## **ASX Announcement**

30 April 2020



# **QUARTERLY ACTIVITIES REPORT** FOR THE PERIOD ENDING 31 MARCH 2020

## **HIGHLIGHTS:**

## **Gabanintha Gold-Copper Project**

- Maiden Mineral Resource Estimate delivers Inferred Mineral Resource of 600,000 tonnes @ 2.2 g/t Au for 42,500 oz Au for the Tumblegum South Gold-**Copper Prospect**
- Average of **90% gold recovery** from cyanide leaching testwork of 20 samples from Tumblegum South
- 90% gold recovery consistent with recoveries from nearby Gabanintha gold mine
- Total gold assay results correlate well to initial laboratory analyses

## **Bryah Basin Manganese Joint Venture**

- \$250,000 received from OM (Manganese) Limited ("OMM") in April 2020 to fully fund next drilling program and other activities
- 1500 metre drilling program commencing this week, with focus on testing for extensions of high-grade manganese intersected in 2019 drilling
- Funds received as part of on-going commitment by OMM under JV Agreement

## **Bryah Basin Gold-Copper Project**

- Aircore drilling program undertaken at Windalah East geochemical anomaly
- Best result 3 metres @ 0.7 g/t Au from 24 metres in hole 20WEAC004
- Hole 20WEAC004 located approximately 1 km east of high-grade gold recorded in 2018 drilling

#### **Corporate**

- Cash in bank at 31 March 2020 was \$1.13 Million.
- Administrative and discretionary expenditure reduced in response to COVID-19 pandemic
- Directors' remuneration reduced by 50%

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ASX Code: BYH ABN: 59 616 795 245

Shares on issue: 100,873,840 Latest Share Price: \$0.028 Market Capitalisation: \$2.8M

**Projects** 

Bryah Basin – Copper, Gold, Manganese

Gabanintha – Gold, Copper bryah.com.au



This report summarises the exploration and corporate activities of Bryah Resources Limited ("Bryah" or "the Company") during the quarter ended 31 March 2020.

## **Management Comments**

Commenting on the quarterly activities of the Company, Managing Director Neil Marston said,

"The latest quarter has been extremely challenging as the Company has had to adjust its exploration activities and finances in response to the COVID-19 pandemic and resultant equity market volatility. The Board has moved quickly to reduce administrative and discretionary expenditure, including a 50% reduction in Directors' remuneration.

The quarter started well with the announcement of a maiden Mineral Resource Estimate at our Tumblegum South prospect. Since listing in 2017 we have completed 2 drilling programs at Tumblegum South and already we have estimated an Inferred Mineral Resource of 600,000 tonnes at 2.2 g/t Au for 42,500 oz Au. This maiden mineral resource estimation is an excellent outcome for the Company.

At Tumblegum South shallow gold mineralisation has been identified within multiple zones, with down dip and along strike extension potential. We are delighted with the overall grade and tonnage for a maiden resource and, given the buoyant outlook for gold, indications are that the prospect has the potential to profitably support open pit mining and trucking to an off-site processing plant. With the current high gold price there is excellent potential for the Company to monetise the prospect, either through an outright sale, or some other form of commercial development. The Company is in on-going discussions with other parties about this opportunity.

The short-term strategy of the board is to preserve existing cash reserves whilst advancing activities which may lead to revenue generation in the near term, such as a transaction on the Tumblegum South Prospect.

At this time, when many other junior explorers are preserving cash by cutting all exploration activities, Bryah is continuing our significant manganese exploration program in the Bryah Basin, at no cost to the Company, with funding being provided by our JV partner, OM (Manganese) Limited ("OMM").

Earlier this month Bryah received another \$250,000 project expenditure payment from OMM. These funds will be used by Bryah to undertake a 1,500-metre drilling program in the coming days. This program is aimed at building on the best results in the most prospective areas identified by our drilling in 2019. Our aim is to obtain a better understanding of the scale of high-grade manganese mineralisation, as these locations have the most potential to support an early start to future mining operations.

We look forward to completing a successful drilling program over the coming weeks."

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## **Exploration Activities**

## **Gabanintha Project**

The Gabanintha Project covers 170 km<sup>2</sup> of ground approximately 40 km south of Meekatharra in Western Australia and includes the Tumblegum South Gold-Copper Prospect (see Figure 1). Bryah holds the rights to all minerals except Vanadium, Uranium, Cobalt, Chromium, Titanium, Lithium, Tantalum, Manganese & Iron Ore ("Excluded Minerals"), which are retained by Australian Vanadium Limited (ASX:AVL).

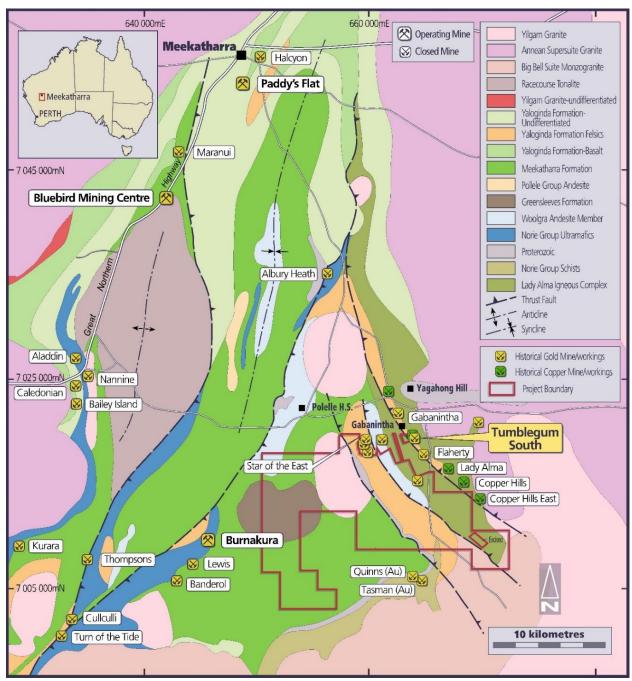


Figure 1 - Gabanintha Project Location Map



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#### **Tumblegum South Gold-Copper Prospect**

The Tumblegum South Gold-Copper Prospect is situated immediately south of the open pits of the Gabanintha Gold Mine, which were mined between 1987 and 1992 by Dominion Mining Ltd in a Joint Venture with Southern Ventures NL and Black Swan Gold Mines Ltd (see Figure 2). Approximately 150,000 oz of gold was produced from mining at Gabanintha.

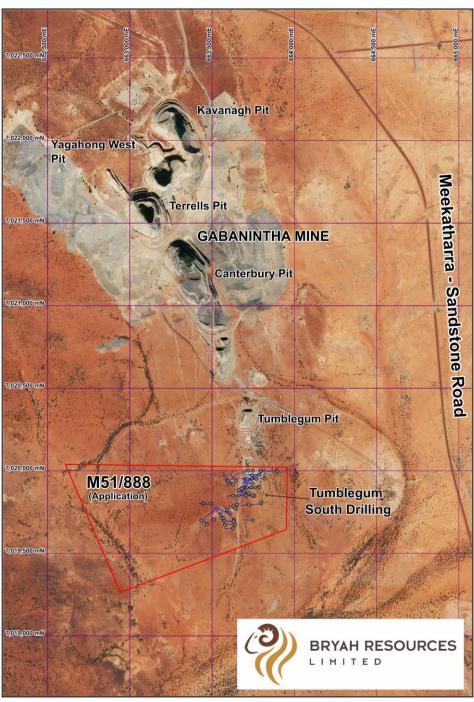


Figure 2 - Map showing location of M51/888 in relation to historic Gabanintha Gold Mine.



#### Mineral Resource Estimate

A Mineral Resource Estimation at the Tumblegum South Prospect was completed in accordance with the JORC Code (2012)<sup>1</sup> during the quarter and was based on 49 reverse circulation (RC) drill holes for a total of 5,640 metres (see Figures 3, 4 & 5).

7 holes were drilled by Yellow Rock Resources Limited (YRR) (re-named Australian Vanadium Limited) during 2013 for 1,571 metres, and 42 holes were drilled by Bryah during 2017 and 2019 for 4,069 metres. Table 1 summarises the drilling completed at Tumblegum South.

Table 1 - Reverse Circulation Drilling used for Inferred Mineral Resource

Year	Company	Number of Holes	<b>Total Metres</b>	Hole Series
2013	YRR	7	1,571	GRC1148 - GRC1150; GRC1156 -1159
2017	Bryah	26	2,486	BGRC001 - BGRC026
2019	Bryah	16	1,583	BGRC027 - BGRC042
	TOTAL	49	5,640	

#### Geology

Drill spacing at Tumblegum South is generally on 25 metre centres, on 25 metre spaced lines, with variable drill directions, due to the presence of two main structural orientations. There is a close-spaced set of northeast—southwest gold-bearing structures, in addition to two gold-bearing structures that are oriented east—west to southwest—northeast (see Figure 3).

A conceptual thrust model has been developed that aligns with truncations of magnetic features at Tumblegum South. An aeromagnetic survey flown in 2017 was used to form this interpretation. Dominantly the lithologies are ultramafic (often sheared with talc-carbonate alteration) with some dolerite intrusions and lesser basalts. Geological modelling was completed using Leapfrog Geo™. Geology units were numerically modelled using nickel assays as there was a comprehensive dataset for nickel, clearly showing 4 different populations (basalt, gabbro/dolerite, basaltic komatiite, serpentinised peridotite from low to high nickel). From previous reports prepared by Dominion Mining Ltd during mining of the Gabanintha open pits to the north, YRR and Bryah geologists also note that gold is hosted in two main styles.

#### These are:

- 1. Biotite—Quartz—Carbonate+/-Pyrite+/-Chalcopyrite lode within talc-carbonate altered ultramafics or at the contact of ultramafic and dolerite; and
- 2. A quartz vein system within the intrusive dolerites or through the massive basalt units marginal to sheared ultramafics.

The presence of abundant biotite alteration in some mineralised intersections suggests there is a potassic alteration component to the gold system in addition to vein hosted gold–copper.

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<sup>&</sup>lt;sup>1</sup> See BYH ASX announcement dated 29 January 2020 for full details.



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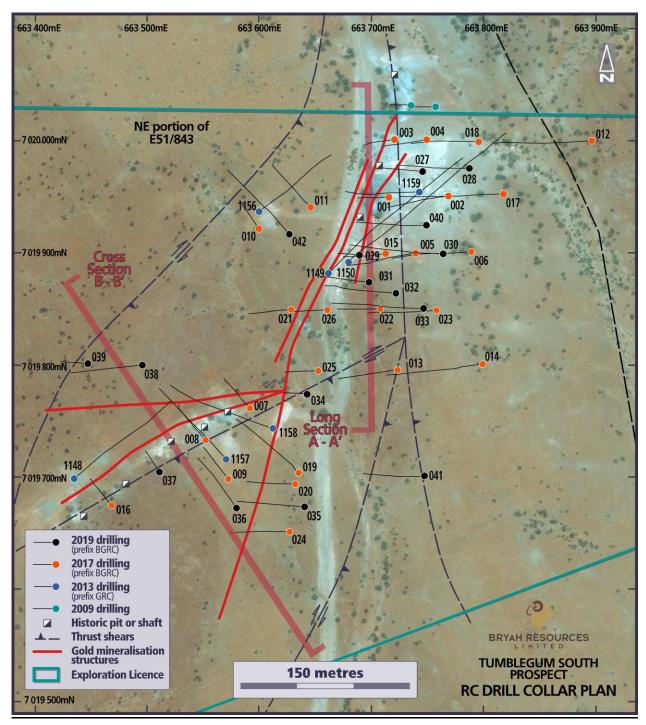


Figure 3 – RC Drill Collar Plan



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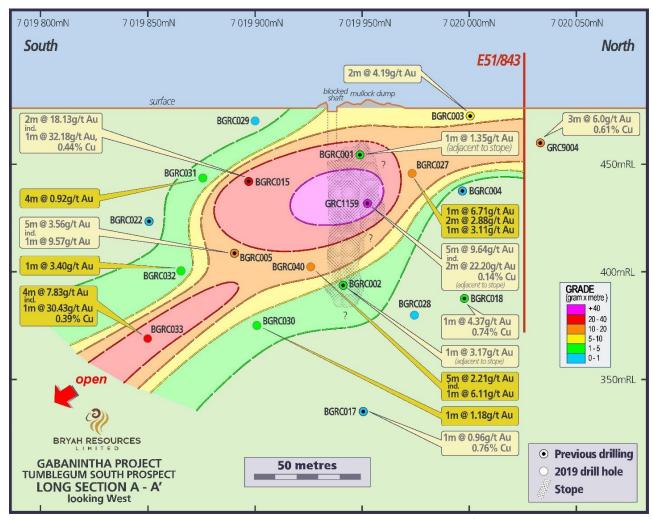


Figure 4 - Tumblegum South Prospect Long Section A-A'

#### Gold, Copper and Silver Estimation

Five gold lodes were modelled in Leapfrog Geo™ using the vein system function for zones tagged at a cut-off above 0.3 g/t Au. Some lower grades were occasionally included as internal waste within the shears or where arsenic, copper, silver and/or tungsten indicated continuity of the host structure. All lodes were tagged in the database during geological modelling. This tagging was then used to create composites, complete variography and run Ordinary Kriging estimations for gold, copper and silver in GEOVIA Surpac™ software.

The block model was created using the parameters shown in Table 2 below.



**Table 2 - Block Model parameters** 

	Х	Υ	Z
Minimum Coordinates	7019525	663350	230
Maximum Coordinates	7020025	663900	500
Estimation Block Size	20	10	5
Min. Block Size	0.625	0.625	0.625
Rotation	0	0	0

Visual examination of the block grades compared to the drill hole grades was done to ensure the estimation is reasonable. In addition, gold, copper and silver were also estimated in the model using inverse distance methods with the same search orientations and sample numbers for each lode as a verification process for the estimation produced by the Ordinary Kriging method. Results were comparable within an acceptable tolerance.

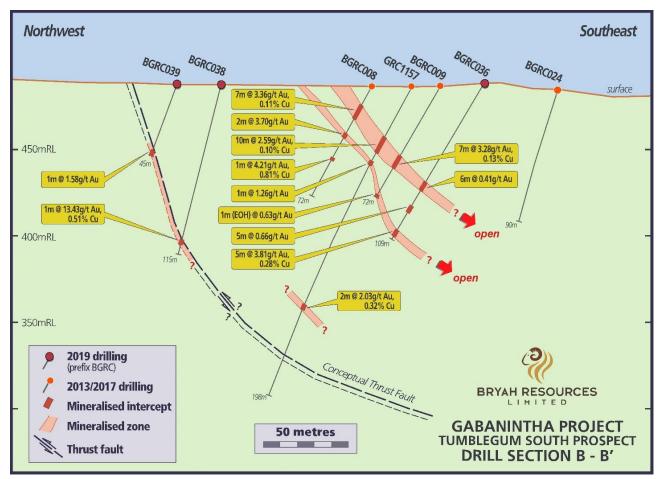


Figure 5 - Tumblegum South Prospect Drill Section B-B'



#### **Block Model Report**

The location of each of the lodes described in this section are shown in Figure 3 above. In summary, Min1, Min4 and Min5 are northeast—southwest lodes while Min2 and Min3 are southwest—northeast and east—west lodes respectively.

The total Inferred Mineral Resource was estimated at 600,000 tonnes at 2.2 g/t Au, 0.2% Cu and 1.5 g/t Ag for 42,500 oz Au.

See Table 3 below for details of the Mineral Resource using a 0.3 g/t Au cut-off.<sup>2</sup>

Table 3 - Total Inferred Mineral Resource Inventory by lode (0.3 g/t Au cut-off)

Lode	Tonnes	Au ppm	Au Oz	Cu ppm	Ag ppm
Min1	194,608	2.61	16,560	2879	2.29
Min2	220,764	2.74	19,440	2084	1.58
Min3	160,046	1.28	6,590	1000	0.72
Min4	30,417	1.46	1,420	413	0.39
Min5	7,212	1.53	340	611	0.42
TOTAL	615,880	2.24	44,350	1966	1.52

At a 1.0 g/t Au cut-off the total Inferred Mineral Resource was estimated at 500,000 tonnes at 2.6 g/t Au, 0.2% Cu and 1.6 g/t Ag for 41,700 oz Au.

See Table 4 below for details of the Mineral Resource using a 1.0g/t cut-off.

Table 4 - Total Inferred Mineral Resource Inventory by lode (1.0 g/t Au cut-off)

Lode	Tonnes	Au ppm	Au Oz	Cu ppm	Ag ppm
Min1	169,107	2.89	15,710	3095	2.43
Min2	196,565	2.99	18,900	2211	1.68
Min3	99,470	1.68	5,370	1215	0.83
Min4	30,241	1.46	1,420	414	0.39
Min5	3,956	2.39	300	687	0.38
TOTAL	499,338	2.60	41,700	2191	1.67

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<sup>&</sup>lt;sup>2</sup> Note the final stated Inferred Mineral Resource is rounded, to reflect the uncertainty inherent in Inferred Mineral Resources



#### **Leaching Test Results**

Following the completion of the Mineral Resource Estimate, a total of 20 1,000-gram samples were tested for gold recovery by cyanide using Intertek Australasia's 6-hour bottle roll leach LeachWELL<sup>TM</sup> technique at their laboratory in Perth<sup>3</sup>.

The calculated gold grades of the samples following the testwork ranged from 0.35 g/t Au to 27.46 g/t Au. The 20 samples have recorded an average of 90% gold recovery using cyanide leaching. This provides the Company with positive results in respect to potential gold recoveries from conventional cyanide leaching.

Table 5 below lists the results of the LeachWELL<sup>TM</sup> and the tailings gold assay which are added together for the total gold grade. The grade received from the initial RC sample analysis, undertaken using a 50-gram Fire Assay (FA50) method, is also included in Table 5 for comparison. To calculate the percentage cyanide leach, the LeachWELL<sup>TM</sup> assay is divided by the total gold grade.

Table 5 - Results of LeachWELL<sup>™</sup> and Tailings Analysis

Hole ID	From m	To m	LeachWELL™ Au (ppm)	Tail Au (ppm)	Total Au (ppm)	FA50 Au (ppm)	Diff. Au (ppm)	NaCN Leach (%)
BGRC031	48	49	0.33	0.02	0.35	0.43	-0.08	94%
BGRC031	58	59	2.69	0.21	2.90	1.52	+1.38	93%
BGRC031	61	62	0.09	0.005	0.095	1.08	-0.985	95%
BGRC032	104	105	1.43	0.12	1.55	3.39	-1.84	92%
BGRC033	117	118	0.83	0.06	0.89	0.51	+0.38	93%
BGRC033	119	120	0.81	0.16	0.97	0.65	+0.32	84%
BGRC033	122	123	24.49	2.20	26.69	30.23	-3.54	92%
BGRC036	67	68	0.39	0.05	0.44	0.51	-0.07	89%
BGRC036	68	69	0.46	0.04	0.50	0.29	+0.21	92%
BGRC036	72	73	1.21	0.06	1.27	0.97	+0.30	95%
BGRC036	99	100	1.89	0.13	2.02	4.94	-2.92	94%
BGRC036	100	101	0.38	0.05	0.43	0.31	+0.12	88%
BGRC036	102	103	20.13	7.33	27.46	12.53	+14.93	73%
BGRC036	103	104	1.18	0.10	1.28	1.03	+0.25	92%
BGRC036	105	106	0.35	0.12	0.47	0.54	-0.07	74%
BGRC038	108	109	11.77	1.80	13.57	13.43	+0.14	87%
BGRC040	92	93	4.30	0.38	4.68	6.11	-1.43	92%
BGRC040	93	94	1.98	0.19	2.17	1.55	+0.62	91%
BGRC040	94	95	0.83	0.07	0.90	0.58	+0.32	92%
BGRC040	96	97	1.17	0.09	1.26	2.71	-1.45	93%

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<sup>&</sup>lt;sup>3</sup> See BYH ASX Announcement dated 8 April 2020 for full details



Results show leaching recoveries ranged from 73% to 95%. Overall, the average across the 20 samples is 90% recovery. The average 90% recovery result is also in line with historical metallurgical tests for oxide ore of 93% recovery at the nearby Gabanintha deposit<sup>5</sup>.

A correlation check of the LeachWELL<sup>TM</sup> tests with the original FA50 results in Table 5 show a greater variance with the higher gold grades; up to 14.93 g/t Au higher in the case of BGRC036 (102-103m). This is likely to be a result of coarse gold causing nuggety effects.

Whilst these results provide positive information in respect to gold recovery from conventional cyanide leaching, further definitive testwork will be required as this project is progressed towards development.

#### **Mining Lease Application**

During the quarter, the Company arranged for a mining lease application (M51/888) to be pegged over the Tumblegum South Prospect area (see Figure 2).

The Company is working with the various stakeholders to get the mining lease granted by the Department of Mines, Industry Regulation and Safety as soon as possible. The grant of the mining lease will be required before any mining operations on the Prospect can commence.

#### **Project Monetisation**

During the quarter, the Company commenced a process to realise the value in the Tumblegum South Prospect, either through an outright sale or some other form of commercial arrangement that would lead to mining, given its near-term development potential.

This process is advancing, with the Company engaged in on-going discussions.

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<sup>&</sup>lt;sup>5</sup> WAMEX Report A22505 - Gabanintha Feasibility Study, November 1986



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## **Bryah Basin Project**

The Bryah Basin project covers approximately 1,135 km<sup>2</sup> in central Western Australia. The project is located close to several mining operations including the high-grade DeGrussa copper-gold mine operated by Sandfire Resources NL (ASX:SFR) and the Fortnum gold mine operated by Westgold Resources Limited (ASX:WGX) (see Figure 6).

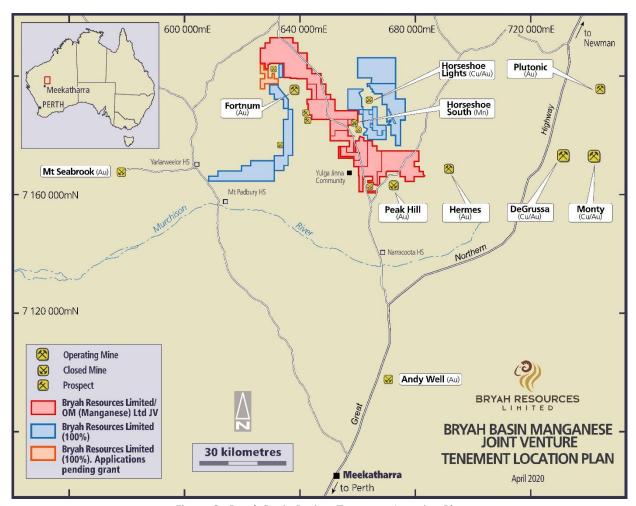


Figure 6 - Bryah Basin Project Tenement Location Plan

Bryah's tenements cover large areas of under-explored ground adjacent to the copper-gold deposit at Horseshoe Lights which is hosted in similar aged volcanic and sedimentary rocks to the DeGrussa copper-gold mine. The Bryah Basin also has several historical and current manganese mines including the recently acquired Horseshoe South Manganese Mine (see Figure 6).



## **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>6</sup>. The Agreement applies to the rights to manganese only over approximately 660 km<sup>2</sup> of the entire tenement package held by the Company in the Bryah Basin (see Figure 6).

Between April and August 2019, OMM funded \$500,000 of project expenditure which yielded highly encouraging manganese drilling results<sup>7</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").

The Manganese JV includes the Horseshoe South Manganese Mine, which is the largest historical manganese mine in the region, as well as several other manganese prospects, including Brumby Creek, Black Hill, Mudderwearie/Devils Hill and Mount Labouchere (see Figure 7).

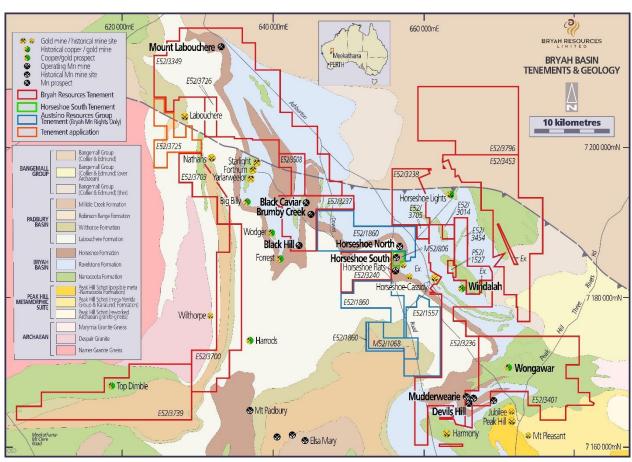


Figure 7 - Bryah Basin Tenements and Geology Map

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<sup>&</sup>lt;sup>6</sup> See BYH ASX Announcement dated 23 April 2019 for full details

<sup>&</sup>lt;sup>7</sup> See Quarterly Activities Report dated 31 October 2019 for full details



#### Manganese JV Funding

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.

In April 2020, OMM provided Bryah with an additional \$250,000 project expenditure payment, to fund the next phase of exploration. The latest payment by OMM completes 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.

#### **Exploration Activities**

Manganese exploration activities under the JV during the quarter have consisted of a Proof of Concept trial for pattern recognition using Google Artificial Intelligence/Machine Learning ("AI/ML") with the aim of accurately mapping outcropping manganese signatures within the area. This trial was completed with additional areas indicative of manganese being identified, which will be investigated by ground reconnaissance in the next quarter.

Bryah has also been actively engaged with the Department of Mines, Industry Regulation and Safety in obtaining the necessary works approvals for the next phase of exploration drilling.

#### **Planned Activities**

The following activities are expected to be carried out by Bryah in the quarter ending 30 June 2020:

- 1. Follow-up drilling (~1,300m) at the Horseshoe South mine, Brumby Creek and Black Hill prospects;
- First pass drilling (~200m) at the Mount Labouchere prospect;
- 3. Follow-up ground truthing and mapping of areas identified by the AI/ML trial; and
- 4. Flora survey at the Black Beauty prospect.

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## **Bryah Basin Gold-Copper Project**

Exploration activities for gold-copper during the period consisted of a short phase of aircore (AC) drilling at the Windalah East geochemical anomaly. This drilling program was originally planned for 5,000 metres in drilling across a number of areas however the program was terminated early due to equity market volatility from the COVID-19 pandemic.

In total, 928 metres of drilling was completed, mainly focused on testing the high priority Windalah East geochemical anomaly<sup>8</sup>, where 8 holes were completed for 669 metres. 3 metre composite samples from these drill holes have been assayed for a limited number of elements. Selected one metre samples from this drilling will be sent to a laboratory for analysis in May 2020.

The best result recorded was 3 metres at 0.7 g/t Au from 24 metres in 20WEAC004 (See Figure 8). Drill hole 20WEAC004 is located approximately 1 km east of RC drilling completed by Bryah in 2018 which successfully identified high-grade gold in two holes<sup>9</sup>:

- BBRC019: 5 metres @ 6.62g/t Au from 79m, including 1m @ 15.05g/t Au from 82m, and
- BBRC020 3 metres @ 6.69g/t Au from 145m, including 1m @ 10.52 g/t Au from 146m.

See Table 6 and Table 7 and Appendix 1 for full details of the drilling completed.

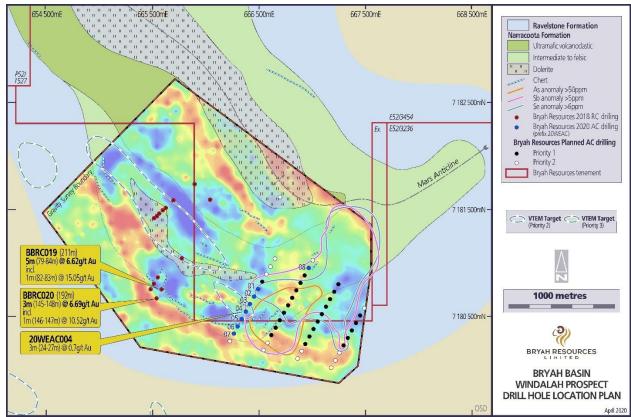


Figure 8 – Windalah Prospect Drill Hole Location Plan

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<sup>8</sup> See BYH ASX Announcement dated 11 March 2020 for full details

<sup>&</sup>lt;sup>9</sup> See BYH ASX Announcement dated 22 November 2020 for full details



## **Corporate Activities**

#### **Response to COVID-19**

The Company's response to the COVID-19 pandemic, and the subsequent equity market volatility experienced in March 2020, consisted of the following measures to reduce administrative and operating costs:

- Directors agreed to a 50% cut to their remuneration from 1 April 2020;
- All non-essential travel plans were cancelled;
- Discretionary administrative and technical services expenditure has been reduced to minimum levels;
- Personnel worked from home, wherever possible, and
- The Bryah Basin AC drilling program was suspended, with less than 20% of the program completed.

#### **Cash Position**

As at the 31 March 2020, the Company had \$1.13 Million (31 December 2019: \$1.48 Million) in cash, which excluded funds provided by OMM and held on behalf of the Bryah Basin Manganese JV.

## Payments to related parties of the entity

The aggregate amount of payments to related parties and their associates included in Section 6.1 of the Appendix 5B cash flows from operating activities was \$89,000, comprising Directors' fees, salaries and superannuation.

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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Managing Director

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Table 6 - Aircore Drill Hole Locations

Hole_ID	MGA_North	MGA_East	MGA_RL	Depth	Dip	Azimuth
20MBAC001	7190349	674645	508	49	-90	0
20SHAC001	7185834	650491	527	114	-90	0
20SHAC002	7185654	650993	527	96	-90	0
20WEAC001	7180796	666468	550	84	-90	0
20WEAC002	7180730	666427	550	72	-90	0
20WEAC003	7180657	666387	550	82	-90	0
20WEAC004	7180582	666347	550	106	-90	0
20WEAC005	7180521	666313	550	90	-90	0
20WEAC006	7180443	666271	550	83	-90	0
20WEAC007	7180377	666235	550	79	-90	0
20WEAC008	7180986	666944	550	73	-90	0

Table 7 – Aircore Significant Intersections

Hole_ID	MGA_North	MGA_East	MGA_RL	mFrom	mTo	Interval	Au_ppm
20MBAC001	7190349	674645	508				NSR
20SHAC001	7185834	650491	527				NSR
20SHAC002	7185654	650993	527				NSR
20WEAC001	7180796	666468	550				NSR
20WEAC002	7180730	666427	550				NSR
20WEAC003	7180657	666387	550				NSR
20WEAC004	7180582	666347	550	24	27	3	0.7
20WEAC005	7180521	666313	550				NSR
20WEAC006	7180443	666271	550				NSR
20WEAC007	7180377	666235	550				NSR
20WEAC008	7180986	666944	550				NSR

Note: NSR = No Significant Result

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**Table 8 - Tenement Information** 

				Listing Rule 5.3.3	
		or the Quarter		rch 2020	1
Location	Project	Tenements	Economic	Notes	Change in
			Interest		Quarter %
Western Australia	Gabanintha	E51/843	100%¹		Nil
		E51/1396	100% <sup>1</sup>		Nil
		E51/1534	100% <sup>1</sup>		Nil
		E51/1685	100% <sup>1</sup>		Nil
		E51/1694	100%¹		Nil
		E51/1695	100%¹		Nil
		P51/2566	100% <sup>1</sup>		Nil
		P51/2567	100% <sup>1</sup>		Nil
		P51/2634	100%¹		Nil
		MLA51/878	Nil	Application	Nil
		MLA51/888	Nil	New Application	100%¹
Western Australia	Bryah Basin	P52/1627	100%	·	Nil
	-	E52/3014	100%		Nil
		E52/3236	100% <sup>2,6</sup>		Nil
		E52/3237	100% <sup>2,6</sup>		Nil
		E52/3238	100%²		Nil
		E52/3240	100% <sup>2,6</sup>		Nil
		E52/3349	100%³,6		Nil
		E52/3401	100%4,6		Nil
		E52/3453	100%4		Nil
		E52/3454	100%4		Nil
		E52/3508	100% <sup>6</sup>		Nil
		E52/3700	100%		Nil
		E52/3705	100%		Nil
		E52/3726	100%		Nil
		E52/3703	100%		Nil
		E52/3739	100%		Nil
		E52/3725	100%	Application	Nil
		E52/3796	Nil	New Application	100%
		M52/1068	90%5	Manganese Rights only	Nil
		E52/1557	90% <sup>5</sup>	Manganese Rights only	Nil
		E52/1860	90% <sup>5</sup>	Manganese Rights only	Nil
		M52/806	100%	Wanganese Mgnts Only	Nil

Note 1: Bryah Resources Limited holds the Mineral Rights for all minerals except V/U/Co/Cr/Ti/Li/Ta/Mn & iron ore only. Australian Vanadium Limited retains 100% rights in V/U/Co/Cr/Ti/Li/Ta/Mn & iron ore on the Gabanintha Project.

Note 2: Pet FC Pty Limited retains a 0.75% Net Smelter Return Royalty

Note 3: Australian Vanadium Limited retains a 0.75% Net Smelter Return Royalty

Note 4: Jalein Pty Limited retains a 0.75% Net Smelter Return Royalty

Note 5: Bryah Resources Limited holds a 90% interest in the rights to prospect, explore, mine and develop manganese ore ("Manganese Rights"). OM (Manganese) Limited has earned a 10% interest in these Manganese Rights.

Note 6: OM (Manganese) Limited has earned a 10% interest in the Manganese Mineral Rights only on these tenements (southern portion of E52/3236 only). Bryah retains 100% rights to all other minerals on these tenements.



## **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 NL in 2009, and at Horseshoe Lights, which was mined until 1994. The Bryah Basin also has several historical and current manganese mines including the 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 km<sup>2</sup> 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.

## **Competent Persons Statement**

The information in this report 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"). Tony 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 report of the matters based on his information in the form and context in which it appears.

## **Competent Person Statement — Mineral Resource Estimation**

The information in this report that relates to Mineral Resources is based on and fairly represents information compiled by Mr Ashley Jones, Consultant with Kamili Geology Pty Ltd. Mr Jones is a member of the Australasian Institute of Mining and Metallurgy (AusIMM). Mr Jones has sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to the activities undertaken to qualify as Competent Persons as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Jones consent to the inclusion in this report of the matters based on their information in the form and context in which they appear.

## **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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# **Appendix 1 – Aircore Drilling Programme**

# 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 Aircore (AC) drill holes.</li> <li>AC drilling was to generally accepted industry standard producing 1.0m samples which were collected beneath the cyclone and then passed through a splitter.</li> <li>The splitter reject sample was collected into plastic buckets and laid out on the ground in 10-20m rows.</li> <li>The holes were sampled as initial 3m composites using a PVC spear to produce an approximate representative 3kg sample into pre-numbered calico sample bags.</li> <li>The last metre was collected separately for assay to be representative of the base of weathering.</li> <li>The full length of each hole drilled was sampled.</li> <li>All Bryah Resources samples collected were submitted to a contract commercial laboratory for drying, crushing and homogenising the sample. 3 m composites were sent for composite samples will be analysed using an aqua regia digestion with ICP-MS finish. All 1m splits will be submitted under a separate sample sequence and will be analysed for a comprehensive 48 element suite with a 4-acid digestion and ICP-MS finish. In addition, they will also be analysed for Au by 50g lead fire assay with ICP-OES finish</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>All holes were drilled with a contract AC drilling rig.</li> <li>All AC holes were drilled using a (3.1/4in) blade and hammer 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 AC samples were not weighed or measured for recovery.</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>Sample recovery was recorded by the Company geologist and this was based on how much of the sample is returned from the cyclone and cone splitter. This was recorded as good, fair, poor or no sample.</li> <li>Bryah Resources is satisfied that the AC holes have taken a sufficiently representative sample of the interval and minimal loss of fines has occurred in the AC drilling resulting in minimal sample bias.</li> <li>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 AC 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>AC logging is both qualitative and quantitative in nature.</li> <li>All chip trays were photographed.</li> <li>The total length of the AC 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 in-situ 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 AC samples were collected from the AC rig and were collected beneath the 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 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 every 50 samples.</li> <li>Certified Reference Material (CRM) samples were inserted in the field every 50 samples containing a range of gold and base metal values.</li> <li>Blank Bunbury basalt material was inserted in the field every 50 samples.</li> <li>Overall QAQC insertion rate of 1:16.6 samples</li> <li>Laboratory repeats taken and standards inserted at pre-determined level specified by the laboratory.</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 both gold and copper.</li> </ul> </li> </ul>
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>	Duplicates and samples containing standards will be included in the analyses.



Criteria	JORC Code explanation	Commentary
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 and supervised all the drilling and sampling process in the field.</li> <li>All primary data related to logging and sampling are captured on appropriate software and directly imported into the database with import validations. Where data has been recorded on paper all paper copies of data have been stored.</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 were initially located by a Geologist using a conventional hand-held GPS.</li> <li>Following completion of the drilling program the hole collars will be surveyed using a differential GPS for accurate collar location and RL with the digital data entered directly into the company Access database.</li> <li>The grid system for the Bryah Basin prospect is MGA_GDA94 Zone 50.</li> <li>Topographic data is collected by a hand-held GPS.</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 programme was a reconnaissance programme 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.</li> <li>Sample compositing was been applied to this drilling programme with 1m samples collected composited to 3m/4m composites or less if specified.</li> </ul>
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 is predominantly south-westerly dipping to subvertical. Therefore, most holes were drilled with an azimuth of 30 or 45 degrees to intersect the structures at right angles to the orientation of the lithological units. Some holes will be drilled in other orientations to intersect specific mineralised structures, but always with an attempt to drill orthogonal to the strike of the interpreted structure. Due to locally varying intersection angles between drillholes and lithological units all results are defined as downhole widths.</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>



Criteria	JORC Code explanation	Commentary
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 courier or company contractor.</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 tenements (E52/3236, E52/3240, E52/3453 and E52/3454) are 100% owned by Bryah Resources Limited.</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>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Previous exploration at the Windalah Prospect has been undertaken by Homestake Australia Limited (1984-1986) and Afmeco Pty Ltd (1988-1990) and involved aeromagnetic surveys, geological mapping, soil and rock chip sampling and RAB drilling.</li> <li>Explorers in all cases identified the prospectivity of the ground however exploration results were not generally followed up due to various issues.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>The Windalah Prospect consists of a sequence of folded sub-cropping Narracoota Formation within a series of North-West trending, anticlinal domes. The Narracoota Formation volcanics occupy the central axis position of the interpreted dome structures. An overlying ridge forming chert is strata-parallel and its distribution is consistent with the dome structures and generally dips away from the central fold axis. Overlying the chert sequence and the underlying Narracoota Formation are sediments of the Ravelstone Formation.</li> <li>The primary exploration target at Windalah is VMS mineralisation similar to the nearby Horseshoe Lights Copper-Gold Mine where mineralisation occurs in the core of a NNW trending and SE plunging parasitic anticline, that is overturned. The sulphide envelope of the deposit itself is SW dipping and plunging to the SSE (150°) and was likely folded. It sits within altered basalt and mafic volcaniclastic units along the contact with overlying felsic volcanic schist.</li> </ul>



Criteria	JORC Code explanation	Commentary
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 metres) 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 6 and 7 of this ASX Announcement.
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>
Relationship between mineralisatio n widths and intercept lengths Diagrams	<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> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should</li> </ul>	<ul> <li>As this programme was a reconnaissance programme there was considerable 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> <li>See attached Figure 8 within this announcement. Sectional view of drilling to be</li> </ul>
	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.	completed once additional laboratory analysis and geological interpretation is completed
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.	Refer to Tables 6 and 7 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.	All relevant exploration data is reported in this announcement.



Criteria	JORC Code explanation	Commentary
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>	<ul> <li>Refer to this announcement.</li> <li>The extent of follow-up drilling has not yet been confirmed.</li> </ul>