ASX ANNOUNCEMENT 26 March 2025

High-value Titanium Mineral Assemblage at Muckanippie

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

- First Heavy Mineral (HM) assemblage analysis from Marmota's new Titanium discovery at Muckanippie has identified **outstanding high-value titanium feedstocks**.
- HM Samples tested using X-Ray Diffraction (XRD) scanning reported **as high as 90% Valuable Heavy Mineral Content** (**VHM**) in the heavy mineral concentrates, with samples returning an average of **79% Valuable Heavy Mineral Content**.
- HM Samples tested from the north (Hole 78: 0 to 12m) returned **very high rutile** (18% to 24%) and **pseudorutile content** (41% to 64%), such that the combined ultra-high value rutile/pseudorutile/anatase content ranged between 60% and 90% and averaged 73% ultra-valuable content.
- Extremely low deleterious element concentrations (Uranium, Thorium): below 0.002% in all tested samples.

Marmota Chairman, Dr Colin Rose, said:

" **Marmota's Titanium discovery holes at Muckanippie EL 6166 feature bonanza Heavy Mineral (HM) concentrations and intercept thicknesses. We are delighted to report that the mineral assemblage of these outstanding HM concentrations is predominantly Valuable Heavy Mineral (VHM) titanium content. Marmota has recorded high VHM in all the tested discovery holes, including very high values of rutile/pseudorutile in the north, starting from surface. This adds to an unfolding discovery, particularly when noted that mineralogical samples to the west on Marmota's adjoining tenement reported remarkable 100% VHM titanium content** [see ASX:MEU 24 Feb 2025]. "

Heavy Mineral (HM) Mineralogical Assessment

Composite samples were selected from the North (Hole 78), the South (Hole 81) and intermediate hole (Hole 80), at various depths (including starting from surface), and carried out at different sizing fractions to obtain a spread of results. For each composite sample, the separated HM concentrate was first obtained, and then subjected to XRD (X-Ray Diffraction) analysis to assess the mineralogy of the HMC for each composite 4m sample from the discovery holes. All results are presented as a percent of the HM fraction.

Table 1 provides results for the most northerly hole: Hole 78.
Composite samples tested from 0m (surface) to 12m:

Table 1 Muckanippie North Hole Wi078

Mineral Assemblage of HMC

VHM = Valuable Heavy Mineral Content

Sample ID	HL 110959 (C19294)	HL 110960 (C19295)	HL110877 (C19296)
Hole ID	Wi078	Wi078	Wi078
From - To (m)	0 – 4 m	4 – 8 m	8 – 12 m
HMC % (sizing fraction analysed)	-1/ +0.020mm	-1/ +0.020mm	-1/ +0.045mm
HMC %	8.6 %	6.2 %	11.8 %
VHM %	**74 %**	**90 %**	**70 %**
Rutile % *	**18 %**	**24 %**	**18 %**
Pseudorutile % *	**51 %**	**64 %**	**41 %**
Ilmenite %	3 %	0 %	10 %
Anatase %	1 %	2 %	< 1 %
Zircon %	1 %	-	-
Other %	27 %	10 %	32 %
Total %**	100 %	100 %	100 %

* 'Rutile' and 'Pseudorutile' quantifications carry a larger than usual uncertainty due to peak broadening and poor crystallinity.

** The quantitative results from the XRD have been normalised to 100 %. The values shown represent the relative proportion of the crystalline material in the sample. Totals that may sum to values greater or less than 100 % are due to rounding errors.

All samples in Table 1 returned very high rutile and pseudorutile values.

Titanium dioxide is a naturally occurring oxide predominantly sourced from ilmenite, pseudorutile, leucoxene, rutile and anatase:

- **Rutile**: is the highest-grade naturally occurring form of titanium, typically 90 to 95% titanium dioxide (TiO_2). Rutile is a small contributor to the worldwide production of titanium, with approximately only 5% of global production of titanium concentrate obtained from processing rutile.
- **Leucoxene:** is a high-grade alteration product of ilmenite (predominantly through weathering), and is the second purest form of titanium, with up to 93% TiO_2.
- **Pseudorutile:** is an intermediate phase in the alteration of ilmenite (predominantly through weathering) towards rutile.
- **Ilmenite:** is by far the most important feedstock in the worldwide production of titanium dioxide (TiO_2). More than 80 percent of the estimated global production of titanium concentrate is obtained from the processing of ilmenite.
- **Anatase**: is also a high-value source of titanium dioxide. It is an important photocatalyst *i.e*. it can accelerate chemical reactions when exposed to light, making it valuable in applications like water purification and air cleaning.

Table 2 provides results for the most southerly hole (Hole 81) and intermediate hole (Hole 80). Composite samples were tested by XRD from 4m to 12m in Hole 81, and from 20 to 24m in Hole 80.

Table 2 **Muckanippie** **Southerly holes: Wi080 and Wi081**

Mineral Assemblage of HMC

VHM = Valuable Heavy Mineral Content

Sample ID	HL110879 (C19323)	HL110880 (C19324)	HL110878 (C19318)
Hole ID	Wi081	Wi081	Wi080
From - To (m)	4–8 m	8 –12 m	20 – 24 m
HMC % (sizing fraction analysed)	-1/ +0.045mm	-1/ +0.045mm	-1/ +0.045mm
HMC %	16.4	16.8	16.4
VHM %	**88 %**	**76 %**	**77 %**
Pseudorutile % *	**15 %**	**16 %**	**1 %**
Ilmenite %	**73 %**	**60 %**	**76 %**
Other %	13 %	24 %	24 %
Total %**	100 %	100 %	100 %

Every composite interval tested yielded consistently high valuable heavy mineral content (VHM), ranging between 76% and 88% with extremely high HMC content, for both the samples very close to surface, and those at 20 to 24m. The average VHM for the samples from these southerly holes was 80%.

* *'Rutile' and 'Pseudorutile' quantifications carry a larger than usual uncertainty due to peak broadening and poor crystallinity.*

** *The quantitative results from the XRD have been normalised to 100 %. The values shown represent the relative proportion of the crystalline material in the sample. Totals that may sum to values greater or less than 100 % are due to rounding errors.*

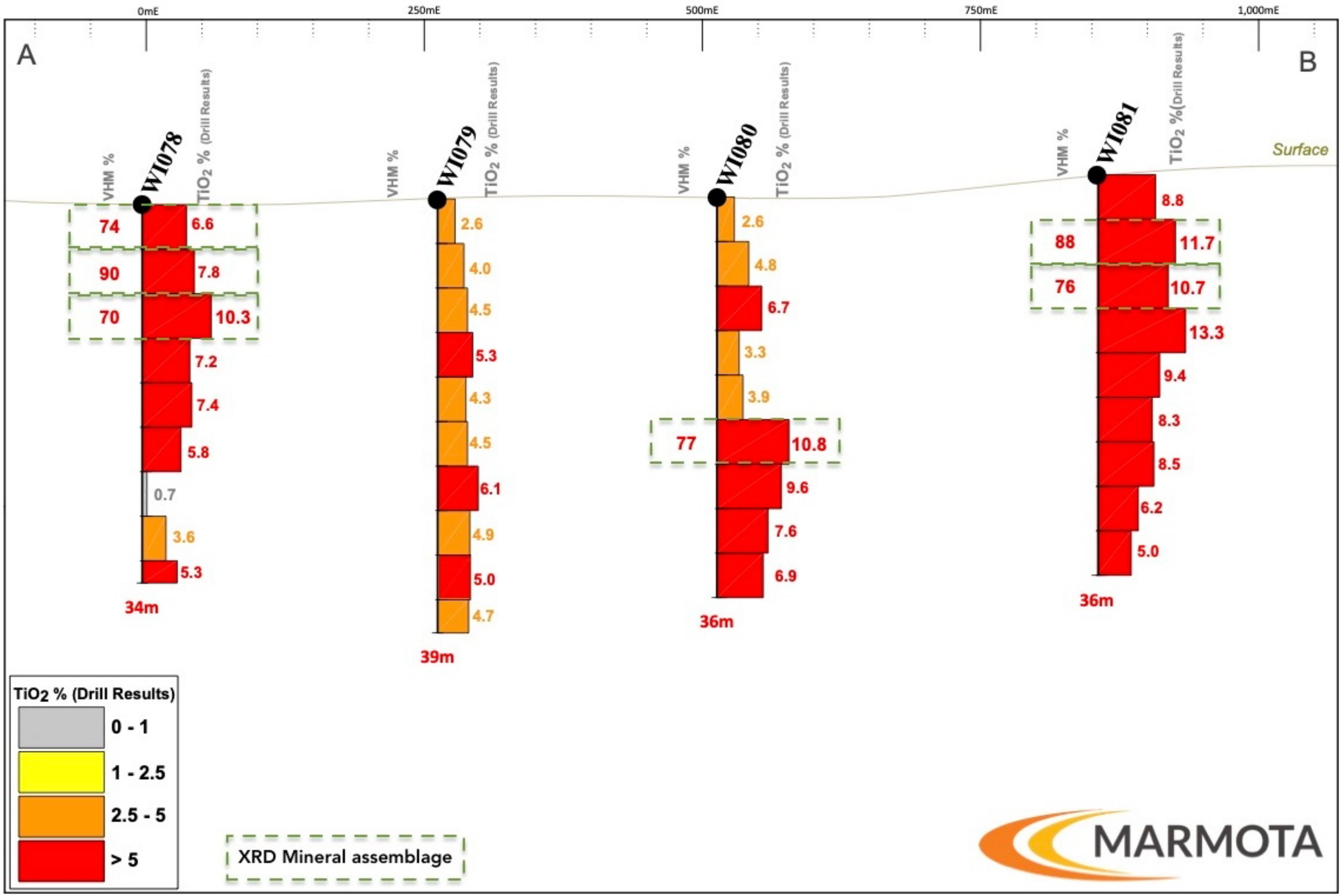

Figure 1: **Cross-section from surface through all 4 Outstanding Titanium Discovery Holes**
Hole 78 (NE) to Hole 81 (SW)
LHS: Valuable Heavy Mineral content (VHM %) **RHS:** TiO_2 % of initial Drill assay

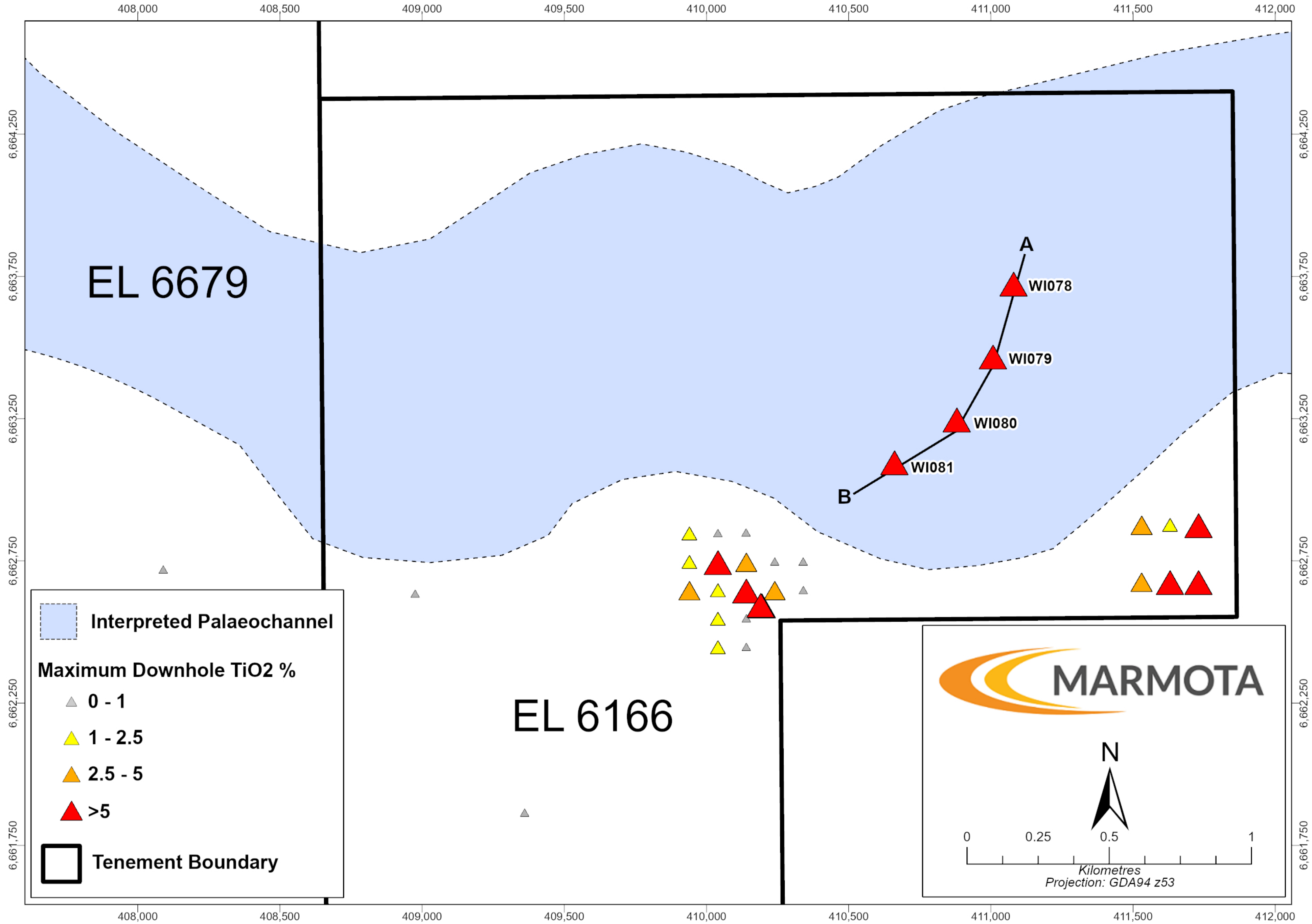

Figure 2: DETAIL VIEW: Marmota's Titanium Discovery on EL 6166 (Muckanippie) with interpreted hosting palaeochannel

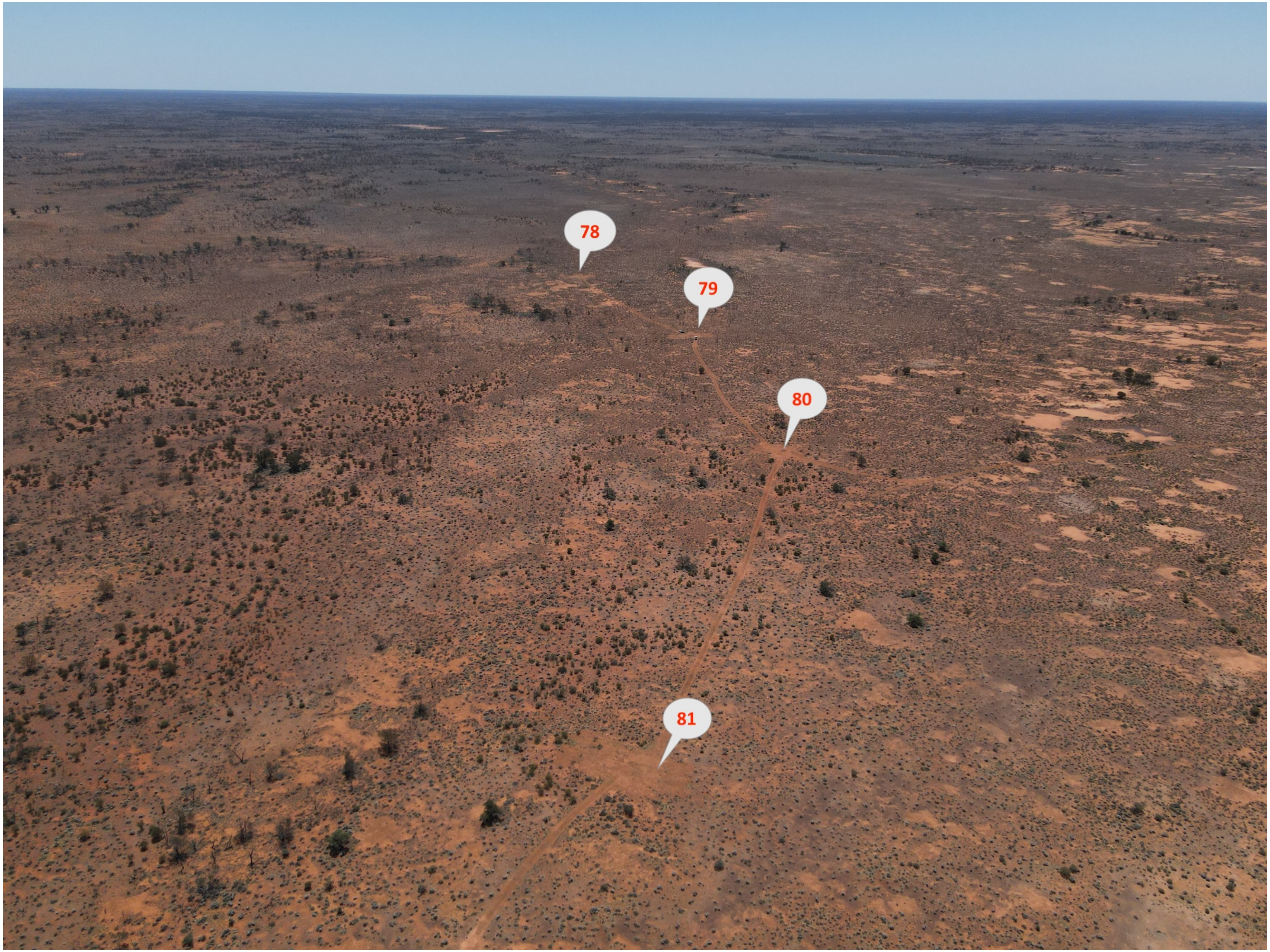

Figure 3: **Titanium discovery holes WI-078 to WI-081 (aerial drone view)**

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. 1 and Fig. 2].

- On 7 January 2025, Marmota announced that a geological review at Muckanippie identified a **regional scale palaeochannel** [see Fig. 2] 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.

- January 2025 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	**28m**	@	**19.2 %** HM	from **0m** (from surface)	including	4m @	**22.2 %** HM
Hole WI-080	**36m**	@	**13.5 %** HM	from **0m** (from surface)	including	4m @	**27.8 %** HM
Hole WI-079	**39m**	@	**13.2 %** HM	from **0m** (from surface)	including	4m @	**26.0 %** HM
Hole WI-078	**24m**	@	**13.5 %** HM	from **0m** (from surface)	including	4m @	**21.3 %** 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_2 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. 4].
- Marmota has recently carried out a follow-up drill program of 91 holes [ASX:MEU 24 Jan 2025, 24 Feb 2025]. Due to lab refurbishments, transport delays and the volume of samples, results are now expected in 4 weeks.
- Australia is one of the leading producers of titanium dioxide and mineral sands in the world. Table 3 below provides a brief listing of the major Australian Mineral Sands projects and their corresponding HM%.

Table 3: Australian Mineral Sand Projects and Heavy Mineral HM %

Company	Project	HM %
Tronox[1]	Western Australia: COOLJARLOO - Dredge Mine	1.6
	Western Australia: DONGARA - Planned Dry Mine	3.9
	New South Wales: ATLAS-CAMPASPE - Dry Mine	3.0
	New South Wales: KARA/CYLINDER	4.1
Iluka Resources Ltd[2]	Eucla Basin : ATACAMA + JACINTH AMBROSIA	4.9
	Murray Basin: EUSTON, WIMMERA & BALRANALD	6.5
	Perth Basin: TUTUNUP, CATABY	5.5
Strandline Resources Ltd[3]	Coburn WA	1.2
Image Resources Ltd[4]	Various Dry Mining Deposits	1.5
	Various Dredge Mining Deposits	2.1
Diatreme Resources Ltd[5]	Cyclone, WA	2.3

Source:

1 Tronox (2023). *2023 Annual Report.*
Available at: https://investor.tronox.com/financials/annual-reports

2 Iluka Resources Limited (2024), *21 Feb 2024 - Annual Report Including Appendix 4E*.
Available at: https://www.iluka.com/investors-media/financial-results

3 Strandline Resources Limited (2024), *1 October 2024 - Annual Report to Shareholders.*
Available at: https://strandline.com.au/announcement-category/annual-report

4 Image Resources (2024), *19 April 2024 – Annual Report to Shareholders.*
Available at: https://imageres.com.au/investors-centre/reports

5 Diatreme Resources Ltd (2024), *22 April 2024 – Annual Report to Shareholders.*
Available at: https://diatreme.com.au/company-reports

HM% is one component of the commercial viability of a mineral sands deposit. Other factors include the mineral assemblage, distribution and sizing fractions of the heavy minerals, metallurgical properties, proximity to infrastructure, size of the resource, depth of resource and method of mining.

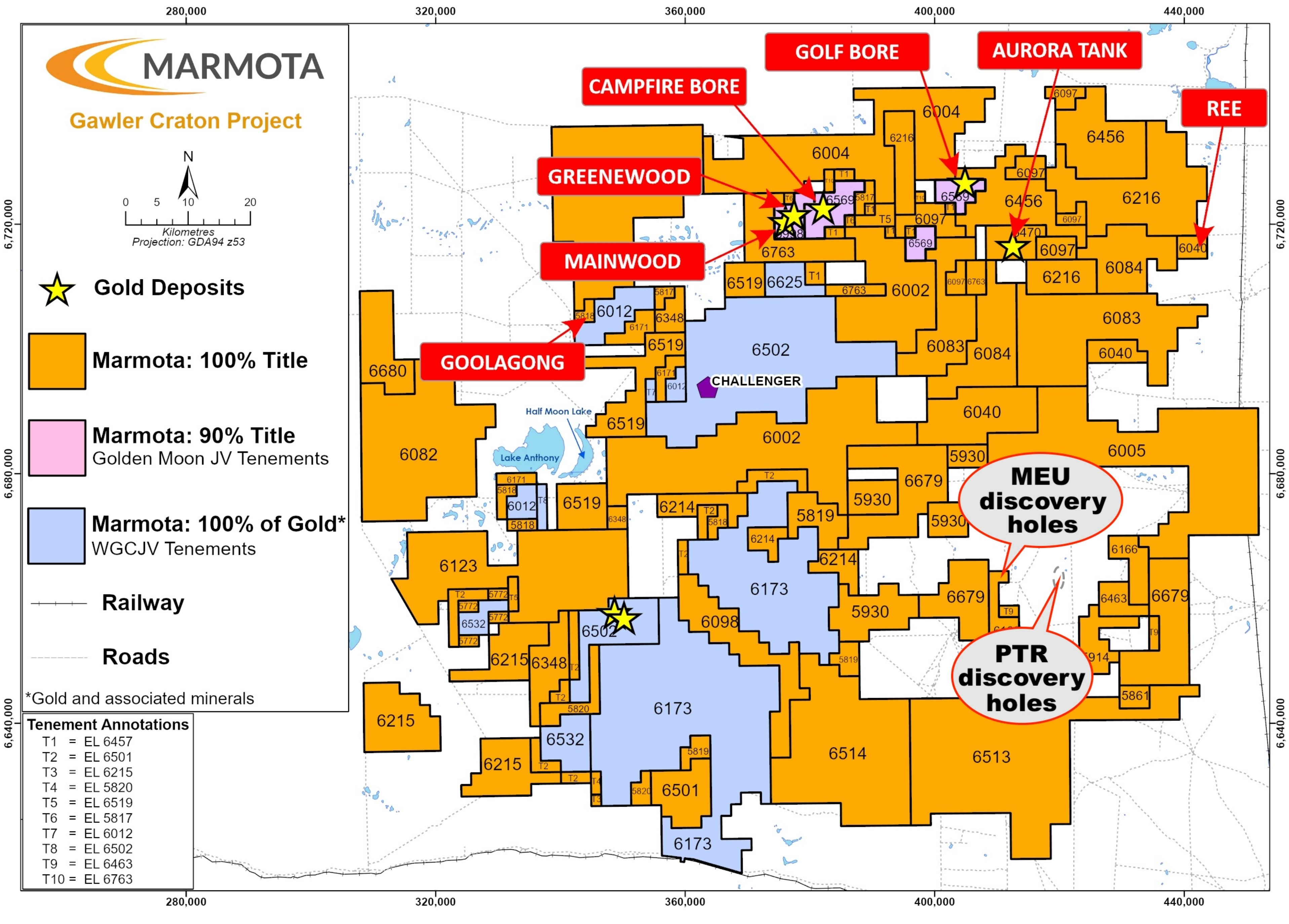

Figure 4: Titanium discovery holes on Marmota's Muckanippie tenement EL 6166 and Petratherm's Muckanippie tenement

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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

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.

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.*	• Muckanippie (RAB): o A total of 106 RAB holes were drilled for 3,995 metres. o Samples were collected at 1m intervals from the drilling cyclone and stored in separate bags at the drill site. o Composite 4m samples were collected using a 50mm PVC tube 'spear' to collect representative samples from bags. Composite samples were an average weight of 3.3 kg which were pulverized to produce sub samples for lab assay. o Titanium was tested by 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. o Only laboratory assay results were used to compile the table of intersections that appears in the report. • Muckanippie Mineral Assemblage of HMC samples: o Following the residue (reserve) samples arriving at the lab samples were split to an average size of 0.470kg for HMC % test work. These samples were then processed using the following steps: o Wet screening at -1mm /+0.045mm or -1mm /+0.020 mm to produce sample for Heavy Mineral Separation. o Standard Heavy Minerals Separation on o -1mm /+0.045mm or -1mm /+0.020mm sand using Tetrabromoethane (TBE) with floats discarded. o XRD of HMC SAMPLES HL 110959 (C19294) and HL 110960 (C19295) were completed on HMC from Heavy Liquid Separation (HLS) using the -1/+0.020mm HMC. o XRD of HMC SAMPLES HL110877 (C19296), HL110878

Criteria	JORC Code explanation	Commentary
		(C19318), HL110879 (C19323) and HL110879 (C19323) were completed on HMC from Heavy Liquid Separation (HLS) using the -1/+0.045mm HMC. ○ 6 Heavy Mineral Concentrate (HMC) samples were selected following Heavy Liquid Separation (HLS) and submitted for X-Ray Diffraction (XRD) ○ Each of the 6 HMC samples were riffle split and approximately 15g was sent for XRD. ○ All samples were prepared for XRD using the following procedure: ▪ HMC samples for XRD were pulverised to P_{100} 75 µm and then 0.7g was sub-sampled and sent for XRD ▪ The samples were pressed into a back-packed sample holder to minimise preferred orientation of the particles. Powder X-ray diffraction (XRD) was used to analyse each sample and Rietveld refinement was used in the quantification of the minerals identified in each sample. • Results of historic drilling (including on adjacent tenements) has been sourced from SARIG (open source data) which has been compiled and maintained by Department of Energy and Mining. For such data, generally limited information or no information is available for sampling collection methods.
	• *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).*	• Drilling method was RAB, with a hole diameter of 146.5 mm. • Historic drilling by other companies has been sourced from SARIG where the drill technique has been sourced.
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.*	• Drill holes and sample depths were recorded in hard copy format during drilling including sample intervals. • Qualitative assessment of sample recovery of drill samples was recorded. • Sample recoveries were generally high, and moisture in samples minimal. • 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. • Historic drilling has been sourced from SARIG: no additional information of recovery is known.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate*	• Representative drill holes were geologically examined by Marmota geologists. • The holes have not been geotechnically logged.

Criteria	JORC Code explanation	Commentary
	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.*	• Geological logging is qualitative. • Historic drilling has been sourced from SARIG including logs where available.
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.*	• Muckanippie Drilling (RAB): ○ Composite samples averaging 3.3 kg were collected for laboratory assay. Samples were collected with a 50mm tube by diagonally spearing individual samples within bags. ○ It is considered representative samples were collected after homogenising of sample through drilling cyclone and unbiased spearing of samples in bags. ○ Laboratory sample preparation includes drying and pulverizing of submitted sample to target of p80 at 75 µm. ○ No samples checked for size after pulverising failed to meet sizing target in the sample batches relevant to the report. ○ Duplicate samples were introduced into the sample stream by the Company. • Muckanippie Mineral Assemblage of HMC samples: ○ Following the residue (reserve) samples arriving at the lab samples were split to an average size of 0.470kg for HMC % test work. These samples were then processed using the following steps: ○ Wet screening at -1mm /+0.045mm or -1mm /+0.020 mm to produce sample for Heavy Mineral Separation. ○ Standard Heavy Minerals Separation on ○ -1mm /+0.045mm or -1mm /+0.020mm sand using Tetrabromoethane (TBE) with floats discarded. ○ XRD of HMC SAMPLES HL 110959 (C19294) and HL 110960 (C19295) were completed on HMC from Heavy Liquid Separation (HLS) using the -1/+0.020mm HMC. ○ XRD of HMC SAMPLES HL110877 (C19296), HL110878 (C19318), HL110879 (C19323) and HL110879 (C19323) were completed on HMC from Heavy Liquid Separation (HLS) using the -1/+0.045mm HMC. ○ 6 Heavy Mineral Concentrate (HMC) samples were selected following Heavy Liquid Separation (HLS) and submitted for X-Ray Diffraction (XRD) ○ Each of the 6 HMC samples were riffle split and

Criteria	JORC Code explanation	Commentary
		approximately 15g was sent for XRD. ○ All samples were prepared for XRD using the following procedure: ▪ HMC samples for XRD were pulverised to P_{100} 75 µm and then 0.7g was sub-sampled and sent for XRD ▪ The samples were pressed into a back-packed sample holder to minimise preferred orientation of the particles. Powder X-ray diffraction (XRD) was used to analyse each sample and Rietveld refinement was used in the quantification of the minerals identified in each sample. • Historic drilling has been sourced from SARIG (open source data), which has been compiled and maintained by Department of Energy and Mining and generally limited information or no information is available for sampling collection methods.
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.*	• Muckanippie Drilling (RAB): ○ Samples from exploratory holes on Muckanippie tenement were analysed for Titanium using Lithium Borate Fusion using Inductively Coupled Plasma Mass Spectrometry. ○ QAQC Drilling assay methods: ○ 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. ○ Both the Company and laboratory QA/QC samples indicate acceptable levels of accuracy and precision have been established. ○ Duplicates were introduced into the sample stream by the Company. The laboratory completed repeat assays on various samples. ○ Standard samples were introduced into the sample stream by the Company, while the laboratory completed standard assays also. ○ Duplicate samples for HMC % was submitted at a ratio of one QA/QC for every 30 samples by company. The duplicates indicate acceptable levels of accuracy and precision have been established. • Muckanippie HMC and Mineral Assemblage of HMC samples:

Criteria	JORC Code explanation	Commentary
		○ The quantitative results from the semi-quantitative XRD have been normalised to 100 %, and the values shown represent the relative proportion of the crystalline material in the sample. Totals greater or less than 100 % are due to rounding errors. ○ No QAQC was submitted for XRD due to small amount of HMC available per sample. ○ The lab's QAQC included using detection limits and confidence intervals inherent in ALS Metallurgy's testing methodology to complete the XRD analysis. ○ Rutile and Pseudorutile quantifications carry a larger than usual uncertainty due to the peak broadening and poor crystallinity during XRD analysis. ○ The XRD traces were collected under the following instrument conditions: (see table below) • Historic drilling has been sourced from SARIG (open source data), which has been compiled and maintained by Department of Energy and Mining and generally limited information or no information is available for sampling collection methods or QAQC protocols.
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. • Where assays were reported in Elemental form and converted to relevant oxide using James Cook University's Element-to-stoichiometric oxide conversion factors: (see table below)

XRD	Panalytical Empyrean
Radiation	Co Kα 1.789 Å
Generator	40 kV 40 mA
Angular Range	5 to 77 °2θ
Time/Step	118 s
Step Size	0.0131 °2θ
X-ray mirror	BBHD Co
Divergence Slit	0.5 °
Anti-Scatter Slit	0.5 mm (observed)
Slit Type	Automatic
Detector	PIXcel1D in linear mode
Rotation Speed	60 rpm

Element	Oxide	Factor
Titanium	TiO_2	1.6681

Criteria	JORC Code explanation	Commentary
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.* • *Quality and adequacy of topographic control.*	• Drillhole coordinate information was collected using a handheld GPS system with an autonomous accuracy of ± 3m utilising GDA 94 Zone 53. • The area is generally of low topographic relief. Topographic control uses SRTM 90 DEM. • Where SARIG (open source data) has been shown this information has been plotted in GDA 94 Zone 53 and there is no known accuracy of this historic data.
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.*	• 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 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. • Samples submitted to the laboratory were transported and delivered by Company staff. • Historic Drilling (open source data): the sample security method is unknown
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.*	• Muckanippie (EL 6166) is 100% owned by Marmota Limited. The EL is located approximately 120 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 tenements are in good standing.

Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Previous exploration drill holes on the tenement included:
		  ○ Regional AC by CRA Exploration Pty Ltd (1983) for Kimberlites.
		  ○ Regional RC by South Australia Department of Mines and Energy (1991) focused on basement lithology.
		  ○ Regional RAB by Normandy Exploration Ltd (1997) focused on Gold, Base Metals.
		  ○ Regional RC drilling by Aztec Mining (1998) focused on Gold, Base Metals.
		  ○ Reconnaissance AC, TMI and EM surveys by Uranium SA Ltd (2007) focused on Uranium.
		  ○ Previous RC drilling at the Widgetty prospect by MEU (2015).
		  ○ Drilling AC by Marmota (2023) for Project X.
		• No previous Titanium exploration has occurred within the tenement.

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. • Marmota targeted near surface mineralisation. • See Geology section in ASX releases.

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.*
		• The required information on drill holes is incorporated into Appendix 2 to the ASX Release.
		• Historic drilling has been sourced from SARIG (open source data), which has been compiled and maintained by Department of Energy and Mining.

Criteria	JORC Code explanation	Commentary
	• *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.*	
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.*	• Muckanippie RAB drilling: ○ Any intersections are calculated by simple averaging of 4m Composite 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. • Muckanippie HMC and Mineral Assemblage of HMC samples: ○ Selected HMC samples were sent for XRD analysis and each analysed interval/sample has been reported. No average or aggregated have been calculated. ○ No metal equivalents are reported.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *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').*	• Drill coverage is considered sufficient to establish approximate true widths, given the current geological understanding of mineralisation 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 • A plan of the collar location of each drill hole has been provided within Figure 2 and Appendix 2 of this ASX announcement.
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.*	• 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 previous ASX releases relating to drilling and results for the Muckanippie (EL 6166) Titanium Discovery: ASX:MEU 24 Feb 2025, 10 Feb 2025, 24 Jan 2025, 16 Jan 2025, 14 Jan 2025, 7 Jan 2025 and 13 Nov 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).*	• Marmota is reviewing results received to date and preparing additional work programs including additional infill and extensional drilling.

Criteria	JORC Code explanation	Commentary
	• *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	

APPENDIX 2 Summary of all Drillhole collars: Initial Mineralogical testwork EL6166

Tenement	Hole ID	Drill Type	Easting (MGA94 z53)	Northing (MGA94 z53)	RL	Dip	Azimuth (Mag)	EOH Depth
Muckanippie	**WI078**	RAB	411,080	6,663,729	186	-90	0	34
Muckanippie	**WI079**	RAB	411,007	6,663,473	185	-90	0	39
Muckanippie	**WI080**	RAB	410,880	6,663,252	186	-90	0	36
Muckanippie	**WI081**	RAB	410,661	6,663,101	188	-90	0	36