ASX ANNOUNCEMENT
29 April 2022

NORTHERN MINERALS

Quarterly Activities Report: March 2022

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Highlights

- Review of the strategic direction of the Company has been undertaken;
- Review confirms that commercial-scale beneficiation plant to produce HRE concentrate at Browns Range is the preferred near-term strategy for the Company;
- Browns Range Pilot Plant placed on care and maintenance;
- Further drill assays received during the quarter demonstrate the prospectivity at Zero, Banshee and Rockslider;
- Best results include:
  - 12m at 0.62% TREO from 36m (Zero);
  - 23m at 1.12% TREO from 30m (Dazzler);
  - 57m at 0.24% TREO from 4m (Rockslider), and
  - 13m at 0.59% TREO from 43m (Banshee).
- All results warrant follow up RC and diamond core, drilling planned for H2 2022.

Figure 1: Pulse Prospect looking South to the Gardner Sandstone Range

Powering Technology.

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Northern Minerals Limited (ASX: NTU) (Company) is pleased to update shareholders on its activities for the quarter ending 31 March 2022.

During the quarter, the Company completed the review of the Company's strategy under the leadership of the Chairman, Nick Curtis. The review concluded that producing and marketing a mixed heavy rare earth concentrate from the proposed commercial-scale beneficiation plant at Browns Range is the preferred near-term strategy for the Company.

The emergence of local customers with capacity and interest in an off-take agreement to purchase the mixed heavy rare earth concentrate feedstock from Browns Range underpins the strategy.

A set of work programs have been developed to address risk areas identified during the strategic review which, together with continuing discussions in relation to off-take agreement for the concentrate, will be required prior to restarting the Feasibility Study (FS) for a commercial-scale beneficiation plant at Browns Range.

Dysprosium and Terbium are critical metals in a low carbon future where rare earth permanent magnet electric motors are going to drive the way the world works, from vehicles, to homes, and to industry. Forecast demand for these metals is strong. The work done over the last ten years by the Company means that it is in a great position to prosper from this important strategic asset. The Board believes the Company is ready to build a broad business that positions itself as a key part of the supply chain for the growing permanent magnet industry.

The Company completed the three-year test program on the Pilot Plant at Browns Range during the March 2022 quarter and the Pilot Plant has been placed on care and maintenance. The results of these test programs including results from the ore sorter will be utilised and updated when the FS is restarted.

During the quarter the Company expended approximately $4.4 million on production and development activities.

During the quarter there have been some encouraging results from the drilling program at Browns Range. Northern Minerals completed 17,500 metres of reverse circulation (RC) drilling and 3,200 metres of diamond drilling during calendar year 2021. Due to the high demand being experienced by analytical laboratories, assay turn around has been particularly slow during the quarter.

Assay results have been received from drilling at the Banshee, Dazzler, Rockslider and Zero prospects during the quarter. Significant intercepts are reported in Appendix 1 and drill hole collars are reported in Appendix 2.

A further 1,000 drill samples from the 2021 program remain outstanding and are expected to be returned over the course of the next few months.

Best results from Banshee was 13m @ 0.59% TREO from 43m in BRBR0171, while at Dazzler was 23m @ 1.12% TREO from 30m in BRDR0175. At Rockslider the best intercept of 57m @ 0.24% TREO from 4m was returned (BRR0559) and at Zero the best intercept of 12m @ 0.62% TREO from 36m was returned (BRR0585A).

Northern Minerals will follow-up these results of drilling, being planned at Browns Range in 2022.

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Rockslider

Rockslider is a new prospect defined from a moderate geochemical anomaly mapped in early 2021 (Figure 2).

Assay results have now been received from all holes completed in 2021. The drilling was designed to test a large, NW-SE striking hematite breccia and associated geochemical anomaly (Figure 3).

The results illustrate continuous, mineralised zones northwest. These zones are generally broad, low grade and contain intermittent high grade peaks reaching up to 1.7% TREO. A strong termination of mineralisation on the southwestern flank is interpreted as a structural shear (Figure 3).

Follow up RC and diamond core drilling will target the northwestern strike extension during 2022.

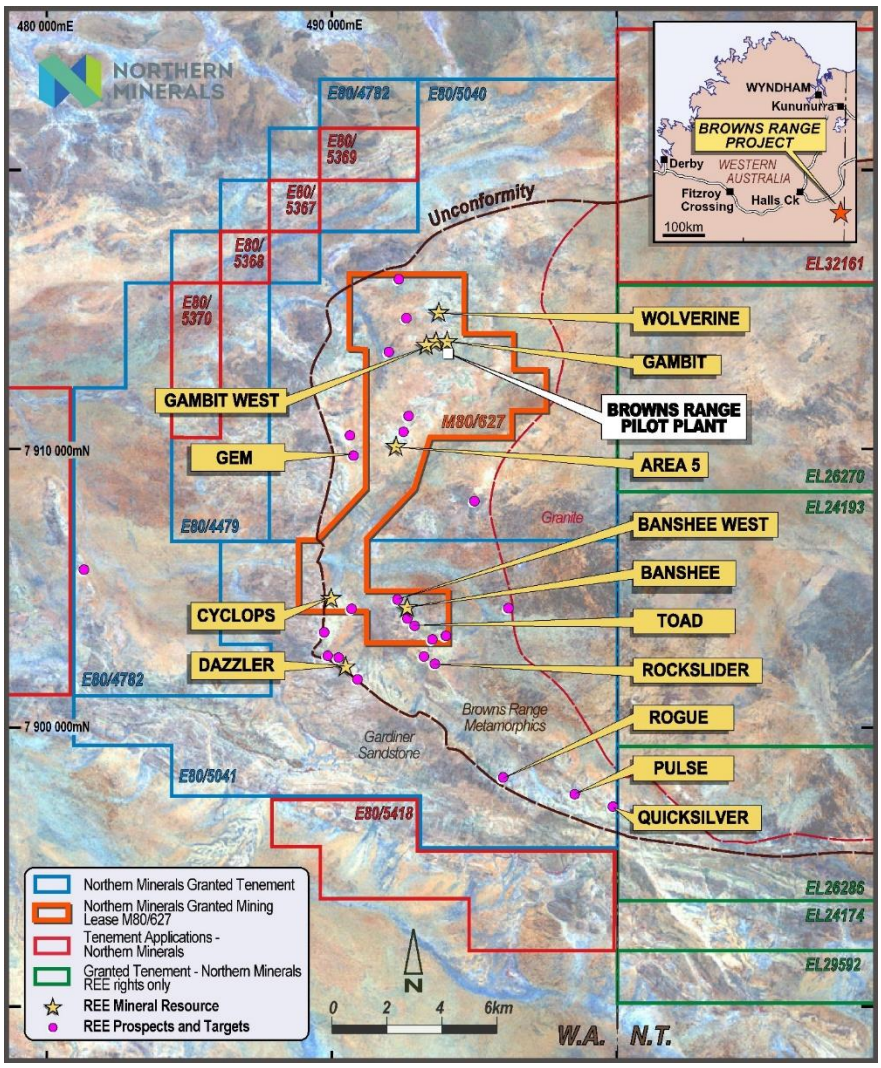

Figure 2: Browns Range Prospect Location Plan

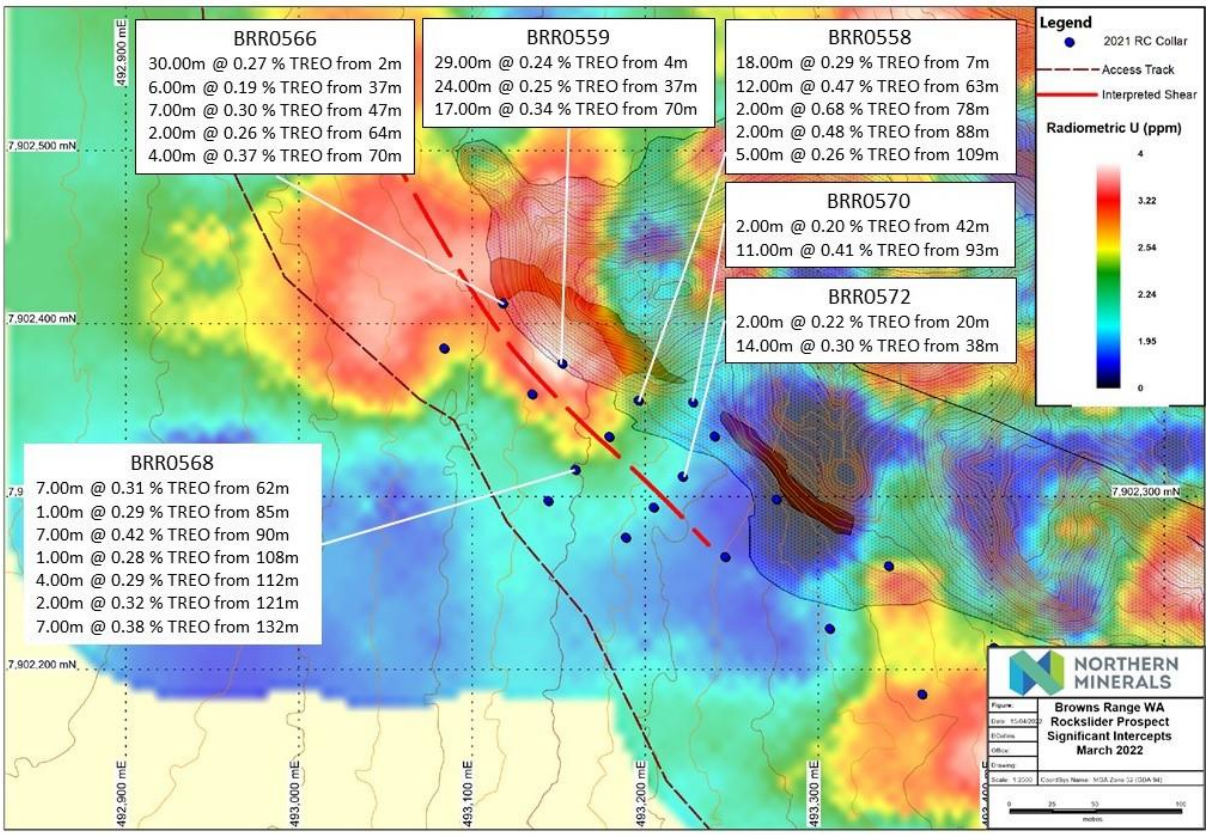

Figure 3 - Significant intercepts, Rockslider Prospect, March 2022

Zero prospect

The Zero prospect formerly known as Gem was discovered in 2021 from mapping of a radiometric anomaly immediately west of mining lease M80/627 (Figure 2).

Assay results have been returned for all holes completed in 2021 (Figure 4). Mineralisation is generally low grade and remains open to the south and west and is interpreted to be controlled by a NNW – SSE trending fault.

Additional RC and diamond core drilling will be conducted in 2022.

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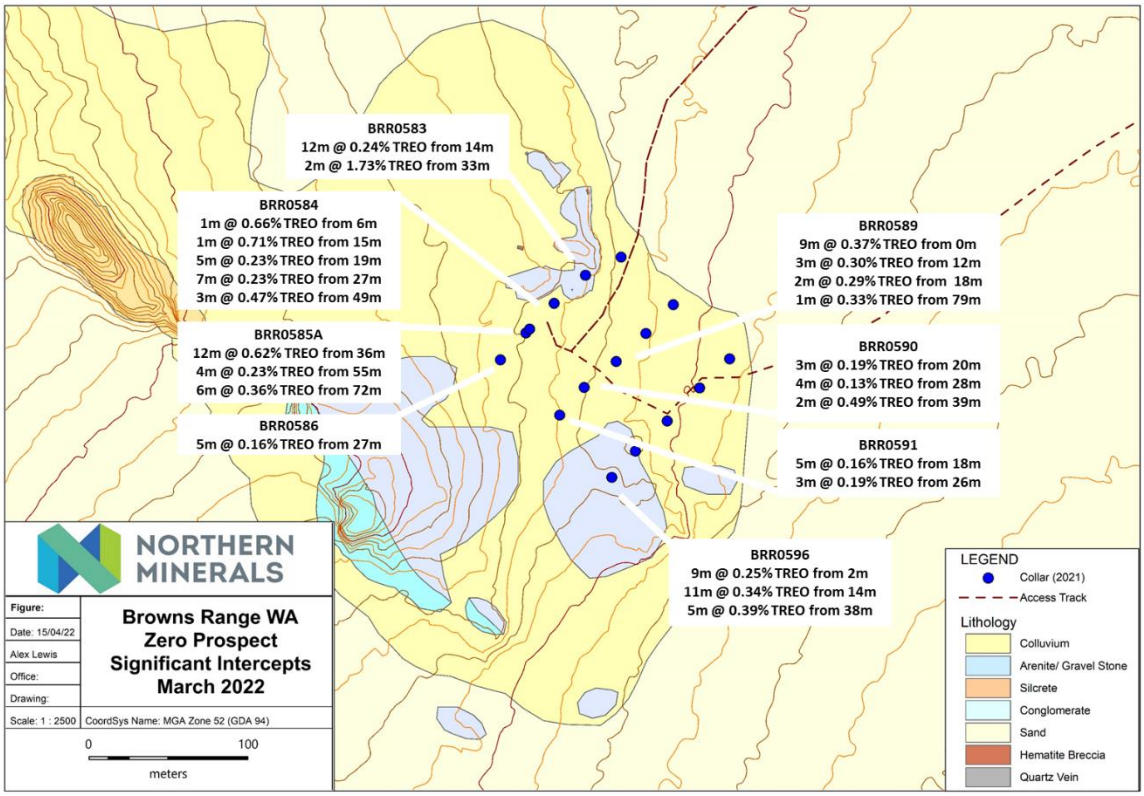

Figure 4 – Zero Prospect Dill Hole Location Plan and Mineralised Intercepts

Banshee

The Banshee prospect is located approximately 2km north of Rockslider within mining lease M80/627 (Figure 2). A total of 110 RC holes were completed for 7,826 metres in 2021. Assay results have been received for all holes.

The Banshee prospect forms part of a broad zone of mineralisation over about 1 square kilometre and includes Banshee, Banshee West and Banshee South prospects. The 2021 RC drill programme were designed to follow up on positive results from the 2020 drill program at Banshee West and Banshee South. An infill RC resource definition drill programme was also designed earlier in 2021 to investigate whether all three prospects were in fact linked. The purpose of this was to see if an Inferred Mineral Resource could be estimated over the broader Banshee area.

Final results reported in this release are in line with previous results reported for Banshee indicating broad, low-grade mineralisation. Best results include:

- 13m at 0.59% TREO from 43m in hole BRBR0171;
- 16m at 0.35% TREO from 9m in hole BRBR0163;
- 17m at 0.24% TREO from 90m in hole BRBR0166, and
- 13m at 0.38% TREO from 94m in hole BRBR0165.

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Dazzler

The Dazzler deposit is located close to the unconformable contact between the Mesoproterozoic Gardiner Sandstone and the Archean-Palaeoproterozoic Browns Range Metamorphics (Figure 2). The high-grade mineralisation occurs immediately above the unconformity, dipping moderately (30-40 degrees) towards the southwest.

Mineralisation is related to the presence of hydrothermal xenotime, which has been identified by petrographic analysis. Xenotime is the dominant rare earth mineral at the other Browns Range deposits.

A JORC reported Inferred Mineral Resource of 0.21Mt at 2.33% TREO was estimated in April 2020.

A total of 14 RC holes (BRDR0162 -BRDR0175) were drilled at the main resource area to infill previous drilling and work towards reclassifying the resource from Inferred to Indicated status. Final results from the last 3 holes has now been received.

Best results include:

- 23m @ 1.12% TREO from 30m in BRDR0175, and
- 16m @ 0.28% TREO from 41m in BRDR0172.

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

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Payments to related parties of the entity and their associates

Payments made during the quarter and included in 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 $74,000.

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

Authorised for release by the Board

Compliance Statement – Exploration Results

The information in this report relating to Exploration Results was compiled by Mr Simon Pooley who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Pooley 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 Pooley consents to the inclusion of this information in the form and context in which it appears.

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About Northern Minerals:

Northern Minerals Limited (ASX: NTU) (Northern Minerals or the Company) is one of a few companies that has produced the heavy rare earth elements Dysprosium and Terbium outside of China with production from the Browns Range Heavy Rare Earth pilot plant project in northern Western Australia.

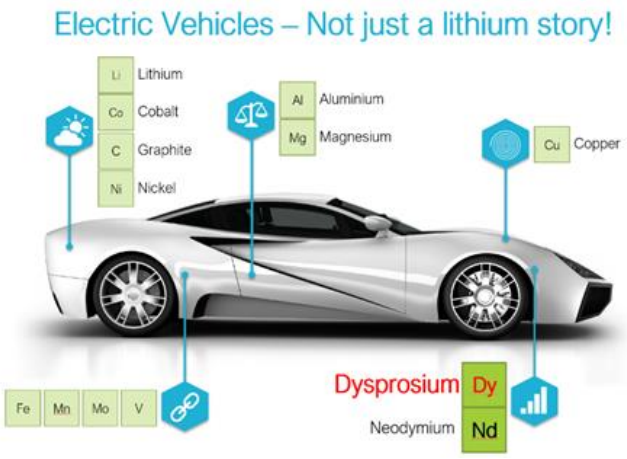
The Company commenced the production of heavy rare earth carbonate in late 2018 as part of pilot assessment of economic and technical feasibility of a larger scale development at Browns Range. An ore sorter was installed and commissioned during 2021 which also tested for its economic and technical feasibility at the front end of the pilot plant. The Company completed the three-year test program on the Pilot Plant at Browns Range during the March 2022 quarter and the Pilot Plant has been placed on care and maintenance.

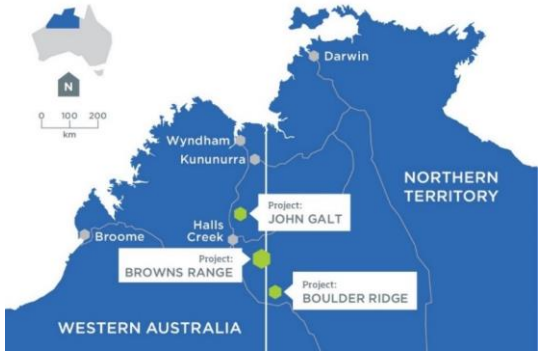
Through the development of its flagship project, the Browns Range Project (the Project), Northern Minerals aims to build the Western Australian operation into a significant world producer of dysprosium outside of China.

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$243.2m
Issued Shares:	4,864m	Cash (as at 31 March 2022)	A$4.2m

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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 Minerals	100%
	Browns Range	EL24174	NT	Granted	Northern Star Resources	REE rights only
	Browns Range	EL26270	NT	Granted	Northern Minerals	100%
Browns Range NT	Browns Range	EL26286	NT	Granted	Northern Minerals	100%
	Browns Range	ELA32161	NT	Application	Northern Minerals	100%
	Browns Range	ELA32162	NT	Application	Northern Minerals	100%

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Project	Location	Tenement ID	State	Status	Holder Application	Interest
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%
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 Minerals	!00%
	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 Minerals	100%
	Ware Range	EL26541	NT	Granted	Northern Minerals	100%
	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
Gardiner-Tanami NT	Tanami	EL29595	NT	Granted	Northern Minerals	100%
	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

Project	Location	Tenement ID	State	Status	Holder Application	Interest
	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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Appendix 1: Significant Drill Hole Intercepts

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Hole Number	Prospect	Hole Type		From (m)	To (m)	Interval (m)	TREO (%)	Dy2O3 (ppm)
BRBR0153	Banshee	RC		19	23	4	0.25	173
			and	9	11	2	0.43	408
			and	19	23	4	0.78	633
BRBR0155	Banshee	RC		2	4	2	0.25	223
			and	11	14	3	1.43	1242
			and	18	21	3	0.29	268
BRBR0156	Banshee	RC		4	9	5	0.3	211
			and	17	21	4	0.24	197
BRBR0158	Banshee	RC		3	5	2	0.19	144
BRBR0161	Banshee	RC		0	7	7	0.19	155
			and	35	40	5	0.29	132
			and	44	47	3	0.45	258
			and	64	67	3	0.22	211
BRBR0162	Banshee	RC		24	30	6	0.14	130
			and	44	54	10	0.29	263
BRBR0163	Banshee	RC		9	25	16	0.35	310
			and	51	54	3	0.17	157
			and	58	65	7	0.22	198
BRBR0164	Banshee	RC		43	49	6	0.35	288
			and	55	70	15	0.19	158
			and	75	80	5	0.22	208
BRBR0165	Banshee	RC		89	91	2	0.23	168
			and	94	107	13	0.38	297
			and	110	123	13	0.34	293
BRBR0166	Banshee	RC		50	52	2	0.93	798
			and	55	58	3	0.21	139
			and	61	64	3	0.29	181
			and	76	81	5	0.68	574
			and	84	86	2	0.25	235
			and	90	107	17	0.24	220
BRBR0167	Banshee	RC		14	16	2	0.25	148
BRBR0168	Banshee	RC		88	90	2	0.68	643
BRBR0169	Banshee	RC		43	45	2	0.22	75
			and	60	62	2	0.27	162
			and	93	95	2	0.3	249

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Hole Number	Prospect	Hole Type		From (m)	To (m)	Interval (m)	TREO (%)	Dy2O3 (ppm)
BRBR0170	Banshee	RC		104	108	4	0.16	142
BRBR0171	Banshee	RC		8	14	6	0.18	147
			and	18	21	3	0.23	208
			and	33	40	7	0.18	131
			and	43	56	13	0.59	470
			and	60	67	7	0.21	196
			and	71	75	4	0.17	152
			and	82	84	2	0.19	154
BRBR0172	Banshee	RC		0	5	5	0.26	244
			and	8	13	5	0.16	148
			and	18	23	5	0.2	172
			and	27	35	8	0.23	191
			and	38	42	4	0.15	115
			and	52	58	6	0.33	270
BRBR0175	Banshee	RC		2	9	7	0.4	387
			and	14	17	3	0.21	205
			and	28	34	6	0.16	149
			and	42	49	7	0.18	154
			and	64	67	3	0.34	242
			and	72	81	9	0.21	81
BRBR0177	Banshee	RC		42	44	2	0.17	139
			and	48	51	3	0.17	143
BRBR0181	Banshee	RC		7	11	4	0.15	122
BRBR0182	Banshee	RC		10	13	3	0.45	381
BRBR0184	Banshee	RC		4	6	2	0.27	197
BRBR0185	Banshee	RC		2	10	8	0.25	228
			and	14	16	2	0.18	173
			and	24	26	2	0.38	360
BRBR0186	Banshee	RC		3	9	6	0.19	110
BRBR0187	Banshee	RC		54	56	2	0.25	189
BRBR0188	Banshee	RC		36	39	3	0.34	220
BRBR0190	Banshee	RC		28	35	7	0.3	277
			and	39	42	3	0.27	240
			and	53	66	13	0.29	253
			and	69	73	4	0.25	231
			and	77	91	14	0.26	206
			and	107	116	9	0.18	151

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Hole Number	Prospect	Hole Type		From (m)	To (m)	Interval (m)	TREO (%)	Dy2O3 (ppm)
BRDR0172	Dazzler	RC		41	57	16	0.28	209
			and	68	71	3	0.3	71
BRDR0174	Dazzler	RC		35	37	2	0.21	142
			and	44	56	12	0.29	194
			and	73	79	6	0.48	208
BRDR0175	Dazzler	RC		30	53	23	1.12	1040
			and	59	70	11	0.27	102
BRR0558	Rockslider	RC		7	25	18	0.29	228
			and	63	75	12	0.47	401
			and	78	80	2	0.68	585
			and	88	90	2	0.48	464
			and	109	114	5	0.26	230
BRR0559	Rockslider	RC		4	33	29	0.24	192
			and	37	61	24	0.25	188
			and	70	87	17	0.34	292
BRR0566	Rockslider	RC		2	32	30	0.27	185
			and	37	43	6	0.19	137
			and	47	54	7	0.3	237
			and	64	66	2	0.26	224
			and	70	74	4	0.37	288
BRR0568	Rockslider	RC		62	69	7	0.31	97
			and	90	97	7	0.42	352
			and	112	116	4	0.29	261
			and	121	123	2	0.32	265
			and	132	139	7	0.38	225
BRR0570	Rockslider	RC		42	44	2	0.2	151
			and	93	104	11	0.41	311
BRR0572	Rockslider	RC		20	22	2	0.22	68
			and	38	52	14	0.3	213
BRR0574	Rockslider	RC		8	10	2	0.2	66
BRR0578	Rockslider	RC		44	46	2	0.17	89
BRR0583	Zero	RC		14	26	12	0.24	214
			and	33	35	2	1.73	1677
BRR0584	Zero	RC		19	24	5	0.23	196
			and	27	34	7	0.23	190
			and	49	52	3	0.47	409

Hole Number	Prospect	Hole Type		From (m)	To (m)	Interval (m)	TREO (%)	Dy2O3 (ppm)
BRR0585A	Zero	RC		36	48	12	0.62	530
			and	55	59	4	0.23	191
			and	72	78	6	0.36	287
BRR0586	Zero	RC		27	32	5	0.16	117
BRR0588	Zero	RC		37	39	2	0.19	168
BRR0589	Zero	RC		0	9	9	0.37	292
			and	12	15	3	0.3	86
			and	18	20	2	0.29	136
BRR0590	Zero	RC		20	23	3	0.19	143
			and	28	32	4	0.13	101
			and	39	41	2	0.49	325
BRR0591	Zero	RC		18	23	5	0.16	127
			and	26	29	3	0.19	139
BRR0593	Zero	RC		4	6	2	0.25	226
BRR0596	Zero	RC		2	11	9	0.25	190
			and	14	25	11	0.34	262
			and	38	43	5	0.39	306

Significant intercepts (>=2m @ 0.15% TREO or equivalent, with a maximum of 2m continuous internal dilution. No top-cut has been applied all widths are downhole lengths.)

(TREO – Total Rare Earth Oxides = Sum of La_2O_3, CeO_2, Pr_6O_{11}, Nd_2O_3, Sm_2O_3, Eu_2O_3, Gd_2O_3, Tb_4O_7, Dy_2O_3, Ho_2O_3, Er_2O_3, Tm_2O_3, Yb_2O_3, Lu_2O_3, Y_2O_3)

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Appendix 2: Drill Hole Collars

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Banshee

Hole ID	Easting (mE)	Northing (mN)	RL (mASL)	Mag Azimuth (Degrees)	Dip (Degrees)	Depth (m)
BRBR0149	492901	7903909	438	003	-60	70
BRBR0150	492800	7904137	435	004	-61	18
BRBR0151	492801	7904087	436	001	-61	18
BRBR0152	492799	7904036	437	001	-61	18
BRBR0153	492799	7903981	439	005	-60	30
BRBR0154	492701	7904084	437	183	-61	48
BRBR0155	492701	7904110	437	180	-60	48
BRBR0156	492701	7904135	436	180	-60	42
BRBR0157	492700	7904159	435	180	-60	36
BRBR0158	492699	7904183	435	180	-60	30
BRBR0159	492523	7904207	437	002	-60	72
BRBR0160	492524	7904161	437	002	-60	72
BRBR0161	492524	7904111	438	001	-60	84
BRBR0162	492524	7904062	439	001	-61	87
BRBR0163	492525	7904012	440	358	-61	96
BRBR0164	492524	7903965	443	359	-60	114
BRBR0165	492525	7903912	449	001	-61	132
BRBR0166	492423	7903986	446	359	-60	128
BRBR0167	492699	7903886	443	177	-61	114
BRBR0168	492700	7903910	440	179	-61	108
BRBR0169	492700	7903932	439	176	-61	108
BRBR0170	492650	7903910	443	173	-61	120
BRBR0171	492649	7904044	441	181	-61	90
BRBR0172	492678	7904073	438	182	-61	66
BRBR0173	492798	7903888	450	002	-61	72
BRBR0174	492524	7904089	438	001	-61	78
BRBR0175	492525	7904039	439	001	-61	90
BRBR0176	492524	7903987	441	001	-60	106
BRBR0177	492524	7904138	438	360	-61	73
BRBR0178	492752	7904162	435	360	-60	12
BRBR0179	492750	7904136	436	005	-60	12
BRBR0180	492750	7904111	436	005	-60	24
BRBR0181	492748	7904087	436	005	-60	80
BRBR0182	492750	7904063	436	360	-60	72

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Banshee Continued

Hole ID	Easting (mE)	Northing (mN)	RL (mASL)	Mag Azimuth (Degrees)	Dip (Degrees)	Depth (m)
BRBR0183	492748	7904036	437	360	-60	42
BRBR0184	492749	7904012	437	359	-60	42
BRBR0185	492750	7903987	438	357	-60	48
BRBR0186	492750	7903961	438	001	-60	60
BRBR0187	492749	7903938	439	360	-60	72
BRBR0188	492748	7903913	441	001	-60	72
BRBR0189	492749	7903891	443	005	-60	84
BRBR0190	492471	7904037	447	360	-61	120

Dazzler

Hole ID	Easting (mE)	Northing (mN)	RL (mASL)	Mag Azimuth (Degrees)	Dip (Degrees)	Depth (m)
BRDR0172	490258	7901952	472	042	-50	84
BRDR0173	490331	7901923	472	043	-51	78
BRDR0174	490311	7901934	473	045	-50	96
BRDR0175	490321	7901944	473	046	-51	78

Rockslider

Hole ID	Easting (mE)	Northing (mN)	RL (mASL)	Mag Azimuth (Degrees)	Dip (Degrees)	Depth (m)
BRR0558	493197	7902355	440	045	-60	120
BRR0559	493152	7902377	440	045	-60	96
BRR0560	493179	7902334	440	045	-60	138
BRR0561	493135	7902359	439	045	-60	90
BRR0566	493118	7902411	439	043	-61	96
BRR0567	493084	7902385	439	044	-60	102
BRR0568	493160	7902315	440	045	-60	150
BRR0569	493144	7902297	440	043	-61	132
BRR0570	493228	7902354	442	043	-61	114
BRR0571	493240	7902334	442	042	-61	102
BRR0572	493222	7902311	441	040	-61	132
BRR0573	493205	7902293	441	043	-61	90
BRR0574	493189	7902276	441	045	-60	90

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Rockslider Continued

Hole ID	Easting (mE)	Northing (mN)	RL (mASL)	Mag Azimuth (Degrees)	Dip (Degrees)	Depth (m)
BRR0575	493276	7902298	442	041	-61	114
BRR0576	493246	7902265	442	041	-61	78
BRR0577	493341	7902259	444	044	-61	108
BRR0578	493307	7902223	443	042	-61	78
BRR0579	493402	7902212	444	045	-60	78
BRR0580	493360	7902185	443	045	-61	78

Zero

Hole ID	Easting (mE)	Northing (mN)	RL (mASL)	Mag Azimuth (Degrees)	Dip (Degrees)	Depth (m)
BRR0582	490547	7910391	451	043	-60	84
BRR0583	490525	7910379	451	041	-61	54
BRR0584	490505	7910362	451	041	-60	72
BRR0585A	490490	7910345	452	042	-60	96
BRR0586	490472	7910326	452	046	-60	66
BRR0587	490580	7910361	450	041	-59	54
BRR0588	490563	7910343	450	043	-60	54
BRR0589	490544	7910325	451	044	-60	90
BRR0590	490524	7910309	451	044	-60	84
BRR0591	490509	7910291	451	043	-60	90
BRR0592	490615	7910327	450	044	-60	54
BRR0593	490596	7910308	450	044	-61	54
BRR0594	490576	7910288	450	047	-60	54
BRR0595	490556	7910269	451	047	-60	54
BRR0596	490541	7910252	451	043	-60	84

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Table 1: JORC code, 2012 Edition

Section 1 - Sampling Techniques and Data

Criteria	JORC Code Explanation	Commentary
Sampling techniques	*Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.*	Drill collar locations have been surveyed using high accuracy KGPS. Down hole surveys were completed using a gyroscope where possible. RC samples were collected at one metre intervals and subsampled via a rig mounted static cone splitter. Reverse Circulation (RC) drill samples were analysed using Niton XRF XLt3-950 GOLDD+ portable XRF analyser (pXRF). The pXRF was placed on the primary split sample taken off the drilling rig's static cone splitter. One measurement was completed for each drill metre sample, through the calico bag. The results from the initial pXRF readings formed the basis for sample selection for additional geochemical analysis.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	The pXRF instrument is calibrated and serviced annually or more frequently, with daily instrument calibration completed as a minimum. Additionally, at the start of each sampling session, standards are analysed. Sampling was carried out under NTU protocols and employed QAQC procedures in line with industry standard practice and fit for purpose i.e. first-pass exploration drilling. RC drill holes were sampled at one metre intervals exclusively and split at the rig to achieve a target 2 to 5 kilogram sample weight.
	Aspects of the determination of mineralisation that are Material to the Public Report.	This report relates to exploration results only.

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Drilling techniques	*Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	RC drilling at Zero, Banshee, Dazzler and Rockslider was with nominal diameter of 5 3/8 inches bit. RC drilling was completed using face sampling hammer.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	RC recovery was initially assessed by subjective assessment based on volume recovered. All intervals selected for geochemical analysis were subsequently weighed incorporating the bulk sample plus the primary and duplicate samples. RC recoveries were observed to be generally acceptable with recoveries typically 80% or greater. RC recovery information is recorded in the geologist logs and entered into the database.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	Geologists were based at the RC rig, and regularly inspected operations to ensure correct procedures were being used. RC sample recoveries were visually checked for recovery, moisture and contamination. The cyclone and splitter were routinely cleaned to minimise material build up.
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	At this stage of exploration this relationship has not been investigated at the prospects in question.
Logging	*Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.*	RC logging was completed on one metre intervals at the rig by the geologist. Typically, lithology, structure and mineralisation was recorded. Logging is completed directly onto a laptop in the field using a proprietary geological logging package with in-built validation. Logging information was reviewed by the responsible geologist prior to final load into the database. Chip trays were collected for each of the RC intervals.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	Logging was generally qualitative in nature.
	The total length and percentage of the relevant intersections logged.	All RC drilling metres were logged and entered into the database.

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Sub-sampling techniques and	*If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*	RC samples were collected from the full recovered interval by rig mounted static cone splitter. The majority of samples were collected dry with a minor number being moist due to ground conditions or excessive dust suppression. Samples were split without drying.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	The sample preparation techniques employed for the RC samples follow industry standard practice at Intertek Genalysis Laboratory. Samples are oven dried, crushed if required and pulverised prior to a pulp packet being removed for analysis.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	At this stage of exploration, subsampling is limited to on rig splitting using a static cone splitter. No QA/QC of the splitting method has been carried out. With diamond core sampling, half core is retained for future reference.
	Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.	Blanks were inserted in the field and developed from local host rock following chemical analysis. Field duplicates were collected by a second sample off the splitter (RC). Insertion rates targeted 1:20 for duplicates, blanks and standards, with increased frequency in mineralised zones..
Sample preparation	*Whether sample sizes are appropriate to the grain size of the material being sampled.*	The RC sample is appropriate for the grain size of the material.
	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	Samples assayed by Genalysis for rare earth elements were fused with sodium peroxide within a nickel crucible and dissolved with hydrochloric acid for analysis. Fusion digestion ensures complete dissolution of the refractory minerals such as xenotime, which are only partially dissolved if the pulp is digested in acids. The digestion solution, suitably diluted, is analysed by ICP Mass Spectroscopy (ICP-MS) for the determination of the REE (La – Lu) plus Y, Th and U.
Quality of assay data and laboratory tests	*For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.*	In the field a Niton (XL3T-950 GOLDD+) XRF handheld tool was used to provide a preliminary quantitative measure of mineralisation. A reading time of 30 seconds was used, with a single reading taken for every metre of RC drilling. With diamond core, up to 4 point readings were recorded every metre. The reading was on unprepared raw RC chips, through the calico sample bag. The samples contained natural moisture. Calibration of the PXRF is at least daily with the silica blank standard and the TILL-4 yttrium standard checked at the beginning of every sample run.

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	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	Certified reference materials, using values across the range of mineralisation, were inserted blindly and randomly. Insertion rates targeted 1:20 for duplicates, blanks and standards, with increased frequency in mineralised zones Results highlight that sample assay values are suitably accurate and unbiased. Blanks were inserted in the field and developed from local host rock following chemical analysis. Laboratory QAQC involves the use of internal lab standards using certified reference material, blanks, splits and replicates as part of the in-house procedures.
	The verification of significant intersections by either independent or alternative company personnel.	Internal verification of significant results by more than one company geologist.
Verification of sampling and assay	*The use of twinned holes.*	No holes have been twinned due to this being early stage exploration at the prospects in question.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	**Portable XRF** Analytical data was collected directly by the Niton pXRF and downloaded by digital transfer to an excel sheet with inbuilt QAQC. All data was checked by the responsible geologist and digitally transferred to Perth. Datashed is used as the database storage and management software and incorporates numerous data validation and integrity checks using a series of defined data loading tools. Data is stored on a SQL server and electronic backups completed three times per day. **RC Drilling** Primary data was collected into a proprietary logging package (OCRIS) with in-built validation. Details were extracted and pre-processed prior to loading. Datashed is used as the database storage and management software and incorporates numerous data validation and integrity checks, using a series of defined data loading tools. Data is stored on a SQL server by Northern Minerals Ltd subject to electronic backup.
	Discuss any adjustment to assay data.	The assay data were converted from reported elemental assays for a range of elements to the equivalent oxide compound as applicable to rare earth oxides. Oxide calculations are completed by the laboratory and checked by Northern Minerals. No issues were identified. The oxides were calculated from the element according to the following factors below: CeO_2 –1.2284, Dy_2O_3 – 1.1477, Er_2O_3 – 1.1435, Eu_2O_3 –

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		1.1579, Gd2O3 – 1.1526, Ho2O3 – 1.1455, La2O3 – 1.1728, Lu2O3 – 1.1371, Nd2O3 – 1.1664, Pr6O11 – 1.2082, Sm2O3 – 1.1596, Tb4O7 – 1.1421, Tm2O3 – 1.1421, Y2O3 – 1.2699, Yb2O3 – 1.1387
	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	Drill collar locations have been surveyed with a high accuracy KGPS. Down hole surveys were completed by the drilling contractor using a gyroscope or single-shot survey tool at the time of drilling. Drill collar locations have subsequently been surveyed using high accuracy KGPS. Down hole surveys have also been conducted post-drilling, where practical, using a Reflex Gyro survey instrument. Survey accuracy of both collars and down hole is considered acceptable at this stage of the exploration program.
Location of data points	*Specification of the grid system used.*	The grid system used is MGA94 Zone 52. All reported coordinates are referenced to this grid.
	Quality and adequacy of topographic control.	Topographic control is based on airborne digital terrain survey data collected in 2011 with accuracy considered to be +/-1m.
	Data spacing for reporting of Exploration Results.	Banshee – 110 drill holes completed on numerous drill fences 50m to 75m apart, with individual holes 25m apart (along fences containing previous drilling). Refer to Figures 5 and 6. At Dazzler, drilling was infill on a 25m x 25m spacing. At Rockslider and Zero drill lines where 50m apart and 25m apart along drill lines.
Data spacing and distribution	*Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.*	Exploration Results only. Data spacing and distribution is not yet sufficient to support Mineral Resource or Ore Reserve Estimation.
	Whether sample compositing has been applied.	N/A

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Orientation of data in relation to geological structure	*Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*	Most drill holes in the current program have been drilled at an inclination of 60° at an orientation perpendicular to the interpreted structural and/or lithological trend. For the Banshee drilling, all holes are drilled -60 degrees to the north to intersect subvertical to steeply dipping, east – west trending primary structures known to host mineralisation. At Dazzler, holes were drilled at -60 degrees towards an azimuth of 45 degrees, the same orientation as the majority of holes completed at Dazzler, targeting extensions along west-northwest mineralised trend. At Rockslider, holes were drilled perpendicular to the strike of the mapped haematite breccia. At Zero, holes were drilled to an azimuth of 045 degrees, perpendicular to the interpreted strike of the fault zone.
	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	Current knowledge indicates that the orientation of drilling with respect to overall structural and lithological trends is not expected to introduce any sampling bias. *The orientation of the drilling is suitable for each prospect and is not expected to introduce any sampling bias.
Sample security	*The measures taken to ensure sample security.*	Samples are collected on site under supervision of the responsible geologist and stored in bulk bags on site prior to transport by company truck or utility to Halls Creek commercial transport yard. The samples are stored in a secure area until loaded and delivered to the Intertek Genalysis laboratory in Perth.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	No audits/reviews have been conducted.

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Section 2: Reporting of Exploration Results

Criteria	JORC Code Explanation	Commentary
Mineral tenement and land tenure status	*Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*	The Banshee prospect is located on M80/627. The tenement is located in the company's Browns Range Project approximately 150 kilometres south-east of Halls Creek and adjacent to the Northern Territory border in the Tanami Desert. Northern Minerals owns 100% of all mineral rights on the tenement. The fully determined Jaru Native Title Claim is registered over the Browns Range Project area and the fully determined Tjurabalan claim is located in the south of the project area. The Dazzler and Rockslider prospects are located immediately south of M80/627 within E80/5041. Zero is located immediately west of M80/627 within E80/5041
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	The tenements are in good standing and no known impediments exist.
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	No previous systematic exploration for REE mineralisation has been completed by other parties prior to Northern Minerals at the prospects in question. Regional exploration for uranium mineralisation was completed in the 1980s without success.
Geology	*Deposit type, geological setting and style of mineralisation.*	The Browns Range prospects are located on the western side of the Browns Range Dome, a Paleoproterozoic dome formed by a granitic core intruding the Paleoproterozoic Browns Range Metamorphics (meta-arkoses, feldspathic meta-sandstones and schists) and an Archaean orthogneiss and schist unit to the south. The dome and its aureole of metamorphics are surrounded by the Mesoproterozoic Gardiner Sandstone (Birrindudu Group). The Browns Range xenotime mineralisation is typically hosted in hydrothermal quartz and hematite veins and breccias within the meta-arkoses of the Archaean Browns Range Metamorphics. Various alteration styles and intensities have been observed; namely silicification, sericitisation and kaolinite alteration. Cyclops and Rockslider- mineralisation is hosted by a sub-vertical quartz-hematitic fault breccia(s) that trend approximately east-west, within the Browns Range

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		Metamorphics. Mineralisation is again related to the presence of hydrothermal xenotime. The Dazzler area prospects are located on a scarp slope that marks the unconformity between the younger overlying Gardiner Sandstone and the older Browns Range Metamorphics. At both prospects it is currently unclear what the controls on mineralisation are, however there is a clear spatial association between the unconformity and the most anomalous zones, with mineralisation occurring in both units above and below the unconformity. At Banshee, Xenotime mineralisation is hosted within coarser grained arkose units of the Browns Range Metamorphics and is considered bedding conformable.
Drill hole Information	*A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* *easting and northing of the drill hole collar* *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* *dip and azimuth of the hole* *down hole length and interception depth* *hole length.*	See tables above in Appendix 2.
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.*	Significant intervals were tabulated downhole for reporting. Each metre downhole was analysed using sodium fusion ICP-MS. All individual metres (one result per metre) were averaged over the entire tabulated range. A lower cut-off of 0.15% TREO was used during data aggregation, allowing for 2m of internal dilution. No top-cuts have been applied.
	Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and	All intervals were initially based on 1m sample runs, with no lengths shorter than 1m. The geologist then qualitatively grouped contiguous mineralised runs together and the average analysis of the entire run is reported here.

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	some typical examples of such aggregations should be shown in detail.	
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalents values are used for reporting of exploration results.
Relationship between mineralisation widths and intercept lengths	*If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.*	The geometry of mineralisation at Dazzler is generally assumed to be east-west and northwest-southeast at Zero based on mineralisation and outcropping structures at adjacent prospects or targets. Based on these assumptions the drilling orientation at each of the aforementioned prospects is considered optimal. At Rockslider and Banshee, mineralisation trends NW – SE and dips to the SW
Diagrams	*Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	Refer to Figures 2,3 and 4 , in the body of text.
Balanced reporting	*Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	Previous exploration results are the subject of previous reports. The results of all drill holes have been reported. Where holes were not reported with significant intercepts there were no significant results.
Other substantive exploration data	*Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	At Browns Range Project WA, airborne magnetic and radiometric surveys were acquired by Northern Minerals in 2011. Hypersp and ectral data captured during October 2012 by Hyvista Corporation Pty Ltd. Very high resolution "Ultracam" aerial photography was captured by Hyvista during the Hyperspectral survey. Regional reconnaissance including geological mapping, rock chip sampling and also geochemical soil sampling completed over all the prospects reported herein. Ground based radiometric surveys were also completed. Mineral Resource estimates have been completed at the Dazzler and Banshee deposits.
Further work	*The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).*	Follow-up drilling is being planned at the Zero, Banshee and Rockslider prospects.

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	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Refer to Figures 2,3 and 4 in body of text.

Section 3: Estimation and Reporting of Mineral Resources

Not applicable

Section 4: Estimation and Reporting of Ore Reserves

Not applicable