

## Uranium Drill Program designed: Saffron area

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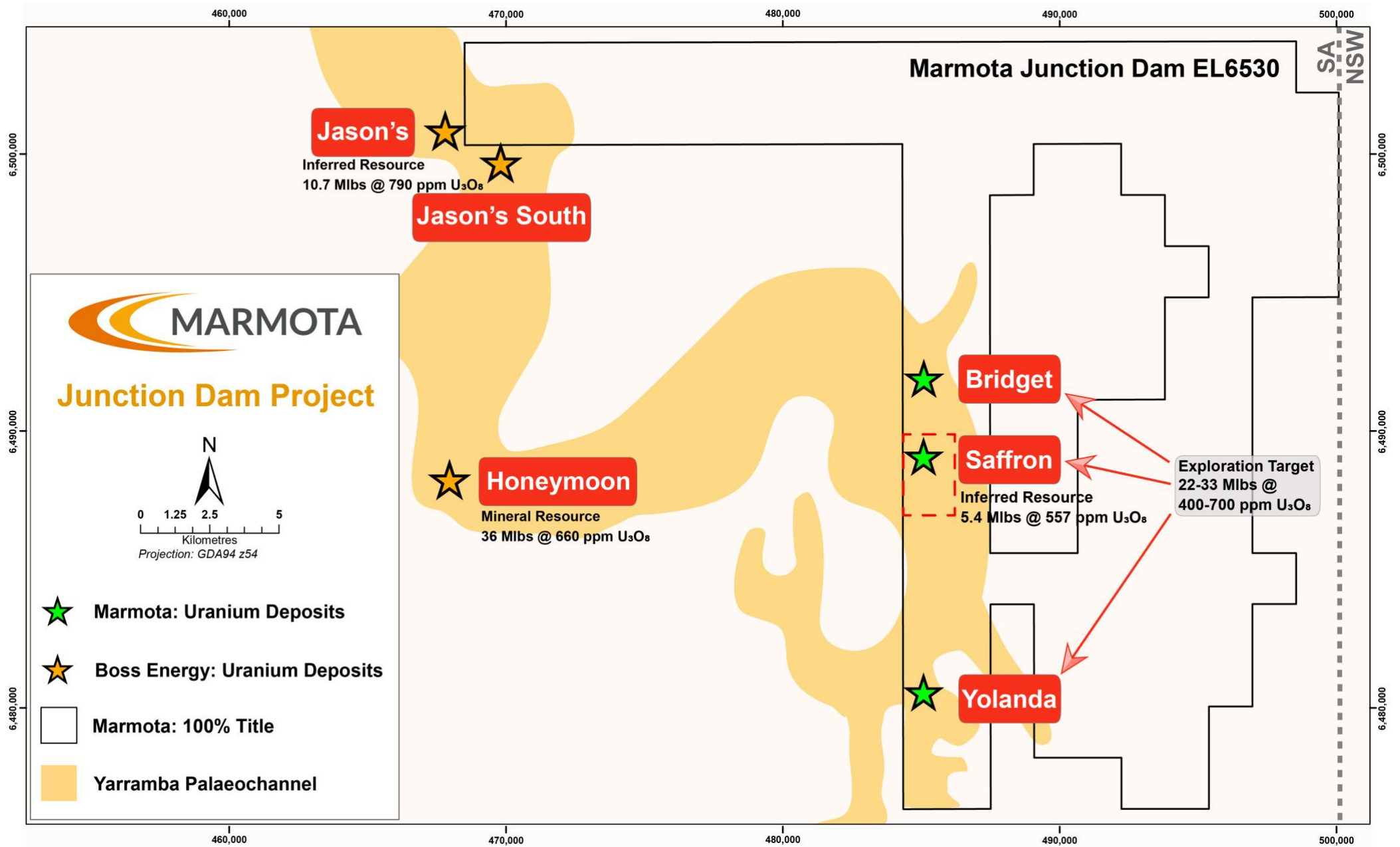
Marmota Limited (ASX: MEU) ("Marmota")

Marmota is pleased to announce the drill program design for the Saffron Uranium Resource area at its 100% owned Junction Dam Uranium Project immediately adjacent to Boss Energy's Honeymoon Uranium Mine.

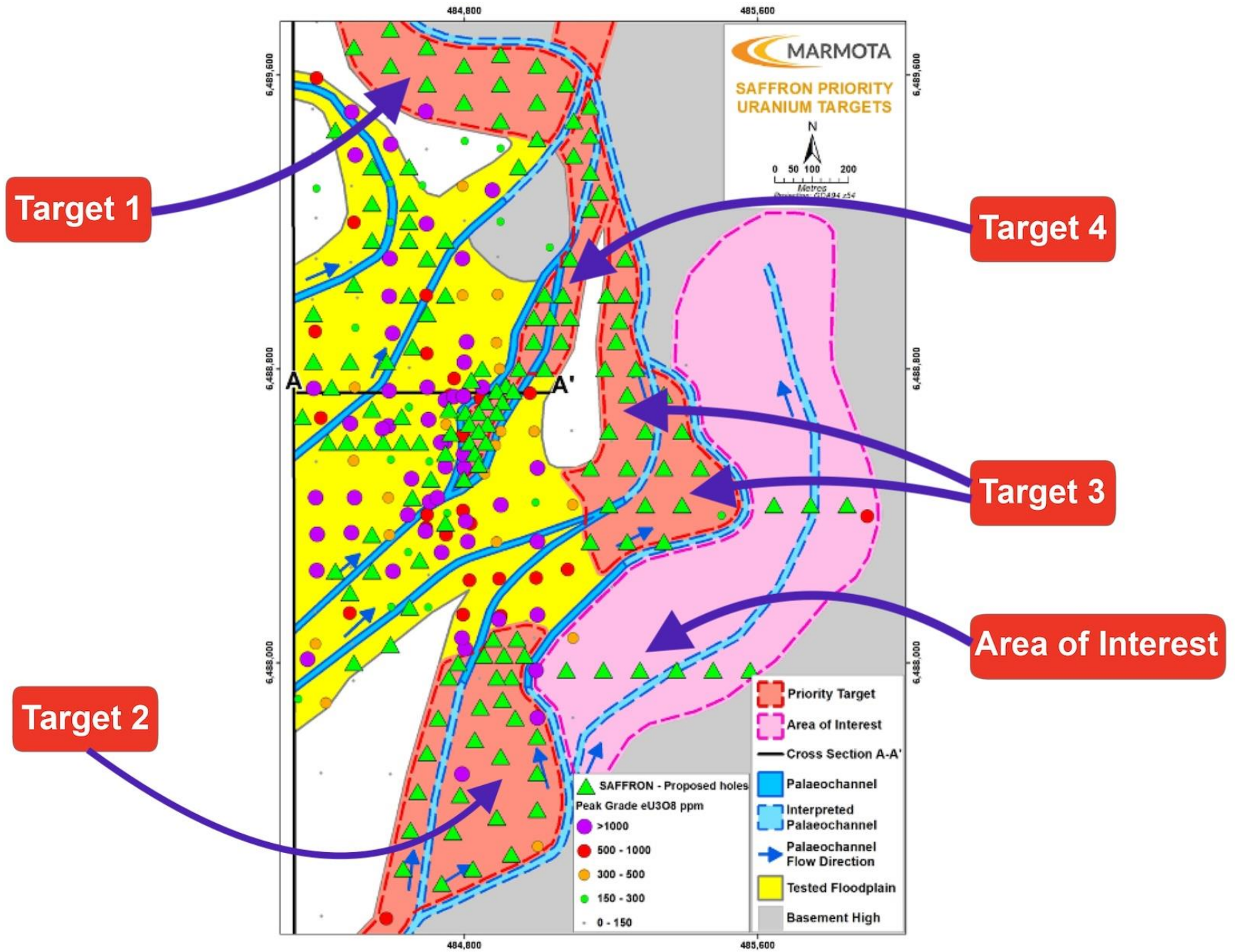
The program has been designed with the intention **to substantially increase the existing uranium resource in the Saffron area**, including drill testing **new high priority targets for additional uranium mineralisation**. The drill program has been designed by uranium expert Mark Couzens to test the targets generated from the stratigraphic and mineralisation review recently completed [ see ASX:MEU [6 Nov 2023](#), [20 Nov 2023](#) ].

### Key Points

- **164 Drill holes have been planned over the Saffron area** [ see [Fig. 2](#) and [Table 1](#) ]
- First drill program for the re-start of Junction Dam Uranium Project.
- **Holes have been designed to** test priority targets to the North, East and South of Marmota's Saffron Uranium Resource where the geology is favourable for the deposition of uranium mineralisation based on the new stratigraphic modelling, and interpretation of EM and gravity images.



**Fig. 1:** Location of Saffron Resource area on MEU's Junction Dam uranium tenement (100% MEU). Junction Dam bookends both sides of the palaeochannel of the Boss Energy Ltd (ASX:BOE market cap > \$2 billion) Honeymoon uranium plant



**Fig. 2:** Proposed drill holes ▲ near the Saffron Resource Area including 4 new exploration targets

# PROPOSED DRILL PROGRAM DETAILS

- **164 drill holes designed for the Saffron Resource area**, to test targets generated by the new stratigraphic and mineralisation model and expand the current resource.
- Proposed drill holes shown in **Figure 2** are for planning purposes and are not necessarily a commitment to drill all planned holes; rather to allow flexibility when drilling to test the stratigraphic and mineralisation model designed by Mark Couzens and adapt as the program is carried out.
- Holes will be tested using a Rotary Mud drill rig with downhole geophysical probes suitable for Uranium exploration.
- Each completed drill hole will be geophysically logged for Gamma radiation and resistivity down the length of the drill hole to determine:
  - 1) lithology and correlating stratigraphy
  - 2) identification of mineralised intervals to allow for the calculation of eU<sub>3</sub>O<sub>8</sub> grades

## Summary of Planned Holes at or near Saffron

Table 1

Target Area	Number of Holes
SAFFRON - Target 1	18
SAFFRON - Target 2	29
SAFFRON - Target 3	6
SAFFRON - Target 4	81
SAFFRON - Area of Interest (A)	9
SAFFRON - Area of Interest (B)	7
SAFFRON – Resource Infill	14
<b>SAFFRON TOTAL</b>	<b>164</b>

## **Saffron: Target 1**

- 18 Drill holes designed to test Target 1.
- This target is at the junction of 5 of the 6 uranium-bearing palaeochannels appearing to merge alongside Willyama Basement as identified on the EM image [ see ASX:MEU 20 Nov 2023 ]. The EM image shows a large bend in the basement that will force the palaeochannels to bend accordingly. The bend in these merged palaeochannels will most likely create a large well-developed floodplain to the SW of the palaeochannels which would be an ideal location for high grade uranium to precipitate. The width of the floodplain appears to be at least 200m wide due to the drillhole shown with a purple peak uranium grade on the southern edge of the target.

## **Saffron: Target 2**

- 29 Drill holes designed to test Target 2.
- This target is on the southern side of the current Saffron deposit. Drilling to date has shown that there are two south-to-north trending palaeochannels located here with a well-developed floodplain up to 70 metres wide. Drillholes in this section have shown high grade uranium present on 3 of the 4 flood plains adjacent to the palaeochannels with the remaining floodplain currently untested.
- Both of these palaeochannels continue further to the south and future work will determine whether they join up with the Yolanda Prospect to the south.

## **Saffron: Target 3**

- 6 Drill holes designed to test Target 3.
- This target is located on the eastern edge of the Saffron resource area where three uranium-bearing palaeochannels have been interpreted to run along the Willyama Basement as interpreted on the EM image [see ASX:MEU 20 Nov 2023]. Very little drilling has been completed in this target area to-date, but the stratigraphic interpretation and EM model suggest that there will likely be bends in the palaeochannels where well-developed floodplains should have formed on the inside of these bends with potentially high-grade uranium mineralisation.

## Saffron: Target 4

- 81 Drill holes designed to test Target 4.
- This target is located within the current Saffron resource area, adjacent to a palaeochannel that splits into two separate palaeochannels and creating an interpreted ox-bow lake.
- The interpreted ox-bow lake provides an ideal location for the concentration of Uranium mineralisation.
- There are two historical holes that were drilled within the interpreted ox-bow lake which both intersected high uranium grades.
- This target is approximately 600 metres long by 150 metres wide with the potential to host high grade uranium mineralisation and is largely untested.

## Area of Interest

- 9 Drill holes designed to test the Area of Interest, and a further 7 outside the [Figure 2](#) map area.
- The 'Area of Interest' has been interpreted from the EM image [ see [ASX:MEU 20 Nov 2023](#) ]. This large region has very few drillholes and is interpreted as a topographic low based on the EM image. The recently developed stratigraphic model suggests the likelihood for this area to contain palaeochannels and uranium mineralisation associated with floodplains adjacent to the palaeochannels.

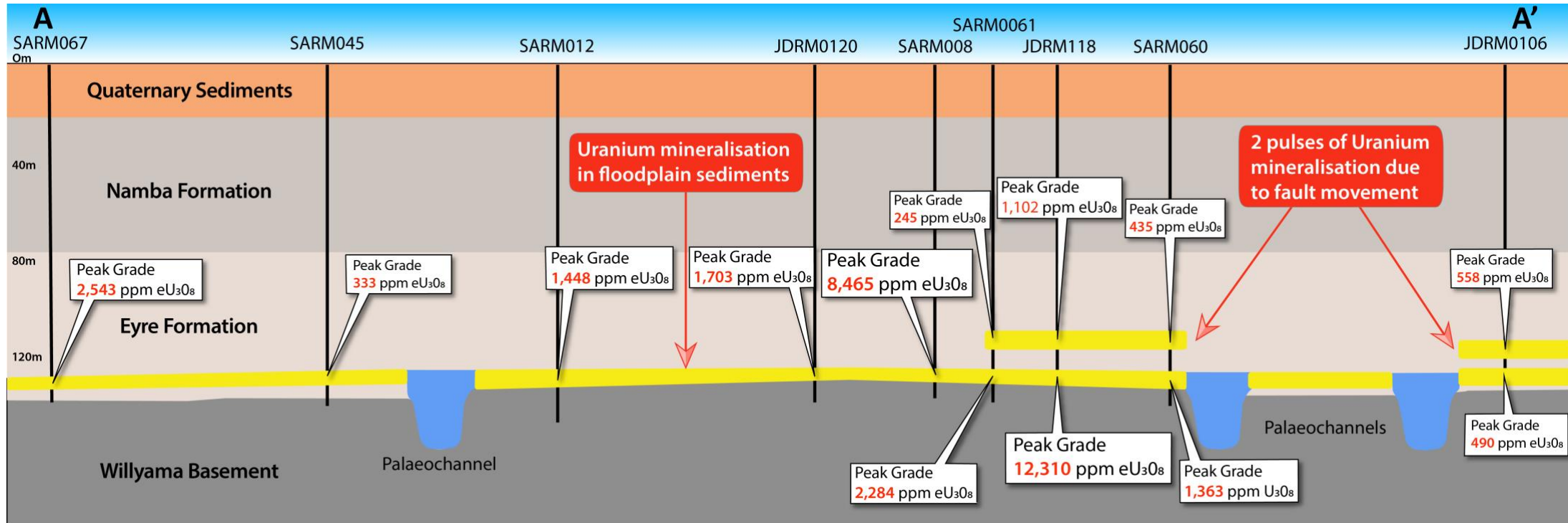
## Infill of current Saffron Resource

- 14 drill holes have been designed to infill the current Saffron Uranium Resource.
- The Saffron area has a current uranium resource of 5.4 million pounds @ 557 ppm U<sub>3</sub>O<sub>8</sub> [ [ASX:MEU 18 Nov 2011](#), [20 Feb 2012](#), [17 July 2013](#) ]
- The uranium resource is located within the same Yarramba Palaeochannel as the Boss Energy Honeymoon Uranium mine [ see [Figure 1](#) ].



# New Saffron Stratigraphic Model

The stratigraphic review has identified that uranium mineralisation around the Saffron area is hosted primarily within floodplains adjacent to numerous uranium-bearing Eyre Formation palaeochannels [ see Fig. 2 and ASX:MEU 20 Nov 2023 ].



**Fig. 3:** Schematic cross-section A-A' with a length of 600 metres [ see Fig. 2 ] across the Saffron Uranium Deposit

The diagram shows existing drillholes across the floodplains (with peak uranium grades).  
 Most of the uranium mineralisation lies in flood plains (yellow) adjacent to the palaeochannels (blue).

There is also noticeable uranium mineralisation higher up in the stratigraphy near steps in the basement suggesting that there could be re-mobilisation of uranium locally along faults.

## Technical Details (Saffron zone)

- The Saffron Uranium Deposit is located within a south-to-north trending section of the Yarramba Palaeovalley. [Fig. 3](#) illustrates a 'west to east' trending stratigraphic cross-section through the middle of the Saffron Uranium Deposit from A – A' [ see [Fig. 2](#) ].
- The basement rocks consist of Willyama Basement comprising mainly of chlorite schist, sandstone as well as albite altered igneous intrusions.
- The base of the Yarramba Palaeovalley was filled locally with up to 15 metres of Eyre Formation basal sands in the lowest depressions within the basement.
- High energy paleochannels originating from the south then started to erode through the basal sands and Willyama Basement.
- Stratigraphic interpretation has identified four north-east trending palaeochannels as well as two south-to-north trending palaeochannels entering the Saffron Uranium Deposit.
- The palaeochannels are approximately 20 metres wide and up to 30 metres deep where they have eroded through the underlying units.
- The palaeochannels have well developed flood plains up to 200 metres wide where overbank sediments including sand and gravel has been dispersed across the Saffron region. The widest sections of floodplain are located on the inside of palaeochannel bends and this is also where the highest grades of uranium have been identified. There are many areas where the floodplains from palaeochannels have merged into one larger floodplain which can be seen in the cross-section in [Fig. 3](#).
- All six palaeochannels identified are uranium-bearing. Most of the uranium seen across the Saffron region is located in the floodplains on the sides of the palaeochannels where disseminated pyrite has been commonly observed which is acting as the reductant for uranium to precipitate. This can be seen on [Fig. 2](#) where most of the peak uranium grades occur within close proximity to the edges of all palaeochannel floodplains.



- The paleochannels themselves [ see Fig. 2 ] are mostly barren of uranium since they have very little reduced material but remain important since they are the main passage for uranium migration throughout the Saffron region.
- All six palaeochannels identified are open. Combined with EM and gravity images, there are large regions within the Yarramba Palaeovalley where further uranium mineralisation could potentially be identified. In the Saffron area, a total of four high priority drill targets have been identified as well as an area of interest where only two holes have been drilled to date and where the geophysical images suggest that palaeochannels as well as uranium mineralisation have to potential to also exist.
- The new stratigraphic model will enable Marmota to target high-grade uranium mineralisation both within the current resource area and near resource exploration targets, as well as targets including the Bridget Prospect to the north and the Yolanda Prospect to the south.

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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**

The information in this announcement regarding the exploration update was prepared by Mark Couzens of Indepth Geological Services who is an independent consultant. Mr Couzens is a member of the AusIMM and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration (over 10 years uranium exploration and ISR experience) and to the activity he is undertaking to qualify as competent person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC 2012). Mr Couzens approves of and consents to the inclusion of the information in this announcement and context in which it appears.

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.