NORTHERN MINERALS

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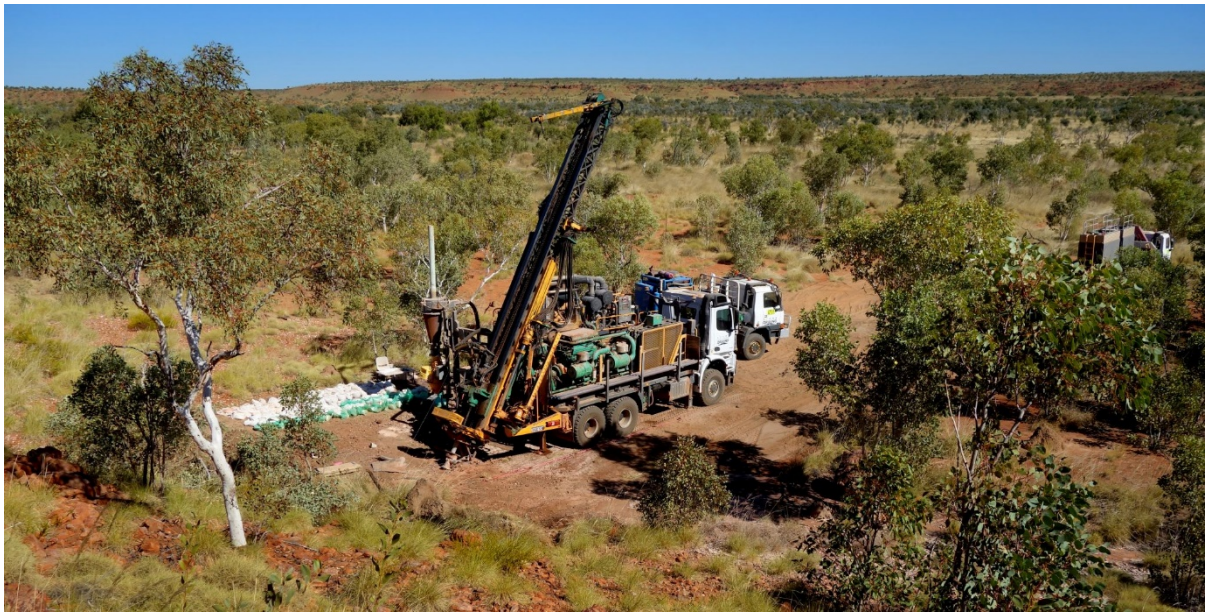
Cyclops, Rockslider and Banshee highlight extensive new exploration targets

Highlights

- Northern Minerals successfully completes 8,700 metres of exploration drilling at Browns Range in July and August 2021;
- Preliminary field pXRF results from Rockslider and Banshee South indicate broad anomalism from these prospects;
- All assays reporting Total Rare Earth Oxide (TREO) are currently awaited however first results are expected in early September 2021;
- Follow up RC drilling (8,000m) due to commence mid-September.



RC Drilling at Rockslider

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Australian heavy rare earths producer Northern Minerals Limited (ASX: NTU) (**the Company**) is pleased to announce that exploration drilling at the Cyclops (Table 3), Rockslider and Banshee (Table 1) prospects has returned highly anomalous portable XRF (pXRF) measurements of yttrium over relatively wide zones. These three prospects are located less than 15km from the Browns Range processing plant (Figure 1).

Reverse Circulation drilling commenced in early July 2021 (ASX Release of 5 July 2021) at Browns Range targeting a second phase of drilling to follow up on drilling completed in late 2020. The main target areas are within the Banshee prospect and along the SE unconformity corridor from Dazzler to Quicksilver. To date, 8,700 metres of drilling has been completed in 120 holes.

Table 1: Rockslider and Banshee South prospects RC drilling – Significant pXRF results

Prospect	Hole ID	Easting (GDA_94)	Northing (GDA_94)	RL (mASL)	Azimuth (Mag)	Dip (Degrees)	Depth (m)		From (m)	To (m)	Interval (m)	Grade pXRF Yttrium (ppm)	Estimated TREO By Correlation (%)
Rockslider	BRR0558	493198	7902354	450	045	-60	120		15	26	11	897	0.14
								and	69	74	5	1,829	0.29
								and	110	114	4	1,060	0.17
Rockslider	BRR0559	493160	7902381	450	045	-60	96		12	23	11	953	0.15
								and	55	61	6	1,030	0.16
								and	72	87	15	1,288	0.21
Rockslider	BRR0560	493179	7902338	450	045	-60	138		16	42	26	1,494	0.24
								and	69	105	36	1,210	0.19
Banshee South	BRBR0129	492335	7903890	450	360	-60	54		3	10	7	1,352	0.22
Banshee South	BRBR0131	492335	7903840	450	360	-60	54		5	10	5	1,368	0.22
Banshee South	BRBR0132	492360	7903890	450	180	-60	54		2	16	14	1,474	0.24
Banshee South	BRBR0134	492385	7903865	450	360	-60	66		50	55	5	2,167	0.35

Notes

1. TREO – Total Rare Earth Oxides
2. Downhole widths only, true width is currently unknown

The measurement of Yttrium using a pXRF is a method that has been used extensively at Browns Range. Historical data demonstrates final assayed Yttrium and TREO has a strong correlation with pXRF (Yttrium) field analysis of RC drill samples at Browns Range. However, the pXRF results that are the subject of this report are preliminary only and the "pXRF Yttrium" and "Estimated TREO by Correlation" is only an indication of the expected order of magnitude for TREO and Yttrium final analysis. The samples analysed, that are the subject of this report, will be submitted for laboratory assay, and some variation from the results presented herein should be expected.

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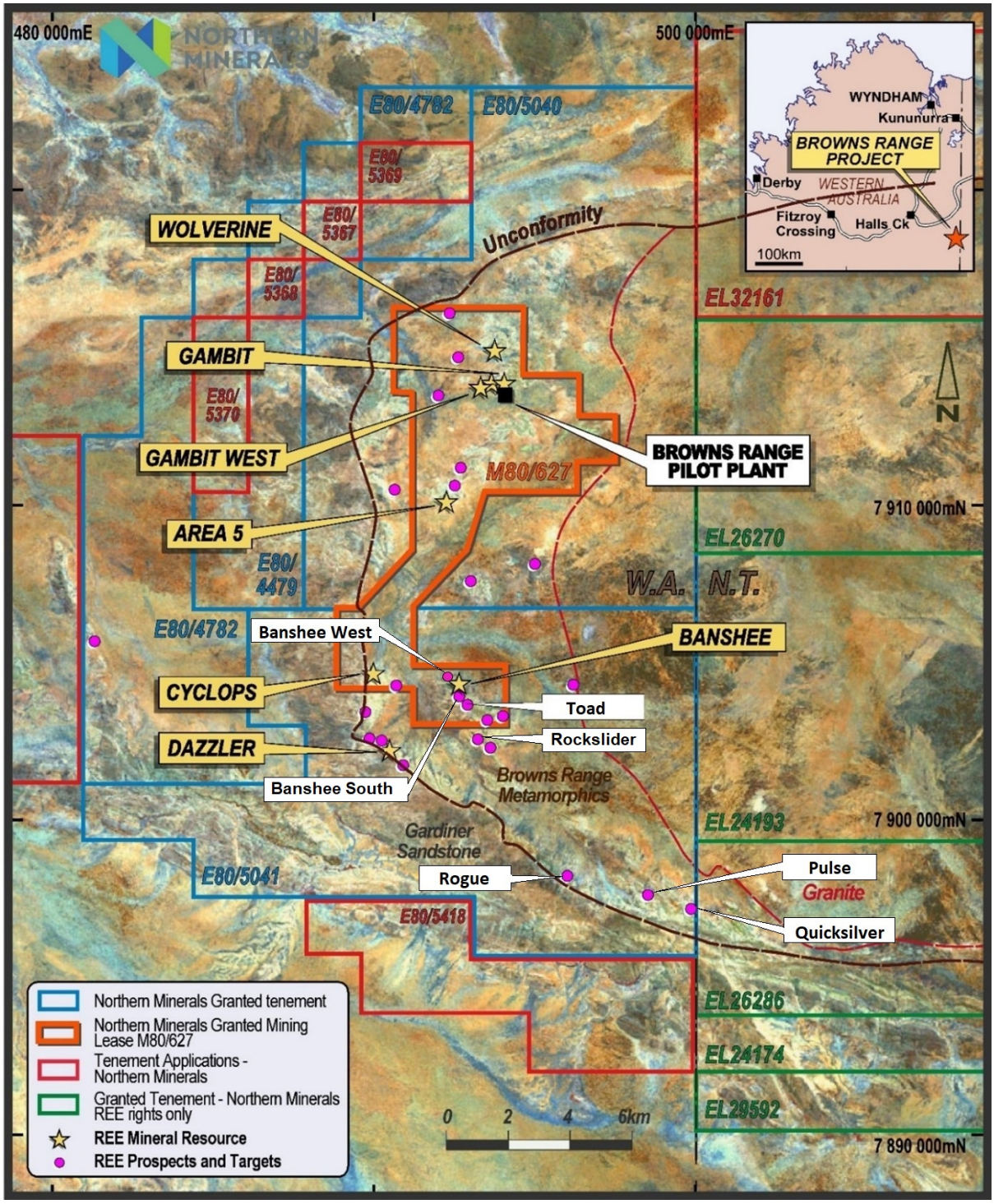

Figure 1: Prospect Location Plan Browns Range

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Banshee South

Preliminary field pXRF data indicates that the Banshee prospect is in fact more extensive than originally thought. Banshee, Banshee West and Banshee South prospects are all part of a much broader mineralized system (Figure 2).

An infill RC drill programme has been planned to test the areas between each of the prospect locations with a view to defining the combined Banshee prospects to an Inferred Mineral Resource under JORC (2012). Drilling is expected to commence around the middle of September 2021.

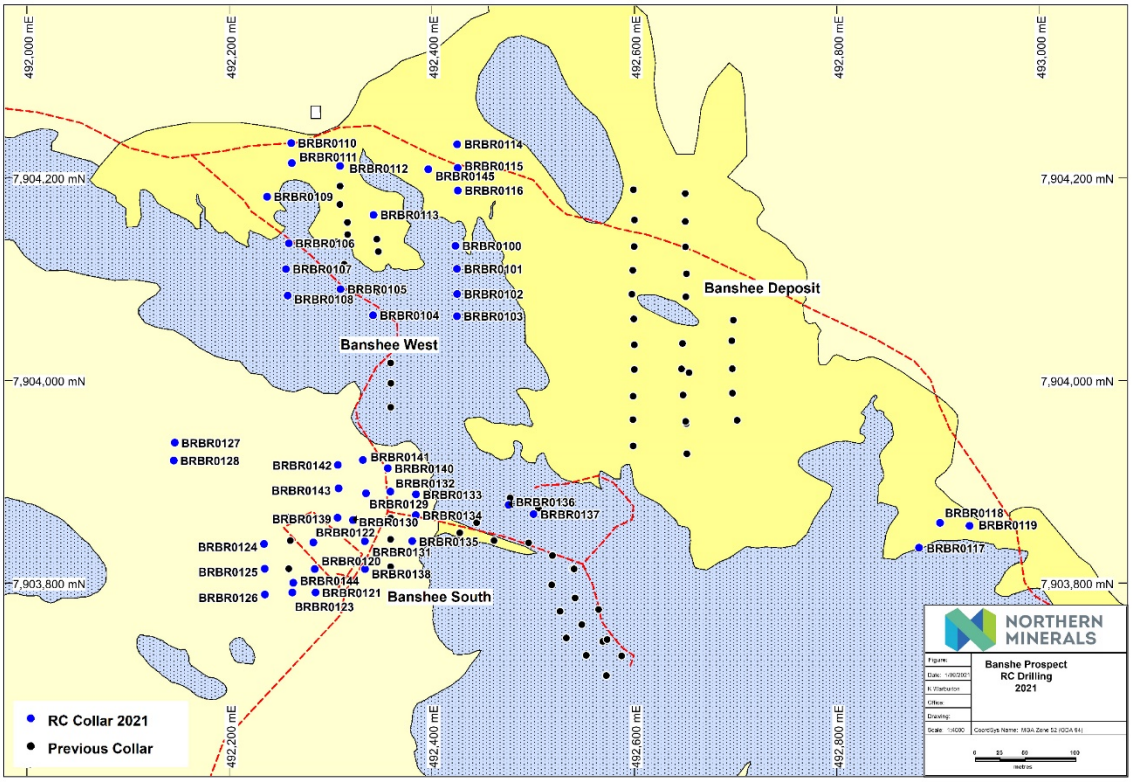

Figure 2: Banshee, Banshee West and Banshee South HREE Prospects (Blue = Arenite, Yellow = Transported Cover)

Rockslider

The Rockslider prospect is located immediately south of the Banshee prospect (Figure 1). This is a new prospect identified from airborne radiometrics. A total of 4 RC holes were drilled for 444 metres (Figure 3). Three of the 4 holes intersected elevated pXRF Yttrium anomalism over extensive down hole intervals. Follow up RC drilling has been planned and will commence upon the completion of the drilling at Banshee.

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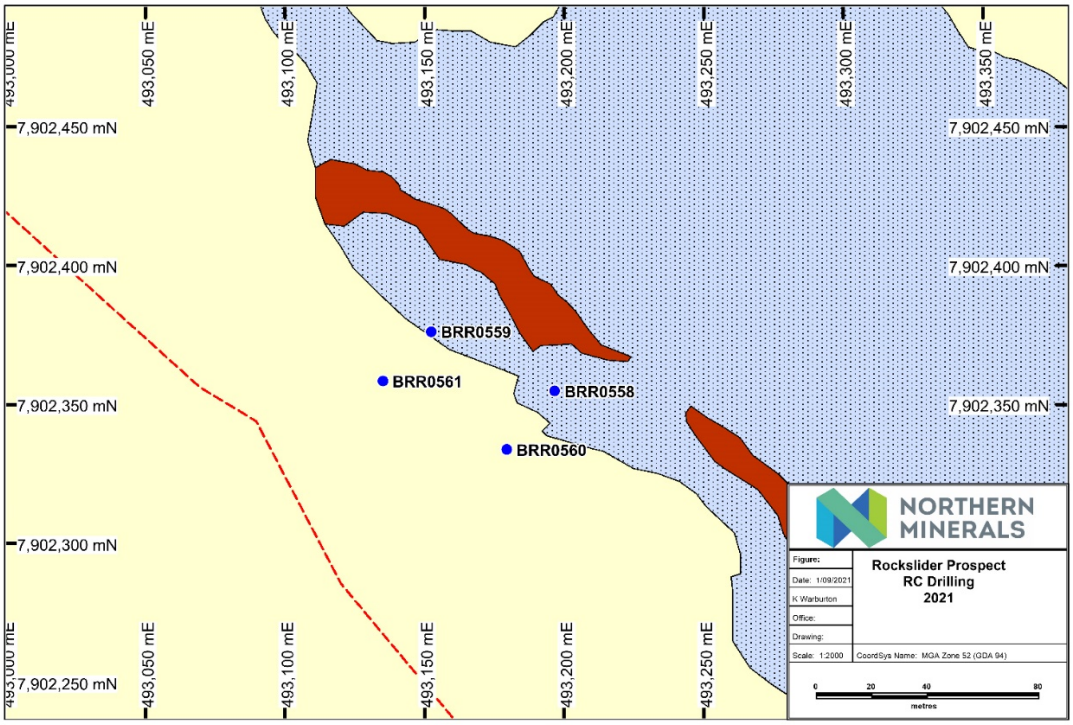

Figure 3: Rockslider Drill Hole Location Plan (Red = Hematite Breccia, Blue = Arenite, Yellow = Transported Cover)

Cyclops Prospect

The Cyclops prospect is located approximately 2km to the west of Banshee. First drill tested in 2012, Cyclops covers an area of 150m x 150m and is defined by 3 sub horizontal, stacked mineralized lenses, each approximately 20m true thickness. HREE mineralization is associated with the mineral xenotime and occurs within a brecciated arenite unit.

A recently completed diamond drill hole BRCD0001 (Table 2) has confirmed a xenotime breccia (Figure 4) and importantly will be able to provide structural measurements to verify the current geological model. Spot field pXRF measurements indicate highly anomalous Yttrium readings (Table 3).

The core will be geologically logged, cut and sampled and sent for assay.

Table 2: Cyclops Diamond Drilling

Prospect	Hole ID	Easting (GDA_94)	Northing (GDA_94)	RL (mASL)	Azimuth (Mag)	Dip (Degrees)	Depth (m)
Cyclops	BRCD0001	489760	7904605	432	180	-60	40

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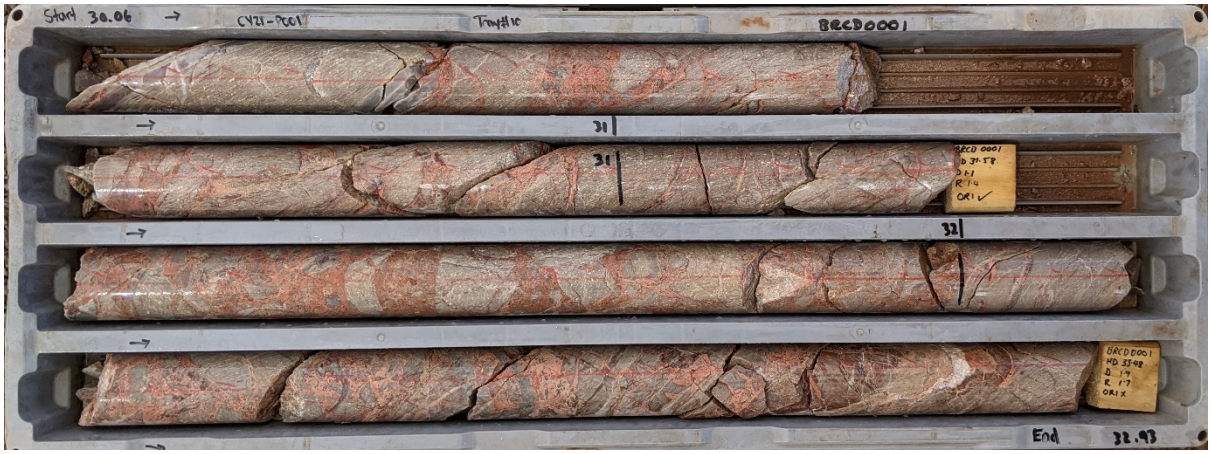

Figure 4: Cyclops Xenotime Breccia 30.06m to 32.93m down hole depth (Pink mineral = Xenotime)

Table 3: Spot field pXRF Yttrium readings and Estimated TREO by Correlation

Hole_Id	Spot Depth	Yttrium by pXRF (ppm)	TREO Estimated By Correlation (%)
BRCD0001	30.5	63,256	10.1
BRCD0001	30.7	60,922	9.7
BRCD0001	31.0	29,886	4.8
BRCD0001	31.4	16,188	2.6
BRCD0001	31.6	6,819	1.1
BRCD0001	32.2	24,953	4
BRCD0001	32.3	20,842	3.3
BRCD0001	32.3	15,705	2.5
BRCD0001	32.7	51,956	8.3
BRCD0001	32.8	22,055	3.5

Use of Portable XRF at Browns Range

Northern Minerals has been using portable XRF (pXRF) successfully at Browns Range since the projects beginning. The current procedure for using field pXRF has been in use since 2014. Using this technique, a reliable indicator of final assay TREO is obtained at the drill rig utilising historical correlations built between pXRF analysis of yttrium and paired assay data for TREO. (TREO = Total Rare Earth Oxides – La2O3, CeO2, Pr6O11, Nd2O3, Sm2O3, Eu2O3, Gd2O3, Tb4O7, Dy2O3, Ho2O3, Er2O3, Tm2O3, Yb2O3, Lu2O3, Y2O3)

Northern Minerals, on balance, expects the pXRF analyses that are the subject of this public statement to be a sufficiently reliable to be fit for purpose for public release as exploration results. In making this public announcement, Northern Minerals has balanced the expectation of reporting in a timely manner with the fact that final assay returns from Browns Range incur significant delay.

It needs to be emphasised, however, that the pXRF results that are the subject of this report are preliminary. Field pXRF analysis is known to suffer many potential sources of error. Deviation from

the historically robust performance of field pXRF as an analytical tool for TREO (via correlation) at Browns Range cannot be ruled out at this stage until confirmatory assays are received.

Figure 5, below, shows all paired data from the Browns Range database available since the start of 2014 – some 3285 paired analyses. The equation used to assess TREO content in the above tables, from raw pXRF analysis, is shown on the chart.

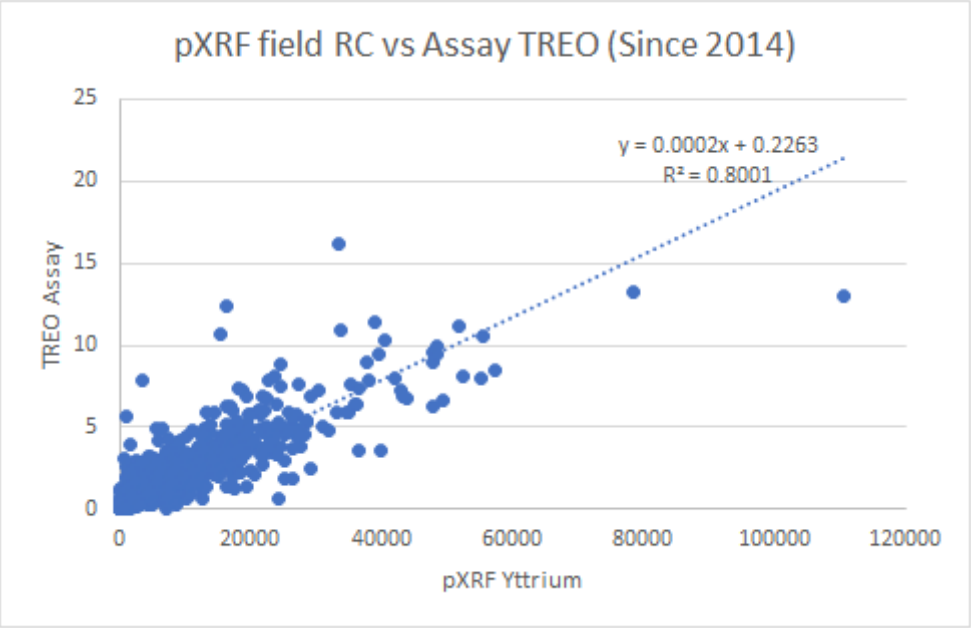

Figure 5: TREO assay versus pXRF Yttrium

Northern Minerals CEO Mark Tory said: *"The field pXRF results are highly encouraging and we eagerly await confirmatory TREO assay results. The Browns Range Dome is an amazingly rich, resource filled area, that holds the key to Northern Minerals' current and future growth."*

"Our overall strategy remains to increase the Mineral Resource and life-of-mine potential at Browns Range to more than 10 years. This will feed into our feasibility study for a potential commercial scale heavy rare earth operation at Browns Range."

Authorised by Mark Tory - CEO

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Compliance Statement

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.

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 pilot plant project in northern Western Australia.

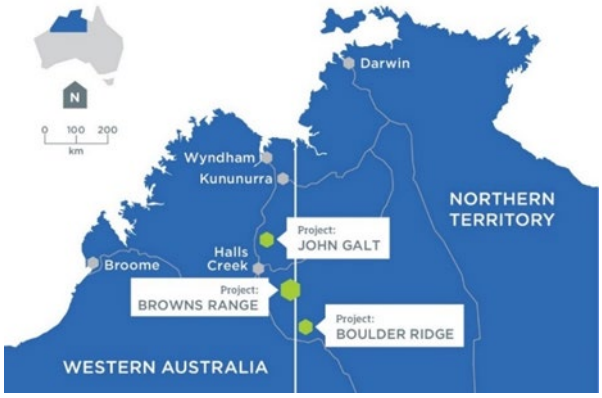
The Company commenced the production of heavy rare earth carbonate in late 2018 as part of pilot assessment of economic and technical feasibility of a larger scale development at Browns Range. An ore sorter was installed and commissioned during 2021 which will also be tested for its economic and technical feasibility at the front end of the pilot plant.

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$213.2m
Issued Shares:	4,846m	Cash (as at 30 June 2021)	A$19.9m

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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 DGPS. Down hole surveys were completed using a gyroscope where possible. RC samples were collected at one metre intervals and were generally subsampled via a rig mounted static cone splitter, apart for resource drilling at Dazzler where subsampling was undertaken using a manual triple tier riffle 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. 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.
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 was with nominal diameters of 5 3/8 inches bit. RC drilling was completed using face sampling hammer. Diamond core drilling was by HQ triple tube.

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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. Diamond core recovery was by direct measurement of the core against the metre marks.
	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. 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.
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, apart from the drilling at Dazzler and Banshee South where they were manually re-split using a triple tier riffle 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.

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Sample preparation	*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.	Subsampling is limited to on rig splitting using a static cone splitter or a manual triple tier riffle splitter (Dazzler and Banshee South only). No QA/QC of the splitting method has been carried out.
	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.	Reference Standards developed from local xenotime mineralisation, and blanks developed from local unmineralized host rock following chemical analysis were inserted in the field. 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.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The RC sample size are considered 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. 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.
	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.

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		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 all 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/DDH 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 – 1.1579, Gd_2O_3 – 1.1526, Ho_2O_3 – 1.1455, La_2O_3 – 1.1728, Lu_2O_3 – 1.1371, Nd_2O_3 – 1.1664, Pr_6O_{11} – 1.2082, Sm_2O_3 – 1.1596, Tb_4O_7 – 1.1421, Tm_2O_3 – 1.1421, Y_2O_3 – 1.2699, Yb_2O_3 – 1.1387

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	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.	Area 5 – 18 drill holes completed on 4 drill fences. Two of the fences were 50m step-outs either side of a drill line from 2011, with individual holes 25m apart. The other two fences were single lines across two geochemical anomalies, with individual holes 25m apart. Regional Exploration target – 7 drill holes completed on 3 drill fences 50m apart, with individual holes 30m to 50m apart. Banshee South – 5 holes drilled along 3 drill fences 25m apart at the north western extent of the main Banshee South trend, with individual holes 20m to 40m apart. A further 6 holes were drilled along 2 fences covering a broad geochemical anomaly located immediately west of main Banshee South trend, with individual holes 25m apart. Banshee West – 8 holes along 2 fences 25m apart with individual holes between 20-40m apart. Iceman- 3 holes along 2 fence 20m apart with individual holes between 20-40m apart. Dazzler – 22 individual holes drilled on 8 lines 25m to 50m apart, infilling and extending previous drilling. Individual holes generally spaced 25m apart, apart from 3 holes stepping out 50m to the north east at the end of their line.

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		Toad – 3 holes completed along 2 drill fences 20m apart, with individual holes 20m apart. A total of 3 drill fences have been completed at the prospect with the other drill results reported in a previous ASX announcement.
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 at all prospects besides Dazzler. Dazzler Mineral Resource estimate to be updated.
	Whether sample compositing has been applied.	Sampling is on 1m intervals. Results have not been physically composited.
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 Area 5 drilling, all holes are drilled -60 degrees to an azimuth of 045 degrees perpendicular to geochemical and/or structural trends, however the trend of mineralisation at the three areas targeted is at this stage unclear. At Banshee South and Banshee West there has been insufficient drilling to confidently determine the geometry and orientation of the mineralisation At Dazzler, mineralisation is interpreted to be a moderately dipping (30-50 degrees) to the southwest, roughly coincident with the contact between the Gardiner Sandstone and the Browns Range Metamorphics stratigraphic units, and striking northwest-southeast. Resource drilling is predominantly conducted at -60 degrees dips drilled to an azimuth of 045 degrees, and as such drill holes intersect the mineralisation at acceptable angles. At Toad, holes were drilled at an inclination of 60 degrees towards an azimuth of 45 degrees. This orientation is perpendicular to an interpreted regional structure, however the trend of the mineralisation at this stage is unclear.
	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.	There is currently insufficient drilling at the recently drilled areas at Area 5, Banshee South, Banshee West, and Toad to confidently interpret the orientation of a potential mineralised zone. Current knowledge however indicates that the orientation of drilling with respect to overall structural and lithological trends is not expected to introduce any sampling bias.

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		There was no significant mineralisation intersected at Iceman or the regional exploration target. For the Dazzler resource drilling, the orientation of drilling with respect to mineralisation 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.*	Prospects drilled are either located on E80/5041 or M80/627. The tenements are all 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 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 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. The Dazzler and Iceman prospects are located on a scarp slope that marks the unconformity between the younger overlying Gardiner Sandstone and the older

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		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. The mineralisation between Dazzler and Iceman is also aligned with a WNW-ESE trend in the magnetic data, marking the edge of the escarpment at the unconformity, indicating a possible structural control on the mineralisation. Further work is required to determine the controls on mineralisation at the Area 5, Banshee South, Banshee West, and Toad prospects with follow-up RC drilling program planned.
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 1 and 2 in the body of the report.
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	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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	and 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 Area 5, Banshee South, Banshee West and Rockslider is currently unclear, but is generally assumed to be east-west or northwest-southeast 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.
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 1 to 3 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, including those with "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. Hyperspectral 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 completed over Banshee South, Banshee West, Central, Dazzler, Iceman and Toad during 2019-2020. Dazzler and Iceman have previously had RC drilling in 2013, 2018 and 2019, and diamond drilling in 2019. RC and diamond drilling were completed at Area 5 between 2011 and 2013, however only a single fence of RC drilling was within the area covered by the recent drilling. Banshee South has previously had RC

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		drilling completed in 2016, 2018 and 2019. Results for the first five RC holes drilled at Toad during 2020 were reported to the ASX on the18th January 2021 Mineral Resource estimates have been previously completed at the Area 5 (2013) and Dazzler (incorporating Iceman). A mineral resource has been estimated for the Banshee deposit (2013), however there is insufficient drilling and/or understanding of the geometry of mineralisation to estimate mineral resources for Banshee South or Banshee West.
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 Area 5, Banshee South, Banshee West, Dazzler and Toad.
	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 1 to 3 in body of text.

Section 3: Estimation and Reporting of Mineral Resources

Not applicable

Section 4: Estimation and Reporting of Ore Reserves

Not applicable