ASX ANNOUNCEMENT 16 June 2022

Aurora Tank Gold: First Pit Wall Design

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

Marmota is pleased to advise it has received the first pit wall parameters to be used in the design of an open pit at Aurora Tank. The pit wall design was carried out by Rocktest, a specialised Geotechnical Engineering consultancy, based on analysis and testing of diamond core obtained from the company's recent diamond drilling program at Aurora Tank. The work determines the first realistic pit wall parameters for the design of an open pit at Aurora Tank.

Five Geological Domains

Rocktest identified five geological domains at Aurora Tank [see Table 1 and Fig. 1].
The domains do not vary much across the site.

	Domain	Depth	Geological Domain
•	**Domain D1**	Surface to 4m BGL	Clayey sand soil
•	**Domain D2**	4m to 13m BGL	Residual soil resulting from weathering of gneiss
•	**Domain D3**	13m to 40m BGL	Highly to extremely weathered gneiss
•	**Domain D4**	40m to 50m BGL	Slightly to highly weathered gneiss
•	**Domain D5**	50m to … BGL	Slightly weathered to fresh gneiss

Table 1: Five Geological Domains at the Aurora Tank gold deposit [**BGL** = Below Ground Level]

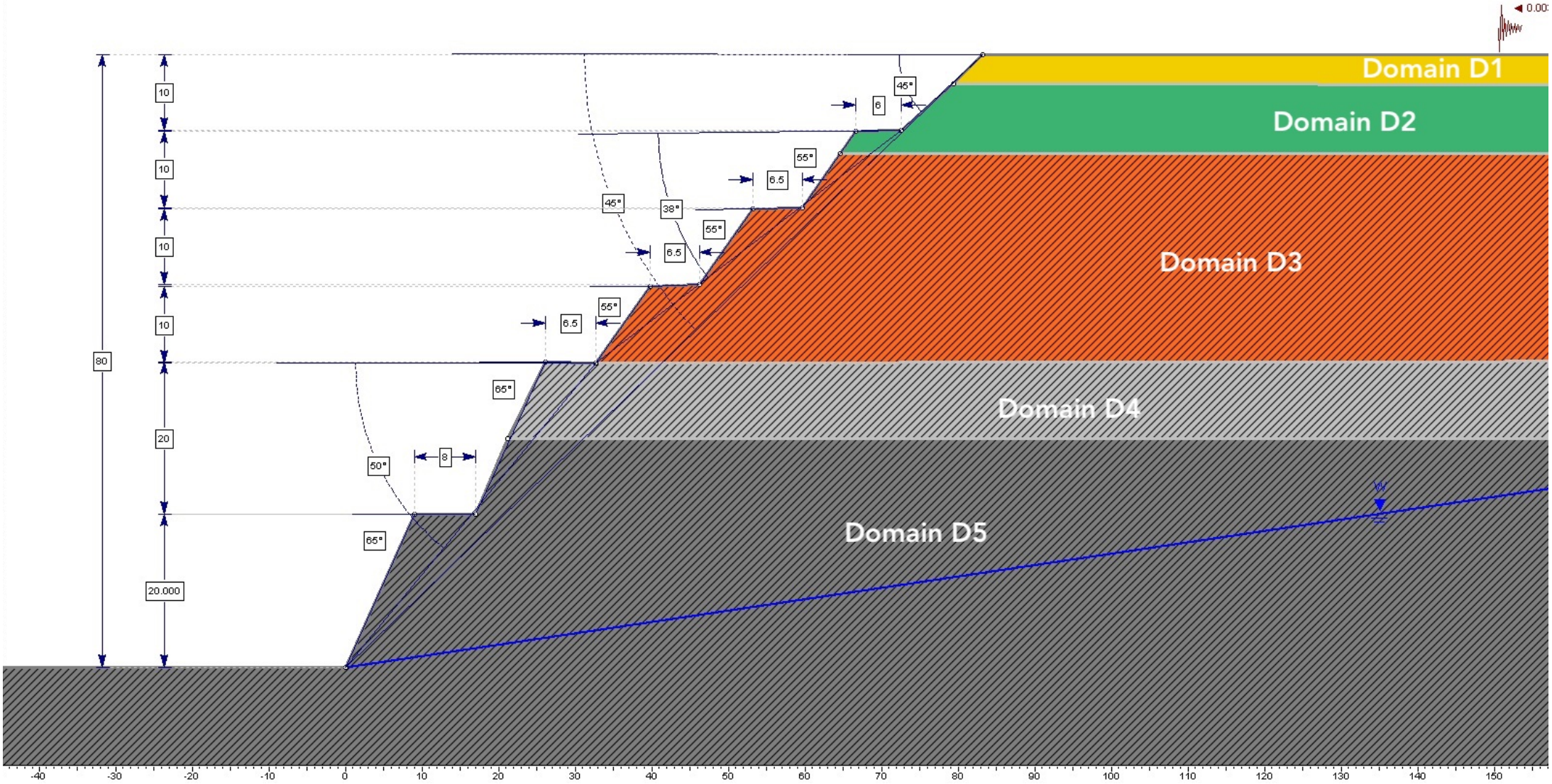


Figure 1: **Aurora Tank – Pit Slope Design Parameters by Domain**

Technical Details

The Aurora Tank deposit is hosted in Christie Gneiss, a metamorphic rock. Locally, this has undergone lower temperature metamorphism (referred to as retrograde metamorphism) that has caused the development of schistocity so that mineral grains have become orientated in such a way that the rock is easily split into thin flakes or plates. This layering in the rock (foliation) results in the gneiss being highly anisotropic *i.e.* the rock is significantly stronger perpendicular to the foliation than along the foliation. The engineering characteristics of the gneiss vary significantly with weathering grade, which varies with depth. Weathering in the upper part can result in these rocks displaying soil like characteristics, whereas in the less weathered and fresh rock zones, the areal extent and frequency of structural discontinuities (*e.g.* joints, foliations, shears, and faults) will have the greatest influence on rock mass stability. The groundwater level was assumed to be at approximately 70m Below Ground Level ('BGL') so the pit walls in domains D1 to D3 are expected to be dry, as will domains D4 and D5. In the latter two, local sumps in the floor of the pit are expected to be required.

Rocktest recommended that access to the pit be developed by means of a clockwise spiral ramp from the NW corner of the pit. Rocktest determined the domain-based parameters for pit wall design as shown in Table 2 and illustrated in Figure 1 (IRA = inter ramp angle)

RECOMMENDED SPECIFICATIONS FOR THE WALLS

Domain	*Depth (mBGL)*	*Maximum Bench Height (m)*	*Maximum Batter Angle (degrees)*	*Minimum Berm Width (m)*	*Maximum IRA(1) (degrees)*	*Overall slope angle*
D1/D2	0 - 10	10	45°	6	n/a	45°
D2/D3	10 - 40	10	55°	6.5	38°	
D4/D5	>40	20	65°	8	50°	

(1) The IRAs assume 0.5m of over-break or crest lost.

Table 2: Recommended Specifications for Aurora Tank Pit Walls by Geological Domain

ATV Logging

In addition, a number of holes were logged by a specialist geophysical wireline logging firm using an acoustic televiewer/scanner (ATV) which greatly increased the number of data points available for use in Rocktest's geotechnical analysis. Downhole geophysical measurements included acoustic and optical imaging, formation density and gyroscopic deviation. The analysis undertaken by Rocktest of the data collected identified five sets of structural features as identified through the ATV logging and confirmed by their logging of the core.

The poles to these planes [*i.e.* a single point (pole) oriented at 90^{o} to the plane] were plotted on a stereonet. The point is projected downwards to the position at which it would intersect the lower half of a sphere. Where points form tight clusters indicates where these discontinuities have a close common orientation. Poles clustered close to the centre of the stereonet indicate discontinuities that are shallow dipping to horizontal, whilst poles located closer to the perimeter of the circle indicate planes that are steeply dipping to vertical.

This is one of the primary tools used in determining how pit wall orientation will intersect the various discontinuity sets, what that interaction may mean for wall stability and how design parameters may be established to mitigate any risk of instability.

The ATV data and its interpretation are shown in Fig.2 and Fig. 3 respectively.

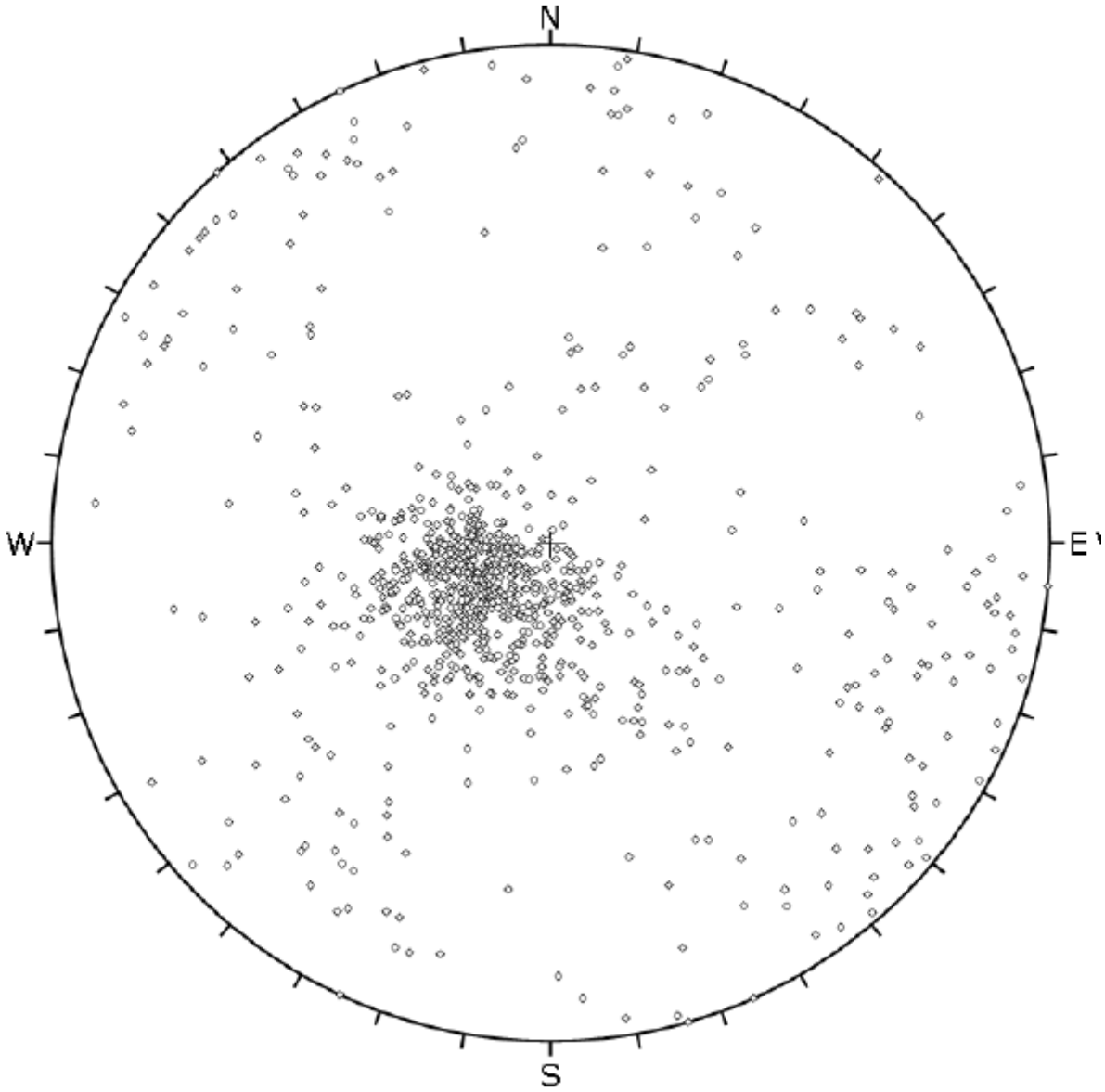
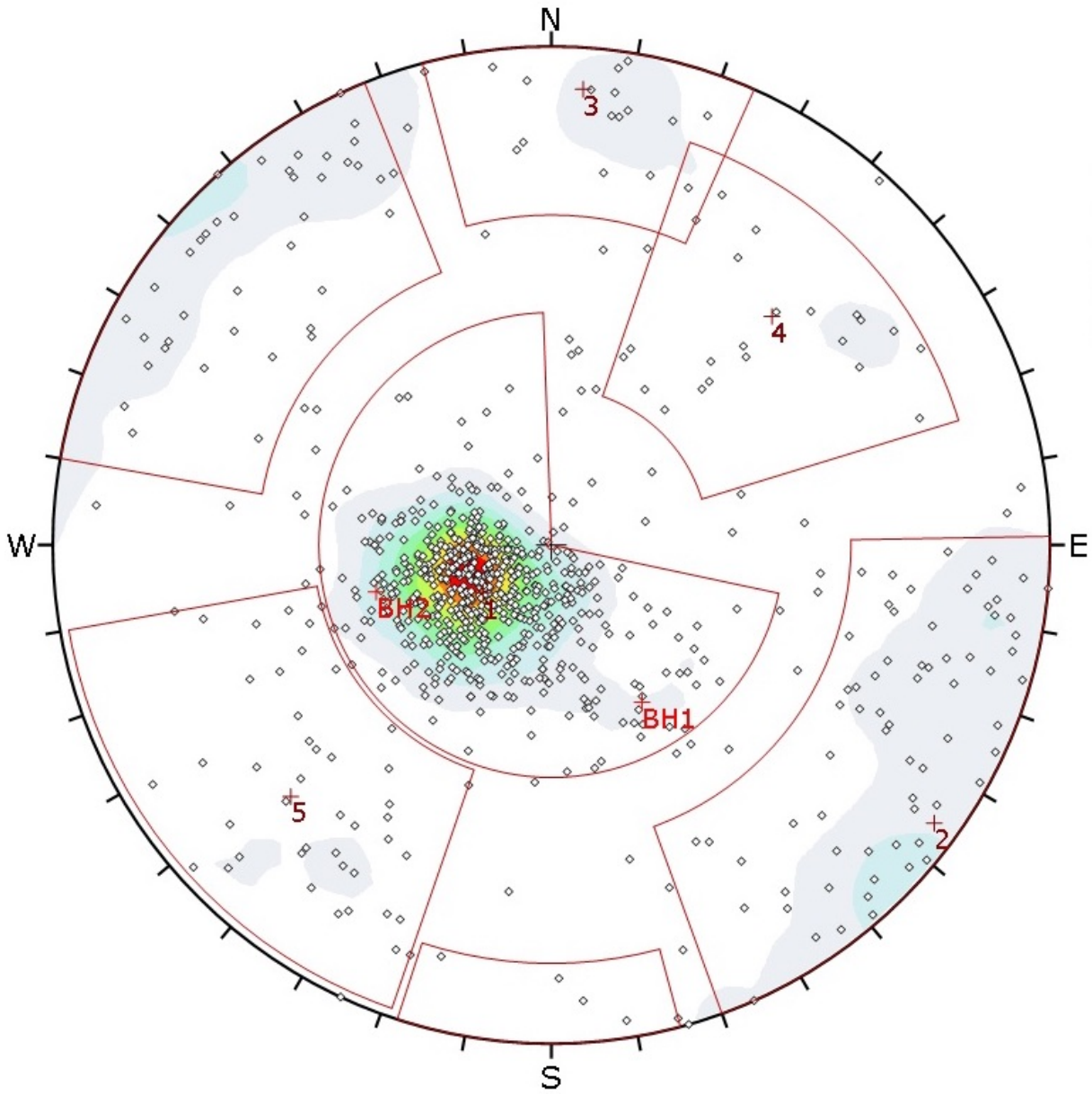


Figure 2: **Orientations of 852 discontinuities sampled by ATV plotted as poles on a stereonet**



Symbol	Feature
◇	Pole Vectors

Color	Density Concentrations
	0.00 - 1.20
	1.20 - 2.40
	2.40 - 3.60
	3.60 - 4.80
	4.80 - 6.00
	6.00 - 7.20
	7.20 - 8.40
	8.40 - 9.60
	9.60 - 10.80
	10.80 - 12.00

Contour Data	Pole Vectors
Maximum Density	11.94%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Plot Mode	Pole Vectors
Vector Count (Weighted)	1428 (852 Entries)
Terzaghi Weighting	Minimum Bias Angle 15°
Hemisphere	Lower
Projection	Equal Angle

Figure 3: Poles contoured based on density defining five sets*

* The mean of the orientations of the poles is plotted as a single red cross and labelled with the set number. Borehole orientations are highlighted.

Marmota Chairman, Dr Colin Rose, said:

> “ Marmota is delighted to tick off another box to progress Aurora Tank from discovery to production by **low-cost low-capex open-pittable mining** including using heap leach methods. Moreover, these geotechnical results themselves are very pleasing as they have significantly improved upon the conservative assumptions for pit wall design assumed to date.
>
> Our substantive flora and fauna environmental studies for Aurora Tank are already completed. Our BLEG testwork in February yielded our highest assays ever, with grades over 200 g/t gold over 1m.
> We are now about to commence final stage metallurgical testing and design for optimal heap leach recoveries at a specialist lab in Sydney. ”

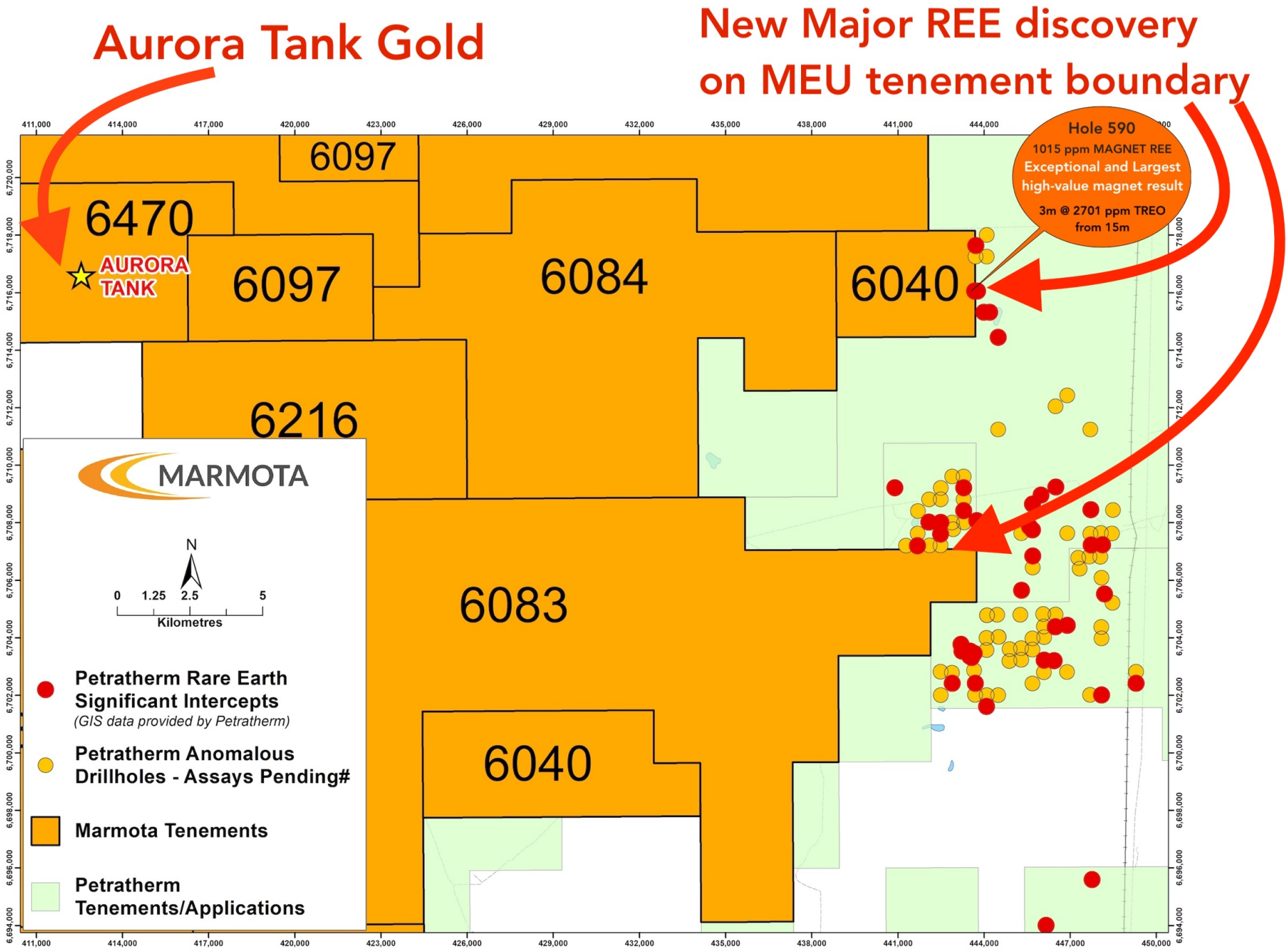


Figure 4: **Detail of Marmota's Aurora Tank tenement, and new major REE discovery along MEU tenement boundary [ASX:MEU 26 April 2022]**

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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

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.