

# Star Minerals Limited commences drilling at Tumblegum South Gold Project

## HIGHLIGHTS

- **Star Minerals has started drilling at its Tumblegum South gold project.**
- **1,500m drill program initiated to further define and expand on the current gold Resource.**
- **As stated in the prospectus, Star Minerals will focus on Tumblegum South and is moving rapidly to monetise the asset.**
- **Existing Inferred Resource estimate for the project totals 600kt, at a grade of 2.2 g/t Au.**

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Star Minerals Limited (ASX: SMS, “the Company” or “Star Minerals”) is pleased to advise that it has mobilised to site and started the first phase of its drilling program to expand the Company’s knowledge of the geology and grade characteristics of its Tumblegum South gold project.

Assisted by staff from Bryah Resources Limited, the Company has been able to rapidly mobilise to site within days of listing on the ASX.

Star Minerals’ CEO, Greg Almond comments: “We are thrilled to be able to mobilise to site and grateful for the assistance from Bryah and Australian Vanadium Limited staff, and the Impact Drilling team.

The drillers were on the road almost as soon as the ASX bell was rung, which is a testament to the great efforts Star Minerals and Impact Drilling made to get everything ready to go.

We believe our investors will be encouraged by this news, as it demonstrates our desire to hit the ground running at Tumblegum South and do what we stated we would – put the money in the ground and develop our gold asset.”



**Figure 1 Drilling underway at Tumblegum South**

As outlined by Star Minerals during its IPO stage, the Company intends to immediately explore and develop Tumblegum South, with drilling activities commencing almost immediately after the official ASX listing on 27<sup>th</sup> October.

The current work shows that the Company is determined to follow up and remain committed to executing its strategy as laid out.

The Company has engaged Impact Drilling to undertake this work, and has been greatly impressed with the fast mobilisation, high quality equipment and professional attitude shown by Impact.

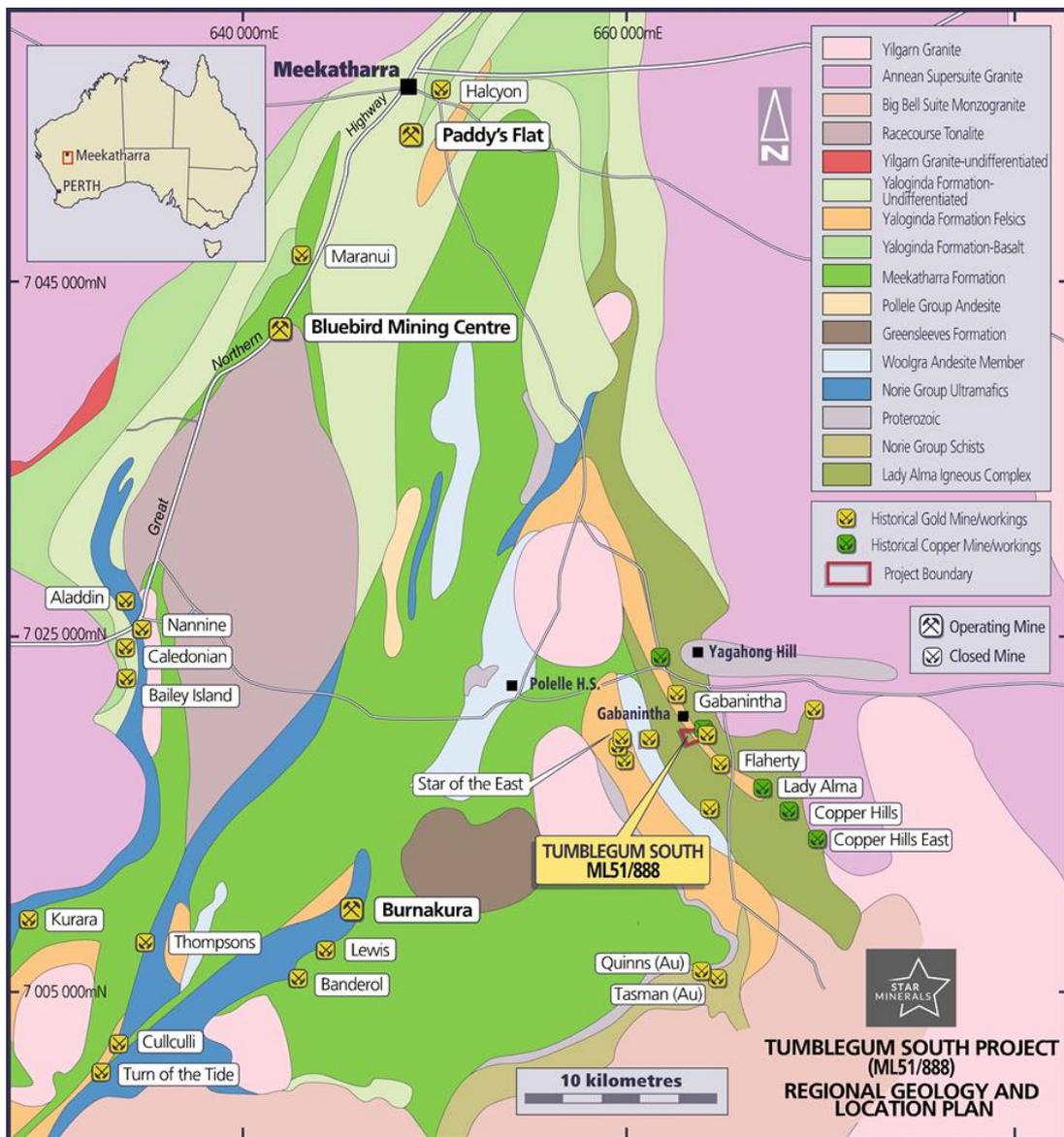


Figure 2 Tumblegum South Project Geology and Location



Tumblegum South has an existing Inferred Resource estimate which totals 600kt, at a grade of 2.2 g/t Au. This work was undertaken by Bryah Resources Limited in January 2020<sup>1</sup>.

Tumblegum South is located approximately 40km south of the town of Meekatharra in Western Australia (see Figure 2). The existing mining lease ML51/888 is directly along strike from the Tumblegum Pit which was mined by Dominion during the 1987–1992 Gabanintha Gold Mine Joint Venture. The Company's current focus is on gold, but there is also significant copper potential on the lease.

*For further information, please contact:*

**Greg Almond, CEO** +61 8 9226 1860

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

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<sup>1</sup> See Bryah Resources Limited (ASX: BYH) ASX announcement dated 29<sup>th</sup> January 2020 'Maiden Gold Resource at Gabanintha'



## **ABOUT STAR MINERALS LIMITED**

SMS is focused on development and exploration of its copper and gold projects. The Company will be using the data gathered to complete the required works to bring the Tumblegum South project up to the necessary level for a decision to mine to be made. In addition, it will use the latest exploration techniques as well as results of previous exploration work undertaken by Bryah Resources and other explorers to investigate the potential of both the Tumblegum South and West Bryah projects.

The Board's strategy is to advance the exploration and development of its deposits wherever possible, utilising established mining operations and infrastructure to achieve low risk early production outcomes.

In addition, the Company intends to continue to investigate ways to grow its business by:

- acquisition, application, or joint venturing into areas surrounding and adjacent to the Projects; and
- acquisition, application, or joint venturing into other, unrelated but economically attractive projects compatible with the Company's goals and capabilities if, and when opportunities of this type come available.

### **Competent Person Statement**

*The information in this announcement that relates to Exploration Results is based on information compiled by Mr Tony Standish, who is a Member of the Australian Institute of Geoscientists. Mr Standish is a consultant to Star Minerals Limited and Bryah Resources Limited. Mr Standish has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Standish consents to the inclusion in this announcement 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 announcement that relates to Mineral Resources is based on and fairly represents information compiled by Mr Ashley Jones, Non-Executive Director of Star Minerals Limited and 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 consents to the inclusion in this announcement of the matters based on his 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.*

## Gabanintha Mineral Resource Estimate (Tumblegum South Prospect)

### JORC Code, 2012 Edition – Table 1 Exploration Results

#### Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
<i>Sampling techniques</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>At Tumblegum South, Bryah Resources Limited (Bryah) drilled angled Reverse Circulation (RC) drill holes in 2017 (26 holes for 2,486 m) and 2019 (16 holes for 1,583 m). RC holes were drilled by Yellow Rock Resources (YRR) (now Australian Vanadium Limited) in 2013 (7 holes for 1,571 m).</li> <li>RC drilling was drilled to generally accepted industry standard producing 1 metre samples which were collected beneath the cyclone and then passed through a cone splitter (2019, 2013) or riffle splitter (2017).</li> <li>The splitter reject sample was collected into plastic buckets and laid out on the ground in 10-20m rows (BGRC001 - BGRC030), then collected in green plastic bags and stored in rows at the drill site (BGRC031 - BGRC042). Green plastic bags for reject drill cuttings were used for the 2013 drilling (GRC1148 – GRC1150; GRC1156 – GRC1159).</li> <li>2013 holes were sampled directly from 1 metre calico splits from the rig cone splitter. 2017 and 2019 holes were sampled as initial 3 metre composites using a PVC spear to produce an approximate representative 3kg sample into pre-numbered calico sample bags. In 2019 where geological logging indicated mineralisation, 1 metre cone split samples from the rig were submitted directly, instead of composites. Intervals that appeared mineralised, along with an approximate 3 metre margin, were collected as 1 metre samples from the RC rig splitter.</li> <li>From the 2017 and 2019 drilling anomalous 3 metre composites (returning greater than 0.2 g/t Au) have been individually assayed using the 1m samples which were collected beneath the RC rig cyclone and passed through the splitter.</li> <li>The full length of each hole drilled was sampled.</li> <li>All Bryah samples collected were submitted to a contract commercial laboratory for drying, crushing and homogenising the sample to produce a 50g charge for fire assay and a separate sample for multi-element analysis using 4 Acid Digest with ICP-OES finish.</li> </ul>
<i>Drilling techniques</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Bryah's Reverse Circulation (RC) holes were drilled with a contract RC drilling rig.</li> <li>All RC holes were drilled using a 140 mm face-sampling drilling bit.</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>• In 2013 the RC samples were not weighed or measured for recovery. 2017 calico samples submitted to the laboratory were weighed, but no qualitative record of drill recoveries or sample condition were made at the drill site. 2019 samples were qualitatively described 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 is recorded as good, fair, poor or no sample.</li> <li>• Bryah is satisfied that the RC holes have taken a sufficiently representative sample of the mineralisation and minimal loss of fines has occurred in the RC drilling resulting in minimal sample bias.</li> <li>• No twin RC drill holes have been completed to assess sample bias.</li> <li>• At this stage no investigations have been made into whether there is a relationship between sample recovery and grade.</li> <li>• Three metre composite spear samples used for initial assay were replaced by one metre individual splits in all zones returning Au greater than 0.2 g/t in the composite.</li> </ul>
<i>Logging</i>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All the 1m RC samples were sieved and representative washed chip sample collected into 20 compartment chip trays for geological logging of colour, weathering, lithology, texture, alteration and mineralisation.</li> <li>• RC logging is both qualitative and quantitative in nature.</li> <li>• All chip trays from the 2017 and 2019 drilling have been returned to Perth for storage in company storage. 2017 chip trays have all been photographed.</li> <li>• The total length of all the RC holes were logged. Where no sample was returned due to cavities/voids it was recorded as such.</li> <li>• Magnetic susceptibility readings were collected for each 1 metre sample (calico or green plastic bag), recorded with sampling data and transcribed into digital format for the 2019 drilling. It was not recorded during earlier drill campaigns.</li> <li>• In 2019 the fine residue from sieving chips was collected in 38um plastic zip-lock bags and tested utilizing portable XRF analysis at the Bryah field camp to assist in field interpretation of lithology. 2017 composite samples were analysed by the commercial laboratory using portable XRF on the pulps prepared for fire assay analysis.</li> </ul>
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the</i></li> </ul>	<ul style="list-style-type: none"> <li>• Sampling technique: <ul style="list-style-type: none"> <li>○ All RC samples from the RC rig were collected in the cyclone and then passed through a splitter (cone splitters in 2013 and 2019; riffle splitter in 2017).</li> <li>○ The samples were generally dry, and all attempts were made to ensure the</li> </ul> </li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>sample preparation technique.</i></p> <ul style="list-style-type: none"> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <i>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.</i></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<p>collected samples were dry. Sample dryness was recorded for every metre in 2019. No record of sample dryness was made for the 2013 and 2017 drilling.</p> <ul style="list-style-type: none"> <li>○ The cyclone and splitter were cleaned with compressed air at the end of every 6 m RC drill rod.</li> <li>○ The sample sizes were appropriate to correctly represent the mineralisation based on the style of mineralisation, the thickness and consistency of intersections, the sampling methodology and percent value assay ranges for the primary elements.</li> <li>• Quality Control Procedures – 2017, 2019 <ul style="list-style-type: none"> <li>○ A duplicated sample was collected every 50 samples for the 3 m composites.</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 crushed basalt (“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>○ Sample preparation occurred in the Intertek (Maddington, WA) laboratory.</li> <li>○ The samples were weighed and dried, then crushed to -2mm using a jaw crusher, and pulverised to -75 microns for a 50g Lead collection Fire Assay to create a homogeneous sub-sample. The pulp samples were also analysed for a suite of 33 elements using 4 Acid Digest with ICP-OES.</li> <li>○ The sample sizes are considered appropriate to correctly represent the gold 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> <li>• Internal laboratory QAQC was performed for the 2013 sampling. No record exists of field QAQC used.</li> </ul>
<p><i>Quality of assay data and laboratory tests</i></p>	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <i>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.</i></li> <li>• <i>Nature of quality control procedures adopted (e.g., standards, blanks,</i></li> </ul>	<ul style="list-style-type: none"> <li>• Duplicates of every 50<sup>th</sup> 3 m composite and samples containing standards and blanks were included in the analyses during 2017 and 2019. Field duplicates of the rig splitter sampling is not employed, though submission of both 3 metres speared composites with results being verified by submission of 1 metre rig splits validates the repeatability of the significant gold intercepts.</li> <li>• All samples from the 2017 and 2019 programs were assayed for gold using fire assay on a 50 gram charge. Multi-element data on the 1 metre split samples was collected using ICP-OES after a 4 acid digest. Gold, silver, lead, zinc and copper</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e., lack of bias) and precision have been established.</i></p>	<p>were analysed in 2013 using Aqua Regia digest with an ICP-MS finish. Samples with greater than 500 ppb gold in the 2013 analysis were also analysed by AAS finish to resolve the higher gold values. These methods are all considered appropriate for full determination of assay values.</p> <ul style="list-style-type: none"> <li>• Portable XRF used by Intertek Genalysis in 2017 was an InnovX Delta Premium HCR portable XRF (pXRF) on soil mode, set to 10 seconds per beam for multi-element data. The Portable XRF used at the Bryah field camp in 2019 was on soil mode with 20 seconds per beam for multi-element data.</li> </ul>
<p><i>Verification of sampling and assaying</i></p>	<ul style="list-style-type: none"> <li>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Significant intersections have been independently verified by alternative company personnel.</li> <li>• The use of twinned holes has not been implemented.</li> <li>• The Competent Person has visited the site and supervised the drilling and sampling process in the field.</li> <li>• All primary data related to logging and sampling are captured on paper logs and entered into validating Excel templates prior to load to the Company SQL database by Bryah's Database Manager.</li> <li>• All paper copies of data have been stored.</li> <li>• No adjustments or calibrations were made to any assay data, apart from resetting below detection values to half positive detection.</li> </ul>
<p><i>Location of data points</i></p>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Specification of the grid system used.</i></li> <li>• <i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All collars were initially located by the Competent Geologist using a conventional hand-held GPS.</li> <li>• Following completion of the drilling in 2017 and 2019 the hole collars were independently surveyed by a Licensed Surveyor from RM Surveys using a real time kinematic differential GPS for accurate collar location and RL with the digital data entered directly into the company Access database. 2013 drill positions were recorded by the supervising geologists at the time and are accurate to about 3 metres, being picked up using a handheld GPS.</li> <li>• Downhole surveys were completed on all the RC drill holes by the drillers. They used a Reflex EZ-Shot gyro downhole multi-shot tool to collect the surveys every 30m down the hole during 2019 and 2017. A Reflex single-shot camera was used in 2013 at about 3 rods down hole, then every 100 m downhole, with an end of hole survey also taken. Due to strong magnetics in some of the rocks at Tumblegum South some single-shot camera surveys were not used during interpretation as the azimuth reading was implausible.</li> <li>• The grid system for the Tumblegum South Prospect is MGA_GDA94 Zone 50.</li> </ul>
<p><i>Data spacing and distribution</i></p>	<ul style="list-style-type: none"> <li>• <i>Data spacing for reporting of Exploration Results.</i></li> <li>• <i>Whether the data spacing and distribution is sufficient to establish the</i></li> </ul>	<ul style="list-style-type: none"> <li>• Drill spacing in key areas is on about 25 metre line spacings by 25 m drill centres.</li> <li>• The drill spacing is now considered sufficient to establish the degree of geological</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i></p> <ul style="list-style-type: none"> <li>• <i>Whether sample compositing has been applied.</i></li> </ul>	<p>and grade continuity applied under the 2012 JORC code. Sample compositing was been applied to parts of this drilling program, with 1m samples collected composited to 3m composites by spear sampling of the reject material from the rig. Composite sampling was repeated/replaced with 1 metre rig-split samples where Au greater than 0.2 g/t was returned.</p>
<p><i>Orientation of data in relation to geological structure</i></p>	<ul style="list-style-type: none"> <li>• <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The attitude of the lithological units is predominantly Easterly dipping to sub-vertical. Therefore, most holes were drilled with an azimuth of 270 degrees to the West to intersect the structures at right angles to the orientation of the lithological units. Some holes were drilled in other orientations to intersect specific mineralised structures, but always approximately orthogonal to the strike of the 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>
<p><i>Sample security</i></p>	<ul style="list-style-type: none"> <li>• <i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The calico samples are packed into polyweave sacks and then placed inside sealed Bulker Bags. The Bulker Bags are then delivered to a 3<sup>rd</sup> party dispatch point in Meekatharra by Company staff.</li> <li>• Chain of Custody was managed by the Company.</li> <li>• The samples were transported to the relevant Perth laboratory by professional transport companies, or company personnel.</li> <li>• Once received at the laboratory, samples were stored in a secure yard until analysis.</li> <li>• The lab receipts received samples against the sample dispatch documents and issues a reconciliation report for every sample batch.</li> <li>• Sample security was not considered a significant risk to the project.</li> </ul>
<p><i>Audits or reviews</i></p>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <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
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>The relevant tenements are 100% owned by Australian Vanadium Ltd (AVL)</li> <li>Bryah acquired the precious and base metal rights to the tenements from AVL in 2017 through a Mineral Rights Sale Agreement. AVL retains 100% rights in the V/U/Co/Cr/Ti/Li/Ta/Mn &amp; iron ore on the Gabanintha Project.</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>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Dominion Mining Ltd completed significant exploration in the area, resulting in mining of the Gabanintha deposits immediately north of Tumblegum South between 1987 and 1992. Other workers have also completed significant exploration for gold in the immediate surrounds, including Metallica NL in 2001 who completed aircore drilling; Reward Minerals in 2005 – 2006 who completed 27 RC holes for 3,249 m and Kentnor Gold Ltd who commissioned a regional interpretation of the geophysics and field mapping, plus drilled 11 RC holes for 1,683 m to the north and east of Tumblegum South. No drilling from these phases of exploration occurred at the Tumblegum South deposit but do provide information about the rocks and gold controls in the local surrounds.</li> <li>Exploration by Australian Vanadium Limited (formerly Yellow Rock Resources) on the relevant tenement in respect to gold and base metals has included: <ol style="list-style-type: none"> <li>Soil geochemistry sampling</li> <li>Induced Polarisation surveys</li> <li>RC drilling in 2013 (7 holes for 1,571 m), and</li> <li>Airborne Magnetic and Radiometric survey in 2017.</li> </ol> </li> </ul>
<i>Geology</i>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The gold and base metals mineralisation is within Archaean greenstone-hosted shear zones (with or without stockwork gold-bearing Quartz-Carbonate veining) close to the contact between the mafic basalt, dolerite and ultramafic rock units in the Yilgarn Craton of Western Australia.</li> </ul>
<i>Drill hole Information</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <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> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Refer to Appendix 1 of this Announcement</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>○ down hole length and interception depth</li> <li>○ hole length.</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>	
Data aggregation methods	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>● A nominal 0.5 g/t Au Cut-off grade was applied in reporting of significant intercepts.</li> <li>● Intercepts reported are length weighted averages.</li> <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 mineralisation widths and intercept lengths	<ul style="list-style-type: none"> <li>● These relationships are particularly important in the reporting of Exploration Results.</li> <li>● If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>● If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g., 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>● Due to locally varying intersection angles between drill holes and lithological units all results are defined as downhole widths.</li> </ul>
Diagrams	<ul style="list-style-type: none"> <li>● Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul style="list-style-type: none"> <li>● See attached figures within this announcement.</li> </ul>
Balanced reporting	<ul style="list-style-type: none"> <li>● Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>● All exploration results are reported in Appendix 1 and previous ASX announcements.</li> </ul>
Other substantive exploration data	<ul style="list-style-type: none"> <li>● 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.</li> </ul>	<ul style="list-style-type: none"> <li>● Down hole geological information was recorded by the rig geologist at the time of drilling.</li> </ul>
Further work	<ul style="list-style-type: none"> <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,</li> </ul>	<ul style="list-style-type: none"> <li>● Following a full review of the drilling and geological data, additional drilling may be undertaken by the Company at a future date.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i>	

### Section 3 Estimation and Reporting of Mineral Resources

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

Criteria	JORC Code explanation	Commentary
<b>Database Integrity</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Data validation procedures used.</li> </ul>	<ul style="list-style-type: none"> <li>Data validation has been undertaken by the company geologists that collected the field data, then it was again reviewed by the resource geologist for the Bryah drill campaigns in 2017 and 2019. Full paper records from the field are available for validation of the digital data. All original assay files are stored by Bryah on the company server as well as being loaded to the SQL database using DataShed™ software at which point normal database validation checks were performed.</li> <li>Data validation of the 2013 drill logging data was undertaken when converting the logging to codes in use in the Bryah database. All original assay files for the drilling are held by Bryah and these have been used to validate the data held in the company SQL database. Issues with two drill hole locations were discovered during the data validation process and as a result the holes were moved back to the planned location, which differed from the location provided by Australian Vanadium Limited (AVL) when the project was handed over to Bryah as part of the acquisition of various mineral rights from AVL. A drill log created at the time of drilling and .kml files for Google Earth that were created during drilling confirmed that the planned location was correct, and the database location was incorrect.</li> </ul>
<b>Site Visits</b>	<ul style="list-style-type: none"> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>The competent person has visited site in October 2019 and has seen the exposed geology, the historic workings and inspected drill sample archives of Company drilling while still located at drill pads.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Geological Interpretation</b>	<ul style="list-style-type: none"> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul style="list-style-type: none"> <li>The major lithologies at the deposit area have distinctive nickel populations and this has been used to discriminate between the host basalts, dolerite, komatiite basalt and serpentinised peridotite. These rock groups are also well documented in the records from mining of open pits immediately north of Tumblegum South. The logging of the drill holes by company geologists is broadly in agreement with the lithologies defined by nickel geochemistry.</li> <li>Mineralised lodes are defined by the presence of gold in excess of 0.3 g/t, with occasional inclusions of material between 0.1 and 0.3 g/t Au. Where geological logging and the presence of arsenic, copper, silver or tungsten anomalies indicate continuation of the structure in the absence of anomalous gold this has been used to further define the major structures associated with gold mineralisation.</li> <li>Leapfrog GEO™ software was used to model the major lithologies and the gold lodes using numerical modelling for the lithologies, and vein modelling for the gold lodes.</li> <li>Lithologies are a mafic – ultramafic package within the greenstone rocks, striking north – south through northeast to southwest with a steep dip to the east. The major mineralisation structures either align with lithological contacts between the basalts and ultramafics, or are cross-structures between lithological contacts that strike east – west to southwest to northeast. There is some Archaean dolerite intruded into the contact between basalt and ultramafic in the north of the deposit that is the area of higher grade values in the main northeast – southwest lode (Min2). The Archaean dolerite may have provided fluid pathways and/or favourable geochemistry for gold deposition.</li> <li>There is adequate geological and geochemical data to have reasonable confidence in continuity of the major rock types and the orientation of the gold-bearing structures.</li> </ul>
<b>Dimensions</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>The Inferred Mineral Resource has a length of 420 m in the northeast – southwest direction, and 220 m in the east - west cross structure direction.</li> <li>The lodes which are oriented northeast – southwest have a minimum thickness of about 1 m, to a maximum of about 6 m.</li> <li>The lodes oriented east – west have a minimum thickness of about 1 m, to a maximum of about 10 m.</li> <li>The Inferred Mineral Resource extends to a maximum depth of 190 metres where there are the deepest drill holes with intersections between 100 and 150 metres from surface.</li> <li>A stope void model was created in 3D based on the drill intersections into the voids. The void area was removed from the mineralised shapes. There is uncertainty to the location of the edges of the stope where it lies between drill sections.</li> </ul>
<b>Estimation and modelling techniques</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Gold estimation was completed using ordinary kriging (OK) for the Mineral Resource estimate. Surpac™ software was used to estimate grades for Au, Cu and Ag, using parameters derived from statistical and variography studies. Co-efficients of variation (COV) are high for all three elements for both lode orientations. Au COV for the main</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>• <i>If a computer assisted estimation method was chosen include a description of computer software and parameters used.</i></li> <li>• <i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i></li> <li>• <i>The assumptions made regarding recovery of by-products.</i></li> <li>• <i>Estimation of deleterious elements or other non-grade variables of economic significance (e.g., sulphur for acid mine drainage characterisation).</i></li> <li>• <i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i></li> <li>• <i>Any assumptions behind modelling of selective mining units.</i></li> <li>• <i>Any assumptions about correlation between variables.</i></li> <li>• <i>Description of how the geological interpretation was used to control the resource estimates.</i></li> <li>• <i>Discussion of basis for using or not using grade cutting or capping.</i></li> <li>• <i>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</i></li> </ul>	<p>northeast-southwest lode is 2.6. For the main east – west lode it is 1.8. These COVs reflect the geology where there is a high grade ‘shoot’ within lower grade surrounds for each modelled lode. Where high grade occurs however, there is good correlation between drill holes along that orientation.</p> <ul style="list-style-type: none"> <li>• Drill spacing at about 25 m by 25 m has provided adequate data for estimation between data points. The maximum average distance of interpolation from data points is about 100 m, with most of the estimation informed by sample points less than 60 m away on average.</li> <li>• Grade has been estimated into each lode individually, constrained by the lode model, from one metre composites within that lode. Downhole and directional variography were completed for the main lode in the northeast – southwest orientation, and for the main lode in the east – west orientation. As there were insufficient data points in the minor lodes sub-parallel to each of these orientations, the variography from the main lodes was then applied to the sub-parallel lodes during estimation. Each lode orientation was assigned its own orientation ellipse for grade interpolation. The Au variogram used in the northeast – southwest lodes had two structures, with ranges of 42.9 and 52.6 m. The Au variogram used in the east – west lodes had two structures, with ranges of 19.5 and 40.6 m.</li> <li>• Statistics for the percentiles within each lode indicated no extreme outliers were present in the Au, Cu or Ag values and as such no top cuts have been applied.</li> <li>• No assumptions have been made regarding recovery of by-products.</li> <li>• Cu, being a deleterious element during cyanide leach processing of Au, has also been estimated.</li> <li>• The block model was created with parent blocks that are 20 m on northing, 10 m on easting and 5 m on RL. Sub-blocking to 0.625 m on each direction was allowed for volume control.</li> <li>• Correlation matrices for statistics for each element in individual lodes shows a strong correlation between Ag and Cu, with a good but slightly weaker correlation between these two elements and Au. As such all elements within a domain used the same sample selection criteria for block grade estimation.</li> <li>• Estimation of Au, Cu and Ag was also completed using Inverse Distance Squared to verify the plausibility of the OK estimate. Results were similar. Visual comparison of block model values compared to drill values was also completed.</li> </ul>
<b>Moisture</b>	<ul style="list-style-type: none"> <li>• <i>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Tonnages are estimated on a dry basis. They are generic values based on generally accepted averages of an SG of 3 as an average for mafic – ultramafic rocks, and an SG of 2.7 for the mineralised lodes, which is allowing for up to 15% quartz material within the shears on average affecting a density decrease from the mafic – ultramafic wall rocks.</li> <li>• No studies have been completed on moisture content of the rock.</li> </ul>
<b>Cut-off parameters</b>	<ul style="list-style-type: none"> <li>• <i>The basis of the adopted cut-off grade(s) or quality parameters applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The Inferred Mineral Resource is quoted at cut-off grades of 0.3 g/t Au and 1.0 g/t Au. These values were chosen as they contain tonnages estimated at an average grade</li> </ul>

Criteria	JORC Code explanation	Commentary
		greater than 2 g/t Au which is reasonably possible to mine through open pit mining, other economic factors notwithstanding.
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>The deposit is considered potentially mineable using conventional open pit mining. The presence of historic open pits ranging from 0.2 km to 2.3 km north of the project demonstrate previous open pit extraction of deposits in the same geological package.</li> <li>It is assumed mining would be toll processed at an existing plant within 40 km of the project.</li> <li>Open-pit optimisations were completed as part of the support to categorise the resource as inferred.</li> </ul>
<b>Metallurgical factors or assumptions</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>To date no metallurgical testwork has been completed. Archive drill samples are to be collected from the field in the coming month to test via LeachWELL™ to determine Au recovery through cyanide leaching.</li> <li>Au mined in the Dominion Mining pits immediately to the north was extracted through conventional cyanide leach.</li> <li>There are currently no mineralogical indications (i.e., abundant pyrrhotite or arsenopyrite) to indicate the gold is refractory.</li> </ul>
<b>Environmental factors or assumptions</b>	<ul style="list-style-type: none"> <li>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 greenfields 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.</li> </ul>	<ul style="list-style-type: none"> <li>It is assumed mining would employ traditional waste dump stockpiling for disposal of waste and tailings material would be stored in a Tailings Storage Facility (TSF) at the location of processing. There are no known environmental impediments to this strategy.</li> </ul>
<b>Bulk density</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Assigned SGs are generic values based on generally accepted averages of an SG of 3 as an average for mafic – ultramafic rocks, and an SG of 2.7 for the mineralised lodes, which is allowing for up to 15% quartz material within the shears on average affecting a density decrease from the mafic – ultramafic wall rocks.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i></li> </ul>	<ul style="list-style-type: none"> <li>No studies on porosity of the rocks have been completed.</li> </ul>
<b>Classification</b>	<ul style="list-style-type: none"> <li><i>The basis for the classification of the Mineral Resources into varying confidence categories.</i></li> <li><i>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).</i></li> <li><i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></li> </ul>	<ul style="list-style-type: none"> <li>The Mineral Resource is classified as Inferred, due to the following factors –               <ol style="list-style-type: none"> <li>Absence of any metallurgical testwork</li> <li>Absence of any SG measurements</li> <li>Absence of any diamond drilling or twin drill holes.</li> </ol> </li> <li>The spacing and quality of drill data is very good for an Inferred Resource and there is strong confidence in the geological continuity of the deposit lodes, however due to the factors listed above the Mineral Resource cannot be classified into Indicated without further work being done.</li> <li>The Competent Person believes that the classification is appropriate given confidence in the grade estimates and the geological interpretation.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li><i>The results of any audits or reviews of Mineral Resource estimates.</i></li> </ul>	<ul style="list-style-type: none"> <li>No audits have been undertaken on the Mineral Resource estimate. The estimate has been reviewed internally by other company geologists.</li> </ul>
<b>Discussion of relative accuracy/ confidence</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>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.</i></li> <li><i>Documentation should include assumptions made and the procedures used.</i></li> <li><i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></li> </ul>	<ul style="list-style-type: none"> <li>The resource classification reflects the relative confidence in the Mineral Resource estimate by the Competent Person.</li> <li>Factors contributing to or detracting from the level of confidence have been outlined in the sections above.</li> <li>This is a global estimate.</li> <li>Assumptions made and procedures used have been outlined in the above sections.</li> <li>There is no reconciliation data available from mining. This is a maiden Mineral Resource estimate, in the lowest JORC 2012 category of Inferred.</li> </ul>