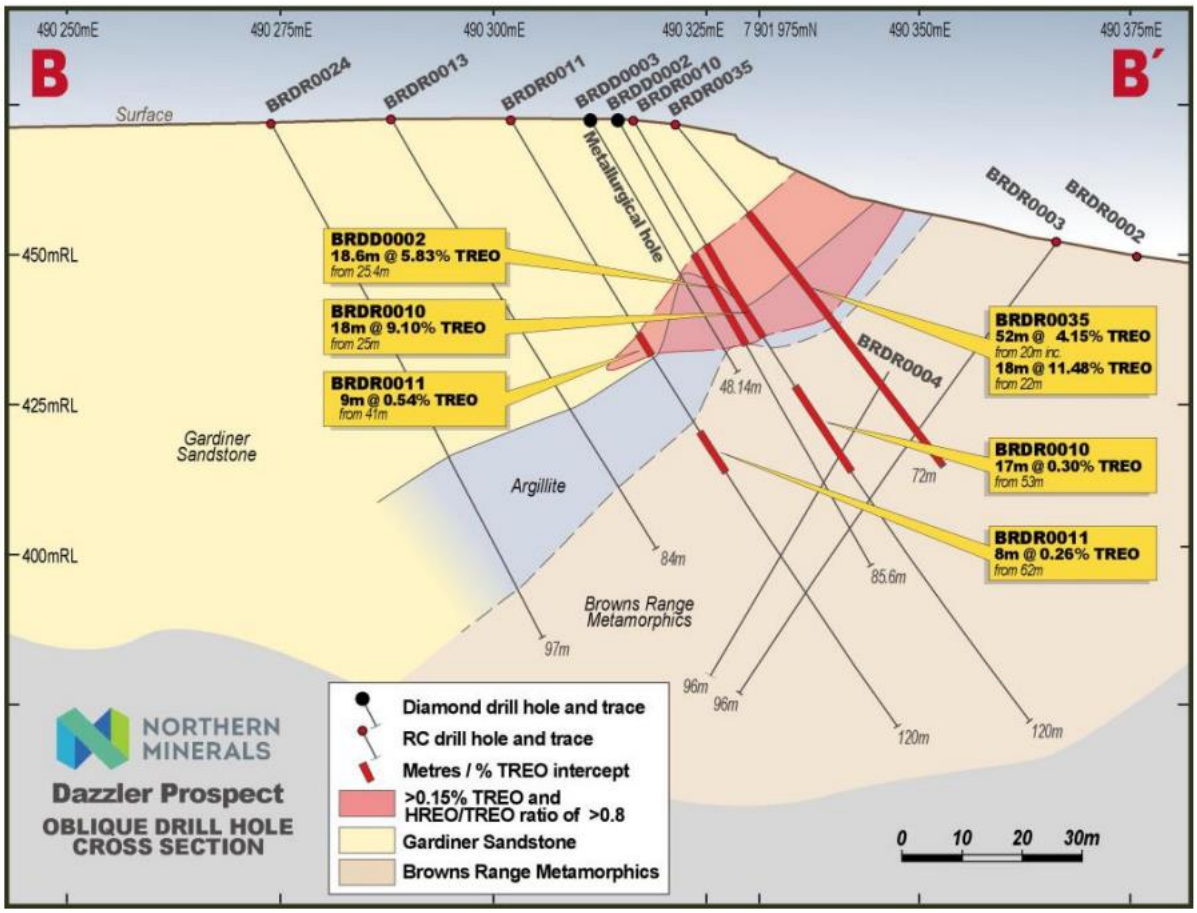


Figure 3: Oblique drill hole cross section – Dazzler Prospect

Dazzler diamond drilling confirms high-grade prospect

In August, the Company announced assay results from recently completed diamond drilling at the Dazzler and Iceman prospects. The diamond drilling program, which comprised 3 drill holes at Dazzler and one at Iceman, was designed to twin and validate the reverse circulation (RC) drilling programs undertaken in 2018 and early 2019. In addition, one of the diamond drill holes at Dazzler was drilled to provide samples for metallurgical test work.

Table 2 – Significant assay results from diamond drilling

*Intervals > 2m @ 0.15% TREO or equivalent, including up to 2m internal dilution

Hole Id	Prospect	Interval (m)	From (m)	To (m)	TREO (%)	Dy_2O_3 (ppm)	Y_2O_3 (ppm)	MHREO/TREO (%)
BRDD0001	Dazzler	16.59	27.00	43.59	7.532	7,403.2	46,991	0.91
BRDD0001	Dazzler	10.30	48.00	58.30	0.552	272.3	1,951	0.43
BRDD0002	Dazzler	18.60	25.40	44.00	5.826	5,593.4	36,279	0.87
BRID0001	Iceman	4.43	21.00	25.43	8.069	7,527.0	5,839	0.89

Comparing the Dazzler diamond drilling assays with the twinned RC drill hole assays, shows the interval in BRDD0001 as being narrower than the twinned RC drill hole but with much higher grade. For BRDD0002, the interval width is approximately the same as the twinned RC drill hole, but the grade is significantly lower than the RC drill hole.

The third diamond drill hole at Dazzler, BRDD0003 was drilled for metallurgical test work purposes only and was not assayed.

The intercept in BRID0001 is narrower than that of the adjacent RC drill holes, but with much higher average grade.

Duncan Road and Gordon Downs Road upgrade

During the quarter, work commenced on the $51 million upgrade to the Duncan Road and Gordon Downs Road, one of the main access roads to the Browns Range Project. The upgrade of the road should improve access to the Project particularly during the wet season.

Currently, it is planned that the Browns Range Pilot Plant Project will operate for ten months of the year, however once the road upgrades are completed, the Company is expecting to have reduced access downtime which would allow continuous operation throughout the year.

Corporate and Financial

R&D claim appeal

During the quarter, the Company lodged a formal appeal with AusIndustry regarding its decision that the Company's activities were 'ineligible R&D claims'. In the first instance, the R&D claims will be assessed by a different claims officer within AusIndustry. If the claim is still denied, the Company reserves the right to take legal action against the finding.

As at the time of writing this report, the appeal process was ongoing.

As reported last quarter, the Company and the ATO have reached an in-principle agreement that will allow staged payment of the disputed amounts while the case is being appealed.

Equity and Debt

$30 million Placement update

In July, the Company announced it had entered into multiple subscription agreements with sophisticated investors, for the placement of 483,870,970 fully paid Ordinary shares in the Company at an issue price of A$0.062 per share to raise A$30 million (before costs).

During the quarter, A$22.6 million was received, while the payment date for the balance was extended to 31 October 2019.

Funds raised from the issues of these shares will be used for ore sorting and product separation studies.

$20 million Placement

In August 2019, the Company announced that it had entered into a Subscription Agreement with Baogang Investment (Australia) Pty Ltd (BGIA) to raise A$20 million at $0.062 per share, with 322,580,645 Ordinary shares issued to the investors. BGIA is a wholly-owned subsidiary of a Chinese State Owned Entity that owns steel mills in China.

The Placement funds will be used to progress the Enhancement Initiatives at Browns Range, including ore sorting and product separation as well as strengthening the balance sheet.

The Placement is subject to approval of the Company's shareholders, BGIA obtaining Australian Foreign Investment Review Board (FIRB) approval and all regulatory approvals in the People's Republic of China being obtained. All conditions to the Placement must be satisfied within 6 months (or such longer period as agreed) in order for the Placement to complete. Funds from the Placement are due to be received within 60 days following satisfaction (or waiver) of the above conditions.

Director changes

During the quarter, Ms Xiaohua Liu, a Non-Executive Director of the Company, resigned from the Board. Ms Liu said her other commitments have become too great for her to be able to fulfill the obligations of her position on the Board, and feels it is the best for her to focus on some other areas of her career.

December Quarter Activities

Key newsflow expected during the December 2019 quarter includes:

- Continued testing of the R&D activities at the Browns Range Pilot Plant
- Potential update on the review of the Company's R&D claim by AusIndustry
- Update on developments with respect to enhancement projects
- Follow up drilling at various prospects

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About Northern Minerals

Northern Minerals Limited (ASX: NTU; Northern Minerals or the Company) has completed practical completion of the Browns Range Heavy Rare Earth Pilot Plant Project in northern Western Australia and commenced production of heavy rare earth carbonate.

Through the development of its flagship project, the Browns Range Project (the Project), Northern Minerals aims to build the Western Australian operation into the first 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 and high technology solutions.

The three-year R&D Pilot Plant Project provides the opportunity to gain production experience, surety of supply for the Company's offtake partner and assess the economic and technical feasibility of the larger full-scale development.

For more information: northernminerals.com.au.

Compliance Statement

The information in this report that relates to the Mineral Resource Estimate for the Dazzler deposit is extracted from the report entitled "Dazzler shines with high-grade Maiden Mineral Resource" dated 6 March 2019 and is 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 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.

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 WA	Browns Range	E80/5260	WA	Application	Northern Minerals	100%
Browns Range WA	Browns Range	E80/5261	WA	Application	Northern Minerals	100%
Browns Range WA	Browns Range	E80/5367	WA	Application	Northern Minerals	100%
Browns Range WA	Browns Range	E80/5368	WA	Application	Northern Minerals	100%
Browns Range WA	Browns Range	E80/5369	WA	Application	Northern Minerals	100%
Browns Range WA	Browns Range	E80/5370	WA	Application	Northern Minerals	100%
Browns Range WA	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 Star Resources	REE rights only
	Browns Range	EL26286	NT	Granted	Northern Star Resources	REE rights only
Browns Range NT	Browns Range	EL32161	NT	Application	Northern Minerals	100%
Browns Range NT	Browns Range	EL32162	NT	Application	Northern Minerals	100%
Browns Range NT	Browns Range	EL32163	NT	Application	Northern Star Resources	REE rights only
Browns Range NT	Browns Range	EL32164	NT	Application	Northern Star Resources	REE rights only
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	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 Star Resources	REE rights only
	Tanami	EL29592	NT	Granted	Northern Star Resources	REE rights only
	Tanami	EL29593	NT	Granted	Northern Star Resources	REE rights only
Gardiner-Tanami NT	Tanami	EL29595	NT	Granted	Northern Star Resources	REE rights only
	Tanami	EL29619	NT	Application	Northern Star Resources	REE rights only
	Tanami	EL29621	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 Star Resources	REE rights only
	Boulder Ridge	EL27590	NT	Granted	Northern Star Resources	REE rights only

Rabbit Flats	Rabbit Flats 1	EL25157	NT	Application	Northern Star Resources	REE rights only
	Rabbit Flats 2	EL25158	NT	Application	Northern Star Resources	REE rights only
	Rabbit Flats 3	EL25159	NT	Application	Northern Star Resources	REE rights only
Rabbit Flats	Rabbit Flats 4	EL25160	NT	Application	Northern Star Resources	REE rights only
	Rabbit Flats 5	EL23935	NT	Application	Northern Star Resources	REE rights only
Kurundi	Kurundi	EL29616	NT	Granted	Horn Resources	REE rights only

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Commissioning is progressing on the three-year pilot plant project with first production of heavy rare earth carbonate in October 2018 The pilot plant development will continue with its R&D studies and will provide the opportunity to gain production experience, surety of supply for our offtake partner and assess the economic and technical feasibility of the larger full scale development.

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