

Bryah Resources Tops 50% Manganese

HIGHLIGHTS

- Further high-grade manganese recorded in latest round of rock chip sampling at 2 sites within Bryah Basin Project area:-
 - Black Hill Prospect 52.12% Mn assay recorded, and
 - Mudderwearie Mine 50.88% and 47.68% Mn assays recorded.
- Further rock chip sample results due in the next 2 weeks.
- Drilling of Black Hill Prospect and historic Mudderwearie Mine to commence following necessary site clearances.
- VTEM survey results over manganese target areas due in late May.
- Manganese mining presently occurring on ground adjoining Bryah tenement package. The Bryah Basin has a history of high-grade (+40% Mn) manganese production.
- Company's strategy includes exploring for shallow high-grade manganese resources which may provide an early cash flow.

Bryah Resources Limited ("Bryah" or "the Company") is pleased to provide an update on its manganese exploration within its Bryah Basin Project in central Western Australia.

Following a site visit in March 2018 by Company personnel, laboratory assays from 10 rock chip samples collected from two locations at Black Hill and Mudderwearie (See Figure 1) have been received.

The best assay result was 52.12% Mn recorded from Black Hill, a manganese capped mesa where a previous sample recorded 49.5% Mn (see ASX announcement dated 8 March 2018).

At the historical Mudderwearie Manganese mine 2 samples assaying 50.88% and 47.68% Mn were collected from the mine's shallow open pit.

Details of all the sample assay results are shown in Table 1 and in Figures 2 (Black Hill) and 3 (Mudderwearie).

The results of the assays confirm the presence of high grade manganese in-situ at both locations. The Company intends to drill test these locations following receipt of the necessary site clearances.

Address

Level 1, 85 Havelock Street West Perth WA 6005 Tel: +61 8 9321 0001 Email: info@bryah.com.au ASX Code: BYH ABN: 59 616 795 245 Shares on issue: 56,350,120 Latest Share Price: \$0.10 Market Capitalisation: \$5.6M

Projects

Bryah Basin – Copper, Gold, Manganese Gabanintha – Gold, Copper bryah.com.au



The Company's strategy now includes exploration for shallow high-grade manganese resources which may be exploited to provide an early cash flow.



Figure 1 – Bryah Basin Tenements and Regional Geology Map





Figure 2 – Satellite imagery showing Black Hill Prospect and sample locations



Figure 3 – Satellite imagery showing West and East Mudderwearie Mines and sample locations



Black Hill Prospect

The Black Hill prospect is dominated by a manganese capped mesa (see Plate 1).

The top of the mesa is approximately 75 metres long, 25-30 metres wide and stands approximately 20 metres above the surrounding terrain. There is evidence of manganiferous scree on the steep slopes of the mesa as well as on the surrounding flat terrain (see Plate 2). The 52.12% Mn rock chip sample (BRYRK097) was collected from in-situ rock near where the Plate 1 photograph was taken.



Plate 1 – Manganese capped mesa at Black Hill

The topmost layer of the mesa demonstrates botryoidal and reniform shapes in the caprock where manganese has re-precipitated around nodules (see Plates 3 & 4).

A further 5 rock chip samples have been collected from the Black Hill Prospect and the laboratory assays for these should be available within the next two weeks.

At least 6 other manganese occurrences have been identified from satellite imagery in the Company's northern tenement area of E52/3237 and E52/3349 (see Figure 4). These sites are all located within the Horseshoe Formation and will be reviewed in detail by ground reconnaissance and geological mapping in the coming months.





Plate 2 – Manganiferous cap and scree slope of the Black Hill mesa shown in Plate 1



Plate 3 – Botryoidal and reniform manganese cap of the Black Hill mesa shown in Plate 1





Plate 4 – Exploration Manager Rohan Williams on top of the Black Hill Prospect



Figure 4 – Geology Map showing location of Northern Manganese Occurrences (refer to geology legend in Fig 1).



Mudderwearie Mine

At the Mudderwearie Mine there are two open excavated areas with some stockpiled material on site (see Figure 3).

The West Mudderwearie mine consists of a shallow open pit where there is evidence of remnant manganese mineralisation in the base of the pit (see Plate 5). The samples assaying 50.88% and 47.68% Mn were collected from this location.



Plate 5 – West Mudderwearie Mine with evidence of manganese mineralisation in the far end of the pit.

Historical production information from the Mudderwearie Mine is limited and no records of production grades have been found.

The nearby historic Ravelstone manganese mine, which is located just to the east of Bryah's tenement (see Figure 5), has reported production between 1956-1964 of 76,237 tonnes at 48.45% Mn for 36,938 tonnes of contained metal¹. 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.

At least 7 manganese occurrences have been identified from satellite imagery in the southern tenement area within or close to the Horseshoe Formation (see Figure 5). Although there is



evidence of some previous drilling being completed in the area, no historical information on exploration of these anomalous areas has been found to date.

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. Such results are due in late May 2018.



Figure 5 - Geology Map showing location of Southern Manganese Occurrences including historic Mudderwearie Manganese Mines (refer to legend in Fig 1).

Manganese Potential of Bryah Basin

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.

Manganese mining is presently occurring on ground adjoining the Company's tenements at the Horseshoe Flats mine owned by Horseshoe Manganese Pty Ltd (see Figure 4). The Horseshoe Flats deposit was discovered in 2010 by shallow drilling. The deposit is described as a talus-style deposit which lies at the foot of the Horseshoe Range under shallow transported cover.



Consulting Geologist, Mr Brian Davis who has previous exploration experience in the Bryah Basin, particularly through his involvement with the Horseshoe South Manganese mine, has commented that exploration to date for manganese talus-style deposits such as the Horseshoe Flats deposit has been limited. Within the Company's tenements there are several kilometres of the stratigraphic horizon which has the potential to host similarly concealed talus-style mineralisation.

The Company considers that the latest mapping and sampling results confirm that there is significant potential for successful manganese exploration within its tenement package.

Upcoming exploration activities aim to identify potential near-term production opportunities so that the Company may capitalise on the prevailing strong manganese prices.

For Further Information, please contact

Neil Marston Managing Director

Tel: +61 9321 0001

References

1. Geology & Mineralisation of the Palaeoproterozoic Bryah & Padbury Basins, Western Australia. GSWA Report 59, 2000, Pirajno, F, et al.

Table 1 – Bryah Basin Project Manganese Samples - Laboratory Results

Sample ID	Northing mN	Easting mE	Prospect Location	Description	Mn %	Fe2O3 %
BRYRK083	7166807	666663	Mudderwearie	Stockpile material	39.37	18.62
BRYRK084	7166733	666732	Mudderwearie	In situ rock	29.56	24.75
BRYRK085	7166905	665681	Mudderwearie	Scree material in pit	50.88	6.34
BRYRK086	7166941	665701	Mudderwearie	In situ rock from pit	47.68	7.34
BRYRK087	7186838	643351	Black Hill	Botryoidal in situ rock	34.94	26.6
BRYRK088	7186833	643354	Black Hill	Lower grade Mn/ Fe rich	6.91	66.53
BRYRK094	7186828	643369	Black Hill	Pisolitic in situ rock	10.58	56.37
BRYRK095	7186772	643392	Black Hill	Base of rock outcrop	18.88	55.01
BRYRK096	7186781	643393	Black Hill	Base of rock outcrop	29.38	36.4
BRYRK097	7186670	643417	Black Hill	In situ rock	52.12	4.59



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.



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	 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. 	 Rock samples were collected with a sample size of at least 1.2kg 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	• 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).	No drilling undertaken in this programme
Drill sample recovery	 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. 	No drilling undertaken in this programme
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. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged. 	No drilling undertaken in this programme
Sub-sampling techniques and sample preparation	 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. 	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	 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. 	 Laboratory checks and samples containing standards were included in the analyses.
Verification of sampling and assaying	 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. 	No drilling undertaken in this programme
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. Specification of the grid system used. Quality and adequacy of topographic control. 	 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	 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. 	 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	 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. 	No drilling undertaken in this programme, so the relationship of samples collected to geological structures is not known.
Sample security	The measures taken to ensure sample security.	 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	The results of any audits or reviews of sampling techniques and data.	 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
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 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 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.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	 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.
Geology	Deposit type, geological setting and style of mineralisation.	 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
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. 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. 	Refer to Table 1 of this ASX Announcement for details of sample locations, etc.
Data aggregation methods	 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. 	 No high-grade cuts have been applied to the reporting of exploration results. No metal equivalent values have been used.
Relationship between mineralisation widths and intercept lengths	 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'). 	 As this programme was a limited programme of reconnaissance sampling no relationships can be established.
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.	See attached figures within this announcement.
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 results are reported without any cut-off grades.
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.	No other exploration data available.
Further work	 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. 	Additional sampling has been planned by the Company but not undertaken to date.