

# **Bryah Discovers High-Grade Manganese Zone**

Grades support near-term direct shipping production strategy.

Highlights:

- Potential direct shipping grade (>30% Mn) manganese intersected in latest RC drilling
- New shallow high-grade manganese discovery at Brumby Creek Prospect. Best results:
  - BRRC089 12 metres (11-23m) @ 24.7% Mn, and 10 metres (29-39m) @ 31.1% Mn, including 3 metres @ 41.0% Mn from 34 m
  - > BRRC090 17 metres (7-24m) @ 26.5% Mn, including 3 metres @ 36.6% Mn from 15 m
  - > BRRC087 **15 metres (8-23m) @ 26.1% Mn**, including **3 metres @ 37.3% Mn** from 16 m
- Manganese mineralisation at Brumby Creek is open down dip and along strike
- Black Hill intersects direct shipping grades:
  - > BHRC005 4 metres @ 32.7% Mn, including 1 m @ 41.9% Mn from surface
  - > BHRC006 6 metres (1-7m) @ 30.0 % Mn, including 1 m @ 47.9% Mn from 4 m
  - > BHRC007 3 metres (1-4m) @ 33.3 % Mn, including 1 m @ 44.6% Mn from 2 m
  - > BHRC009 2 metres @ 38.8 % Mn, including 1 m @ 43.2% Mn from surface
- Drilling program was **fully funded by OM (Manganese) Limited** under Bryah Basin Joint Venture Agreement, with Bryah managing the project
- Cobalt values of up to 1,320ppm reported, with consistently anomalous association with Manganese mineralisation requiring further investigations.
- Drilling results from Mount Labouchere Prospect and Horseshoe South Mine expected next week.
- **Fast track strategy for production** leveraging off existing mining lease and new higher-grade prospects.

Bryah Resources Limited ("Bryah" or "the Company") is pleased to advise the first set of results of its recent reverse circulation (RC) drilling program at its Bryah Basin project (90% Bryah/10% OM (Manganese) Limited ("OMM")), which is located approximately 150 km north of the town of Meekatharra in central Western Australia (see Figure 1).



Commenting on the latest drilling results Managing Director, Neil Marston said:

"We are very encouraged with the latest drilling results, in particular the new high-grade manganese zone discovered under shallow cover at the Brumby Creek Prospect. These grades and thicknesses of mineralisation demonstrate that the manganiferous Horseshoe Range, most of which is under our joint venture's tenure, has the potential to host significant tonnages of shallow high-grade manganese. Manganese ore prices have recovered significantly recently, which augurs well for us as we develop a pathway to production.

We look forward to getting back on site to re-commence additional drilling under our manganese joint venture with OMM to progress this project."

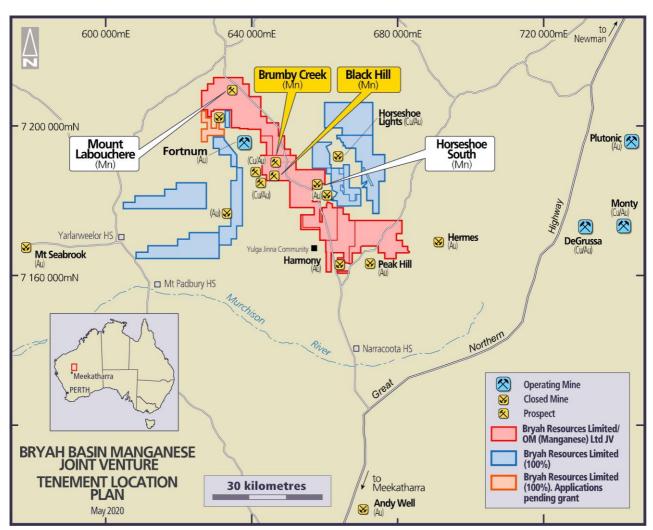


Figure 1: - Project Location Map

#### **Fast-Tracking a Production Strategy**

Manganese was last mined at the Horseshoe South Manganese Mine in 2011 by a subsidiary of Mineral Resources Limited (ASX:MIN), where manganese ore was crushed and screened to produce a direct shipping ore, with lower grade material beneficiated via a dense media separation plant.



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The Horseshoe South Manganese Mine lies on a granted mining lease (M52/806), which is still considered an active mining area.

The Brumby Creek and Black Hill prospects lie on Exploration Licence E52/3237. The Company intends to fast track studies required to support the lodgment of mining lease applications over these prospects.

The fast track production strategy has commenced with:

- Environmental Flora studies at Brumby Creek and Black Hill commenced last week
- Mineral interpretation and resource estimates underway
- Bulk samples collected from the Horseshoe South Mining Lease for beneficiation test work

Mining Lease applications will be lodged once preparation of supporting documentation is completed.

## **Drilling Program**

The Brumby Creek and Black Hill prospect locations are shown in Figure 1. The drilling program was focused on testing for extensions of high-grade manganese mineralisation intersected in drilling programs completed in 2019.

The first results from the drilling highlight a significant high-grade manganese discovery at the Brumby Creek prospect. The significant results from the drilling are in Table 1 and all information is shown in Table 2 and Table 3.

Table 1 - Best Drill Results

Hole No	Manganese Intersection (using 18% Mn cut-off grade)
<b>Brumby Creek</b>	
BRRC079	10 metres from surface @ 26.3% Mn
BRRC082	10 metres (2-12m) @ 26.4% Mn
BRRC087	15 metres (8-23m) @ 26.1% Mn, including 3 metres (16-19m) @ 37.3% Mn
BRRC088	13 metres (4-17m) @ 23.6% Mn
BRRC089	12 metres (11-23m) @ 24.7% Mn and 10 metres (29-39m) @ 31.1% Mn,
	including 3 metres (34-37m) @ 41.0% Mn (See Figure 2)
BRRC090	17 metres (7-24m) @ 26.5% Mn, including 3 metres (15-18m) @ 36.6% Mn
Black Hill	
BHRC005	4 metres @ 32.7% Mn, including 1 metre at 41.9% Mn from surface
BHRC006	6 metres (1-7m) @ 30.0% Mn, including 1 metre @ 47.9% Mn from 4 m
BHRC007	3 metres (1-4m) @ 33.3% Mn, including 1 metre @ 44.6% Mn from 2 m
BHRC009	2 metres @ 38.8% Mn, including 1 metre @ 43.2% Mn from surface



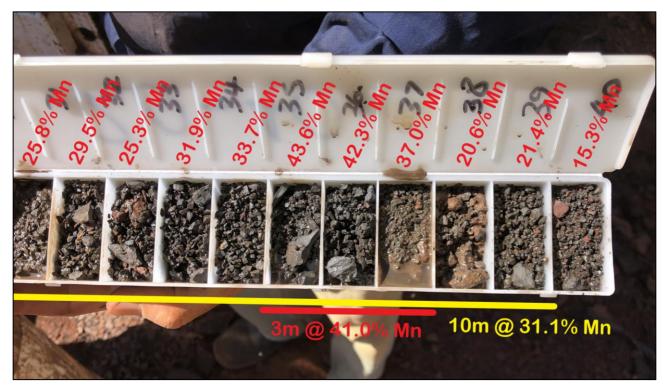


Figure 2 - Photo of drill chips from 29-40 metres in BRRC089

#### **Brumby Creek**

At the Brumby Creek prospect 14 drill holes for 294 metres were drilled to test for extensions of high-grade manganese mineralisation intersected in BRRC074 which recorded **23 m @ 25.8% Mn** from surface in 2019<sup>1</sup>.

Holes were stepped out 25 m along strike to intersect the mapped surface manganese. The southern most lines intersected the best width and grade (BRRC089 and BRRC090), particularly in BRRC089 which intersected 2 zones of manganese mineralisation, with the deeper zone recording the best interval to date, grading 10 m @ 31.1% Mn, from 29 m down hole depth, including 3 metres @ 41.0% Mn from 34 metres (see Figure 2). Manganese mineralisation is open along strike to the south, where additional drilling will be targeted in the next drilling program.

Anomalous cobalt mineralisation is being observed, generally in association with the manganese mineralisation. One metre intervals of up to 1,310ppm Co have been recorded and these results require further investigation as they appear part of the supergene mineralisation with Manganese.

The drill hole locations at Brumby Creek are shown in Figure 3 and the high-grade drilling in holes BRRC089 and BRRC090 are shown in the drill section in Figure 4 below.

<sup>&</sup>lt;sup>1</sup> See BYH ASX Announcement dated 31 July 2019 for full details



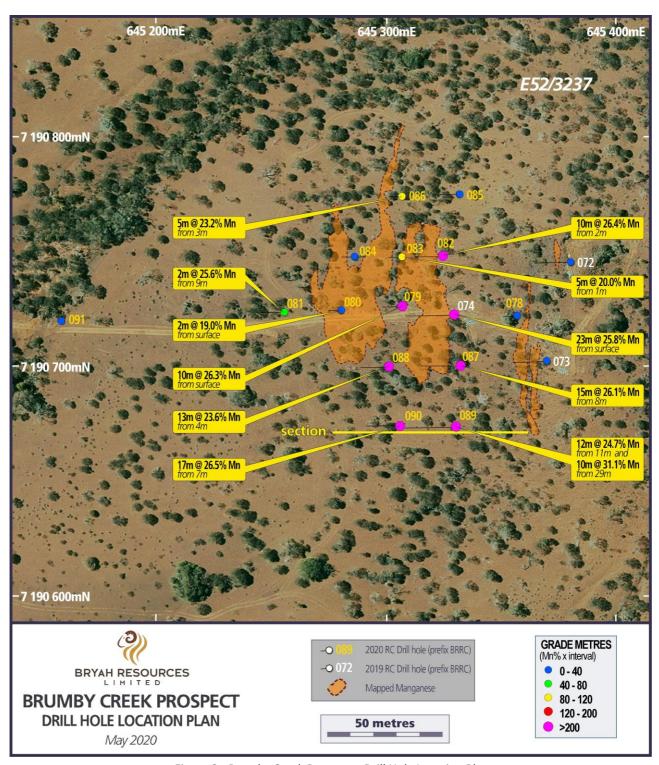


Figure 3 - Brumby Creek Prospect - Drill Hole Location Plan



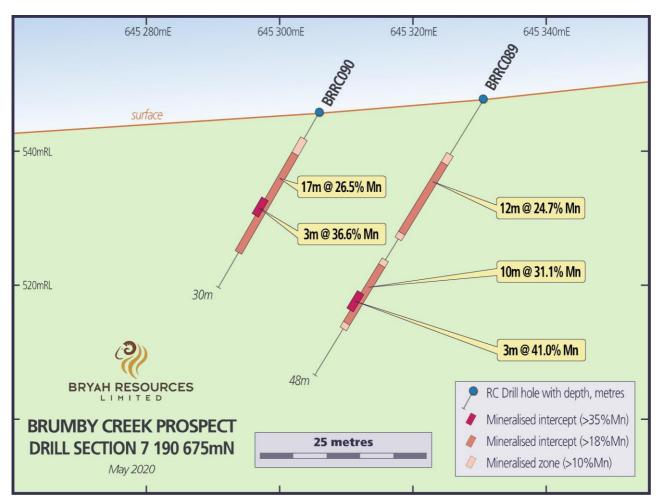


Figure 4 - Brumby Creek Prospect Drill Section 7190675mN



#### **Black Hill**

At the Black Hill prospect 9 drill holes for 78 metres were drilled to test for extensions of high-grade manganese mineralisation (e.g. BHRC002 - 6 metres from surface @ 38.1% Mn, including 3 m @ 42.0% Mn from 2 metres) intersected in 2019<sup>2</sup>.

The high-grade manganese mineralisation is largely restricted to the mesa cap which is outcropping. The grades received confirm the 2019 drilling results and are sufficient to define the extent of the hilltop mineralisation. A detailed topographic model will be generated to define the amount of mineralised material present and assist in the preparation of a mineral resource estimate.

The drill hole locations at Black Hill are shown in Figure 5 and in the drill section in Figure 6 below.

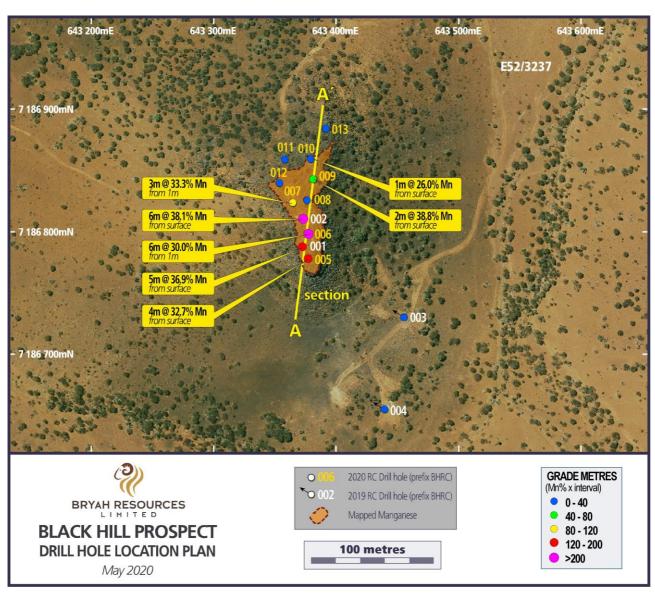


Figure 5 - Black Hill Drill Hole Location Plan

<sup>&</sup>lt;sup>2</sup> See BYH ASX Announcement dated 2 August 2019 for full details



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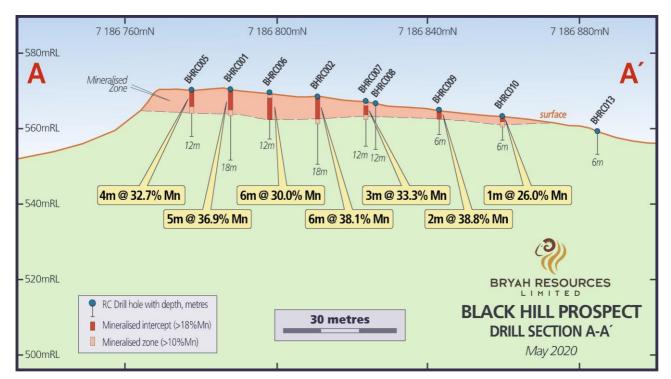


Figure 6 - Black Hill Prospect Drill Section A-A'

## **Follow-Up Activities**

Additional manganese sample assays are expected to be received from drilling at the Mount Labouchere Prospect and Horseshoe South Mine over the coming days. These will be reported as they become available.

Planning for follow-up drilling at Brumby Creek to extend the mineralisation is underway and a program of works approval from the Department of Mines Industry Regulation and Safety (DMIRS) will be requested shortly. Heritage clearances have previously been secured for another 100 metres to the north and south of the current drill holes at Brumby Creek, so no additional heritage surveys will be needed for the next drilling program.

The flora survey undertaken last week, primarily to focus on the new prospects at Cheval and Black Beauty was expanded to cover flora at the Brumby Creek and Black Hill areas to assist in fast tracking the production strategy.

DMIRS program of works approval to commence drilling at the Black Beauty and Cheval prospects (see Figure 7) is expected to be received in the coming weeks, following completion of the flora survey last week.

Further investigation of the anomalous cobalt observed in the last drilling program will be undertaken to establish its mineralogical relationship with the manganese.



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## **Bryah Basin Manganese Joint Venture**

In April 2019, Bryah executed a Manganese Farm-In and Joint Venture Agreement ("Agreement") with OMM, a wholly owned subsidiary of ASX-listed OM Holdings Limited (ASX:OMH)<sup>3</sup>. OM Holdings Limited is a vertically integrated Manganese and Silicon specialist involved in mining, smelting and trading, with operations located in Australia, China, Japan, Malaysia, Singapore and South Africa. In Australia, OMM operates the Bootu Creek manganese mine in the Northern Territory.

The Agreement applies to the rights to manganese only over approximately 660 km<sup>2</sup> in the Bryah Basin (see Figure 1).

Between April and August 2019, OMM funded \$500,000 of project expenditure which yielded highly encouraging manganese drilling results<sup>4</sup>. In August 2019, OMM elected under the Agreement to proceed and the Joint Venture was formed following payment of a \$250,000 Exercise Fee, whereby OMM secured an initial 10% interest in the Manganese Joint Venture ("JV").

Under Stage 2 of the Agreement, OMM can elect to progressively fund the next \$2.0 million of exploration expenditure in four tranches of \$500,000 each, to earn up to a 51% interest in the Manganese JV by 30 June 2022.

OMM has completed Tranche 1 funding of \$500,000 and, once expended by Bryah, will increase the JV interest held by OMM from 10% to 20%. Bryah is Project Manager of the JV until OMM has earned a 51% JV interest and has elected to be Project Manager.

### **Manganese Ore Market**

International manganese ore prices have increased substantially in recent months, mainly as a result of the temporary suspension of most mining activities in South Africa during March and April 2020, due to COVID-19 restrictions. South Africa is the world's leading producer of manganese ore.

Currently longer-term forecasts place manganese ore in the US\$5 to US\$6/dmtu<sup>5</sup> bracket for high-grade ore<sup>6</sup>. For 37% Mn ore this represents a price of between US\$185/dry tonne and US\$222/dry tonne.

The board of directors of Bryah Resources Limited has authorised this announcement to be given to the ASX.

For further information, please contact:

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<sup>&</sup>lt;sup>3</sup> See BYH ASX Announcement dated 23 April 2019 for full details

<sup>&</sup>lt;sup>4</sup> See BYH Quarterly Activities Report dated 31 October 2019 for full details

<sup>&</sup>lt;sup>5</sup> Dry Metric Tonne Unit – see Appendix 1 for further definition

<sup>&</sup>lt;sup>6</sup> Reference - E25 ASX Announcement dated 19 May 2020 pp13



Table 2 - Drilling Results (using a cut-off grade of 18% Mn)

Hole ID	Depth From (m)	Depth To (m)	Interval Width (m)	Mn %	Fe %	Co ppm	P %
BRRC078	No Significant Assays						
BRRC079	0	10	10	26.3	19.0	877	0.13
BRRC080	0	2	2	19.0	23.4	615	0.07
BRRC081	9	11	2	25.6	17.8	895	0.08
BRRC082	2	12	10	26.4	24.4	866	0.07
BRRC083	1	6	5	20.0	24.0	782	0.13
BRRC084			No Sig	nificant As	ssays		
BRRC085			No Sig	nificant As	ssays		
BRRC086	3	8	5	23.2	19.2	776	0.13
BRRC087	3	5	2	22.7	25.0	405	0.13
	8	23	15	26.1	21.7	410	0.14
including	16	19	3	<i>37.3</i>	12.5	<i>550</i>	0.12
	29	30	1	23.8	27.7	260	0.22
BRRC088	4	17	13	23.6	19.1	663	0.14
BRRC089	11	23	12	24.7	26.2	387	0.17
	29	39	10	31.1	16.5	412	0.13
including	34	37	3	41.1	10.9	<i>550</i>	0.10
BRRC090	7	24	17	26.5	17.1	719	0.11
including	15	18	3	36.6	9.5	<i>953</i>	0.08
BRRC091	No Significant Assays						
BHRC005	0	4	4	32.7	19.9	545	0.12
including	0	1	1	41.9	12.9	<i>820</i>	0.03
BHRC006	1	7	6	30.0	19.0	617	0.02
including	4	5	1	47.9	7.4	1320	0.02
BHRC007	1	4	3	33.3	14.8	653	0.02
including	2	3	1	44.6	7.4	<i>850</i>	0.02
BHRC008	No Significant Assays						
BHRC009	0	2	2	38.8	17.4	370	0.04
including	1	1	1	43.2	13.0	440	0.02
BHRC010	0	1	1	26.0	26.5	640	0.08
BHRC011	No Significant Assays						
BHRC012	No Significant Assays						
	No Significant Assays						

Note: Intervals are down hole and may not be true thickness

Results in BRRC078 – BRRC091 may include up to 2 metres of <18% Mn material



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Table 3 - Drill Hole Locations

Hole ID	Easting mE	Northing mN	RL (m)	Azimuth & Dip (planned)	Total Depth
BRRC078	645354	7190724	552.6	270°/-60°	12
BRRC079	645309	7190729	547.6	270°/-60°	18
BRRC080	645277	7190723	545.0	270°/-60°	12
BRRC081	645254	7190723	542.9	270°/-60°	24
BRRC082	645323	7190747	550.0	270°/-60°	24
BRRC083	645304	7190747	548.0	270°/-60°	12
BRRC084	645286	7190747	545.8	270°/-60°	12
BRRC085	645331	7190773	550.5	270°/-60°	18
BRRC086	645307	7190772	548.0	270°/-60°	12
BRRC087	645331	7190700	549.0	270°/-60°	36
BRRC088	645302	7190697	546.1	270°/-60°	24
BRRC089	645330	7190672	547.4	270°/-60°	48
BRRC090	645308	7190675	545.5	270°/-60°	30
BRRC091	645162	7190720	536.5	Vertical	12
BHRC005	643377	7186778	569.9	Vertical	12
BHRC006	643378	7186798	569.3	Vertical	12
BHRC007	643365	7186823	567.2	Vertical	12
BHRC008	643376	7186826	566.5	Vertical	12
BHRC009	643382	7186843	564.5	Vertical	6
BHRC010	643379	7186859	563.0	Vertical	6
BHRC011	643358	7186859	562.7	Vertical	6
BHRC012	643354	7186840	564.7	Vertical	6
BHRC013	643391	7186885	559.2	Vertical	6



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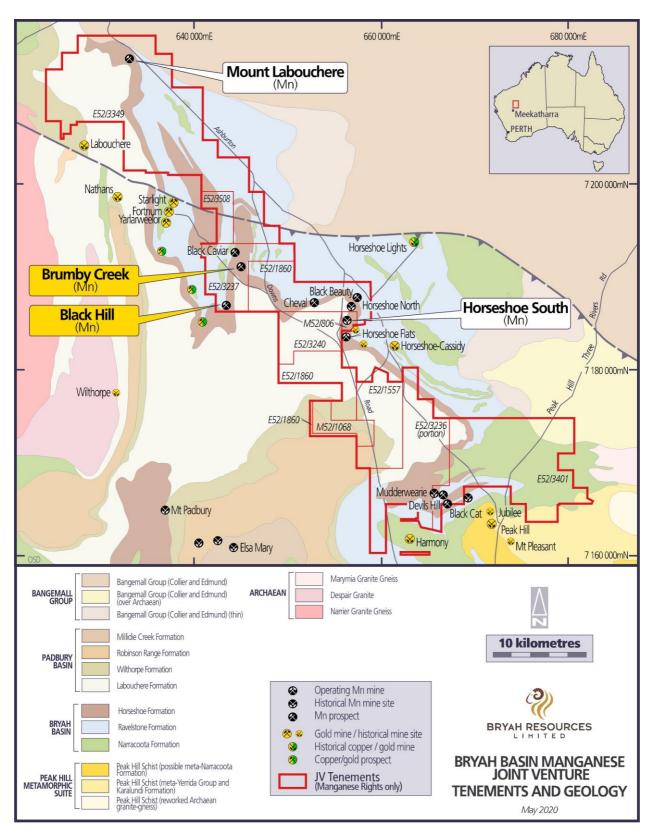


Figure 7 - Tenements and Geology Map



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#### **About Bryah Resources Limited**

Bryah Resources Limited is a copper-gold-manganese focused explorer with 2 projects located in central Western Australia, being the 1,135km<sup>2</sup> Bryah Basin Project and the 170km<sup>2</sup> Gabanintha Project.

The Bryah Basin is host to the high-grade copper-gold mines at DeGrussa, discovered by Sandfire Resources Limited in 2009, and at Horseshoe Lights, which was mined until 1994. The Bryah Basin also has several historical and current manganese mines including the Company's recently acquired Horseshoe South mine. The Company has secured a joint venture agreement with OM (Manganese) Limited in respect to its manganese rights only in respect to approximately 660 km² of its Bryah Basin tenement holdings.

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. Bryah has announced a maiden Inferred Mineral Resource at the Tumblegum South Prospect at Gabanintha of 600,000 tonnes @ 2.2 g/t Au for 42,500 oz Au<sup>7</sup>.

#### **Competent Persons Statement**

The information in this announcement that relates to Exploration Results is based on information compiled by Mr Tony Standish, who is a Member of the Australian Institute of Geoscientists. Mr Standish is a consultant to Bryah Resources Limited ("the Company"). Mr Standish 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'. Tony Standish 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.

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<sup>&</sup>lt;sup>7</sup> See BYH ASX Announcement dated 29 January 2020 for full details



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## Appendix 1 - Manganese Ore Pricing

Dry Metric Tonne Unit (dmtu) is the internationally agreed-upon unit of measure for Manganese ore pricing. It has the same mass value as a metric tonne, but the material has been notionally dried to remove the moisture level.

One dry metric tonne unit consists of 1% of Manganese (Mn) contained in a tonne of ore, excluding moisture.

Benchmark pricing (US\$) of Manganese Ore exists and is available to the market as follows:

- Manganese Ore Index 37% Mn, FOB Port Elizabeth, South Africa
- Manganese Ore Index 37% Mn, CIF Tianjin China, and
- Manganese Ore Index 44% Mn, CIF Tianjin China.

Discounts may apply to Manganese Ore which is not of benchmark grade.

#### Worked Example:

To calculate the price of a dry metric tonne of Manganese Ore the \$ per dmtu of metal contained is multiplied by the grade of the ore.

Manganese Ore Grade (dmt): - 37% Mn

dmtu: - 37% Mn / 1% Mn = 37 dmtu

Price/dmtu (US\$) - \$5.00 FOB (free on board)

Price/dry metric tonne (US\$): 37 dmtu x \$5.00 = US\$185

Forex Rate – AUD:USD 0.65

Price/dry metric tonne (AU\$): \$185/0.65 = **AU\$284** 



# **Appendix 2 - Manganese RC Drilling**

# JORC Code, 2012 Edition – Table 1 Exploration Results

## **Section 1 Sampling Techniques and Data**

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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.</li> </ul>	<ul> <li>For this drilling programme Bryah Resources Limited (Bryah Resources) utilised a mix of angled Reverse Circulation (RC) drill holes with some vertical holes included.</li> <li>RC drilling was to generally accepted industry standard producing 1m samples of approximately 3kg weight which were collected beneath a rotary cone splitter mounted under the cyclone.</li> <li>The splitter reject sample was collected into green plastic bags which were numbered and laid into 10m rows, initially by the hole then removed and stored at a bag farm.</li> <li>The holes were sampled as 1m samples from the splitter and placed into pre-numbered calico bags with the draw-sting tied up and then placed inside the green plastic bag for later collection and despatch.</li> <li>The full length of each hole drilled was sampled.</li> <li>Selected samples (based on visual logging) were collected and submitted to a contract commercial laboratory for sorting, drying, crushing, splitting and pulverising.</li> <li>A prepared sample is then fused in a lithium borate flux with lithium nitrate additive. The resultant glass bead is analysed via X-Ray Fluorescence (XRF). XRF is suitable analysis for a wide range of geological ores.</li> </ul>
Drilling techniques	<ul> <li>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).</li> </ul>	<ul> <li>Bryah Resources' RC holes were drilled with a contract RC drilling rig.</li> <li>All RC holes were drilled using a 137mm face sampling drilling bit.</li> </ul>
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul> <li>The RC samples were not weighed or measured for recovery on the rig but will be completed on a campaign basis at a later date as required.</li> <li>To ensure maximum sample recovery and the representivity of the samples, an experienced Company geologist was present during drilling to monitor the sampling process. Any issues were immediately rectified.</li> <li>Bryah Resources is satisfied that the RC holes have taken a sufficiently representative sample of the interval and minimal loss of fines has occurred in the RC drilling resulting in minimal sample bias.</li> <li>No twin RC drill holes have been completed to assess sample bias. At this stage no investigations have been made into whether there is a relationship between sample recovery and grade.</li> </ul>



Criteria	JORC Code explanation	Commentary
Logging	<ul> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>All of the 1m RC samples were sieved and collected into 20m chip trays for geological logging of colour, weathering, lithology, alteration and mineralisation for potential Mineral Resource estimation and mining studies.</li> <li>RC logging is both qualitative and quantitative in nature.</li> <li>The total length of the RC holes were logged. Where no sample was returned due to cavities/voids it was recorded as such.</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the insitu material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>Sampling technique:         <ul> <li>All RC samples were collected by the RC rig into a cyclone and then passed through the cone splitter.</li> <li>The samples were generally dry and all attempts were made to ensure the collected samples were dry.</li> <li>The cyclone and cone splitter were cleaned with compressed air at the end of every 6m RC drill rod.</li> <li>The sample sizes were appropriate to correctly represent the mineralisation based on the style of mineralisation, the thickness and consistency of intersections, the sampling methodology and percent value assay ranges for the primary elements.</li> </ul> </li> <li>Quality Control Procedures were:         <ul> <li>A duplicated sample was collected at random intervals on the cyclone nominally 1 per 100 samples.</li> <li>Certified Reference Material (CRM) samples were inserted in the field every 40 samples containing a range of manganese values.</li> <li>Overall QAQC insertion rate of 1:30 samples</li> <li>Laboratory repeats taken and standards inserted at pre-determined level specified by the laboratory.</li> <li>Sample preparation at the laboratory: The samples are weighed and dried at 105°C, then coarsely crushed to -6.3mm using a jaw crusher. If the sample size is greater than 2.5kg the samples are then riffle split. Samples are then pulverised by LM5 or disc pulveriser to 80% passing -75 microns</li> <li>The sample sizes are considered appropriate to correctly represent the mineralisation based on the style of mineralisation, the thickness and consistency of intersections, the sampling methodology and the assay value ranges expected for manganese and its impurities.</li> </ul> </li> </ul>



Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>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.</li> </ul>	<ul> <li>XRF is suitable for the total analysis of a range of geological ores and is appropriate for analysis of manganese and its associated impurities.</li> <li>Duplicates and samples containing standards were included in the analyses.</li> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>Significant intersections have been independently verified by alternative company personnel.</li> <li>The use of twinned holes has not been implemented and is not considered necessary at this stage of exploration.</li> <li>The Competent Person has visited the site &amp; supervised all the drilling and sampling process in the field.</li> <li>All primary data related to logging and sampling are captured using laptops into LogChief templates.</li> <li>All data is sent to Perth and stored in the centralised Access database with a Data Shed front end which is managed by company geologists.</li> <li>No adjustments or calibrations have been made to any assay data, apart from resetting below detection values to half positive detection.</li> </ul>
Location of data points	<ul> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>All collars have currently been surveyed with a differential GPS by Bryah staff and will be independently surveyed by surveyors using a differential GPS for accurate collar location and RL. The digital data has been entered directly into the company Access database.</li> <li>Downhole surveys have been completed on all the RC drill holes by the drillers. They used a Reflex Ez-Trac downhole as a single-shot tool to collect the surveys approximately every 30m down the hole in a stainless-steel starter rod.</li> <li>The grid system for the Bryah Basin prospect is MGA_GDA94 Zone 50.</li> <li>Topographic control is based upon known survey datums located within the project area.</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>As this program tested several locations there was considerable variation in the drill spacing and drillhole orientation.</li> <li>The drill spacing is generally not sufficient to establish the degree of geological and grade continuity applied under the 2012 JORC code.         Sample compositing was not applied to this drilling; all samples collected at 1m intervals.     </li> </ul>



Criteria	JORC Code explanation	Commentary
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	<ul> <li>The attitude of the lithological units varies greatly both within the prospects and between prospect to prospect.         At this part of Brumby Creek, the regional stratigraphy is mapped approximately north south and dipping steeply to the east therefore the azimuth drilled was at an azimuth of 270°.         At Black Hill, the mineralisation is located in a gently north dipping cap to a mesa and all drill holes were drilled vertically.     </li> <li>No drilling orientation and sampling bias has been recognized at this time and it is not considered to have introduced a sampling bias.</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>The samples collected were placed in calico bags and transported to the relevant Perth laboratory by company personnel.</li> <li>Sample security was not considered a significant risk.</li> </ul>
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	<ul> <li>The Company database has been compiled from primary data by independent database consultants and was based on original assay data and historical database compilations.</li> <li>A regular review of the data and sampling techniques is carried out internally.</li> </ul>

# **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	<ul> <li>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.</li> <li>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.</li> </ul>	<ul> <li>The relevant tenement (E52/3237) is 100% owned by Bryah Resources Limited. OM (Manganese) Limited holds a 10% joint venture interest in respect to the manganese rights only on this tenement.</li> <li>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.</li> </ul>	



Criteria	JORC Code explanation	Commentary
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>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.</li> <li>Mining operations between 1948 and 1967 received the focus of early exploration.</li> <li>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.</li> <li>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.</li> </ul>
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).
Drill hole Information	<ul> <li>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> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in m) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>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.</li> </ul>	Refer to Tables 2 and 3 of this ASX Announcement for details of sample locations, etc.
Data aggregation methods	<ul> <li>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.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>No high-grade cuts have been applied to the reporting of exploration results.</li> <li>No metal equivalent values have been used.</li> </ul>



Criteria	JORC Code explanation	Commentary
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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').</li> </ul>	<ul> <li>As this programme was a first pass programme there was some variation in the drill spacing and hole orientation.</li> <li>Due to locally varying intersection angles between drill holes and lithological units all results are defined as downhole widths.</li> <li>This drill spacing is also not sufficient to establish the degree of geological and grade continuity applied under the 2012 JORC Code.</li> </ul>
Diagrams	<ul> <li>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.</li> </ul>	See attached figures within this announcement.
Balanced reporting	<ul> <li>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.</li> </ul>	Refer to Tables 2 and 3 of this ASX Announcement.
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	<ul> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	Additional drilling was completed in other locations and assays are pending