ASX ANNOUNCEMENT

3RD MARCH 2022

Maiden Bryah Basin Manganese Mineral Resource

HIGHLIGHTS

- Total Inferred and Indicated JORC 2012 compliant Mineral Resource 1.84 Million tonnes (MT) at 21% Mn
- Mineral Resource includes 0.65 MT at 20% Mn on a granted Mining Lease M52/806
- Indicated Mineral Resources of 1.08 MT at 22% Mn and Inferred Mineral Resources of 0.75MT at 20% Mn
- Maiden Mineral Resources estimated over Area 74, Brumby Creek, Black Hill and Horseshoe areas, over 6 prospects in total
- Manganese defined as a critical mineral by many countries, including the United States for its use in steelmaking and batteries[1]

MANGANESE EXPLORATION - WHAT'S COMING UP?

- Mining Licence applications to be lodged to support future feedstocks for mining project based on granted mining lease at Horseshoe Manganese M52/806
- Gradient Array Induced Polarisation (GAIP) surveys covering prospective areas
- Drilling in March to follow-up Brumby West deposit extension and further 2021 GAIP targets
- Ore sorting of bulk samples by Steinert

Bryah Resources Limited (ASX: BYH, "Bryah" or "the Company") is pleased to announce its maiden Manganese JORC Resource. Bryah owns 49% of the manganese rights in a Joint Venture with OM (Manganese) Ltd, ("OMM") a wholly owned subsidiary of OM Holdings Limited (ASX: OMH).

Commenting on the maiden JORC Resource, Bryah CEO Ashley Jones said:

"We are very pleased to announce the Maiden Mineral Resource for the Bryah Basin JV Project with OM Manganese. The JV with OMM has allowed us to drill these targets out and convert them to Indicated and Inferred Mineral Resources. These Mineral Resources will now underpin mining licence applications in the Brumby Creek and Black Hill locations. The Horseshoe South area Mineral Resources are already located on a granted mining lease and this will take us one step closer to where we want to be - producing manganese.

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[1] Source: https://www.usgs.gov/news/national-news-release/us-geological-survey-releases-2022-list-critical-minerals

The manganese cut off parameters at 15% are high relative to many of our peers, which we anticipate will result in potentially higher yields to make a saleable manganese product. Having historical production from the area gives us confidence in progressing towards a production outcome.

The success of the GAIP geophysics in the last year and the planned new GAIP surveys will allow us to rapidly test the potential for further targets along the prospective Horseshoe Formation. The surveys will be followed up with RC drilling later this year."

Table 1 2012 JORC Manganese Mineral Resources at 15% Mn Cut-off

Prospect	Category	Kt*	Mn %	Fe %
Area 74	Indicated	239	23.6	21.4
Brumby Creek East and Brumby Creek West		525	21.2	19.1
Horseshoe South and Horseshoe South Extended		295	20.5	23.6
Black Hill		24	29.7	20.2
Total Indicated		**1,083**	**21.7**	**20.9**
Brumby Creek East and Brumby Creek West	Inferred	403	20.3	21.8
Horseshoe South and Horseshoe South Extended		351	19.5	29.9
Total Inferred		**753**	**19.9**	**25.6**
Total Mineral Resource		**1,836**	**21.0**	**22.8**

** Totals may not add up due to rounding. kT = 1,000 Tonnes*

Manganese Mineralisation Style

The mode of mineralisation for manganese in the Horseshoe Ranges is in-situ and detrital manganese formation within shale and siltstone, with rare thin Banded Iron Formation bands. The mineralisation is present on the flanks of iron stone ridges, typically at the change of slope zone between the ridges and the plains to the south and west of the folded Horseshoe Range. This change of slope is the zone of transition to softer, less resistant (to weathering) shale units as opposed to iron siltstones higher on the ridge.

Supergene regolith processes are the likely formation mechanism for all manganese mineralisation in this area. Elemental segregation within the weathering profile has resulted in manganese oxide forming within the saprolite profile of the shales and siltstones of the Horseshoe Formation as sub-horizontal to gently dipping lenticular bodies. This style of mineralisation is preserved at:

- Eastern area of Brumby Creek East
- Northern portion of Brumby Creek West
- Horseshoe Extensions

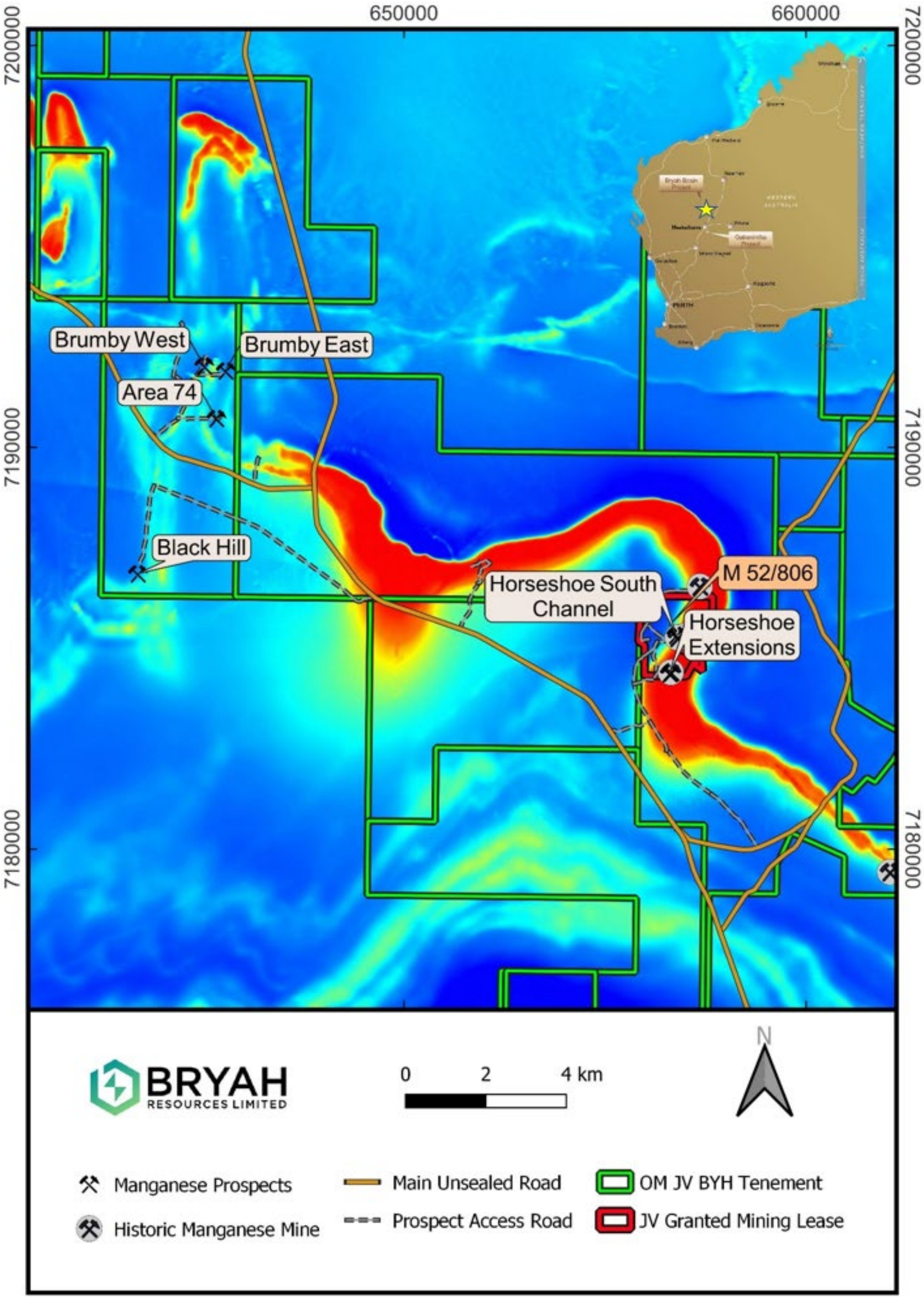

Figure 1 Location of Mn JV prospects with Mineral Resource on Aeromagnetics TMI RTP image

The other style of manganese deposit is formed by erosion and re-working of manganese material down-slope to form detrital deposits in channels. This is the style of mineralisation at:

- South end of Brumby Creek West
- West side of Brumby Creek East
- Area 74

- Black Hill Mesa
- Horseshoe South Channel

The manganese mineralisation forms conductive bodies, and as such geophysical GAIP surveys are being applied to generate targets for drill testing for buried manganese lenses. Ongoing exploration using geophysics and drilling is expected to find additional manganese deposits, with an aggressive exploration program planned for 2022.

Manganese Models

The manganese mineralisation has been geologically modelled using Leapfrog Geo™ software. Figures 2 to 4 below show the geological models, with topography coloured by elevation and drilling data used for the Mineral Resource estimates. Geological models have been created with other input data such as geological mapping and geochemical discrimination of lithological domains.

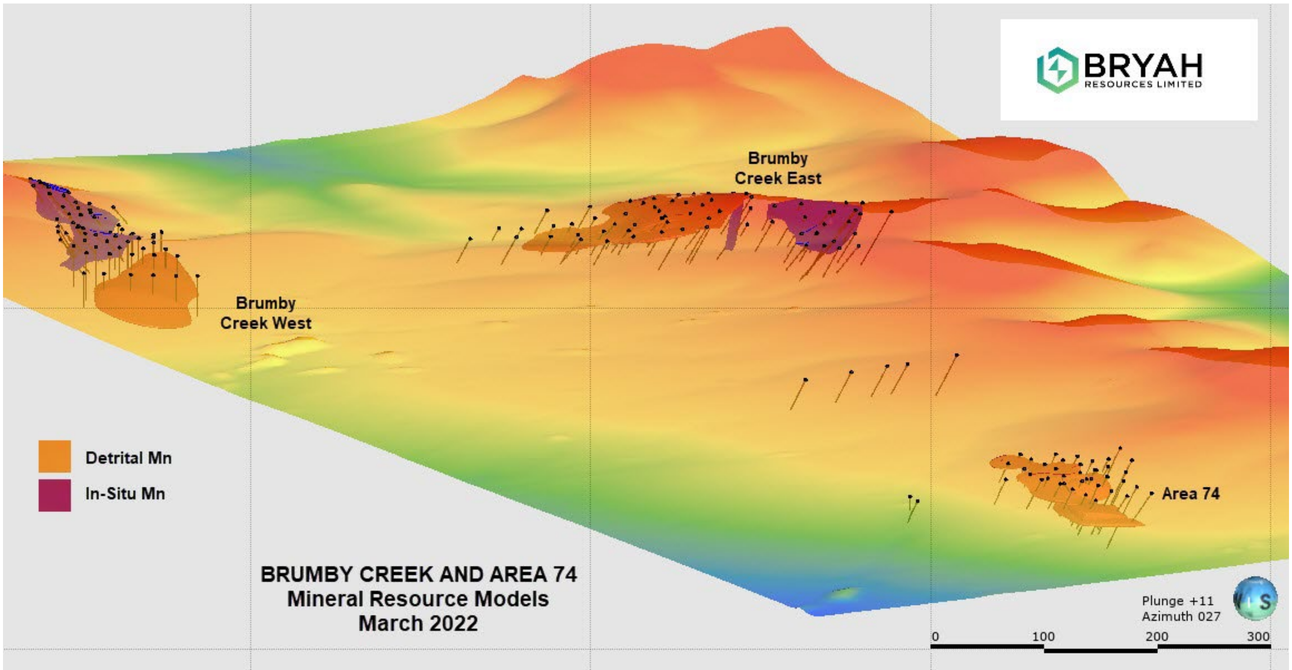

Figure 2 Brumby Creek and Area 74 Geology Models with terrain coloured by elevation, looking northeast

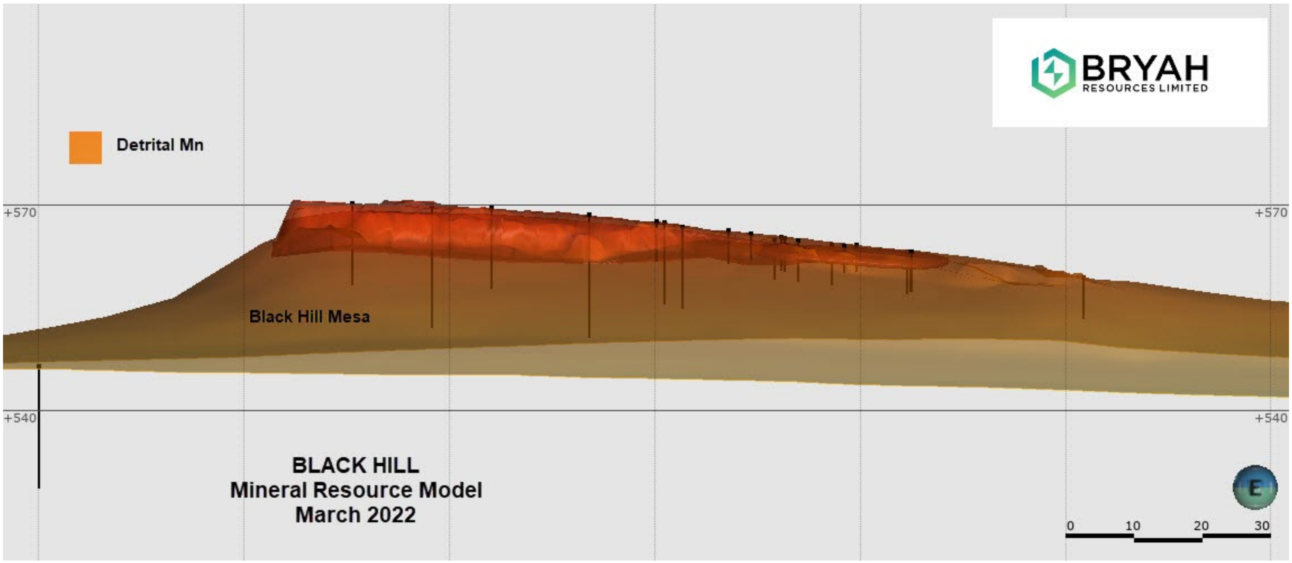

Figure 3 Black Hill Geology Model with terrain coloured by elevation, looking west

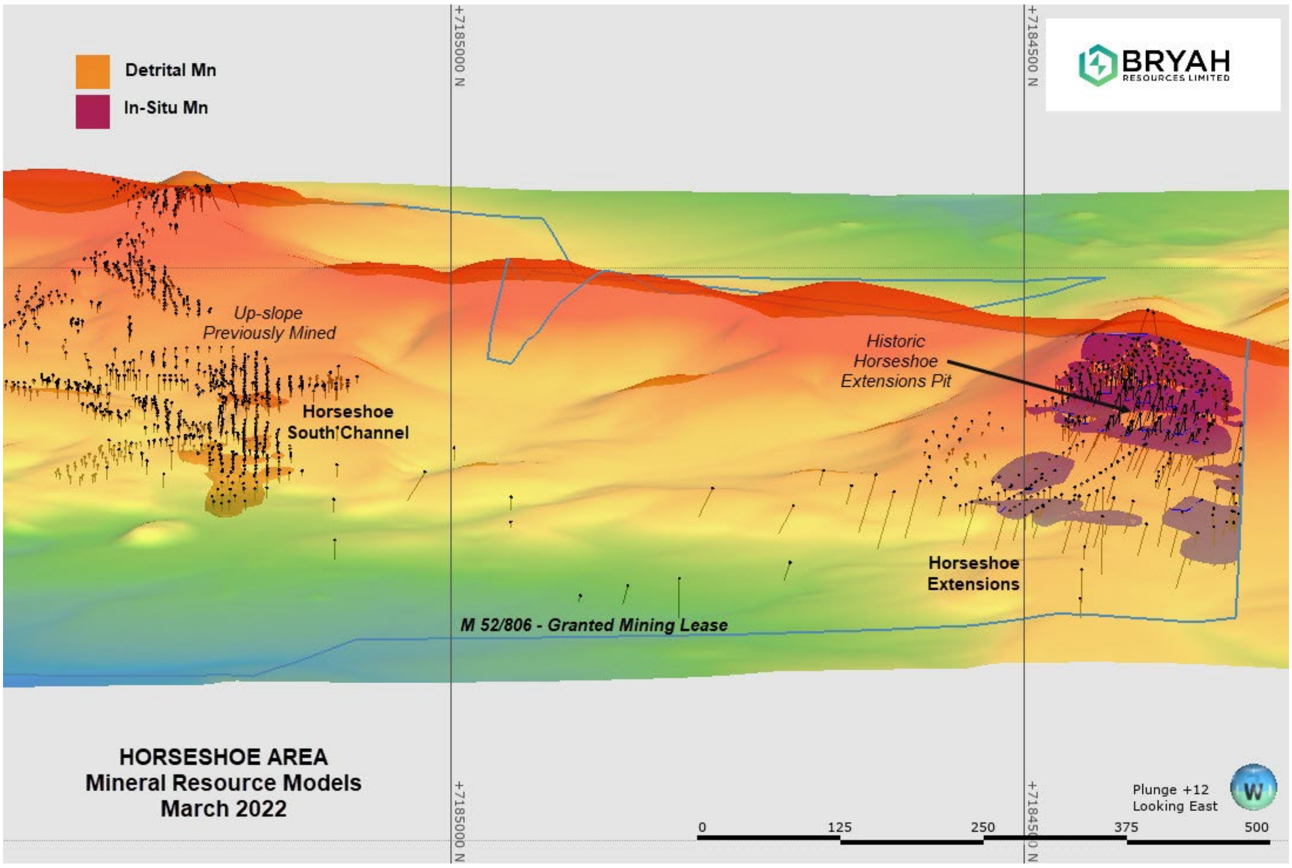

Figure 4 Horseshoe Area Geology Model with terrain coloured by elevation, looking east

Drill results received in early 2022 were included in the Mineral Resource Estimate for Brumby Creek. Reverse Circulation (RC) drilling in September 2021 identified an extension of the manganese mineralisation at the southern end of Brumby Creek West. The manganese is likely to be a channel deposit, and is situated under cover, beneath 10 – 15 metres of transported nodular ironstone and clay laterite. The additional drill results are shown in Figure 5 below. A cross section of the extension zone, with an outline of the Mineral Resource area is shown in Figure 6.

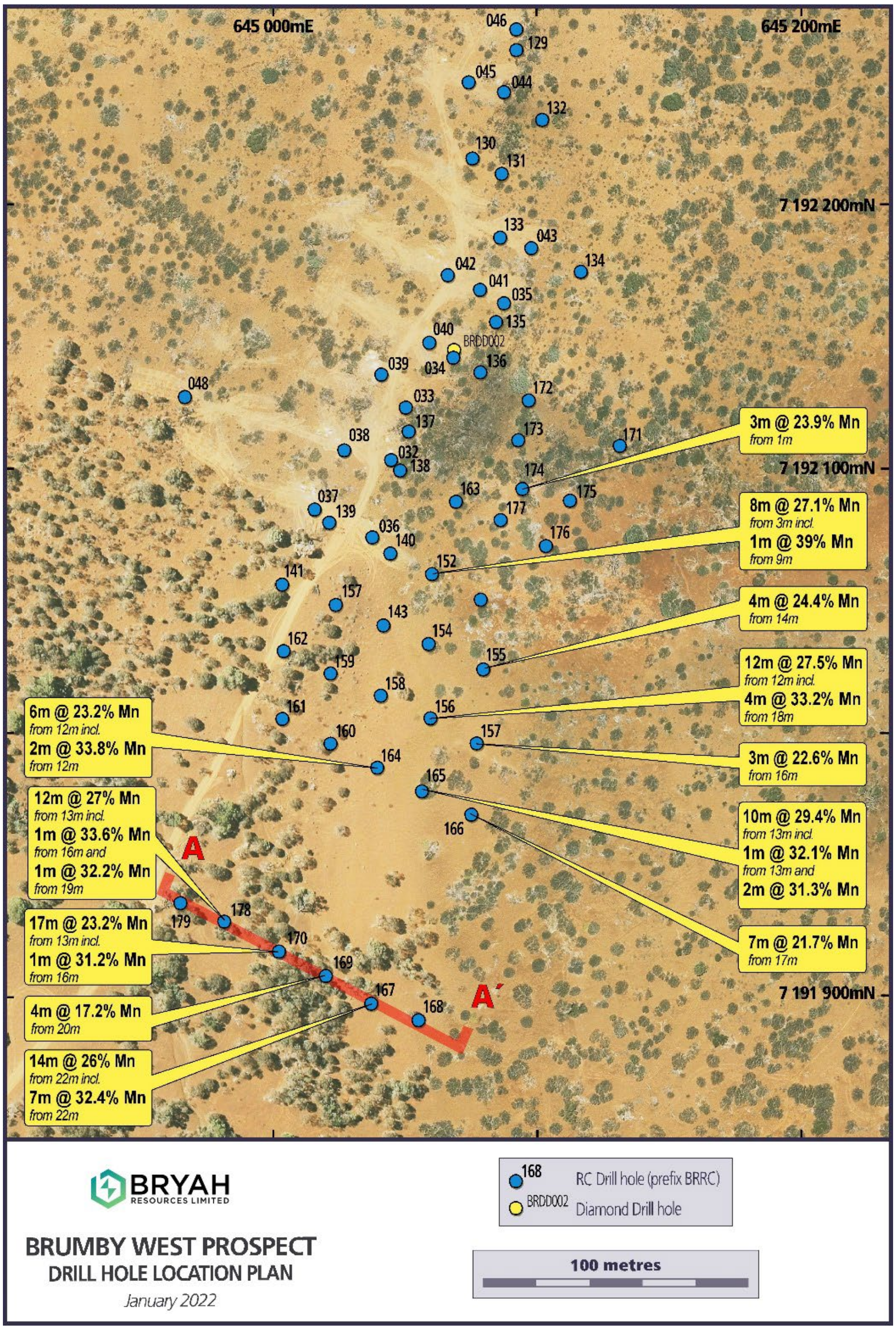

Figure 5 6 Collar Plan of Drilling at Brumby West with location of Drill Section

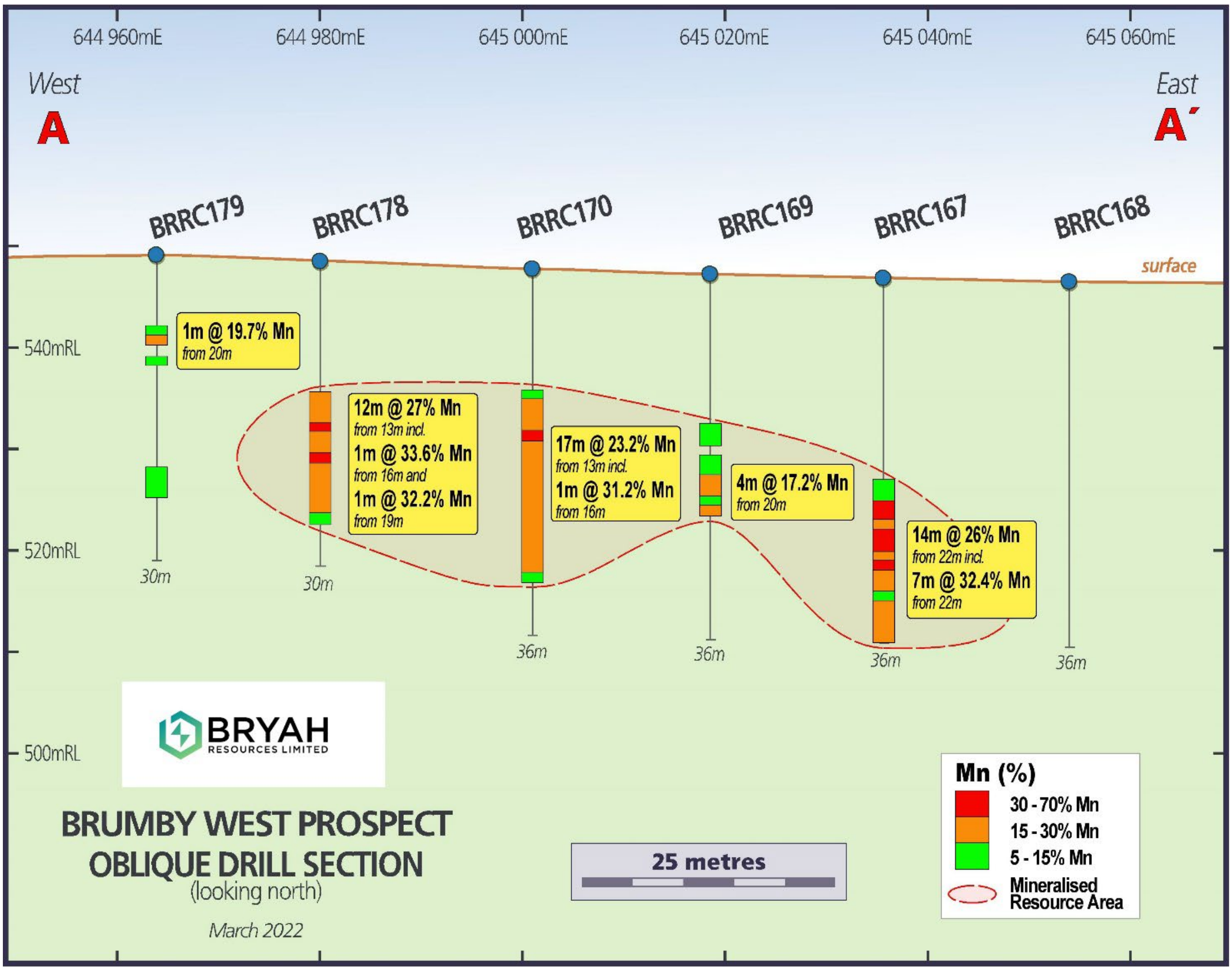

Figure 6 Cross Section through Brumby West Southern line showing extent of Mineral Resource estimation

Summary of Resource Estimate and Reporting Criteria

As per ASX listing rule 5.8 and the 2012 JORC reporting guidelines, a summary of material information used to estimate the Mineral Resource is detailed below, (for more detail please refer to Table 1, Sections 1 to 3 included in Appendix 1).

GEOLOGY AND GEOLOGICAL INTERPRETATION

The manganese deposits are formed from rocks of the Horseshoe Formation in the Bryah Basin. These rocks are sequences of iron siltstone, Banded Iron Formation and shale. Iron-rich units form an extensive range of hills, and the manganese deposits are located on the flanks of the hills. Two styles of manganese deposit are present; in-situ bedrock hosted manganese and re-worked/transported detrital channel manganese. The genesis of the manganese concentration is supergene, with in-situ deposits formed in the modern-day upper saprolite horizon. Later erosion, deposition and mechanical sorting with supergene over-print has resulted in manganese channel deposits forming down-slope in some places.

The deposits have been modelled using Leapfrog Geo™ software, specifically the Vein System geological modelling function. Interpolations were constrained using drilling, or if not closed by drilling, by hard boundaries half the drill spacing away from the last hole or using geological mapping where mineralisation crops out. Reference plane orientations were set to ensure the manganese was modelled as sub-horizontal to gently dipping bodies.

DRILLING TECHNIQUES AND HOLE SPACING

The manganese deposits have been drilled using reverse circulation methods. The typical drill spacing is 25m by 25m in areas of Indicated Mineral Resource category drilling by Bryah (Brumby Creek West; Brumby Creek East; Area 74). Black Hill is drilled to about 10m by 10m. At Horseshoe area where there is a large dataset of historical drilling, spacing can reduce to 5m by 5m in places. Some sections of the Inferred Mineral Resource Category have drill spacing of 60m between lines, but 20m spacing on the section lines (e.g., southernmost part of Brumby Creek West).

Diamond core drilling has been completed at four of the six prospects, for seven core holes in total. The diamond core was not assayed, being collected for metallurgy work, however the visual observations of the core and continual down hole XRF scanning have confirmed results obtained through the RC holes they were twinning.

SAMPLING AND SUB-SAMPLING TECHNIQUES

Drill samples were collected at one metre intervals, from a cyclone cone splitter mounted on the rig. Duplicates were collected every 20th metre from the second chute to check the split is representative of the entire metre.

SAMPLE ANALYSIS METHOD

Samples were sent to an accredited laboratory in Perth for an XRF suite of elements including all of the major elements plus base metals.

CUT-OFF GRADES

The geological manganese domains were modelled based on a 10 percent manganese cut-off grade. Small areas of lower grade and waste were incorporated into the Horseshoe South Extension domains beneath the existing pit where required for domain continuity.

Mineral Resource estimates have been stated at a 15 percent manganese cut-off grade.

ESTIMATION METHODOLOGY

The Mineral Resource estimate has been completed using Surpac Geovia™ software. Ordinary Kriging was applied, with Inverse Distance Squared (ID^2) check estimations also completed. The Mineral Resource stated in this release is an Ordinary Kriging estimate.

Samples were composited to 1m within each estimation domain, using fixed length option and a low percentage inclusion threshold to include all samples. Top-cuts were decided by completing an outlier analysis using a combination of methods including grade histograms, log probability plots and other statistical tools. Based on this statistical analysis of the data population, no top-cuts were applied.

Estimation parameters were based on the variogram models, data geometry and kriging estimation statistics. Variogram calculations were carried out on the 1m composites from domains with significant numbers of samples and then the parameters applied to other domains that had too few samples for variography. The estimate was resolved into 5m (E) x 5m (N) x 4m (RL) parent cells that had been sub-celled at the domain boundaries for accurate domain volume representation. Elements were estimated in three passes with the first pass using optimum search distance of 30m and the second run was set at 60m. A final pass used a large search distance in order to populate all remaining blocks.

Density was applied as a regression based on manganese content, with the regression based on volumetric/weight density calculations of whole trays of core.

CLASSIFICATION CRITERIA

The Mineral Resource has been classified on the basis of confidence in the geological model, continuity of mineralized zones, drilling density, confidence in the underlying database, a combination of search volume and number of data used for the estimation plus availability of bulk density information.

The Mineral Resources are classified as Indicated category in areas of 25m by 25m (or closer) spaced drilling by Bryah Resources. Where the drill spacing is broader, or the domains consist of largely historical drilling the category is Inferred.

MINING AND METALLURGICAL METHODS AND PARAMETERS

Past production

- 1948 to 1969: approximately 490,000 tonnes of high-grade ore at 42% Mn
- 2008 to 2011: Minerals Resources Ltd (ASX: MIN) produced over 400,000 tonnes of ore using Dense Media Separation to produce saleable Mn ore

All historical pits are shallow open pits. Current resources have a max depth of 45m and would also be amenable to shallow open pits.

Past production gives confidence that material beneficiates to a saleable Mn product. This is confirmed by current beneficiation sighter test work which is ongoing.

For further information, please contact:

Ashley Jones, CEO +61 8 9321 0001

This announcement has been produced in accordance with the Company's published continuous disclosure policy and has been approved by the Board

ABOUT BRYAH RESOURCES

Bryah's assets are all located in Western Australia, a Tier One global mining and exploration jurisdiction. Strategically the Projects are energy metals focused, or able to exploit synergies of geological knowledge, locality and exploration.

Gabanintha, near Meekatharra, has a JORC 2012 Mineral Resource for Cu, Ni, Co[2] and additional structural gold potential. The prospective Bryah Basin licences cover 1,048km^2 and have a potential new Volcanogenic Massive Sulphide (VMS) 'Horseshoe Lights type' mine analogue at the Windalah prospect, and multiple other similar untested targets. The area also contains extensive outcroppings of manganese, the subject of a substantial $7M joint venture with ASX listed OM Holdings Limited (ASX: OMH). OMH is a vertically integrated manganese producer and refiner with a market capitalisation of over $600m. Bryah and OMH have an excellent working relationship, with OMH having already spent over $2 million to earn-in to the Manganese Rights of the Project.

The copper nickel resource and recently identified gold mineralisation at Gabanintha will be the subject of further drill definition and a prefeasibility study to integrate the project with the Australian Vanadium Project (ASX: AVL). The resource has been defined by the drilling efforts of AVL in the development of its vanadium project and enabled Bryah to define a base metal resources inventory.

Bryah's base metals inventory at Gabanintha and manganese JV have a clear pathway to production, which will be significantly advanced in 2022 by the commencement and completion of metallurgical feasibility studies at both projects.

The Company's new Lake Johnston tenements are prospective for battery metals lithium and nickel and following the grant of these tenements, will undergo mapping and evaluation ahead of drilling. The corridor near Lake Johnson contains significant mines and discoveries of Ni and Li, including the Mount Holland Lithium Mine and the historical Maggie Hays/Emily Ann nickel deposits.

[2] See ASX announcement dated 1st June 2021 *'31.3 MT Ni-Cu-Co Mineral Resource at Gabanintha*

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.

COMPETENT PERSON STATEMENT – EXPLORATION RESULTS AND EXPLORATION TARGETS

The information in this report that relates to Exploration Results and Exploration Targets is based on and fairly represents information and supporting documentation prepared by Tony Standish. Mr Standish is a member of the Australasian Institute of Mining and Metallurgy and 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.

COMPETENT PERSON STATEMENT — MINERAL RESOURCE ESTIMATION

The information in this announcement that relates to Mineral Resources is based on and fairly represents information compiled by Mr Lauritz Barnes, (Consultant with Trepanier Pty Ltd), Dr Joe Drake-Brockman (Consultant with Drake-Brockman Geoinfo Pty Ltd) and Ms Gemma Lee (Principal Geologist with Bryah Resources). Mr Barnes, Dr Drake-Brockman and Ms Lee are members of the Australasian Institute of Mining and Metallurgy (AusIMM) and/or the Australian Institute of Geoscientists (AIG). All have 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. Specifically, Mr Barnes is the Competent Person for the estimation, Dr Drake-Brockman is the Competent Person for the geological model and site visits and Ms Lee is the Competent Person for the geological database. Mr Barnes, Dr Drake-Brockman and Ms Lee consent to the inclusion in this announcement of the matters based on their information in the form and context in which they appear.

Appendix 1 - 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.*	• For the Mineral Resource Bryah Resources Limited (Bryah Resources) utilised both angled and vertical Reverse Circulation (RC) drill holes. • 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. • 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. • 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. • The full length of each hole drilled was sampled. • Selected samples (based on visual logging) were collected and submitted to a contract commercial laboratory for sorting, drying, crushing, splitting, and pulverising. • 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.
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).*	• Bryah Resources' RC holes were drilled with a contract RC drilling rig. • Seven PQ size diamond core holes have been completed at four prospects. The holes were not assayed, being for metallurgy work, but have been continual XRF scanned, and geologically logged. Diamond core confirms the mineralisation encountered in RC holes.
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.*	• The RC samples were not weighed or measured for recovery on the rig but will be completed on a campaign basis later as required. A visual estimate of recovery was made in 3 categories (Poor/Fair/Good). • 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.

Criteria	JORC Code explanation	Commentary
		• 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. • 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.
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.*	• All 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. • RC logging is both qualitative and quantitative in nature. • The total length of the RC holes was logged. Where no sample was returned due to cavities/voids it was recorded as such.
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.*	• Sampling technique: ○ All RC samples were collected by the RC rig into a cyclone and then passed through the cone splitter. ○ The samples were generally dry, and all attempts were made to ensure the collected samples were dry. Moisture was logged in a qualitative way. ○ The cyclone and cone splitter were cleaned with compressed air at the end of every 6m RC drill rod. ○ 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. • Quality Control Procedures were: ○ A duplicated sample was collected at random intervals on the cyclone nominally 1 per 20 samples in recent drill campaigns (1 per 40 samples pre 2020). ○ Certified Reference Material (CRM) samples were inserted in the field every 40 samples containing a range of manganese values. ○ Blank sample inserted at the start of every hole. ○ Overall QAQC insertion rate of 1:15 samples ○ Laboratory repeats taken and standards inserted at pre-determined level specified by the laboratory. ○ 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

Criteria	JORC Code explanation	Commentary
		samples are then riffle split. Samples are then pulverised by LM5 or disc pulveriser to 80% passing -75 microns ○ 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.
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.*	• XRF is suitable for the total analysis of a range of geological ores and is appropriate for analysis of manganese and its associated impurities. • Duplicates 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.*	• Significant intersections have been independently verified by alternative company personnel. • The use of twinned holes has not been implemented. • Drilling of diamond core has confirmed the deportment of the manganese mineralisation and provided bulk density information. • The Competent Person has visited the site and supervised and inspected the drilling and sampling processes in the field. • All primary data related to logging and sampling are captured using laptops into Microsoft Excel (pre 2020) and LogChief templates (2020 onwards). • 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. • No adjustments or calibrations have been made to any assay data, apart from resetting below detection values to half positive detection.

Criteria	JORC Code explanation	Commentary
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 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. • 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. • The grid system for the Bryah Basin prospect is MGA_GDA94 Zone 50. • Topographic control is from a digital elevation model derived from aerial geophysical surveys,
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 program tested several locations there was considerable variation in the drill spacing and drillhole orientation. • The drill spacing in this program is to provide sufficient information to establish the degree of geological and grade continuity applied under the 2012 JORC code for a mineral resource. Sample compositing was not applied to this drilling; all sampling was at 1m intervals.
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.*	• The attitude of the lithological units varies greatly both within the prospects and between prospect to prospect. • The sedimentary package at Horseshoe South strikes roughly north-south but due to folding can dip at a range of attitudes and directions. Manganese mineralisation can follow and/or overprint sedimentary bedding. • No drilling orientation and sampling bias has been recognized at this time and it is not considered to have introduced a sampling bias.
	• *The measures taken to ensure sample security.*	• The samples collected were placed in calico bags and transported to the relevant Perth laboratory by company personnel. • 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 drilled in this program (E52/3237 and E52/1806) are 100% owned or beneficially held by Bryah Resources Limited. OM (Manganese) Limited holds a 51% joint venture interest in respect to the manganese rights only on these tenements. • 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 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.

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 m) 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 previous announcements for all manganese drill intercepts: Refer to ASX:BYH releases: *Manganese Drilling Confirms New Mineralised Areas, 21 January 2022* *High-Grade Manganese at Horseshoe South, 5 January 2021* *Manganese Drilling Update, 17 December 2020* *Manganese Drilling Update, 18 September 2020* *Latest Drilling hits High-Grade Manganese Zone, 26 August 2020* *Horseshoe South Drilling Update, 9 June 2020* *Further High-Grade Manganese at Horseshoe South, 29 May 2020* *High-Grade Manganese in Latest Drilling, 2 August 2019* *Drilling Extends Manganese at Brumby Creek, 31 July 2019* *Bryah Continues Manganese Exploration Success at Black Beauty Prospect, 15 July 2019* *Significant Manganese Intersected in Bryah Basin, 4 July 2019* *New High-Grade Manganese Find at Brumby Creek, 16 August 2018*
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').*	• In this program there was some variation in the drill spacing and hole orientation. • Due to locally varying intersection angles between drill holes and lithological units all results are defined as downhole widths.
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.*	• Drill results have been previously released, including NSI results. Refer to ASX:BYH releases: *Manganese Drilling Confirms New Mineralised Areas, 21 January 2022*

Criteria	JORC Code explanation	Commentary
		High-Grade Manganese at Horseshoe South, 5 January 2021 *Manganese Drilling Update, 17 December 2020* *Manganese Drilling Update, 18 September 2020* *Latest Drilling hits High-Grade Manganese Zone, 26 August 2020* *Horseshoe South Drilling Update, 9 June 2020* *Further High-Grade Manganese at Horseshoe South, 29 May 2020* *High-Grade Manganese in Latest Drilling, 2 August 2019* *Drilling Extends Manganese at Brumby Creek, 31 July 2019* *Bryah Continues Manganese Exploration Success at Black Beauty Prospect, 15 July 2019* *Significant Manganese Intersected in Bryah Basin, 4 July 2019* *New High-Grade Manganese Find at Brumby Creek, 16 August 2018*
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 drilling to test for lateral extensions of manganese mineralisation have not yet been planned.

Section 3 Estimation and Reporting of Mineral Resources

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

Criteria	JORC Code Explanation	Commentary
Database Integrity	*Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.*	All the drilling was logged into Microsoft Excel (pre 2020) or into LogChief (2020 onwards) then loaded into a Microsoft SQL Server relational drill hole database using DataShed™ management software. Logging information was reviewed by the responsible geologist and database administrator prior to final load into the

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		database. All assay results were received as digital files, as well as the collar and survey data. These data were transferred directly from the received files into the database. All other data collected for the Bryah Basin Manganese project were recorded as Excel spreadsheets prior to loading into SQL Server. The data have been periodically checked by BYH personnel, the database administrator as well as the personnel involved in the Mineral Resource estimate for the project.
	Data validation procedures used.	Since 2020, all drill campaign data has been collected into a point of capture validation software program – Logchief. All data has been checked in 3D by the BYH field geologists after loading to the Company database, to ensure correctness. All data have been checked for overlapping intervals, missing samples, FROM values greater than TO values, missing stratigraphy or rock type codes, downhole survey deviations of ±10° in azimuth and ±5° in dip, assay values greater than or less than expected values and several other possible error types. Furthermore, each assay record was examined and mineral resource intervals were picked by the Competent Person. QAQC data and reports have been checked by the database administrator, MRG, and BYH geologists.
Site Visits	*Comment on any site visits undertaken by the Competent Person and the outcome of those visits.*	Mr Tony Standish, Ms Gemma Lee and Dr Joe Drake-Brockman have visited site on numerous occasions. Dr Drake-Brockman has completed extensive mapping at the Brumby Creek, Area 74 and Horseshoe area. Mr Standish and Ms Lee have supervised RC drilling of the deposits and reviewed data collection practices during drill programs. Data capture during the drilling programs is considered to be of good quality.
	If no site visits have been undertaken indicate why this is the case.	Not applicable.
Geological Interpretation	*Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.*	Previous manganese explorers and miners in the Horseshoe Ranges wrote about the sub-horizontal and lenticular nature of the deposits in Wamex Reports. As these findings were developed through mining of the deposits, there is reasonable confidence in the flat-lying models adopted for the manganese mineralisation. There is a geochemical distinction (namely in ratio of phosphorus and titanium, plus manganese and iron) between deposits higher on the hill (in-situ) and those lower on the flanks (detrital channel).

Criteria	JORC Code Explanation	Commentary
	Nature of the data used and of any assumptions made.	No assumptions are made regarding the input data.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	There are no alternative interpretations applied to the Mineral Resource estimation, and extrapolation of mineralised domains beyond the extent of drilling has been minimised due to the small nature of individual deposits.
	The use of geology in guiding and controlling Mineral Resource estimation.	The Mineral Estimation parameters are based largely on the orientation of the geological domains.
	The factors affecting continuity both of grade and geology.	Regolith processes are the main factor affecting continuity of grade and geology. Some stratigraphic influence is present on the in-situ mineralisation highest on the ranges, with lateral extent limited by the position of favourable shale units (as opposed to more iron stone rich units).
Dimensions	*The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	Deposits vary from 200m to 500m in strike length, with a width varying between 20m and 80m. The deposits extend to a maximum depth of 45 metres below surface, with mineralisation at surface in places.
Estimation and Modelling Techniques	*The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.*	Grade estimation was completed using Ordinary Kriging (OK) for the Mineral Resource estimate. Surpac Geovia™ software was used to estimate grades for Mn, Fe, Al, Si, Ti, and P using parameters derived from statistical and variography studies. Drill hole samples were flagged with wire framed domain codes. Sample data were composited to 1m using a using fixed length option and a low percentage inclusion threshold to include all samples. Most samples (99%) are around 1m intervals in the raw assay data. Top-cuts were decided by completing an outlier analysis using a combination of methods including grade histograms, log probability plots and other statistical tools. Based on this statistical analysis of the data population, no top-cuts were applied.

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		Directional variograms were modelled by domain using traditional variograms. Nugget values are moderate (around 20-30%) and structure ranges up to 120m in the primary zones. Variograms for domains with lesser numbers of samples were poorly formed and hence variography was applied from the higher sampled domains. Block model was constructed with parent blocks for 5m (E) by 5m (N) by 4m (RL) and sub-blocked to 2.5m (E) x 2.5m (N) x 0.5m (RL) for volume definition. All estimation was completed to the parent cell size. Three estimation passes were used. The first pass had a limit of 30m, the second pass 60m and the third pass searching a large distance to fill the blocks within the wire framed zones. Each pass used a maximum of 12 samples, a minimum of 6 samples and maximum per hole of 4 samples. Search ellipse sizes were based primarily on a combination of the variography and the trends of the wire framed mineralized zones. Hard boundaries were applied between all estimation domains.
	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	No previous estimates exist. Historical production consists of: 1948 to 1969: approximately 490,000 tonnes of high-grade ore at 42% Mn 2008 to 2011: Minerals Resources Ltd (ASX: MIN) produced over 400,000 tonnes of ore using Dense Media Separation to produce saleable Mn ore Past production gives confidence that material beneficiates to a saleable Mn product. This is confirmed by current beneficiation sighter test work which is ongoing and gives confidence to the use of a cut-off of 15% Mn
	The assumptions made regarding recovery of by-products.	There are no by-products associated with this Mineral Resource estimate.
	Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterization).	Estimates were undertaken for Si, Al, Ti and P which are deleterious elements in iron ore blast furnace feeds. This is relevant due to the use of manganese ore in steel making processes.

Criteria	JORC Code Explanation	Commentary
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. *Any assumptions behind modelling of selective mining units.*	There are no assumptions about the SMU.
	Any assumptions about correlation between variables.	All elements within a domain used the same sample selection routine for block grade estimation. No co-kriging was performed at the Bryah Resources manganese prospects.
	Description of how the geological interpretation was used to control the resource estimates.	The geological interpretation is used to define the mineralised domains. All domains are used as hard boundaries to select sample populations for variography and grade estimation. All material is oxide.
	Discussion of basis for using or not using grade cutting or capping.	Analysis showed that none of the domains had statistical outlier values that required top-cut values to be applied.
	The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	Validation of the block model included a volumetric comparison of the resource wireframes to the block model volumes. Validation of the grade estimate included comparison of block model grades to the declustered input composite grades plus swath plot comparison by easting and elevation. Visual comparisons of input composite grades vs. block model grades were also completed.
Moisture	*Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	All mineralisation tonnages are estimated on a dry basis. The moisture content in mineralisation is considered very low.
Cut-Off Parameters	*The basis of the adopted cut-off grade(s) or quality parameters applied.*	Grade envelopes have been wireframed to an approximate 10% Mn cut-off allowing for continuity of the mineralised zones. Past production gives confidence that material beneficiates to a saleable Mn product. This is confirmed by current beneficiation sighter test work which is ongoing and gives confidence to the use of a cut-off of 15% Mn being used for Mineral Resource reporting. The 15% manganese cut-off results in a manganese to iron ratio of around 1, which is expected to improve and reach saleable specifications with on-site beneficiation processes.

Criteria	JORC Code Explanation	Commentary
Mining Factors or Assumptions	*Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	Previous historical mining of manganese in the Horseshoe Ranges by Mineral Resources used shallow open pit mining. Potential mining of these new Mineral Resources are assumed to be by shallow open cut pits.
Metallurgical Factors or Assumptions	*The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	Some sighter samples and bulk ore samples have been tested for susceptibility to beneficiation, with preliminary results indicating material can be upgraded in manganese content, with removal of silica, aluminium and iron. Metallurgy work is ongoing with ore sorting and beneficiation sighter test work still in progress. Beneficiation of the manganese ore by Mineral Resources during 2008 to 2011 using Dense Media Separation has demonstrated the deposits are amenable to upgrade to produce saleable Mn ore.
Environmental Factors or Assumptions	*Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfield project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	On-site beneficiation of the manganese would result in an oxidised iron-clay rich waste. This material is not expected to have any implications for waste stockpiling due to the strongly oxidised nature, and similarity to existing material in the naturally occurring surface rocks throughout the Horseshoe Ranges.
Bulk Density	*Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.*	Bulk density applied to the Mineral Resource is based on volumetric-mass determinations of whole trays of core. The density data consists of 98 trays of core drilled over 7 holes at four of the prospects which also adequately accounts for potential porosity of the weather rock. A regression between manganese (content measured by continual XRF scanning) and bulk density is applied to the model in the mineralised domains. The regression applied is: BD = 0.033 * Mn_pct + 2.084 Waste is assigned a bulk density of 2.15, which is the average density of the trays of core with less than 10 percent Mn. The bulk density is a dry density.

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	The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.	The density determinations used are volumetric-mass measurements, that account for internal void spaced in the rock.
	Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	It is assumed waste is reasonably uniform in bulk density value. Mining studies will consider waste movement in terms of BCM units rather than density.
Classification	The basis for the classification of the Mineral Resources into varying confidence categories.	Indicated Mineral Resources are defined nominally on 20-30mE x 20-30mN spaced drilling; and Inferred Mineral Resources nominally 20-30mE by up to 80mN with consideration given for the confidence of the continuity of geology and mineralisation.
	Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).	The Mineral Resource has been classified on the basis of confidence in the geological model, continuity of mineralised zones, drilling density, confidence in the underlying database, a combination of search volume and number of data used for the estimation plus availability of bulk density information.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	Competent Persons Ms Gemma Lee, Dr Joe Drake-Brockman and Mr Lauritz Barnes believe that the classification appropriately reflects their confidence in the grade estimates and robustness of the interpretations.
Audits or Reviews	The results of any audits or reviews of Mineral Resource estimates.	The current Mineral Resource estimate has not been audited.
Discussion of Relative Accuracy/ Confidence	*Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person.* *For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.*	The resource classification represents the relative confidence in the resource estimate as determined by the Competent Persons. Issues contributing to or detracting from that confidence are discussed above. No quantitative approach has been conducted to determine the relative accuracy of the resource estimate. The Ordinary Kriged estimate is considered to be a global estimate with no further adjustments for Selective Mining Unit (SMU) dimensions. Accurate mining scenarios are yet to be determined by mining studies. No production data is available for comparison to the estimate. The local accuracy of the resource is adequate for the expected use of the model in the mining studies.

Criteria	JORC Code Explanation	Commentary
	The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.	These levels of confidence and accuracy relate to the global estimates of grade and tonnes for the deposit.
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	This Mineral Resource estimate grade and quantity are realistic compared to historical production of nearly 1 million tonnes, of manganese greater than 30% from the Horseshoe area. Historical production consists of: • 1948 to 1969: approximately 490,000 tonnes of high-grade ore at 42% Mn • 2008 to 2011: Minerals Resources Ltd (ASX: MIN) produced over 400,000 tonnes of ore using Dense Media Separation to produce saleable Mn ore