



# NEXUSMINERALS

ASX ANNOUNCEMENT

29 March 2023

## Nexus Granted Tenure over VIC/NSW Critical Minerals Exploration Package

- ✓ Nexus has recognised an opportunity to access a significant underexplored landholding in Victoria and NSW which is highly prospective for Australia's demand for critical minerals
- ✓ 12-month critical minerals evaluation study utilising regional scale approach - results in significant ground position now secured
- ✓ Nexus has been granted ~15,000km<sup>2</sup> of tenure over prospective critical minerals tenure
- ✓ The Lachlan Orogen's Wagga-Omeo Zone (WOZ) determined to be highly prospective for Lithium-Cesium-Tantalum (LCT) pegmatites in addition to tin mineralisation
- ✓ The WOZ extends ~700km in a north-south direction and averages ~80km east-west - from Omeo in southern Victoria to Nymagee in central NSW

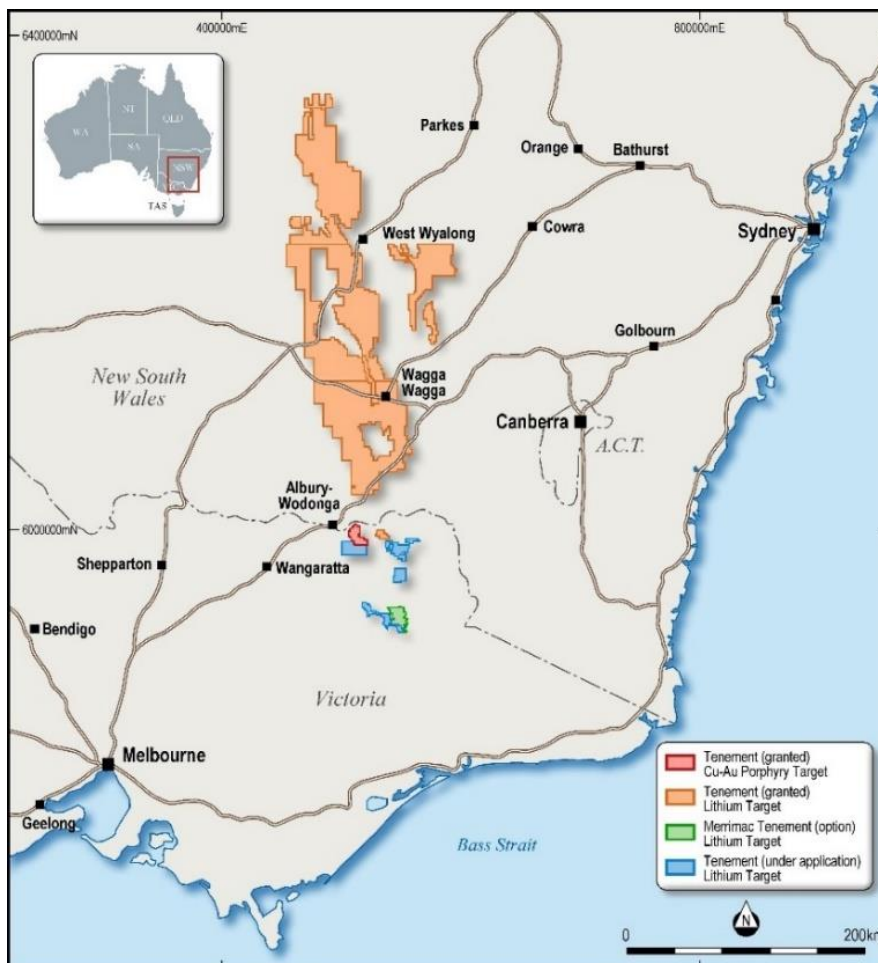


Figure 1: Nexus Critical Minerals Project Location

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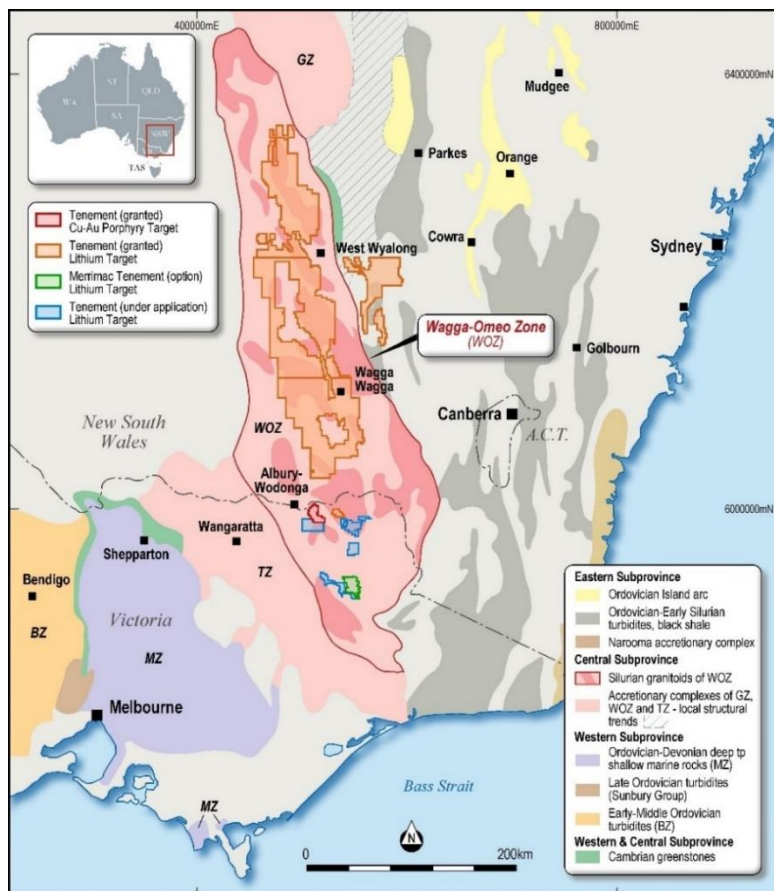
# NEXUS MINERALS

**Nexus Minerals Limited (ASX: NXM) (Nexus or the Company)** has recognised an opportunity to access a significant underexplored landholding in Victoria and NSW which is highly prospective for Australia’s demand for critical minerals. The 12-month assessment and evaluation study resulted in the Company’s emerging ground position of critical mineral exploration projects in Australia. The critical mineral search commenced by assessing the LCT pegmatite potential of the Lachlan Orogen of Victoria and NSW. This extended to the association of tin mineralisation to the emplacement of LCT pegmatites.

The Company has also entered into an option agreement to explore and acquire the Merrimac Project (**Merrimac**) in north-eastern Victoria. The project hosts known LCT pegmatites and tin mineralisation and abuts one of Nexus’ under-application tenements that also hosts known LCT pegmatites and tin mineralisation.

In addition to the positive results from the Bethanga porphyry Cu-Au fertility assessment study, this extensive new ground position over a hugely underexplored and prospective region, will allow Nexus to undertake the search for critical minerals in a significant manner.

Nexus Managing Director Andy Tudor commented *“Whilst focused on our Wallbrook project in the Eastern Goldfields of Western Australia, it has also been a very productive 12 months of work that has led Nexus to be able to establish a significant ground position, in such a prospective region. The results from our desktop review and the opportunities identified have led us to undertake one of the largest pegging exercises of ground in NSW. Field crews are already on the ground across multiple project areas commencing initial ground truthing. This critical mineral search will be undertaken alongside the exploration planned for the Company’s Bethanga porphyry Cu-Au project”.*



**Figure 2: Nexus Critical Minerals Project Location over Geology**



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## NSW

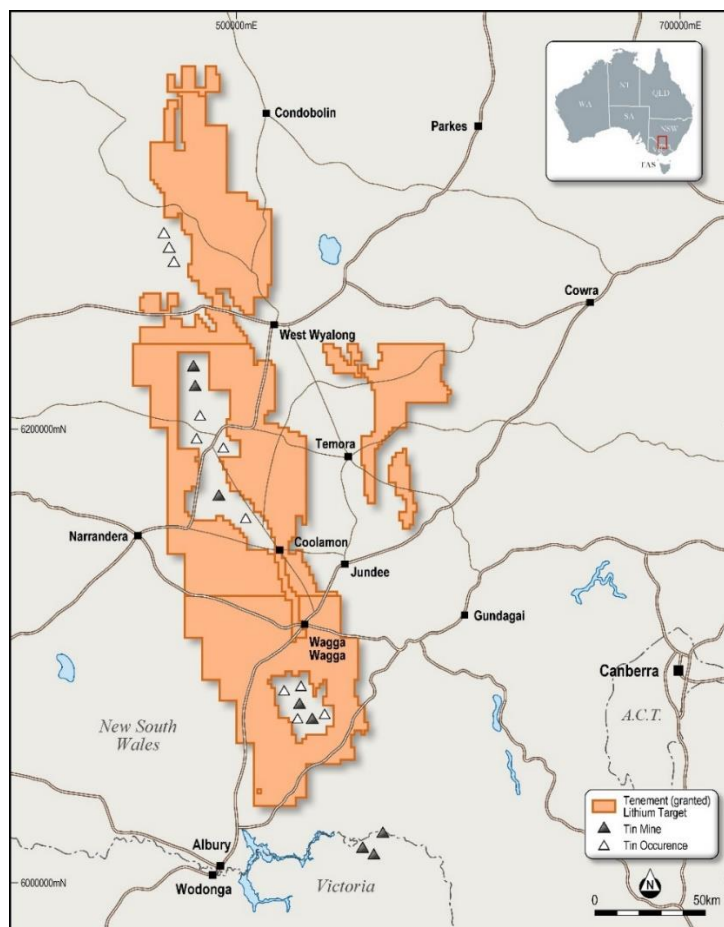
- ✓ **Over 15,000km<sup>2</sup> of prospective critical minerals ground tenure granted**
- ✓ **First mover advantage allows for regional scale exploration targeting with one of the largest pegging exercises in NSW history**

Nexus reviewed geology and litho-geochemical data from the Wagga-Omeo Zone (WOZ) in southern NSW as part of a regional-scale approach to select exploration ground for LCT pegmatites in the Lachlan Orogen. The objective was to establish from first principals, intrusive rocks permissive for LCT pegmatite development and assess their fertility using open-file data rather than focusing only on known tin and lithium occurrences.

A review of open file geology and whole-rock geochemistry confirmed that much of the exploration ground applied for in southern NSW is underlain by reduced, fractionated, peraluminous S-type granites similar to those associated with the spodumene-bearing pegmatites of the Dorchap Range in north-eastern Victoria.

A significant ground position (~15,000km<sup>2</sup>) in the WOZ has been pegged, to allow for the identification of the most prospective areas utilising; re-processing of open file geophysical and geochemical datasets, systematic mapping, sampling and high-quality geochemical analysis of intrusive rocks.

The tenure is considered prospective for lithium, cesium, tantalum and tin, with Nexus having a first mover advantage in the region, allowing for regional scale exploration and targeting.



**Figure 3: Nexus Tenements NSW**



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## Northeast Victoria

- ✓ Fieldwork commenced on existing Nexus Granya LCT pegmatite project. The Granya project was acquired in April 2021 as part of the Bethanga porphyry Cu-Au acquisition
- ✓ Nexus signs option deal for Merrimac LCT pegmatite project
- ✓ Five LCT pegmatite prospective tenements under application

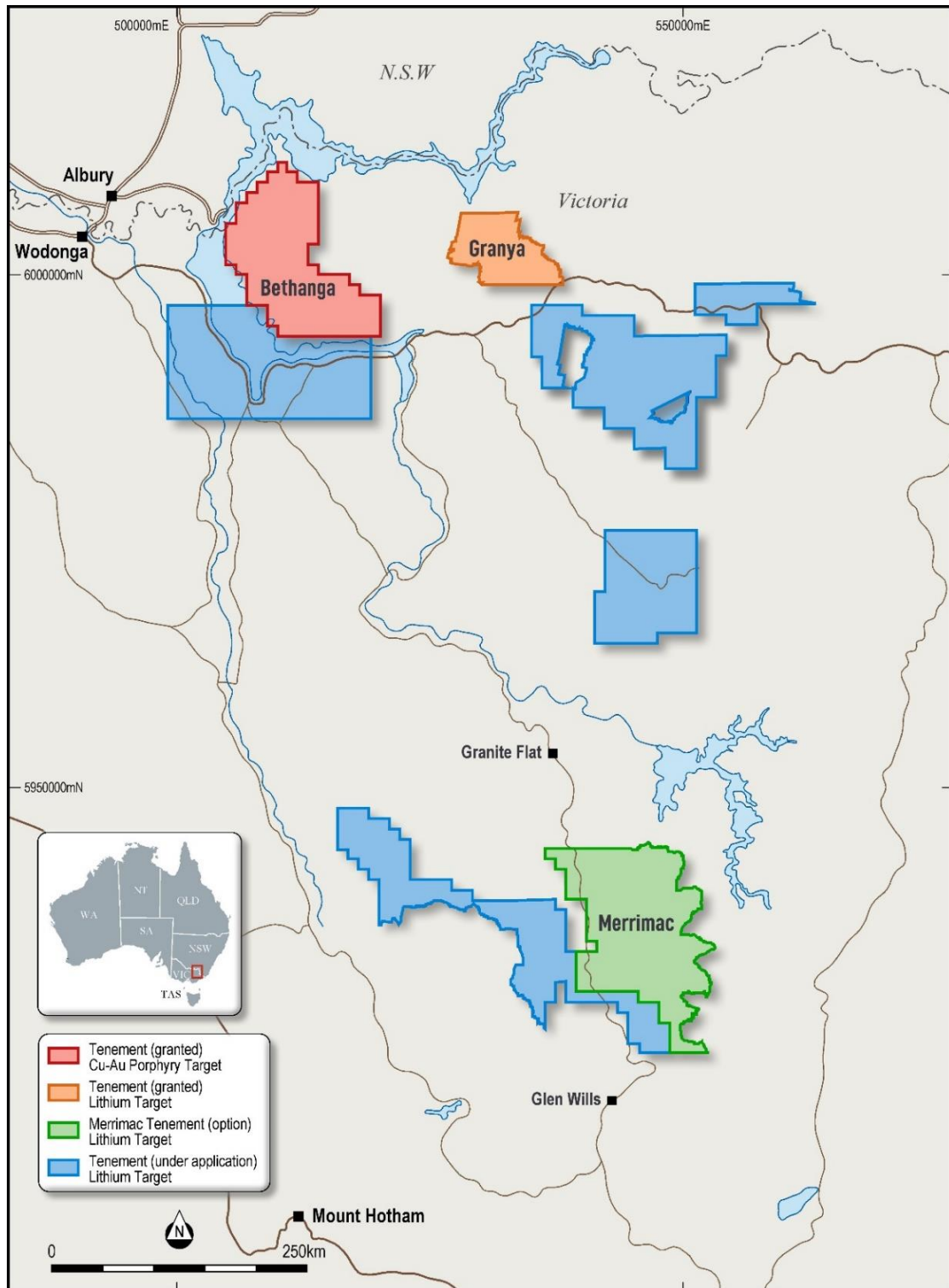


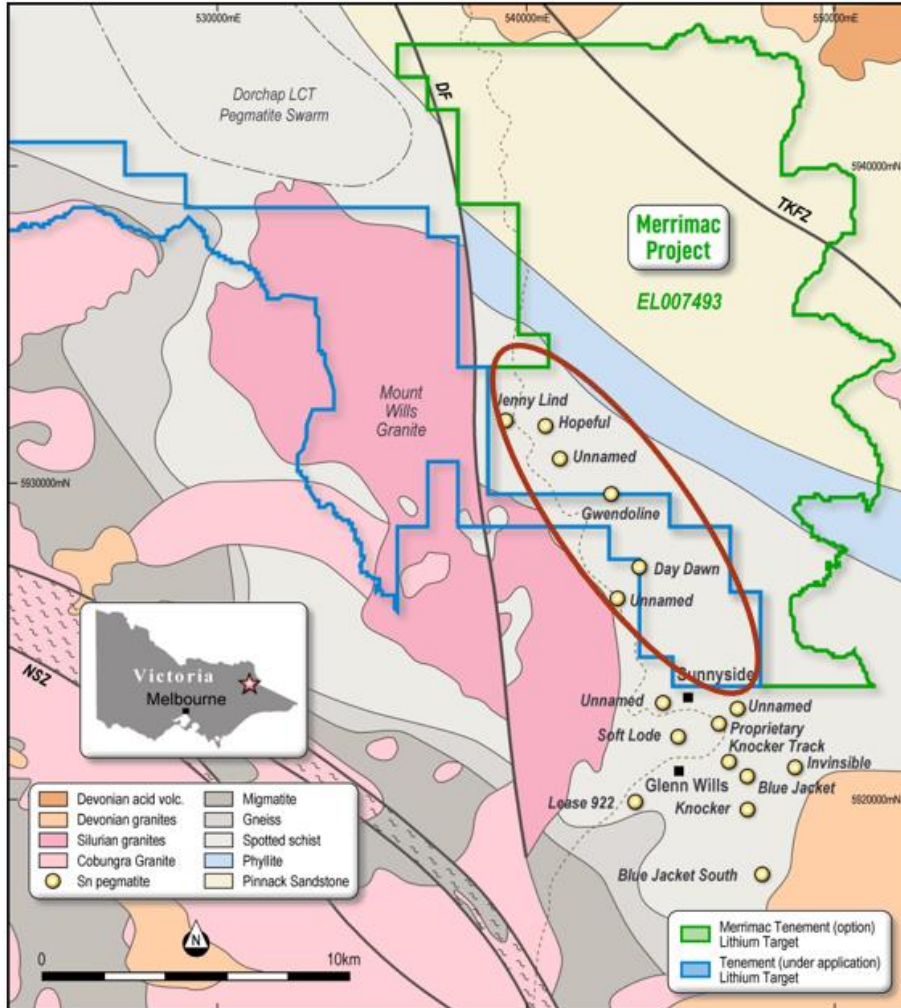
Figure 4: Nexus Tenements North-Eastern Victoria



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## Merrimac LCT Pegmatite Project

The Merrimac tenement, provides over 10km strike of prospective LCT pegmatite ground, situated in the 3-6km zone from the fertile Mount Wills Granite, along a line of historical tin pegmatite occurrences.



**Figure 5: Nexus Merrimac Project North-Eastern Victoria**

### Merrimac Option

The following terms and conditions have been agreed for the Option to acquire the Merrimac Project (tenement EL007493):

- A \$10,000 non-refundable fee paid for a one-month due diligence period that was completed 13 March 2023.
- The Company successfully completed initial due diligence and paid a further \$90,000 non-refundable option fee to the Vendors (Option Fee). This Option Fee allows Nexus to have the exclusive right for a period of 9 months (Option Period) to undertake reconnaissance exploration activities on the tenements.
- At any time during the Option Period Nexus may elect to exercise the Option and have the vendors transfer the tenement to Nexus. The consideration for the acquisition of 100% of the Merrimac project being:
  - \$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.



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## Background

The discovery of spodumene-bearing pegmatite dykes in the Dorchap Range of north-eastern Victoria has spurred exploration interest for critical minerals in this region and further north into NSW. Lithium-cesium-tantalum (LCT) pegmatites appear to be associated with highly fractionated, reduced S-type Silurian granites that also often host tin mineralization (Figures 6, 7 and 8). The LCT pegmatites of the Dorchap Range are associated with the historical primary tin fields at Mitta Mitta and Mount Wills. The Mount Wills granite, dated at 420+/-4 Ma (Silurian), has been linked to the tin-bearing pegmatites of the Mount Wills district, and may also be genetically related to the LCT pegmatites of the Dorchap Range. Typically, LCT bearing pegmatites are found approximately 3 to 6 km from the contact of a fertile granite intrusion.

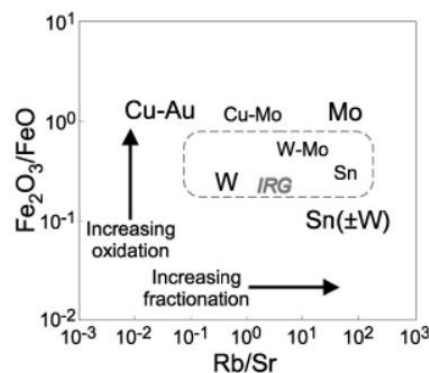
Other historical primary tin production in north-eastern Victoria occurred at Walwa, Burrowye and Mount Alfred. Historical alluvial tin fields occur in north-eastern Victoria at Reedy Creek (Beechworth-Eldorado), Toora, Koetong and Mount Cudgewa. Other minor tin occurrences are also likely evident in regional stream sediment data.

The historical primary tin fields and, by extension, prospective LCT pegmatite areas, are found in the Wagga-Omeo Zone (WOZ) that also hosts historical Cu and Au production at Bethanga. This belt of metamorphic rocks extends north into NSW as part of the central Lachlan Orogen, and hosts tin mines and occurrences at Ardlethan, Kikiora and Mount Tallebung.

The Nexus review of geology and lithogeochemical data from the Wagga-Omeo Zone in southern NSW has been undertaken as part of a regional-scale approach to select exploration ground for LCT pegmatites in the Lachlan Orogen. The objective is to establish from first principals, intrusive rocks permissive for LCT pegmatite development and assess their fertility using available open-file data rather than focusing only on known tin (Sn) and lithium (Li) occurrences.

A significant ground position (~15,000km<sup>2</sup>) in the Wagga-Omeo Zone has been pegged, to allow for the identification of the most prospective areas utilising; re-processing of open file geophysical and geochemical datasets, systematic mapping, sampling and high-quality geochemical analysis of intrusive rocks.

Limitations in the distribution and suitability of the available open-file data means that additional information is needed to best assess prospective areas. The absence of data presents an opportunity that can be addressed through systematic research and data acquisition.



**Figure 6: Relationship between oxidation state and fractionation for magmatic hydrothermal deposits (From Blevin, 2004)**



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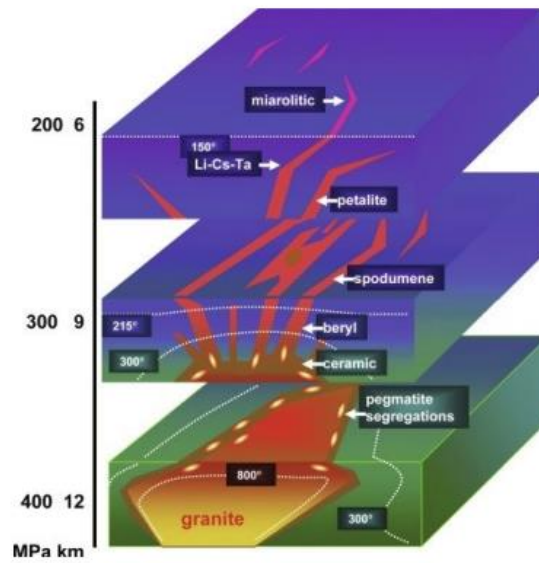


Figure 7: Vertical zonation of LCT pegmatites from a fertile intrusive granite (From Encyclopedia of Geology, 2021)

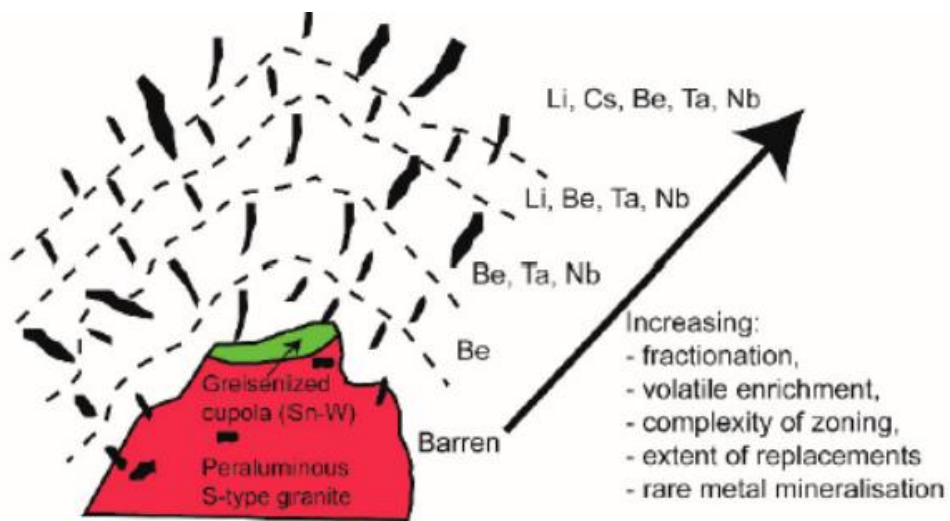
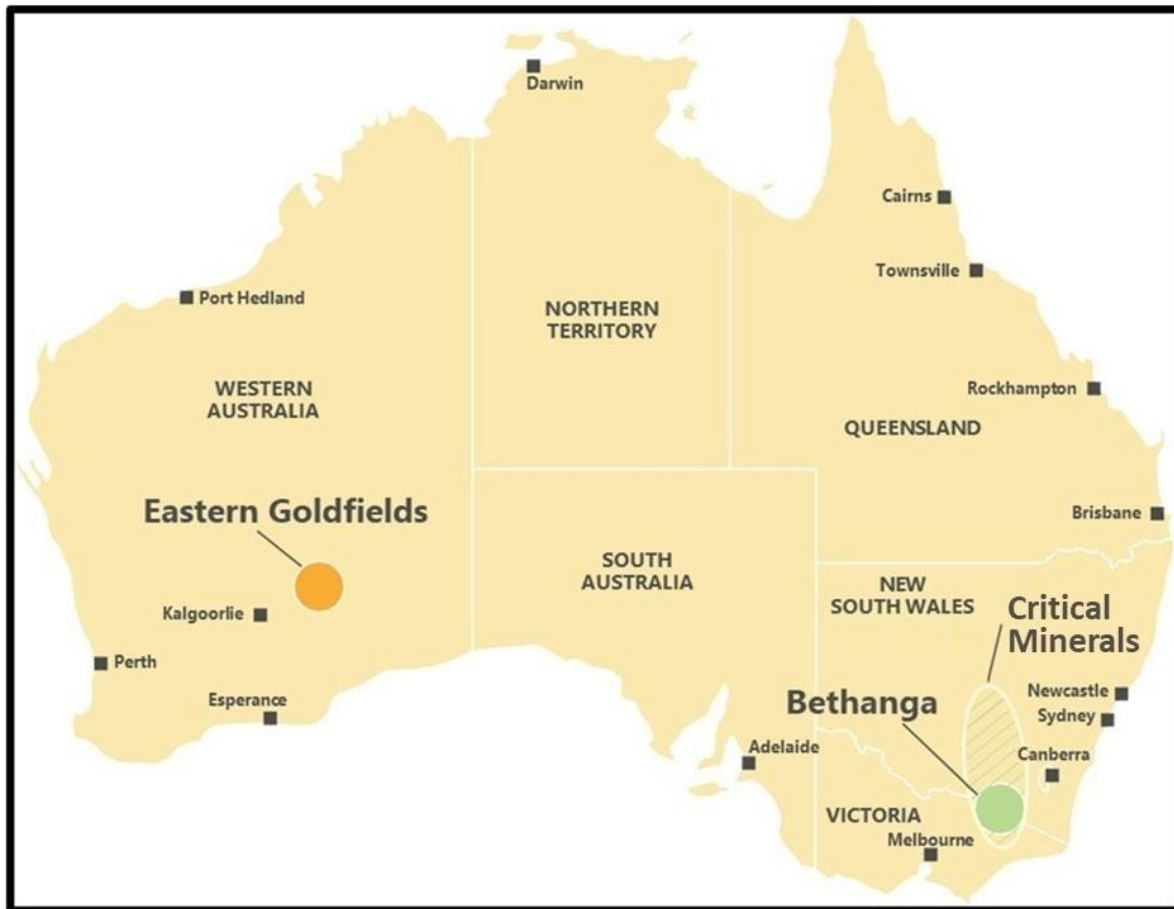


Figure 8: Detailed geochemical zoning of pegmatites from a fertile intrusive contact (From Steiner, 2019)



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



**Figure 9: Nexus Project Locations, Australia**

## **About Nexus**

Nexus principal activity is exploring for gold deposits on its highly prospective 250km<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 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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                      **Mr Paul Boyatzis, Non-Executive Chairman**

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**Website**        **[www.nexus-minerals.com](http://www.nexus-minerals.com)**

**ASX Code**      **NXM**





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*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.*