

ASX ANNOUNCEMENT 21 MARCH 2023

High-grade gold assay results of Diamond Drilling - Tumblegum South

HIGHLIGHTS

- Gold mineralisation confirmed through assay results from Diamond drilling
- Results of the assay include:
 - 2.1m @ 20.49g/t Au in hole BGDD002 from 26.7m downhole including 0.94m @ 42.59g/t Au from 26.7m downhole
 - 0.4m @ 41.5g/t Au in hole TDH004 from 62.7m downhole
- Diamond drilling further confirms Star's interpretation of geology
- Drilling was designed to reinforce previous RC Drilling
- Results prove potential of project and provides further data for Resource modelling

Star Minerals Limited (ASX: SMS, "the Company" or "Star Minerals") is pleased to advise that it has received the assay results from its diamond drilling campaign at the Tumblegum South gold project.

Drilled in two programs consisting of 3 holes for a total of 162m in 2020, then a further two holes in 2022 for a total of 354.8m (Total 5 holes for 516.8m). The first program was designed to provide structural and potential metallurgical information, while the second program was planned to pass through multiple modelled geological zones that were interpreted from the previous RC drilling programs.

Star Minerals' CEO, Greg Almond comments:

"We are very satisfied to have completed this program and receive these impressive gold results. The assays provide further support to the already great results we have seen from our RC drilling programs.

The most recent assays and geological logging further confirms the Tumblegum South mineralisation model and provides encouragement for our future works to unlock the Resource and potential of this gold project.

This recent drilling shows continuity of the gold mineralisation which we will further interpret and incorporate into our model and anticipated future Resource update."



Sample results are shown in Table 1 below. Results of significance include:

- o 2.1m @ 20.49g/t Au in hole BGDD002 from 26.7m downhole
- o 4.7m @ 2.3g/t Au in hole BGDD003 from 44.6m downhole
- o 0.4m @ 41.5g/t Au in hole TDH004 from 62.7m downhole
- 6.4m @ 1.57g/t Au in hole TDH004 from 111.6m downhole
- 2.8 m @ 3.23g/t Au in hole TDH005 from 113.2m downhole

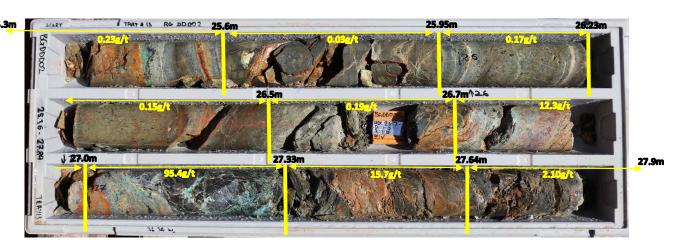


Figure 1 - PQ3 (83mm) drill core from BGDD002 (25.36m – 27.84m) which includes the high-grade interval of 0.94m @ 42.59g/t Au from 26.7m.

Once again leveraging from its commercial relationships, Star Minerals was able to quickly execute the planned drilling program during September¹ 2022, and after completion of core photography, logging and sampling activities submit its samples, with the final results returned in March 2023.

The diamond drilling program was planned to test the interpretation of the geology based on the previous exploration data that the Company has and served as a way to increase the confidence of the interpretation and modelling of this information. The success of the diamond drilling shows that the current data set is robust enough to use as a tool for a Resource update, which will then be used as an input for further scoping, engineering and environmental works.

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¹ See Star Minerals Limited (ASX: SMS) ASX announcement dated 8 September 2022 'Diamond drilling at Tumblegum South Gold Project begins'



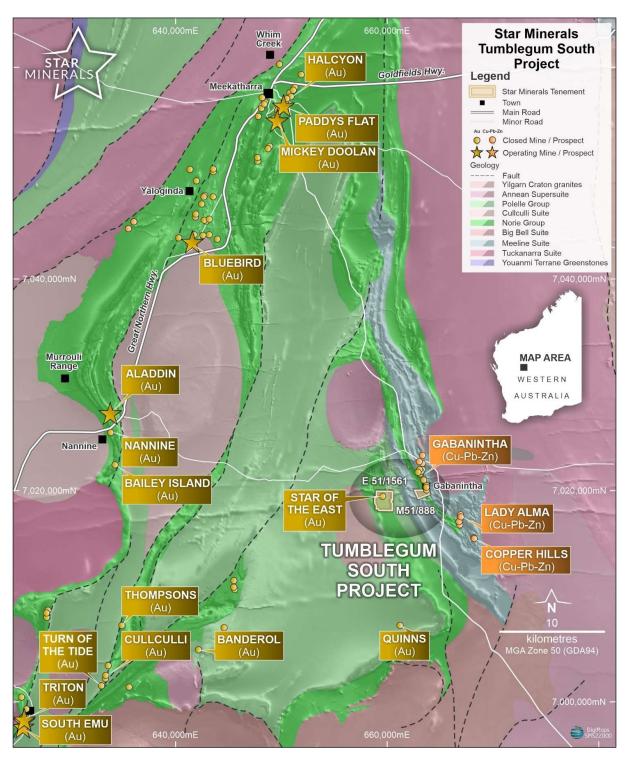


Figure 2 - Tumblegum South Project area



Figure 3 below shows a plan of the drill collars, the collar location, drill trace, and significant intercepts.

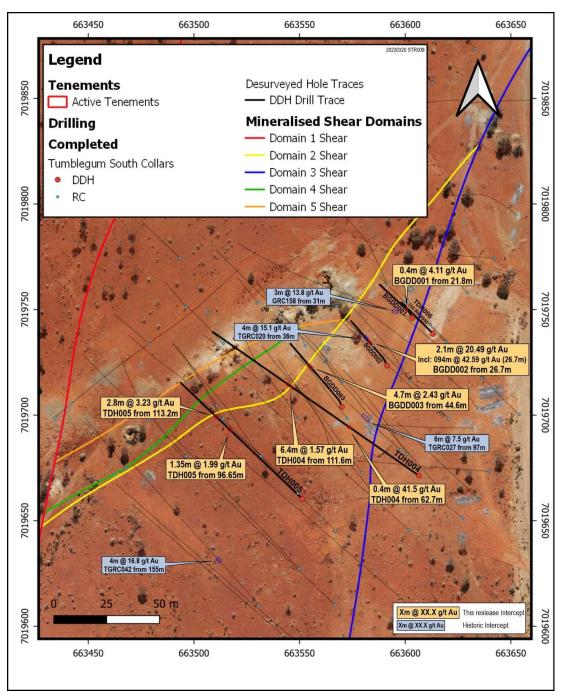


Figure 3 - Drill collars with bold diamond drill traces, significant intercepts as labelled.



Figure 4 shows cross sections looking to the east-northeast, showing the collar, drill trace and significant intercepts in recently completed diamond drilling.

SECTIONS

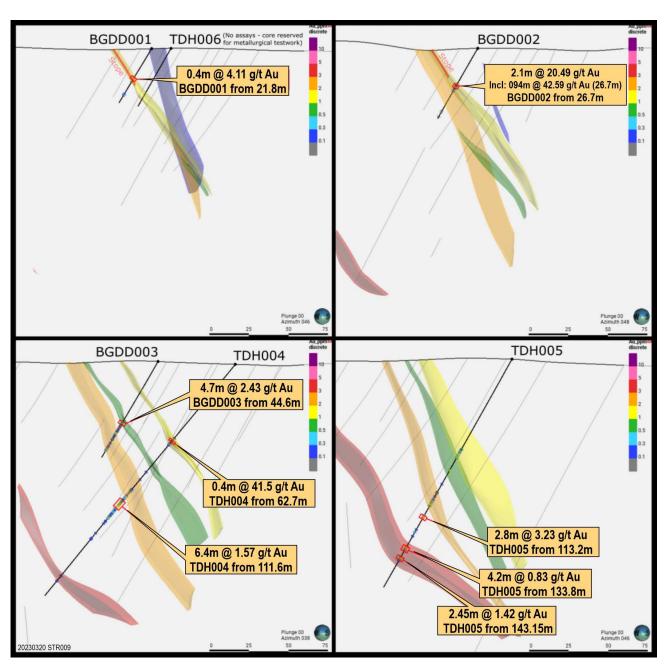


Figure 4 - Cross-sections with significant intercepts.



Analysis of the Phase 1 drilling results at Star of the East are presented in Table 1 below.

Table 1 – Tumblegum South Project DDH drilling results.

Hole ID	East	North	RL	Max Depth	m From	m To	Interval m	Au g/t*
BGDD001	663603.4	7019746	480.5	40	21.8	25.9	0.4	4.11
BGDD002	663591.4	7019723	481.83	51.2m	26.7	28.8	2.1	20.49
				Including	26.7	27.64	0.94	42.59
BGDD002					46.5	47.0	0.5	0.88
BGDD003	663570	7019704	483.24	70.8m	44.6	49.3	4.7	2.43
BGDD003					51.3	53.1	1.8	1.23
BGDD003					56.6	57.4	0.8	0.53
TDH004	663607	7019471	481.5	165.4m	62.7	63.1	0.4	41.50
TDH004					64.5	65.3	0.8	4.00
TDH004					103.75	105.0	1.25	0.63
TDH004					111.6	118.0	6.4	1.57
TDH004					124.9	126.0	1.1	0.75
TDH004					173.4	174.1	0.7	3.35
TDH005	663551	7019671	484	189.4m	64.55	65.35	0.8	0.92
TDH005					69.65	70.45	0.8	0.94
TDH005					80.0	81.0	1	1.27
TDH005					96.65	98.0	1.35	1.99
TDH005					100.75	101.45	0.7	2.20
TDH005					103.3	107.0	3.7	1.33
TDH005					113.2	116.0	2.8	3.23
TDH005					133.8	138.0	4.2	0.83
TDH005					143.15	145.6	2.42	1.42
TDH006	663613.2	7019738	480.7	42.1m		Reserved	l for metallurgio	cal tests

Intercepts calculated greater than 0.5g/t (uncut) weighted average with 1m internal waste.

SUMMARY

The Tumblegum South project has a current resource of 42,500 Au oz's, on a tonnage of 610,000t at 2.2 g/t Au². Note the current work does not change the information or affect the resource already described.

Tumblegum South is located approximately 40km south of the town of Meekatharra in Western Australia.

 $^{^2}$ See Bryah Resources Limited (ASX: BYH) ASX announcement dated 29th January 2020 'Maiden Gold Resource at Gabanintha



NEXT STEPS

The recent drilling, sampling and assay work from drilling shows that the Company is determined to execute on its announced strategy to immediately develop assets that complement its existing projects.

This latest drilling shows the robustness of previous work on the Tumblegum South resource, and gives the Company confidence that the project is suitable for further work to define the gold mineralisation, ready for a future Resource update and further work on a scoping study for mining. The company will provide further details on this work once this has been collected, analysed and reviewed.

For further information, please contact: **Greg Almond, CEO** +61 8 9226 1860

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

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.



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.

No New Information

Except where explicitly stated, this announcement contains references to prior exploration results and Mineral Resource estimates, all of which have been cross-referenced to previous market announcements made by the Company. The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements and, in the case of estimates of Mineral Resources that all material assumptions and technical parameters underpinning the results and/or estimates in the relevant market announcement continue to apply and have not materially changed.



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
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 1m 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. 	 At Tumblegum South, Bryah Resources drilled 3 angled Diamond Drill (DD) holes for 162m in September 2020, with the core being reserved for potential metallurgical testwork. Star Minerals drilled a further 3 DD holes for 396.9m in September 2022 (this announcement). Diamond drilling was drilled to generally accepted industry standard with core stored in marked plastic trays. The full length of 5 of the holes drilled were sampled. Holes drilled near surface were highly broken so the full core was submitted for preparation and assay (GBDD001, 2, & the upper portion of GBDD003), while once deeper in the hole, and solid core was obtained, the core was cut in half by diamond bladed saw and half core submitted for assay (22TDH004, 5 & the lower portion of GBDD003) All Star Minerals samples collected were submitted to a contract commercial laboratory for drying, crushing and homogenising the sample to produce a 50g charge for fire assay finish. Mineralised intervals will be assayed for multi elements in the near future.
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). 	 All DD holes were drilled with a contract diamond drilling rig. DD holes were drilled using a HQ (65mm) and PQ (83mm) diameter core
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 calico samples submitted to the laboratory were weighed. The representivity of the samples was a factor in selecting whole core for assay in broken sections in most of the 2020 drill core, while competent (solid) core could be satisfactorily cut in half before sampling. Sample recovery was recorded by the Company geologist as part of core logging. This is recorded as length of recovered sample in the tray. No twin drill holes have been completed to assess sample bias, though this core drilling often closely parallels RC drill holes. 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.	All the diamond core was placed in core trays, washed then marked up for metre intervals for geological logging of colour, weathering, lithology, texture, alteration and mineralisation. Where the core was sufficiently competent for continuous



Criteria	JORC Code explanation	Commentary
	 Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged. 	 orientation lines were marked. Structural readings were collected for interpretation. Geological logging is both qualitative and quantitative in nature. All core trays were returned to Perth for storage in company storage and photographed prior to sampling. The total length of all the DD holes were logged. Where no sample was returned due to cavities/voids it was recorded as such. Magnetic susceptibility readings were collected for approximately every 0.5 metre along the core and recorded with sampling data and transcribed into digital format.
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 insitu 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: Whole core for holes GBDD001, GBDD002 and 0-40m of GBDD003. Half core samples for 40-70.8m GBDD003, 22THD004 and 22TDH005 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 A duplicated sample was collected every 20 samples for the 1 m samples, with either a CRM every 50 samples and a blank ("Bunbury Basalt") inserted at the end of each hole; overall QAQC insertion rate of 1:14.3 samples. Certified Reference Material (CRM) samples were inserted in the field every 50 samples containing a range of gold and base metal values. Laboratory repeats taken and standards inserted at pre-determined level specified by the laboratory. Sample preparation occurred in the Bureau Veritas (Kalgoorlie, WA) laboratory. 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 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 gold.



Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	 The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established. 	 QAQC procedures described above. All samples were assayed for gold using fire assay on a 50 gram charge. These methods are all considered appropriate for full determination of assay values. While two batches of assays showed contamination of some blank material, an investigation by the lab whereby 117 samples were re-assayed from their coarse rejects, and has shown a high correlation between the results providing confidence in this batch of samples. The contamination has most likely been introduced during pulverising of the sample at the LM5 pulveriser as the blank material would not require a preliminary crush. All other batches of samples have returned blank material results within the expected range.
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, due to the scale of this program. The Competent Person has visited the site and supervised the drilling and sampling process in the field. All primary data related to logging are either captured digitally using LogChief for lithology and sampling on paper logs and entered into validating Excel templates prior to load to the Company SQL database by independent Database Manager. All paper copies of data have been stored. No adjustments or calibrations were made to any assay data, apart from resetting below detection values to half positive detection.
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. 	 In 2020 and in 2022, collar pegs were set out using a DGPS. Topographic control is currently through a digital elevation model derived from an aerial survey completed in 2018. The collars have been independently surveyed by a Licensed Surveyor using a real time kinematic differential GPS for accurate collar location. Downhole surveys were completed on all the 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. The grid system for the Tumblegum South project is MGA_GDA94 Zone 50.
Data spacing and distribution	 Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. 	 Drill spacing is across the prospect at variable spacing to target mineralisation and structure previously identified with earlier drilling. Sample intervals predominantly 1m though shorter geologically defined intervals were applied where visual mineralisation and alteration was identified.



Criteria	JORC Code explanation	Commentary
	Whether sample compositing has been applied.	
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 drilling was mostly drilled at nominally -60 degrees toward 315 degrees (nort where targeting a generally ENE-WSW striking structure hosting the mineralisation which previous drilling has defined. The attitude of the lithological units predominantly westerly dipping to sub-vertical. Therefore, most holes were drilled with an azimuth of 315 degrees to intersect the structures at right angles. The orientation of the lithological units is not considered critical in this case. Due locally varying intersection angles between drillholes and lithological units all resultance defined as downhole widths. No drilling orientation and sampling bias has been recognized at this time and it not considered to have introduced a sampling bias.
Sample security	The measures taken to ensure sample security.	 The core was brought to Perth and the samples stored in a company facility we they were further logged then sampled. Individual samples were placed in calico bags. The samples are packed into polyweave sacks and then placed inside sealed Bulk Bags. The Bulker Bags are then collected by a commercial courier. Chain of Custody was managed by the Company. The samples were transported to the relevant Kalgoorlie laboratory by profession transport companies, or company personnel. Once received at the laboratory, samples were stored in a secure yard until analysis. The lab receipts received samples against the sample dispatch documents an issues a reconciliation report for every sample batch. Sample security was not considered a significant risk to the project.
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 independe 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.

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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 tenement is 100% owned by Star Minerals Ltd (SMS). SMS acquired the tenement from Australian Vanadium Ltd in 2022, and also acquired associated rights from Bryah Resources Ltd in 2022. 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.	 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. Exploration by Australian Vanadium Limited (formerly Yellow Rock Resources) on the relevant tenement in respect to gold and base metals had included: Soil geochemistry sampling Induced Polarisation surveys RC drilling in 2013 (7 holes for 1,571 m), and Airborne Magnetic and Radiometric survey in 2017.
	Geology	Deposit type, geological setting and style of mineralisation.	 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.
15	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: a easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole	Refer to Table 1 of this Announcement.

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Criteria	JORC Code explanation	Commentary
	 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. 	
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. 	 A nominal 0.5 g/t Au Cut-off grade was applied in reporting of significant intercepts. Intercepts reported are length weighted averages. A 1m internal waste with no minimum grade was applied 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'). 	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. 	All exploration results are reported in Table 1 and previous ASX announcements.
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. 	Down hole geological information was recorded by the rig geologist at the time of drilling, and any oriented structural details in subsequent logging sessions.
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). 	 Following a full review of the drilling and geological data, additional drilling may be undertaken by the Company at a future date.



Criteria	JORC Code explanation	Commentary
	 Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	Mineralised intervals will be assayed for selected multi-elements.