



# ASX ANNOUNCEMENT

## BANGEMALL Ni-Cu-PGE EXPLORATION UPDATE

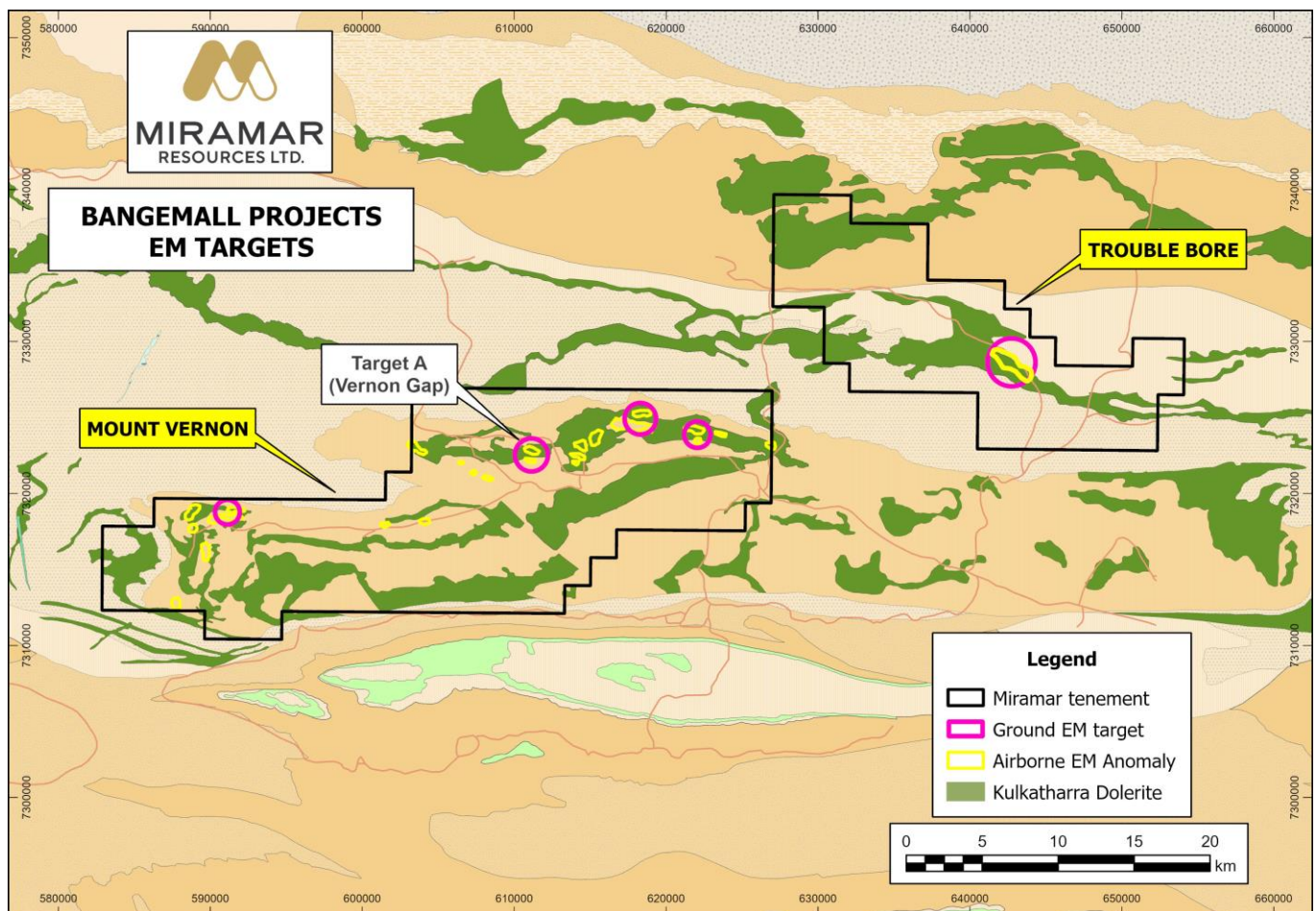
- Fixed loop TEM survey progressing at Mount Vernon and Trouble Bore
- Multiple conductive plates modelled at first target (Vernon Gap)
- Miramar has dominant land position in a potential new Ni-Cu-PGE province

Miramar Resources Limited (ASX:M2R, “Miramar” or “the Company”) is pleased to provide an update on activities at the Company’s district-scale Bangemall Project in the Gascoyne region of WA.

The Bangemall Project has potential for Norilsk-style nickel, copper and platinum group element (Ni-Cu-PGE) mineralisation related to Kulkatharra Dolerite sills, part of the Warakurna Large Igneous Province and the same age as the large Nebo and Babel Ni-Cu deposits in the West Musgraves.

The Company recently commenced a fixed loop electromagnetic (FLTEM) survey over selected airborne EM anomalies within the Mount Vernon and Trouble Bore project areas (Figure 1).

Despite enduring extreme weather conditions, with multiple consecutive days above 45 degrees, the geophysical contractors, Wireline Services Group, have recently completed surveying the first target, “Vernon Gap”.



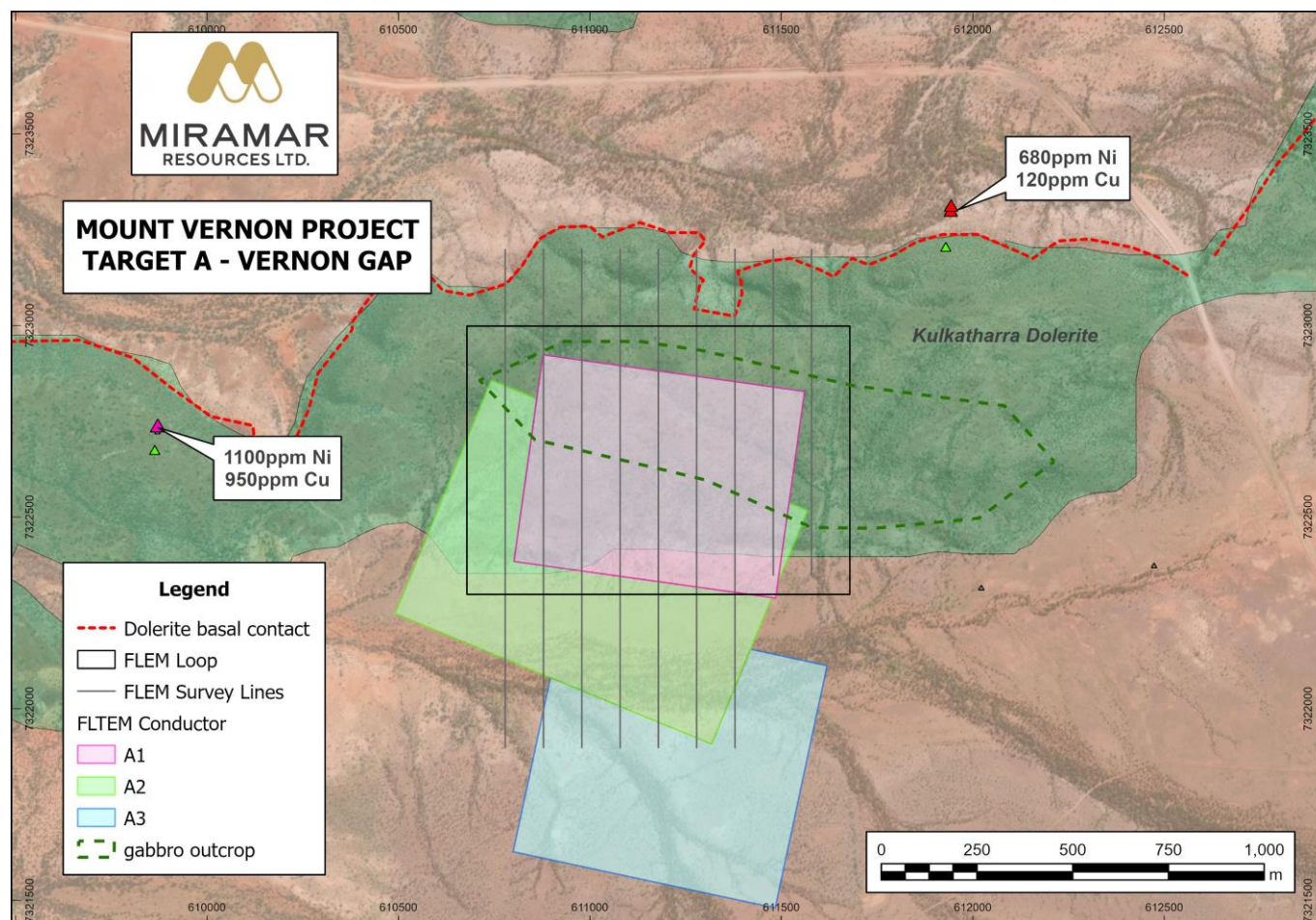
**Figure 1.** Mount Vernon and Trouble Bore projects showing airborne EM anomalies and planned ground EM in relation to Kulkatharra Dolerite sills.



Modelling of the FLTEM data shows multiple south-dipping conductive plates, approximately 700m x 700m in area, under the dolerite sill and where disseminated sulphides (pyrite) are observed in outcropping gabbro (Figure 2).

There is no previous drilling in the vicinity of this target.

The geophysical crew have now moved on to the second target, approximately 10 kilometres east of Vernon Gap.

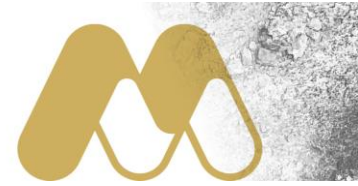


**Figure 2.** “Vernon Gap” Target showing conductive plates modelled from FLTEM survey.

Miramar’s Executive Chairman, Mr Allan Kelly, said the Bangemall Project had the potential for a style of Ni-Cu-PGE mineralisation not previously seen in WA, and most like the giant Norilsk nickel-copper deposits in Siberia.

*“We are the first company to conduct any systematic exploration for this style of deposit in the Bangemall area, so to identify sulphides in dolerite and gabbro, albeit pyrite, and conductors at our first target is pretty exciting” he said.*

*“We believe the Bangemall has the potential to be an entirely new nickel province in which we have built a commanding land position, and we look forward to continuing to uncover the potential of this very large project,” he said.*



**Planned work**

Miramar's initial aim is to show "proof of concept" of the Company's Ni-Cu-PGE deposit model at Bangemall by identifying Ni-Cu-PGE sulphide mineralisation.

Work planned for 2024 includes:

- Completion of FLEM surveys over selected VTEM anomalies at Mount Vernon and Trouble Bore,
- Application for funding under the WA government's "Exploration Incentive Scheme"
- RC drill testing – subject to permitting
- Progressing other tenement applications to grant, and
- Identifying other prospective areas to peg and/or acquire

**For more information on Miramar Resources Limited, visit the Company's website at [www.miramarresources.com.au](http://www.miramarresources.com.au), follow the Company on social media (Twitter @MiramarRes and LinkedIn @Miramar Resources Ltd) or contact:**

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This announcement has been authorised for release by Mr Allan Kelly, Executive Chairman, on behalf of the Board of Miramar Resources Limited.



## About the Bangemall Project

Miramar's 100%-owned Bangemall Project comprises granted Exploration Licences and Applications covering approximately 2,190 km<sup>2</sup> within the Gascoyne region of Western Australia (Figure 3).

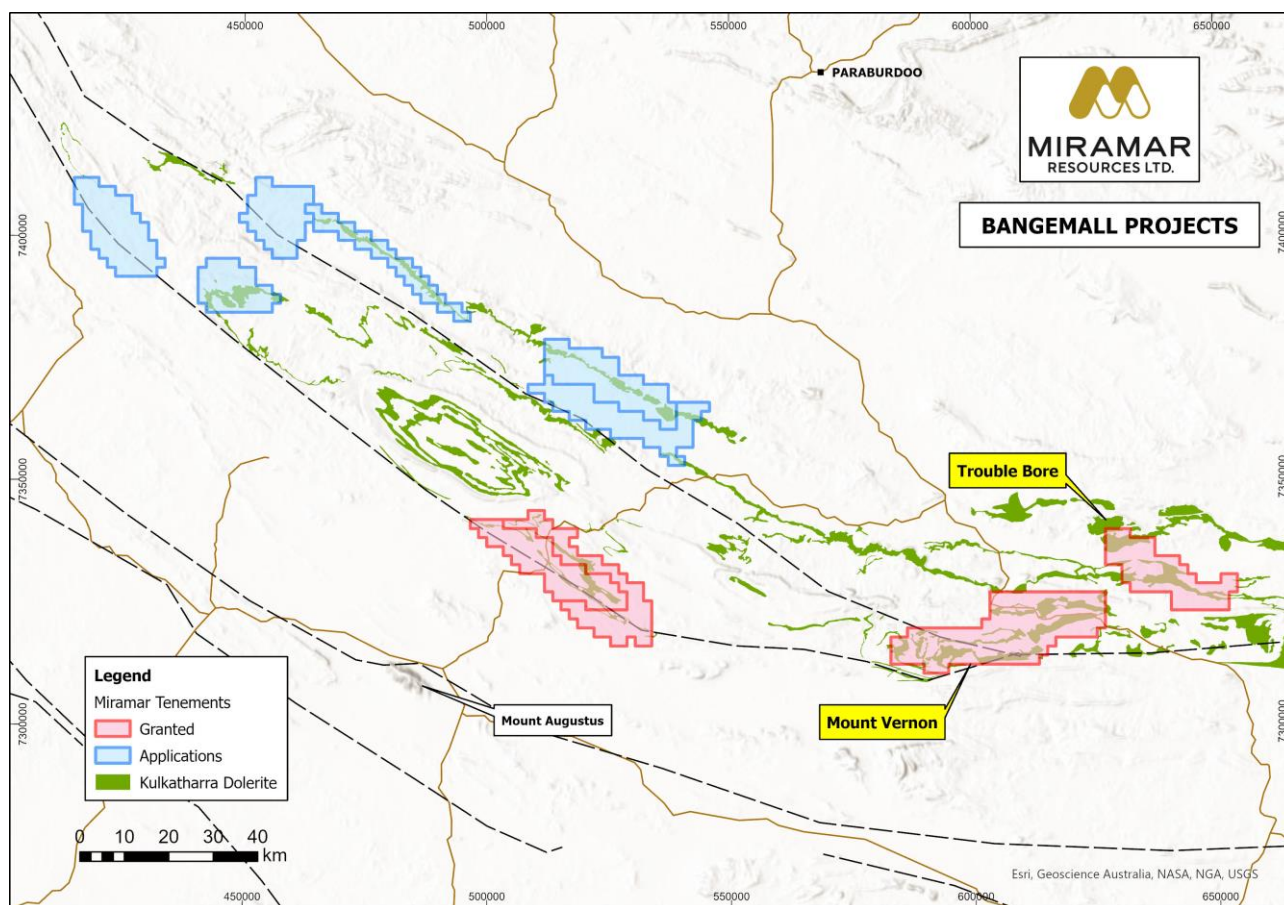
The Proterozoic Edmund and Collier Basins have been intruded by numerous 1070Ma aged Kulkatharra Dolerite sills, part of the Warakurna Large Igneous Province, and the same age as the Giles Complex which hosts the large Nebo and Babel Ni-Cu deposits in the West Musgraves.

The region has therefore been identified by both the Geological Survey of Western Australia and Geoscience Australia as having high prospectivity for Ni-Cu-PGE mineralisation associated with the Kulkatharra Dolerite sills, similar to the giant Norilsk-Talnakh Ni-Cu-PGE deposits in Russia (Figure 4).

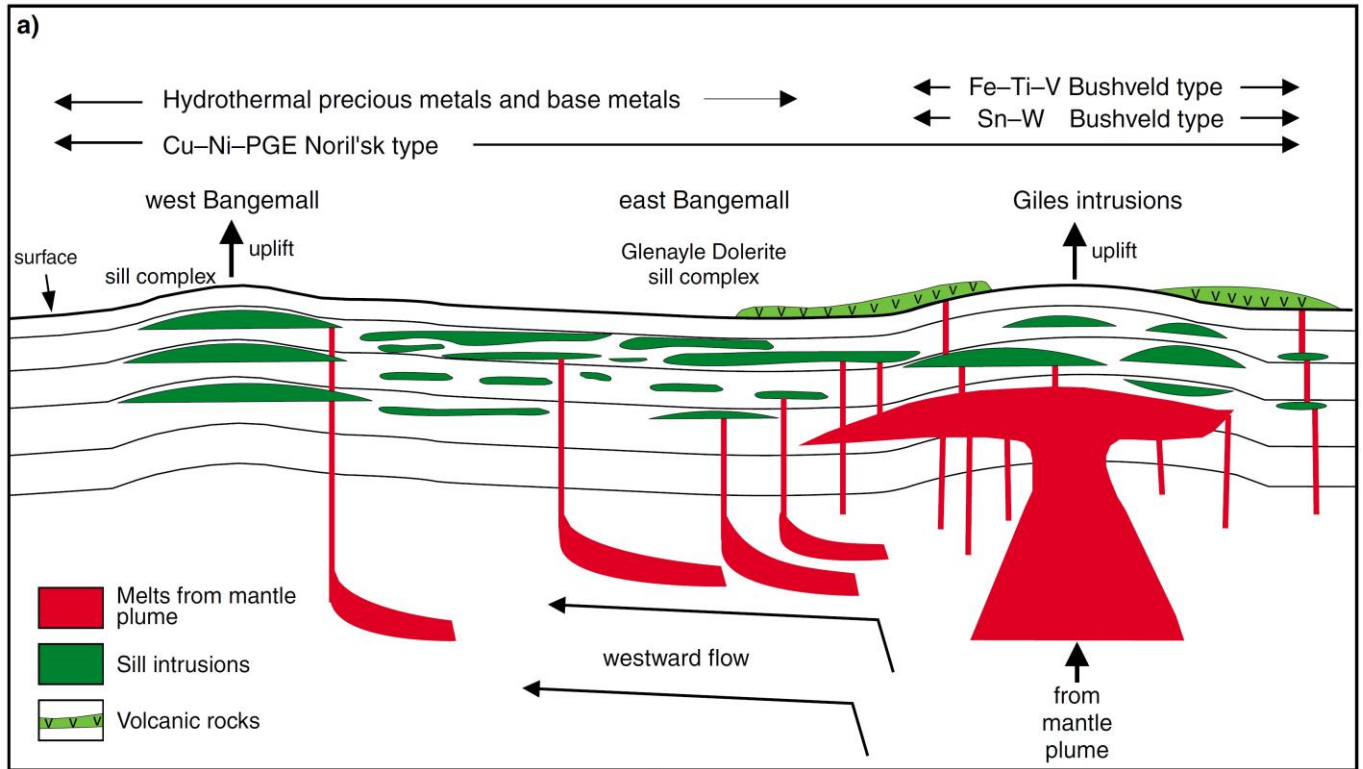
Since 2020, Miramar has built a strategic land position in the Bangemall region, focussing on areas containing key ingredients and/or regional-scale indicators for Proterozoic Ni-Cu-PGE mineralisation:

- Kulkatharra Dolerite sills – source of Ni, Cu +/- PGE's
- Proximity to major crustal-scale faults (+/- cross faults) - potential plumbing systems +/- traps
- Sulphidic sediments - potential sulphur source
- Regional-scale geochemical anomalism (GSWA regional geochemistry)
- Regional-scale EM anomalism (2013 Capricorn AEM Survey)

At the Mount Vernon Project, Miramar identified multiple late-time VTEM anomalies associated with strongly elevated Ni, Cu and PGE results in historic rock chip samples and is planning to conduct ground EM surveys during 2024 with the aim of defining targets for drill testing.



**Figure 3.** Bangemall Projects showing Kulkatharra Dolerite sills and major crustal-scale faults (dashed lines).



**Figure 4.** Schematic long section of the Warakurna Large Igneous Province showing mafic rocks and potential mineralisation styles (Morris and Pirajno, 2005).

**References**

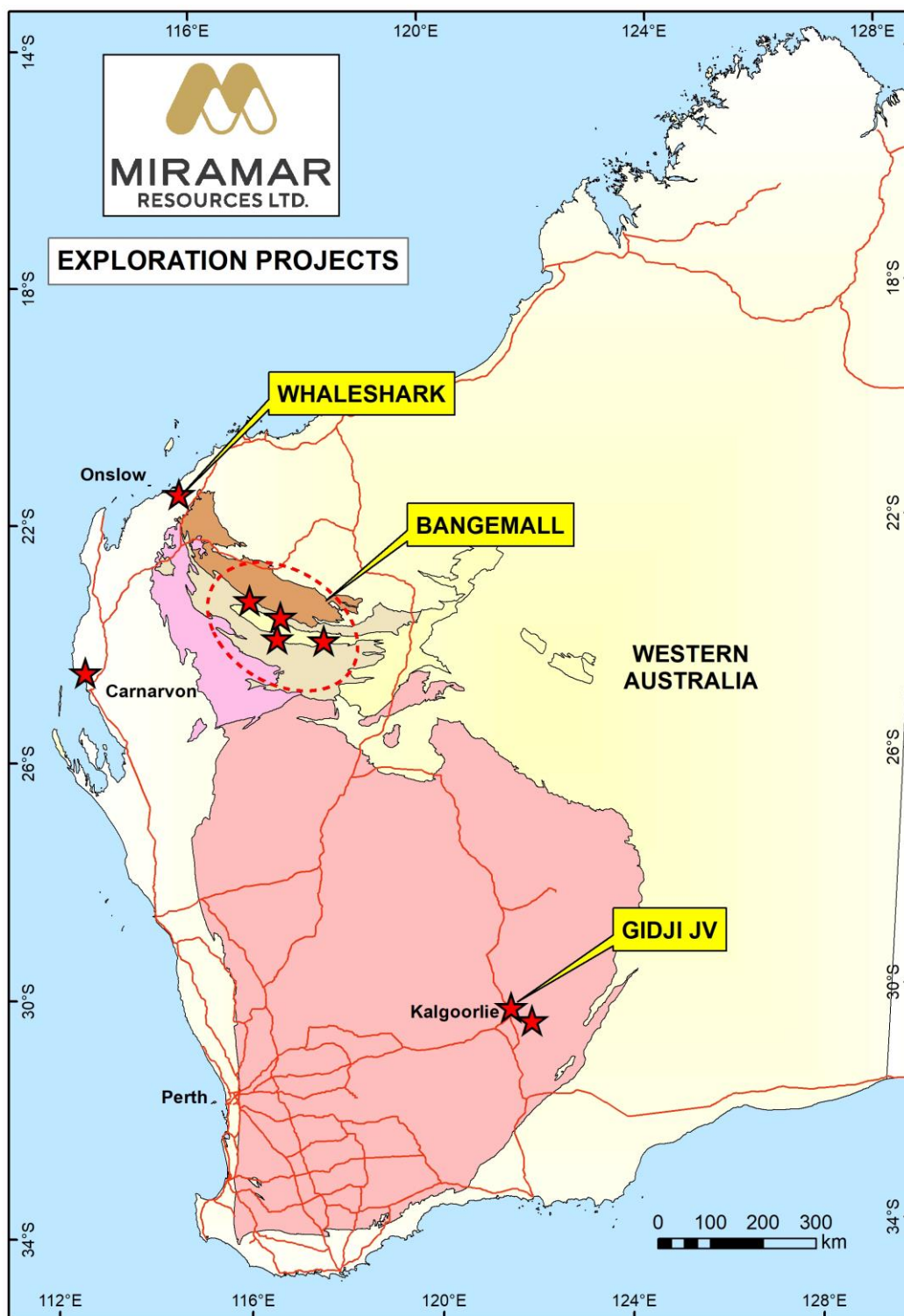
MORRIS, P. A., AND PIRAJNO, F., 2005, Mesoproterozoic Sill Complexes of the Bangemall Supergroup in Western Australia: Geology, Geochemistry and Mineralisation Potential. GSWA Report 99.

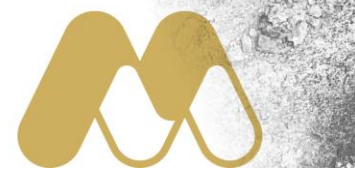


**About Miramar Resources Limited**

Miramar Resources Limited is an active, WA-focused mineral exploration company exploring for gold, copper and Ni-Cu-PGE deposits in the Eastern Goldfields and Gascoyne regions of WA.

Miramar’s Board has a track record of discovery, development and production within Australia, Africa, and North America, and aims to create shareholder value through discovery of high-quality mineral deposits.





## COMPETENT PERSON STATEMENT

The information in this report that relates to Exploration Results is based on information compiled by Allan Kelly, a “Competent Person” who is a Member of The Australian Institute of Geoscientists. Mr Kelly is the Executive Chairman of Miramar Resources Ltd. He is a full-time employee of Miramar Resources Ltd and holds shares and options in the company.

Mr Kelly has sufficient experience that is relevant to the style of mineralisation and type of deposits under consideration and to the activity being undertaken to Qualify as a “Competent Person” as defined in the 2012 Edition of the ‘Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves’.

Mr Kelly consents to the inclusion in this Announcement of the matters based on his information and in the form and context in which it appears.

Historical exploration results for the Bangemall Project, including JORC Table 1 and 2 information, is included in the Miramar Prospectus dated 4 September 2020.

JORC Table 1 and 2 information for recent exploration results within the Bangemall Project is contained in the following ASX Announcements:

- *2 January 2024 – “Tenement Grant Expands Bangemall Project”*
- *24 July 2023 – “Approval Received for Mount Vernon Drilling”*
- *17 July 2023 – “Gascoyne Projects Update”*
- *21 June 2023 – Gascoyne Projects Funded Following Capital Raising”*
- *25 May 2023 – “High-Priority Ni-Cu-PGE Targets Identified at Mt Vernon”*
- *14 March 2023 – “Gascoyne Plans Finalised Following Capital Raising”*
- *9 March 2023 – “Gascoyne Region Exploration Update”*
- *17 January 2023 – “Multiple Large REE Targets Identified at Dooley Downs”*
- *“14 November 2022 – “Large REE Targets Identified at Dooley Downs”*
- *3 October 2022 – “Diamond occurrence & uranium targets identified at Bangemall”*
- *12 June 2022 – “New Ni-Cu-PGE targets identified at Bangemall”*
- *3 February 2022 – “Multiple Large EM Anomalies Identified at Mt Vernon”*
- *25 January 2022 – “EM Survey Commenced at Bangemall Ni-Cu-PGE Target”*
- *1 September 2021 – “Multiple EM Conductors Identified within Bangemall Project”*