



ASX ANNOUNCEMENT

24 January 2025

# Heavy Minerals Titanium Discovery Drilling has Commenced

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Marmota Limited (ASX:MEU) ('Marmota')

**Drilling has commenced at the new Muckanippie Heavy Minerals Titanium discovery that just yielded bonanza Heavy Mineral assays *in every discovery hole* [ ASX:MEU 14 Jan 2025 ].**

## Heavy Mineral Sands Drill Program

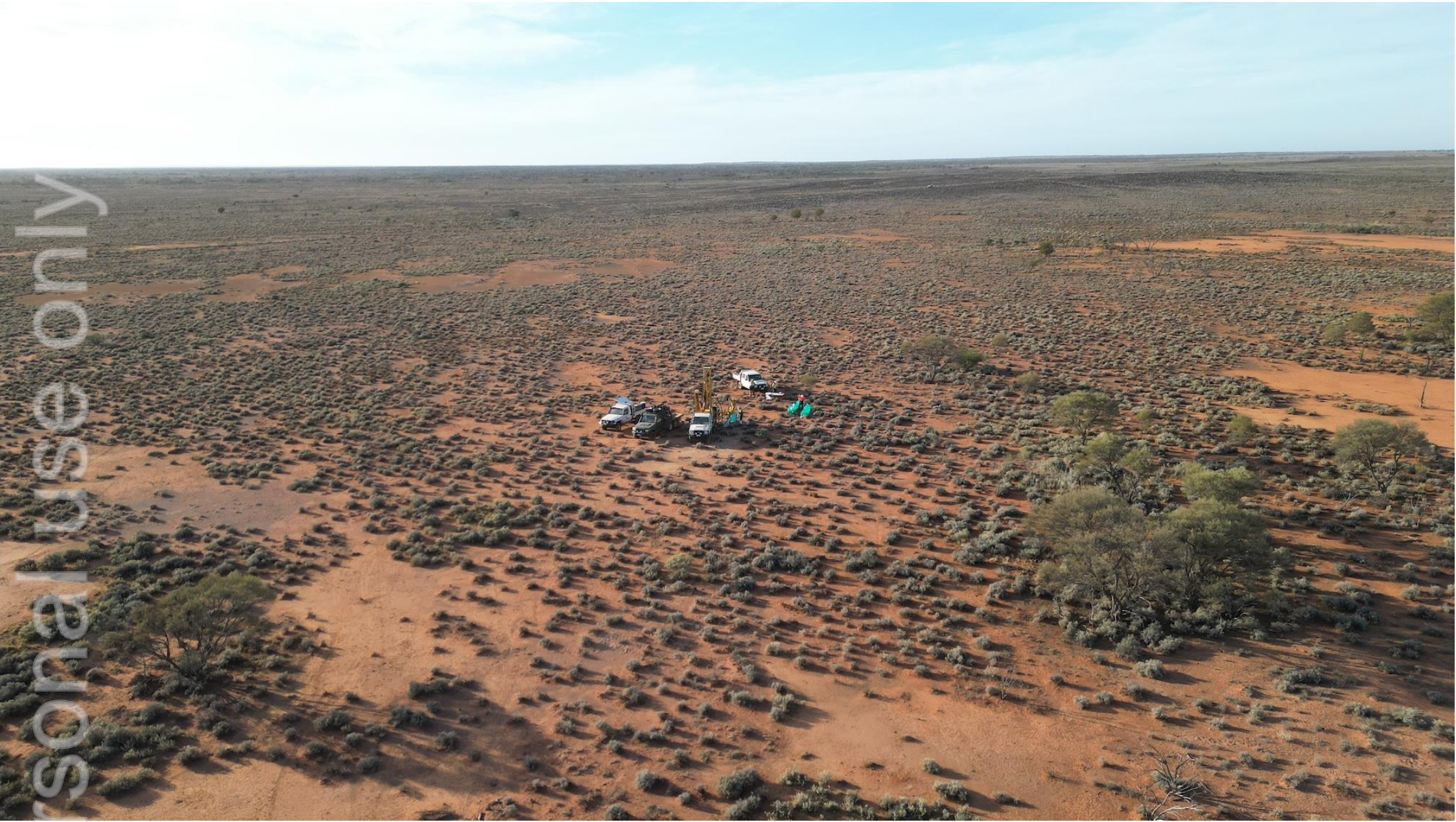
- **AC Drill program:** 89 planned holes (may vary)
- **Hole depths:** ~ 30m (average, or to refusal)

Hole depths are purposefully shallow as the target is the titanium-bearing mineral sands *from surface*.

**Figure 1** provides a plan view of the 4 discovery holes, every one of which yielded bonanza Heavy Mineral assays, and the 89 planned holes along the interpreted titanium-hosting palaeochannel.

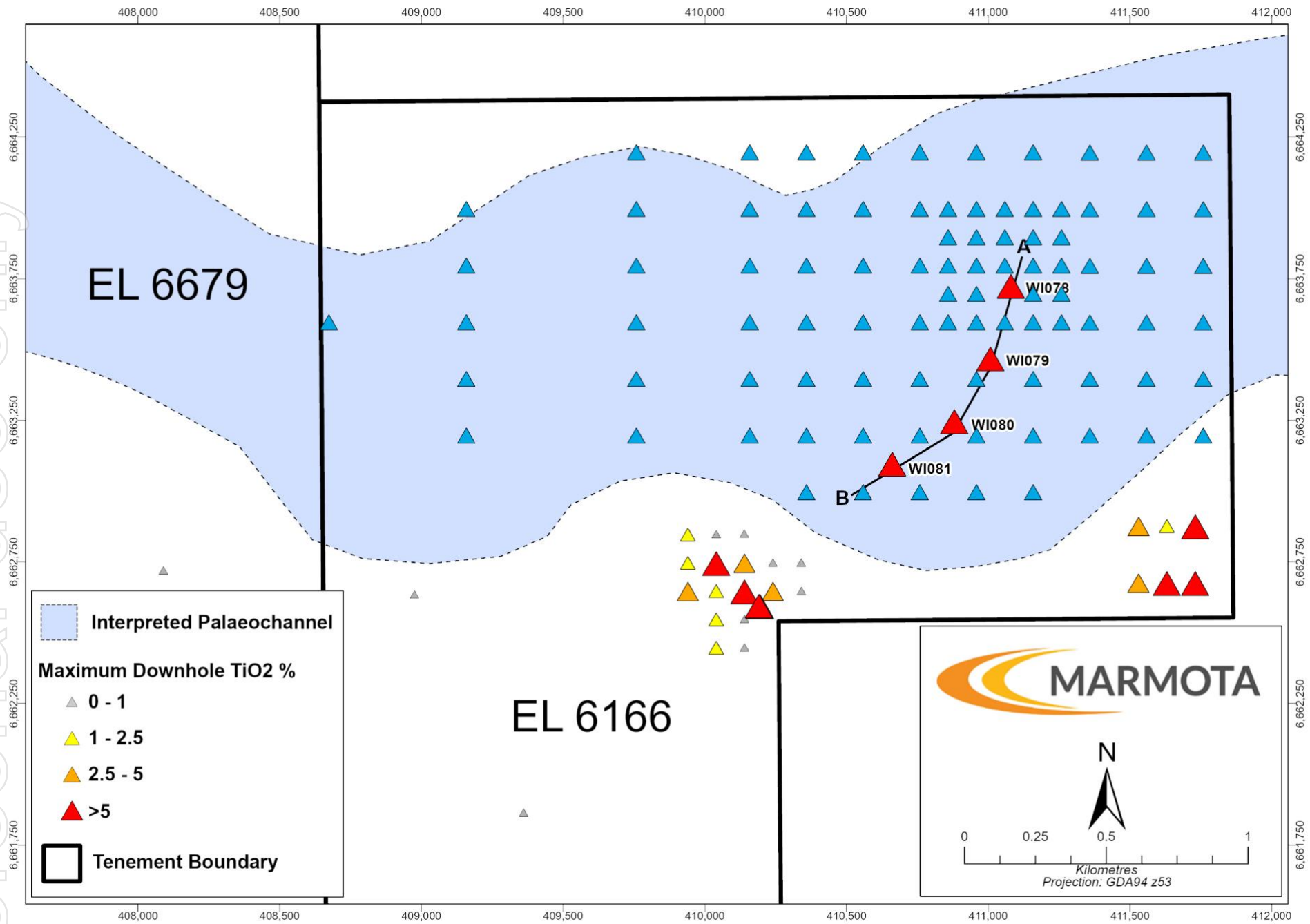
## Timeline

**Drilling commenced yesterday. Drilling is progressing extremely well, with the first 10 holes already completed totalling 359m. Drilling is expected to be completed in around 9 days time.**

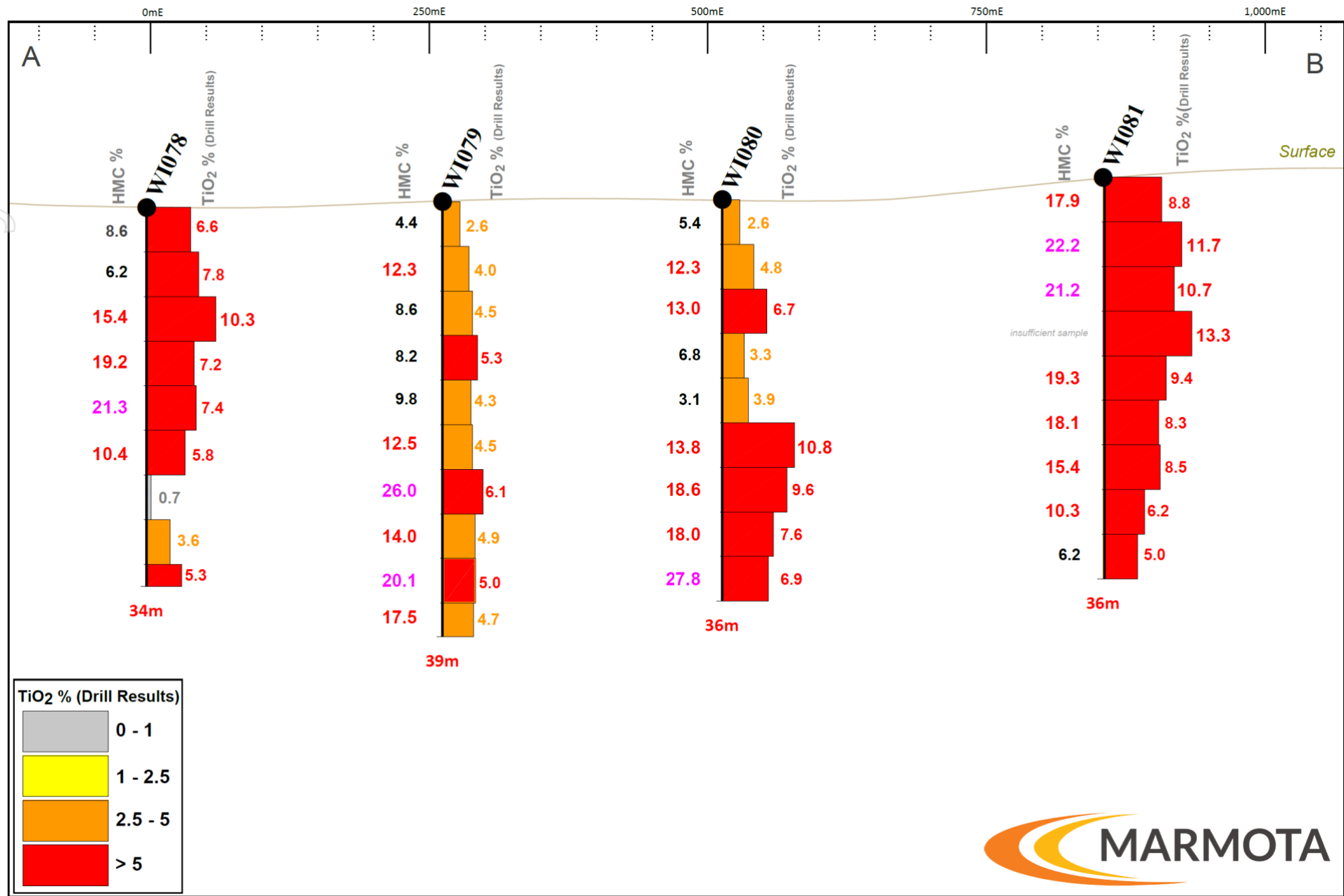


**Photo:** Drilling commencing yesterday at Marmota's Muckanippie Titanium Heavy Mineral Sands Discovery

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**Figure 1:** 89 Planned drill holes  around MEU's Titanium Discovery on EL 6166 with interpreted hosting palaeochannel

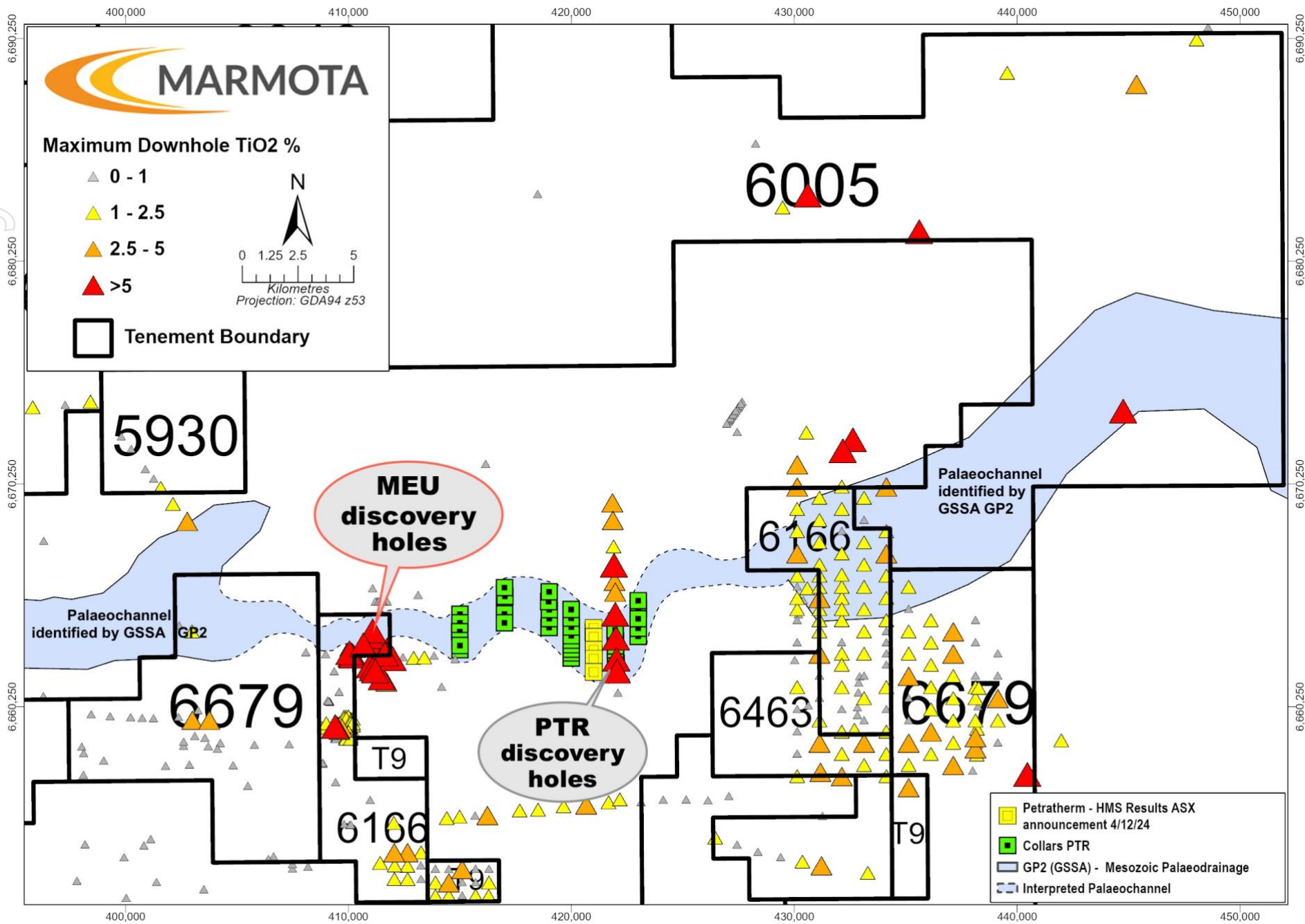


**Figure 2: Cross-section from surface through all 4 Outstanding Titanium Discovery Holes**  
**Hole 78 (NE) to Hole 81 (SW)**

LHS: New Heavy Mineral concentration (HMC %)

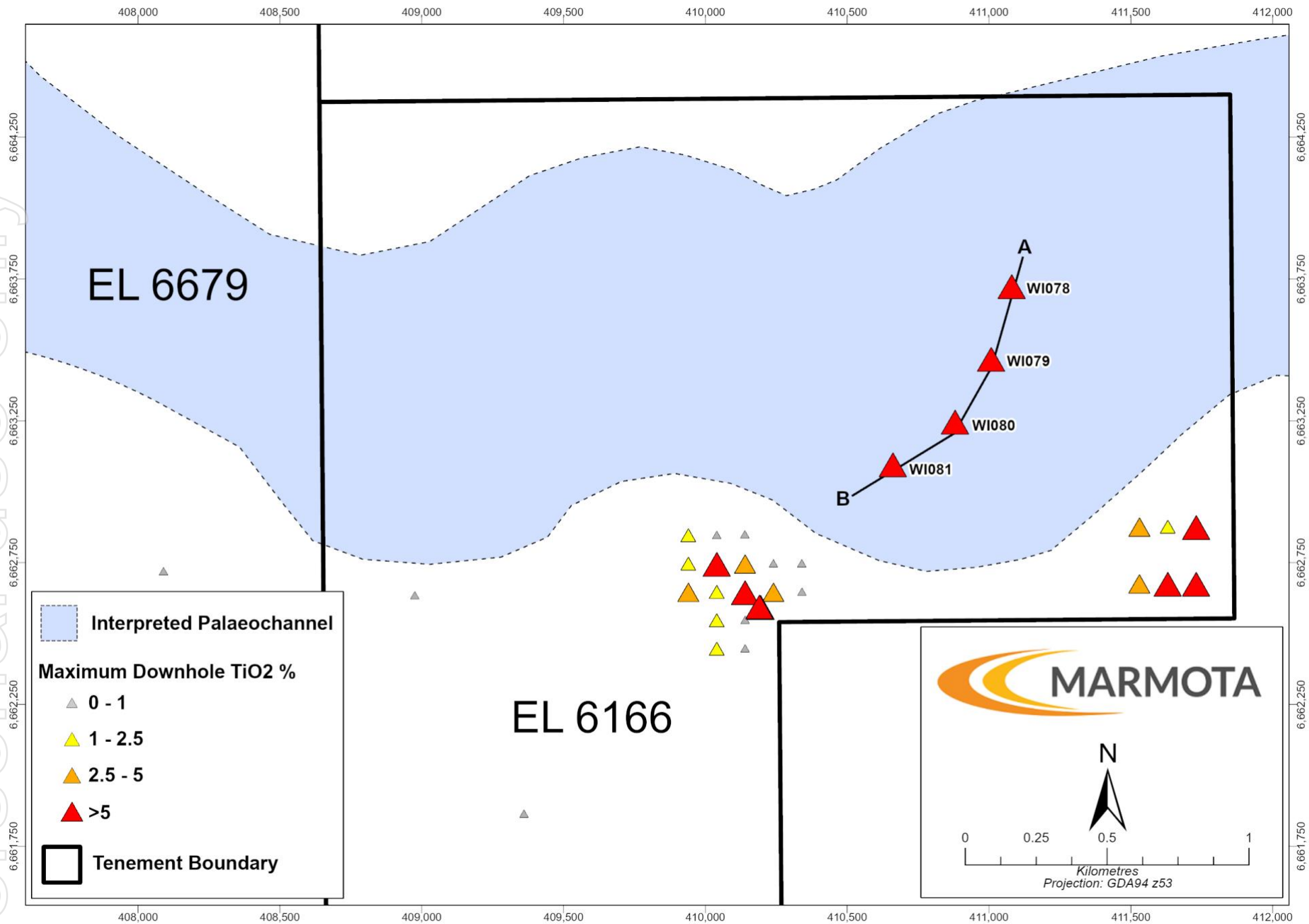
RHS: TiO<sub>2</sub> % of initial Drill assay





**Figure 3:** Palaeochannel interpretation over the regional area of Marmota's Titanium Discovery on EL 6166 (Muckanippie) and Petratherm's Titanium discovery, and adjacent MEU tenements [ ASX:MEU 7 Jan 2025 ]

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**Figure 4: DETAIL VIEW: Marmota's Titanium Discovery on EL 6166 (Muckanippie) with interpreted hosting palaeochannel**



**Figure 5:** First bags from drilling yesterday at Muckanippie Heavy Mineral Sands discovery

# Background

- In November 2024, Marmota discovered **exceptional thick rich titanium** mineralisation at Muckanippie [ ASX:MEU 13 Nov 2024 ] from surface, *in every discovery hole* [ see Fig. 2 ].
- In December 2024, Marmota submitted the first metallurgical testwork to specialist laboratories to determine the heavy mineral properties in the discovery holes.
- On 7 January 2025, Marmota announced that a geological review at Muckanippie identified a **regional scale palaeochannel** [ see Fig. 3 ] interpreted to transect both Marmota's recent discovery of exceptional thick rich titanium mineralisation at Muckanippie (EL 6166) [ ASX:MEU 13 Nov 2024 ] and Petratherm's discovery of thick rich titanium mineralisation also at Muckanippie [ ASX:PTR 11 Sept 2024 ].  
The new interpretation of the Mesozoic palaeochannel has been aided by work published as recently as November 2024 by the Geological Survey of South Australia ('GSSA') GP2 project [ ASX:MEU 7 Jan 2025 ].
- **Marmota holds approximately 28km (in length) of the highly prospective titanium-bearing palaeochannel** on its tenements. Of the 28km, approximately 10km (in length) lies within Marmota's tenements to the west, and approximately 18km (in length) lies within Marmota's tenements to the east.
- The palaeochannel is interpreted to be up to ~ 5km in width over MEU tenements, as defined by the Geological Survey of South Australia GP2 project.

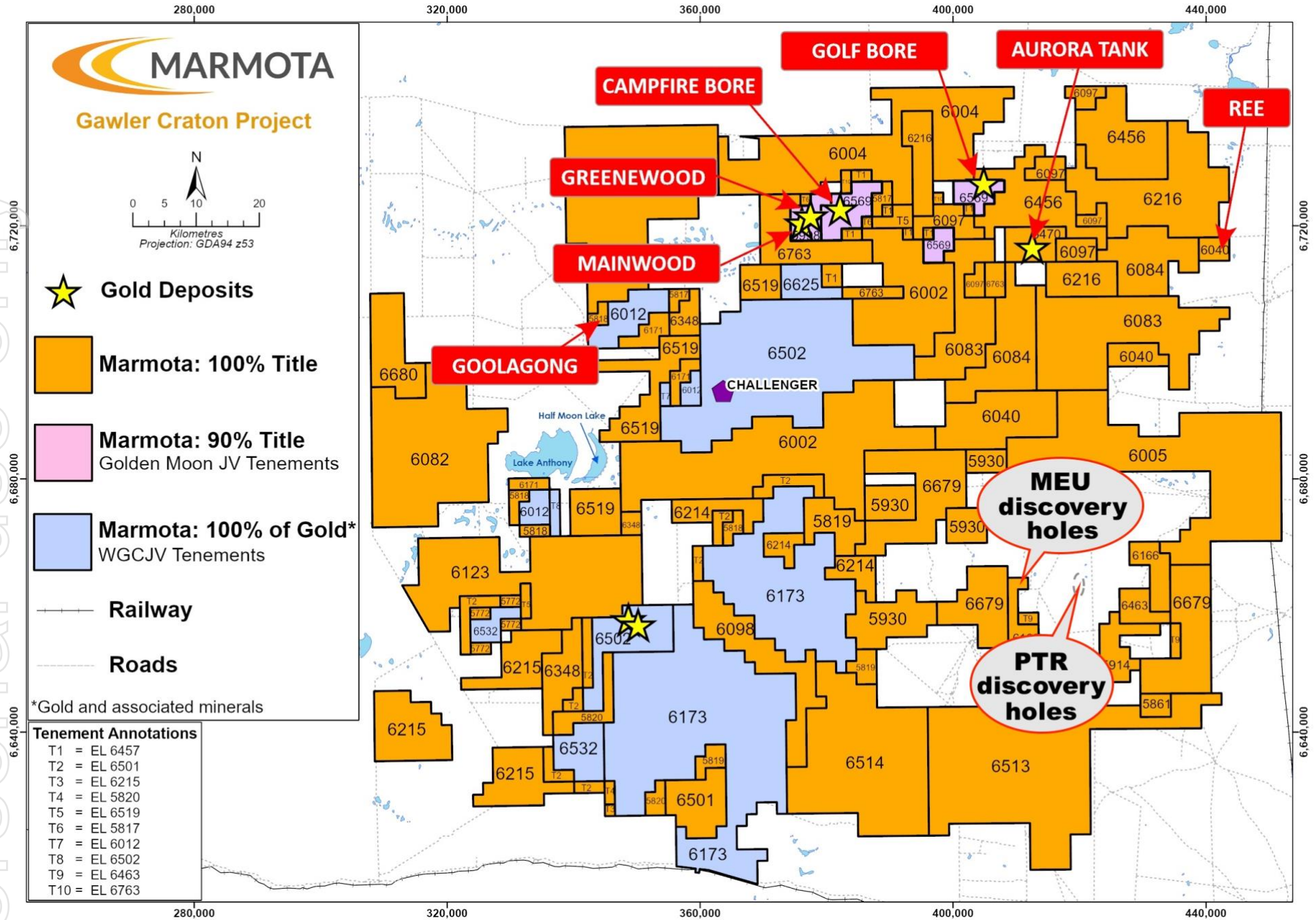
- Last week's assay results [ ASX:MEU 14 Jan 2025 ] yielded **outstanding Heavy Mineral (HM) concentrate percentages, with every discovery hole featuring bonanza HM grades over thick wide intervals from surface:**

Hole WI-081	<b>28m @ 19.2 %</b> HM	from <b>0m</b> (from surface)	including 4m @ <b>22.2 %</b> HM
Hole WI-080	<b>36m @ 13.5 %</b> HM	from <b>0m</b> (from surface)	including 4m @ <b>27.8 %</b> HM
Hole WI-079	<b>39m @ 13.2 %</b> HM	from <b>0m</b> (from surface)	including 4m @ <b>26.0 %</b> HM
Hole WI-078	<b>24m @ 13.5 %</b> HM	from <b>0m</b> (from surface)	including 4m @ <b>21.3 %</b> HM

- Titanium is one of the critical minerals identified by governments worldwide with a range of uses in energy storage, defence, space, semiconductors, surgical implants, pigments and the production of metal alloys.
- The discovery features exceptional **TiO<sub>2</sub> grades over 10%** [ ASX:MEU 13 Nov 2024 ], with every hole featuring remarkable intersections from surface.
- The titanium discovery is **located close to transport infrastructure**, adjacent to both the Adelaide to Darwin rail line, and the Adelaide to Perth rail line [ see Fig. 6 ].

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

**“ Marmota announced just 10 days ago HM assays featuring bonanza grades in every discovery hole. Those assays confirm Marmota’s discovery at Muckanippie as a highly significant new Heavy Mineral sands discovery. Marmota is progressing with full speed a major follow-up drill program to rapidly advance, grow and develop this outstanding titanium Heavy Mineral discovery. ”**



**Figure 6:** Titanium discovery holes on Marmota’s Muckanippie tenement EL 6166 and Petratherm’s Muckanippie tenement

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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](http://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 and Executive Director of Exploration at Marmota. 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.