

ASX ANNOUNCEMENT 29 MAY 2023

# **Tumblegum South Mineral Resource Update**

## HIGHLIGHTS

- Updated JORC 2012 Tumblegum South Mineral Resource delivers total Indicated and Inferred Mineral Resource of 616,000 tonnes @ 2.28 g/t Au for 45,000 Oz gold.
- Includes Indicated Mineral Resource of 337,000 tonnes @ 2.52 g/t Au for 27,000 Oz gold.
- Tumblegum South Mineral Resource is on granted mining lease M51/888
- **Conversion of 60% of the Mineral Resource to Indicated category** (up from 0% in Maiden Mineral Resource estimate<sup>1</sup>) reflects significant increase of confidence in the geological model.
- Contained ounces represents a 5.8% increase on previous Mineral Resource estimate<sup>1</sup> (MRE).
- Star Minerals progressing toll treatment options of the Tumblegum Mineral Resource.

Star Minerals Limited (ASX: SMS, "the Company" or "Star Minerals") is pleased to advise that it has completed an updated MRE reported in accordance with the JORC 2012 Code at the Tumblegum South gold project.

The new MRE represents a total increase in contained ounces of 5.8% along with conversion of 60% of the Mineral Resource to Indicated category. The MRE consists of:

- Total 616,000 tonnes @ 2.28 g/t Au for 45,000 Oz Au
- Indicated 337,000 tonnes @ 2.52 g/t Au for 27,000 Oz Au
- Inferred 279,000 tonnes @ 1.99 g/t Au for 18,000 Oz Au

This shallow, high-grade Indicated category portion of the resource has tremendous upside to be investigated in ongoing feasibility studies.

Tumblegum South is located in the Polelle Group mafics, about 40km south of Meekatharra at the historic Gabanintha mining locale in Western Australia (Figure 1). The revised estimate has followed additional drill campaigns of reverse circulation drilling during 2021 and 2022, and diamond core drilling during 2022.

The additional data has strengthened the geological model and therefore confidence in the Mineral Resource estimation, resulting in an upgrade of 60% of the existing Mineral Resource to Indicated category.

#### Star Minerals' CEO, Greg Almond comments:

"Star Minerals has progressed the Tumblegum South Project towards a high degree of confidence in the value of the deposit with this Mineral Resource update. Successful drilling programs through 2021 and 2022 have highlighted the high-grade nature of the deposit, with gold grades of a calibre that are very appealing for shallow, cost-effective open pit mining."

<sup>&</sup>lt;sup>1</sup> See BYH ASX Announcement dated 29<sup>th</sup> January 2020 "Maiden Gold Resource at Gabanintha"



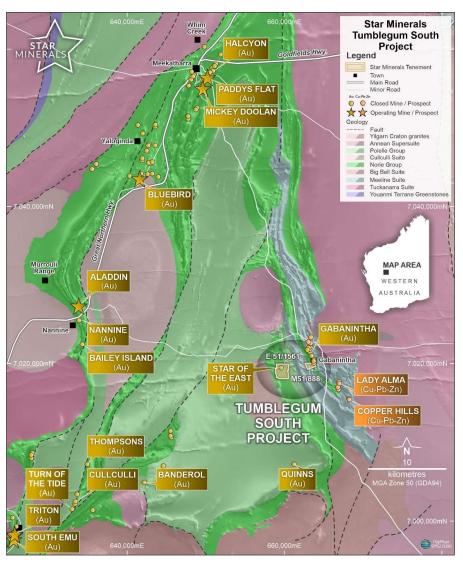


Figure 1: Location of the Tumblegum South Project

Star Minerals has progressed the Tumblegum South gold project at a time when the gold price is strong. Additional work at the neighbouring Star of the East deposit (which the Company has an option to purchase) provides an additional complimentary project in the Gabanintha area, with the potential to provide further ounces to any future mining endeavour.

The deposit at Tumblegum South is modelled as three north-south oriented gold-bearing shears and multiple shear and crackle breccia domains in a transpressive east-west shear system. Importantly, the gold mineralisation is from surface, with the majority of the Indicated Mineral Resource portion in the top 100 metres.



## **Mineral Resource Statement**

The Mineral Resource Statement for the Tumblegum South Mineral Resource estimate was prepared during May 2023 and is reported according to the *Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves* (the 'JORC Code') 2012 edition.

A total of 10,832.9 m of drilling from 99 drill holes was available for the Mineral Resource estimate. Mineralisation interpretations and the Mineral Resource Estimate were informed by combined 8566.9m of RC and diamond drilling from 75 drillholes that intersect the Mineral Resource. Drill intercepts, comprised of RC and diamond core is 588.8 m of drilling intersecting the resource. At the time of interpretation, one diamond drill hole was complete but not assayed (TDH006), being drilled for metallurgy and comminution sample.

Of the drill metres underpinning the Mineral Resource, 53% were completed by Star Minerals Ltd (SMS) in 2021 and 2022 and 40% by Bryah Resources Ltd (BYH) from 2017 to 2020. Historical drilling includes seven holes (five of which intersect the resource; 7% of drill metres) completed in 2013 by Australian Vanadium Ltd (AVL; formerly Yellow Rock Resources). The depth from surface to the current vertical limit of the Mineral Resources is approximately 175 m (305 mRL).

In the opinion of Entech, the resource evaluation reported herein is a reasonable representation of the global gold Mineral Resources within the Tumblegum South deposit, based on sampling data from RC and diamond drilling available as of 3 March 2023. Mineral Resources are reported below topography, excluding mining voids and comprise transitional and fresh rock. The Mineral Resource Statement is presented in Table 1.

This Mineral Resource estimate includes Inferred Mineral Resources, which are unable to have economic considerations applied to them, and there is no certainty that further sampling will enable them to be converted to Measured or Indicated Mineral Resources.

Project Area	Resource Category	Weathering	Tonnes (kt)	Grade (g/t Au)	Gold ounces (koz)
		Transitional	25	2.99	2
	Indicated	Fresh	312	2.48	25
Tumblegum		Subtotal	337	2.52	27
South		Transitional	40	1.76	2
	Inferred	Fresh	239	2.03	16
		Subtotal	279	1.99	18
	Total		616	2.28	45

Table 1: 2023 Tumblegum South Mineral Resource at a	a 0.5 g/t Au cut-off by weathering status
---	---

Tonnages are dry metric tonnes. Minor discrepancies may occur due to rounding.

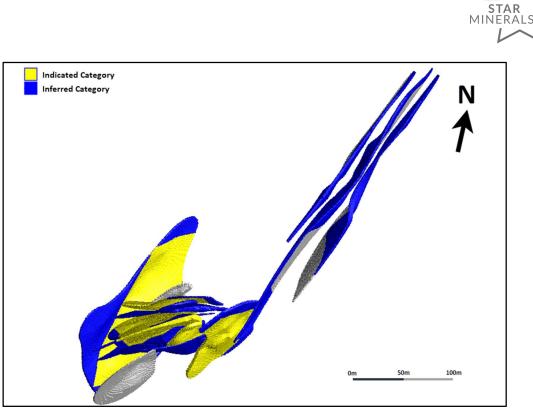


Figure 2: 2023 Mineral Resource Category – Tumblegum South Gold Deposit

## New Data in 2023 Mineral Resource Update

Two further reverse circulation (RC) campaigns, and two diamond drill core campaigns have been completed since the Maiden Mineral Resource was announced in 2020<sup>1</sup>. In total, a further 44 RC drill holes for 4,634 metres and six diamond core holes for 558.9 metres has been completed and incorporated into this Mineral Resource update.

Density data has been determined through collection of 167 Archimedes specific gravity determinations at the Company shed in Perth.

Structural data was collected and interpreted to verify and refine the geological model interpretation.

The drilling completed at the Project is shown in Figure 3 below. The major shears modelled at the Project are also shown.



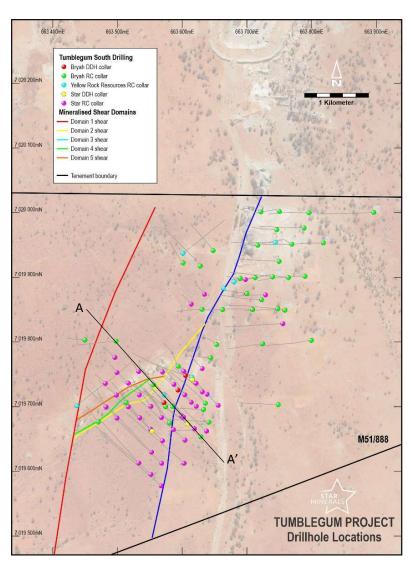


Figure 3: Summary of all drilling completed at Tumblegum South. The location of mineralised shears are shown for reference.

## **Comparison with Maiden 2020 Mineral Resource Estimation**

The major change between the 2020 Maiden Mineral Resource estimation and this updated 2023 Mineral Resource estimation is the addition of infill drilling and diamond core drilling to increase the accuracy of the geological interpretation.

The additional data has provided insight into the deposit geometry and structural architecture, allowing conversion of 60% of the Mineral Resource to Indicated category in 2023. The Maiden 2020 Mineral Resource estimation was solely in the Inferred category due to broader spaced drilling and lack of diamond core assay and structural data.

Table 2 below summarises the difference in the Mineral Resource estimation for the Tumblegum South deposit between the 2020 Maiden estimation and this 2023 Mineral Resource update.



Table 2: Comparison of 2023 Mineral Resource Estimate and 2020 Maiden Mineral Resource Estimate – Tumblegum South Gold Deposit

Mineral Resource Estimate	Indicated_Category			Inf	erred Categ	ory	Global			
Year	Kt	Au g/t	Au Oz	Kt	Au g/t	Au Oz	Tonnes	Au g/t	Au Oz	
2023	337	2.52	27,300	279	1.99	17,800	616	2.28	45,000	
2020	-	-	-	600	2.2	42,500	600	2.2	42,500	

Tonnages are dry metric tonnes. Minor discrepancies may occur due to rounding.

#### **NEXT STEPS**

This Mineral Resource Update is a significant step towards the value of the Tumblegum South gold deposit being realised by the Company.

Additional work is being completed on Star of the East with an option to purchase that deposit due Q2 2023. Initial results from the Project are encouraging, and the Company is keen to receive results from the latest round of drilling completed at Star of the East recently.

Work will continue in the Gabanintha area to continue to build the Mineral Resource inventory, towards economic development.

*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.



## 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 3).

## **Geology and Geological Interpretation**

The Tumblegum South gold deposit is the southern extensions of ore mined in the Gabanintha gold mining pits operated by Dominion Mining Limited between 1987 and 1992.

The geology of Tumblegum South is dominated by an approximately north-south striking sequence of alternating mafic and ultramafic rocks including:

- Medium- to coarse-grained magnetite-rich pyroxenite/serpentinite
- Fine-grained komatiitic basalt
- Tholeiitic basalt
- High-magnesium basalt
- Medium- to coarse-grained magnetite rich pyroxenite/metadolerite

The geological model is shown in Figure 4 below.

Detailed structural analysis of oriented diamond drill core has assisted in the development of a structural model that is the architecture to the geology model shown below. This consists of a primary conjugate shear system with the Domain 1001 and Domain 1003 shears running sub-parallel to each other. These form the upper and lower margins of a transpressive wedge/flower structure defined by a set of three (Domains 1002/1008, 1004 and 1005) dominantly transcurrent shears between them. Gold mineralisation between these shear zones is controlled by the development of a crackle breccia in the halo to reactivated shears. These crackle breccia mineralisation haloes are modelled domains 1091 to 1099. A section of the mineralisation model is shown below, which is located at the A - A' line in Figure 3.

In Domain 1002, 1004 and 1005, gold in the shears is associated with quartz veining with potassic and carbonate alteration of the host mafics. In Domains 1091 to 1099, gold is associated with quartz-chalcopyrite-pyrrhotite and quartz-carbonate-sericite crackle breccia veins.



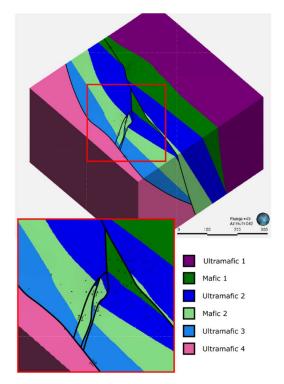


Figure 4: Tumblegum South Geological Model showing oblique view looking northeast (azimuth 042°).

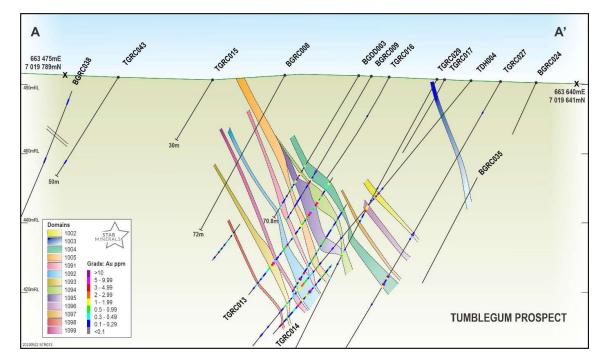


Figure 5: Oblique Section of the Tumblegum South Gold Deposit



## **Drilling Techniques and Hole Spacing**

The Mineral Resource estimation was completed in accordance with the JORC Code (2012) and is based on 93 reverse circulation (RC) drillholes for a total of 10,274m, as well as 6 diamond drillholes for a total of 558.9m. All drilling was completed by Australian Vanadium (formerly Yellow Rock Resources), Bryah Resources and Star Minerals with all field drill records available from each program. The location of these holes is summarised in Figure 3.

Drilling is largely at 25x25m spacing through the modelled gold bearing lodes. There are some areas of broader spaced drilling (up to 50m) where the Mineral Resource is classified as Inferred Category.

## Sampling and Sub-Sampling Techniques

One metre calico samples for the entire hole were collected directly from the cone splitter on the drill rig for all RC programs since 2019, and submitted for gold analysis. One metre calico samples for the entire hole were collected using a riffle splitter from the drill rig for the 2017 program. For the 2013 YRR program, the one metre cone split samples from the rig were all submitted to the laboratory.

For the 2017 and 2019 BYH programs, three metre composites were created by spear sampling of the 1 metre reject material from green bags in 2019, and directly from reject piles placed on the ground during the 2017 program. In 2017 the entire hole was assayed on the three-metre composite spear samples, with intervals returning results greater than 0.2 g/t Au in the composites later submitted as the one metre riffle splits from the rig. In 2019, one metre cone split samples from the rig were directly submitted where the field geologist identified potential mineralisation, with the remainder of the hole submitted as three-metre spear sampled composites. In the 2017 and 2019 programs where results greater than 0.2 g/t Au were returned in the composites, the one metre cone splits were retrieved from the field and also submitted for analysis.

An extensive portable XRF geochemical suite was analysed by Company personnel. The results were not used in the Mineral Resource estimate but were used to aid in the geological interpretation of the area.

2022 diamond core was cut in half with the half containing the orientation line retained as archive core. The remaining half was bagged into calico bags and sent for assay at an accredited laboratory. For core drilled by BYH in 2020, whole core was bagged into calicos for all except the bottom half of hole BGDD003, which was half core sampled, then dispatched to an accredited laboratory. Whole core sampling of most of the 2020 core was done due to the broken nature of the core to ensure a representative sample was assayed.

#### Sample Analysis Method

Analytical methods used for each programme are outlined in Table 3. Preparation at all labs included drying, crushing, and pulverising with an appropriate sub-sample weight of pulp extracted depending on the analytical method selected.



Company	Year	Laboratory	Sample Type	Analytical Method
YRR	2013	SGS Perth Airport	One metre cone rig split	Aqua Regia digest, Inductively Coupled Plasma with a Mass Spectrometry finish (ICP-MS) or Atomic Absorption Spectroscopy (AAS) finish on samples greater than 500 ppb Au
ВҮН	2017	Intertek Genalysis Maddington	Three metre spear Composite	50 gram fire assay with OES finish (FA50/OE); Portable XRF – InnovX Delta
ВҮН	2017	Intertek Genalysis Maddington	One metre riffle rig split	50 gram fire assay with OES finish (FA50/OE); 4 Acid Digest, Inductively Coupled Plasma with an Optical (Atomic) Emission Spectrometry finish (ICP-OES) for 33 elements
ВҮН	2019	Intertek Genalysis Maddington	Three metre spear Composite	50 gram fire assay with OES finish (FA50/OE); 4 Acid Digest, Inductively Coupled Plasma with an Optical (Atomic) Emission Spectrometry finish (ICP-OES) for 33 elements
ВҮН	2019 - 2022	Field Office	Fines from one metre rig reject sample (green bag)	Portable XRF - Vanta
ВҮН	2019	Intertek Genalysis Maddington	One metre cone rig split	50 gram fire assay with OES finish (FA50/OE); 4 Acid Digest, Inductively Coupled Plasma with an Optical (Atomic) Emission Spectrometry finish (ICP-OES)
SMS	2021 - 2022	Bureau Veritas Kalgoorlie	One metre cone rig split	50 gram fire assay with AAS finish (FA001)
SMS	2020 - 2022	Bureau Veritas Kalgoorlie	Diamond ½ core, Diamond full core	50 gram fire assay with AAS finish (FA001)

Table 3: Summary of lab preparation and analytical methods used for each programme.

## **Cut-Off Grades**

All shear and crackle breccia zone wireframes were modelled using a nominal 0.5 g/t Au cut-off grade, with occasional intervals between 0.1 and 0.5 g/t Au included to maintain domain continuity along strike. Domains 1003, 1006, and 1007 were modelled along strike from high-grade zones to maintain geological continuity using a 0.3 cut-off grade. Further sub-domaining was done within these lodes constrain high grade shoots within the larger domain.

#### **Specific Gravity**

Bulk density values at the Tumblegum South deposit were derived from 167 validated measurements taken from 5 DIAMOND holes completed during 2021 and 2022. Density measurements were collected using the water immersion methodology with both wet and dry density measurements captured in the MS Access database. Density measurements were undertaken on transitional (39) and fresh (128) drill core samples. Samples were taken nominally from 2.05 m to 188.6 m downhole to provide a representative density profile across oxidation states.



The following bulk density values were determined and applied in the block model:

- Transitional Mineralisation: 2.70 t/m3
- Fresh Mineralisation: 2.90 t/m3.

#### **Estimation Methodology**

Sample data within mineralisation domains were composited to 1 m downhole lengths using a best-fit methodology and 0.6 m minimum threshold on inclusions. Two residual composites resulted from this approach which were reviewed and included in the estimate.

Declustering of composite data within individual mineralised domains was analysed in Supervisor™ software, using a fixed grid per domain. The declustered cell size used for each mineralisation domain was 15mN, 10mE and 5mZ.

Exploratory data analysis (EDA) of the declustered composited gold variable within the mineralised domain groups was undertaken using Datamine's Supervisor<sup>™</sup> software. Analysis for sample bias, domain homogeneity and top-capping was undertaken. The requirement to undertake further sub-domaining of composite data by weathering or lithology boundaries, for the purposes of interpolation, was not supported by statistical and spatial analysis.

Assessment and application of top-capping for the estimate were undertaken on the gold variable in individual domains. Top-caps were initially applied on a global basis within individual domains to limit the potential influence of obvious statistical outliers. Global top-caps were applied to domains 1001, 1002, 1003 and 1203 as presented in Table 4. No top-caps were applied to other domains.

Domain	Top-cap (g/t Au)	Percentage of metal cut	Number of composites cut
1001	25	26.9%	2
1002	25	12.4%	2
1003	25	9.4%	1
1203	25	5.7%	1

A distance-limiting constraint was applied during interpolation for metal control in domains 1001, 1002, 1003, 1004, 1005, 1091, 1093, 1094 and 1097. Distances selected were typically half the search range and grades selected based on natural mineralisation population breaks.

Variography was undertaken on the capped, declustered gold variable. Two–spherical structure, normal scores omni-directional variograms were modelled for domains 1005 and 1092. Variography was not conducted on remaining domains owing to insufficient data. Domains were grouped based on spatial, statistical and mineralisation similarities, with variography from Domain 1092 applied to all domains excluding Domain 1005. High-grade sub-domains were combined with their lower-grade counterparts for variography analysis. Nugget values between 32% and 39% were modelled, with continuity ranges of 32–35m in the major direction.



Interpolation was undertaken using Ordinary Kriging (OK) in GEOVIA Surpac<sup>™</sup> within parent cell blocks. Dimensions for the interpolation were Y: 10 mN, X: 10 mE, Z: 5 mRL, with sub-celling of Y: 0.625 mN, X: 0.625 mE, Z: 0.625 mRL. The model was not rotated. Considerations relating to appropriate block size include drill hole data spacing, conceptual mining method and search neighbourhood optimisations (QKNA).

A two-pass estimation search strategy was employed for all domains. All domains were estimated within a maximum distance of 40 m and 60 m for the first pass and second pass, respectively. The number of neighbourhood composites ranged from a minimum of 6 to a maximum of 14 samples for the first pass. The minimum number of composites was reduced to 4 for the second pass, except for domains 1003, 1206 and 1207, which used a minimum of 3 composites.

Domain boundaries represented hard boundaries, whereby composite samples in that domain were used to estimate blocks within the domain. Global and local validation of the gold variable estimated outcomes was undertaken by means of statistical analysis, swath plots and visual comparison (cross and long sections) against input data. Internal audits and peer review underpin Entech's validation process, with a focus on independent resource tabulation, block model validation, verification of technical inputs, and peer review of approaches to domaining, interpolation and classification.

The 3D block model was coded with density, weathering and Mineral Resource classification prior to evaluation for Mineral Resource reporting.

#### **Classification Criteria**

Mineral Resources were classified as Indicated and Inferred to appropriately represent confidence and risk with respect to data quality, drill hole spacing, geological and grade continuity and mineralisation volumes. Additional considerations were the stage of project assessment, amount of diamond drilling undertaken, current understanding of mineralisation controls and potential mining selectivity within an open pit mining framework.

In Entech's opinion, the drilling, surveying and sampling undertaken, and analytical methods and quality controls used, are appropriate for the style of deposit under consideration.

**Indicated Mineral Resources** were defined where a moderate level of geological confidence in geometry, continuity and grade was demonstrated, and were identified as areas where:

- Blocks were well supported by drill hole data, with the distance to the nearest sample being approximately within 25 m or less or where drilling was within approximately 25 m of the block estimate; and
- Blocks were interpolated with a neighbourhood largely informed by the maximum number of samples.

**Inferred Mineral Resources** (to 305 mRL) were defined where a low to moderate level of geological confidence in geometry, continuity and grade was demonstrated, and were identified as areas where:

- Drill spacing averaged a nominal 40 m or less, or where drilling was within 40 m of the block estimate; and
- Estimation quality was considered low, as delineated by a conditional bias slope nominally between 0.1 and 0.5.



The reported Mineral Resource was depleted for historical mining and constrained at depth by the available drill hole spacing outlined for Inferred classification, nominally 175 m below surface. All classified Mineral Resources were reported inside the tenement boundary (M51/888), as provided by SMS. Mineralisation within the model which did not satisfy the criteria for classification as Mineral Resources remained unclassified.

Mineral Resources that are not Ore Reserves do not have demonstrated economic viability. The Mineral Resource estimate does not account for mining selectivity, mining loss and ore dilution. This Mineral Resource estimate includes Inferred Mineral Resources which are unable to have economic considerations applied to them, and there is no certainty that further sampling will enable them to be converted to Measured or Indicated Mineral Resources. Variances to the tonnage, grade, and metal tonnes of the Mineral Resource estimate are expected with further definition drilling.

The delineation of Indicated and Inferred Mineral Resources appropriately reflects the Competent Person's view on continuity and risk at the deposit.

#### Assessment of Reasonable Prospects for Eventual Economic Extraction

The reported Mineral Resource was constrained at depth by the available drill hole spacing outlined for Inferred classification, nominally 175 m below surface (305 mRL) and within the SMS tenement boundary. Entech considers material at this depth would fall under the definition of 'reasonable prospects for eventual economic extraction' (RPEEE) in an open pit mining framework.

The Tumblegum South prospect is located on an existing mining lease (M51-888).

#### **Mining and Depletion**

Historical underground mining activity has been undertaken at Tumblegum South, as evidenced by shafts and mullock heaps on the tenement but information regarding historical underground mining is very limited. In lieu of any detailed information, mined volumes have been digitised using surface mining exposures (i.e. mine shafts) in combination with voids encountered during drill programs to determine two mined stopes: north and south. Given the lack of historical data, it should be noted that mined volumes likely contain potential errors in spatial position and/or unknown voids and mineralisation in the vicinity of mined volumes therefore remains in the Inferred classification. The bulk of mining appears to have been focused on domain 1003 in the north and domains 1002/1092 in the south. Entech has not been able to undertake a cross-check of depletion volumes and historical mined figures owing to the lack of historical mining metrics.

No dilution or cost factors were applied to the estimate.



#### **Metallurgy**

BYH collected 20 residual RC samples for gold recovery analysis by cyanide using a 6-hour bottle roll leach<sup>2</sup>. Testing was conducted at the Intertek Genalysis laboratory in Perth using its LeachWELL<sup>™</sup> technique. Gold recoveries ranged from 73 to 95%, with an average of 90%. The calculated gold grades ranged from 0.35 g/t Au to 27.46 g/t Au. Further definitive testwork is required with TDH006 core hole archived for metallurgical testwork.

Based on discussions with SMS geologists, Entech understands there are no metallurgical amenability risks which would be material to the Mineral Resource estimate.

No metallurgical recovery factors were applied to the Mineral Resources or resource tabulations.



## Competent Person Statement – Exploration Results

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 Ms Lisa Milham, (Consultant with Entech Pty Ltd). Ms Milham is a member of the Australian Institute of Geoscientists (AIG). Ms Milham 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. Ms Milham consents to the inclusion in this announcement of the matters based on their information in the form and context in which it 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.



Doma	in	Indi	cated Catego	ry	In	ferred Categ	ory	Global			
Туре	#	Kt	Au g/t	Au Oz	Kt	Au g/t	Au Oz	Kt	Au g/t	Au Oz	
	1001	94.6	3.34	10,153	48.2	2.4	3,714	142.7	3.02	13,867	
	1002	36.6	4.91	5,772	8.9	4.12	1,175	45.4	4.75	6,947	
us	1203				35.9	3.61	4,167	35.9	3.61	4,167	
Domains	1004	21.7	2.72	1,899	5.8	1.08	202	27.6	2.37	2,101	
Doi	1005	61.9	1.62	3,233	13.8	1.06	471	75.7	1.52	3,704	
Shear	1206				6.8	1.72	376	6.8	1.72	376	
Sh	1207				4.2	2.23	301	4.2	2.23	301	
	1003				41.5	1.72	2,292	41.5	1.72	2,292	
	1006				22.9	0.72	531	22.9	0.72	531	
SL	1091				11.4	0.85	311	11.4	0.85	311	
naii	1092	54.9	1.7	3,011	23.9	1.63	1,253	78.9	1.68	4,264	
Dor	1093	31.9	1.29	1,321	4.8	0.76	116	36.7	1.22	1,438	
cia	1094				12.5	3.05	1,223	12.5	3.05	1,223	
reci	1095	35.3	1.65	1,878	7.4	0.89	210	42.7	1.52	2,089	
le B	1096				13.3	2.03	868	13.3	2.03	868	
Crackle Breccia Domains	1097				7.6	1.03	253	7.6	1.03	253	
C	1099				9.7	1.14	355	9.7	1.14	355	
TOTA	L	337	2.52	27,269	279	1.99	17,818	616	2.28	45,086	

## Appendix 1 – 2023 Tumblegum South Global Mineral Resource by Domain

Tonnages are dry metric tonnes. Minor discrepancies may occur due to rounding.



Azimuth

315

## Appendix 2 – Tumblegum South Collars and Intercepts in 2023 Mineral Resource

Direction – IV	IGA94 Zone	50			
Hole ID	East	North	RL	Max Depth	Dip
BGDD001	663,603	7,019,746	481	40	-60
BGDD002	663,591	7,019,723	482	51.2	-60
BGDD003	663,570	7,019,704	483	70.8	-60
BGRC001	663,715	7,019,950	481	54	-60
BGRC002	663,768	7,019,951	480	114	-60
BGRC003	663,720	7,020,001	480	54	-60
BGRC004	663,749	7,020,001	479	72	-60
BGRC005	663,739	7,019,900	482	114	-60
BGRC008	663,553	7,019,733	482	72	-60
BGRC009	663,573	7,019,698	483	72	-60
BGRC015	663,712	7,019,899	482	72	-60
BGRC017	663,817	7,019,953	479	180	-60
BGRC018	663,795	7,019,999	478	120	-60
BGRC019	663,634	7,019,703	481	150	-60
BGRC020	663,632	7,019,694	481	90	-60
BGRC022	663,707	7,019,850	482	78	-60
BGRC023	663,758	7,019,849	481	126	-60
BGRC024	663,627	7,019,651	481	90	-60
BGRC025	663,652	7,019,795	479	60	-60
BGRC026	663,660	7,019,849	481	60	-60
BGRC027	663,745	7,019,973	480	73	-60
BGRC028	663,787	7,019,975	479	127	-60
BGRC029	663,689	7,019,898	479	40	-60
BGRC030	663,764	7,019,899	481	151	-60
BGRC031	663,698	7,019,874	482	73	-60
BGRC032	663,721	7,019,864	482	116	-60
BGRC033	663,746	7,019,850	482	157	-60
BGRC034	663,642	7,019,774	479	40	-60
BGRC035	663,640	7,019,673	480	115	-60
BGRC036	663,579	7,019,673	483	109	-60
BGRC037	663,511	7,019,704	483	46	-60
BGRC038	663,495	7,019,800	484	115	-60
BGRC040	663,749	7,019,924	481	121	-60
0004440	662.662	7 010 000	100	200	60

Collars and Hole Direction – MGA94 Zone 50

DODDOOT	003,003	7,019,740	401	40	-00	313
BGDD002	663,591	7,019,723	482	51.2	-60	320
BGDD003	663,570	7,019,704	483	70.8	-60	320
BGRC001	663,715	7,019,950	481	54	-60	270
BGRC002	663,768	7,019,951	480	114	-60	270
BGRC003	663,720	7,020,001	480	54	-60	270
BGRC004	663,749	7,020,001	479	72	-60	270
BGRC005	663,739	7,019,900	482	114	-60	270
BGRC008	663,553	7,019,733	482	72	-60	315
BGRC009	663,573	7,019,698	483	72	-60	315
BGRC015	663,712	7,019,899	482	72	-60	270
BGRC017	663,817	7,019,953	479	180	-60	270
BGRC018	663,795	7,019,999	478	120	-60	270
BGRC019	663,634	7,019,703	481	150	-60	315
BGRC020	663,632	7,019,694	481	90	-60	270
BGRC022	663,707	7,019,850	482	78	-60	270
BGRC023	663,758	7,019,849	481	126	-60	270
BGRC024	663,627	7,019,651	481	90	-60	270
BGRC025	663,652	7,019,795	479	60	-60	270
BGRC026	663,660	7,019,849	481	60	-60	270
BGRC027	663,745	7,019,973	480	73	-60	270
BGRC028	663,787	7,019,975	479	127	-60	270
BGRC029	663,689	7,019,898	479	40	-60	270
BGRC030	663,764	7,019,899	481	151	-60	270
BGRC031	663,698	7,019,874	482	73	-60	270
BGRC032	663,721	7,019,864	482	116	-60	270
BGRC033	663,746	7,019,850	482	157	-60	270
BGRC034	663,642	7,019,774	479	40	-60	270
BGRC035	663,640	7,019,673	480	115	-60	270
BGRC036	663,579	7,019,673	483	109	-60	325
BGRC037	663,511	7,019,704	483	46	-60	325
BGRC038	663,495	7,019,800	484	115	-60	270
BGRC040	663,749	7,019,924	481	121	-60	270
GRC1149	663,662	7,019,882	466	300	-60	50
GRC1150	663,679	7,019,892	466	300	-60	50
GRC1157	663,570	7,019,716	783	198	-60	320
GRC1158	663,612	7,019,743	480	198	-60	290
GRC1159	663,743	7,019,954	467	116	-60	270
TDH004	663,607	7,019,671	481	189.4	-50	305
TDH005	663,551	7,019,660	484	165.4	-60	315
TGRC001	663,479	7,019,698	482	75	-52	315
TGRC002	663,496	7,019,680	483	100	-60	315
TGRC004	663,496	7,019,716	483	60	-60	315
TGRC005	663,514	7,019,698	484	80	-60	315
TGRC006	663,532	7,019,680	485	111	-60	315
TGRC007	663,549	7,019,663	484	120	-60	315
TGRC008	663,567	7,019,645	482	164	-60	315
TGRC011	663,531	7,019,716	484	65	-60	315
TGRC012	663,549	7,019,698	485	97	-60	315
TGRC013	663,567	7,019,681	484	114	-60	315
	,	,. ,,				

Hole ID	East	North	RL	Max Depth	Dip	Azimuth
TGRC014	663,585	7,019,663	482	135	-60	315
TGRC016	663,584	7,019,699	482	109	-60	315
TGRC017	663,601	7,019,682	482	90	-60	315
TGRC018	663,567	7,019,752	481	30	-60	315
TGRC019	663,585	7,019,733	482	45	-60	315
TGRC020	663,602	7,019,716	482	77	-60	315
TGRC021	663,621	7,019,698	481	85	-60	315
TGRC022	663,600	7,019,753	480	35	-60	315
TGRC023	663,619	7,019,735	481	58	-60	315
TGRC024	663,636	7,019,718	480	70	-60	315
TGRC025	663,654	7,019,700	479	94	-60	315
TGRC026	663,550	7,019,627	482	174	-60	315
TGRC027	663,617	7,019,664	481	174	-60	315
TGRC028	663,602	7,019,646	481	192	-60	315
TGRC029	663,598	7,019,683	482	138	-60	315
TGRC030	663,612	7,019,704	482	120	-60	315
TGRC031	663,635	7,019,660	480	108	-60	315
TGRC032	663,629	7,019,720	481	114	-60	315
TGRC033	663,630	7,019,758	479	60	-60	315
TGRC034	663,728	7,019,872	482	108	-60	270
TGRC035	663,697	7,019,896	482	54	-60	270
TGRC038	663,601	7,019,610	480	240	-60	315
TGRC039	663,567	7,019,610	481	216	-60	315
TGRC040	663,531	7,019,610	481	180	-60	315
TGRC041	663,549	7,019,592	480	228	-60	315
TGRC042	663,566	7,019,575	480	255	-60	315
TGRC044	663,754	7,019,827	481	180	-60	270



#### Domain Intercepts in Mineral Resource

Hole ID	From (m)	To (m)	Interval	Au g/t	Domain	Hole ID	From (m)	To (m)	Interval	Au g/t	Domain
BGRC038	31	32	1	0.01	1001	BGDD001	21.9	23.8	1.9	2.80	1002
GRC1157	142	144	2	2.04	1001	BGDD002	26.7	28.85	2.15	20.01	1002
GRC1158	162	164	2	4.65	1001	BGRC019	68	70	2	1.48	1002
TDH004	173.4	174.1	0.7	3.35	1001	BGRC020	74	77	3	3.53	1002
TDH005	143.15	145.6	2.45	1.42	1001	GRC1158	31	36	5	8.72	1002
TGRC001	40	41	1	2.43	1001	TDH004	62.7	66	3.3	6.11	1002
TGRC002	63	64	1	0.44	1001	TGRC017	54	57	3	0.98	1002
TGRC006	104	108	4	0.53	1001	TGRC019	16	18	2	0.45	1002
TGRC008	147	151	4	3.94	1001	TGRC020	36	40	4	15.07	1002
TGRC026	141	144	3	14.74	1001	TGRC021	53	60	7	2.63	1002
TGRC028	167	173	6	0.70	1001	TGRC022	14	17	3	2.57	1002
TGRC038	176	177	1	1.44	1001	TGRC023	39	42	3	4.65	1002
TGRC039	151	155	4	3.45	1001	TGRC024	62	63	1	4.39	1002
TGRC040	129	130	1	4.30	1001	TGRC025	83	84	1	3.35	1002
TGRC041	133	138	5	0.62	1001	TGRC027	76	77	1	10.30	1002
TGRC042	155	159	4	16.80	1001	TGRC028	73	77	4	8.26	1002
BGRC001	27	30	3	0.61	1003	TGRC029	57	58	1	0.29	1002
BGRC002	102	105	3	3.17	1003	TGRC030	51	52	1	2.97	1002
BGRC003	7	11	4	2.32	1003	TGRC031	90	91	1	1.89	1002
BGRC004	48	49	1	0.33	1003	TGRC032	57	59	2	4.29	1002
BGRC005	84	91	7	2.65	1003	GRC1149	61	68	7	0.24	1003
BGRC015	45	48	3	12.19	1003	GRC1158	7	9	2	0.01	1003
BGRC017	164	166	2	0.55	1003	GRC1159	58	63	5	9.64	1003
BGRC018	105	107	2	2.34	1003	TGRC017	7	9	2	0.01	1003
BGRC019	60	63	3	0.85	1003	TGRC020	9	11	2	0.01	1003
BGRC020	42	45	3	0.01	1003	TGRC021	43	45	2	0.01	1003
BGRC024	49	51	2	0.00	1003	TGRC023	23	24	1	0.30	1003
BGRC025	40	42	2	0.01	1003	TGRC024	55	57	2	2.01	1003
BGRC026	22	23	1	0.14	1003	TGRC025	82	83	1	0.09	1003
BGRC027	58	59	1	0.16	1003	TGRC027	36	38	2	0.01	1003
BGRC028	112	113	1	0.28	1003	TGRC028	21	23	2	0.01	1003
BGRC029	14	17	3	0.03	1003	TGRC029	2	4	2	0.01	1003
BGRC030	121	122	1	1.18	1003	TGRC030	30	31	1	0.01	1003
BGRC031	52	54	2	0.67	1003	TGRC031	62	64	2	0.03	1003
BGRC032	85	87	2	0.00	1003	TGRC032	44	45	1	0.01	1003
BGRC033	117	124	7	4.61	1003	TGRC033	26	28	2	0.01	1003
BGRC034	36	37	1	0.03	1003	TGRC034	95	99	4	0.65	1003
BGRC035	56	60	4	0.01	1003	TGRC035	28	31	3	0.19	1003
BGRC040	92	97	5	2.21	1003	TGRC038	38	39	1	1.13	1003
BGDD003	44.2	46.3	2.1	3.20	1004	BGRC037	22	23	1	0.26	1005
BGRC009	47	52	5	3.88	1004	GRC1157	37	44	7	2.36	1005
BGRC036	67	69	2	0.41	1004	TDH004	103.75	106.35	2.6	0.83	1005
GRC1157	30	36	6	1.81	1004	TDH005	100.75	107	6.25	1.12	1005
TDH004	82.9	83.65	0.75	0.06	1004	TGRC001	6	8	2	1.08	1005
TDH005	80	81	1	1.27	1004	TGRC004	2	3	1	0.34	1005
TGRC007	76	77	1	0.13	1004	TGRC005	30	31	1	2.50	1005
TGRC008	100	101	1	0.13	1004	TGRC006	57	58	1	1.25	1005
TGRC013	54	58	4	0.71	1004	TGRC007	98	100	2	1.13	1005
TGRC013	75	76	1	0.83	1004	TGRC008	124	126	2	0.97	1005
TGRC014	56	57	1	2.00	1004	TGRC011	23	24	1	1.88	1005
TGRC010	109	110	1	0.79	1004	TGRC011	47	49	2	5.42	1005
TGRC020	97	103	6	7.47	1004	TGRC012 TGRC013	74	77	3	0.85	1005
TGRC027	111	103	1	0.03	1004	TGRC013	100	103	3	0.85	1005
TGRC028	77	80	3	0.03	1004	TGRC014	62	63		1.72	1005
		108	2	0.01			127		1	0.70	
TGRC031	106				1004	TGRC026		129	2		1005
BGDD003	56.6	58.1	1.5	0.42	1005	TGRC028	139	143	4	1.50	1005
BGRC008	13	19	6	3.81	1005	TGRC038	168	169	1	1.03	1005



Hole ID	From (m)	To (m)	Interval	Au g/t	Domain	Hole ID	From (m)	To (m)	Interval	Au g/t	Domair
BGRC009	64	66	2	0.17	1005	TGRC039	143	144	1	0.29	1005
BGRC036	90	94	4	0.50	1005	BGRC029	36	40	4	0.01	1006
BGRC001	45	48	3	0.01	1006	BGRC030	142	145	3	0.01	1006
BGRC003	21	24	3	0.07	1006	BGRC031	58	62	4	0.92	1006
BGRC004	60	63	3	0.01	1006	BGRC032	104	105	1	3.40	1006
BGRC005	105	108	3	0.02	1006	BGRC033	139	140	1	0.70	1006
BGRC015	69	72	3	0.00	1006	BGRC040	102	105	3	0.01	1006
BGRC026	33	36	3	0.00	1006	GRC1159	78	79	1	0.40	1006
BGRC027	69	70	1	3.11	1006	TGRC035	51	54	3	0.01	1006
BGRC028	123	127	4	0.02	1006	TGRC044	177	179	2	0.01	1006
BGRC001	13	14	1	1.35	1007	BGRC029	3	6	3	0.05	1007
BGRC002	96	97	1	0.20	1007	BGRC030	105	107	2	0.00	1007
BGRC004	27	30	3	0.01	1007	BGRC031	12	13	1	0.13	1007
BGRC005	72	75	3	0.00	1007	BGRC032	54	56	2	0.13	1007
BGRC015	36	39	3	0.03	1007	BGRC033	96	99	3	0.10	1007
BGRC018	90	93	3	0.01	1007	BGRC040	75	78	3	0.02	1007
BGRC022	39	42	3	0.01	1007	GRC1150	31	32	1	0.47	1007
BGRC023	120	123	3	0.03	1007	GRC1159	47	48	1	0.00	1007
BGRC027	33	35	2	2.88	1007	TGRC034	61	62	1	0.37	1007
BGRC028	90	93	3	0.02	1007	TGRC035	16	18	2	0.03	1007
BGDD002	46.5	47	0.5	0.88	1091	TGRC044	134	135	1	0.50	1007
BGDD003	63	64.5	1.5	0.34	1091	TDH004	111.6	119	7.4	1.42	1092
BGRC008	19	21	2	0.52	1091	TDH005	112.55	116	3.45	2.70	1092
BGRC009	71	72	1	0.63	1091	TGRC007	104	111	7	0.96	1092
BGRC036	96	97	1	0.39	1091	TGRC008	129	135	6	0.46	1092
GRC1157	50	51	1	1.26	1091	TGRC012	66	67	1	2.72	1092
TDH004	108	110.55	2.55	0.40	1091	TGRC012	87	90	3	1.20	1092
TGRC012	54	55	1	2.60	1091	TGRC013	109	116	7	4.14	1092
TGRC012 TGRC013	81	83	2	0.85	1091	TGRC014	77	79	2	3.58	1092
		108	1				7			2.33	
TGRC014	107			0.49	1091	TGRC018	42	18	11		1092
TGRC016	69	70	1	1.37	1091	TGRC019		44	2	0.82	1092
BGDD001	24.4	24.8	0.4	0.52	1092	TGRC020	61	62	1	0.36	1092
BGDD003	65.5	66.2	0.7	0.45	1092	TGRC023	42	44	2	0.73	1092
BGRC008	31	33	2	3.70	1092	TGRC026	130	132	2	0.43	1092
BGRC036	99	106	7	2.82	1092	TGRC028	145	146	1	0.36	1092
GRC1157	57	59	2	0.39	1092	TGRC032	59	62	3	0.68	1092
GRC1158	38	39	1	0.33	1092	TGRC038	205	206	1	0.01	1092
BGRC008	45	47	2	2.34	1093	BGDD003	48.2	49.3	1.1	3.90	1094
GRC1157	75	78	3	0.44	1093	BGRC009	53	54	1	3.44	1094
TDH004	124.4	126	1.6	0.65	1093	BGRC036	72	74	2	0.61	1094
TDH005	135	139	4	0.94	1093	TDH004	88	89	1	0.11	1094
TGRC005	67	68	1	0.60	1093	TGRC012	39	40	1	1.43	1094
TGRC012	74	75	1	2.89	1093	TGRC013	60	66	6	3.23	1094
TGRC013	96	100	4	2.74	1093	TGRC014	84	85	1	17.00	1094
TGRC014	125	126	1	0.74	1093	TGRC016	60	61	1	0.60	1094
TGRC016	87	88	1	0.33	1093	TGRC029	84	87	3	1.08	1094
TGRC018	26	27	1	0.53	1093	TGRC008	111	113	2	3.47	1095
TGRC020	66	68	2	0.85	1093	TGRC012	43	45	2	1.16	1095
TGRC028	163	164	1	0.42	1093	TGRC013	66	73	7	2.29	1095
BGDD003	51.3	54	2.7	0.96	1095	TGRC014	87	94	7	1.30	1095
BGRC036	82	87	5	0.66	1095	TGRC026	117	118	1	0.32	1095
TDH005	96.65	98	1.35	1.99	1095	TGRC028	135	136	1	0.50	1095
TGRC006	51	52	1	2.41	1095	TGRC039	136	141	5	0.64	1095
TGRC007	93	94	1	4.94	1095	TGRC040	120	121	1	0.55	1095
BGRC020	85	87	2	1.24	1096	TGRC007	66	68	2	1.64	1095
TGRC017	64	65	1	1.08	1096	TGRC008	96	98	2	2.21	1097
TGRC017	62	64	2	0.74	1096	TGRC014	74	75	1	0.26	1097
1 GILCOZI		65	3	2.77	1096	TGRC014	69	70	1	0.26	1097
TGRC020		117	2	6.11	1030		09	/0	1	0.0	103/
TGRC029	62						0.4				
TGRC029 TGRC031 BGRC036	98 64	104 65	6 1	3.03 0.01	1096 1097	TGRC027 TGRC028	94 95	95 96	1	0.10	1097 1097



Hole ID	From (m)	To (m)	Interval	Au g/t	Domain	Hole ID	From (m)	To (m)	Interval	Au g/t	Domain
TDH005	67.2	71.2	4	0.46	1097	TGRC031	104	106	2	0.32	1097
BGRC008	36	40	4	0.37	1099	TGRC008	141	142	1	0.45	1099
BGRC036	108	109	1	0.23	1099	TGRC012	70	71	1	0.37	1099
GRC1157	65	66	1	0.47	1099	TGRC013	95	96	1	0.33	1099
TDH004	120	122	2	0.37	1099	TGRC014	117	119	2	5.03	1099
TDH005	125	126	1	0.31	1099	TGRC016	83	84	1	0.30	1099
TGRC007	114	115	1	0.49	1099						



# **APPENDIX 3 - Gabanintha Mineral Resource Estimate (Tumblegum South Gold Deposit)**

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

## Section 1 Sampling Techniques and Data

Criteria
Sampling 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).	<ul> <li>core was obtained, the core was cut in half by diamond bladed saw and half core submitted for assay (TDH004, TDH005 &amp; the lower portion of BGDD003)</li> <li>All Yellow Rock Resources, Bryah Resources and 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. Bryah Resources (2017 and 2019) drilling samples were additionally assayed for a multielement suite using a four acid digestion with ICP-OES finish.</li> <li>Mineralised samples (using lab pulps) from SMS drilling will be assayed in the near future for deleterious elements, base metals and major element oxides by four acid digestion with an ICP-MS finish.</li> <li>All DDH holes were drilled with a contract diamond drilling rig.</li> <li>DDH holes were drilled using a HQ (65mm) and PQ (83mm) diameter core.</li> <li>All YRR and BYH holes were drilled using a 140mm face-sampling drilling bit.</li> </ul>
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	<ul> <li>All DDH holes were drilled with a contract diamond drilling rig.</li> <li>DDH holes were drilled using a HQ (65mm) and PQ (83mm) diameter core.</li> <li>All RC holes were drilled with a contract RC drilling rig.</li> </ul>
	<ul> <li>SMS drillhole sequence TGRC001 to TGRC025 was drilled using a slimline RC rig with a 128mm face-sampling drilling bit.</li> <li>SMS drillhole sequence TGRC026 to TGRC044 was drilled using a 140mm face-sampling drilling bit.</li> </ul>
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	<ul> <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, 2021 and 2022 RC samples were qualitatively described for recovery and weighed at the lab.</li> <li>To ensure maximum sample recovery and the representivity of the RC drilling samples, an experienced Company geologist was present during drilling to monitor the sampling process. Any issues were immediately rectified.</li> </ul>
	<ul> <li>Sample recovery was recorded by the Company geologist as part of core logging for all 2019, 2021 and 2022 RC drilling as well as all DDH drilling. For RC drilling recovery is recorded as good, fair, poor or no sample. This is recorded as length of recovered sample in the tray for DDH drilling measured by hand by trained field crew.</li> </ul>
	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.



	Criteria	JORC Code explanation	Commentary
			<ul> <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>All full core and half core samples were weighed at the lab.</li> <li>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.</li> <li>No twin drill holes have been completed to assess sample bias, though diamond core drilling often closely parallels RC drill holes.</li> <li>At this stage no investigations have been made into whether there is a relationship between sample recovery and grade.</li> </ul>
12101210 12101215	Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>All 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>All chip trays from the 2017, 2019, 2021, and 2022 RC drilling have been returned to Perth for storage in company storage. All chip trays have been photographed.</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, 2021, and 2022 RC drilling. It was not recorded during earlier drill campaigns.</li> <li>In 2019 the fine residue from sieving chips was collected in 38um plastic ziplock 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> <li>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 orientation lines were marked. Structural readings were collected for interpretation.</li> <li>Geological logging is both qualitative and quantitative in nature.</li> <li>All core trays were returned to Perth for storage in company storage and photographed prior to sampling.</li> </ul>



Sub-sampling       •       If core, whether cut or sawn and whether quarter, half or all core taken.       •       Sampling         echniques and sample preparation       •       If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.       •       Sampling         •       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.       •       •	al length of all the DDH and RC holes were logged. Where no sample urned due to cavities/voids it was recorded as such. ic susceptibility readings were collected for approximately every 0.5 along the diamond core and recorded with sampling data and bed into digital format. g technique: 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). The samples were generally dry, and all attempts were made to ensure the collected samples were dry. Sample dryness was recorded for every metre in 2019, 2021 and 2022 drilling. No record of sample dryness was made for the 2013 and 2017 drilling.
0	The cyclone and splitter were cleaned with compressed air at the end of every 6 m 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 an percent value assay ranges for the primary elements. Whole core for holes BGDD001, BGDD002 and 0-40m of BGDD003 Half core samples for 40-70.8m BGDD003, TDH004 and TDH005 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 an percent value assay ranges for the primary elements.



	Criteria	JORC Code explanation	Comn	nentary						
>				0	QAQC for th	ne drill progr	ams is sun	nmarised bel	ow:	
				Year	Standard type	DH sample count	Standard type count	Standard sample count	Ratio of QC standard to DH samples	
				2013	CRM	3,100	0	0	N/A	
				(RC)	Laboratory	3,100	9	288	1:10	
				2017	CRM	1,114	3	45	1:25	
				(RC)	Laboratory	1,114	27	188	1:06	
				2019	CRM	778	4	18	1:43	
				(RC)	Laboratory	778	37	90	1:09	
				2021 (RC)	CRM	1,790	5	40	1:45	
				(RC)	Laboratory	1,790	4	94	1:19	
				2022 (RC)	CRM	2,675	5	75	1:36	
				(110)	Laboratory	2,675	10	226	1:12	
				2022 (DDH)	CRM	660	8	37	1:18	
				(5511)	Laboratory	660	8	51	1:13	
			•	2021 a 2013 R The sa crushe create For 20 multiel The sa minera consist	e preparation nd 2022 RC dr C drilling; and mples were v r, and pulveris a homogenec 17 and 2019 ement suite a mple sizes are lisation base ency of inters expected for	illing as well Intertek Ge veighed and sed to -75 mi ous sub-samp BYH drillin fter a four a considered d on the st ections, the	as 2020 a nalysis for dried, the crons for a ble. g, pulps v cid wet dig appropriations cyle of mi	nd 2022 DDH the 2017 and on crushed to 50g Lead co were additio gestion with te to correctl ineralisation,	I drilling; SGS d 2019 RC dri o -2mm using llection Fire A nally assayed and ICP-OES f y represent t the thickne	for the lling. g a jaw ssay to d for a inish. he gold ss and



Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul> <li>QAQC procedures described above.</li> <li>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.</li> <li>BYH 2017 and 2019 RC drilling samples received an additional 33 element multielement assay that included a four acid digestion with ICP-OES finish. These methods are all considered appropriate for full determination of assay values.</li> <li>Gold, silver, lead, zinc and copper 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.</li> <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> <li>While two batches of assays from the 2022 DDH drilling samples 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.</li> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>Significant intersections have been independently verified by alternative company personnel.</li> <li>The use of twinned holes has not been implemented, but several holes do pass within close range of each other in mineralised areas.</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 are either captured digitally using LogChief for lithology and sampling on paper logs and entered into validating</li> </ul>
	ASX: SMS   <u>starminerals.com.a</u>	au 27



	Criteria	JORC Code explanation	Commentary
	Criteria Location of data points	<ul> <li>JORC Code explanation</li> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>Excel templates prior to load to the Company SQL database by independent 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> <li>For the 2020 and 2022 DDH as well as the 2021 and 2022 RC drilling programmes, collar pegs were set out using a DGPS. Prior to this, all collar pegs were set out using a handheld GPS.</li> <li>Topographic control is currently through a digital elevation model derived from an aerial survey completed in 2018. Original data accuracy was recorded to a 0.12m pixel resolution. A DTM for this project area has been generated at 3m spatial resolution. The spatial accuracy is quoted at a vertical sigma value of 0.25m.</li> <li>2017, 2019, 2020, 2021 and 2022 RC and DDH collars have been independently surveyed by a Licensed Surveyor using a real time kinematic differential GPS for accurate collar location.</li> <li>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 drill holes by the drillers for all RC and DDH drilling completed in 2017, 2019, 2020. They used a Reflex EZ-Shot gyro downhole multi-shot tool to collect the surveys at the following spacing: <ul> <li>2m for 2020 DDH drilling (BGDD series)</li> <li>5m for 2022 DDH drilling (TDH series)</li> </ul> </li> </ul>
			<ul> <li>5m for 2022 DDH drilling (TDH series)</li> <li>5m for 2017 RC drilling (BGRC series)</li> <li>30m for 2019 RC drilling (BGRC series)</li> <li>30m for 2021 and 2022 RC drilling (TGRC series)</li> <li>A Reflex single-shot camera was used for 2013 RC drilling 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</li> </ul>
15	2  ))		<ul> <li>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 project is MGA_GDA94 Zone 50.</li> </ul>



Criteria	JORC Code explanation	Commentary
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>Drill spacing is across the prospect at variable spacing to target mineralisation and structure previously identified with earlier drilling.</li> <li>The majority of drilling is focussed on 25m spaced drilling lines by 25m drill centres</li> <li>Shallow, mineralised areas of the deposit have been drilled to within 5m hole spacing.</li> <li>The drill spacing is now considered sufficient to establish the degree of geological and grade continuity applied under the 2012 JORC code.</li> <li>The majority of RC sampling has been collected at 1m downhole interval resolution using and rig mounted cyclone splitter with sample collected in a prenumbered calico bag.</li> <li>Sample compositing has been applied to some 2017 and 2019 drilling, with 1m samples collected composite 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. This ensures that all RC drilling intervals above cut-off grade have been sampled to 1m downhole resolution using cyclone split calicos.</li> <li>DDH sample intervals are predominantly 1m, though shorter geologically defined intervals were applied where visual mineralisation and alteration was identified.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul> <li>At the southern end of the mineral resource drilling was mostly drilled at nominally -60 degrees toward 315 degrees (north) where targeting a generally ENE-WSW striking set of structures structure hosting the mineralisation which drilling has defined. The attitude of the lithological units is predominantly easterly dipping to sub-vertical. 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 to locally varying intersection angles between drillholes and lithological units all results are defined as downhole widths.</li> <li>At the northern end of the mineral resource drilling was mostly drilled at nominally -60 degrees toward 270 degrees where targeting a generally N-S striking set of structures structure hosting the mineralisation which drilling has defined. The attitude of the lithological units is predominantly easterly</li> </ul>
	ASX: SMS   <u>starminerals.com.a</u>	29



Criteria	JORC Code explanation	Commentary
$\mathcal{C}$		<ul> <li>dipping to sub-vertical. Most holes were drilled with an azimuth of 270 degrees to intersect the structures at right angles. The orientation of the lithological units is not considered critical in this case. 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>
Sample security	• The measures taken to ensure sample security.	<ul> <li>RC calico samples are packed into polyweave sacks and then placed inside sealed Bulker Bags. The Bulker Bags are then delivered to a 3rd party dispatch point in Meekatharra by Company staff.</li> <li>Diamond core was brought to Perth and the samples stored in a company facility where they were further logged then sampled.</li> <li>Individual full core and half core DDH samples were placed in calico bags.</li> <li>DDH samples are packed into polyweave sacks and then placed inside sealed Bulker Bags. The Bulker Bags are then collected by a commercial courier.</li> <li>Chain of Custody was managed by the Company.</li> <li>The samples were transported to the relevant Kalgoorlie 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>
Audits or reviews	<ul> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul> <li>The Company database has been compiled from primary data by independent database consultants and was based on original assay data and historical database compilations.</li> <li>A regular review of the data and sampling techniques is carried out internally.</li> </ul>



## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <li>The relevant tenements are 100% owned by Star Minerals Ltd (SMS).</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 Tumblegum Sout Mining Lease.</li> <li>SMS acquired the precious and base metal rights to the tenements from BY in 2021, and has completed the transfer of the tenement,</li> <li>At the time of reporting, there are no known impediments to obtaining licence to operate in the area and the tenements are in good standing.</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Dominion Mining Ltd completed significant exploration in the area, resultin in mining of the Gabanintha deposits immediately north of Tumblegur South between 1987 and 1992. Other workers have also complete significant exploration for gold in the immediate surrounds, includin Metallica NL in 2001 who completed aircore drilling; Reward Minerals i 2005 – 2006 who completed 27 RC holes for 3,249 m and Kentnor Gold Lt who commissioned a regional interpretation of the geophysics and fiel 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 a the Tumblegum South deposit but do provide information about the rock and gold controls in the local surrounds.</li> <li>Exploration by Australian Vanadium Limited (formerly Yellow Roc Resources) on the relevant tenement in respect to gold and base metals ha included:         <ol> <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>



Criteria	JORC Code explanation	Commentary
		<ol> <li>26 RC holes for 2486m in 2017</li> <li>16 RC holes for 1583m in 2019</li> <li>3 DDH holes for 162m in 2020 (unsampled until SMS takeover of the project)</li> <li>Preliminary metallurgical testing including determination of gold recovery by conventional cyanide leach using Intertek Genalysis and the LeachWell<sup>™</sup> method.</li> </ol>
Geology	• Deposit type, geological setting and style of mineralisation.	<ul> <li>The gold and base metals mineralisation is within Archaean greenstone-hosted shear zones (with or without stockwork gold-bearing quartz-carbonate and quartz-sulphide veining and crackle breccia) close to the contact between the mafic basalt, dolerite and ultramafic rock units in the Murchison Domain of the Yilgarn Craton, Western Australia.</li> <li>Structural analysis of diamond core has resolved a sound structural model for the deposit consisting of shear hosted gold mineralisation in a transpressive wedge-style structure in a predominantly compression regime. Shear-hosted gold mienralisation is hosted within weakly to strongly deformed, laminated quartz-(sulphide) fault-fill veins. This is followed by majority brittle deformation in a predominantly compression structural regime that includes the development of mineralised conjugate quart-sulphide veining and quartz-carbonate crackle breccia in brittle damage zones in the footwall to reactivated shears. There is potentially additional gold endowment within shears during the second stage of deformation.</li> </ul>
Drill hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> </ul> </li> </ul>	Refer to Appendix 2 of this Announcement.

 $\mathbf{Q}$ 



Criteria	JORC Code explanation	Commentary
	<ul> <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> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>A nominal 0.5 g/t Au Cut-off grade was applied in reporting of significant intercepts for all RC and DDH drilling.</li> <li>Intercepts reported are length weighted averages.</li> <li>A 1m internal waste with no minimum grade was applied</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> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</li> </ul>	<ul> <li>Due to locally varying intersection angles between drill holes and lithological units all results are defined as downhole widths.</li> </ul>
Diagrams	<ul> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	• See attached figures within this announcement.
Balanced reporting	<ul> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul> <li>All exploration results are reported in Table 1 and previous ASX announcements.</li> </ul>
Other substantive exploration data	<ul> <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</li> </ul>	<ul> <li>Down hole geological information was recorded by the rig geologist at the time of drilling for all RC and DDH drilling.</li> <li>Any oriented structural details for diamond core were recorded in subsequent logging sessions after trays of core had been returned to Perth.</li> </ul>
	ASX: SMS   starminerals.com.a	



	Criteria	JORC Code explanation	Commentary
$\geq$		characteristics; potential deleterious or contaminating substances.	
	Further work	<ul> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>may be undertaken by the Company at a future date.</li> <li>Mineralised intervals will be assayed for selected multi-elements including a deleterious element suite and base metals.</li> </ul>



## 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	<ul> <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> <li>Data validation was undertaken by company geologists responsible for collecting the field data, prior to peer review by the resource geologist for the Bryah Resources Ltd (BYH) and Star Minerals (SMS) drill campaigns (2017, 2019, 2020, 2021 and 2022). Drilling data were logge either onto paper (2013 YRR, 2017 BYH drill programs), into Microsoft Excel (2019 BYH drill program) or into LogChief (2020 BYH, 2021-2022 SMS drill programs) before being loaded into DataShed™, a Microsoft SQL Server database that stores user settings, allowing only approved data to be entered. Full paper records from the field are available for validation of the digital data. BYH stores all original assay files on the company server.</li> <li>2013 drilling data were validated during the integration of the data into the BYH database. All original assay files for the drilling are held by BYH and these have been used to validate the data in DataShed™. During th data validation process, issues with two drill hole locations were discovered and 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 BYH as part of the acquisition of various mineral rights from AVL).</li> <li>No external third-party reviews were undertaken.</li> <li>Drilling data were retained for all programs excluding the 2013 drilling. Reverse circulation (RC) chips have been photographed and securely stored at the SMS Bayswater core processing/storage facility.</li> <li>Prior to using the drilling data in the Mineral Resource estimate, Entect undertook a database audit that included the following:         <ul> <li>Checking for duplicate drill hole names and duplicate coordinates the collar table.</li> <li>Checking for missing drill holes in the collar, survey, assay, and geology tables based on drill hole names.</li> </ul> </li> </ul>



Criteria	JORC Code explanation	Commentary
		<ul> <li>Checking for survey inconsistencies including dips and azimuths &lt;0°, dips &gt;90°, azimuths &gt;360°, and negative depth values.</li> <li>Checking for inconsistencies in the 'From' and 'To' fields of the assay and geology tables. The inconsistency checks included the identification of negative values, overlapping intervals, duplicate intervals, gaps and intervals where the 'From' value is greater than the 'To' value.</li> <li>Entech's database checks were conducted in MS Access, Leapfrog™ and GEOVIA Surpac™ mining software.</li> <li>Elevation (RL) discrepancies were observed for 2013 drill holes and BGRC029 relative to the aerial surveyed topographical surface. Entech did not sight accurate elevation coordinates for these eight drill holes. Consequently, these holes were draped to the topographic surface on the basis that this was a better representation of the true surface. Entech did not identify any other inaccuracies. Entech also undertook a site visit as part of its due diligence process.</li> <li>The drill hole data were considered suitable for underpinning Mineral Resource estimation of global gold ounces. The data included drilling results available up to and including 3 March 2023. SMS's Tony Standish was appointed Competent Person for Sampling Techniques, Exploration Results and Data Quality underpinning the Mineral Resource estimate. Mr Standish has conducted multiple and regular site visits to the Tumblegum South deposit.</li> </ul>
Site Visits	<ul> <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> <li>Entech visited the Tumblegum South project on 10 June 2022, and SMS's core processing facilities on 16 June 2022 to review drilling and sampling processes for RC and DD drilling and inspect drill hole chips and drill core for consideration in the estimation of Mineral Resources. Mineralisation surface exposures and historical working exposures were also inspected during the visit.</li> <li>Based on site visit observations, Entech made the following recommendations relevant to the Mineral Resource estimate:         <ul> <li>Undertake a density measurement campaign to build on the existing</li> </ul> </li> </ul>



Criteria	JORC Code explanation	Commentary
		<ul> <li>Increase amount of oriented DDH drilling into the prospect.</li> <li>Continue to build on the structural understanding of the deposit.</li> </ul>
Geological Interpretation	<ul> <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> <li>Entech was supplied MS Access database 'BYH_Gabanintha_20230303' comprising 111 collar records in table 'Collar'. Of this total, 99 collar records are within the Tumblegum South prospect, which has the following defined extents:         <ul> <li>Local Northing: 7019550mN – 7020020mN</li> <li>Local Easting: 663400mE – 663800mE.</li> </ul> </li> <li>Interpretation of mineralisation domains was carried out by SMS geologists. At the time of interpretation, one DDH drill hole was complete but not assayed (TDH006). This hole was therefore removed from the estimation dataset. Mineralisation interpretations are constrained to the Tumblegum South prospect.</li> <li>All drill types were used for mineralisation modelling and estimation (RC and DDH).</li> <li>Entech understands that mineralisation is largely structurally controlled at Tumblegum South.</li> <li>Two dominant styles of gold mineralisation exist within the shears, firstI within thick laminated quartz-chalcopyrite-pyrrhotite (up to 30% sulphide) fault fill veins with occasional visible gold, and secondly within sulphide-poor, strongly deformed quartz veins. All shear-hosted mineralisation is located in moderately to strongly sheared ultramaficmafic rocks with a weak to strong carbonate-chlorite-biotite alteration. Additionally, in the footwall to shears, a brittle damage zone has developed, characterised by the presence of crackle breccia-type veining Auriferous crackle breccia veining is characterised by a quartz-chalcopyrite-pyrrhotite vein mineral assemblage and are typically hoster within a conjugate set of veins. Smaller, erratic carbonate veins with discrete carbonate-sericite haloes and a lack of sulphides occasionally host gold within the brittle damage/crackle breccia zone.</li> <li>Geological logging, veining and presence of sulphides (specifically As, Cu Ag or Tg) were used for lithology and mineralisation modelling. Alternative mineralisation geometries were compared against indica</li></ul>



	Criteria	JORC Code explanation	Commentary
			based numerical modelling (Leapfrog™ Indicator RBF Interpolants) at varying cut-offs and probability outcomes. These alternative models supported the metal distribution in the interpreted mineralised
			<ul> <li>wireframes.</li> <li>The Tumblegum South deposit is hosted within a mafic-ultramafic alternating package striking roughly north–south through northeast–</li> </ul>
$\bigcirc$			southwest, with a steep to subvertical dip to the east. The major mineralisation shears are either slightly (northern end of the resource) or obtusely (southern end of the resource) oblique to the lithological
(15)			<ul> <li>contacts identified.</li> <li>Lithological models were generated by SMS personnel prior to commencing the mineralisation domain interpretation. Major lithologies</li> </ul>
			were assigned based on (and in order of importance) evaluation of qualitative geological logging, multi-element assay data (especially Ni, Cr and Mg) where applicable, magnetic susceptibility where applicable, and
			pXRF assay of drilling sample reject fines. This led to the identification of an alternating mafic-ultramafic lithological succession that includes basalts, dolerites, komatiitic basalts, magnetite-rich metadolerite and peridotite. These rock types are also well documented in record from the
			mining of open pits by Dominion Mining Ltd immediately north of, and along strike from, Tumblegum South. The logging of the drill holes by company geologists is broadly consistent with the lithologies defined by
			<ul> <li>Entech considers further drilling will lead to better definition of the relationship between lithology and mineralisation at the deposit.</li> </ul>
			<ul> <li>Weathering surfaces were created by interpreting the existing drill logging for oxidation state and were extended laterally beyond the limits of the Mineral Resource model. Entech reviewed the weathering contacts</li> </ul>
P U O S			in relation to mineralisation controls but did not find clear evidence of a relationship between weathering contacts and grade distribution in the Tumblegum South domains.
			<ul> <li>Mineralisation interpretations were informed by 75 drill holes – comprising RC (69) and DDH (6) – and supported by a nominal drill density of 25 m along strike × 25 m down dip.</li> </ul>
		1	activity of 25 th along strike × 25 th down dip.
		ASX: SMS   <u>starminerals.com.a</u>	<u>au</u> 38
7			



	Criteria	JORC Code explanation	Commentary			
				<ul> <li>Factors which limited the confidence of the geological interpretation nclude:</li> <li>High reliance on RC data for definition of discrete mineralisation boundaries</li> <li>Limited number of structural readings as a result of RC drilling</li> </ul>		
				<ul> <li>Factors which aided the confidence of the geological interpretation ncluded:</li> <li>Grid drilled and perpendicular 25 m × 25 m drill data within the central core of the deposit.</li> </ul>		
				<ul> <li>Diamond drilling completed and included in this Mineral Resource estimate since the January 2020 Mineral Resource estimate largely confirms mineralisation thickness and grade tenor.</li> <li>Geology modelling providing a reliable framework mineralisation modelling, particularly within the Brittle Damage Zone (BDZ).</li> </ul>		
$\sum$			i	n Entech's opinion, the available drilling density supports the continuity mplied by the interpreted mineralisation domains, both along strike and down dip.		
			ii ii c ii ii e	nterpretations of domain continuity were undertaken by SMS personnel n Leapfrog <sup>™</sup> software. The mineralisation intercepts correlating to ndividual domains were manually selected prior to creating vein models using Leapfrog <sup>™</sup> Geo implicit modelling software. High-grade sub- domains were interpreted for domains 1003, 1006 and 1007 using ndicator-based numerical modelling (Leapfrog <sup>™</sup> Indicator RBF nterpolants) at a cut-off grade of 0.5 g/t Au. Cut-offs were based on exploratory data analysis (EDA) of the mineralisation sample population as well as visual review of the mineralisation tenor and strike, and dip		
$\bigcirc$			c b	continuity. Interpretation volumes were reviewed by Entech prior to being used in the Mineral Resource estimate.		
			r	A total of 20 domains were interpreted at Tumblegum South: 17 nineralisation domains and 3 high-grade mineralisation sub-domains. A cut-off grade of 0.5 g/t Au was used to guide the geological continuity		
			c b	of the interpreted mineralisation. Selection of the cut-off grade was based on statistical and spatial analysis of composite data indicating a		
JU			l r	natural mineralisation population exists above 0.5 g/t Au. Within the		



Criteria	JORC Code explanation	Commentary
		mineralised wireframe, if an intercept fell below the nominal cut-off but continuity was supported by host lithologies, the intercept was retained for continuity purposes due to the commodity and the style of deposit.
$\bigcirc$		
Dimensions	<ul> <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> <li>Mineralised domains at Tumblegum South extend over a 475 m local grid north—south strike length. Lode thicknesses are highly variable and range from 1 m to 6 m thick in the local grid north—east striking domains, and from 1 m to 10 m in the local grid east striking domains with a maximum thickness of 9–10 m (domain 1093).</li> <li>Mineralisation exists from surface and currently extends 175 m to a lower limit of 305 mRL at its deepest and remains open at depth.</li> </ul>
Estimation and modelling techniques	<ul> <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> <li>If a computer assisted estimation method was chosen include a description of computer software and parameters used.</li> <li>The availability of check estimates, previous estimates and/or mine</li> </ul>	<ul> <li>Sample data were composited to a 1 m downhole length using a best-fit method. Top-caps were applied prior to block grade estimation, with the maximum distance of possible extrapolation in each domain being based on variogram analysis and the geological understanding of the deposit.</li> <li>EDA and variography analysis of the capped and declustered composited gold variable within domain groups whose relation similarities were underpinned by observed spatial and statistical analysis. All EDA was completed in Datamine's Supervisor software and data were exported for</li> </ul>



<ul> <li>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</li> <li>In the case of block model interpolation, the block size in relation to</li> </ul>	<ul> <li>An Ordinary Kriging (OK) interpolation approach in GEOVIA Surpac<sup>™</sup> was selected for all interpreted domains. All estimates used domain boundaries as hard boundaries for grade estimation where only composite samples within that domain are used to estimate blocks coded as falling within that domain.</li> <li>Following variography analysis (two-spherical structure, normal scores</li> </ul>
<ul> <li>Description of how the geological interpretation was used to control the resource estimates.</li> <li>Discussion of basis for using or not using grade cutting or capping.</li> <li>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li> </ul>	<ul> <li>variograms), omni-directional models were established for domains 1005 and 1092. Domains were grouped based on spatial, statistical and mineralisation similarities, with variography from Domain 1092 applied to all domains excluding Domain 1005. High-grade sub-domains were combined with their lower-grade counterparts for variography analysis. Nugget values between 32% and 39% were modelled with continuity ranges of 32–35 m in the major direction.</li> <li>A check estimate in 3D was undertaken for all domains using the Inverse Distance Squared method. The check estimate results were, on average, 2.5% higher in metal content.</li> <li>No assumptions with respect to by-products were made.</li> <li>Copper (Cu), being a deleterious element during cyanide leach processing of Au, has also been estimated.</li> <li>Interpolation was undertaken using OK in GEOVIA Surpac™ within parent cell blocks. Dimensions for the interpolation were Y: 10 mN, X: 10 mE, Z: 5 mRL, with sub-celling of Y: 0.625 mN, X: 0.625 mE, Z: 0.625 mRL. The model was not rotated. Considerations relating to appropriate block size include drill hole data spacing, conceptual mining method and search neighbourhood optimisations (QKNA).</li> <li>Only RC and DDH drill data were used in the Mineral Resource estimate. The average drill spacing ranges from 20 m to 25 m.</li> <li>A two-pass estimation search strategy was employed for all domains. All domains were estimated within a maximum distance of 40 m and 60 m for the first pass and second pass, respectively. The number of neighbourhood composites ranged from a minimum of 6 to a maximum of 14 samples for the first pass. The minimum number of composites was reduced to 4 for the second pass, except for domains 1003, 1206 and 1207, which used a minimum of 3 composites.</li> </ul>



Criteria	JORC Code explanation	Commentary
		<ul> <li>No selective mining units were assumed.</li> <li>No correlated variables have been investigated or estimated.</li> <li>All domain estimates were based on mineralisation domain constraints underpinned by geological logging (lithology, mineralogy and veining) and a nominal cut-off grade of 0.5 g/t Au. The mineralisation constraints have been used as hard boundaries for grade estimation wherein only composite samples within that domain are used to estimate blocks coded as falling within that domain.</li> <li>Assessment and application of top-capping for the estimate were undertaken on the gold variable in individual domains. Top-caps were initially applied on a global basis within individual domains to limit the potential influence of obvious statistical outliers. Global top-caps are as follows:         <ul> <li>Domain 1001: Top-cap = 25 g/t Au and 26.9% metal reduction (the high percentage of metal reduction is due to the effect of two statistical and spatial composite outliers)</li> <li>Domain 1002: Top-cap = 25 g/t Au and 12.4% metal reduction (the moderate percentage of metal reduction is due to the effect of two statistical and spatial composite outliers)</li> <li>Domain 1003: Top-cap = 25 g/t Au and 9.4% metal reduction.</li> <li>A distance-limiting constraint was applied during interpolation for metal control in domains 1001, 1002, 1003, 1004, 1005, 1091, 1094, 1094 and 1097. Distances selected were typically half the search range and grades selected based on natural mineralisation population breaks.</li> </ul> </li> <li>Validation of the estimation outcomes was completed by global and local bias analysis (swath plots) and statistical and visual comparison (cross and long sections) with input data.</li> </ul>
Moisture	• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	<ul> <li>Density and tonnage were estimated on a dry in situ basis.</li> <li>No studies have been completed on moisture content of the rock.</li> </ul>
Cut-off parameters	• The basis of the adopted cut-off grade(s) or quality parameters	• The Mineral Resource estimate cut-off grade for reporting of global gold resources at Tumblegum South was 0.5 g/t Au. This was based on



	Criteria	JORC Code explanation	Commentary
			consideration of grade-tonnage data, potential mining methods, and economic cut-offs applied at other analogous operations.
rsonal use on	Mining factors or assumptions	<ul> <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> <li>Open pit mining methods were assumed at the Tumblegum South deposit. The presence of historical open pits within 0.2–2.3 km north of the project demonstrate previous open pit extraction of deposits in the same geological package.</li> <li>No mining dilution or minimum mining widths were assumed or applied within the Mineral Resource.</li> <li>The Mineral Resource estimate extends nominally 175 m below the topographic surface to 305 mRL. Entech considers material at this depth would fall under the definition of 'reasonable prospects for eventual economic extraction' (RPEEE) within an open pit mining framework.</li> <li>The Tumblegum South deposit is located on an existing mining lease (M51/888).</li> <li>Historical underground mining activity has been undertaken at Tumblegum South, as evidenced by shafts and mullock heaps on the tenement but information regarding historical underground mining is very limited. In lieu of any detailed information, mined volumes have been digitised using surface mining exposures (i.e. mine shafts) in combination with voids encountered during drill programs to determine two mined stopes: north and south. Given the lack of historical data, it should be noted that mined volumes likely contain potential errors in spatial position and/or unknown voids, thus mineralisation in the vicinity of mined volumes remains in the Inferred classification. The bulk of mining appears to have been focused on domain 1003 in the north and domains 1002/1092 in the south. Entech has not been able to undertake a cross-check of depletion volumes and historical mined figures owing to the lack of historical anning metrics.</li> <li>No dilution or cost factors were applied to the estimate.</li> <li>A series of pit shell optimisations were completed using the previous model, these will be updated as part of the planning process.</li> </ul>
	)		· /

 $\mathbf{Q}$ 



Criteria	JORC Code explanation	Commentary
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.	<ul> <li>BYH collected 20 residual RC samples for gold recovery analysis by cyanide using a 6-hour bottle roll leach (ASX announcement. 8 April 2020. BYH – Positive Gold Recoveries for Tumblegum South). Testing was conducted at the Intertek Genalysis laboratory in Perth using the LeachWELL™ technique. Gold recoveries ranged from 73% to 95%, with an average of 90%. The calculated gold grades ranged from 0.35 g/t Au to 27.46 g/t Au. Further definitive testwork is required with TDH006 (DDH) archived for metallurgical testwork.</li> <li>Gold mined by Dominion Mining Ltd immediately to the north was extracted through conventional cyanide leach.</li> <li>Based on discussions with SMS geologists, Entech understands there are no metallurgical amenability risks which would be material to the Mineral Resource estimate.</li> <li>No metallurgical recovery factors were applied to the Mineral Resources or resource tabulations.</li> </ul>
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 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.	<ul> <li>No environmental factors were applied to the Mineral Resources or resource tabulations.</li> </ul>
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.	<ul> <li>Bulk density values at the Tumblegum South deposit were derived from 167 validated measurements taken from 5 DDH holes completed during 2021 and 2022. The samples were located between 7019650 mN and 7019760 mN. Samples were taken nominally from 2.05 m to 188.6 m</li> </ul>



Criteria	JORC Code explanation	Commentary
	<ul> <li>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.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul> <li>downhole to provide a representative density profile across oxidation states.</li> <li>Entech recommends density measurement campaigns continue to be undertaken at Tumblegum South to ascertain any deviations in density to those applied.</li> <li>SMS supplied the bulk density values. Independent verification of raw data was carried out by Entech, and the following bulk density values were determined and applied in the block model: <ul> <li>Transitional: 2.70 t/m<sup>3</sup></li> <li>Fresh: 2.90 t/m<sup>3</sup>.</li> </ul> </li> <li>Density measurements were collected using the water immersion methodology with both wet and dry density measurements captured in the MS Access database. Density measurements were undertaken on transitional (39) and fresh (128) drill core samples.</li> <li>Due to the statistical variation in lithology, bulk densities were averaged in each weathering unit. An average bulk density value based on weathering coding has been assigned for tonnage reporting.</li> </ul>
Classification	<ul> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>Whether appropriate account has been taken of all relevant factors (ie 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).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul> <li>Mineral Resources were classified as Indicated and Inferred to appropriately represent confidence and risk with respect to data quality, drill hole spacing, geological and grade continuity and mineralisation volumes. Additional considerations were the stage of project assessment amount of RC drilling undertaken, current understanding of mineralisation controls and mining selectivity within an open pit mining environment.</li> <li>In Entech's opinion, the drilling, surveying and sampling undertaken, and analytical methods and quality controls used, are appropriate for the style of deposit under consideration.</li> <li>Indicated Mineral Resources were defined where a moderate level of geological confidence in geometry, continuity and grade was demonstrated, and were identified as areas where:         <ul> <li>blocks were well supported by drill hole data, with the distance to</li> </ul> </li> </ul>

**L** 



		Commentary
		<ul> <li>where drilling was within approximately 25 m of the block estimate; and</li> <li>blocks were interpolated with a neighbourhood largely informed by the maximum number of samples.</li> <li>Inferred Mineral Resources (to 305 mRL) were defined where a low to moderate level of geological confidence in geometry, continuity and grade was demonstrated, and were identified as areas where: <ul> <li>drill spacing averaged a nominal 40 m or less, or where drilling was within 40 m of the block estimate;</li> <li>estimation quality was considered low, as delineated by a conditional bias slope nominally between 0.1 and 0.5; and</li> <li>areas informed by RC drilling only.</li> </ul> </li> <li>The reported Mineral Resource was constrained at depth by the available drill hole spacing outlined for Inferred classification, nominally 305 m below surface.</li> <li>All classified Mineral Resources were reported inside the tenement boundary (M51/888), as provided by SMS.</li> <li>Mineralisation within the model which did not satisfy the criteria for classification as Mineral Resources remained unclassified.</li> </ul>
		<ul> <li>Consideration has been given to all factors that are material to the Mineral Resource outcomes, including but not limited to confidence in volume and grade delineation, quality of data underpinning Mineral Resources, mineralisation continuity and variability of alternate volume interpretations and grade interpolations (sensitivity analysis).</li> <li>In addition to the above factors, the classification process considered nominal drill hole spacing, estimation quality (conditional bias slope, number of samples, distance to informing samples) and reliability of input data.</li> <li>The delineation of Indicated and Inferred Mineral Resources appropriately reflects the Competent Person's view on continuity and risk at the deposit.</li> </ul>
Audits or reviews	• The results of any audits or reviews of Mineral Resource estimates.	<ul> <li>Entech undertook internal audits and peer review with a focus on independent resource tabulation, block model validation, verification of</li> </ul>
	Audits or reviews	Nudits or reviews of Mineral Resource estimates.



Criteria	JORC Code explanation	Commentary		
		<ul><li>technical inputs, and peer review of approaches to domaining, interpolation and classification.</li><li>The estimate was also reviewed internally by SMS geologists.</li></ul>		
Discussion of relative accuracy/ confidence	<ul> <li>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.</li> <li>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.</li> <li>Documentation should include assumptions made and the procedures used.</li> <li>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul> <li>Variances to the tonnage, grade, and metal tonnes of the Mineral Resource estimate are expected with further definition drilling. It is the opinion of the Competent Person that the classification criteria for Indicated and Inferred Mineral Resources appropriately capture and communicate these variances and risks.</li> <li>The Mineral Resource Statement relates to global tonnage and grade estimates.</li> <li>No formal confidence intervals or recoverable resources were undertaken or derived.</li> <li>The resource classification reflects the relative confidence in the Mineral Resource estimate by the Competent Person.</li> <li>Historical underground mining activity has been undertaken at Tumblegum South, as evidenced by shafts and mullock heaps on the tenement but information regarding historical underground mining is very limited. In lieu of any detailed information mined volumes have been digitised using surface mining exposures (i.e. mine shafts) in combination with voids encountered during drill programs to determine two mined stopes: north and south. Given the lack of historical data, it should be noted that mined volumes likely contain potential errors in spatial position and/or unknown voids and mineralisation in the vicinity of mined volumes therefore remains in the Inferred classification. The bulk of mining appears to have been focused on Domain 1003 in the north and domains 1002/1092 in the south. Entech has not been able to undertake a cross-check of depletion volumes and historical mined figures owing to the lack of historical mining metrics.</li> </ul>		



Engineering | Geology | Geotech

Entech Pty Ltd. ABN 23 143 135 773

8 Cook St, West Perth WA 6005 admin\_au@entechmining.com

entechmining.com

26 May 2023

Greg Almond Chief Executive Officer Star Minerals Ltd

### LETTER OF CONSENT – TUMBLEGUM SOUTH MINERAL RESOURCE ESTIMATE

Dear Mr Almond

The following report summarises material outcomes with respect to the Mineral Resource estimate for the Tumblegum South deposit, prepared by Entech Pty Ltd May 2023 and reported in accordance with JORC Code (2012) guidelines. The Material Summary, JORC Code Table 1 (Section 3), sign-off and consent form included in this letter allow Star Minerals Ltd to achieve compliance with the Australian Securities Exchange (ASX) Listing Rules regarding announcements of Mineral Resources to the market, with respect to Estimation and Reporting of Mineral Resources.

This document does not specifically address JORC Code (2012) guidelines or ASX Listing Rules regarding announcements of Mineral Resources to the market, with respect to Sampling Techniques, Exploration Results and Data Quality underpinning the Mineral Resource Estimate.

Should you have any questions relating to this report, please contact the undersigned.

Regards Entech Pty Ltd

Lisa Milham BSc(Hons) Geology MAIG Senior Geology Consultant

### MATERIAL SUMMARY

### TUMBLEGUM SOUTH MINERAL RESOURCE ESTIMATE

Material information summary as required under ASX Listing Rule 5.8 and JORC Code (2012) reporting guidelines.

#### **Mineral Resource Statement**

The Mineral Resource Statement for the Tumblegum South Mineral Resource estimate was prepared during May 2023 and is reported according to the *Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves* (the 'JORC Code') 2012 edition.

The Mineral Resource estimate includes 8,566.9 m of drilling from 75 reverse circulation (RC) and diamond drill (DD) drill holes completed since 2013. Of the drill metres underpinning the Mineral Resource, 53% were completed by Star Minerals Ltd (SMS) in 2021 and 2022 and 40% by Bryah Resources Ltd (BYH) from 2017 to 2020. Historical drilling includes seven holes (five of which intersect the resource; 7% of drill metres) completed in 2013 by Australian Vanadium Ltd (AVL). The depth from surface to the current vertical limit of the Mineral Resources is approximately 175 m (305 mRL).

In the opinion of Entech, the resource evaluation reported herein is a reasonable representation of the global gold Mineral Resources within the Tumblegum South deposit, based on sampling data from RC and DD drilling available as of 3 March 2023. Mineral Resources are reported below topography, excluding mining voids and comprise transitional and fresh rock. The Mineral Resource Statement is presented in Table 1.

Project Area	Resource Category	Weathering	Tonnes (kt)	Grade (g/t Au)	Gold ounces (koz)
			1	1	
		Transitional	25	2.99	2
	Indicated	Fresh	312	2.48	25
Tumblegum		Subtotal	337	2.52	27
South	Inferred	Transitional	40	1.76	2
		Fresh	239	2.03	16
		Subtotal	279	1.99	18
	Total		616	2.28	45

#### Table 1 Tumblegum South Mineral Resource at a 0.5 g/t Au cut-off by weathering status

Tonnages are dry metric tonnes. Minor discrepancies may occur due to rounding.

A total of 10,832.9 m of drilling from 99 drill holes was available for the Mineral Resource estimate. Mineralisation interpretations were informed by RC and DD drilling (99 holes, of which 75 intersect the resource). Of the 75 drill holes, RC and DD holes were included in the estimate for 588.8 m of drilling intersecting the resource. At the time of interpretation, one DD drill hole was complete but not assayed (TDH006).

This Mineral Resource estimate includes Inferred Mineral Resources, which are unable to have economic considerations applied to them, and there is no certainty that further sampling will enable them to be converted to Measured or Indicated Mineral Resources.

#### **Competent Person's Statement**

The information in the report to which this Mineral Resource Statement is attached that relates to the estimation and reporting of gold Mineral Resources at the Tumblegum South deposit is based on information compiled by Ms Lisa Milham, BSc, a Competent Person who is a current Member of the Australian Institute of Geoscientists (MAIG 7680). Ms Milham, Senior Geologist at Entech Pty Ltd, is an independent consultant to Star Minerals Ltd with sufficient experience relevant to the style of mineralisation and deposit type under consideration and to the activities being undertaken 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*. Ms Milham consents to the inclusion in the report of matters based on her information in the form and context in which it appears.

Entech's Senior Geologist Tim Holmes undertook a site visit to the Tumblegum South deposit and SMS's core processing facilities in June 2022 to review drilling and sampling processes for RC and DD drilling and inspect drill hole chips and drill core for consideration in the estimation of Mineral Resources. Mineralisation surface exposures and historical working exposures were also inspected during the site visit. No material issues pertaining to the Mineral Resource estimate were identified, observed, or documented during the visit. Entech recommended improvements to density measurements (increasing existing dataset) and undertaking additional DD drilling.

#### **Drilling techniques**

Drilling has been completed from surface using RC and DD drilling techniques. Six of these holes have been drilled using diamond drill (DD) techniques (BGDD001-003, TDH004-006). All DD holes except TDH006 were oriented. At the time of interpretation, analytical data for TDH006 were missing, and this hole was therefore removed from the estimation dataset. TDH006 remains unsampled and has been archived at the SMS Bayswater core processing and storage facility for future comminution and metallurgical testwork.

RC drilling used a nominal 128–140 mm diameter face-sampling hammer. Diamond drilling was completed using a combination of PQ, HQ and NQ2 drill diameters.

Collar locations for RC and DD holes completed between 2017 and 2022 were picked up by a licensed surveyor using a real-time kinematic differential global positioning system (RTK GPS). Collar locations for the seven RC holes completed in 2013 were picked up using a handheld GPS. Elevation (RL) discrepancies were observed for 2013 drill holes, in addition to BGRC029, relative to the topographical surface. Discrepancies were handled by amending drill hole collar elevations to the aerial-surveyed topographical surface on the basis that this was a better representation of the true surface. All reported coordinates were referenced to grid system MGA\_GDA94 Zone 50. The topography is relatively flat at the location of drilling. Downhole surveys were completed using REFLEX gyroscopic survey tools at 30 m increments or less for drilling completed between 2017 and 2022. REFLEX single-shot survey tools were used to complete downhole surveys at 100 m increments or less for drilling completed where azimuth readings were deemed implausible owing to suspected high magnetics within host rocks. Entech did not review downhole survey data against database information.

#### Historical drilling

Tumblegum South was drilled as part of an exploration program for strike extensions of northern open

pit deposits of the Gabanintha Gold Mine. Australian Vanadium Ltd (AVL; formerly Yellow Rock Resources) commenced RC drilling in 2013 at Tumblegum South, coupled with soil geochemistry sampling and geophysical surveys during its tenure.

Of the drill holes used in the Tumblegum South Mineral Resource estimate, seven RC drill holes were drilled by AVL in 2013, 45 holes (RC-42, DD-3) were drilled by BYH from 2017 to 2020 and 47 holes (RC-44, DD-3) were drilled by SMS during 2021–2022. One DD hole (TDH006), drilled by SMS in 2022, informs the mineralised interpretation but is excluded from the estimate owing to analytical data being unavailable at the time of estimation.

The key focus of SMS drilling was to continue to test and define mineralisation presence and mineralisation style at Tumblegum South and to provide an updated Mineral Resource estimate. All areas included in the Mineral Resource estimate are now considered sufficiently supported by SMS drill information.

#### Sampling and sub-sampling techniques

Using a cone splitter, 1 m RC samples were split and collected at the drill rig from collar to end-of-hole (EOH) for all RC drill campaigns excluding 2017 which used a riffle splitter. Each RC sample weighs approximately 3 kg. The RC chips were geologically logged over 1 m intervals.

All 1 m RC samples were submitted to the laboratory for the YRR 2013, SMS 2021 and SMS 2022 drill programs. For the 2017 and 2019 BYH drill programs, 3 m RC composites were collected by spear sampling the 1 m reject material directly from reject piles in 2017 and from green bags in 2019. In the 2017 drill program, the entire hole was assayed on the 3 m composite spear samples. Where intervals returned gold grades greater than 0.2 g/t Au, these were later submitted as 1 m riffle splits. In the 2019 drill program, 1 m cone split samples were directly submitted where the field geologist identified potential mineralisation, with the remainder of the hole submitted as 3 m spear sampled composites. Where gold grades greater than 0.2 g/t Au were returned in the 2019 composites, the 1 m cone splits were retrieved from the field and also submitted for analysis. For both 2017 and 2019 drill programs, sample information was recorded on paper and subsequently digitised in MS Excel and loaded into the database.

The majority of DD core drilled in 2020 (BYH) was whole core sampled except for the latter part (40–70.8 m) of BGDD003 which was half core sampled. DD core drilled in 2022 (SMS) was sawn in half lengthways with the half containing the orientation line retained. The DD holes were logged to geological boundaries in addition to being structural and geotechnically logged.

Drilling intersected transitional and primary ore to a maximum downhole depth at the 255 m RL. Sample recovery and metreage were visually assessed and recorded where either were significantly reduced.

Continuous verification of correct RC sample depths and sequence were undertaken and sample recoveries were visually checked for recovery, moisture and contamination. The cyclone was flushed with compressed air and manually cleaned at 6 m intervals. The RC samples collected were all predominantly dry.

SMS's QAQC protocols include the collection and analysis of field duplicates (rig-mounted cyclone split duplicates) and the insertion of appropriate commercial standards (certified reference materials,

CRMs) and blank samples. Sample submissions for BGDD001–003 did not contain blank samples.

Laboratories produced additional checks including laboratory standards and pulp duplicates. The QAQC insertion types and rates are outlined in Table 2.

Year	Standard type	DH sample count	Standard type count	Standard sample count	Ratio of QC standard to DH samples
2012 (PC)	CRM	3,100	0	0	N/A
2013 (RC)	Laboratory	3,100	9	288	1:10
2017 (DC)	CRM	1,114	3	45	1:25
2017 (RC)	Laboratory	1,114	27	188	1:06
2010 (PC)	CRM	778	4	18	1:43
2019 (RC)	Laboratory	778	37	90	1:09
2021 (DC)	CRM	1,790	5	40	1:45
2021 (RC)	Laboratory	1,790	4	94	1:19
2022 (DC)	CRM	2,675	5	75	1:36
2022 (RC)	Laboratory	2,675	10	226	1:12
2022 (0011)	CRM	660	8	37	1:18
2022 (DDH)	Laboratory	660	8	51	1:13

#### Table 2 Ratios for certified reference material and laboratory standards

#### Historical sampling

Seven RC holes drilled in 2013 were used in the Mineral Resource estimation. All 1 m samples were submitted to the laboratory. Sample information was recorded on paper and subsequently digitised in MS Excel and loaded into the database.

#### Sample analysis method

Analytical methods used for each program are outlined in Table 3. Preparation at all laboratories included drying, crushing and pulverising, with an appropriate sub-sample weight of pulp extracted depending on the analytical method elected.

Company	Year	Laboratory	Sample type	Analytical method
AVL (formerly YRR)	2013	SGS Perth Airport	1 m cone rig split	Aqua regia digest, inductively coupled plasma with a mass spectrometry finish (ICP-MS) or atomic absorption spectroscopy (AAS) finish on samples greater than 500 ppb Au
ВҮН	2017	Intertek Genalysis Maddington	3 m spear composite	50 g fire assay with OES finish (FA50/OE); Portable XRF – InnovX Delta
ВҮН	2017	Intertek Genalysis Maddington	1 m riffle rig split	50 g fire assay with OES finish (FA50/OE); 4- acid digest, inductively coupled plasma with an optical (atomic) emission spectrometry finish (ICP-OES) for 33 elements

#### Table 3 Summary of laboratory preparation and analytical methods used for each program

Company	Year	Laboratory	Sample type	Analytical method
ВҮН	2019	Intertek Genalysis Maddington	3 m spear composite	50 g fire assay with OES finish (FA50/OE); 4- acid digest, inductively coupled plasma with an optical (atomic) emission spectrometry finish (ICP-OES) for 33 elements
ВҮН	2019 - 2022	Field Office	Fines from 1 m rig reject sample (green bag)	Portable XRF - Vanta
ВҮН	2019	Intertek Genalysis Maddington	1 m cone rig split	50 g fire assay with OES finish (FA50/OE); 4- acid digest, inductively coupled plasma with an optical (atomic) emission spectrometry finish (ICP-OES)
SMS	2021 - 2022	Bureau Veritas Kalgoorlie	1 m cone rig split	50 g fire assay with AAS finish (FA001)
SMS	2020/2022	Bureau Veritas Kalgoorlie	DDH half core, DDH full core	50 g fire assay with AAS finish (FA001)

#### Historical analysis

Analysis of the 2013 RC drilling was via aqua regia digest, inductively coupled plasma with a mass spectrometry finish (ICP-MS) or atomic absorption spectroscopy (AAS) finish on samples greater than 500 ppb Au. Analysis was conducted at the SGS Perth Airport laboratory.

#### **Geology and geological interpretation**

The Tumblegum South gold deposit is thought to be the southern extension of mineralisation encountered in the Gabanintha gold mining pits operated by Dominion Mining Limited between 1987 and 1992. However, several key differences exist between the deposits, including a shift in shear orientation from northwest to northeast at Tumblegum South, differing alteration/mineralisation styles and a reduction in the breadth and intensity of ductile shear fabrics.

The geology of Tumblegum South is dominated by a poorly defined, ~north–south striking sequence of alternating mafic and ultramafic rocks. Structural analysis of oriented DD core has assisted in the development of a sound structural model that underpins the geology model. This consists of a primary conjugate shear system with domain 1001 and 1003 shears running sub-parallel to one another. These form the upper and lower margins of a transpressive wedge/flower structure defined by a set of three (domains 1002/1008, 1004 and 1005) dominantly transcurrent shears between them.

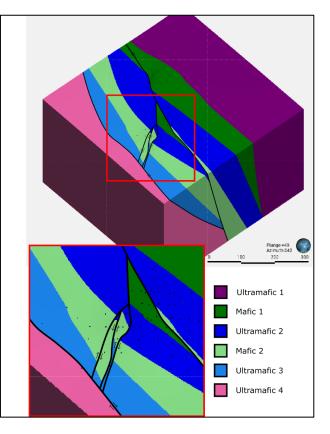


Figure 1 Oblique view looking northeast (azimuth 042°) illustrating Tumblegum South geological model.

This brittle-ductile regime is succeeded by a brittle, reverse-dominated structural regime characterised by the presence of conjugate quartz-chalcopyrite-pyrrhotite and quartz-carbonate crackle breccia style veining in the footwall to shears within so-called "brittle damage zones" (BDZs). Reverse reactivation of earlier shears is thought to be the controlling process in development of the BDZs in their respective footwalls. This episode may also be linked with gold remobilisation and secondary endowment of shears with mineralisation.

In the BDZ, gold mineralisation is hosted within conjugate quartz-chalcopyrite-pyrrhotite-(carbonate) veins in the footwall to reactivated shears and is sometimes associated with discrete vein halo carbonate-sericite alteration. Occasionally, gold also grades weakly in sulphide-poor quartz-carbonate crackle breccia veins with carbonate-sericite alteration haloes.

Two dominant styles of gold mineralisation exist within the shears: firstly within thick laminated quartz-chalcopyrite-pyrrhotite (up to 30% sulphide) fault fill veins with occasional visible gold, and secondly within sulphide-poor, strongly deformed quartz veins. All shear hosted mineralisation is located within moderately to strongly sheared ultramafic-mafic rocks with a weak to strong carbonate-chlorite-biotite alteration.

Weathering surfaces were created by interpreting the existing drill logging for oxidation state and were extended laterally beyond the limits of the Mineral Resource model. Entech reviewed the weathering contacts in relation to mineralisation controls but did not find clear evidence of a relationship between weathering contacts and grade distribution in Tumblegum South domains.

All drill types (DD and RC) were used for mineralisation modelling and estimation. Mineralisation

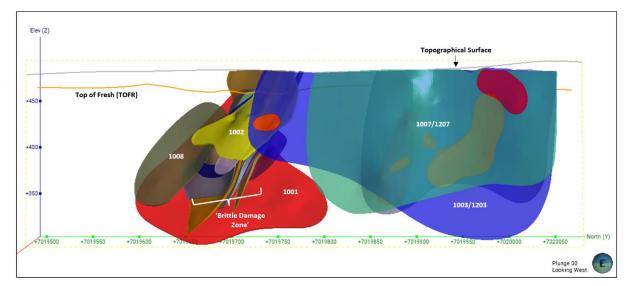
interpretations were informed by 75 drill holes – comprising RC (69) and DD (6) – and supported by a nominal drill density of 25 m along strike by 25 m down dip.

Interpretations of domain continuity were undertaken by SMS personnel in Leapfrog software. The mineralisation intercepts correlating to individual domains were manually selected prior to creating vein models using Leapfrog<sup>™</sup> Geo implicit modelling software. High-grade sub-domains were interpreted for domains 1003, 1006 and 1007 using indicator-based numerical modelling (Leapfrog<sup>™</sup> Indicator RBF Interpolants) at a cut-off grade of 0.5 g/t Au. Cut-offs were based on exploratory data analysis (EDA) of the mineralisation sample population as well as visual review of the mineralisation tenor and strike, and dip continuity. Interpretation volumes were reviewed by Entech prior to being used in the Mineral Resource estimate.

A total of 20 domains were interpreted at Tumblegum South: 17 mineralisation domains and three high-grade mineralisation sub-domains.

A cut-off grade of 0.5 g/t Au was used to guide the geological continuity of the interpreted mineralisation for all shear and crackle breccia domains. Domains 1003, 1006 and 1007 were modelled along strike from high-grade zones using a cut-off grade of 0.3 g/t Au. Selection of the cut-off grade was based on statistical and spatial analysis of composite data indicating a natural mineralisation population exists above 0.5 g/t Au (for shear and crackle breccia domains). Within the mineralised wireframe, if an intercept fell below the nominal cut-off but continuity was supported by host lithologies, the intercept was retained for continuity purposes due to the commodity and the style of deposit.

Mineralised domains at the Tumblegum South deposit extend over a 475 m local grid north–south strike length. Lode thicknesses are highly variable and range from 1 m to 10 m in the local grid north– east striking domains with a maximum thickness of 9-10 m (domain 1093). Mineralisation exists from surface and extends 175 m to a lower limit of 305 mRL at its deepest and remains open at depth.



#### Figure 2 Long section of Tumblegum South looking west showing mineralised domains, weathering and topography

Notes: High-grade mineralised sub-domains (1203, 1206 and 1207) are depicted in red. Mineralised domains (as interpreted) do not represent Mineral Resource estimate classification extents. Domains 1008 and 1098 demonstrate drill targets (due to

limited drill information) and were not included in the Mineral Resource.

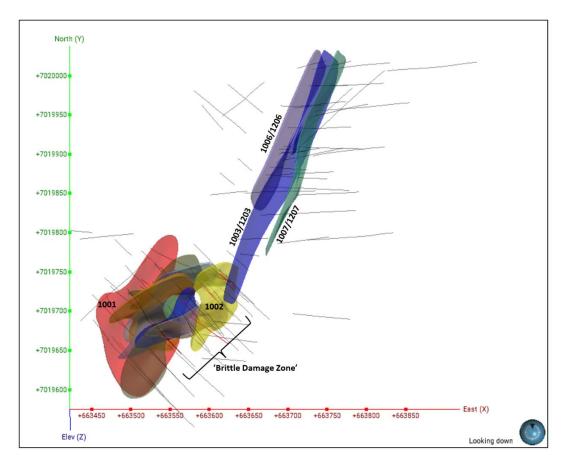


Figure 3 Plan section of Tumblegum South showing drill hole traces (RC in grey, DD in red) and mineralisation domains

Notes: Grey = RC drilling. Red = DD drilling. Mineralised domains (as interpreted) do not represent Mineral Resource estimate classification extents. Domains 1008 and 1098 demonstrate drill targets (due to limited drill information) and were not included in the Mineral Resource.

Entech considers confidence in mineralisation continuity and distribution, as implied in the Mineral Resource estimate classification of Indicated and Inferred, is moderate, given the regularised drill pattern, drill centre spacing (20–25 m) and orthogonal drilling informing these Mineral Resources.

#### Estimation methodology

Sample data within mineralisation domains were composited to 1 m downhole lengths using a bestfit methodology and 0.6 m minimum threshold on inclusions. Two residual composites resulted from this approach which were reviewed and included in the estimate.

Declustering of composite data within individual mineralised domains was analysed in Supervisor<sup>™</sup> software, using a fixed grid per domain. The declustered cell size used for each mineralisation domain was 15 mN, 10mE and 5 mZ.

Exploratory data analysis (EDA) of the declustered composited gold variable within the mineralised domain groups was undertaken using Datamine's Supervisor™ software. Analysis for sample bias, domain homogeneity and top-capping was undertaken. The requirement to undertake further sub-domaining of composite data by weathering or lithology boundaries, for the purposes of interpolation, was not supported by statistical and spatial analysis.

Assessment and application of top-capping for the estimate were undertaken on the gold variable in individual domains. Top-caps were initially applied on a global basis within individual domains to limit the potential influence of obvious statistical outliers. Global top-caps were applied to domains 1001, 1002, 1003 and 1203 as presented in Table 4. No top-caps were applied to other domains.

Domain	Top-cap (g/t Au)	Percentage of metal cut	Number of composites cut
1001	25	26.9%	2
1002	25	12.4%	2
1003	25	9.4%	1
1203	25	5.7%	1

#### Table 4 Summary of global top-caps applied per capped domain

A distance-limiting constraint was applied during interpolation for metal control in domains 1001, 1002, 1003, 1004, 1005, 1091, 1093, 1094 and 1097. Distances selected were typically half the search range and grades selected based on natural mineralisation population breaks.

Variography was undertaken on the capped, declustered gold variable. Two–spherical structure, normal scores omni-directional variograms were modelled for domains 1005 and 1092. Variography was not conducted on remaining domains owing to insufficient data. Domains were grouped based on spatial, statistical and mineralisation similarities, with variography from Domain 1092 applied to all domains excluding Domain 1005. High-grade sub-domains were combined with their lower-grade counterparts for variography analysis. Nugget values between 32% and 39% were modelled, with continuity ranges of 32–35 m in the major direction.

Interpolation was undertaken using Ordinary Kriging (OK) in GEOVIA Surpac<sup>™</sup> within parent cell blocks. Dimensions for the interpolation were Y: 10 mN, X: 10 mE, Z: 5 mRL, with sub-celling of Y: 0.625 mN, X: 0.625 mE, Z: 0.625 mRL. The model was not rotated. Considerations relating to appropriate block size include drill hole data spacing, conceptual mining method and search neighbourhood optimisations (QKNA).

A two-pass estimation search strategy was employed for all domains. All domains were estimated within a maximum distance of 40 m and 60 m for the first pass and second pass, respectively. The number of neighbourhood composites ranged from a minimum of 6 to a maximum of 14 samples for the first pass. The minimum number of composites was reduced to 4 for the second pass, except for domains 1003, 1206 and 1207, which used a minimum of 3 composites.

Domain boundaries represented hard boundaries, whereby composite samples in that domain were used to estimate blocks within the domain. Global and local validation of the gold variable estimated

outcomes was undertaken by means of statistical analysis, swath plots and visual comparison (cross and long sections) against input data. Internal audits and peer review underpin Entech's validation process, with a focus on independent resource tabulation, block model validation, verification of technical inputs, and peer review of approaches to domaining, interpolation and classification.

The 3D block model was coded with density, weathering and Mineral Resource classification prior to evaluation for Mineral Resource reporting.

#### **Classification criteria**

Mineral Resources were classified as Indicated and Inferred to appropriately represent confidence and risk with respect to data quality, drill hole spacing, geological and grade continuity and mineralisation volumes. Additional considerations were the stage of project assessment, amount of DD drilling undertaken, current understanding of mineralisation controls and potential mining selectivity within an open pit mining framework.

In Entech's opinion, the drilling, surveying and sampling undertaken, and analytical methods and quality controls used, are appropriate for the style of deposit under consideration.

**Indicated Mineral Resources** were defined where a moderate level of geological confidence in geometry, continuity and grade was demonstrated, and were identified as areas where:

- blocks were well supported by drill hole data, with the distance to the nearest sample being approximately within 25 m or less or where drilling was within approximately 25 m of the block estimate; and
- blocks were interpolated with a neighbourhood largely informed by the maximum number of samples.

**Inferred Mineral Resources** (to 305 mRL) were defined where a low to moderate level of geological confidence in geometry, continuity and grade was demonstrated, and were identified as areas where:

- drill spacing averaged a nominal 40 m or less, or where drilling was within 40 m of the block estimate; and
- estimation quality was considered low, as delineated by a conditional bias slope nominally between 0.1 and 0.5.

The reported Mineral Resource was depleted for historical mining and constrained at depth by the available drill hole spacing outlined for Inferred classification, nominally 175 m below surface. All classified Mineral Resources were reported inside the tenement boundary (M51/888), as provided by SMS. Mineralisation within the model which did not satisfy the criteria for classification as Mineral Resources remained unclassified.

Mineral Resources that are not Ore Reserves do not have demonstrated economic viability. The Mineral Resource estimate does not account for mining selectivity, mining loss and ore dilution. This Mineral Resource estimate includes Inferred Mineral Resources which are unable to have economic considerations applied to them, and there is no certainty that further sampling will enable them to be converted to Measured or Indicated Mineral Resources. Variances to the tonnage, grade, and metal tonnes of the Mineral Resource estimate are expected with further definition drilling.

The delineation of Indicated and Inferred Mineral Resources appropriately reflects the Competent Person's view on continuity and risk at the deposit.

#### Cut-off grade

The Mineral Resource cut-off grade for reporting of global gold resources at the Tumblegum South deposit was 0.5 g/t Au. This was based on consideration of grade-tonnage data, potential mining methods, and economic cut-offs applied at analogous operations. Tonnages were estimated on a dry basis. All Mineral Resource tabulations are exclusive of historical mining voids.

#### Bulk density

Bulk density values at the Tumblegum South deposit were derived from 167 validated measurements taken from 5 DD holes completed during 2021 and 2022. The samples were located between 7019650 mN and 7019760 mN. Samples were taken nominally from 2.05 m to 188.6 m downhole to provide a representative density profile across oxidation states.

Entech recommends density measurement campaigns continue to be undertaken at Tumblegum South to ascertain any deviations in density to those applied.

SMS supplied bulk density values. Independent verification of raw data was carried out by Entech, and the following bulk density values were determined and applied in the block model:

- Transitional: 2.70 t/m<sup>3</sup>
- Fresh: 2.90 t/m<sup>3</sup>.

Density measurements were collected using the water immersion methodology with both wet and dry density measurements captured in the MS Access database. Density measurements were undertaken on transitional (39) and fresh (128) drill core samples.

#### Assessment of Reasonable Prospects for Eventual Economic Extraction

The reported Mineral Resource was constrained at depth by the available drill hole spacing outlined for Inferred classification, nominally 175 m below surface (305 mRL) and within the SMS tenement boundary. Entech considers material at this depth would fall under the definition of 'reasonable prospects for eventual economic extraction' (RPEEE) in an open pit mining framework.

The Tumblegum South prospect is located on an existing mining lease (M51-888).

#### Mining and Depletion

Historical underground mining activity has been undertaken at Tumblegum South, as evidenced by shafts and mullock heaps on the tenement but information regarding historical underground mining is very limited. In lieu of any detailed information, mined volumes have been digitised using surface mining exposures (i.e. mine shafts) in combination with voids encountered during drill programs to determine two mined stopes: north and south. Given the lack of historical data, it should be noted that mined volumes likely contain potential errors in spatial position and/or unknown voids and mineralisation in the vicinity of mined volumes therefore remains in the Inferred classification. The bulk of mining appears to have been focused on domain 1003 in the north and domains 1002/1092 in the south. Entech has not been able to undertake a cross-check of depletion volumes

and historical mined figures owing to the lack of historical mining metrics.

No dilution or cost factors were applied to the estimate.

#### Metallurgy

BYH collected 20 residual RC samples for gold recovery analysis by cyanide using a 6-hour bottle roll leach<sup>1</sup>. Testing was conducted at the Intertek Genalysis laboratory in Perth using its LeachWELL<sup>™</sup> technique. Gold recoveries ranged from 73 to 95%, with an average of 90%. The calculated gold grades ranged from 0.35 g/t Au to 27.46 g/t Au. Further definitive testwork is required with TDH006 (DD) archived for metallurgical testwork.

Based on discussions with SMS geologists, Entech understands there are no metallurgical amenability risks which would be material to the Mineral Resource estimate.

No metallurgical recovery factors were applied to the Mineral Resources or resource tabulations.

END.

<sup>&</sup>lt;sup>1</sup> ASX Announcement. 8 April 2020. BYH – Positive Gold Recoveries for Tumblegum South

### **COMPETENT PERSON'S CONSENT FORM**

Pursuant to the requirements of ASX Listing Rules 5.6, 5.22 and 5.24 and clause 9 of the 2012 JORC Code (Written Consent Statement)

#### **Report Description**

Report: Tumblegum South Mineral Resource Estimate

Releasing Company: Star Minerals Ltd

Deposit Name: Tumblegum South Deposit

Date: 26 May 2023

#### **Statement**

I, Lisa Milham, confirm that I am the Competent Person (Estimation and Reporting of Gold Mineral Resources) for the Report, and:

- I have read and understood the requirements of the 2012 edition of the *Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves* (JORC Code, 2012 edition).
- I am a Competent Person as defined by the JORC Code, 2012 edition, having five years' experience that is relevant to the style of mineralisation and type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I am a Member of the Australian Institute of Geoscientists (MAIG 7680).
- I have reviewed the Report to which this Consent Statement applies.
- I am a consultant working for Entech Pty Ltd and have been engaged by Star Minerals Ltd to prepare the documentation for the Tumblegum South Mineral Resource estimate on which the Report is based, for the period ending 30 June 2023.

I have disclosed to the reporting company the full nature of the relationship between myself and the company, including any issue that could be perceived by investors as a conflict of interest.

I verify that the Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation relating to Mineral Resources.

#### CONSENT

I consent to the release of the Report and this Consent Statement by the directors of:

Star Minerals Ltd

Signature of Competent Person

Professional Membership: Membership Number:

lim

26 May 2023

Date

Australian Institute of Geoscientists MAIG (7680)

Jillian Irvin (MAIG 3035)

Signature of Witness

West Perth, Western Australia

Additional Deposits covered by the Report for which the Competent Person signing this form is accepting responsibility:

••••••
Additional Reports rela accepting responsibility
None
,
Ato
Signature of Competen
Signature of competen
Professional Membersh
Membership Number:
110 /
Jul Li
Signature of Witness

None..... ..... ..... .....

ated to the deposit for which the Competent Person signing this form is *'*:

None	
	••••••

t Person

nip:

26 May 2023

Date

Australian Institute of Geoscientists MAIG (7680)

Jillian Irvin (MAIG 3035)

West Perth, Western Australia



### 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	<ul> <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> <li>Data validation was undertaken by company geologists responsible for collecting the field data, prior to peer review by the resource geologist for the Bryah Resources Ltd (BYH) and Star Minerals (SMS) drill campaigns (2017, 2019, 2020, 2021 and 2022). Drilling data were logged either onto paper (2013 YRR, 2017 BYH drill programs), into Microsoft Excel (2019 BYH drill program) or into LogChief (2020 BYH, 2021-2022 SMS drill programs) before being loaded into DataShed™, a Microsoft SQL Server database that stores user settings, allowing only approved data to be entered. Full paper records from the field are available for validation of the digital data. BYH stores all original assay files on the company server.</li> </ul>
		• 2013 drilling data were validated during the integration of the data into the BYH database. All original assay files for the drilling are held by BYH and these have been used to validate the data in DataShed <sup>™</sup> . During the data validation process, issues with two drill hole locations were discovered and 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 BYH as part of the acquisition of various mineral rights from AVL).
		<ul> <li>No external third-party reviews were undertaken.</li> <li>Drilling data were retained for all programs excluding the 2013 drilling. Reverse circulation (RC) chips have been photographed and securely stored at the SMS Bayswater core processing/storage facility. Diamond drill (DD) core is also stored in SMS's Bayswater core processing/storage facility.</li> </ul>
(D)		<ul> <li>Prior to using the drilling data in the Mineral Resource estimate, Entech undertook a database audit that included the following:</li> <li>Checking for duplicate drill hole names and duplicate coordinates in the collar table.</li> <li>Checking for missing drill holes in the collar, survey, assay, and geology tables based on drill hole names.</li> </ul>
		<ul> <li>Checking for survey inconsistencies including dips and azimuths &lt;0°, dips &gt;90°, azimuths &gt;360°, and negative depth values.</li> <li>Checking for inconsistencies in the 'From' and 'To' fields of the assay and geology tables. The inconsistency checks included the identification of negative values,</li> </ul>
		<ul> <li>overlapping intervals, duplicate intervals, gaps and intervals where the 'From' value is greater than the 'To' value.</li> <li>Entech's database checks were conducted in MS Access, Leapfrog ™ and GEOVIA</li> </ul>
		<ul> <li>Surpac<sup>™</sup> mining software.</li> <li>Elevation (RL) discrepancies were observed for 2013 drill holes and BGRC029 relative to the aerial surveyed topographical surface. Entech did not sight accurate elevation coordinates for these eight drill holes. Consequently, these holes were draped to the</li> </ul>



Criteria	JORC Code explanation	Commentary
		<ul> <li>topographic surface on the basis that this was a better representation of the true surface. Entech did not identify any other inaccuracies. Entech also undertook a site visit as part of its due diligence process.</li> <li>The drill hole data were considered suitable for underpinning Mineral Resource estimation of global gold ounces. The data included drilling results available up to and including 3 March 2023. SMS's Tony Standish was appointed Competent Person for Sampling Techniques, Exploration Results and Data Quality underpinning the Mineral Resource estimate. Mr Standish has conducted multiple and regular site visits to the Tumblegum South deposit.</li> </ul>
Site Visits	<ul> <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> <li>Entech visited the Tumblegum South project on 10 June 2022, and SMS's core processing facilities on 16 June 2022 to review drilling and sampling processes for RC and DD drilling and inspect drill hole chips and drill core for consideration in the estimation of Mineral Resources. Mineralisation surface exposures and historical working exposures were also inspected during the visit.</li> <li>Based on site visit observations, Entech made the following recommendations relevant to the Mineral Resource estimate: <ul> <li>Undertake a density measurement campaign to build on the existing limited dataset.</li> <li>Increase amount of oriented DD drilling into the prospect.</li> <li>Continue to build on the structural understanding of the deposit.</li> </ul> </li> </ul>
Geological Interpretation	<ul> <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> <li>Entech was supplied MS Access database 'BYH_Gabanintha_20230303' comprising 111 collar records in table 'Collar'. Of this total, 99 collar records are within the Tumblegum South prospect, which has the following defined extents: <ul> <li>Local Northing: 7019550mN – 7020020mN</li> <li>Local Easting: 663400mE – 663800mE.</li> </ul> </li> <li>Interpretation of mineralisation domains was carried out by SMS geologists. At the time of interpretation, one DD drill hole was complete but not assayed (TDH006). This hole was therefore removed from the estimation dataset. Mineralisation interpretations are constrained to the Tumblegum South prospect.</li> <li>All drill types were used for mineralisation modelling and estimation (RC and DD).</li> <li>Entech understands that mineralisation is largely structurally controlled at Tumblegum South.</li> <li>Two dominant styles of gold mineralisation exist within the shears, firstly within thick laminated quartz-chalcopyrite-pyrrhotite (up to 30% sulphide) fault fill veins with occasional visible gold, and secondly within sulphide-poor, strongly deformed quartz veins. All shear-hosted mineralisation is located in moderately to strongly sheared ultramafic-mafic rocks with a weak to strong carbonate-chlorite-biotite alteration. Additionally, in the footwall to shears, a brittle damage zone has developed, characterised by the presence of crackle breccia-type veining. Auriferous crackle breccia veining is characterised by a quartz-chalcopyrite-pyrrhotite vein mineral assemblage and are typically hosted within a conjugate set of veins. Smaller, erratic carbonate veins with discrete carbonate-sericite haloes and a lack of sulphides occasionally host gold within the brittle damage/crackle breccia zone.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul> <li>Geological logging, veining and presence of sulphides (specifically As, Cu, Ag or Tg) were used for lithology and mineralisation modelling. Alternative mineralisation geometries were compared against indicator-based numerical modelling (Leapfrog<sup>™</sup> Indicator RBF Interpolants) at varying cut-offs and probability outcomes. These alternative models supported the metal distribution in the interpreted mineralised wireframes.</li> <li>The Tumblegum South deposit is hosted within a mafic-ultramafic alternating package striking roughly north–south through northeast–southwest, with a steep to subvertical dip to the east. The major mineralisation shears are either slightly (northern end of the resource) or obtusely (southern end of the resource) oblique to the lithological contacts identified.</li> </ul>
		<ul> <li>Lithological models were generated by SMS personnel prior to commencing the mineralisation domain interpretation. Major lithologies were assigned based on (and in order of importance) evaluation of qualitative geological logging, multi-element assay data (especially Ni, Cr and Mg) where applicable, magnetic susceptibility where applicable, and pXRF assay of drilling sample reject fines. This led to the identification of</li> </ul>
		an alternating mafic-ultramafic lithological succession that includes basalts, dolerites, komatiitic basalts, magnetite-rich metadolerite and peridotite. These rock types are also well documented in record from the mining of open pits by Dominion Mining Ltd immediately north of, and along strike from, Tumblegum South. The logging of the drill holes by company geologists is broadly consistent with the lithologies defined by the discrimination process outlined above.
		<ul> <li>Entech considers further drilling will lead to better definition of the relationship between lithology and mineralisation at the deposit.</li> <li>Weathering surfaces were created by interpreting the existing drill logging for oxidation state and were extended laterally beyond the limits of the Mineral Resource model. Entech reviewed the weathering contacts in relation to mineralisation controls but did not</li> </ul>
(D)		<ul> <li>find clear evidence of a relationship between weathering contacts and grade distribution in the Tumblegum South domains.</li> <li>Mineralisation interpretations were informed by 75 drill holes – comprising RC (69) and DD (6) – and supported by a nominal drill density of 25 m along strike x 25 m down dip.</li> </ul>
		<ul> <li>Factors which limited the confidence of the geological interpretation include:</li> <li>High reliance on RC data for definition of discrete mineralisation boundaries</li> <li>Limited number of structural readings as a result of RC drilling</li> </ul>
		<ul> <li>Factors which aided the confidence of the geological interpretation included:</li> <li>Grid drilled and perpendicular 25 m × 25 m drill data within the central core of the deposit.</li> <li>Diamond drilling completed and included in this Mineral Resource estimate since</li> </ul>
		<ul> <li>the January 2020 Mineral Resource estimate largely confirms mineralisation thickness and grade tenor.</li> <li>Geology modelling providing a reliable framework mineralisation modelling, particularly within the Brittle Damage Zone (BDZ).</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul> <li>In Entech's opinion, the available drilling density supports the continuity implied by the interpreted mineralisation domains, both along strike and down dip.</li> <li>Interpretations of domain continuity were undertaken by SMS personnel in Leapfrog<sup>™</sup> software. The mineralisation intercepts correlating to individual domains were manually selected prior to creating vein models using Leapfrog<sup>™</sup> Geo implicit modelling software. High-grade sub-domains were interpreted for domains 1003, 1006 and 1007 using indicator-based numerical modelling (Leapfrog<sup>™</sup> Indicator RBF Interpolants) at a cut-off grade of 0.5 g/t Au. Cut-offs were based on exploratory data analysis (EDA) of the mineralisation sample population as well as visual review of the mineralisation tenor and strike, and dip continuity. Interpretated at Tumblegum South: 17 mineralisation domains and 3 high-grade mineralisation sub-domains.</li> <li>A total of 20 domains were interpreted at Tumblegum South: 17 mineralisation domains and 3 high-grade mineralisation sub-domains.</li> <li>A cut-off grade of 0.5 g/t Au was used to guide the geological continuity of the interpreted mineralisation for all shear and crackle breccia domains. Domains 1003, 1006 and 1007 were modelled along strike from high-grade zones using a cut-off grade of 0.3 g/t Au. Selection of the cut-off grade was based on statistical and spatial analysis of composite data indicating a natural mineralisation population exists above 0.5 g/t Au (for shear and crackle breccia domains). Within the mineralised wireframe, if an intercept was retained for continuity was supported by host lithologies, the intercept was retained for continuity was supported by host lithologies, the intercept was retained for continuity purposes due to the commodity and the style of deposit.</li> </ul>
Dimensions	<ul> <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> <li>Mineralised domains at Tumblegum South extend over a 475 m local grid north-south strike length. Lode thicknesses are highly variable and range from 1 m to 6 m thick in the local grid north-east striking domains, and from 1 m to 10 m in the local grid east striking domains with a maximum thickness of 9–10 m (domain 1093).</li> <li>Mineralisation exists from surface and currently extends 175 m to a lower limit of 305 mRL at its deepest and remains open at depth.</li> </ul>
Estimation and modelling techniques	<ul> <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> <li>If a computer assisted estimation method was chosen include a description of computer software and parameters used.</li> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>The assumptions made regarding recovery of by-products.</li> <li>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</li> <li>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> </ul>	<ul> <li>Sample data were composited to a 1 m downhole length using a best-fit method. Topcaps were applied prior to block grade estimation, with the maximum distance of possible extrapolation in each domain being based on variogram analysis and the geological understanding of the deposit.</li> <li>EDA and variography analysis of the capped and declustered composited gold variable within domain groups whose relation similarities were underpinned by observed spatial and statistical analysis. All EDA was completed in Datamine's Supervisor software and data were exported for further visual and graphical review.</li> <li>An Ordinary Kriging (OK) interpolation approach in GEOVIA Surpac™ was selected for all interpreted domains. All estimates used domain boundaries as hard boundaries for grade estimation where only composite samples within that domain are used to estimate blocks coded as falling within that domain.</li> <li>Following variography analysis (two–spherical structure, normal scores variograms), omni-directional models were established for domains 1005 and 1092. Domains were grouped based on spatial, statistical and mineralisation similarities, with variography from</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul> <li>Any assumptions behind modelling of selective mining units.</li> <li>Any assumptions about correlation between variables.</li> <li>Description of how the geological interpretation was used to control the resource estimates.</li> <li>Discussion of basis for using or not using grade cutting or capping.</li> <li>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li> </ul>	<ul> <li>Domain 1092 applied to all domains excluding Domain 1005. High-grade sub-domains were combined with their lower-grade counterparts for variography analysis. Nugget values between 32% and 39% were modelled with continuity ranges of 32–35 m in the major direction.</li> <li>A check estimate in 3D was undertaken for all domains using the Inverse Distance Squared method. The check estimate results were, on average, 2.5% higher in metal content.</li> <li>No assumptions with respect to by-products were made.</li> <li>Copper (Cu), being a deleterious element during cyanide leach processing of Au, has also been estimated.</li> <li>Interpolation was undertaken using OK in GEOVIA Surpac™ within parent cell blocks. Dimensions for the interpolation were Y: 10 mN, X: 10 mE, Z: 5 mRL, with sub-celling of Y: 0.625 mN, X: 0.625 mRL. The model was not rotated. Considerations relating to appropriate block size include drill hole data spacing, conceptual mining method and search neighbourhood optimisations (QKNA).</li> <li>Only RC and DD drill data were used in the Mineral Resource estimate. The average drill spacing ranges from 20 m to 25 m.</li> <li>A two-pase estimation search strategy was employed for all domains. All domains were estimated within a maximum distance of 40 m and 60 m for the first pass and second pass, respectively. The number of neighbourhood composites ranged from a minimum of 6 to a maximum of 14 samples for the first pass. The minimum number of composites was reduced to 4 for the second pass, except for domain constraints underpinned by geological logging (lithology, mineralogy and veining) and a nominal cut-off grade of 0.5 g/t Au. The mineralisation constraints have been used as hard boundaries for grade estimation wherein only composite samples within that domain are used to estimate blocks coded as falling within that domain.</li> <li>Assessment and application of top-capping for the estimate were undertaken on the gold variable in individual domains. Top-cap s</li></ul>

Criteria	JORC Code explanation	Commentary
		<ul> <li>A distance-limiting constraint was applied during interpolation for metal control in domains 1001, 1002, 1003, 1004, 1005, 1091, 1094, 1094 and 1097. Distances selected were typically half the search range and grades selected based on natural mineralisation population breaks.</li> <li>Validation of the estimation outcomes was completed by global and local bias analysis (swath plots) and statistical and visual comparison (cross and long sections) with input data.</li> </ul>
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	<ul> <li>Density and tonnage were estimated on a dry in situ basis.</li> <li>No studies have been completed on moisture content of the rock.</li> </ul>
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	• The Mineral Resource estimate cut-off grade for reporting of global gold resources at Tumblegum South was 0.5 g/t Au. This was based on consideration of grade-tonnage data, potential mining methods, and economic cut-offs applied at other analogous operations.
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.	<ul> <li>Open pit mining methods were assumed at the Tumblegum South deposit. The presence of historical open pits within 0.2–2.3 km north of the project demonstrate previous open pit extraction of deposits in the same geological package.</li> <li>No mining dilution or minimum mining widths were assumed or applied within the Mineral Resource.</li> <li>The Mineral Resource estimate extends nominally 175 m below the topographic surface to 305 mRL. Entech considers material at this depth would fall under the definition of 'reasonable prospects for eventual economic extraction' (RPEEE) within an open pit mining framework.</li> <li>The Tumblegum South deposit is located on an existing mining lease (M51/888).</li> <li>Historical underground mining activity has been undertaken at Tumblegum South, as evidenced by shafts and mullock heaps on the tenement but information regarding historical underground mining is very limited. In lieu of any detailed information, mined volumes have been digitised using surface mining exposures (i.e. mine shafts) in combination with voids encountered during drill programs to determine two mined stopes: north and south. Given the lack of historical data, it should be noted that mined volumes likely contain potential errors in spatial position and/or unknown voids, thus mineralisation in the vicinity of mined volumes remains in the Inferred classification. The bulk of mining appears to have been focused on domain 1003 in the north and domains 1002/1092 in the south. Entech has not been able to undertake a cross-check of depletion volumes and historical mined figures owing to the lack of historical mining metrics.</li> <li>No dilution or cost factors were applied to the estimate.</li> <li>A series of pit shell optimisations were completed using the previous model, these will be updated as part of the planning process.</li> </ul>

Criteria	JORC Code explanation	Commentary
Metallurgical factors or assumptions	<ul> <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> <li>BYH collected 20 residual RC samples for gold recovery analysis by cyanide using a 6-hour bottle roll leach (ASX announcement. 8 April 2020. BYH – Positive Gold Recoveries for Tumblegum South). Testing was conducted at the Intertek Genalysis laboratory in Perth using the LeachWELL™ technique. Gold recoveries ranged from 73% to 95%, with an average of 90%. The calculated gold grades ranged from 0.35 g/t Au to 27.46 g/t Au. Further definitive testwork is required with TDH006 (DD) archived for metallurgical testwork.</li> <li>Gold mined by Dominion Mining Ltd immediately to the north was extracted through conventional cyanide leach.</li> <li>Based on discussions with SMS geologists, Entech understands there are no metallurgical menability risks which would be material to the Mineral Resource estimate.</li> <li>No metallurgical recovery factors were applied to the Mineral Resources or resource tabulations.</li> </ul>
Environmental factors or assumptions	<ul> <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>	No environmental factors were applied to the Mineral Resources or resource tabulations.
Bulk density	<ul> <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> <li>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.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul> <li>Bulk density values at the Tumblegum South deposit were derived from 167 validated measurements taken from 5 DD holes completed during 2021 and 2022. The samples were located between 7019650 mN and 7019760 mN. Samples were taken nominally from 2.05 m to 188.6 m downhole to provide a representative density profile across oxidation states.</li> <li>Entech recommends density measurement campaigns continue to be undertaken at Tumblegum South to ascertain any deviations in density to those applied.</li> <li>SMS supplied the bulk density values. Independent verification of raw data was carried out by Entech, and the following bulk density values were determined and applied in the block model: <ul> <li>Transitional: 2.70 t/m<sup>3</sup></li> <li>Fresh: 2.90 t/m<sup>3</sup>.</li> </ul> </li> <li>Density measurements were collected using the water immersion methodology with both wet and dry density measurements captured in the MS Access database. Density measurements were undertaken on transitional (39) and fresh (128) drill core samples.</li> </ul>

Criteria JORC Code explanation	Commentary
	• Due to the statistical variation in lithology, bulk densities were averaged in each weathering unit. An average bulk density value based on weathering coding has been assigned for tonnage reporting.
<ul> <li>Classification</li> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>Whether appropriate account has been taken of all relevant factors (ie 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).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul> <li>Mineral Resources were classified as Indicated and Inferred to appropriately represent confidence and risk with respect to data quality, drill hole spacing, geological and grade continuity and mineralisation volumes. Additional considerations were the stage of project assessment, amount of RC drilling undertaken, current understanding of mineralisation controls and mining selectivity within an open pit mining environment.</li> <li>In Entech's opinion, the drilling, surveying and sampling undertaken, and analytical methods and quality controls used, are appropriate for the style of deposit under consideration.</li> <li>Indicated Mineral Resources were defined where a moderate level of geological confidence in geometry, continuity and grade was demonstrated, and were identified as areas where:         <ul> <li>blocks were well supported by drill hole data, with the distance to the nearest sample being approximately within 25 m or less or where drilling was within approximately 25 m of the block estimate; and</li> <li>blocks were interpolated with a neighbourhood largely informed by the maximum number of samples.</li> </ul> </li> <li>Inferred Mineral Resources (to 305 mRL) were defined where a low to moderate level of geological confidence in geometry, continuity and grade was demonstrated, and were identified as areas where:         <ul> <li>drill spacing averaged a nominal 40 m or less, or where drilling was within 40 m of the block estimate;</li> <li>estimation quality was considered low, as delineated by a conditional bias slope nominally between 0.1 and 0.5; and</li> <li>areas informed by RC drilling only.</li> </ul> </li> <li>The reported Mineral Resources were reported inside the tenement boundary (M51/888), as provided by SMS.</li> <li>Mineralisation within the model which did not satisfy the criteria for classification as Mineral Resources remained unclassified.</li> <li>Consideration h</li></ul>

Criteria	JORC Code explanation	Commentary
Audits or reviews	<ul> <li>The results of any audits or reviews of Mineral Resource estimates.</li> </ul>	<ul> <li>Entech undertook internal audits and peer review with a focus on independent resource tabulation, block model validation, verification of technical inputs, and peer review of approaches to domaining, interpolation and classification.</li> <li>The estimate was also reviewed internally by SMS geologists.</li> </ul>
Discussion of relative accuracy/confidence	<ul> <li>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.</li> <li>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.</li> <li>Documentation should include assumptions made and the procedures used.</li> <li>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul> <li>Variances to the tonnage, grade, and metal tonnes of the Mineral Resource estimate are expected with further definition drilling. It is the opinion of the Competent Person that the classification criteria for Indicated and Inferred Mineral Resources appropriately capture and communicate these variances and risks.</li> <li>The Mineral Resource Statement relates to global tonnage and grade estimates.</li> <li>No formal confidence intervals or recoverable resources were undertaken or derived.</li> <li>The resource classification reflects the relative confidence in the Mineral Resource estimate by the Competent Person.</li> <li>Historical underground mining activity has been undertaken at Tumblegum South, as evidenced by shafts and mullock heaps on the tenement but information regarding historical underground mining is very limited. In lieu of any detailed information mined volumes have been digitised using surface mining exposures (i.e. mine shafts) in combination with voids encountered during drill programs to determine two mined stopes: north and south. Given the lack of historical data, it should be noted that mined volumes likely contain potential errors in spatial position and/or unknown voids and mineralisation in the vicinity of mined volumes therefore remains in the Inferred classification. The bulk of mining appears to have been focused on Domain 1003 in the north and domains 1002/1092 in the south. Entech has not been able to undertake a cross-check of depletion volumes and historical mined figures owing to the lack of historical mining metrics.</li> </ul>