



High-grade Manganese identified in Bryah Basin

HIGHLIGHTS

- High-grade (up to ~50% Mn) manganese recorded in rock chip sampling within Bryah Basin Project area;
- Exploration programme to be immediately expanded to target manganese on the 718km² Bryah Basin Project;
- Manganese is one of a group of metals that manufacturers are using in production of next generation battery and power storage applications;
- Benchmark prices for Manganese ore up over 50% in the last six months, highlighting strong demand for this emerging battery metal;
- The Bryah Basin has a history of high-grade (+40% Mn) manganese production, including from the Mudderwearie Manganese Mine which is within the Company's landholding;
- Numerous untested manganese anomalies identified at surface from satellite imagery;
- Focus of exploration will be on finding economic resources amenable to short-term production within project area;
- VTEM survey recently completed over high priority manganese areas to assist in exploration and target generation;
- Manganese opportunity complements the Company's active Cu-Au exploration strategy in a world class copper - gold exploration region.

Bryah Resources Limited ("Bryah" or "the Company") is pleased to announce the expansion of its exploration programme to include manganese on its Bryah Basin Project, which is located in central Western Australia (see Figure 1).

The Company has recently collected five manganese samples from two prospective locations within its project area which were submitted for laboratory analysis.

The best assay result recorded was 49.5% Mn in a rock chip sample collected from Exploration Licence E52/3237. Interestingly, this sample was collected from a hilltop covered with outcropping manganese (see Figure 2 and Plates 1 & 2).

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Shares on issue: 56,350,120

Latest Share Price: \$0.12

Market Capitalisation: \$6.8M

Projects

Bryah Basin – Copper, Gold,
Manganese

Gabanintha – Gold, Copper

bryah.com.au

With a history of manganese production in the Bryah Basin, the Company has decided to broaden its exploration focus to include manganese targets which may be amenable to small-medium scale mining and could be brought into production in a short time frame.

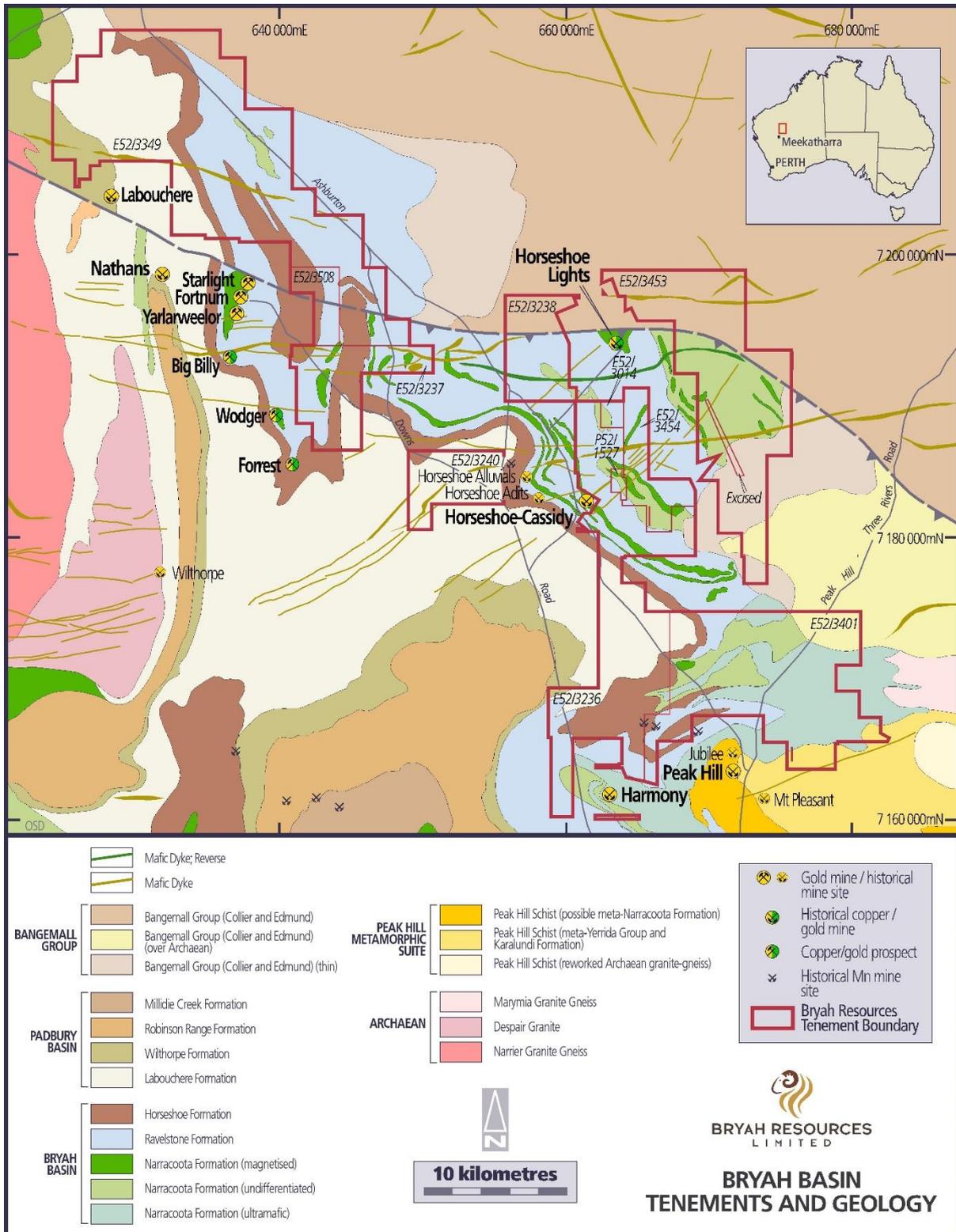


Figure 1 – Bryah Basin Tenements and Regional Geology Map

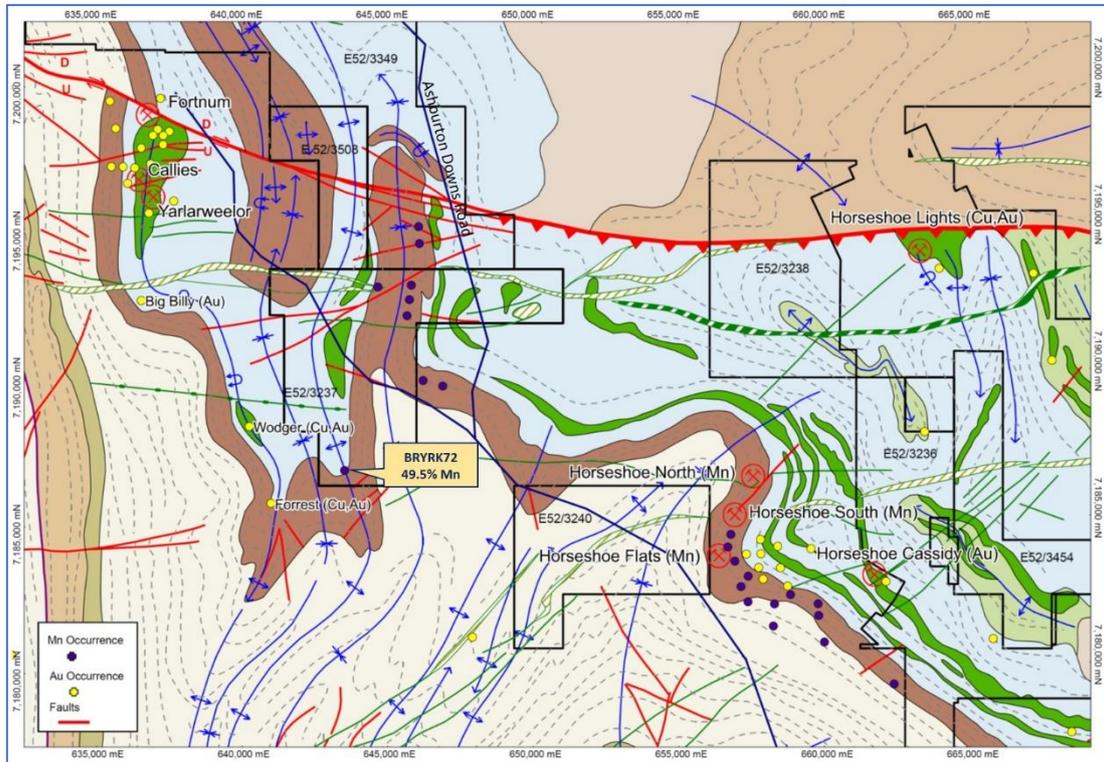


Figure 2 – Geology Map showing location of Northern Manganese Occurrences (refer to legend in Fig 1).



Plate 1 – Manganiferous hilltop outcrop – site of 49.5% Mn sample



Plate 2 – Manganese sample BRYRK072 – assayed 49.5% Mn

Manganese - an Emerging Energy Metal

Manganese is fast becoming an important energy metal which, in part, is why prices for manganese ore have risen by over 50% in the last 6 months. Manganese, along with cobalt, is one of a group of metals that manufacturers are using in production of next generation battery and power storage applications.

Historically, manganese has been used in steel production, where about 90% of all manganese supplies are consumed. The balance has been traditionally used in fertilizers, water treatment and other markets. However, the demand for manganese is now increasing as applications, such as Electric Vehicle batteries draw on global supplies.

Manganese dioxide is used in regular dry cell batteries and the metal is also the main ingredient of lithium-manganese-oxide batteries. These batteries are notable for their high thermal stability and are safer than some types of lithium-ion batteries.

There are also lithium-nickel-manganese-cobalt-oxide (NMC) batteries using about 19% manganese and 20% cobalt. These are commonly used in powertrains for vehicles and power tools.

Global demand for manganese has jumped from around 11 million metric tonnes (MMT) in 2009 to 18 MMT in 2016 and it is expected to grow to just under 20 MMT this year¹.

Bryah Basin Manganese Potential

The Bryah Basin is well known for hosting a number of historical manganese mining areas. The majority of mining activities are known to have occurred during the period 1948 – 1967 with manganese production grades above 40% Mn reported.

More recently, in May 2008, ASX listed Mineral Resources Limited (ASX:MIN) commenced manganese production centred on the Horseshoe South Mine (see Figure 2), using a two stage crushing and screening plant. Monthly production was targeted at 20,000 tonnes per month². These operations ran for 2-3 years.

In recent months, an unlisted operator has commenced manganese mining operations at the nearby Horseshoe Flats Mine, which is also adjacent to one of Bryah's tenements.

One of the historical mining areas, which is located within the Company's tenements, is the Mudderwearie Mine which is shown in Figure 3. In addition to the Mudderwearie Mine workings, there are at least six other areas of manganese anomalism nearby which have been identified from satellite imagery.

At the Mudderwearie Mine there are open excavated areas with some stockpiled material on site (see Plates 3, 4 and 5). During a recent site visit by the Company's management, 4 samples were collected from stockpile material and in-situ rock. The 2 stockpile samples returned assays of 16.3% Mn and 20.0% Mn whilst the 2 in-situ samples returned assays of 35.6% Mn and 27.2% Mn respectively. Details of these samples are shown in Table 1.

The nearby historic Ravelstone manganese mine, which is located just to the east of Bryah's tenement (see Figure 3), has reported production between 1956-1964 of 76,237 tonnes at 48.45% Mn for 36,938 tonnes of contained metal³. Although the Ravelstone mine is not located on the Company's tenements, it may give an indication concerning the style and potential grade of manganese mineralisation in the Mudderwearie area.

Historical production information from the Mudderwearie Mine is limited. No records of production grades have been found however it is expected to have been about 40% Mn.

At least 7 manganese occurrences have been identified from satellite imagery in the northern tenement area (see Figure 2) with at least 7 anomalies identified in the southern tenement area as well (see Figure 3). No historical information on sampling of these anomalous areas has been found to date. The 49.5% Mn sample was collected from one of these anomalous areas which is a topographical feature that has the characteristic manganese capping found elsewhere in the Bryah Basin (see Plate 1).

Both the northern and southern anomalous areas have been covered by the Company's recently completed VTEM-Max Electromagnetic (EM) geophysical survey. The VTEM-Max system is a useful exploration tool for identifying buried manganese deposits, so the Company looks forward to seeing the final results of the EM survey over these particular areas.

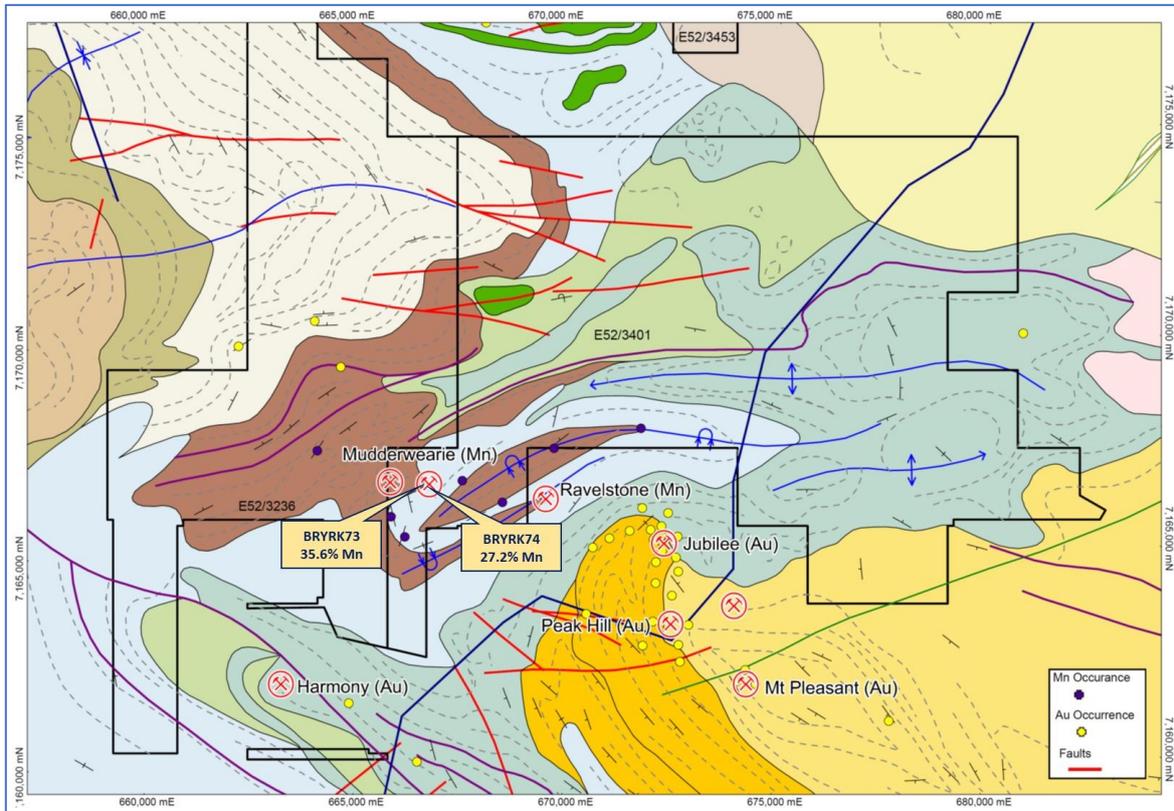


Figure 3 - Geology Map showing location of Southern Manganese Occurrences including Mudderwearie Manganese Mine (refer to legend in Fig 1).



Plate 3 - Mudderwearie mining area with remnant manganese stockpiles



Plate 4 - Exploration Manager Rohan Williams sampling remnant manganese stockpiles at Mudderwearie.



Plate 5 - Remnant stockpiles at Mudderwearie Manganese Mine.

Exploration Strategy – matching excellent ground with technical expertise

The potential opportunity for the Company in respect to manganese is to find small-medium size +30% manganese orebodies which are at, or close to the surface. Such deposits are expected to be amenable to open pit mining and simple beneficiation (crushing, screening and Heavy Media Separation) methods. The aim of any future production is to produce a finished product which is of benchmark quality for seaborne traded manganese ore.

To assist the Company in quickly evaluating the manganese potential of the region it has engaged veteran consultant geologist Brian Davis. Mr Davis has significant direct manganese experience over several years, having worked on earlier manganese exploration undertaken by Tuart Resources Limited and Peak Hill Manganese Pty Ltd (PHMPL) in the Bryah Basin area. Mr Davis was responsible for identifying numerous manganese anomalies from satellite imagery (Landsat) and aerial photography in 2001⁴. Only limited on-ground exploration of these anomalies has been undertaken since then. Mr Davis was also involved in the Horseshoe South Manganese mine when two export shipments grading 32-34% Mn and totalling 39,000 tonnes were dispatched between 2003 and 2004 by PHMPL.

The expansion of the exploration team and focus to include manganese does not detract from, but rather complements, the Company's active copper-gold exploration planned for the Bryah Basin.

The Company considers there is significant potential for successful manganese exploration within its tenement package. This strategy aims to identify potential near-term production opportunities.

For Further Information, please contact

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References

1. Manganese: Critical Metal for Battery and Electric Vehicle Markets, Lithium-News.com, Dec 2017.
2. Mineral Resources Limited, Annual Reports 2008.
3. Geology & Mineralisation of the Palaeoproterozoic Bryah & Padbury Basins, Western Australia. GSWA Report 59, 2000, Pirajno, F, et al.
4. Independent Geologist's Report for the properties of Peak Hill Manganese Pty Ltd (unpublished), Brian Davis, November 2006.

About Bryah Resources Limited

In October 2017 Bryah Resources Limited raised \$5 Million and was admitted to the official list on the Australian Securities Exchange (ASX). The Company is a copper-gold-manganese focused explorer with 2 projects located in central Western Australia, being the 718 km² Bryah Basin Project and the 202km² Gabanintha Project.

The Bryah Basin is host to the high-grade copper-gold mines at DeGrussa, discovered by Sandfire Resources NL in 2009, and at Horseshoe Lights, which was mined up until 1994. The Bryah Basin also has several historical and current manganese mines.

Bryah Resources Limited's exploration strategy is:

- to apply the best and latest exploration methods to evaluate the ground;*
- to use high resolution geophysics to identify deeper structures and potentially mineralised zones;*
- to drill test targets below the depth of previous drilling, and*
- to apply maximum funds on exploration activities.*

At Gabanintha, Bryah holds the rights to all minerals except Vanadium/Uranium/Cobalt/Chromium/Titanium/Lithium/Tantalum/Manganese & Iron Ore (Excluded Minerals). Australian Vanadium Limited retains 100% rights in the Excluded Minerals on the Gabanintha Project.

Competent Persons Statement

The information in this announcement that relates to Exploration Results is based on information compiled by Mr Rohan Williams, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Williams is an employee of Bryah Resources Limited ("the Company"). Rohan Williams has sufficient experience which is 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'. Rohan Williams consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

Forward Looking Statements

This report may contain certain "forward-looking statements" which may not have been based solely on historical facts, but rather may be based on the Company's current expectations about future events and results. Where the Company expresses or implies an expectation or belief as to future events or results, such expectation or belief is expressed in good faith and believed to have a reasonable basis. However, forward looking statements are subject to risks, uncertainties, assumptions and other factors which could cause actual results to differ materially from future results expressed, projected or implied by such forward-looking statements. Readers should not place undue reliance on forward looking information. The Company does not undertake any obligation to release publicly any revisions to any "forward looking statement" to reflect events or circumstances after the date of this report, or to reflect the occurrence of unanticipated events, except as may be required under applicable securities laws.

Table 1 – Bryah Basin Project Manganese Samples - Laboratory Results

Sample ID	Northing mN	Easting mE	Project Location	Description	Mn Grade %
BRYRK072	7186825	643353	E52/3237	Rock outcrop sample	49.5
BRYRK073	7166790	666686	Mudderwearie Mine	Insitu Rock sample	35.6
BRYRK074	7166814	666630	Mudderwearie Mine	Insitu Rock sample	27.2
BRYRK075	7166897	666650	Mudderwearie Mine	Stockpile material	20.0
BRYRK076	7166955	666706	Mudderwearie Mine	Stockpile material	16.3

Manganese Exploration and Sampling

JORC Code, 2012 Edition – Table 1 Exploration Results

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> 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. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information. 	<ul style="list-style-type: none"> Rock samples were collected with a sample size of at least 0.6 kg from recorded locations. Stockpile samples were collected with a sample size of approximately 3kg using channel sampling techniques or random grab samples across the stockpile face.
Drilling techniques	<ul style="list-style-type: none"> 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). 	<ul style="list-style-type: none"> No drilling undertaken in this programme
Drill sample recovery	<ul style="list-style-type: none"> Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. 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. 	<ul style="list-style-type: none"> No drilling undertaken in this programme
Logging	<ul style="list-style-type: none"> 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. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged. 	<ul style="list-style-type: none"> No drilling undertaken in this programme
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. 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. Whether sample sizes are appropriate to the grain size of the material being sampled. 	<ul style="list-style-type: none"> The sample sizes are considered appropriate to correctly represent the surface and stockpile manganese mineralisation.

Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. 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. 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. 	<ul style="list-style-type: none"> Duplicates and samples containing standards were included in the analyses.
Verification of sampling and assaying	<ul style="list-style-type: none"> The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	<ul style="list-style-type: none"> No drilling undertaken in this programme
Location of data points	<ul style="list-style-type: none"> 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. Specification of the grid system used. Quality and adequacy of topographic control. 	<ul style="list-style-type: none"> All sample locations were initially located by the Field Geologist using a conventional hand-held GPS. The grid system for the Bryah Project is MGA_GDA94 Zone 50.
Data spacing and distribution	<ul style="list-style-type: none"> Data spacing for reporting of Exploration Results. 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. Whether sample compositing has been applied. 	<ul style="list-style-type: none"> As this programme was a reconnaissance programme the sample results are indicative in nature and are not necessarily representative of the surrounding geology. Outcrop samples were not composited, but each stockpile sample was aggregated from multiple parts of the stockpile.
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. 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. 	<ul style="list-style-type: none"> No drilling undertaken in this programme, so the relationship of samples collected to geological structures is not known.
Sample security	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	<ul style="list-style-type: none"> The samples collected were placed in calico bags and transported to the relevant Perth laboratory by courier. Sample security was not considered a significant risk.
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> The Company database has been compiled from primary data by independent database consultants and was based on original assay data and historical database compilations. A regular review of the data and sampling techniques is carried out internally.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> 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 security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area. 	<ul style="list-style-type: none"> The relevant tenements are 100% owned by Bryah Resources Limited At the time of reporting, there are no known impediments to obtaining a licence to operate in the area and the tenements are in good standing.
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> The manganese deposits in the region were discovered during the gold rush period between 1897 and 1911 however were of little interest to explorers at the time. Mining operations between 1948 and 1967 received the focus of early exploration. Manganese exploration conducted by BHP Limited, King Mining Corporation Ltd, Valiant Consolidated Ltd and various others since the 1960's was concentrated mainly around the historic pits at Elsa Group, Millidie, Horseshoe South, Mudderwearie and Ravelstone. Tuart Resources Limited and Peak Hill Manganese Pty Ltd undertook regional exploration over a large portion of the Bryah and Padbury Basins in the period after 2000, identifying numerous manganese anomalies from satellite imagery and aerial photography. Only limited on-ground exploration of many of these anomalies was undertaken.
<i>Geology</i>	<ul style="list-style-type: none"> Deposit type, geological setting and style of mineralisation. 	<ul style="list-style-type: none"> These manganese occurrences are within the Lower Proterozoic Bryah and Padbury Basins. Manganese deposits are a product of prolonged weathering and oxidation of sedimentary rocks and chemical concentration and re-deposition of manganese within ancient drainage systems. Most of the manganese deposits are remnants of former drainage palaeochannels. Although detailed surveys have not been completed, the location of most manganese deposits appears to be at about the elevation of the former palaeosurface. These deposits are now left as hilltop mesas or cappings (inverted relief).

Criteria	JORC Code explanation	Commentary
<i>Drill hole Information</i>	<ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> ○ 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. • If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case. 	<ul style="list-style-type: none"> • Refer to Table 1 of this ASX Announcement for details of sample locations, etc.
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> • In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated. • 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. • The assumptions used for any reporting of metal equivalent values should be clearly stated. 	<ul style="list-style-type: none"> • No high-grade cuts have been applied to the reporting of exploration results. • No metal equivalent values have been used.
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> • These relationships are particularly important in the reporting of Exploration Results. • If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. • If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known'). 	<ul style="list-style-type: none"> • As this programme was a limited programme of reconnaissance sampling no relationships can be established.
<i>Diagrams</i>	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • See attached figures within this announcement.
<i>Balanced reporting</i>	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • All results are reported without any cut-off grades.
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • No other exploration data available.
<i>Further work</i>	<ul style="list-style-type: none"> • The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out 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. 	<ul style="list-style-type: none"> • Additional sampling has been planned by the Company but not undertaken to date.