

Northern Minerals reaps benefits from exploration at Dazzler and Iceman

- Northern Minerals has conducted a strategic review which has identified substantial potential value at Dazzler and Iceman prospects
- Recent exploration results at Dazzler and Iceman prospects returned grades which were significantly higher than the existing Mineral Resource average grade of 0.63% TREO
- Follow up drilling planned for the first half of 2019

Australian heavy rare earths producer Northern Minerals Limited (ASX: NTU) (the Company) is pleased to announce this further guidance on the exploration potential and near-term strategy for the Dazzler and Iceman prospects at the Browns Range Project (the Project).

For the Dazzler prospect an Exploration Target of 80,000t to 140,000t at a grade range of 2 - 4% TREO for a total of 1,600,000kg to 5,600,000kg contained TREO, has been estimated. At the Iceman prospect an Exploration Target of 15,000t to 30,000t at a grade range of 2 - 4% TREO for a total of 300,000kg to 1,200,000kg contained TREO, has been estimated. **The potential quantity and grade of the Exploration Targets are conceptual in nature, there has been insufficient exploration to determine a Mineral Resource and there is no certainty that further exploration work will result in the determination of a Mineral Resource.**

These Exploration Targets are in addition to the current Total Mineral Resource estimate for the Project which currently stands at 57,308,000kg contained Total Rare Earth Oxides (TREO), see Table 1 below.

The Exploration Targets for both prospects are predominantly based upon the assay results from RC drilling completed there earlier this year and reported on 11 September 2018 (see ASX announcement "Assay results confirm Dazzler & Iceman discoveries"). Both Exploration Targets are contained within 40m of the surface.

Commenting on the new Exploration Targets, Managing Director and CEO, George Bauk, said *"Following the successful recommencement of exploration drilling at Browns Range in 2018, we discovered the Dazzler and Iceman deposits in the initial program.*

"These are both high-priority targets due to the very high grades and proximity to the Browns Range processing facility.

"We aim to convert these deposits up to Mineral Resources in early 2019 as an inexpensive way of materially adding value to the project."

Table 1: Browns Range Mineral Resource Estimate, Combined (At 30 June 2018)

Deposit	Classification	Mt	TREO %	Dy ₂ O ₃ kg/t	Y ₂ O ₃ kg/t	Tb ₄ O ₇ kg/t	HREO %	TREO kg
Wolverine	Indicated	2.88	0.84	0.74	4.89	0.11	89	24,195,000
	Inferred	1.97	0.89	0.76	5.15	0.11	88	17,588,000
	Total ¹	4.85	0.86	0.75	4.99	0.11	89	41,786,000
Gambit West	Indicated	0.12	1.8	1.62	10.98	0.22	94	2,107,000
	Inferred	0.13	0.51	0.4	2.67	0.05	81	674,000
	Total ¹	0.25	1.11	0.97	6.56	0.13	91	2,781,000
Pilot Plant Stockpiles	Indicated	0.21	0.97	0.85	5.63	0.12	89	2,049,000
	Inferred	0.04	0.26	0.2	1.35	0.03	79	92,000
	Total	0.25	0.87	0.75	5.01	0.11	89	2,141,000
Gambit	Indicated							
	Inferred	0.21	0.89	0.83	5.62	0.11	96	1,878,000
	Total ¹	0.21	0.89	0.83	5.62	0.11	96	1,878,000
Area 5	Indicated	1.38	0.29	0.18	1.27	0.03	69	3,953,000
	Inferred	0.14	0.27	0.17	1.17	0.03	70	394,000
	Total ¹	1.52	0.29	0.18	1.26	0.03	69	4,347,000
Cyclops	Indicated							
	Inferred	0.33	0.27	0.18	1.24	0.03	70	891,000
	Total ¹	0.33	0.27	0.18	1.24	0.03	70	891,000
Banshee	Indicated							
	Inferred	1.66	0.21	0.16	1.17	0.02	87	3,484,000
	Total ¹	1.66	0.21	0.16	1.17	0.02	87	3,484,000
Total ¹	Indicated	4.59	0.71	0.6	3.99	0.09	86	32,304,000
	Inferred	4.48	0.56	0.46	3.18	0.07	86	25,001,000
	Total ¹	9.07	0.63	0.53	3.59	0.08	86	57,308,000

¹ - Rounding may cause some computational discrepancies

TREO = Total Rare Earth Oxides – La₂O₃, CeO₂, Pr₆O₁₁, Nd₂O₃, Sm₂O₃, Eu₂O₃, Gd₂O₃, Tb₄O₇, Dy₂O₃, Ho₂O₃, Er₂O₃, Tm₂O₃, Yb₂O₃, Lu₂O₃, Y₂O₃;

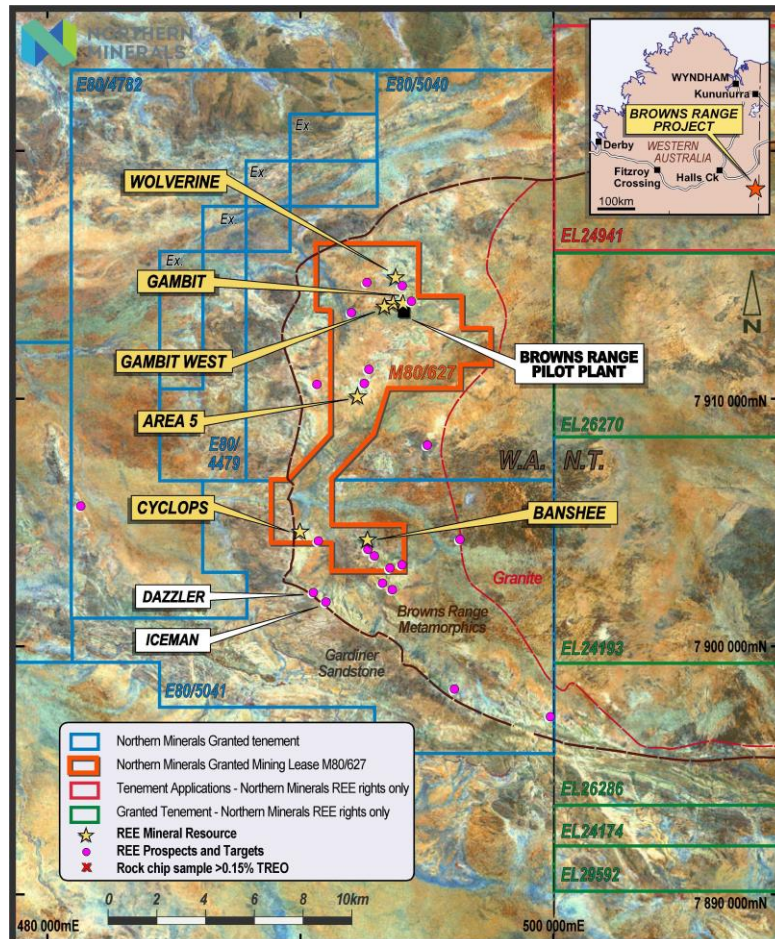
HRE or HREO = Heavy Rare Earth Oxides – Total of Sm₂O₃, Eu₂O₃, Gd₂O₃, Tb₄O₇, Dy₂O₃, Ho₂O₃, Er₂O₃, Tm₂O₃, Yb₂O₃, Lu₂O₃, Y₂O₃

HREO % = HREO / TREO * 100

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These two prospects are located less than 15km from the Browns Range processing plant (see Figure 1 below).

Figure 1 – Browns Range Project – Prospect and Deposit location



Dazzler

Dazzler is located south of the Browns Range Pilot Plant on the edge of a small scarp adjacent to a strong geochemical soil anomaly. The prospect was first drilled in 2013, with seven RC drill holes completed at the base of the scarp slope. This drilling only intersected patchy mineralisation and appears, in the current interpretation, to have been drilled below the base of the main mineralisation.

In 2018 an alternate geological hypothesis led Northern Minerals to drill the geochemical anomaly from the top of the escarpment. This intersected extremely encouraging mineralisation within the Gardiner Sandstone (which had previously been considered non-prospective). Results of this drill program were reported on 11 September 2018 (see ASX announcement “Assay results confirm Dazzler & Iceman discoveries”). A total of thirteen holes for 1,242 metres were completed at Dazzler in 2018 (see Figures 2 & 3 below). The 2018 drill program is the first drilling at the Browns Range Project to assess the unconformity between the Gardiner Sandstone and the underlying Browns Range Metamorphics.



Drilling at Dazzler

An Exploration Target of 80,000t to 140,000t at a grade range of 2 - 4% TREO has been estimated. The potential quantity and grade of the Exploration Target is conceptual in nature, there has been insufficient exploration to determine a Mineral Resource and there is no certainty that further exploration work will result in the determination of a Mineral Resource.

Estimate Methodology and planned work

The Dazzler Exploration Target was estimated as follows:

- Where access allowed, the drilling at the Dazzler prospect was conducted on a nominal 20m by 25m grid.
- The drill results were interpreted to form a “tight” wireframe around the 20m by 25m drilling, with the edges of the wireframe extending up to 20m from the nearest drillhole. This wireframe represents the current best knowledge of the geological and structural interpretation of the Dazzler deposit. Nine drillhole pierce points directly inform this wireframe interpretation. The total drilling within this wireframe is 71 individual 1m composites.
- Statistical analysis of drilling assay results shows that mineralisation at Dazzler has two populations – one Heavy Rare Earth dominated and the other Light Rare Earth dominated. Only the Heavy Rare Earth dominated population has been wireframed for the Exploration Target estimation process.
- The volume of this “tight” wireframe was reported and used to form the lower tonnage estimate of this exploration target. An assumed density of 2.5 has been used to convert wireframe volume to tonnes.

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- The raw sample statistics were reviewed for measures of central tendency and spread. From this review of summary statistics, the competent person selected threshold grades that they believe reflect the prospectivity of the Dazzler deposit as modelled. These threshold grades form the basis of the grade range of this Exploration Target estimate.
- The deposit wireframe was extended 20-30 metres into the area of the undrilled escarpment crest and the vicinity of the original geochemical anomaly. This extended wireframe was used to build a blockmodel.
- Northern Minerals has designed a conceptual open cut mine on this blockmodel of the Dazzler deposit.
- The blockmodeled volume, constrained within the conceptual pit design, has been used to form the upper estimate of the Exploration Target tonnes. An assumed density of 2.5 has been used to convert blockmodeled volume to tonnes.

The topographical configuration of the deposit combined with the relatively shallow dip of the deposit give a stripping ratio of circa 4:1 based on the pit design volumes and upper tonnage threshold.

Northern Minerals intends to carry out further exploration at the Dazzler prospect in the 2019 field season. The first step of this is to design and execute a suitable drilling campaign to drill the remainder of the Dazzler Exploration Target in the proximity of the escarpment edge.

Figure 2 – Dazzler prospect – Drill hole location plan and Exploration Target outline

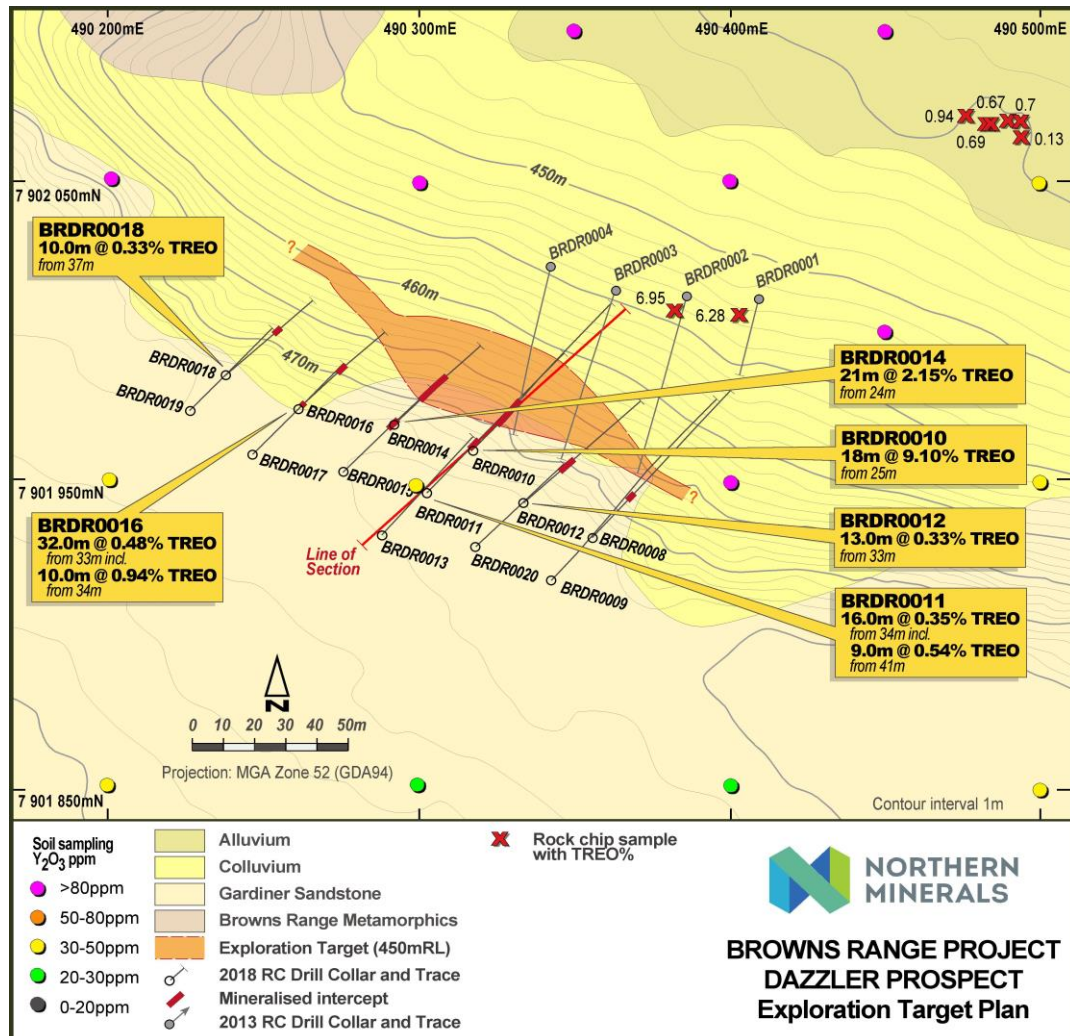
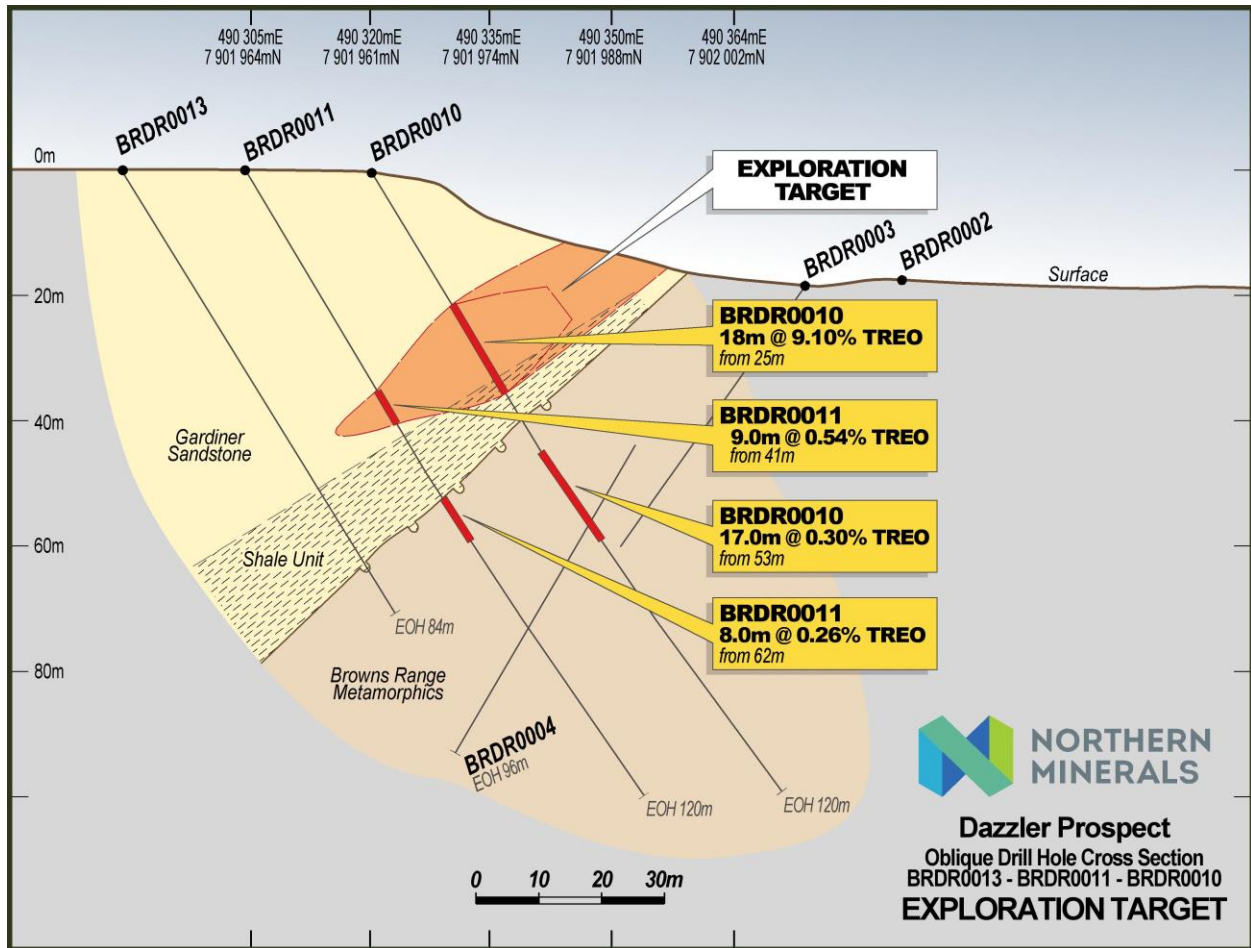


Figure 3 – Dazzler prospect – Drill hole cross section BRDR0010, 0011 and 0013



Iceman

The Iceman prospect is located approximately 400m along strike to the southeast of Dazzler. The drilling completed earlier this year at the Iceman prospect, which comprised nine holes for 754 metres, was targeted on the edge of a small scarp adjacent to a strong geochemical soil anomaly (see Figure 4 below). Drilling from above the scarp firstly intersected the overlying Gardiner Sandstone unit before intersecting the lower Browns Range Metamorphics.

An Exploration Target of 15,000t to 30,000t at a grade range of 2 - 4% TREO has been estimated at Iceman. The potential quantity and grade of the Exploration Target is conceptual in nature, there has been insufficient exploration to determine a Mineral Resource and there is no certainty that further exploration work will result in the determination of a Mineral Resource.

Estimate Methodology and planned work

The Iceman Exploration Target was estimated as follows:

- Northern Minerals has currently wireframe modelled the Iceman prospect on 2 drill sections spaced 35m apart. 4 drillhole pierce points inform this wireframe.
- Northern Minerals has utilised the volume of the current Iceman wireframe as the low side tonnage estimate for the purpose of estimating an Exploration Target. A density of 2.5 has been assumed.,
- The Iceman prospect shows similar geological and geochemical characteristics as the Dazzler prospect, albeit with less drilling having been completed.
- There is potential to double the volume of the current wireframe based on further step-out drilling.
- Northern Minerals considers the Iceman prospect to be analogous to the Dazzler deposit, and for the purposes of an Exploration Target assumes they may be comparable in grade. As such, Northern Minerals has estimated the same grade range as it has estimated for Dazzler.

Northern Minerals intends to carry out further drilling at the Iceman prospect after drilling has been completed at Dazzler. The entire “corridor” between the Dazzler and Iceman prospects and beyond is considered highly prospective for similar mineralisation and will be drill tested later in 2019 (see Figure 5).

Figure 4– Iceman prospect – Drill hole location plan and Exploration Target outline

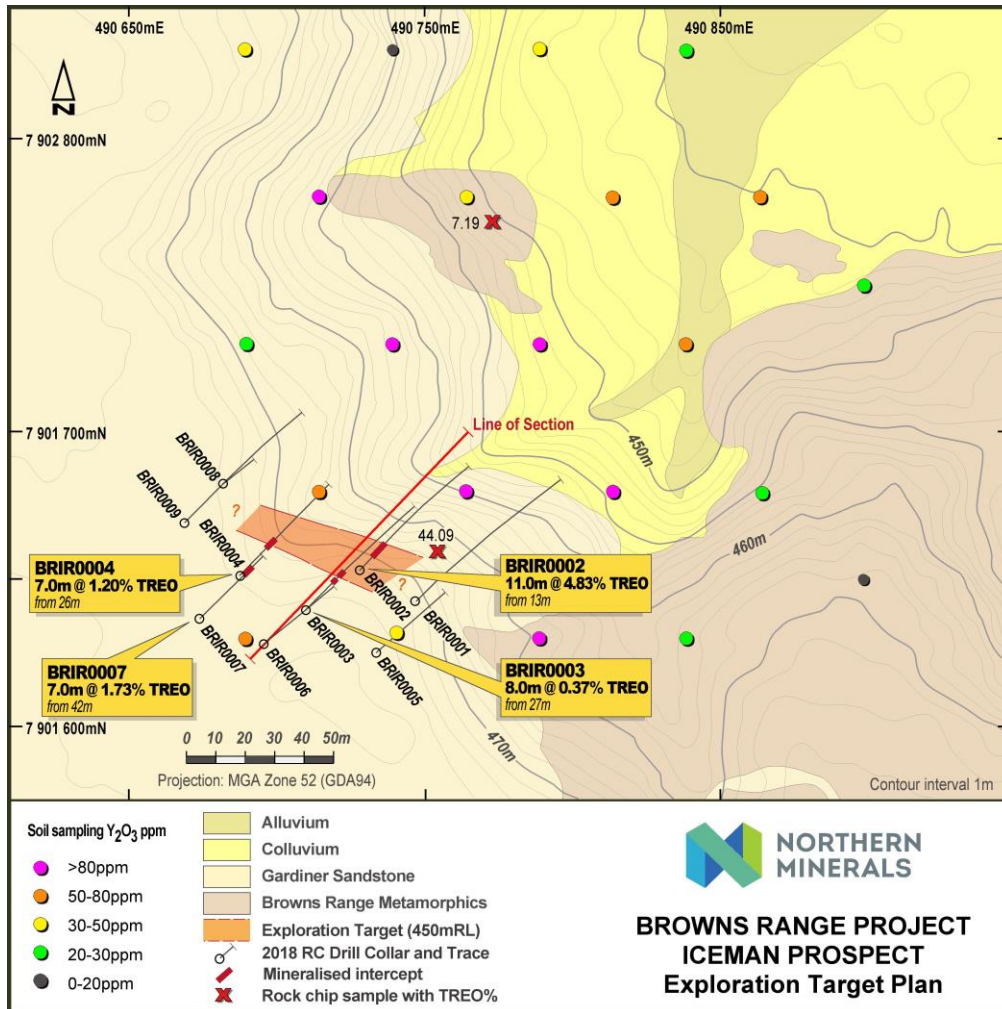
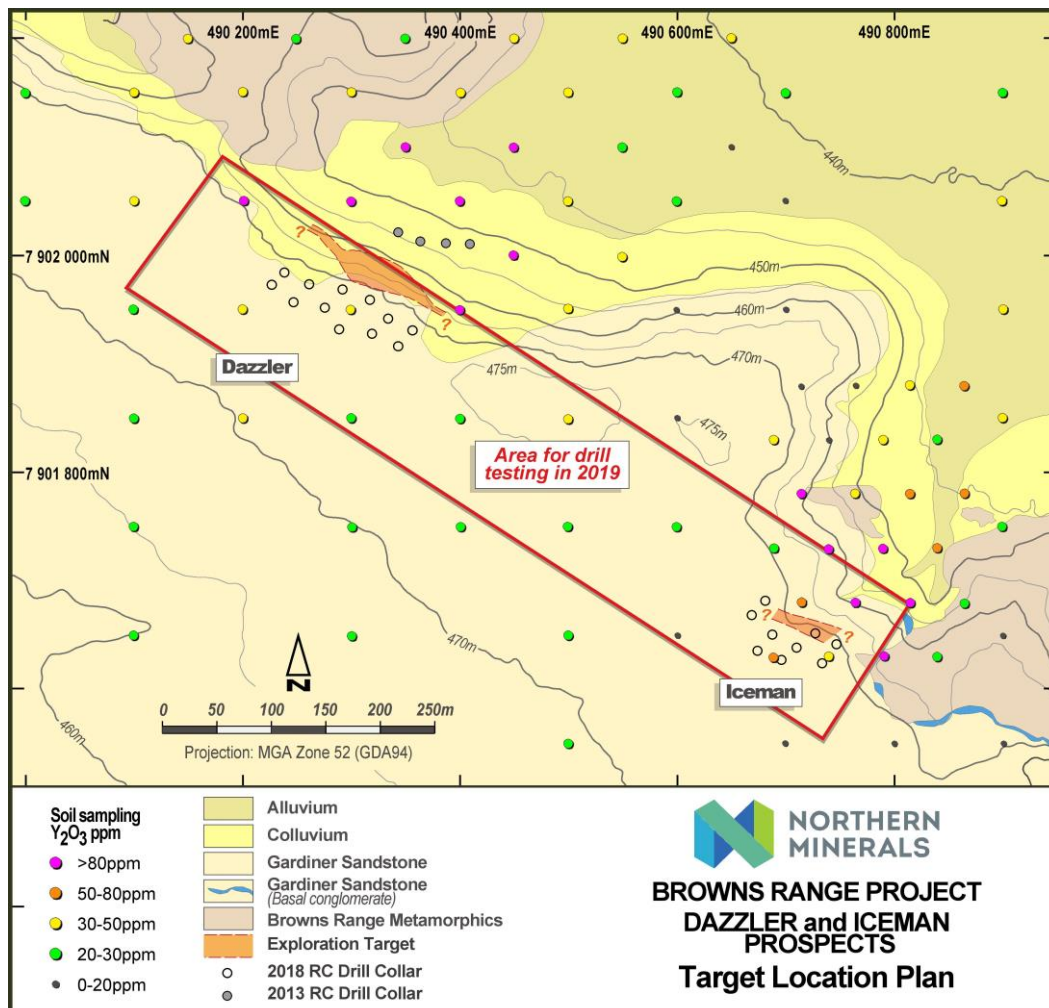


Figure 5 – Dazzler/Iceman prospects – area for proposed drilling in 2019



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About Northern Minerals:

Northern Minerals Limited (ASX: NTU; Northern Minerals or the Company) has commenced commissioning of 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 aims to be 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 will commence first production of heavy rare earth carbonate in Q3 2018. The pilot plant development provides 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.

For more information: northernminerals.com.au.



ASX Code:	NTU	Market Capitalisation:	A\$87.9m
Issued Shares:	1,188m	Cash (as at 30 Sept 2018):	A\$4.6m

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Compliance Statement

The information in this announcement that relates to Exploration Results at the Dazzler and Iceman Prospects is extracted from the report entitled “Assay results confirm Dazzler and Iceman discoveries” dated 11 September 2018 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.

The information in this announcement that relates to the Mineral Resource Estimates for the Browns Range Project is extracted from the report entitled “Mineral Resource and Ore Reserve Update – Post Trial Mining Operations at June 30 2018” dated 28 September 2018 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.

The information in this report relating to Exploration Targets was compiled by Mr Bill Rayson who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Rayson is a consultant for Northern Minerals Limited and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the ‘Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves’ (the JORC Code). Mr Rayson consents to the inclusion of this information in the form and context in which it appears.

The information in this report relating to Exploration Results was compiled by Mr Robin Wilson who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Wilson is a full time employee of Northern Minerals Limited and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the ‘Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves’ (the JORC Code). Mr Wilson consents to the inclusion of this information in the form and context in which it appears.