ASX ANNOUNCEMENT 22 2 22

First BLEG analysis at Aurora Tank yields 200 g/t gold grades

Marmota Limited (ASX: MEU) ("Marmota")

Marmota is pleased to advise that the first Bulk Leach Extractable Gold (BLEG) analysis of gold samples from Aurora Tank has yielded grades over 200 g/t gold.

The assaying of high grade intersections via the BLEG method is an important step for resource estimation and to test the accuracy of bonanza fire assay grades reported in February 2021 [see ASX:MEU 4 Feb 2021].

The high-precision BLEG method has not only confirmed the bonanza results, but yielded even higher average grades over the same intervals, and has returned the **highest ever gold assays at Aurora Tank of 235 g/t gold over 1m**.

Key Points

- The BLEG tests were designed to provide confidence for resource estimation and confirmation of high-grade fire assay results at Aurora Tank, and as a check against so-called nugget effects.
- The precision of BLEG test results is high due to much larger sample sizes.
  BLEG testwork is a much more expensive method of conducting assaying.

Methodology

- In industry standard **fire assays** (as normally used by Marmota), the 1m split sample is crushed, and then a small sub-sample of approximately 40g is collected for assaying.
- Because the sample taken for assaying is so small, the fire assay method can fall prey to the so-called 'nugget effect'. Gold is particularly susceptible to the nugget effect, and it can be very difficult to completely homogenise a sample during sample prep, making it hard to obtain a statistically representative sample.

- **BLEG analysis**, by contrast, dramatically reduces the nugget effect by using much larger samples to produce what is generally considered the most accurate results of any metallurgical testing process. For the **BLEG analysis**, Marmota collected 4 new large 1 kg samples from the original 1m split bags at Aurora Tank. Each large 1 kg sample was then pulverised and the entire 1 kg crushed sample was then leached in a cyanide solution for 24 hours to extract its gold content.
- The purpose of the test was to determine, as close as possible via the BLEG method, the full gold content contained in each 1 kg sample. For completeness, the residue was then subjected to another cyanide digest. Using this method, 99% of the gold collected from the samples was returned within 24 hours, with a further 1% collected from the residue. This modified BLEG procedure was designed to reveal the full gold content of the samples.

Results

The first high-grade test was carried out over Hole 20ATRC324, collecting 4 samples (each of 1 kg) over the interval from 66-67m downhole*:

Hole ID	Easting (MGA94 z53)	Northing (MGA94 z53)	RL	Dip	Azimuth (Mag)	EOH Depth
20ATRC324	412,113	6,715,892	154	-60	150	102

BLEG	Gold grade
Sample 1	**227 g/t**
Sample 2	**235 g/t**
Sample 3	**142 g/t**
Sample 4	**183 g/t**
Average BLEG grade	**197 g/t**

* 66m downhole is approximately 57m below surface.

- The BLEG assay results from Sample 1 and Sample 2 of respectively **227 g/t gold and 235 g/t gold are the highest ever gold assays to date at Aurora Tank**.

- The average BLEG grade of **197 g/t gold** over 1m also represents the new highest grade over 1m at Aurora Tank, and is 19% higher than the previous average fire assay result of 165 g/t gold for the same interval [*cf.* ASX:MEU 4 Feb 2021].

A second high-grade test was carried out over Hole 20ATRC224, collecting 4 samples (each of 1 kg) over the interval from 55-56m downhole[†]:

Hole ID	Easting (MGA94 z53)	Northing (MGA94 z53)	RL	Dip	Azimuth (Mag)	EOH Depth
20ATRC224	412,084	6,715,827	154	-60	150	72

BLEG Tests	Gold grade
Sample 1	**41 g/t**
Sample 2	**38 g/t**
Sample 3	**46 g/t**
Sample 4	**44 g/t**
Average BLEG grade	**42.5 g/t**

- The average grade from the BLEG analysis for the second test was 42.5 g/t gold over 1m which again confirms the original high-grade interval reported by the fire assay result of 41 g/t [*cf.* ASX:MEU 4 Feb 2021].

[†] 55m downhole is approximately 48m below surface.

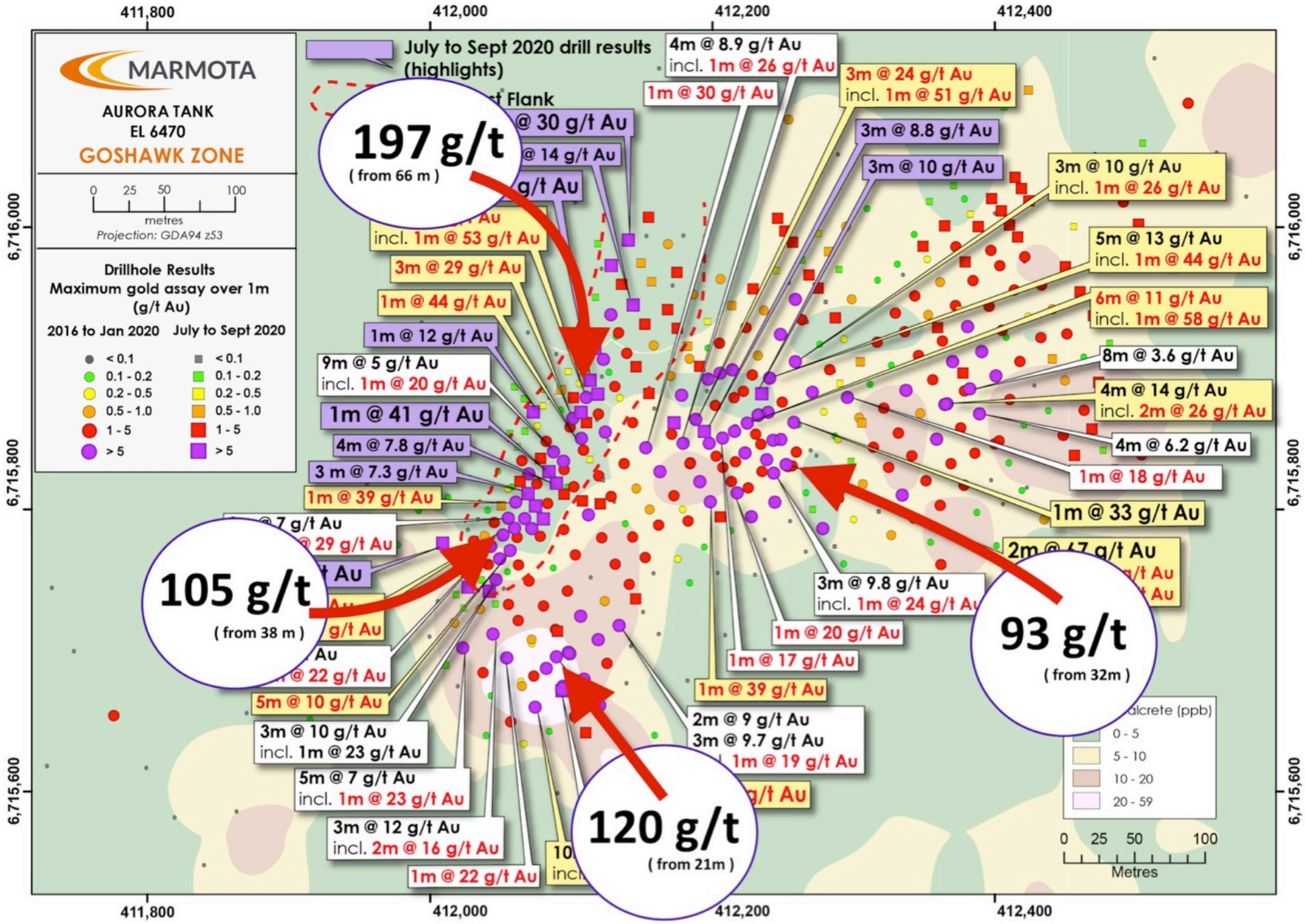

Figure 1: **Aurora Tank: location and grade of best intersections over 1m** (circled)

Marmota Chairman, Dr Colin Rose, said:

" Companies that are lucky enough to get bonanza grades are sometimes reluctant to re-test them, because, due to the nugget effect, new fresh samples can sometimes differ markedly from the original.

Marmota has re-tested the bonanza grades using the high precision large sample BLEG technique – not just once – but by taking 4 fresh samples … with ALL 4 samples returning bonanza grades, and the average grade increasing by a further 19%, and yielding our highest ever gold assays at Aurora Tank.

This is a wonderful verification of the bonanza grades at Aurora Tank, and particularly exciting and relevant for us with the next round of RC drilling at Aurora Tank about to commence.

Further announcements about the forthcoming RC program will provide more detail shortly. "

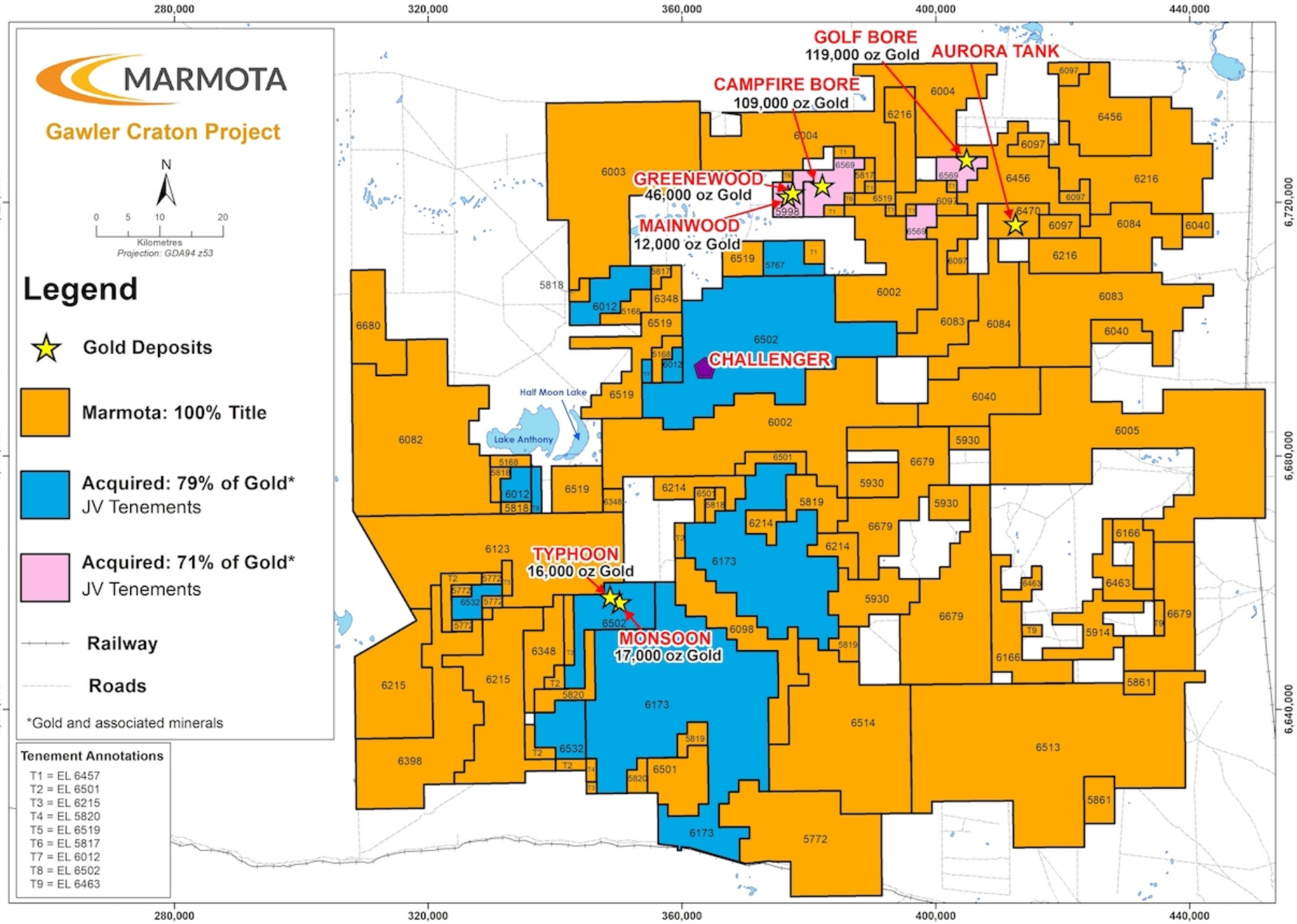

Figure 2: Aurora Tank and Marmota's Gawler Craton Gold project

Follow Marmota on Twitter at: twitter.com/MarmotaLimited

For further information, please contact:

Marmota Limited
Dr Colin Rose Executive Chairman
Email: colin@marmota.com.au

Unit 6
79-81 Brighton Road
Glenelg SA 5045
ABN: 38 119 270 816
T: (08) 8294 0899
F: (08) 8376 8633
www.marmota.com.au

About Marmota Limited

Marmota Limited (ASX: MEU) is a South Australian mining exploration company, focused on gold, copper and uranium. Gold exploration is centred on the Company's dominant tenement holding in the highly prospective and significantly underexplored Gawler Craton, near the Challenger gold mine, in the Woomera Prohibited Defence Area. The Company's copper project is based at the Melton project on the Yorke Peninsula. The Company's uranium JORC resource is at Junction Dam adjacent to the Honeymoon mine.

For more information, please visit: www.marmota.com.au

Competent Persons Statement

Information in this Release relating to Exploration Results is based on information compiled by Aaron Brown, who is a Member of the Australasian Institute of Geoscientists. He has sufficient experience which is relevant to the styles of mineralisation and types of deposits under consideration and to the activities being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code of Reporting of Exploration Results, Mineral Resources and Ore Reserves." Mr Brown consents to the inclusion in the report of the matters based on this information in the form and context in which they appear.

Where results from previous announcements are quoted, Marmota confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcement and, in the case of estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed.

APPENDIX 1 JORC Code, 2012 Edition – Table 1 report

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverized 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.*	• A total of 134 RC holes were drilled from July to September 2020 • Samples were collected at 1m intervals from the drilling cyclone and stored in separate bags at the drill site. • Bags containing the drill cuttings for each metre of interest were collected from site. • 4 samples of ~1kg each were taken from each 1m interval and submitted for BLEG analysis • Only laboratory assay results were used to compile the table of intersections that appears in the report.
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).*	• Drill Method was Reverse Circulation drilling. • Hole diameters are 146.5 mm
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• Drillholes and sample depths were recorded in hard copy format during drilling including description of lithology and sample intervals. • Qualitative assessment of sample recovery and moisture content of drill samples was recorded. • Sample recoveries were generally high, and moisture in samples minimal. In some instances, where ground water influx was high, wet/moist samples were collected. • The sample system cyclone was cleaned at the end of each hole and as required to minimise up-hole and cross-hole contamination. • No relationship is known to exist between sample recovery and grade, in part due to in-ground variation in grade. A potential bias due to loss/gain of fine/coarse material is not suspected. Drilling was halted between each interval to make sure the hole was cleared out before commencing the next interval.

Criteria	JORC Code explanation	Commentary
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• All samples were geologically logged by Marmota geologists. The holes have not been geotechnically logged. • Geological logging is qualitative. • Chip trays containing 1 m geological subsamples were collected. • 100% of any reported intersections in this announcement have had geological logging completed.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• 1m samples were collected directly from the drill rig cyclone in individually numbered bags. • Replicate 1m samples were collected with a 50mm tube by diagonally spearing individual samples within bags. • Laboratory sample preparation includes drying and pulverizing of submitted sample to target of p80 at 34 um. • No samples checked for size after pulverizing failed to meet sizing target in the sample batches relevant to the report. •
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	• Bureau Veritas Minerals in Adelaide were used for analytical work. Samples were analysed in the following manner: o Optimised BLEG digest procedure o Liquor assayed Au by ICP-MS (Met9L). • Laboratory analytical charge sizes are standard sizes and considered adequate for the material being assayed.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• An alternative company representative has checked the calculation of the quoted intersections. No twinned holes were drilled in the program. • No adjustments have been made to the assay data.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.*	• Drill hole coordinate information was collected using an RTX Differential GPS system with an autonomous accuracy of +/- 2.5 centimetres utilising GDA 94 Zone 53. • Down hole surveys were undertaken at 30m intervals downhole, or as requested by the geologist.

Criteria	JORC Code explanation	Commentary
	• *Quality and adequacy of topographic control.*	• Area is approximately flat lying and topographic control uses SRTM 90 DEM.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• Holes were located to follow up specific geological and mineralisation targets. • Drill hole spacing is irregular as indicated in Appendix 2
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• Drill lines were orientated with respect to previously drilled mineralisation and interpreted structure. Therefore, a sampling bias should not have occurred.
Sample security	• *The measures taken to ensure sample security.*	• Company staff collected all laboratory samples. • Samples submitted to the laboratory were transported and delivered by Company staff.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No audit of data has been completed to date.

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• Aurora Tank (EL 6470) is 100% owned by Marmota Limited. EL 6470 is located approximately 100 km southwest of Coober Pedy in South Australia. • There are no third party agreements, non-government royalties, historical sites or environmental issues. • Exploration is conducted within lands of the Antakirinja Matu-Yankunytjatjara Native Title Determination Area. • The tenement is in good standing.
Exploration	• *Acknowledgment and appraisal of exploration by other parties.*	• Exploration in the Commonwealth Hill region has been carried out

Criteria	JORC Code explanation	Commentary
done by other parties		by a number of exploration companies previously including; • Kennecott Explorations (Australia) Pty Ltd (1968-69) • Dampier Mining Co. Ltd (1978-79) • Afmeco Pty Ltd (1980-83) • Stockdale Prospecting Ltd (1986-87) • SADME (1996-97) • Minotaur Gold NL (1993-99) • Redport Ltd (1997-2002) • Apollo Minerals (2013-15)
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Goshawk zone of Aurora Tank is situated in the Christie Domain of the western Gawler Craton. The Christie Domain is largely underlain by late Archaean Mulgathing Complex which comprises meta-sedimentary successions interlayered with Banded Iron Formations (BIF), chert, carbonates and calc-silicates. • Marmota is targeting Challenger-style Late Archaean gold whilst also considering occurrence of a variety of other mineralisation styles which may exist in the tenement area.
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* ○ *easting and northing of the drill hole collar* ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* ○ *dip and azimuth of the hole* ○ *down hole length and interception depth* ○ *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	• The required information on drill holes is incorporated into Appendix 2 to the ASX Release.
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• Any intersections are calculated by simple averaging of 1 m samples. • Where aggregated intercepts are presented in the report, they may include shorter lengths of high-grade mineralisation; these shorter lengths are also tabulated. • No metal equivalents are reported.
Relationship between	• *These relationships are particularly important in the reporting of Exploration Results.*	• Drill coverage is considered sufficient to establish approximate true widths due the current geological understanding of mineralisation

Criteria	JORC Code explanation	Commentary
mineralisation widths and intercept lengths	• *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	dip and strike • Mineralisation intersections are downhole lengths; exact true widths are unknown but are similar to the intersection lengths as the mineralised zones are approximately normal to hole inclinations.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• See Figures within ASX release
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• A cut-off grade of 5 g/t (5000 ppb) gold was applied in reviewing assay results and deemed to be appropriate at this stage in reporting of exploration results. • Reporting is considered balanced.
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.*	• See ASX Release 4 Feb 2021. Geological observations are included in that report.
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.*	• Marmota is currently reviewing results received to date and preparing additional work programs and additional infill and extensional drilling.