ASX ANNOUNCEMENT
17 April 2018

# Positive high grade exploration results drive drilling campaign

## Highlights

- New rock chip samples return anomalous grades of up to 6.4% TREO from regional sampling;
- Sampling returned multiple samples grading >1% TREO;
- RC drilling planned targeting several prospect areas this quarter;
- Exploration program part of project enhancement plans to extend mine life from 11 years to >20 years.

Australian heavy rare earths developer, Northern Minerals Limited (ASX: NTU) (**the Company**) is pleased to announce further high grade rare earth oxide (REO) geochemical results from the Browns Range Project.

The new samples highlight the prospectivity of the project and surrounding region. All of the samples have been collected from the Western Australian side of the border with much of the prospective area on the Northern Territory side yet to be assessed. See Figure 1 for sample locations.

The results of the sampling are shown below:

| Sample | Prospect | East | North | TREO% | $Dy_2O_3$ ppm | $Tb_4O_7$ ppm | HREO% |
|---|---|---|---|---|---|---|---|
| BRRK400 | Regional | 494233 | 7902517 | 2.68 | 1067 | 196 | 0.43 |
| BRRK401 | Rockslider | 493202 | 7902360 | 6.40 | 5700 | 729 | 0.90 |
| BRRK402 | Regional | 493830 | 7899441 | 0.47 | 426 | 73 | 0.85 |
| BRRK403 | Banshee South | 492577 | 7903722 | 2.66 | 1999 | 243 | 0.79 |
| BRRK404 | Quicksilver | 499851 | 7897210 | 4.02 | 2547 | 425 | 0.63 |
| BRRK405 | Quicksilver | 499781 | 7897261 | 3.34 | 1369 | 197 | 0.43 |
| BRRK406 | Quicksilver | 499766 | 7896632 | 1.72 | 1263 | 202 | 0.72 |

**TREO = Total Rare Earth Oxides** – $La_2O_3$, $CeO_2$, $Pr_6O_{11}$, $Nd_2O_3$, $Sm_2O_3$, $Eu_2O_3$, $Gd_2O_3$, $Tb_4O_7$, $Dy_2O_3$, $Ho_2O_3$, $Er_2O_3$, $Tm_2O_3$, $Yb_2O_3$, $Lu_2O_3$, $Y_2O_3$;
**HREO% = Heavy Rare Earth Oxides** – Total of $Sm_2O_3$, $Eu_2O_3$, $Gd_2O_3$, $Tb_4O_7$, $Dy_2O_3$, $Ho_2O_3$, $Er_2O_3$, $Tm_2O_3$, $Yb_2O_3$, $Lu_2O_3$ and $Y_2O_3$ as a percentage of TREO

The samples are point samples and therefore have a high potential of bias and should not be considered as being representative of the overall mineralised structure or rock type. The samples were selected using a portable XRF (measuring yttrium).

The results are highly anomalous, given the average grade of the Browns Range deposits is 0.63% TREO. The high proportion of Heavy Rare Earths for most of the samples indicates that the dominant rare earth mineral is likely to be xenotime, the same as at Gambit West and Wolverine, the Company's first two open pit mines. The highest-grade sample, BRRK401 (6.4% TREO) is from the Rockslider prospect which is yet to be drilled. **Three of the samples are from a newly discovered prospect** (Quicksilver) near the NT border. This latest discovery highlights the potential of the project area in the NT that is yet to be systematically assessed.

One of the samples, BRRK403, is from the Banshee South prospect. The only drilling completed at Banshee South to date was in December 2016, with 2 exploration holes drilled and the second hole returning **4m @ 1.5% TREO from 5m**. Also, at Banshee South, in 2016, ten 1m rock chip channel samples were taken along an east-west oriented line. Assay results highlighted the easternmost samples with the last **4 metres averaging 1.93% TREO**.

Follow-up drilling at Banshee South and several other prospects is proposed to commence in the June quarter. Drilling will target both brownfields targets along the Wolverine and Gambit structural corridors, where mining has already commenced, as well as greenfields targets including Iceman and Rogue and follow-up drilling at Polaris and Dazzler.

If successful, a program of RC drilling will be undertaken in the September quarter aimed at proving up and increasing the Mineral Resources at Browns Range.

Northern Minerals' Managing Director and CEO, George Bauk, commented "*After a period where we have focussed on the construction of Browns Range, we are pleased to release results that highlight the long term prospectivity of the region.*

*"We have a goal of increasing the potential mine life of Browns Range to greater than 20 years and these results continue to give us confidence that this will be achievable."*

"The Browns Range project is coming to life, with construction near completion, production only months away and exciting exploration results that will be followed up with drilling this quarter."

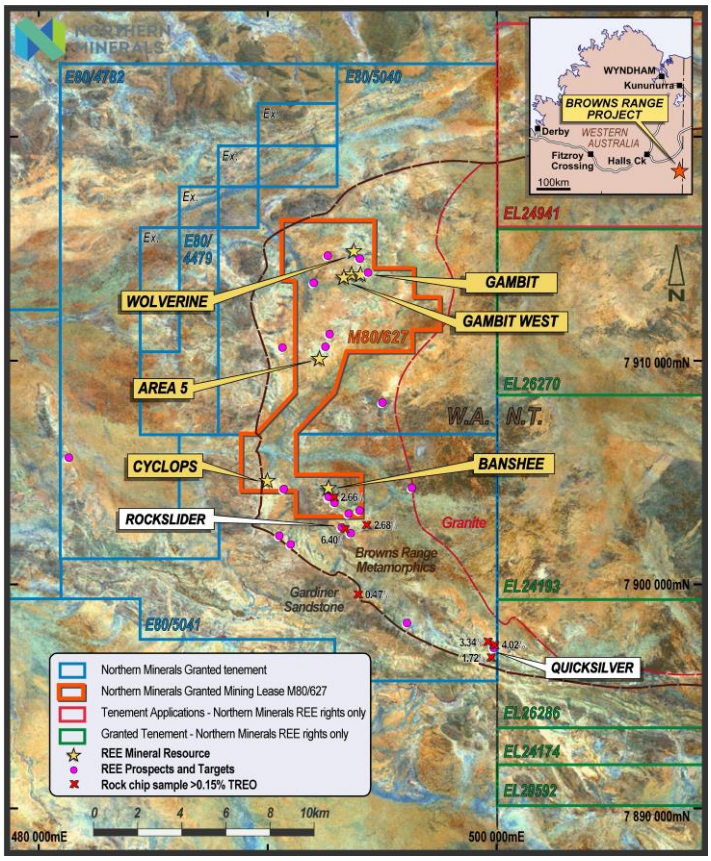


Figure 1: Rock chip samples location plan

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## About Northern Minerals:

Northern Minerals Limited (ASX: NTU; Northern Minerals or the Company) has commenced development of the Browns Range Heavy Rare Earth Pilot Plant Project in northern Western Australia.

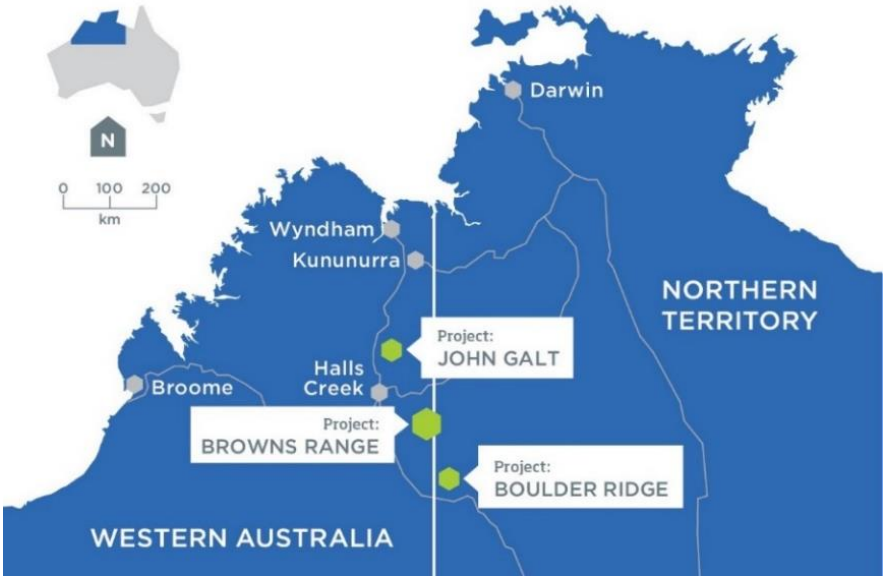
Through the development of its flagship project, the Browns Range Project (the Project), Northern Minerals aims to be the first significant world producer of dysprosium outside of China.

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 from July 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.

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| ASX Code: | NTU | Market Capitalisation: | A$91m |
| Issued Shares: | 1,100m | Cash (as at 31 Dec 2017): | A$8.1m |

## Compliance Statement

The information in this report that relates to Exploration Results at the Banshee South Prospect, Browns Range is extracted from the report entitled "Exploration and geological review following mining demonstrates additional Browns Range HRE potential" dated 27 November 2017 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 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 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.

*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.* | Rock chip samples were taken from in-situ mineralisation using a hand held geo-pick. Typically, samples are in excess of 1kg. The sampling targeted breccias and veins with potential mineralisation, and were selected using a spectrometer and portable XRF measuring yttrium. |
| | *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* | Rock chip samples were taken for an indication of mineralisation only. As point samples they have a high potential of bias and should not be considered as being representative of the overall mineralised structure. Sample points were surveyed using a hand-held GPS.<br>Number of samples collected:7 |
| | *Aspects of the determination of mineralisation that are Material to the Public Report.* | Rock chip samples were taken for an indication of mineralisation only. As point samples they have a high potential of bias and should not be considered as being representative of the overall mineralised structure. The whole sample collected was crushed and pulverised prior to analysis. |
| *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).* | Not applicable – no drilling completed |
| | *Method of recording and assessing core and chip sample recoveries and results assessed.* | Not applicable – no drilling completed |

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| *Drill sample recovery* | *Measures taken to maximise sample recovery and ensure representative nature of the samples.* | Not applicable – no drilling completed |
| | *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.* | Not applicable – no drilling completed |
| *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.* | Not applicable – no drilling completed |
| | *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* | Not applicable – no drilling completed |
| | *The total length and percentage of the relevant intersections logged.* | Not applicable – no drilling completed |
| *Sub-sampling techniques and sample preparation* | *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* | Not applicable – no drilling completed |
| | *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* | The sample preparation procedure follows industry best practice. Samples are oven dried at $120^0$C for 8 hours before processing through a Boyd jaw crusher reducing the sample to 90% passing 3mm. The samples are then pulverised to achieve a grind size of 85% passing 75 micron. |
| | *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* | No field subsampling. |
| | *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.* | No duplicate sampling nor analytical checks were performed for any sampling except the laboratory originated standards and repeats for internal QAQC purposed for geochemical analysis. |
| | *Whether sample sizes are appropriate to the grain size of the material being sampled.* | Sample sizes of greater than 1kg are considered to be appropriate (based on previous sampling at Browns Range) |
| *Quality of assay data and laboratory tests* | *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-Perth 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 |

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| | | solution, suitably diluted, is analysed by ICP Mass Spectroscopy (ICP-MS), for the determination of the REE (La-Lu) plus Y, Th, Ba, Sr, Zr, and U. Al, Fe, Ti, Mg, P, Sc, and S, when analysed, use Inductively Coupled Plasma Optical Emission Spectroscopy (ICP-OES). The composition of the flux and crucible precludes the analysis of Na, Ni, Co, Cr and Mo, so these elements are not determined. These elements when requested use a four acid digest with ICP-OES finish, and this method is also used for K, Mn, V, As, Cu, Pb and Zn when analysed. |
| | *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.* | Northern Minerals has three Niton XRF XLt3-950 GOLDD+ portable XRF analysers (pXRF) which are used in the field. The read time is 30 seconds in "soil mode". Results are considered "fit for purpose" in the context of 'first-pass" measurements. Calibration is at least daily. PXRF readings of Yttrium are used to select the rock chip sample locations. |
| | *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.* | Laboratory QAQC involves the use of internal lab standards using certified reference material, blanks, splits and replicates as part of the in house procedures. |
| *Verification of sampling and assaying* | *The verification of significant intersections by either independent or alternative company personnel.* | Internal verification of significant results by more than one company geologist. |
| | *The use of twinned holes.* | Not Applicable – no drilling completed |
| | *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* | Handwritten data collected in the field was transferred into an excel template and verified by the project geologist. Location data from the GPS unit was downloaded and cross referenced against the data entry to ensure no transcription errors.<br>**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. |
| | *Discuss any adjustment to assay data.* | Adjustments made to the assay data were limited to the conversion of reported elemental assays for a range of elements to the equivalent oxide compound as applicable to rare earth oxides. In all instances the original elemental data has been stored in the database and the equivalent oxide values loaded into appropriately labelled fields |

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| | | identifying them as calculated values. Selected checks on these calculated fields did not identify any issues.<br><br>The oxides were calculated from the element according to the following factors below:<br><br>$CeO_2$ - 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<br><br>Ratios of each oxide to Total Rare Earth Oxides (TREO) are used to determine the percentages of heavy (HRE) and light (LRE) rare earth oxides. The criteria are summarised as:<br><br>Rare earth oxide is the industry accepted form for reporting rare earths. The **TREO** (Total Rare Earth Oxide) is calculated from addition of $La_2O_3$, $CeO_2$, $Pr_6O_{11}$, $Nd_2O_3$, $Sm_2O_3$, $Eu_2O_3$, $Gd_2O_3$, $Tb_4O_7$, $Dy_2O_3$, $Ho_2O_3$, $Er_2O_3$, $Tm_2O_3$, $Yb_2O_3$, $Y_2O_3$, and $Lu_2O_3$. Note that $Y_2O_3$ is included in the TREO calculation.<br><br>Northern Minerals reports HREO% determined by the formula:<br><br>**HREO%** = [$Sm_2O_3$+$Eu_2O_3$+$Gd_2O_3$+$Tb_4O_7$+ $Dy_2O_3$+ $Ho_2O_3$+ $Er_2O_3$+$Tm_2O_3$+$Yb_2O_3$, + $Y_2O_3$,+$Lu_2O_3$] /[$La_2O_3$+$CeO_2$+$Pr_6O_{11}$+$Nd_2O_3$+$Sm_2O_3$+$Eu_2O_3$+$Gd_2O_3$+$Tb_4O_7$+ $Dy_2O_3$+ $Ho_2O_3$+ $Er_2O_3$+$Tm_2O_3$+$Yb_2O_3$ +$Y_2O_3$,+$Lu_2O_3$(TREO) ]**x 100** |
| *Location of data points* | *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.* | Sample sites are recorded using a hand-held GPS with an accuracy of ± 5m. |
| | *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 Lidar survey data collected in 2013 with accuracy considered to be better than 20cm. |
| *Data spacing and distribution* | *Data spacing for reporting of Exploration Results.* | Rock chip sampling was undertaken at random intervals along strike of the mineralised structures. |
| | *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity* | Not Applicable |

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| | *appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* | |
| | *Whether sample compositing has been applied.* | No compositing |
| *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.* | Sampling orientation was appropriate for the early stage exploration. |
| | *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.* | Not applicable – no drilling completed. |
| *Sample security* | *The measures taken to ensure sample security.* | Samples are collected on site under supervision of a responsible geologist and stored in on site prior to transport by company truck or utility to Halls Creek commercial transport yard. The samples were 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.* | Not considered necessary for the early stages of exploration sampling and the style of sampling undertaken. |

*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 targets and prospects are located within Mining Lease M80/627, or adjoining exploration licences E80/5040 and E80/5041. The tenements are 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 by companies before Northern Minerals has been completed at the potential new targets identified. 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.<br><br>All rock chips and targets are located within arkosic units of the Browns Range |

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| | | Metamorphics.<br>Further work is required to determine the controls on mineralisation at the new targets. |
| *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:*<br>*easting and northing of the drill hole collar*<br>*elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*<br>*dip and azimuth of the hole*<br>*down hole length and interception depth*<br>*hole length.* | Not applicable – no drilling completed. |
| *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.* | None applied or considered necessary for the style of sampling undertaken. |
| | *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 some typical examples of such aggregations should be shown in detail.* | Not Applicable |
| | *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.* | Not Applicable |
| *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 Figure 1 in body of text. |

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| *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.* | All rock chip assay results are reported. |
| *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 captured by Hyvista during the Hyperspectral survey.<br>Regional reconnaissance including, rock chip sampling completed over new targets and prospects. |
| *Further work* | *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* | RC or RAB/Aircore drilling is planned to test the Rockslider area At other new targets and prospects, infill geochemical soil sampling is proposed followed by first-pass shallow RAB/Aircore drilling. |
| | *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 Figure 1 in body of text. |

*Section 3: Estimation and Reporting of Mineral Resources*

Not applicable

*Section 4: Estimation and Reporting of Ore Reserves*

Not applicable