



ASX ANNOUNCEMENT

6 April 2021

# New gold anomalies

## Accelerated Discovery Initiative

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

[ Updated to include JORC Table 1 Appendix: pp. 8–12 ]

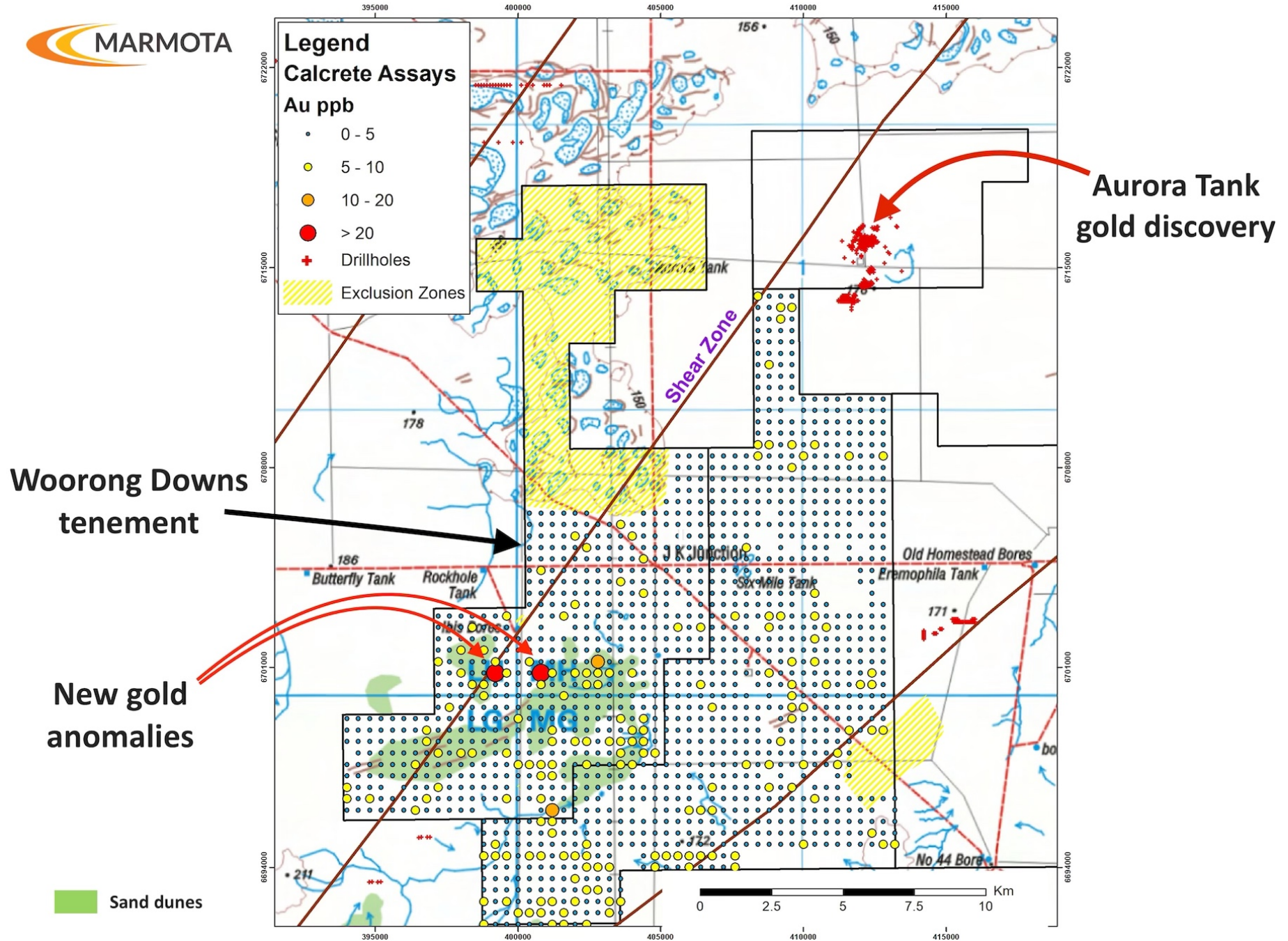
Marmota is pleased to advise that assay results from Phase 1 of the new *Accelerated Discovery Initiative* (ADI)<sup>1</sup> sampling program has yielded 2 new strong gold-in-calcrete anomalies. Both new gold anomalies are located in the tenements adjoining Marmota's Aurora Tank gold discovery, and adjacent to the same shear zone as the Aurora Tank gold discovery.

### Background

- Last month, Marmota completed sampling of 1,768 individual new sample locations, covering approximately 300km<sup>2</sup> of ground on a 400m spaced sample grid, extending outwards from the gold discovery at Aurora Tank to the surrounding tenements [ ASX:MEU [9 March 2021](#) ]
- At each sample location, both a calcrete sample (geochemical) and tree leaf sample (biogeochemical) was taken.
- Marmota has now received the assay results from the Phase 1 calcrete samples, reported here.

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<sup>1</sup> Exploration work is jointly funded by the SA Government under a \$225,000 grant awarded to Marmota under the *Accelerated Discovery Initiative* [ ASX:MEU [24 June 2020](#) ]



**Figure 1: New Gold-in-calcrete anomalies on Woorong Downs tenement (400m grid)**

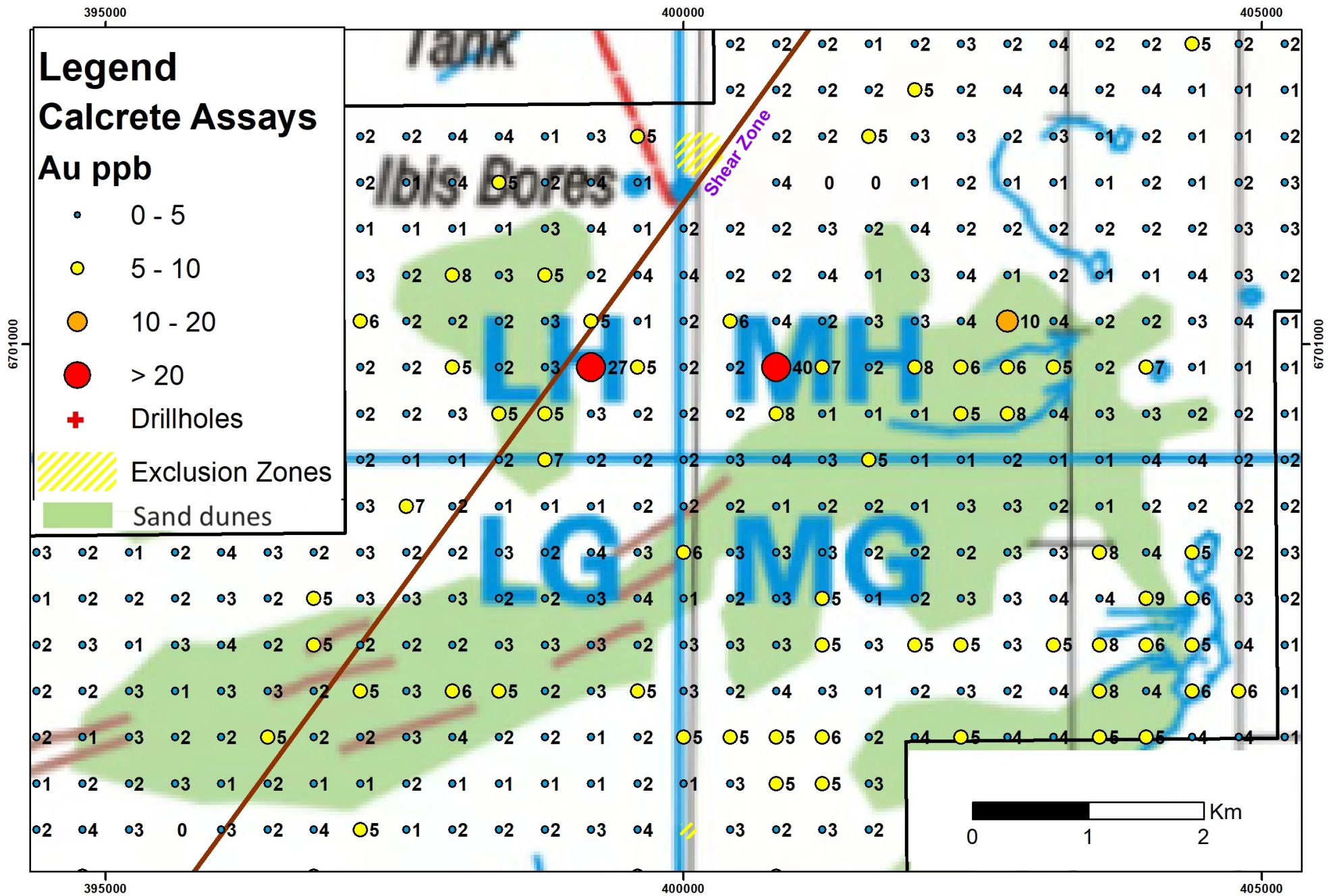
## New Key Points

- The new anomalies are located on the Woorong Downs (west) tenement, located roughly midway between the Challenger Gold mine (to the west) and Marmota's Aurora Tank gold discovery (20km NE). Both Challenger and Aurora Tank were found by testing near surface calcrete for anomalous gold. The CSIRO originally identified anomalous gold-in-calcrete near the surface to be an indicator of gold below surface.
- The new gold anomalies lie adjacent to the same NE shear zone as the Aurora Tank gold discovery where Marmota has yielded multiple outstanding 1m intersections over 100 g/t gold, all close to surface, including most recently our best ever result of 165 g/t gold over 1m (approx. 57m from surface) [ ASX:MEU 4 Feb 2021 ] .
- The new assay results for the Woorong Downs ADI **calcrete sampling** has yielded 2 new strong gold-in-calcrete anomalies, namely of 40 ppb Au and 27 ppb Au (on a 400m grid).

For comparison, the highest ever gold-in-calcrete result recorded at the Aurora Tank (Goshawk) discovery was 38ppb Au (including all detailed in-fill sampling down to a 50m grid size).

No such in-fill has been carried out yet at Woorong Downs: the Phase 1 data is sourced purely from a wide-spaced 400m regional grid.

- The anomalous gold samples also feature elevated levels of copper, bismuth, molybdenum and uranium. These indicator elements are likely to assist target identification once the infill sampling results are available.
- Sand dunes: Both of the new gold-in-calcrete anomalies are situated on the edge of sand dunes (the sand dunes are shown as green zones in Fig.1 ). The presence of sand dunes increases the depth of cover which has the effect of typically lowering the level of gold anomalism at surface and 'obscuring' or 'masking' the presence of any gold mineralisation underneath the calcrete anomaly. The adjacent surrounding sand dunes do appear to show elevated levels of gold in the dune samples which is quite encouraging. One anomaly in the dunes, located 2km east of the 40 ppb gold anomaly, consists of a cluster of results in the 5-10 ppb gold range located in sand dune cover and looks to be of particular interest.



**Figure 2: DETAIL view New Gold-in-calcrete anomalies (400m grid)**

## What's Next: **ADI – Phase 2**

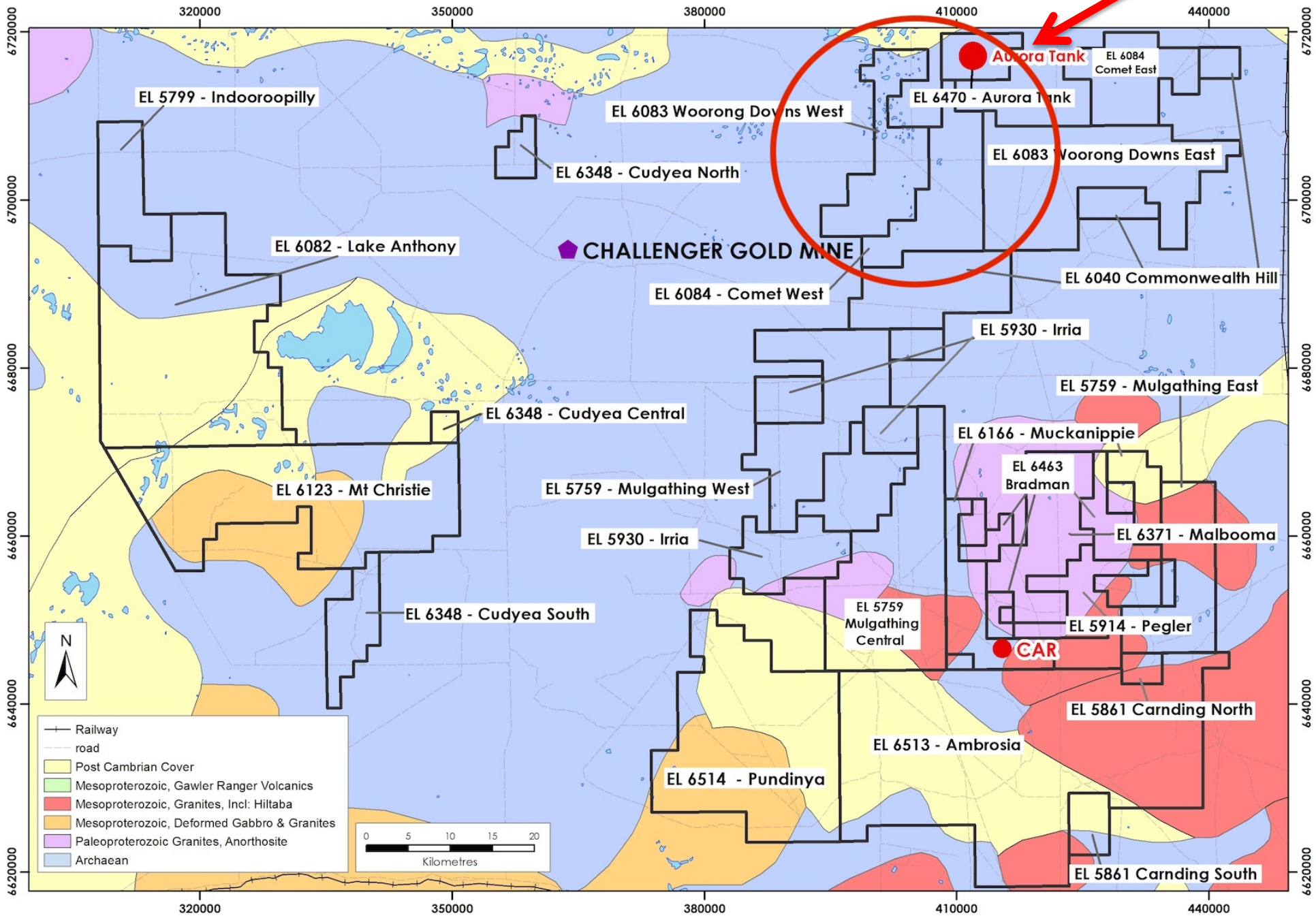
- Marmota is initiating detailed Phase 2 in-fill calcrete and biogeochemical sampling as a high priority.
- Two teams are being mobilised to the area: one for the calcrete layer, and one for the biogeochemical layer.
- Phase 2 will in-fill around each anomaly on a detailed 50m grid, determine if the anomalies define coherent zones, and the size and extent of those zones.

## Aurora Tank update

- Marmota is currently upgrading the infrastructure and facilities at the Aurora Tank camp:
  - Marmota is doubling the camp's water storage capacity to 80,000L, in advance of the diamond drilling program. New water tanks will be arriving shortly.
  - Approvals for septic tank and waste water treatment system have been obtained. Installation of the new system is planned for this month.
  - New ATV (all terrain vehicle) has been purchased and arriving this week.
- Two new drilling programs are being planned for Aurora Tank:
  - Diamond drill program and RC drill program – more detail to follow

## Marmota Chairman, Dr Colin Rose, said:

“ These results are a fantastic start to the ADI sampling program. This program has progressed with remarkable speed during the extreme summer months that are normally quiet, and while we carry out infrastructural upgrades at Aurora Tank. We are very excited to see how the program develops in Phase 2 and which we plan to have underway possibly as soon as next week. ”



**Figure 3: Marmota's Aurora Tank tenement and surrounding tenements**

**For further information, please contact:**

**Marmota Limited**

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**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](http://www.marmota.com.au)

**Competent Persons Statement**

Information in this Release relating to Exploration Results is based on information compiled by Dr Kevin Wills, who is a Fellow of the Australasian Institute of Mining and Metallurgy. 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." Dr Wills consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

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.

**Section 1 Sampling Techniques and Data**

(Criteria in this section apply to all succeeding sections)

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was 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.</li> </ul>	<ul style="list-style-type: none"> <li>Calcrete samples were collected on a 400m grid.</li> <li>Samples were collected at varying depths with the most calcareous sample collected at each location.</li> <li>Samples collected were ~1kg in weight.</li> <li>Information regarding the type of calcrete, sample location, terrain, and level of HCL reaction were recorded for each sample.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul style="list-style-type: none"> <li>Samples were collected using a mechanised 4wd mounted Auger with a maximum reach of 6m.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul style="list-style-type: none"> <li>Samples were hand sieved to ensure collection of high-quality calcrete samples for geochemical assay.</li> <li>Samples averaged 1kg in weight, which is sufficient to be considered representative for this sample medium.</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Recorded data at each sample point included sample number, GDA94 Zone 53 Co-ordinates, calcrete type, sample depth, level of HCl reaction, terrain, rock outcrop or float occurrence and any notes relating to potential contamination e.g. near roads.</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No subsampling was undertaken during calcrete sampling.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i></li> <li>• <i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Samples were submitted to Bureau Veritas in Adelaide for Analysis</li> <li>• Samples were milled and a sub-sample was digested by Aqua Regia (AR102) and analysed for Au, Ag, As, Bi, Ca, Cd, Ce, Co, Cr, Cs, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Pd, Pt, Sb, Se, S, Sn, Sr, Te, U, V, W, and Zn.</li> <li>• QA/QC checks comprised on standards and duplicates inserted by Marmota at an interval of 1 in 50 samples.</li> <li>• Laboratory inserted standards blanks and duplicates occurred at an interval of ~ 1 in 15 samples.</li> <li>• Assay returned reported acceptable levels of accuracy and precision.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Sampling data was recorded on field sheets and checked and digitised upon completion of sampling.</li> <li>• No adjustments have been made to the laboratory assays.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>• <i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i></li> <li>• <i>Specification of the grid system used.</i></li> <li>• <i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Sample location was recorded using a handheld GPS (+/- 5m accuracy)</li> <li>• Locations are recorded as GDA 94 zone 53 coordinates</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>• <i>Data spacing for reporting of Exploration Results.</i></li> <li>• <i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i></li> <li>• <i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Samples were collected on a 400m x 400m square grid which is considered sufficient for 1<sup>st</sup> pass calcrete sampling.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>• The orientation of the 400m x 400m square shaped sampling grid is considered sufficient to provide unbiased 1<sup>st</sup> pass sampling with respect to known structures and considering the target deposit type.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>• The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>• Sample were transported from site by Marmota personnel and securely delivered to Bureau Veritas.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>• The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>Aurora Tank (EL 6470), Comet (EL6084) and Woorong Downs (EL6083) tenements are 100% owned by Marmota Limited.</li> <li>The tenements are located approximately 100 km southwest of Coober Pedy in South Australia.</li> <li>There are no third-party agreements, non-government royalties, historical sites or environmental issues.</li> <li>Exploration is conducted within lands of the Antakirinja Matu-Yankunyjtajjara Native Title Determination Area.</li> <li>The tenement is in good standing.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Exploration in the Commonwealth Hill region has been carried out by a number of exploration companies previously including; <ul style="list-style-type: none"> <li>Kennecott Explorations (Australia) Pty Ltd (1968-69)</li> <li>Dampier Mining Co. Ltd (1978-79)</li> <li>Afmeco Pty Ltd (1980-83)</li> <li>Stockdale Prospecting Ltd (1986-87)</li> <li>SADME (1996-97)</li> <li>Minotaur Gold NL (1993-99)</li> <li>Redport Ltd (1997-2002)</li> <li>Apollo Minerals (2013-15)</li> </ul> </li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The sampling has been conducted within the Christie Domain of the Archaean Mulgathing Complex which comprises of meta-sedimentary successions interlayered with Banded Iron Formations (BIF), chert, carbonates and calc-silicates.</li> <li>Marmota is targeting Challenger-style Late Archaean gold whilst being open for occurrence of a variety of other mineralisation styles which may also exist in the tenement area.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </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 style="list-style-type: none"> <li>N/A</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>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.</i></li> <li><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>No data aggregation methods have been applied</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li><i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li><i>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').</i></li> </ul>	<ul style="list-style-type: none"> <li>No new drilling results in this announcement</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Sample locations are shown in Figure 1 of this release.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>All assay data has been grouped and shown within Figure1.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li><i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>See attached release.</li> <li>Marmota is currently reviewing results and will be mobilising shortly to carry out infill calcrete sampling and biogeochemical sampling.</li> <li>Drilling of the best targets defined in the infill sampling is planned.</li> </ul>