ASX ANNOUNCEMENT 24 February 2025

# 100% Leucoxene extends MEU Titanium discovery West

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

**100% leucoxene in all observed Heavy Mineral concentrate samples** has been identified in historical work by Flinders Mines Ltd on Marmota tenement EL6679 immediately west of Marmota's new Titanium Heavy Minerals sands discovery at Muckanippie EL6166 [ see Figure 1 ]. Leucoxene is a high-value high-titanium-content $TiO_2$. It confirms the presence of high-value titanium in the next tenement to the west (all 100% MEU owned), and **extends the potential strike of the MEU titanium heavy mineral sands discovery to 9 km**.

The analysis work was carried out by Diatech Heavy Mineral Services Laboratory ('Diatech') for Flinders Mines in 2009 [ see Key Points section and Appendix 1 for full details ]:

Only 2 sample intervals were tested by Diatech within the tenement:

- In Hole FCGDH-019, the interval from 15m to 19m was tested.
- In Hole FCGDH-020, the interval from 27m to 30m was tested.

**Both holes returned 100 % Leucoxene of the HM content in all observed* samples** [ see Table 1 ]**:**

| | | |
|---|---|---|
| Hole FCGDH-019 | from **15 – 19m** | **100 %** Leucoxene* |
| Hole FCGDH-020 | from **27 – 30m** | **100 %** Leucoxene* |

The distance between the 2 holes (FCGDH-019 and FCGDH-020) is 277 metres.

***Cautionary statement**: Mineral percentages are semi-quantitative visual logging of the Heavy Mineral (HM) concentrates observed under a stereomicroscope undertaken by Diatech Heavy Minerals Sands laboratory for Flinders Mines (previous explorer) in 2009. The observed material was prepared so as to isolate heavy minerals (kimberlitic indicator minerals) and diamonds, in the smallest concentrate possible for ease of visual observation. HM % were not reported. Visual estimates of mineral abundance should never be considered a proxy or substitute for laboratory analyses where concentrations or grades are the factor of principal economic interest. Visual estimates also potentially provide no information regarding impurities or deleterious physical properties relevant to valuations. For further details, see Appendix 1.

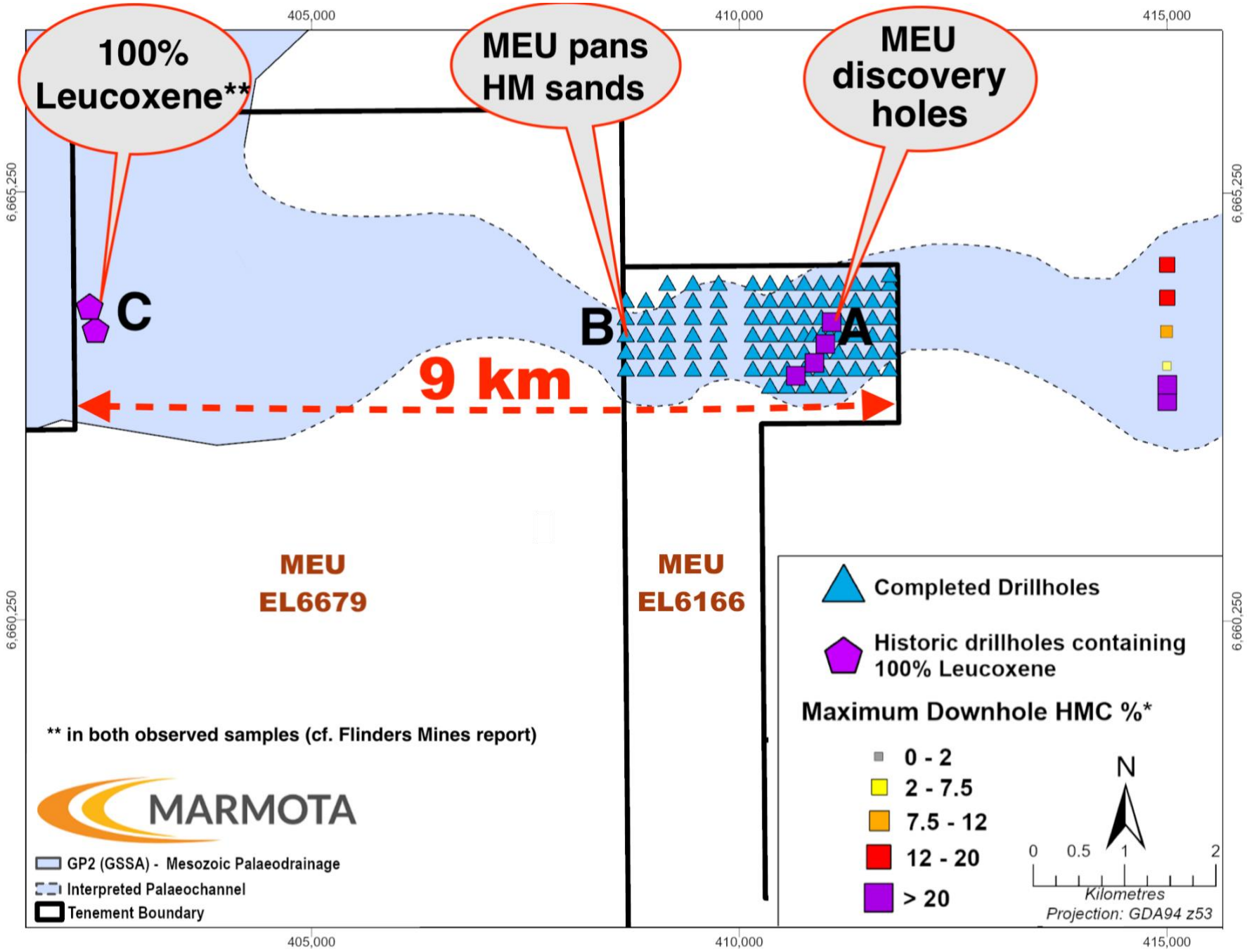


**Figure 1:** **Discovery holes (A), Drilling to west and visual HM sands to west (B), and now 100 % Leucoxene (C)**

## Key Points

1. In 2008–9, Flinders Mines Ltd ('Flinders') (now Red Hawk Mining Ltd ASX:RHK) carried out a program searching for micro-diamonds in kimberlites in the Gawler Craton.
2. Importantly, the Flinders program included 2 drill holes on tenement EL6679 (now 100% MEU owned) to the west of Marmota's new titanium discovery at Muckanippie EL6166. Both of these holes are fortuitously located within the interpreted titanium-bearing palaeochannel. Marmota now owns both of these tenements (*i.e.* EL6166 and EL6679 to the west: see Figure 1).
3. The Flinders Mines work also included examination of Heavy Mineral assemblages on a selected interval on each hole on EL6679 (100% owned by Marmota): from 15m to 19m on Hole 19, and from 27m to 30m on Hole 20.
4. Flinders did not find the micro-diamonds they were looking for, and the results of the testwork were accordingly not published to market at the time. However, the Heavy Mineral assemblage work is detailed in the Annual Technical Reports filed with the Department of Mining[1], along with the laboratory work by Diatech.

**Both of the holes tested by Flinders Mines in 2009 returned a remarkable 100% leucoxene in all observed HM concentrate samples, in both tested intervals.** Leucoxene is a high-value fine-grained high-titanium-content $TiO_2$ .

**Table 1 Flinders Mines Holes on MEU EL6679** **Mineral percentages***

| Hole ID | Sample ID | Easting | Northing | DIP | AZI | EOH | From (m) | To (m) | Interval (m) | Leucoxene %* |
|---|---|---|---|---|---|---|---|---|---|---|
| FCGDH-019 | CG009 | 402476 | 6663650 | -90 | 0 | 55 | 15 | 19 | **4 m** | **100** |
| FCGDH-020 | CG011 | 402407 | 6663919 | -90 | 0 | 42 | 27 | 30 | **3 m** | **100** |

*Mineral percentages of observed HM concentrate. See Cautionary statement on Page 1.
The 100% Leucoxene includes other minerals that in total will be less than 1%, and they are noted as Tr (trace).

1. Only two sample intervals were analysed within the tenement. Both lie in the interpreted palaeochannel.
2. Both sample intervals reported 100% leucoxene in the observed HM content.
3. Leucoxene is a high-value fine-granular high-titanium-content $TiO_2$.

[1] Cole, L., Miller, D., Parker,F. (2009), *Flinders Mines Supplement to: Tasman Resources Ltd ANNUAL TECHNICAL REPORT For the period 20 May 2008 to 19 May 2009,* SARIG ENV011241, Department of Energy and Mining, South Australia
URL: https://sarigbasis.pir.sa.gov.au/WebtopEw/ws/samref/sarig1/image/DDD/ENV11241.pdf

# MEU titanium HM sands discovery extends west again see Figure 1

**A** **Position A** in Figure 1

In January 2025, Marmota announced **outstanding Heavy Mineral (HM) concentrate percentages, with** *every discovery hole* [ see **Position A** in Figure 1 ] **featuring bonanza HM grades over thick wide intervals from surface** [ ASX:MEU 14 Jan 2025 ]. Marmota immediately commenced a 91 hole follow-up drill program [ ASX:MEU 24 Jan 2025 and 10 Feb 2025 ].

**B** **Position B** in Figure 1 [ and Hole 30 in Figure 2 ]

In February 2025, Marmota announced that the team received very positive visual feedback[2] while drilling, from panning samples for heavy mineral concentrate [ ASX:MEU 10 Feb 2025 ], giving rise to the geology team modifying the program, and shifting drill holes to the west.

**C** **Position C** in Figure 1

In the latest development, heavy minerals sands containing **100% leucoxene** (high-value titanium) in all observed samples has been identified in historical work by Flinders Mines Ltd at position C, in both holes tested, and at two different depths: 15-19m in the first hole (hole 19), and 27 to 30m in the second hole (hole 20).[3]

Figure 2 provides a plan view of the 4 discovery holes, every one of which yielded bonanza Heavy Mineral assays, and the 91 drilled holes along the interpreted titanium-hosting palaeochannel.

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[2] Cautionary note: Visual estimates of mineral abundance should never be considered a proxy or substitute for laboratory analyses where concentrations or grades are the factor of principal economic interest. Visual estimates also potentially provide no information regarding impurities or deleterious physical properties relevant to valuations.

[3] All other holes in the program were on different tenements.

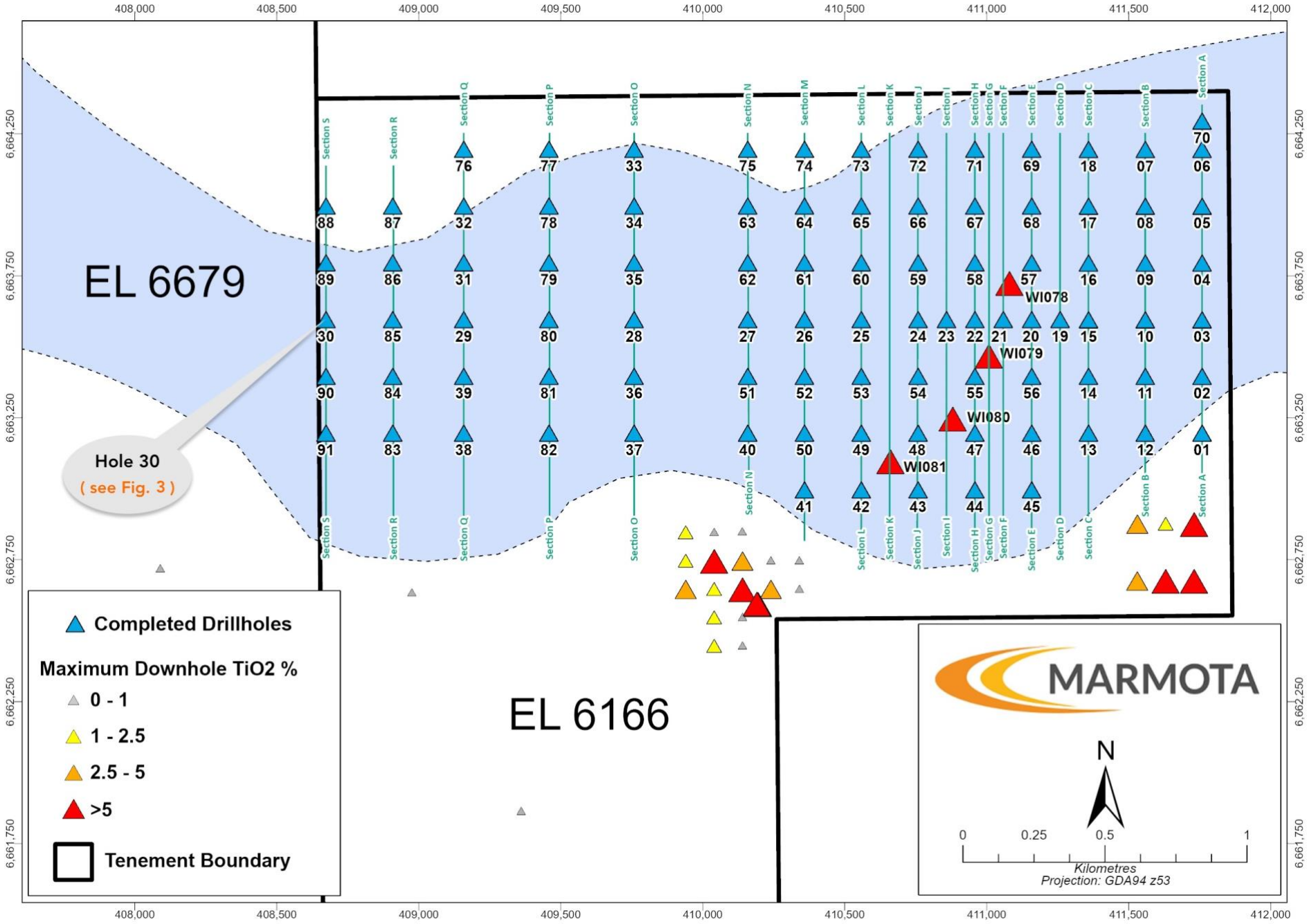


**Figure 2:** **91 new drilled holes ▲ around MEU's Titanium Discovery on EL 6166 with interpreted hosting palaeochannel**

**Figure 3**

**Photograph of Heavy Mineral Sands panned from Hole 25MKAC030 (Hole 30) on the far western tenement boundary while drilling during program** [ASX:MEU 10 Feb 2025 ]

**Depth interval: 7m to 8m from surface. HM % estimate based solely on visual inspection is ~ 20% of sample and is yet to be assayed. This is broadly consistent with the HM % reported in the discovery holes on the eastern side of the tenement** [ASX:MEU 14 Jan 2025 ]**. Heavy Minerals appear black and separate when panned and can be distinguished from host sands and clays.**

**Cautionary statement**

Visual estimates of mineral abundance should never be considered a proxy or substitute for laboratory analyses where concentrations or grades are the factor of principal economic interest. Visual estimates also potentially provide no information regarding impurities or deleterious physical properties relevant to valuations. The purpose of Marmota including this photograph in the release is to explain why its geologists modified the design of the drill program once drilling had commenced. It is not intended in any way as a proxy or substitute for obtaining laboratory assay results. Laboratory assay results are the appropriate methodology for determining the extent and grade of mineralisation. Samples have arrived in Adelaide and have been delivered to the lab. Initial 4m geochemical assays should be available within around 4 weeks of delivery to laboratory.

No identification of the HM species can be made until the laboratory work is completed.

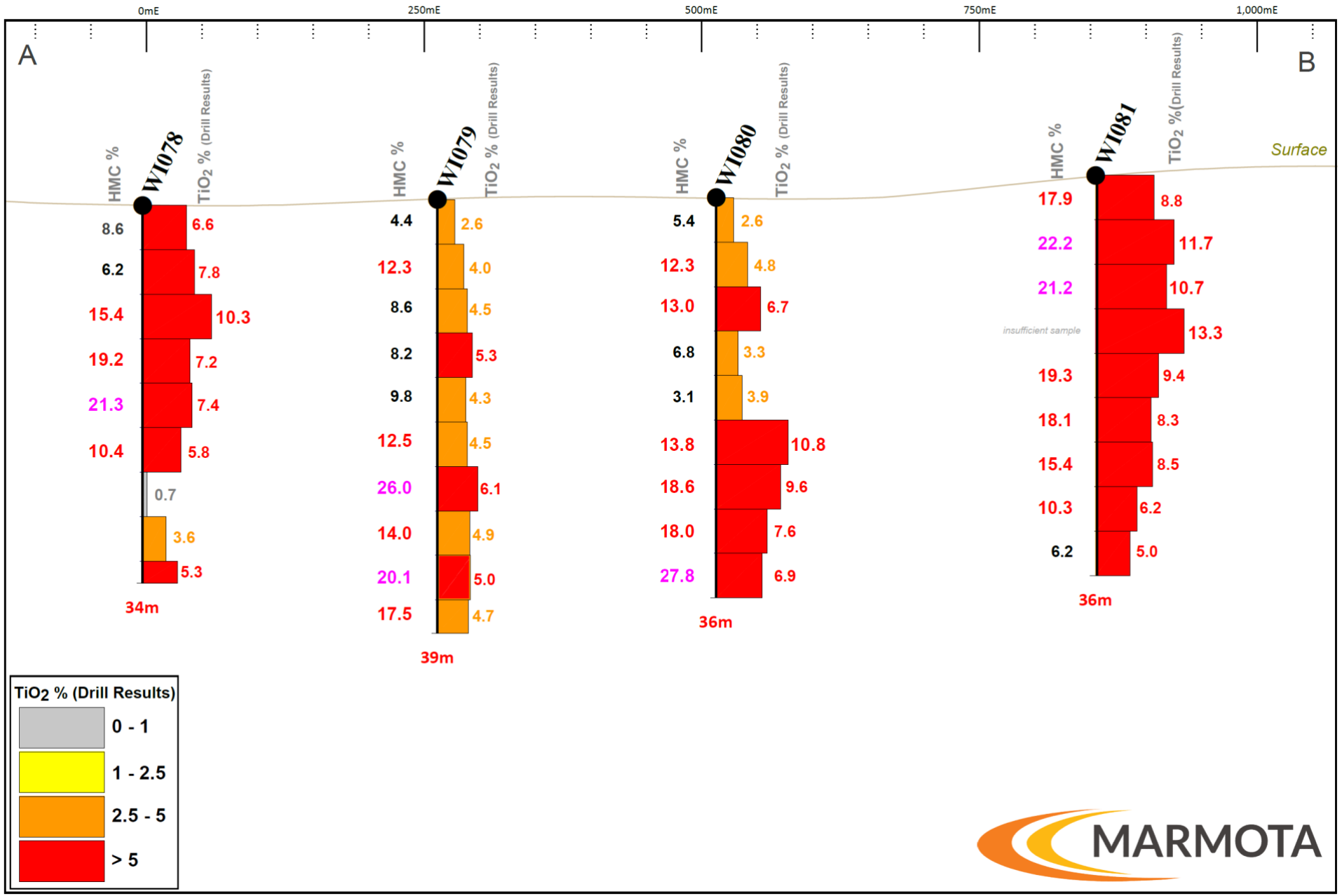


**Figure 4:** **Cross-section from surface through all 4 Outstanding Titanium Discovery Holes**
**Hole 78 (NE) to Hole 81 (SW)** [ ASX:MEU 14 Jan 2025 ]
**LHS:** Heavy Mineral concentration (HMC %) **RHS:** $TiO_2$ % of initial Drill assay

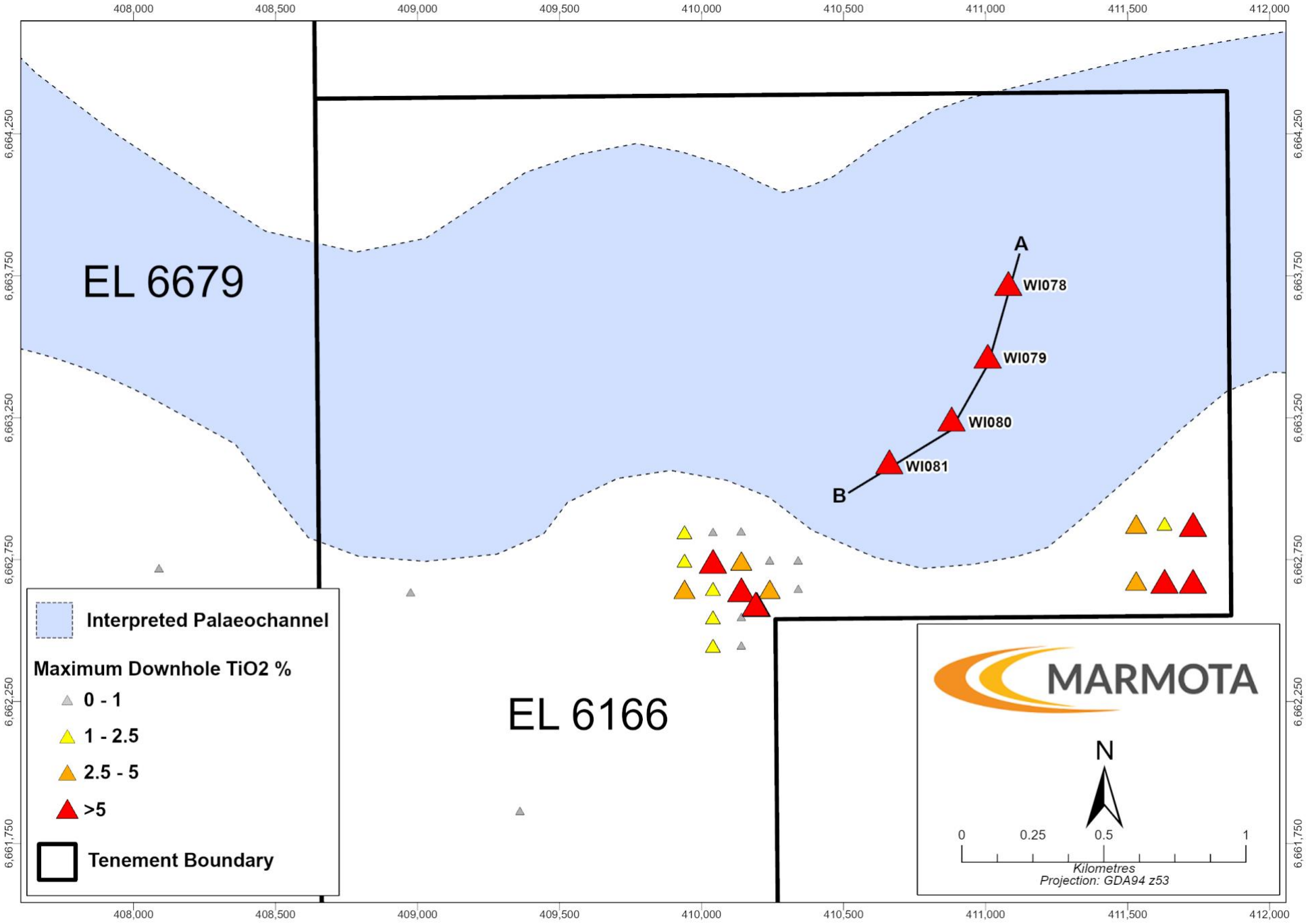


**Figure 5:** **DETAIL VIEW: Marmota's Titanium Discovery on EL 6166 (Muckanippie) with interpreted hosting palaeochannel**

**Figure 6:** **First bags from drilling 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. 4 and Fig. 5 ].
- 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. 5 ] 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.

- 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. 6 ].

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

> “ **Marmota announced in January 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. We are delighted with the new extension to the west: the 2 holes tested by Flinders are 277m apart, were sampled at different depths, and both feature 100% high-value leucoxene in all observed HMC samples. The potential strike of the MEU titanium heavy mineral sands discovery is now 9 km.** ”

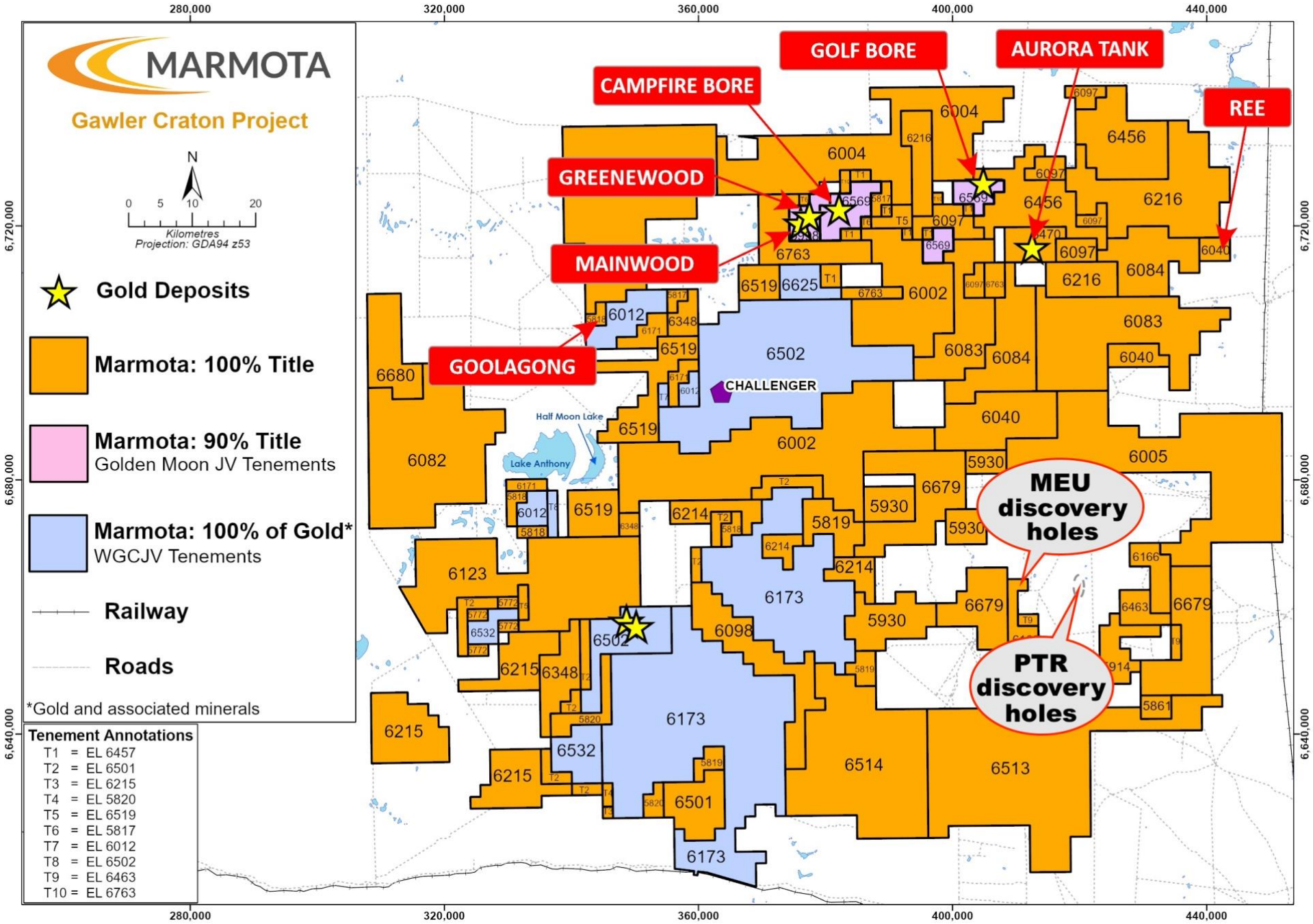




**Figure 6:** **Titanium discovery holes on Marmota's Muckanippie tenement EL 6166 and Petratherm's Muckanippie tenement**

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**About Marmota Limited**

Marmota Limited (ASX:MEU) is a South Australian mining exploration company focused on gold, titanium 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

Marmota extends its thanks to Diatech Heavy Mineral Services for reviewing selected technical details in this release.

**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.*<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.* | • Historic Flinders Mines Ltd (FMS) Aircore drillholes:<br>○ Drillhole information has been sourced from SARIG open source data, and reports all holes (2) on EL 6679 (100% MEU Ground adjacent to EL6166 Titanium Heavy Mineral Discovery) reported in the Flinders Mines exploration program of 2009.<br>○ Flinders Mines (FMS) completed sampling of specific intervals in these drillholes for kimberlitic indicator minerals (KIM). Only 1 interval sample from FCGDH-019 and 1 interval sample from FCGDH-020 was selected by FMS and submitted to DIATECH Heavy Mineral Services.<br>○ There is no open source information how the 2 selected interval samples were collected from the drill rig and any sample preparation prior to the samples being dispatched to DIATECH.<br>○ The sample interval from FCGDH-019 was 15m-19m (sample ID CG-009) with a 17.86kg Head Weight, as per the open source data.<br>○ The sample intervals from FCGDH-020 was 27m-30m (sample ID CG-011) with a 13.52kg Head Weight, as per the open source data.<br>○ The reports and open source data are as follows:<br>▪ Sample CG009 (FCGDH-019: 15-19m) was received by DIATECH as "Drill Chip" and the Observed sample type for the detailed Heavy Mineral Analysis was TBE (tetrabromoethane SG 2.96) concentrate. Final Concentration weight of 83.42g for the size range of -1.2+0.3mm, with the HMC observation weight of 83.42g.<br>▪ Sample CG011 (FCGDH-020: 27-30m) was received by DIATECH as "Drill Chip" and the Observed sample type for the detailed Heavy |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | Mineral Analysis was TBE (tetrabromoethane SG 2.96) concentrate. Final Concentration weight of 234.62g for the size range of -1.2+0.3mm, with the HMC observation weight of 82.48g. |
| ***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).* | • Historic Flinders Mines Ltd (FMS) drilling method has been reported in the open source data as Aircore (ACR); no hole diameter has been provided. |
| ***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.* | • Historic Flinders Mines Ltd (FMS) data 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 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.* | • Historic Flinders Mines Ltd (FMS) data has been sourced from SARIG including geology logs. |
| ***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.* | • 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.<br>• Historic Flinders Mines Ltd (FMS) Aircore drillholes:<br>  ○ Drillhole information has been sourced from SARIG open source data.<br>  ○ Only 2 holes were drilled in EL 6679 from the Flinders Mines exploration program (now 100% MEU Ground adjacent to EL 6166 Titanium Heavy Mineral Discovery). Both are reported here.<br>  ○ 2 Aircore (AC) drillholes were completed on EL 6679 (formally EL 3345) by Flinders Mines between 20th May 2008 and 19th of May 2009. The two Flinders Mines AC drillholes related to EL 6679 are FCGDH-019 and FCGDH-020, with hole depths of 55m and 42m respectively. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | ○ Flinders Mines (FMS) completed sampling of specific intervals in these drillholes for kimberlitic indicator minerals (KIM). One sample interval from each drill hole was selected by FMS and submitted to DIATECH Heavy Mineral Services.<br>○ FMS received "Detailed Heavy Mineral Analysis" reports for these two samples (CG-009 and CG-011) from DIATECH. The reports and open source data are as follows:<br>▪ Sample CG009 (FCGDH-019 was 15-19m) was received by DIATECH as "Drill Chip" and the Observed sample type for the detailed Heavy Mineral Analysis was TBE (tetrabromoethane SG 2.96) concentrate. Final Concentration weight of 83.42g for the size range of -1.2+0.3mm, with the HMC observation weight of 83.42g.<br>▪ Sample CG011 (FCGDH-020 was 27-30m) was received by DIATECH as "Drill Chip" and the Observed sample type for the detailed Heavy Mineral Analysis was TBE (tetrabromoethane SG 2.96) concentrate. Final Concentration weight of 234.62g for the size range of -1.2+0.3mm, with the HMC observation weight of 82.48g. |
| ***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.* | • 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.<br>• Historic Flinders Mines Ltd (FMS) Aircore drillholes: No open source QAQC information is available for the detailed Heavy Mineral Analysis completed by FMS. |
| ***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.* | • An alternative company representative has checked the historic reports from DIATECH Heavy Mineral Services of the quoted intersections.<br>• No twinned holes were reported to be drilled in the program. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | • *Discuss any adjustment to 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.*<br>• *Quality and adequacy of topographic control.* | • Historic Flinders Mines Ltd (FMS) Aircore drillholes: coordinates have been plotted in GDA 94 Zone 53 and open source data of the drillhole locations documents the "Surveying instrument" as GPS Averaged Position using GDA94 and projected in UTM MGA Zone 53. |
| ***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.* | • Historic Flinders Mines Ltd (FMS) Aircore 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.* | • Historic Flinders Mines Ltd (FMS) Aircore drill holes have all been drilled vertically. This is appropriate for near surface, palaeovalley hosted sediments which are generally form horizonal beds. Therefore, a sampling bias should not have occurred. |
| ***Sample security*** | • *The measures taken to ensure sample security.* | • Historic Drilling (open source data): the sample security method is unknown<br>• Historic Flinders Mines Ltd (FMS) Aircore drill holes: No open source information is available for the sample security of the two FMS drill holes. |
| ***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.* | • Muckanippie (EL 6166) is 100% owned by Marmota Limited. The EL is located approximately 120 km southwest of Coober Pedy in South Australia.<br>• Mulgathing (EL 6679) is 100% owned by Marmota Limited. The EL is located approximately 120km southwest of Coober Pedy in South Australia and the western portion of EL 6679 is adjacent to MEU's (EL 6166) Muckanippie Titanium Heavy Minerals Discovery.<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 drill holes on EL 6166 (Muckanippie) tenement included:<br>  ○ Regional AC by CRA Exploration Pty Ltd (1983) for Kimberlites.<br>  ○ Regional RC by South Australia Department of Mines and Energy (1991) focused on basement lithology.<br>  ○ Regional RAB by Normandy Exploration Ltd (1997) focused on Gold, Base Metals.<br>  ○ Regional RC drilling by Aztec Mining (1998) focused on Gold, Base Metals.<br>  ○ Reconnaissance AC, TMI and EM surveys by Uranium SA Ltd (2007) focused on Uranium.<br>  ○ Previous RC drilling at the Widgetty prospect by MEU (2015).<br>  ○ Drilling AC by Marmota (2023) for Project X.<br>• Previous exploration drill holes on Western portion of EL 6679 tenement included:<br>  ○ Regional AC by Afmeco Pty Ltd (1980-1983) designed to test basement rocks following interpretation of aeromagnetic surveys of the area.<br>  ○ Regional exploration soil sample program and geological mapping by CRA Exploration Pty Ltd (1988-1989) for Gold and base metals.<br>  ○ Regional RC by South Australia Department of Mines and Energy (1991) focused on basement lithology.<br>  ○ Regional RAB by Normandy Exploration Ltd (1997) focused on Gold, Base Metals.<br>  ○ Aircore drilling by Tasman Resources NL in 2006 Drilling to test Nickel and possible ultramafics associated with a number of magnetic highs. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | ○ Aircore program by Flinders Mines (via JV with Tasman Resources in 2008-2009) for kimberlites and included a detailed Heavy Mineral Analysis report by DIATECH.<br>• 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.<br>• The drillholes reported in this announcement intercepted paleochannel sediments consisting of medium to coarse, sub angular, poorly sorted sands, with a matrix of varying kaolin content, interpreted to be Middle to Late Jurassic Algebuckina Sandstone.<br>• 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:*<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.<br>• Historic drilling has been sourced from SARIG (open source data) which has been compiled and maintained by Department of Energy and Mining.<br>• Historic Flinders Mines Ltd (FMS) Aircore drill hole information has been sourced from SARIG (open source data) and only holes which relate to this reporting of 100% Leucoxene in sample intervals from FCGDH-019 was 15-19m (sample ID CG-009) and FCGDH-020 was 27-30m (sample ID CG-011) are included in Appendix 2 of the ASX Release. No other holes have been reported from the FMS drill program, as the program was a regional program targeting geophysical magnetic anomalies and kimberlite targets on other tenements and not relevant to Titanium Heavy Mineral Sands within the western portion of EL 6679. |
| ***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.*<br>• *The assumptions used for any reporting of metal equivalent values should be clearly stated.* | • Historic Flinders Mines Ltd (FMS) Aircore drill holes: only 1 interval from each drill hole has had detailed Heavy Mineral Analysis and there is no aggregate lengths represented in this report. No metal equivalents are reported. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| ***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').* | • 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.<br>• Historic Flinders Mines Ltd (FMS) Aircore drill holes were completed as vertical drillholes. There is only 1 interval per drillhole which has had detailed Heavy Mineral Analysis and true width of the Leucoxene Mineralisation cannot be reported due to selective sample undertaken by FMS for a separate target commodity (kimberlites). No relationship can be made between width and FMS detailed Heavy Mineral Analysis. |
| ***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<br>• Historic Flinders Mines Ltd (FMS) Aircore drill holes: No Sections have been provided for the Historic Flinders Mines Ltd (FMS) Aircore drill holes, as only 1 sample interval down the length of each drill hole has had detailed Heavy Mineral Analysis test work and there isn't sufficient data for a section interpretation.<br>• Plan of the collar location of each drill hole has been provided within Figure 7 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.<br>• Historic Flinders Mines Ltd (FMS) Aircore drill holes: Limited data detailed Heavy Mineral Analysis was completed by FMS and only open source data is available for reporting of these exploration results. |
| ***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.* | • Historic Flinders Mines Ltd (FMS) Aircore drill holes: All data has been reviewed from open source data (SARIG).<br>• Geological Logs have been reviewed by Marmota. Logging by FMS for the samples submitted for detailed Heavy Mineral Analysis has been logged as "basal sands samples above highly weathered bedrock" by FMS for both FCGDH-019 interval (15-19m) and FCGDH-020 interval (27-30m).<br>• A geophysical survey (high resolution helimagnetic) over small regional areas was completed by FMS targeting prospective Kimberlite geology.<br>• FMS also completed loam sampling with samples sent for detailed Heavy Mineral Analysis at DIATECH; no loam samples were collected by FMS in the western portion of EL 6679.<br>• As reported by FMS (open source data) "Drilling was targeting Jurassic kimberlite, extruding through crystalline basement, and beneath the Jurassic Algebuckina Sandstone. No kimberlite was intersected." Microprobing of particular samples was completed by FMS, however no microprobing was completed on the samples from the western portion of EL 6679.<br>• No geochemistry is available for FCGDH-019 from the open source data. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | • No other historic drillholes (identified from open source data) over the western portion of EL 6679 have had Detailed Heavy Mineral Analysis, other than the samples reported in this ASX Release and the figures only show drill where Detailed Heavy Mineral Analysis has been undertaken in EL 6679.<br>• See previous ASX releases relating to drilling and results for the Muckanippie (EL 6166) Titanium Discovery: ASX:MEU 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).*<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 reviewing results received to date and preparing additional work programs including additional and extensional drilling. |

## APPENDIX 2

**Summary of Historic Flinders Mines Aircore Drillhole collars over the western portion of EL 6679 which had samples submitted for detailed Heavy Mineral Analysis at DIATECH Heavy Mineral Services**

| Tenement | Hole ID | Drill Type | Easting (MGA94 z53) | Northing (MGA94 z53) | RL | Dip | Azimuth (Mag) | EOH Depth |
|---|---|---|---|---|---|---|---|---|
| **Mulgathing** | FCGDH-019 | AC | 402476 | 6663650 | 190 | -90 | 0 | 55 |
| **Mulgathing** | FCGDH-020 | AC | 402407 | 6663919 | 190 | -90 | 0 | 42 |

**Collar information has been sourced from SARIG (open source data) managed by the Department of Energy and Mining.**

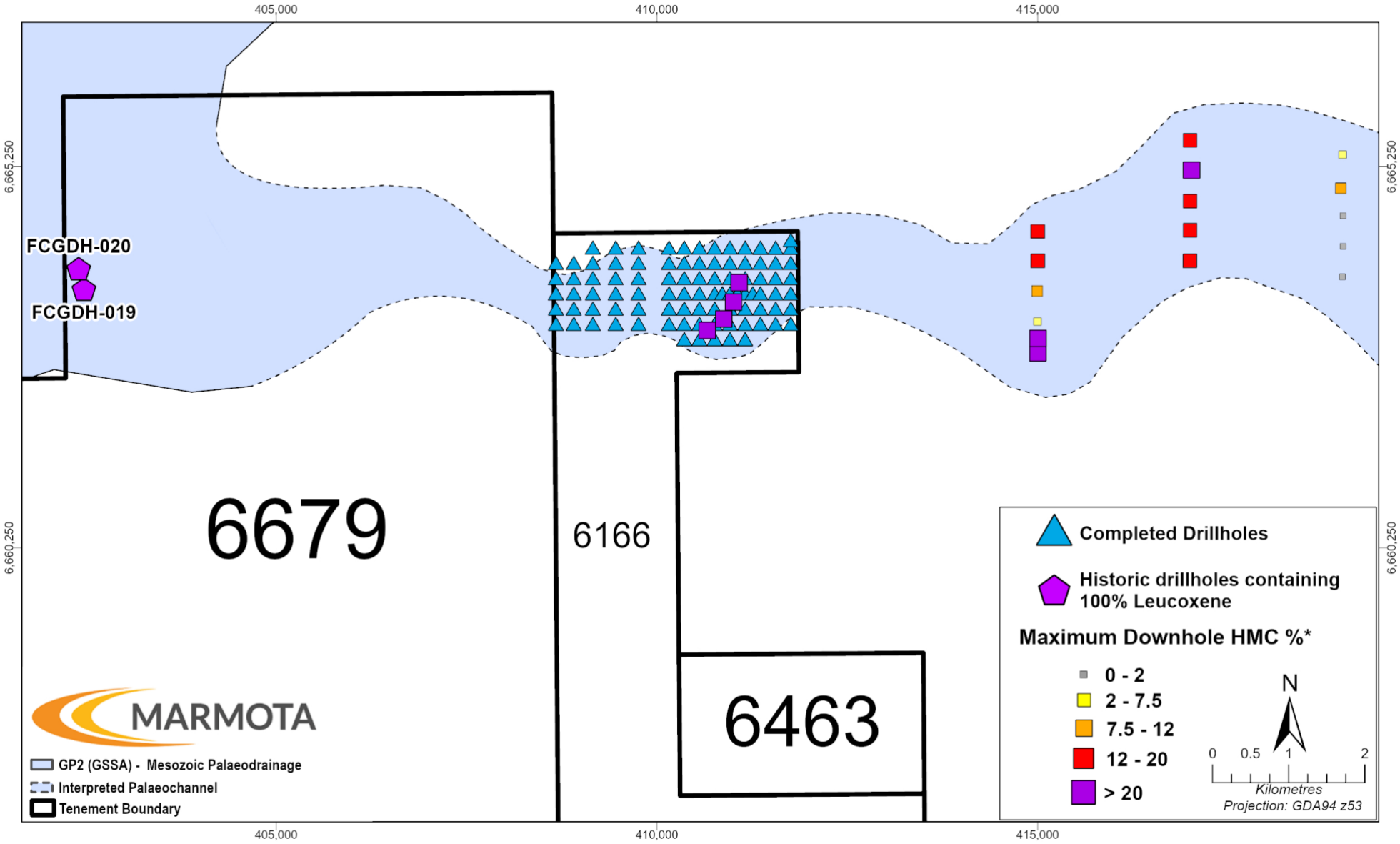


**Figure 7:** **Flinders Diamond Historic Aircore drillholes** Mulgathing (EL 6679: part)

**+ Marmota's January 2025 AC drill holes** Muckanippie (EL 6166)