ASX ANNOUNCEMENT 30 April 2024

# Marmota discovers gold at Goolagong

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

Marmota (ASX:MEU) is very pleased to announce, as part of its Project X regional reconnaissance program, that drilling at **Target 5: 'Goolagong'** on EL 5818 (100% owned) has yielded a potential new gold discovery.

## Highlights

- First ever drilling by any company at Goolagong.
- Goolagong drilling (Project X: Target 5) was designed to test a NE striking gold-in-calcrete anomaly (approximately 800m x 200m) which has never been previously tested by a drill hole.

- Hole 23MR184 was air-core (AC) drilled to refusal at 38m (i.e. to the point where harder rock was reached beyond which the AC rig could not drill). The last 2 metres drilled in this hole returned significant gold, with the **grades notably increasing to the end of hole at 38m**:

  **2m @ 0.64 g/t Gold** From 36m downhole to end of hole [ Hole 23MR184 ]
  From 36m to 37m: 0.53 g/t gold
  From 37m to 38m: **0.75 g/t gold**
  **Importantly, not yet tested below 38m (end of hole).**

- All of the adjacent holes ended closer to surface, typically at around 23m or 29m, with all holes ending at refusal. The deeper weathering at hole 23MR184 is likely due to a fracture system conducive to the increased flow of meteoric waters.

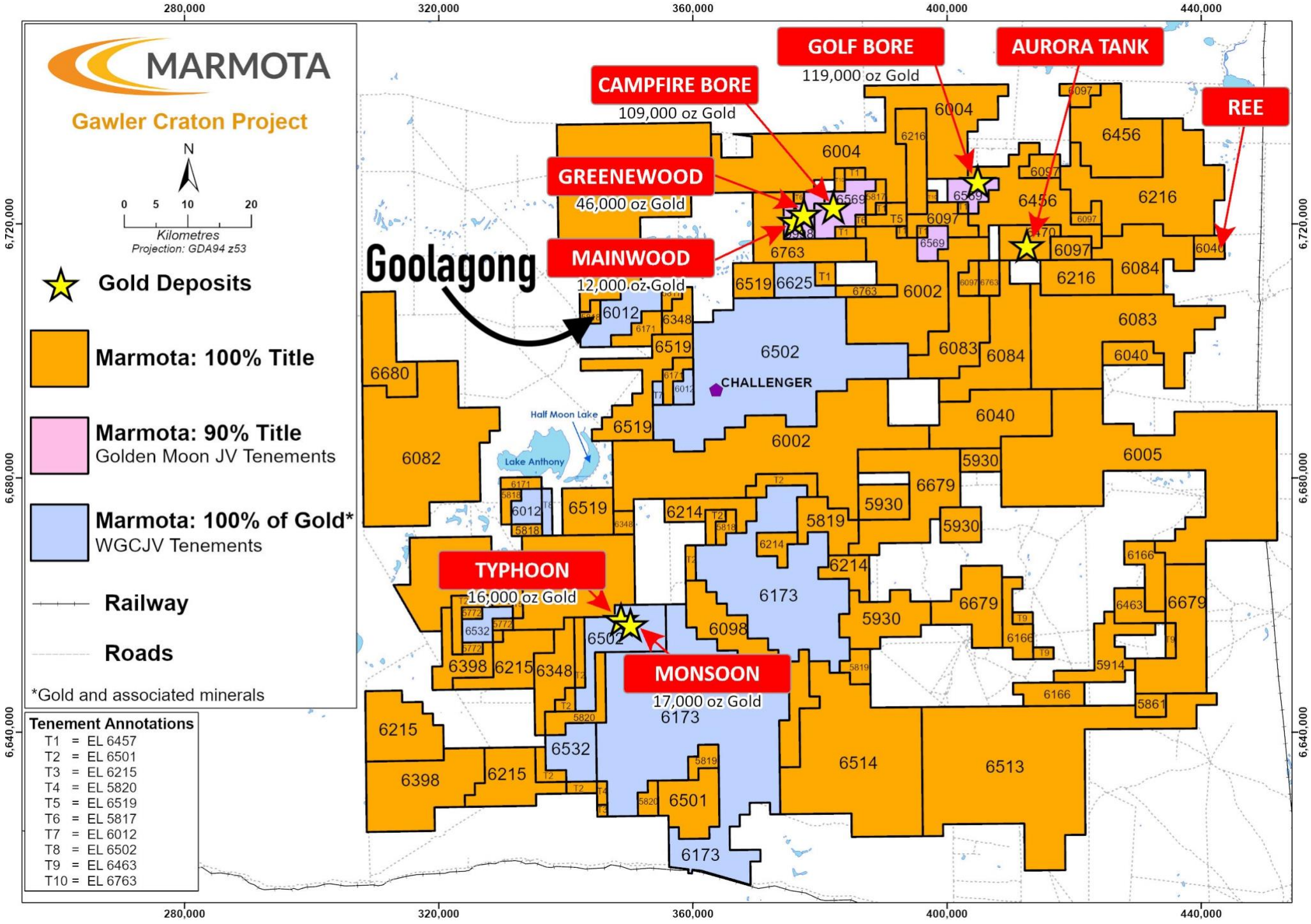




**Figure 1:** **Location of new gold found at Goolagong [ on tenement EL 5818 ]**

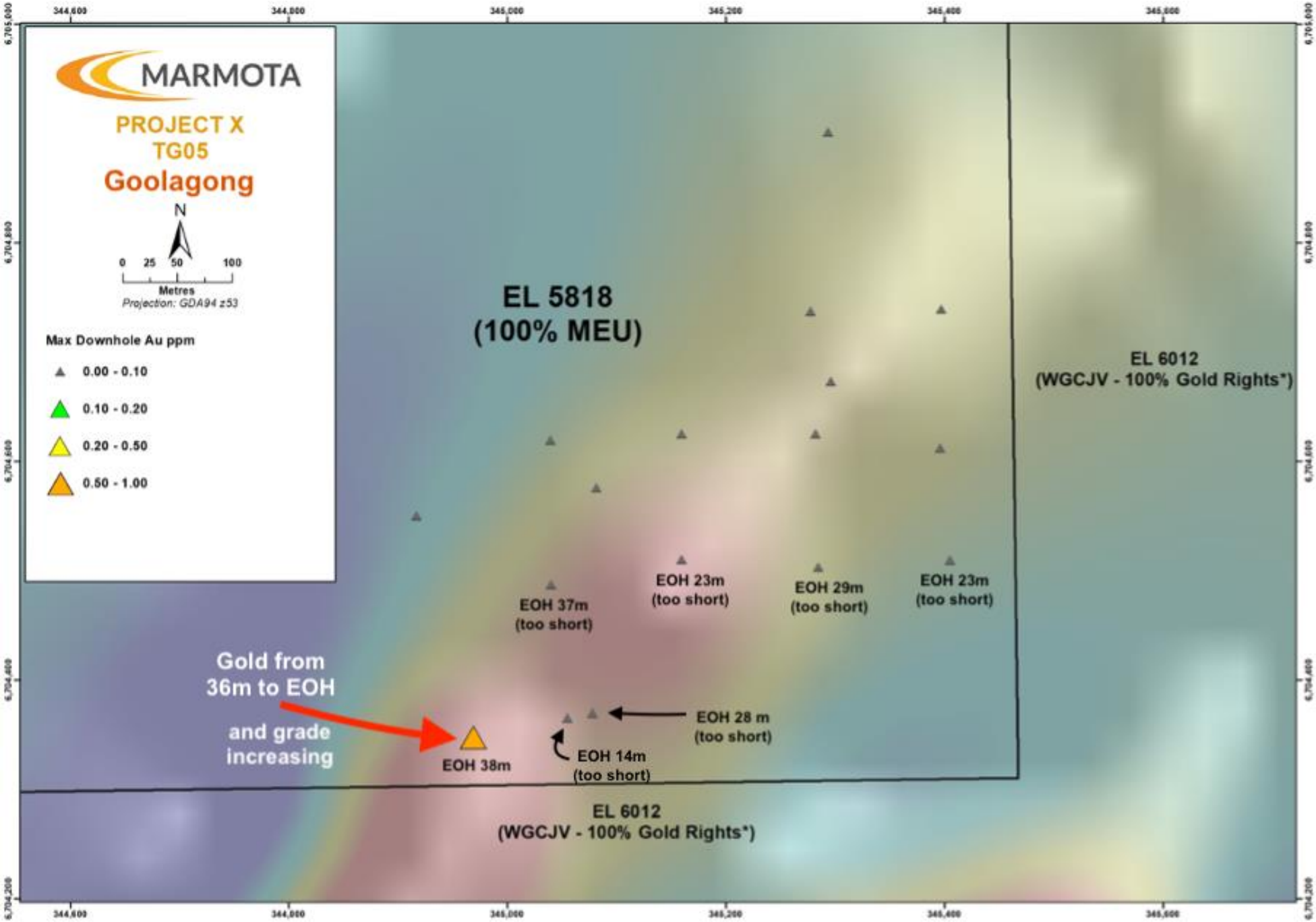


**Figure 2:** **Goolagong on EL5818: Maximum downhole Au over Total Magnetic Intensity (TMI) image + End of Hole (EOH) depths**

# Additional Detail

## Table 1

**Goolagong: Reconnaissance Au program**

**Significant Gold Intersections > 0.5 g/t [ over 1m or larger intervals ]**

| Hole ID | Easting | Northing | DIP | AZM | EOH | Depth From (m) | Depth To (m) | Intercept Width (m) | Au g/t |
|---|---|---|---|---|---|---|---|---|---|
| 23MR184 | 344,969 | 6,704,347 | -90 | 0 | 38 | 36 | 38 | **2** | **0.64** |
| *including* | | | | | | 37 | 38 | 1 | **0.75** |

## 1. Location and Extent

- Goolagong is located [ see Figure 1 ]:
  a) 20km NW of the Challenger Gold Mine and
  b) 35km SW of Marmota's Greenewood and Mainwood gold deposits (MEU 90% owned)
  [ see Golden Moon JV ASX:MEU 9 April 2024 ]
- Goolagong is 100% owned by Marmota. Marmota also owns 100% of the gold rights on the adjoining tenement.
- Marmota's regional reconnaissance program (Project X) included the drilling of 17 air-core (AC) reconnaissance holes across the tenement. The average depth of drilling was 33m, testing for gold mineralisation close to surface.

## 2. Highly prospective

- Significant gold mineralisation commences at 36m, with grades increasing to end of hole at 38m.
- Not tested below 38m.
- Mineralisation attractively close to surface.
- Adjacent holes had same issue with AC refusal: they remain untested at relevant depths.
- **Results already checked, replicated and verified**: the results are anomalous in 4m composites (Lab 1), and were then checked and verified by collecting separate 1m splits and assaying those in a second different lab (Lab 2).
- The bottom (end-of-hole) sample, which yielded 0.75 g/t Au (37-38m), shows the mineralisation is hosted in grey to black Christies Gneiss with quartz veining [ see Figure 3 ], similar to gold mineralisation at Aurora Tank, Campfire Bore, Golf Bore and Challenger.

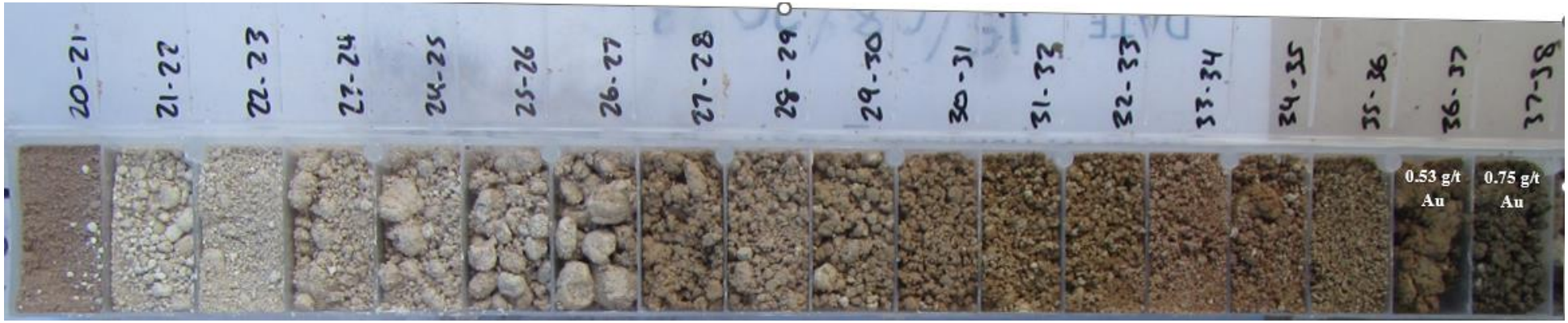


**Figure 3:** **Drill samples collected in chip trays during drilling.**
**Gold mineralisation starts in the last 2 metres, with grade increasing to the end of hole (36m to 38m).**

- Goolagong has a NE striking gold-in-calcrete anomaly with 26 ppb peak Au-in-calcrete.
- The calcrete anomaly is also coincident with a linear magnetic high [ see Figure 2 ].

# Comment

**Marmota Chairman, Dr Colin Rose, said:**

**" It is just the start for Goolagong, but what an exciting development!**

**Goolagong already has all the attributes of being a potential new gold discovery, with gold grades increasing downhole, reproducible across 4m composites and 1m splits, and which only stopped due to hitting refusal with the recon AC rig. It also highlights the degree of luck in exploration: if the hole had been drilled 2m shorter, this could have been so easily missed.**

**Marmota will be bringing in a larger RC rig (i) to drill deeper, (ii) to drill the adjacent holes, (iii) to identify in which direction it is heading. We would love to have this work done as soon as possible, most likely in conjunction with the large RC program being prepared at Campfire Bore (PEPRs already lodged). "**

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**About Marmota Limited**

Marmota Limited (ASX: MEU) is a South Australian mining exploration company focused on gold and uranium. Gold exploration is centred on the Company's gold discovery at Aurora Tank that is yielding outstanding intersections in the highly prospective and significantly underexplored Gawler Craton in the Woomera Prohibited Defence Area. The Company's flagship uranium 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 Australian Institute of Geoscientists. He has sufficient experience 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 this 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.

For the purpose of ASX Listing Rule 15.5, the Board has authorised for this announcement to be released.

## 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.*<br>• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*<br>• *Aspects of the determination of mineralisation that are Material to the Public Report.*<br>• *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 17 Air-core holes were drilled for 564m<br>• Samples were collected at 1m intervals from the drilling cyclone and stored in separate bags at the drill site.<br>• Composite 4m samples**:**<br>○ 4m composites were collected using a 50mm PVC tube 'spear' to collect representative samples from bags. Composite samples were an average weight of 1.9 kg which were pulverised to produce sub samples for lab assay (by Bureau Veritas in Adelaide) Aqua Regia and Lithium Borate Fusion.<br>○ For Aqua Regia, a 40 g sample was taken for digest and analysed by Inductively Coupled Mass Spectrometry (ICP-MS) and Inductively Coupled Plasma Atomic Emission Spectrometry (ICP-AES).<br>○ For Lithium Borate Fusion, an aliquot of sample is fused with lithium metaborate at high temperature in a Pt crucible. The fused glass is then digested in nitric acid. and analysed by ICP-MS<br>• 1m splits samples:<br>○ 1m splits were collected using the drilling cyclone and stored at Marmota'a Aurora Tank Camp.<br>○ Following testing of 4m composite samples down the entire length of the hole, selected 1 metres splits were sent for further analysis.<br>○ 1m splits bags submitted for analysis we an average weight of 1.6kg which were pulverised to produce sub samples for lab analysis by ALS Adelaide, then transported to ALS Perth to complete samples using BOTH Fire Assay and Four Acid Digestion.<br>○ For Fire Assay, a 50g samples was taken for fire assay and analysed by Inductively Coupled Plasma Atomic Emission Spectrometry (ICP-AES) for Gold. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | ○ For Four Acid Digestion, 25g was taken for Mixed Acid digest and analysed by Inductively Coupled Plasma Atomic Emission Spectrometry (ICP-AES) for 34 elements.<br>• 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 Air-core drilling.<br>• Hole diameters are 87 mm. |
| ***Drill sample recovery*** | • *Method of recording and assessing core and chip sample recoveries and results assessed.*<br>• *Measures taken to maximise sample recovery and ensure representative nature of the samples.*<br>• *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.* | • Drill holes and sample depths were recorded in hard copy format during drilling including sample intervals.<br>• Qualitative assessment of sample recovery of drill samples was recorded.<br>• Sample recoveries were generally high, and moisture in samples minimal.<br>• 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. |
| ***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.*<br>• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.*<br>• *The total length and percentage of the relevant intersections logged.* | • Representative drill holes were geologically examined by Marmota geologists.<br>• The holes have not been geotechnically logged.<br>• Geological logging is qualitative.<br>• Chip trays containing 1m geological subsamples were collected.<br>• 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.*<br>• *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*<br>• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*<br>• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*<br>• *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.*<br>• *Whether sample sizes are appropriate to the grain size of the material being sampled.* | • Composite samples averaging 1.9 kg were collected for laboratory assay. Samples were collected with a 50mm tube by diagonally spearing individual samples within bags.<br>• 1m Spilt samples were collected directly off the sample cyclone at 1metre intervals down the length of the drill hole. 1m split samples were kept at Marmota's Aurora Tank Camp once collected.<br>• It is considered representative samples were collected after homogenizing of sample through drilling cyclone and unbiased spearing of samples in bags.<br>• Laboratory sample preparation includes drying and pulverizing of submitted sample to target of p80 at 75 µm.<br>• No samples checked for size after pulverizing failed to meet sizing target in the sample batches relevant to the report.<br>• Duplicate samples were introduced into the sample stream by the Company. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| ***Quality of assay data and laboratory tests*** | • *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*<br>• *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.*<br>• *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 of the 4m composite samples.<br>• ALS Adelaide (Sample Preparation) and ALS Perth (analytical) were used for analytical work of the 1m Split samples.<br>• Samples from exploratory holes on Target 5: Goolagong were analysed in the following manner:<br>• 4m Composites (Bureau Veritas):<br>○ Aqua Regia Digest: Analysed by Inductively Coupled Plasma Mass Spectrometry (ICP-MS) or Inductively Coupled Plasma Atomic Emission Spectrometry (ICP-AES)for Au, Ca, Fe, Mg, Mn, S, V, Ag, As, Bi, Cd, Co, Cr, Cs, Cu, Li, Mo, Ni, Pb, Pd, Pt, Sb, Se, Sn, Sr, Te, W, Zn, U, Th, Ce, La, Nd, Pr, Ga.<br>• 1m Splits Samples (ALS):<br>○ Fire Assays (ALS): Analysed by Inductively Coupled Plasma Atomic Emission (ICP-AES) for Au only.<br>○ 4 Acid Digest (ALS): Analysed by Inductively Coupled Plasma Atomic Emission (ICP-AES) for 34 elements including; Ag, Al, As, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, K, La, Li, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sc, Sr, Th, Ti, Tl, U, V, W, Zn.<br>• For all samples, the Company introduced QA/QC samples at a ratio of one QA/QC sample for every 30 drill samples. The laboratory introduced additional QA/QC samples (blanks, standards, checks) at a ratio of greater than 1 QA/QC sample for every 10 samples.<br>• Both the Company and laboratory QA/QC samples indicate acceptable levels of accuracy and precision have been established.<br>• Duplicates were introduced into the sample stream by the Company. The laboratory completed repeat assays on various samples.<br>• Standard samples were introduced into the sample stream by the Company, while the laboratory completed standard assays also. |
| ***Verification of sampling and assaying*** | • *The verification of significant intersections by either independent or alternative company personnel.*<br>• *The use of twinned holes.*<br>• *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*<br>• *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.<br>• 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.*<br>• *Specification of the grid system used.* | • For exploration holes on Target 5, drillhole coordinate information was collected using a handheld GPS system with an autonomous accuracy of ± 3m utilising GDA 94 Zone 53.<br>• The area is generally of low topographic relief. Topographic control |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | • *Quality and adequacy of topographic control.* | uses SRTM-derived Hydrological 1 Second Digital Elevation Model Version 1.0 |
| ***Data spacing and distribution*** | • *Data spacing for reporting of Exploration Results.*<br>• *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.*<br>• *Whether sample compositing has been applied.* | • 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.*<br>• *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 new reconnaissance holes. Therefore, a sampling bias should not have occurred. |
| ***Sample security*** | • *The measures taken to ensure sample security.* | • Company staff collected all laboratory samples.<br>• Samples submitted to the laboratory were transported and delivered by Company staff.<br>• 1m Samples were store at Marmota's Aurora Tank Camp. |
| ***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.*<br>• *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.* | • Lake Anthony (EL 5818) is 100% owned by Half Moon Pty Ltd a wholly owned subsidiary of Marmota Limited. These ELs are located approximately 155 km southwest of Coober Pedy in South Australia.<br>• There are no third-party agreements, non-government royalties, historical sites or environmental issues.<br>• Exploration is conducted within lands of the Antakirinja Matu-Yankunytjatjara Native Title Determination Area.<br>• The tenements are in good standing. |
| ***Exploration done by other parties*** | • *Acknowledgment and appraisal of exploration by other parties.* | • Previous exploration within EL 5818 has been calcrete sampling by the following companies:<br>○ CRA Exploration Pty Ltd (1995)<br>○ Dominion Mining Ltd (1998)<br>○ Tyranna Resources Ltd (2016) |
| ***Geology*** | • *Deposit type, geological setting and style of mineralisation.* | • All drilling occurred within geology of 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. |
| ***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:*<br>○ *easting and northing of the drill hole collar*<br>○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*<br>○ *dip and azimuth of the hole*<br>○ *down hole length and interception depth*<br>○ *hole length.*<br>• *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.*<br>• *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.* | • Any intersections are calculated by simple averaging of 1m or 4m Samples.<br>• Where aggregated intercepts are presented in the report, they may include shorter lengths of high-grade mineralisation; these shorter lengths are also tabulated.<br>• No metal equivalents are reported. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | • *The assumptions used for any reporting of metal equivalent values should be clearly stated.* | |
| ***Relationship between mineralisation widths and intercept lengths*** | • *These relationships are particularly important in the reporting of Exploration Results.*<br>• *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.*<br>• *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').* | • Drill coverage is considered sufficient to establish approximate true widths, given the current geological understanding of mineralisation dip and strike.<br>• 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 0.5 g/t ppm (500 ppb) was applied in reviewing assay results and deemed to be appropriate at this stage in reporting of exploration results.<br>• 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 Releases regarding Project X: 17 July 2023, 1 August 2023, 28 August 2023, 20 September 2023, 15 January 2024 and 13 March 2024. |
| ***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).*<br>• *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. |

## APPENDIX 2 Drillhole collar summary: Target 5 'Goolagong' exploration holes

| Tenement | Hole ID | Easting (MGA94 z53) | Northing (MGA94 z53) | RL | Dip | Azimuth (Mag) | EOH Depth |
|---|---|---|---|---|---|---|---|
| EL 5818 | 23MR184 | 344,969 | 6,704,347 | 179 | -90 | 0 | 38 |
| EL 5818 | 23MR185 | 345,055 | 6,704,365 | 179 | -90 | 0 | 14 |
| EL 5818 | 23MR185a | 345,078 | 6,704,369 | 180 | -90 | 0 | 28 |
| EL 5818 | 23MR186 | 345,405 | 6,704,509 | 181 | -90 | 0 | 23 |
| EL 5818 | 23MR187 | 345,284 | 6,704,503 | 180 | -90 | 0 | 29 |
| EL 5818 | 23MR188 | 345,159 | 6,704,510 | 180 | -90 | 0 | 23 |
| EL 5818 | 23MR189 | 345,039 | 6,704,487 | 179 | -90 | 0 | 37 |
| EL 5818 | 23MR190 | 344,917 | 6,704,550 | 179 | -90 | 0 | 51 |
| EL 5818 | 23MR191 | 345,081 | 6,704,576 | 179 | -90 | 0 | 34 |
| EL 5818 | 23MR192 | 345,039 | 6,704,619 | 180 | -90 | 0 | 40 |
| EL 5818 | 23MR193 | 345,159 | 6,704,625 | 180 | -90 | 0 | 54 |
| EL 5818 | 23MR194 | 345,281 | 6,704,625 | 180 | -90 | 0 | 38 |
| EL 5818 | 23MR195 | 345,296 | 6,704,673 | 180 | -90 | 0 | 31 |
| EL 5818 | 23MR196 | 345,396 | 6,704,612 | 180 | -90 | 0 | 22 |
| EL 5818 | 23MR197 | 345,397 | 6,704,739 | 180 | -90 | 0 | 38 |
| EL 5818 | 23MR198 | 345,277 | 6,704,737 | 180 | -90 | 0 | 37 |
| EL 5818 | 23MR199 | 345,293 | 6,704,901 | 180 | -90 | 0 | 27 |

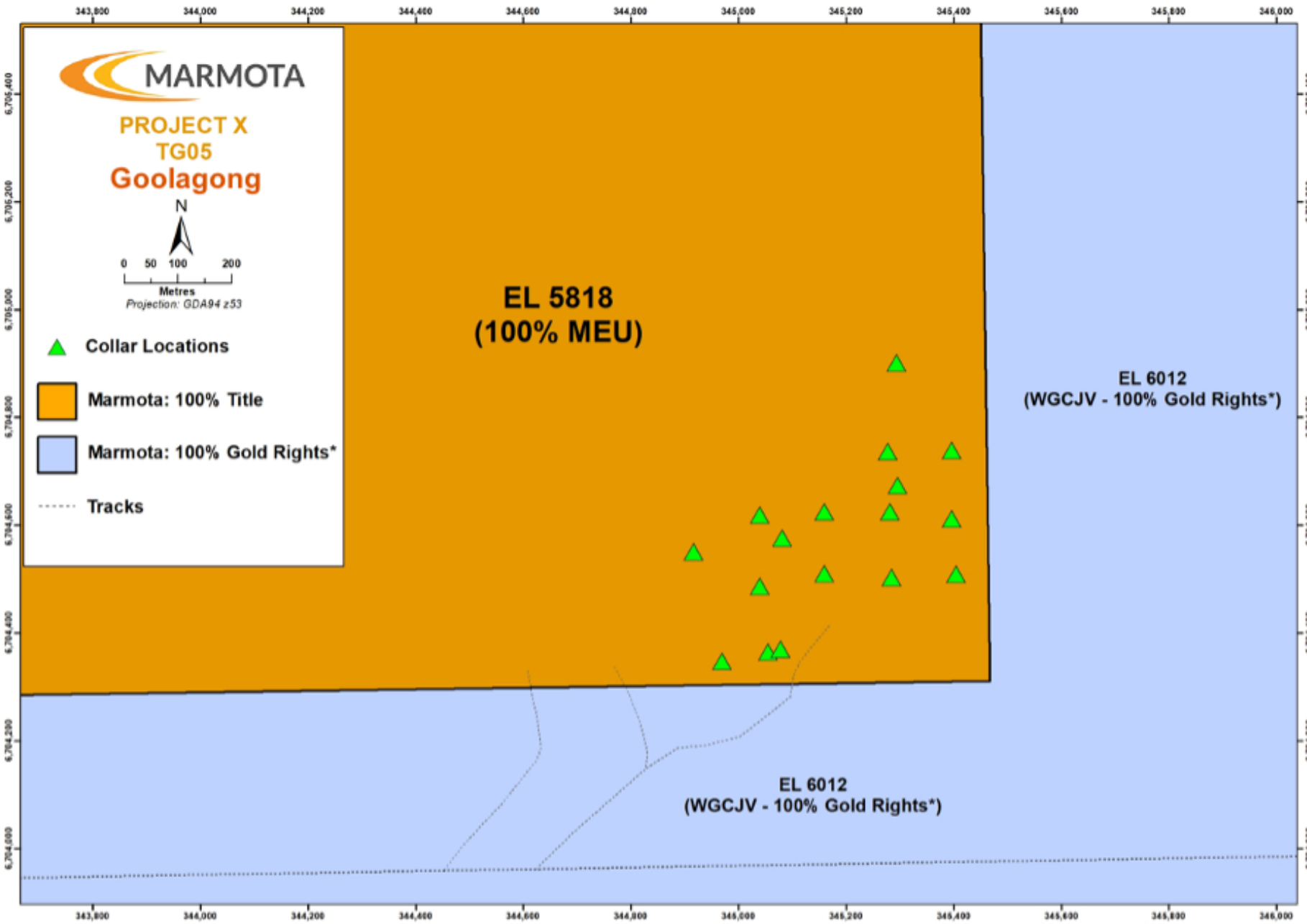


**Figure 4:** **Goolagong drillhole collars** ▲ (on EL 5818)