



# NEXUSMINERALS

ASX ANNOUNCEMENT

17 November 2023

## Exploration Update

### Wallbrook Gold Project

- ✓ Nexus management actively evaluating the Crusader-Templar resource area for open pit mine options
- ✓ Mine operators, trucking contractors, mine management and technical services groups providing input to the study process
- ✓ Treatment of any ore processed would be through toll treatment at existing processing plants
- ✓ 3D modelling of Branches prospect incorporates latest RC drill results
- ✓ Regional targets (incl. MC4.1 prospect) continue to provide positive drill results - emerging "Gold Camp" prospectivity increasing through systematic regional exploration success

### Bethanga Porphyry Cu-Au Project – Northeast Victoria

- ✓ 2,000m diamond drill program (4 x ~500m deep holes) planned for February 2024
- ✓ Drill contractor tender process underway
- ✓ Positive porphyry Cu-Au fertility study results with Bethanga considered highly prospective for hosting a porphyry Cu-Au system
- ✓ Aeromagnetic and ground magnetic surveys confirm existence of multi-phase magnetic intrusive complex – indicative of the core of a porphyry Cu-Au system
- ✓ Geochemical elemental association is that of magmatic – hydrothermal fluids originating from a fertile porphyry Cu system
- ✓ Nexus not selected for BHP Xplor 2024 accelerator program

### NSW & Victoria Critical Mineral Search – 15,000km<sup>2</sup> "Mega Peg"

- ✓ NSW critical mineral search has commenced with geophysical data collation and reprocessing
- ✓ Interpretation of NSW Wagga Omeo Zone (WOZ) geophysical data commenced to classify intrusive bodies and accurately map geological contact relationships – initial results expected January 2024
- ✓ Regional scale geological approach applied with over ~15,000km<sup>2</sup> of granted tenure prospective for critical minerals – hunting for large orebodies
- ✓ Desktop studies completed on historic reports across tenement area
- ✓ Field crews mobilizing to NSW next week to commence ground truthing identified areas of interest
- ✓ Merrimac project option not exercised

### Research and Development Rebate

- ✓ Application for a \$1.35 million R&D rebate submitted to the ATO for work completed on the Company's R&D project

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# NEXUS MINERALS

Nexus Minerals Limited (ASX: NXM) (Nexus or the Company) is pleased to provide an exploration update on Company activities across the Wallbrook Gold project in the eastern goldfields of Western Australia, the Bethanga porphyry Cu-Au project and the NSW/Victoria critical minerals exploration tenure.

## Wallbrook Gold Project

### Crusader - Templar Prospect

Nexus management continue to actively progress the mine studies at the Crusader-Templar project. Work is continuing on evaluating the Crusader-Templar resource area for open pit mine options. Discussions and site visits with various contractors, across the complete spectrum of the mining project requirements have commenced and will continue into 2024, as part of the study process. Treatment of any ore processed would be through toll treatment at existing processing plants.

### Wallbrook Regional Prospects

The exploration team remains focussed on deploying the validated and methodical exploration approach to build a suite of exploration targets for drill testing. There are currently 5 mineralised corridors (MC1- MC5) identified on the project which remain substantially underexplored despite their proximity to existing mining operations. Given the early exploration maturity of the project, initial targeting is focussing on the top 0-100 metres below surface, where opportunity exists for a significant discovery.

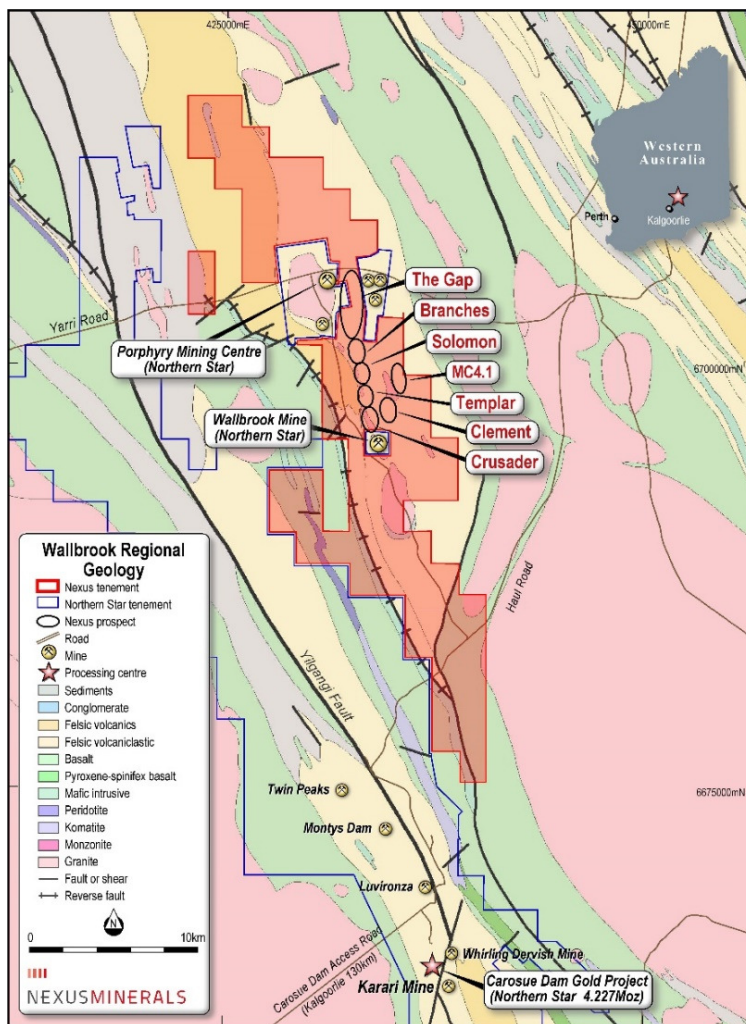


Figure 1: Wallbrook Gold Project – Eastern Goldfields WA



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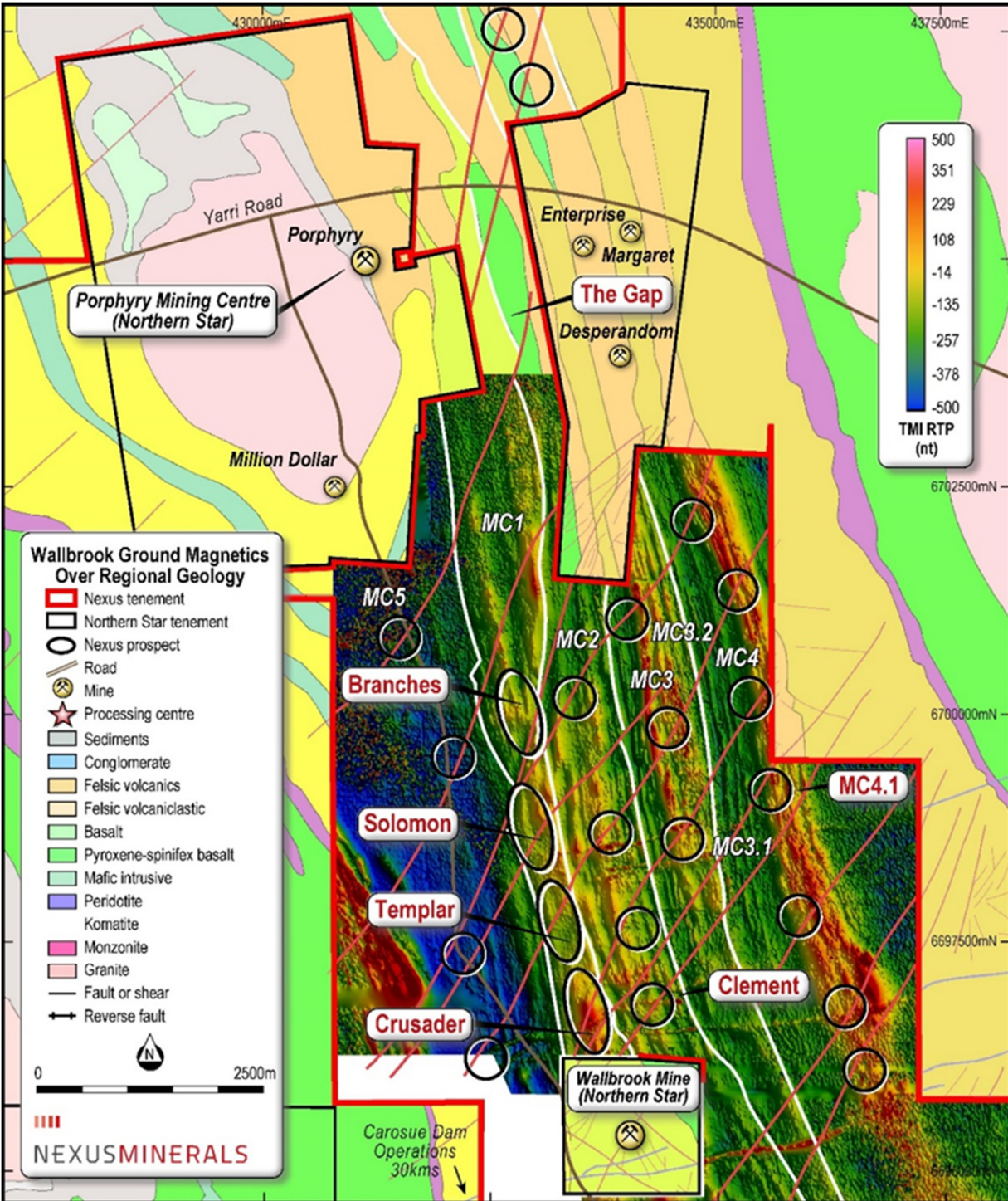


Figure 2: Nexus Wallbrook Prospect Location and Ground Magnetics over Geology



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## Bethanga Porphyry Cu-Au Project – Northeast Victoria

A 2,000m diamond drill program (4 x ~500m deep holes) is planned to commence February 2024 with the tender process for drill contractors underway.

The porphyry Cu-Au fertility study returned positive outcomes with Bethanga considered highly prospective for hosting a porphyry Cu-Au system. The porphyry target zone covers ~8km x 3km, with a high priority target zone of ~3km x 1.5km. Aeromagnetic and ground magnetic surveys confirm the existence of a multi-phase magnetic intrusive complex – indicative of the core of a porphyry Cu-Au system.

Rock litho-geochemistry indicates the intrusive rocks are consistent with emplacement into a tectonic porphyry environment and soil geochemistry returned commodity and trace element enrichment expected in the upper levels of a porphyry Cu system. The elemental association is interpreted to have been formed by magmatic – hydrothermal fluids originating from a fertile porphyry Cu system.

Nexus application to enter the BHP Xplor 2024 accelerator program was not selected. BHP stated that they received a significant number of applications and competition for the program this year was strong, having to make difficult choices between many high caliber applicants.

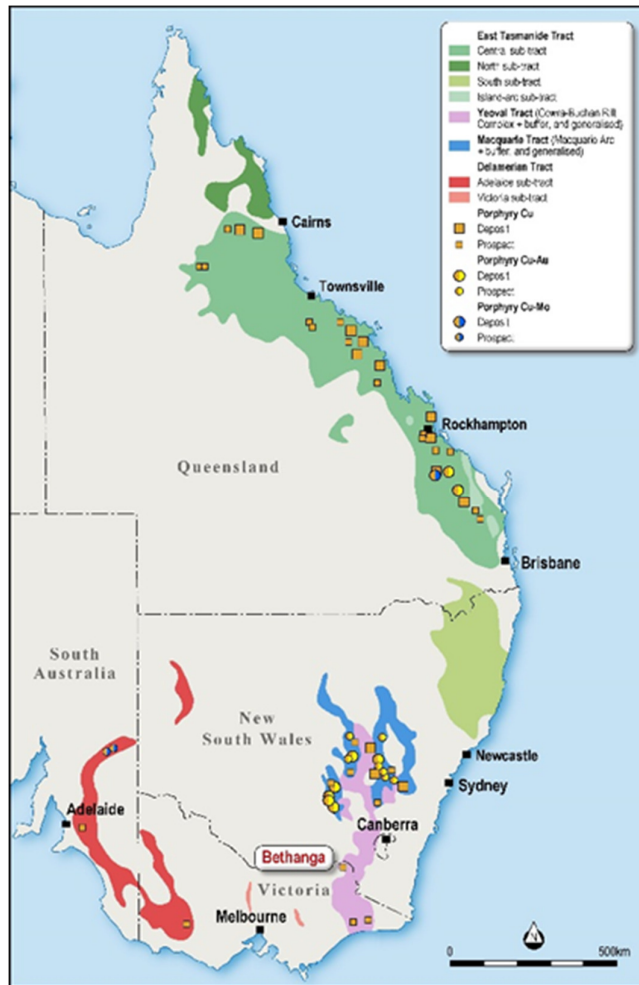


Figure 3: Bethanga Porphyry Cu-Au Project Location



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## **NSW & Victoria Critical Mineral Search – 15,000km<sup>2</sup> “Mega Peg”**

Nexus Minerals has secured the largest package of exploration tenure in NSW (extending south into Victoria) to undertake the search for critical minerals - lithium, caesium, tantalum, tin and copper. Very limited exploration for these critical minerals has taken place in this highly prospective geological terrain. Desktop studies are now complete and the geological field crews are mobilizing to NSW next week to commence ground truthing areas of interest identified in historical reports.

Through analysis of geological and litho-geochemical data sourced from the Lachlan Orogen’s Wagga-Omeo Zone (WOZ) in southern New South Wales (NSW), Nexus successfully identified prospective reduced, fractionated, peraluminous S-type granites capable of supporting LCT pegmatite formation. Recognizing this opportunity, the Company has strategically positioned itself as a first mover on a regional scale, securing 15,000km<sup>2</sup> of granted critical minerals tenure.

Nexus has now taken significant steps to leverage the best available government and open-file company geophysics surveys. These surveys have been compiled and re-processed, encompassing detailed magnetic, radiometric, and gravity data. To aid in the analysis, a comprehensive set of images and enhancements of the data have been generated, providing valuable insights for the ongoing exploration efforts.

The data will now be integrated with available government geological mapping, geochemical and petrological information with the following objectives:

1. Accurately map and refine the granite boundaries.
2. Categorise granites according to their geophysical signatures.
3. Identify S-type granites based on geophysical signature.
4. Identify granites with zoning evident in the geophysics.
5. Map large scale faults and structural trends that may be controlling pegmatite distribution.

The Nexus exploration team will then analyse and interpret the results to refine priority target areas to initiate on ground exploration activities. Due to the size of the datasets involved the project area will be split into two halves, north and south. This interpretation exercise will be completed on the northern half of the project by January 2024 - allowing the geology team on track to begin regional reconnaissance, mapping and initial geochemical sampling early 2024. Given the scale and opportunity on the project, the exploration team remains focussed on a methodical, science driven approach to identify large mineralising systems.



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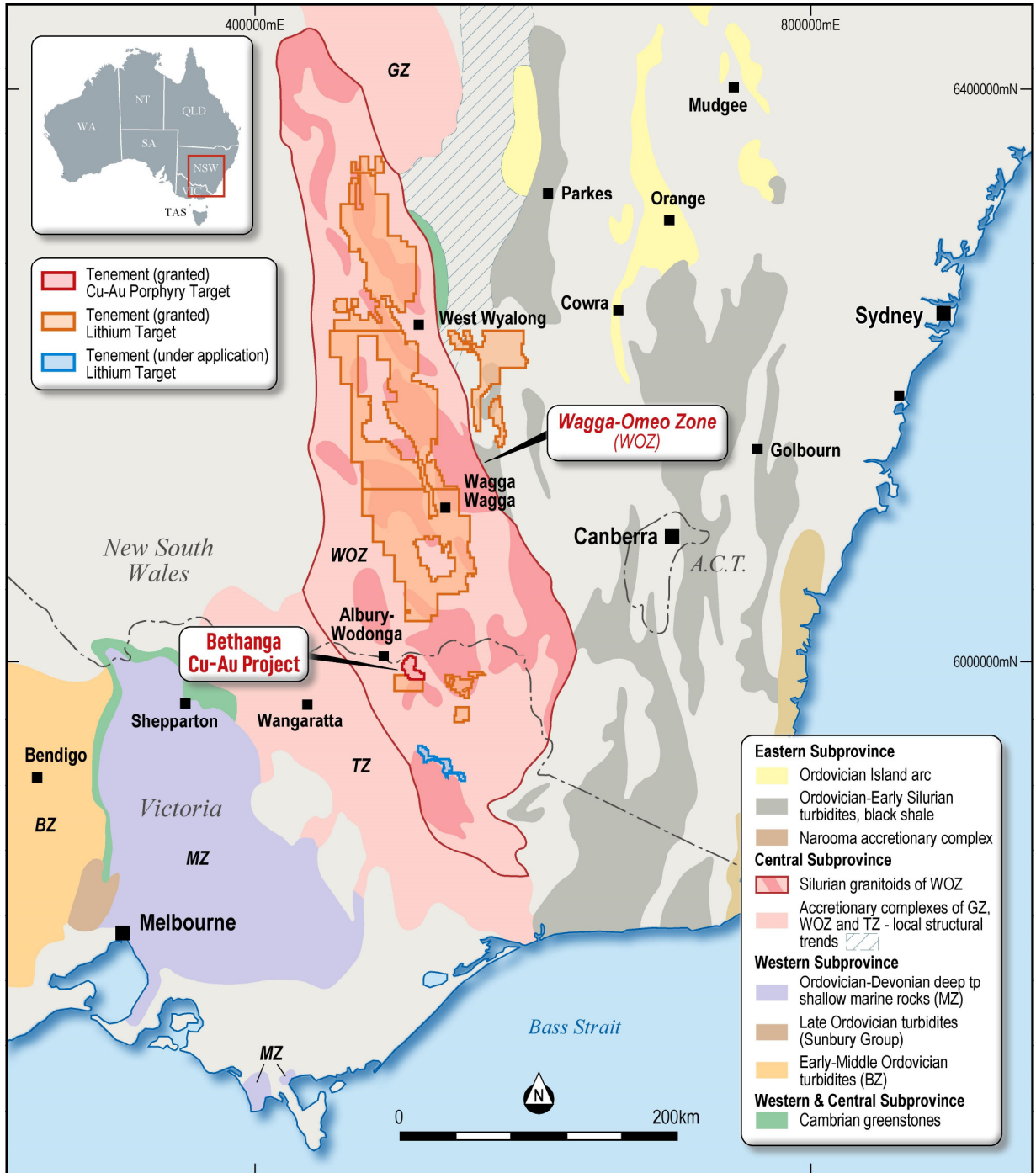


Figure 4: Nexus Critical Minerals Projects Location over Geology



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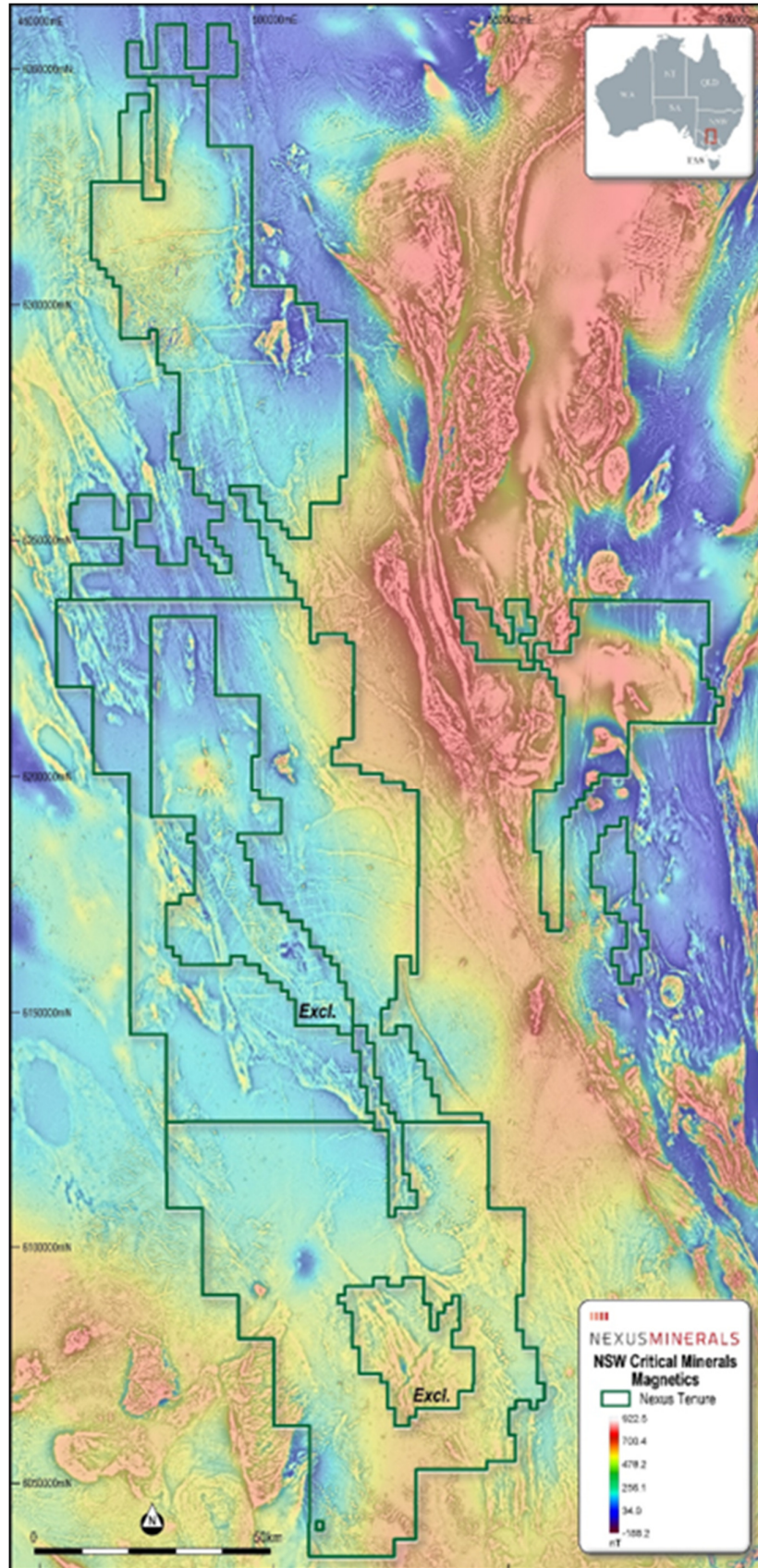


Figure 5: NSW critical minerals tenure over magnetics



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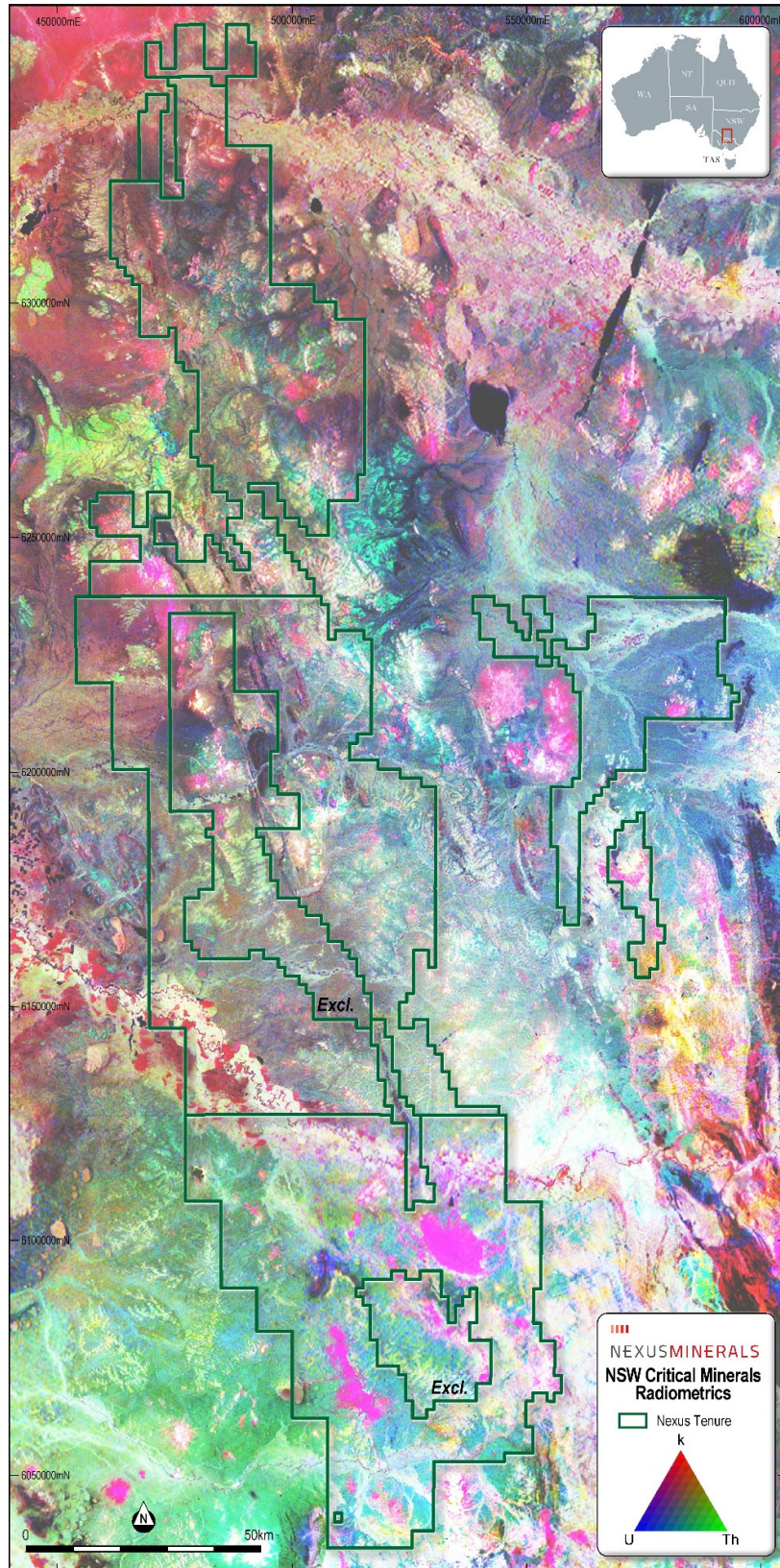


Figure 6: NSW critical minerals tenure over Radiometrics





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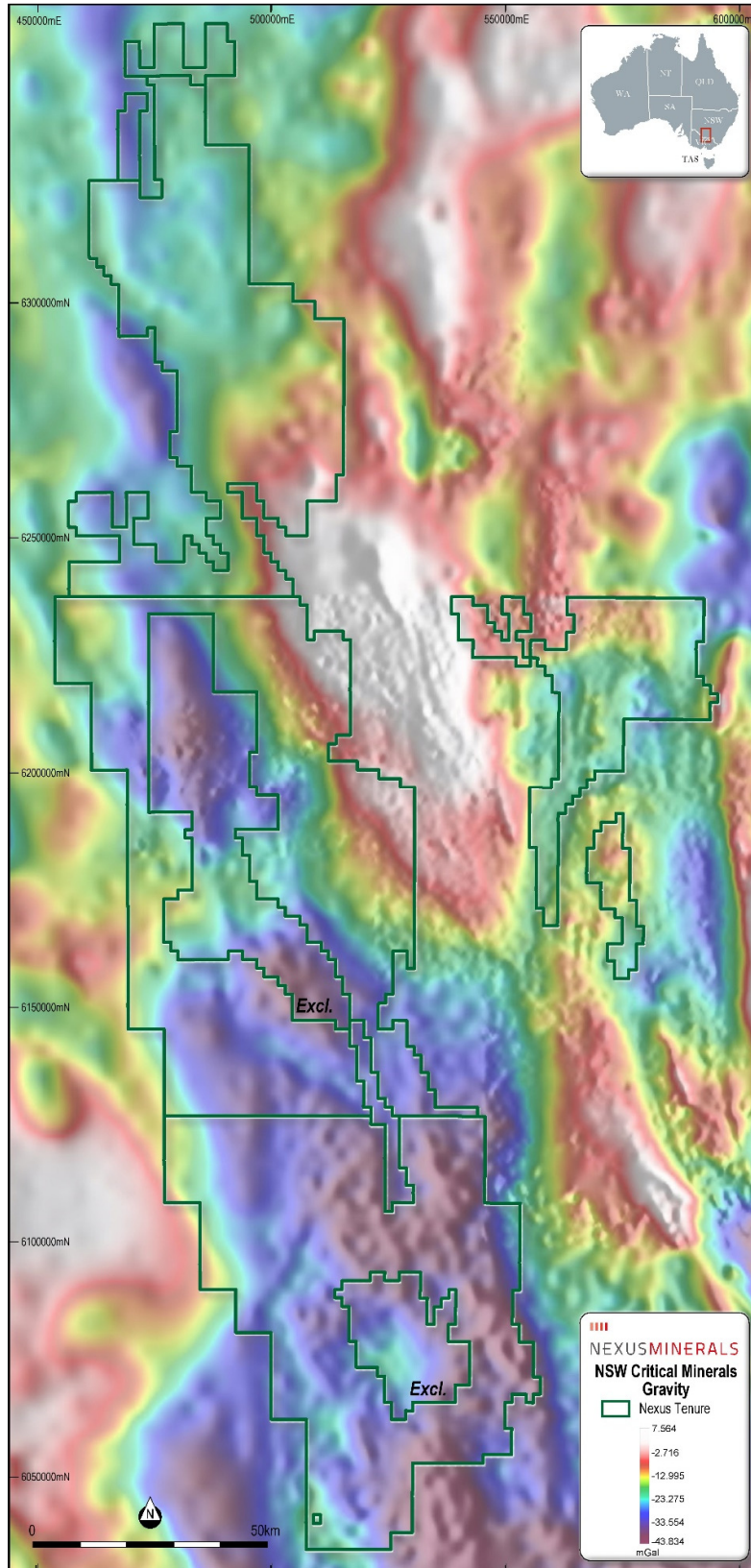


Figure 7: NSW critical minerals tenure over gravity



# NEXUS MINERALS

## Merrimac Project Option

In March 2023 Nexus announced it had secured an option to acquire the Merrimac Project (tenement EL007493) (see ASX 29/03/2023). This Option agreement allowed Nexus to have the exclusive right for a period of 9 months (Option Period) to undertake reconnaissance exploration activities on the tenements. Nexus has elected not to exercise the Option.

The consideration for the acquisition of 100% of the Merrimac project would have required:

- \$300,000 cash consideration; and at Nexus' discretion either:
- Payment of a further \$600,000 cash; or
- The issue of fully paid ordinary shares in the capital of Nexus Minerals to the value of \$600,000, at a 7 day VWAP to the date Nexus issues the exercise notice, subject to shareholder approval.

An initial field mapping and sampling campaign at the Merrimac Project identified LCT pegmatites in the southwestern portion of the exploration licence. Pegmatite dykes returned one anomalous high-grade lithium assay of 2.85% Li<sub>2</sub>O. A further 112 litho-geochemical samples were collected across various lithologies to assist in mapping, with 13 pegmatite rock chip samples returning anomalous results greater than 0.20% Li<sub>2</sub>O, with 5 samples of 1.00% Li<sub>2</sub>O or greater. The final mapping and interpretation of the Merrimac pegmatite dykes has determined that the density, thickness and grades of the pegmatites associated with the anomalous zone were not sufficient to warrant exercising the option. The decision to not exercise the option is also taken in light of Nexus being granted over 15,000km<sup>2</sup> of prospective LCT pegmatite tenure in April 2023.

The abutting Nexus 100% application licence remains prospective due to its proximity to the Mt Wills Granite source, and its 10km of strike exploration zone. It includes a greater area of exploration tenure within the 'goldilocks zone' (the 3-6km optimal distance from the source). Mapping identified pegmatite dykes up to the boundary of the Nexus application licence, and key element ratios (K/Rb, K/Cs, Nb/Ta and Mg/Li) are anomalous on the boundary.

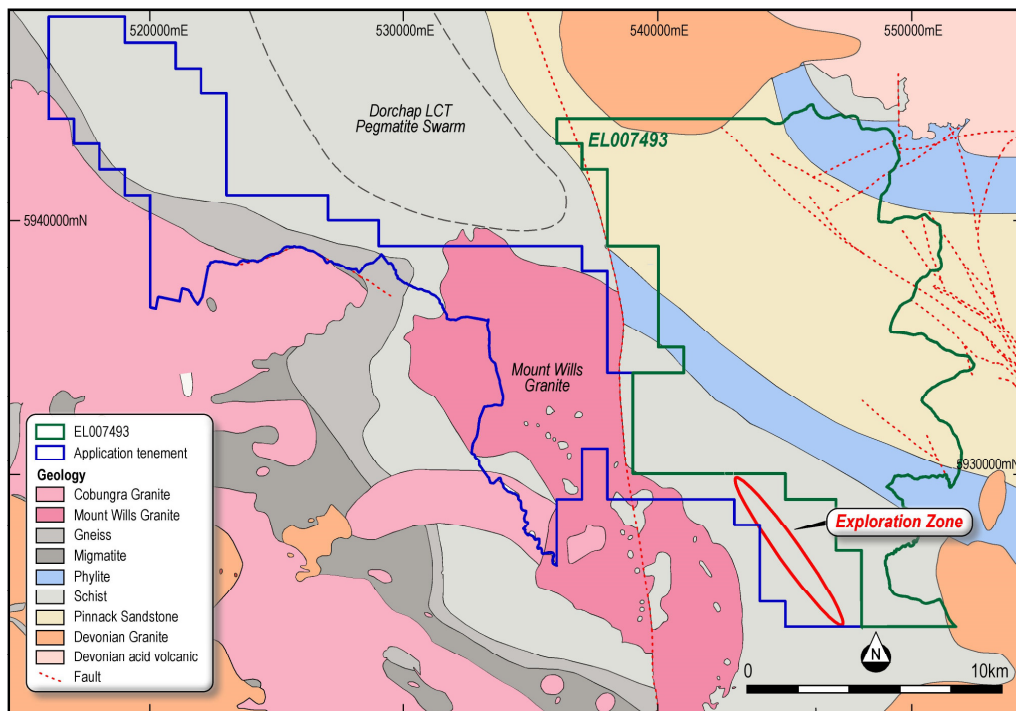


Figure 8: Merrimac Project map



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## Nexus Research and Development Project

Nexus' R&D project is focused on developing new rock characterising processes for deeply deformed, altered, metamorphosed, and weathered rock formations. The project is developing several new tools and processes by coupling data from Portable X-Ray Fluorescence analysers (pXRF) with image analysis and data from other rock property instruments where appropriate.

The tools and processes developed have a potential wide array of applications in a range of industries. This includes an automated drill chip rock classification program, estimation of the impact of weathering on geochemical data with a weathering correction tool and inexpensive lithology identification of fine-grained rocks through multi-disciplinary data analysis.

The project has seen a number of core and supporting activities undertaken during the 2023 financial year upon which the R&D rebate of \$1.35 million is based.

This announcement is authorised for release by Mr Andy Tudor, Managing Director, Nexus Minerals Limited.

## About Nexus

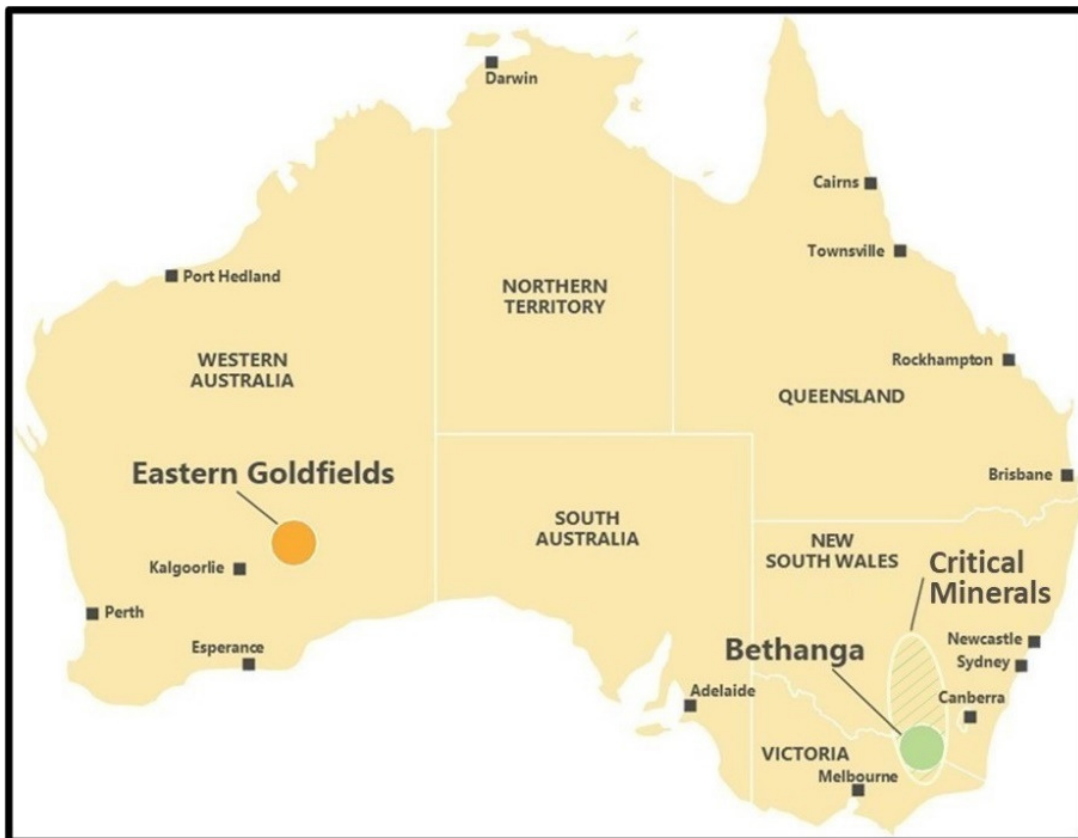


Figure 9: Nexus Minerals Australian Project Locations



# NEXUS MINERALS

Nexus principal activity is exploring for gold deposits on its highly prospective 204km<sup>2</sup> Wallbrook tenement package in the Eastern Goldfields of Western Australia. In addition to this, the company has expanded its existing project portfolio with the addition of the Bethanga Porphyry Copper-Gold project in Victoria, and its extensive Critical Mineral tenement exploration package of 15,000km<sup>2</sup> in north-eastern Victoria and NSW.

Nexus Minerals' tenement package at the Wallbrook Gold Project commences immediately to the north of Northern Star's multi-million ounce Carosue Dam mining operations, and current operating Karari and Whirling Dervish underground gold mines. Nexus holds a significant land package of highly prospective geological terrane within a major regional structural corridor and is exploring for gold deposits.

Nexus is actively investing in new exploration techniques to refine the targeting approach for their current and future tenements.

- Ends -

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**ASX Code**      **NXM**

*The information in this release that relates to Exploration Results, Mineral Resources or Ore Reserves is based on, and fairly represents, information and supporting documentation, prepared, compiled or reviewed by Mr Andy Tudor, who is a Member of the Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. Mr Tudor is the Managing Director and full-time employee of Nexus Minerals Limited. Mr Tudor has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity for which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Tudor consents to the inclusion in the release of the matters based on his information in the form and context in which it appears. The results are available to be viewed on the Company website [www.nexus-minerals.com](http://www.nexus-minerals.com). The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original announcements.*

*FORWARD LOOKING AND CAUTIONARY STATEMENTS. Some statements in this announcement regarding estimates or future events are forward-looking statements. They include indications of, and guidance on, future earnings, cash flow, costs and financial performance. Forward looking statements include, but are not limited to, statements preceded by words such as "planned", "expected", "projected", "estimated", "may", "scheduled", "intends", "anticipates", "believes", "potential", "predict", "foresee", "proposed", "aim", "target", "opportunity", "could", "nominal", "conceptual" and similar expressions. Forward-looking statements, opinions and estimates included in this report are based on assumptions and contingencies which are subject to change without notice, as are statements about market and industry trends, which are based on interpretations of current market conditions. Forward-looking statements are provided as a general guide only and should not be relied on as a guarantee of future performance. Forward-looking statements may be affected by a range of variables that could cause actual results to differ from estimated results and may cause the Company's actual performance and financial results in future periods to materially differ from any projections of future performance or results expressed or implied by such forward-looking statements. So, there can be no assurance that actual outcomes will not materially differ from these forward-looking statements.*