

ASX Release 17 October 2023

Honeymoon Uranium Project, South Australia

Drilling for base metals underway at Honeymoon

FQM conducting 1800m diamond drilling program as part of the earn-in agreement which gives the global major base metals rights over five tenements at Honeymoon

Highlights

- The Boss-FQM agreement gives FQM the right to earn a 51% interest in Honeymoon's base metal endowment by spending \$6m on exploration and a further 24% interest by sole-funding all base metals expenditure up to a Decision to Mine
- The agreement enables Boss to remain fully-focused on its core business of uranium exploration, development and production while having exposure at no cost to the significant potential of a base metals exploration program led by a global major
- As part of the agreement, FQM has started an initial preliminary base metals exploration program; Expenditure incurred beyond this initial program will then count towards the earn-in

Boss Energy Limited (ASX: BOE; OTCQX: BQSSF) is pleased to announce that First Quantum Minerals (TSE:FM) (FQM) has commenced a maiden diamond drilling program targeting basement-hosted base metal mineralisation below the Yarramba Palaeovalley on Honeymoon's tenements in South Australia.

The drilling program will cover three high-priority targets identified from extensive analysis and modelling of geophysical and geochemical datasets, alongside geological logging of historic drill holes at the state core library in Adelaide. The drilling will comprise at least five diamond core holes for a minimum of 1,800m drilling, with experienced drilling contractor DDH1 chosen to complete the program. The program is expected to take 4-6 weeks, with geochemical assay results expected within 1-2 months of program completion.

Boss Energy entered into an exploration earn-in agreement with FQM in February 2022. FQM is a significant Canadian-listed group operating eight mines across four continents producing copper, nickel, and gold with an additional three mines under development. With a proven track record in discovering and developing deposits, Boss considers FQM an ideal partner in the exploration and potential development of any base metal discoveries at Honeymoon.

Boss Managing Director Duncan Craib said: "This agreement is an outstanding opportunity for Boss and our shareholders.

"We have a global leader in FQM funding base metals exploration at Honeymoon, giving Boss significant exposure to their success at no cost to us while we focus on our goal of becoming Australia's next uranium producer".

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Earn-in and Joint Venture Principles

The Agreement relates to base metals rights over the following 5 tenements at Boss' Honeymoon Uranium Project: EL 6512, EL 6511, EL 6020, EL 6510, EL 6081 (collectively referred to as the "JV Project").

Having completed the exploration targeting and due diligence program, FQM, through its subsidiary First Quantum Minerals (Australia) Pty Ltd, has decided to proceed with the work program ("Work Program") or withdraw from the JV Project. The Work Program will comprise target definition programs and 1,800m of RC and diamond drilling and all associated geochemical analysis.

After completion of the Work Program, FQM may elect to earn a 51% interest in the JV Project by sole funding \$6M of expenditure within 5 years and maintaining minimum annual expenditure on the JV Project of \$500,000 ("First Earn-in"). At this point, the parties will enter into a joint venture agreement.

After completion of the First Earn-in, FQM may elect to earn an additional 24% interest in the JV Project for a total interest of 75% by sole funding expenditure on the JV Project until a Decision to Mine within 5 years and maintaining minimum annual expenditure on the JV Project of \$500,000 ("Second Earn-in"). FQM may extend the Second Earn-in up to 10 years by increasing minimum annual expenditure on the JV Project to \$1M.

After acquiring a 75% interest, FQM shall continue to sole fund required studies and programs up to receipt of all permits for commencement of construction, after which Boss can maintain its project interest of 25% by funding its share of project development costs or dilute.

If FQM does not complete the Second Earn-in, Boss' interest in the JV Project will revert to 51% with FQM retaining a 49% interest.

Boss shall be the operator of the JV Project until FQM has acquired a 51% interest after which FQM can opt to become the operator.

Boss retains the sole right to explore for and exploit all uranium discoveries on the JV Project (being greater than 50% of the in-situ metal value being uranium). Boss will have a first right of offer in respect of any uranium discoveries made by FQM within the Curnamona craton of South Australia.

FQM may withdraw from the JV Project at any point pursuant to 60 days' notice. If the withdrawal occurs after FQM has earned a 51% interest, but prior earning a 75% interest, Boss shall revert to a 51% interest. Should either party's interest fall below 10%, its interest will convert to a 1% net smelter royalty.

Drilling program overview

First Quantum's maiden drilling program will comprise at least five diamond drill holes for a minimum of 1,800m covering three high priority targets known as Atlas, Pandora and Yarramba. The objective of the drilling program is to test for base and precious metals in the older bedrock below the sedimentary sequences which locally host uranium, including that of the Honeymoon deposit. Target styles include stratiform copper-gold and structurally-hosted mineralisation, with the Bimba Formation position (regionally anomalous transition between major stratigraphic packages of the Willyama Supergroup and host to the nearby Kalkaroo Cu-Au deposit) being targeted in almost all cases. All drill lines were cleared during a recent heritage clearance with the NAWNTAC native title group in April 2023.

“Atlas” drill target

The Atlas target consists of a distinctive ‘bulge’ in typically straight-tracking magnetic grain adjacent to a Honeymoon Granite body, along strike from Hunter’s Dam Pb-Zn prospect. This is interpreted as a doubly-plunging antiform (dome), approximately 4km long with likely preserved Bimba Formation position on the north-western flank based on the strong contrast in aeromagnetic imagery and geochemical anomalism present in historic shallow drill holes (Figure 1). At least two drill holes have been planned as a section along one line at the Atlas target, with contingency for a third hole along strike if initial drilling produces favourable result.

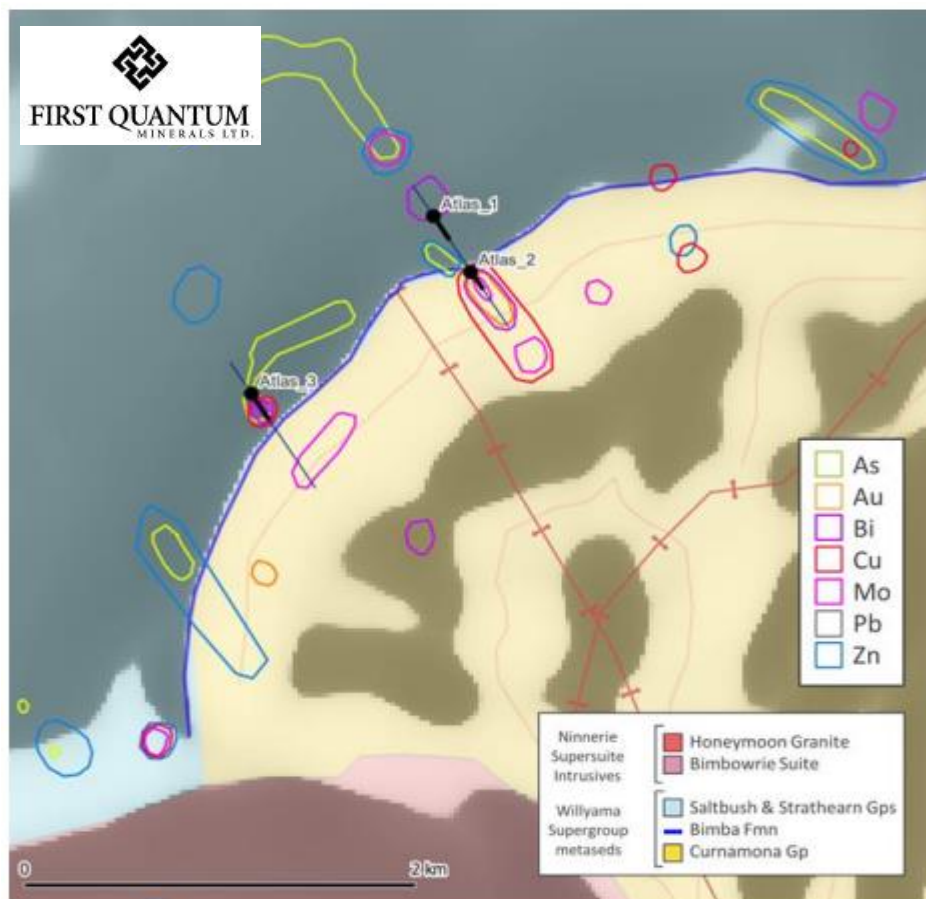


Figure 1: Location of planned holes at Atlas target, with aeromagnetic RTP res 1km greyscale image as background overlaid by interpreted stratigraphy and anomalous geochemistry from historic RM/AC/RC drilling.

“Pandora” drill target

The Pandora target is a NNE-SSW trending strongly magnetic feature located between two Honeymoon Granite bodies. Potentially a significant structure, the fault appears to bisect a regional synform, and may form part of an array or wider fault zone along with other interpreted faults nearby, all of which are similar in orientation to inferred early growth faults. The structure is highly magnetic and appears similar in appearance to the Kalkaroo Fault - this may represent a fluid flow pathway with strong associated iron alteration.

Two holes on two lines are planned at the Pandora target, with the northern of the two (Figure 2) testing the potential for preserved Bimba Formation between the two granites, perhaps concealed within their unusual magnetic rim’ and the interpreted intersection of the fault with this location.

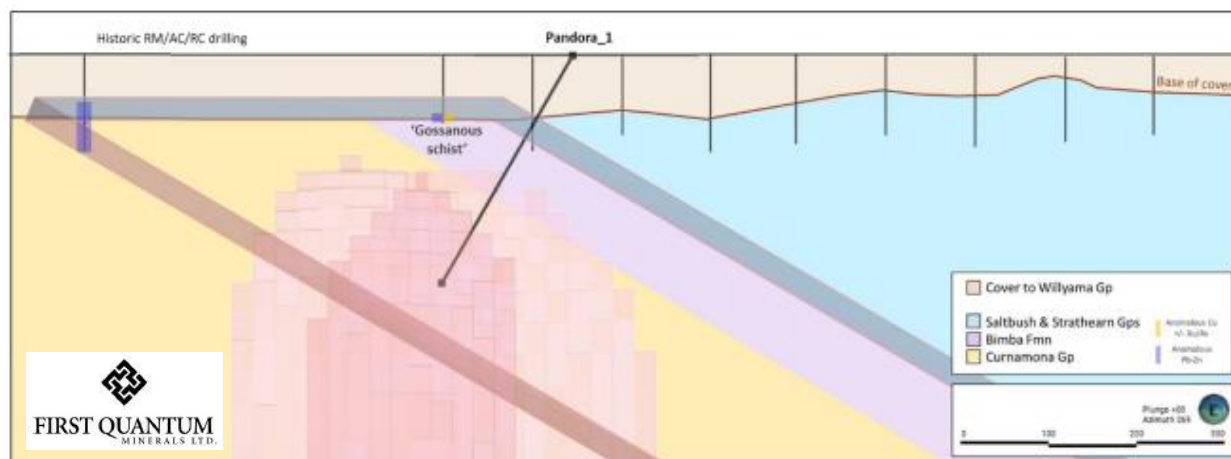


Figure 2: Location of northern planned hole at Pandora target, in relation to historic RM/AC/RC drill section with anomalous geochemistry and interpreted stratigraphy, 3D mag inversion (pink body) and 2D profile modelling of the top of magnetic surface (grey polygon).

“Yarramba” drill target

The Yarramba target is a regional structural domal feature. A major ~NNW-SSE trending doubly plunging magnetic antiform, inferred to be cored by magnetic Curnamona Group, and located adjacent to the position of a potential syn-depositional growth fault. The dome remains untested, with only one historic diamond hole located on the eastern flank of the dome structure outside of Boss Energy tenure.

Previous depth to source modelling indicated that deep drilling (~600m) would be required to reach the magnetic anomaly which may represent the Curnamona Group & the base of the target Bimba Formation (Figure 3). At this stage, one deep diamond drill hole is planned to test modelled magnetic anomalies within the centre of the dome structure.

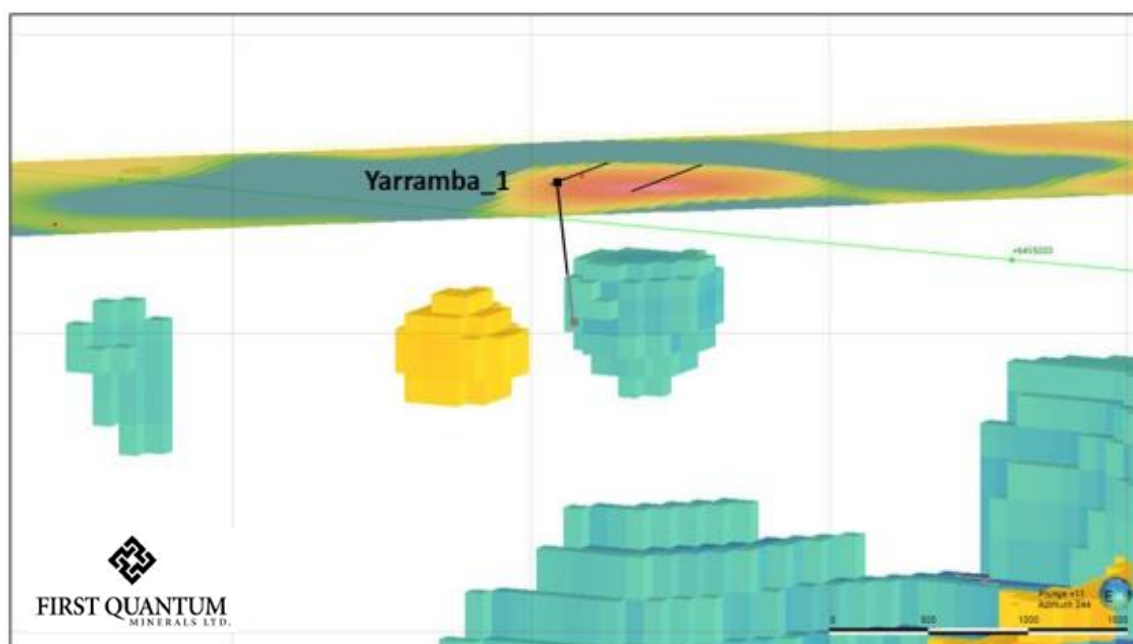


Figure 3: Yarramba Dome perspective view looking SW with a slight dip. Yellow & teal bodies represent interpreted block model magnetic centres.

Next steps

Following the completion of the drilling program, downhole petrophysical logging will be completed for all drill holes, with drill core samples submitted for geochemical assay. All geological and geophysical information obtained will be used to update geological modelling and be used to guide future work programs. Assay results are expected to be received ~1-2 months following the conclusion of the drilling program.

This ASX announcement was approved and authorised by the Board of Boss Energy Limited.

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Competent Person's Statement

The information contained in this announcement that relates to exploration results is provided by Mr Jason Cherry, who is a Member of both the AusIMM and the Australasian Institute of Geoscientists (AIG). Mr Cherry has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration, and to the activity being undertaken to qualify as a Competent Person, as defined in the JORC 2012 edition of the "Australasian Code for Reporting of Mineral Resources and Ore Reserves". Mr Cherry has 17 years of experience and is a full-time employee as Geology Manager for Boss Resources Ltd. Mr Cherry consents to the inclusion in this report of the matters based on this information in the form and context in which they appear.