

# Indicated Mineral Resource at Mon Ami

## **Highlights:**

- Indicated and Inferred Mineral Resource estimate for Mon Ami of 1.56Mt @ 1.11 g/t Au for 55,500 oz Au
- 95% of Mineral Resource is within the Indicated classification
- Baseline technical and environmental studies completed without issue
- Ancillary tenements granted and heritage surveys complete
- A data room has been prepared to assist in discussions aimed at securing a milling solution
- New geological interpretation is expected to aid future exploration targeting along strike and at depth.

Great Southern Mining Limited (ASX:GSN) (GSN or the Company) CEO Sean Gregory commented:

"We are pleased to announce this new geological interpretation and upgrade to the Mineral Resource classification at Mon Ami. We believe that the new geological interpretation has 'cracked the code' which may enable further gold discoveries along strike and at depth. Supporting technical and environmental studies have all been completed to a very high standard. We are now proud to proclaim Mon Ami as 'shovel-ready', subject to a commercial milling solution and final approvals under the Mining Act."



Figure 1 – Geological interpretation of a main vertical lode and 5 north-west dipping lodes. Looking east.

Suite 4, 213 Balcatta Road, Balcatta, WA 6021 Australia

www.gsml.com.au

T (08) 9240 4111 E admin@gsml.com.au ACN: 148 168 825 ABN: 37 148 168 825





Figure 2 - Mon Ami Location Map

#### **Geology and Geological Interpretation**

Mon Ami lies on the boundary between the Duketon and Edjudina domains in the Kurnalpi Terrance of the Eastern Gold Fields, Yilgarn Craton; 15km south of Laverton in Western Australia (Figure 2). The gold mineralisation is hosted within greenstone belt sequences that have experience brittle-ductile shearing within the near vertical north-south trending Barnicoat Shear Zone. The shear zone varies in width from 10 to 50m and forms a zone of deformation with intense shearing and alteration at the contact between the metabasalt to the east, and undifferentiated clastic sediments with zones of polymictic conglomerate to the west. The meta-sediments have all been metamorphosed to greenschist facies, are tightly folded and exhibit a prominent vertical schistosity indicating a degree of flattening and shearing. The intensity of the shearing increases to the margins of the structure.

The gold mineralisation at Mon Ami extends over a strike length of at least 770m and is hosted in a main north-south striking vertical lode tracing the Barnicoat Shear Zone.

A new feature of the 2021 Mon Ami Mineral Resource is the identification of at least five moderate northwest dipping lodes stepping off the western margin of the vertical lode (Figure 1, Figure 3). These lodes are named after the small-scale historical underground workings at Bordee (1 & 2), Richie, Mon Ami, and a topographical feature, the Gully lode.



This new geological interpretation is expected to aid improved exploration targeting at Mon Ami on two fronts. Firstly, the periodicity of the lode occurrences may enable additional lodes to be discovered along strike. Secondly, as the highest-grade mineralisation is encountered at the intersection of the north-west dipping lodes and the vertical lode, this provides a vector for further exploration at depth for possible underground high-grade extensions to the deposit.



Figure 3 - Plan view of the Mon Ami Resource domains (right) and a section slice through (6818800mN left image) of the Resource area highlighting the vertical shear lode (blue outline) and the Richie (pink) and Mon Ami lodes with block model grades throughout the domains.

#### **Drilling, Sampling and Assaying**

The Mon Ami Mineral Resource is informed by 126 Reverse Circulation (RC) drill holes drilled from 1991-2021 for 15,274m plus 2 HQ diamond drill holes. 62 Rotary Air Blast (RAB) holes for 2,960m have also been drilled at the project from 1989-2001, however these have not been used in the grade estimation. Of the RC drill holes, 34 holes were drilled in 2020-2021 and subsequent to the previous Mineral Resource estimate.

All RC samples were split at the rig mounted cone splitter to 1-3kg for each 1m down hole interval. The cyclone is manually cleaned at the each of each drill rod. Samples from portions of the holes deemed unmineralised were obtained as 4m composites using the spear method. However, where any anomalous results were returned, the 1m cone-split samples were submitted for re-assay.

Assaying was conducted by fire assay at ALS Perth on a 50g charge.



Standards are assayed at a frequency of 1 in 50, Blanks 1 in 50 and field duplicates are collected at a ratio of 3 in 100. Review of these quality assurance checks concluded that the samples are sufficiently reliable for this Mineral Resource estimate.

## **Estimation Methodology**

The Mineral Resource has been estimated by SRK using ordinary kriging in Isatis Neo software as a proportional model (10m x 10m x 2m parent block) and verified in Vulcan software as a sub-block model (2m x 2m x 1m sub blocks). Top-cuts between 4 and 20 g.t Au were applied to each domain following statistical analysis. Variograms were modelled for each domain with moderate nugget values, ranges from 30m to 100m. Continuity **is** excellent along strike, reasonable across strike, and **less well defined** in the down dip directio**n**.

#### Density

The previous 2018 Inferred Mineral Resource used a density estimate of 2.8-2.9 t/m3 that was estimated using downhole geophysical logs and air picnometer testing of reverse circulation drilling samples. This is now considered a non-preferred method.

For this 2021 Indicated Mineral Resource, additional density measurements were taken. Fifty-six samples of HQ (63mm) diamond drill core, each 20-30 cm core sticks, were weighed dry and in water (i.e. Archimedes' method) to measure the dry density of each rock type and oxidation state per industry standards. Fresh samples averaged 2.6 t/m<sup>3</sup>, transitional samples averaged 2.4 t/m<sup>3</sup> and oxide samples averaged 2.2 t/m<sup>3</sup>. These values compare well with benchmarking of other nearby deposits in similar geology and were therefore adopted for this 2021 Mineral Resource estimate.

#### **Classification Criteria**

SRK assessed the data quality, geological continuity, data coverage (nominally 30m x 25m in the Indicated Mineral Resource), validation results, block quality statistics and potential economic viability. SRK concluded that the main area of the resource could be classified as Indicated. Narrower and lower grade strike extensions to the north defined by less drilling have been classified as Inferred.

#### **Mineral Resource Statement**

The 2021 Mineral Resource estimate for the Mon Ami Gold Project is shown in Table 1 below.

Classification	COG	Tonnage	Grade	Metal
	g/t Au	Mt	g/t Au	Oz Au
Indicated	0.5	1.41	1.16	52,500
Inferred	0.5	0.15	0.61	3,000
Total	0.5	1.56	1.11	55,500

Table 1 – Mon Ami 2021 Mineral Resource Statement



# **Cut Off Grades**

The economic Cut-Off Grade (COG) at a possible future gold price is calculated as follows:

COG = Processing Cost / ((Recovery x (Gold Price x (1-Royalties) – Selling Cost) / 31.1 g/oz) x (1+Dilution) COG = \$47 / (95% x (\$3,000 x (1-2.5%-2.75%) - \$4)) x (1+10%)

COG = 0.5 g/t Au

This estimate is considered reasonable and consistent with other nearby operations.

The sensitivity of the Mon Ami Indicated Mineral Resource to COG is shown in Table 2 below.

COG	Tonnage	Grade	Metal
g/t Au	Mt	g/t Au	Oz Au
0.3	1.55	1.09	54,300
0.5	1.41	1.16	52,500
0.7	1.13	1.30	47,300
1.0	0.75	1.53	36,793
1.2	0.53	1.70	29,150

Table 2 - Mon Ami Indicated Mineral Resource estimate sensitivity to cut off grade

#### **Reconciliation with previous Mineral Resource**

The 2021 Mineral Resource features reductions in ounces due to the revised density estimates, geological interpretation and grade estimation. These reductions are offset by increases from the adoption of a new economic cut-off grade and the inclusion of additional strike length along the Barnicoat Shear Zone to the north as Inferred classification (Figure 4).

The 2021 Mineral Resource estimate is a significant step forward for the project as it is a higher level of geological confidence reflected in the classification as Indicated rather than inferred. Indicated is the minimum classification level for consideration in future Ore Reserve estimates after all modifying factors have been considered.





Figure 4 – Waterfall reconciliation of changes to the Mon Ami Mineral Resource Estimate from 2018 to 2021.

#### **Mining Methods**

Mining at Mon Ami is assumed to be drill and blast, load and haul open-pit mining utilising 120t hydraulic excavators and 100t haul tracks to excavate 12m benches in 4 flitches as is typical in Western Australia.

A geotechnical study has been completed that has reviewed the diamond drill core, down hole televiewer data and rock mass strength to recommend pit design parameters. Preliminary whittle optimisations have been completed.

The Mon Ami Mineral Resource estimate is restricted to 150m below the topographic surface. Some of the higher-grade and deeper parts of the Mineral Resource may be extracted by underground methods.

#### Metallurgy

The leaching characteristics of Mon Ami were tested in 2019 where the recoveries averaged 95% in the fresh and transitional rock (Refer ASX Announcement 24/01/19), which will be the focus of any open pit development.

Further testwork on the comminution properties is almost complete. This is expected to quantify the soft nature of the meta-sedimentary rocks hosting the mineralisation at Mon Ami.

#### **Environmental Studies**

A two-stage flora and fauna survey was conducted at Mon Ami in March and May 2021. Two Priority 3 flora taxa were identified and potential short range endemic habitat was observed near the Mt Weld road. The contemplated mine development is not expected to impact any species significantly.

A desktop subterranean fauna study was also completed in 2021 that concluded that the rocks and 50m water table depth at Mon Ami were unsuitable habitat for stygofauna and troglofauna.

Soil and Waste Characterisation studies were also completed earlier in 2021. Geochemical testing of representative waste rock at Mon Ami has shown it to be non-acid forming and without any leachable heavy metals present. Soil test-pitting at the site has identified the topsoil stripping and rehabilitation steps that will be necessary to rehabilitate the site after mining is completed.



## Land Access

Mon Ami is located on a granted mining lease. An 8km haul road has been designed that links the deposit with the existing sealed Mt Weld road. A miscellaneous license and general-purpose license for the haul road and ancillary infrastructure has now been granted in favour of GSN.

GSN maintains a respectful relationship with the Nyalpa Pirniku Traditional Owners and a heritage survey was completed over the proposed mine and haul road route earlier during 2021.

Primary approvals for the project will be via a Mining Proposal under the *Mining Act 1978 (WA)*, a relatively straight forward 6-week process that will commence once a commercial milling solution for the project is agreed.

#### This ASX release was approved by the Executive Chairman on behalf of the Board of GSN

#### For Further Information Contact:

John Terpu Executive Chairman +61 8 9240 4111

#### **About Great Southern Mining**

Great Southern Mining Limited is a leading Australian listed gold exploration company. With significant land holdings in the world-renowned gold districts of Laverton in Western Australia and Mt Carlton in North Queensland, all projects are located within 30km of operating gold mills and major operations.

The Company's focus is on creating shareholder wealth through efficient exploration programs and strategic acquisitions of projects that complement the Company's existing portfolio of quality assets.

For further information regarding Great Southern Mining Limited please visit the ASX platform (ASX:GSN) or the Company's website <u>www.gsml.com.au</u>.



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

Deposit	Competent Person	Employer	Professional Institute
Mon Ami 2020-2021 Exploration Results and Geological Interpretation	Simon Buswell- Smith	Great Southern Mining Ltd	MAIG
Mon Ami 2019 Exploration Results incl. metallurgy	Dr Bryce Healy	Noventum Group Pty Ltd	MAIG
Mon Ami Mineral Resource	Dr Michael Cunningham	SRK Consulting (Australasia) Pty Ltd	MAusIMM, MAIG

The information in this report that relates Exploration Results and Mineral Resources is based on the information of the Competent Persons listed in the table above. Each of the Competent Persons have sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity they are undertaking to qualify as Competent Persons under the JORC Code (2012). For new information each consent to the inclusion in the report of the matters based on his information in the form and context in which they occur. Previously announced information is cross referenced to the original announcements. In these cases, the Company is not aware of any new information or data that materially affects the information presented and that the technical parameters underpinning the estimates continue to apply and have not materially changed. The Company confirms that the form and context in which the original market announcements.

#### **Forward Looking Statements**

Forward-looking statements are only predictions and are not guaranteed. They are subject to known and unknown risks, uncertainties and assumptions, some of which are outside the control of the Company. Past performance is not necessarily a guide to future performance and no representation or warranty is made as to the likelihood of achievement or reasonableness of any forward-looking statements or other forecast. The occurrence of events in the future are subject to risks, uncertainties and other factors that may cause the Company's actual results, performance or achievements to differ from those referred to in this announcement. Given these uncertainties, recipients are cautioned not to place reliance on forward-looking statements. Any forward-looking statements in this announcement speak only at the date of issue of this announcement. Subject to any continuing obligations under applicable law and the ASX Listing Rules, the Company, its directors, officers, employees and agents do not give any assurance or guarantee that the occurrence of the events referred to in this announcement will occur as contemplated.



## JORC Code, 2012 Edition – Table 1

## Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done, this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>RC drill cuttings were collected over 1 m intervals via cyclone and cone splitter into plastic bags (15–35 kg of sample material):         <ul> <li>1–3 kg of sample was split from each 1 m sample length via a cone splitter. The cyclone was manually cleaned at the completion of each rod and thoroughly cleaned at the completion of each hole. The 1–3 kg samples were pulverised to produce 50 g charge for Fire Assay.</li> <li>4 m composites were collected via a spear method for the portion of the hole that is interpreted to not be within the main shear zone. Anomalous 4 m samples were resampled and assayed in 1 m intervals. \.</li> </ul> </li> <li>RC samples were collected and submitted for analysis at ALS Laboratories in Perth for Fire Assay analysis. Field QC procedures involved the use of Certified Reference Materials (CRMs) and blanks.</li> </ul>
Drilling techniques	• Drill type (e.g. core, reverse circulation, open- hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face- sampling bit or other type, whether core is oriented and if so, by what method, etc.).	<ul> <li>The drilling operation was undertaken by experienced drilling contractor PXD Drilling.</li> <li>Reverse Circulation (RC) drilling was conducted with a modern truck mounted Schramm. RC samples were obtained using high pressure and high volume compressed air and a RC 143 mm diameter face bit.</li> <li>Hole orientations were surveyed using a Reflex-multishot tool at 30 m intervals.</li> </ul>
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul> <li>RC sample recoveries of less than approximately 80% are noted in the geological/sampling log with a visual estimate of the actual recovery. Very few samples were recorded with recoveries of less than 80%.</li> <li>Wet RC samples are recorded in logs with only a small proportion (5%) detected.</li> </ul>
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral</li> </ul>	<ul> <li>All RC drilling was logged at the rig by an experienced geologist.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<ul> <li>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>Lithology, veining, mineralisation, alteration, weathering and oxidation were recorded.</li> <li>Evidence for structural features are noted.</li> <li>RC logging is qualitative and descriptive in nature.</li> <li>Representative portions of samples were retained in chip trays for future reference.</li> <li>All data was recorded/logged in the field in Seequent's Geosoft MXDeposit™ software and or Datashed subsequently transferred to the electronic drill hole database.</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all subsampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>Half core sampling has been undertaken on the diamond drill core at selected intervals by the geologist.</li> <li>RC samples (nominal 15–35 kg weight) were split through a cyclone splitter, and a 2–3 kg sub-sample submitted as the primary sample for assay.</li> <li>4 m composites were collected via a spear method for the portion of the hole that is interpreted to not be within the main shear zone. Anomalous 4 m samples were resampled and assayed in 1 m intervals. Field duplicates were taken 3 in every 100 samples as a control on sample representivity.</li> <li>Sample size is regarded as appropriate.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul> <li>Assay technique is Fire Assay and is regarded as a total assay.</li> <li>Assaying of the RC drilling samples was conducted by ALS laboratory, Perth.</li> <li>Field QC procedures involved the use of CRMs, in conjunction with duplicates and blanks. The results of this analysis are reviewed when results are received.</li> <li>The Fire Assay gold analyses undertaken are considered a total assay method and is an appropriate assay method for the target-style mineralisation.</li> <li>Standard laboratory QC procedures were also implemented as part of the geochemical testing protocol.</li> <li>No geophysical tools have been applied to the samples, or down hole, at this stage. Although, the previous 2018 estimate used downhole geophysics to measure density.</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> </ul>	<ul> <li>Results are verified by the geologist, and cross reference by another GSN personal. assay files are imported directly into Datashed which has internal validation.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<ul> <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>No twin holes have been conducted.</li> <li>Data is collected on a tablet computer in the field and then imported into Datashed daily.</li> <li>RC field QC procedures involved the use of CRMs as assay standards and blanks. Field duplicates were collected for future analysis.</li> <li>Assay data is reviewed prior to importing into Datashed No adjustments were made to raw assay files.</li> </ul>
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>All data location points referred to in this report are in:         <ul> <li>Datum: Geodetic Datum of Australia 94 (GDA94) Projection: Map Grid of Australia (MGA)</li> <li>Zone: Zone 51.</li> </ul> </li> <li>All collar surveys were completed using handheld GPS (+/- 5 m accuracy). RC drilling in 2018,2020 and 2021 have been picked up by a surveyor (+/- 0.1m accuracy)</li> <li>Drill rig alignment was attained using a handheld compass and verified with downhole surveys collected near-surface followed by approximately every 30 m.</li> <li>Downhole surveys were routinely carried out, generally on continuous measure, conducted using a Reflex-multishot survey tool.</li> <li>The 3D location of individual samples is considered to be adequately established and in line with industry standards for this stage of exploration.</li> <li>Topography was interpolated from collars which were surveyed using DGPS.</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>The drill hole spacing ranges are not systematic, nor grid based outside the resource area. Drill hole collar positions are based solely on the drilling of specific exploration targets.</li> <li>The RC drill holes were planned to test the extension or down plunge extension of the ore body and or to focus on the northeastern splays.</li> <li>Other RC drilling holes were designed over areas of interest from field mapping activities.</li> <li>Sampling of RC cuttings has been undertaken at 1 m intervals and are considered appropriate for the high-grade mineralisation zones.</li> <li>The current drill hole spacing and distribution within the resource area is sufficient to establish the degree of</li> </ul>



Criteria	JORC Code explanation	Commentary
		<ul> <li>geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure and classification. The Mineral Resources are classified as Indicated and Inferred at this stage.</li> <li>1 m sampling compositing has been applied within key mineralised intervals.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul> <li>The drill holes have been designed to cross-cut the main lithology to maximise structural, geotechnical and geological data.</li> <li>No drilling orientation and/or sampling bias has been recognised at this time.</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>Logging has been carried out by GSM and contract personal who were always on-site during drilling.</li> <li>No third-parties have been allowed access to the samples.</li> <li>Samples were shipped directly from site to a secure stored site in Laverton to undergo evaluation.</li> <li>Select samples for geochemical analysis were transported from Laverton to ALS in Perth where, upon receipt, the samples are officially checked-in and appropriate chain of custody documentation received.</li> <li>All sample information is kept in paper and digital form. Digital data is backed up onto the GSM server regularly and then externally backed-up daily.</li> </ul>
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	No audits or reviews have been conducted.

# Section 2 Reporting of Exploration Results

(Criteria listed in section 1 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,</li> </ul>	• The Mon Ami Gold Project consists of Mining Lease M 38/1256 and Exploration Licence E 38/2829. GSM holds 100% ownership in both of the tenements.
	native title interests, historical sites, wilderness or national park and environmental settings.	<ul> <li>A royalty agreement of 2.75% Net Smelter Royalty is in place between GSM and Valleybrook Investments Pty Ltd relating to</li> </ul>
	<ul> <li>The security of the tenure held at the time of reporting along with any known</li> </ul>	GSM's acquisition of the Project in 2018.



Criteria	JORC Code explanation	Commentary
	impediments to obtaining a licence to operate in the area.	
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	Relevant exploration done by other parties     has been previously disclosed to the market.
Geology	Deposit type, geological setting and style of mineralisation.	• Mon Ami lies on the Barnicoat Shear Zone which defines the eastern flank of the central terrane of the Laverton Tectonic Zone and traces through the central part of the tenement. The shear zone marks the contact between the conglomerate sedimentary package to the west and basalt to the east, and hosts gold-bearing quartz veins that are the primary target for exploration. Gold is localised within quartz veining at the lithological contact of the sedimentary sequence and the basalt unit, within the regional shear zone. It is interpreted that the presence of cross-cutting, northeast splays intersecting the regional shear zone is the main control on concentrating gold along the regional shear zone.
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 drillholes:</li> <li>easting and northing of the drillhole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar</li> <li>dip and azimuth of the hole</li> <li>downhole length and interception depth</li> <li>hole length.</li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul> <li>All the drill holes used for mineral resource estimation purposes are summarised in the body of the memorandum. Further specific details are contained within GSM's ASX announcements.</li> <li>Easting and northing are given in MGA94 – Zone 51 coordinates.</li> <li>The height of the collars is surveyed to Australian Height Datum.</li> <li>Dip is the inclination of the hole from the horizontal. Azimuth is reported in magnetic degrees in the direction the hole is drilled. MGA94 and magnetic degrees vary by &lt;10° in the project area.</li> <li>Downhole length is the distance measured along the drill hole trace. Intersection length is the thickness of an anomalous gold intersection measured along the drill hole trace to the end of the hole measured along the drill hole trace from the surface to the end of the hole measured along the drill hole trace.</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</li> </ul>	<ul> <li>Significant assay intervals are recorded above 0.2g/t Au with a maximum internal dilution of 1 m. No top-cuts are applied.</li> <li>A breakdown of the high-grade interval is shown in the previous ASX announcements released to market at the time of drilling</li> <li>No metal equivalent values are used.</li> </ul>



Criteria	JORC Code explanation	Commentary
	should be stated and some typical examples of such aggregations should be shown in detail.	
	<ul> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</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 drillhole angle is known, its</li> </ul>	<ul> <li>All significant intersections are quoted as downhole widths. The mineralisation has a near vertical orientation most holes are drilled at a -60° dip.</li> <li>All lengths are reported as downhole and the</li> </ul>
<ul> <li>Intercept lengths</li> <li>respect to the drillhole angle is known, its nature should be reported.</li> <li>If it is not known and only the downhole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known')</li> </ul>	section in the body of the report displays the relationship between drill hole angle and mineralisation interpretation.	
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 drillhole collar locations and appropriate sectional views.</li> </ul>	<ul> <li>Relevant maps and diagrams are included in the body of this memorandum.</li> </ul>
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 matters of importance have been included.</li> </ul>
Other substantive exploration data	• Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	All matters of importance have been included.
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>	• Future exploration includes assessment of recent drill results. Mineralisation is open along strike and at depth. Diagrams highlight potential areas of interest for follow up work, e.g. a satellite resource to the north of the main Mon Ami deposit.



## Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, 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>SRK created and updated an SQL database using open-source PostgresSQL, from all data provided. This included checking of raw assay data from both ALS and SGS assay certificates with provided data in ascii format.</li> <li>Samples were cross checked, and a number of validations were made. The data was then imported into Isatis.neo™ software where it was validated and corrected where appropriate. Mr Simon Buswell-Smith subsequently did further checks on the database and any issues were immediately corrected</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>No site visit was conducted by SRK however a series of meetings were held between SRK and Dr Healy, and more recently with Mr Buswell-Smith who visited the site (Competent Persons for Sections 1 and 2) to discuss the geology, mineralisation, and QA/QC procedures.</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>The confidence in the geological interpretation of the Mon Ami deposit is considered good. The global geological setting is a structurally controlled shear zone following a steeply dipping black shale horizon. Two different interpretations were estimated with the results very similar (&lt;1%) in both grade and tonnage.</li> <li>Drilling by GSN as well as historical drilling and information derived from WAMEX reports were used to aid interpretation.</li> <li>Lodes that were previously interpreted in the 2018 MRE were re-interpreted based on further drilling and better understanding of the gold hosting structures.</li> <li>Re-interpretation by section analysis using Vulcan<sup>™</sup> software was completed, and following review and corrections by Mr. Buswell-Smith, a total of four sub-parallel lodes were completed.</li> <li>The shear zone plays a major role in the continuity of both grade and geology and is modelled as the Vertical Lode (Domain 020). A further five lodes were modelled to the west.</li> </ul>
Dimensions	• The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	<ul> <li>The Mineral Resource area has dimensions of approximately 285 m (easting – across dip), 930m (northing – along strike) by 285 m (elevation).</li> </ul>



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Further Work •	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	<ul> <li>Future exploration includes deeper drilling below 150 m depth, to test the potential for an underground operation. Additionally, more drilling north of the original Mon Ami resource (2018) and the satellite Inferred resource to the north will be done to test the continuity of the mineralisation.</li> <li>Presently, there are not enough samples &gt;150 m to estimate a potential underground operation. Further drilling may be undertaken to test the economic viability of an underground development.</li> </ul>
Estimation and modelling techniques	The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen, include a description of computer software and parameters used. The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. The assumptions made regarding recovery of by-products. Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation). In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. Any assumptions about correlation between variables. Description of how the geological interpretation was used to control the resource estimates. Discussion of basis for using or not using grade cutting or capping. The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.	<ul> <li>Grade Estimation using Ordinary Kriging was completed using Isatis.neo<sup>™</sup> (proportional model) and verified in Vulcan<sup>™</sup> (subblock model) software for gold (Au g/t). Drill hole spacing is approximately 30 m with 1 m sample intervals through mineralised zones.</li> <li>Drill hole samples were flagged using domain codes generated from 3D domains. Sample data was composited to 1 m intervals with no significant residuals. The influence of extreme sample distribution outliers was reduced by top-cutting where required. The top-cuts were determined using a range of analysis tools and were reviewed and applied on a domain basis. Normally the cuts allowed up to a maximum of 5% metal loss.</li> <li>For the four domains, directional variograms were modelled for gold using gaussian and raw variograms in the geostatistical software lsatis.neo<sup>™</sup>. Nugget values are moderate, ranging around 10–30%. Grade continuity was characterised by two spherical models with short ranges (up to 30 m), and longer ranges up to 100 m. Gold continuity in the down-dip direction was relatively poor, but reasonable across strike, and good to excellent along strike.</li> <li>An apparent plunge of 030–040° was present to the north.</li> <li>A previous estimate was completed in 2018 which was classified as Inferred.</li> </ul>
Estimation and modelling techniques		<ul> <li>The economics and cut-off grades are based on metallurgical testwork, a conceptual open- pit shell (down to the fresh), and gold prices of approximately US\$1,900 per oz.</li> <li>No deleterious elements were estimated.</li> </ul>
		The block model was constructed using a 10     m (easting) by 10 m (northing) by 2 m



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		(elevation) parent block size. Sub-cells of 2 m (east) by 2 m (north) by 1 m (elevation) were allowed to ensure block model volumes accurately reflect wireframe grades. All estimation was completed at the parent block scale. Kriging Neighbourhood Analysis was carried out to optimise block size, search distances and the number of samples used. The size of the first two pass search ellipses per domain was based on the corresponding variogram. The ellipse was orientated in the plane of the deposit (approximately north– south), steeply dipping to the west and with a moderate plunge to the north.
		<ul> <li>The first two passes used a minimum of 6 composites, and a maximum of 24 composites. This was relaxed for the final pass to enable 100% of blocks to be given a gold estimate. Hard boundaries were applied between all the domains.</li> <li>No selective mining units were assumed in</li> </ul>
		<ul> <li>this estimate.</li> <li>No correlations between variables were</li> </ul>
		<ul> <li>The geological interpretation correlated the gold mineralisation to geological and structural elements, particularly at shear zone contacts. These domains were used as hard boundaries to select sample populations for variography and estimation.</li> </ul>
		<ul> <li>All domains displayed moderate skewness. Top-cuts between 4–20 ppm Au were applied to the domains</li> </ul>
		<ul> <li>Validation of the block model involved a visual inspection of the block model versus domain boundaries and drill hole intersections. Comparison of block model statistics and drill hole composite statistics, and swath plots (northing, easting, elevation) were also completed.</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.	The tonnages were estimated on a dry basis.
Cut-off parameters	• The basis of the adopted cut-off grade(s) or quality parameters applied.	<ul> <li>A general exclusion of low-grade zones</li> <li>&lt;0.25 g/t Au has been applied, based on similar styles of deposits nearby.</li> </ul>
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</li> </ul>	<ul> <li>Mining of the Mon Ami deposit will likely be open pit mining. The geometry of the deposit will make it amenable to mining methods currently employed in many open-pit operations in similar deposits in the Yilgarn Craton.</li> <li>Further drilling will be done for a potential underground operation.</li> </ul>



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	rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	
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>No assumptions have been made for metallurgical factors.</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>	<ul> <li>No environmental impact statement has yet been compiled.</li> </ul>
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>Previous bulk density for converting estimates to grade-tonnage were estimated from downhole geophysical measurements carried out on 50 samples from 25 RC holes. The bulk density values were estimated from samples taken within the primary shear zone during the 2017 and 2018 drilling programs.</li> <li>Updated density measurements were conducted for this study based on two diamond hole near the centre of the resource, that represent various host rock lithologies, oxidation states and degree of mineralisation. Values were determined from water immersion of wax coated samples.</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 (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of</li> </ul>	<ul> <li>The Mineral Resource classification is based on reasonable confidence in the geological and grade continuity, along with 30 m drill spacing. Estimation parameters including Kriging efficiency, Kriging weights and Slope of Regression have been used during the classification.</li> <li>The input data is comprehensive in its coverage of the mineralisation and does not</li> </ul>



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•	geology and metal values, quality, quantity and distribution of the data). Whether the result appropriately reflects the Competent Person's view of the deposit.	<ul> <li>favour or misrepresent in situ mineralisation.</li> <li>Geological controls consist of a primary mineralisation event via hydrothermal fluids later modified by structural events. The definition of the mineralised zone is based on a high-level of geological understanding from nearby mines and deposits, producing a robust model of mineralised domains. The validation of the block model shows good correlation of the input data to the estimated grade.</li> <li>The Mineral Resource Estimate appropriately reflects the view of the Competent Person.</li> </ul>
Audits or • reviews	The results of any audits or reviews of Mineral Resource estimates.	No audits or reviews have been carried out as yet.
Discussion of relative accuracy/ confidence	Where appropriate, a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	<ul> <li>The relative accuracy and confidence level in the Mineral Resource estimate is considered to be in line with the generally accepted accuracy and confidence of the nominated Mineral Resource categories of Indicated and Inferred. This has been determined on a quantitative and, to a lesser extent, a qualitative basis, and is based on the Competent Person's experience with similar gold deposits in Western Australia. The factors that could affect the relative accuracy and confidence of the estimate include:         <ul> <li>The completeness and accuracy of the historical database.</li> <li>Better structural constrain of the main shear zone and sub-parallel structures.</li> </ul> </li> <li>The Competent Person is of the opinion that the scope for variations is minimal, and if any, the impact on the Mineral Resource estimate is unlikely to be significant.</li> <li>The estimate is a global estimate and not suitable for detailed mine planning.</li> <li>No production data is available as the deposit currently remains unmined.</li> </ul>