



# ASX ANNOUNCEMENT

## GROUND EM SURVEY UNDERWAY AT MOUNT VERNON

- Fixed loop EM survey at Mount Vernon to refine targets for future drill testing
- Miramar has dominant land position in potential new Ni-Cu-PGE province

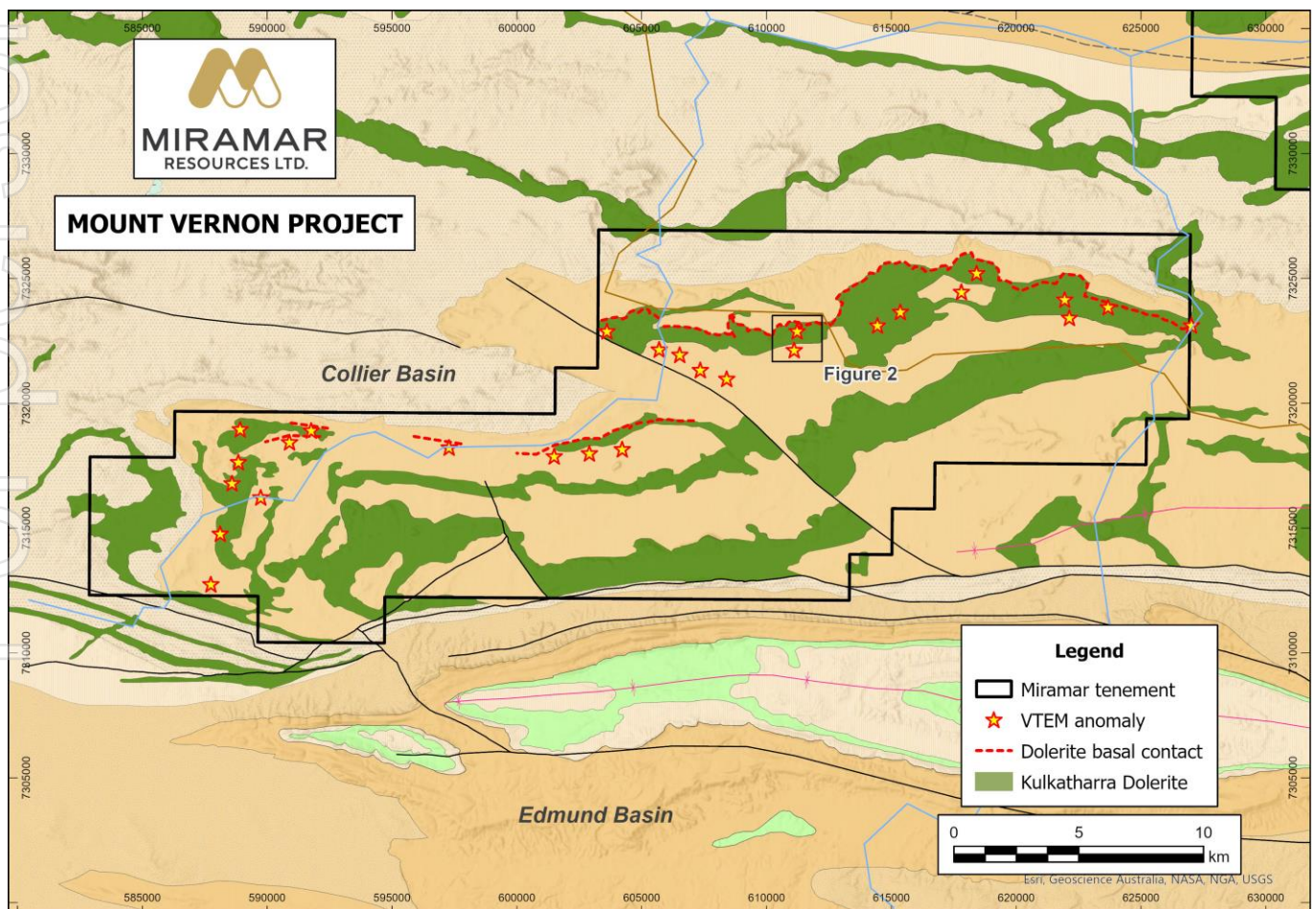
Miramar Resources Limited (ASX:M2R, “Miramar” or “the Company”) is pleased to advise that geophysical contractors have commenced a fixed loop electromagnetic (FLEM) survey at the Company’s 100%-owned Mount Vernon nickel, copper and platinum group element (Ni-Cu-PGE) Project, part of the Company’s district-scale Bangemall Project in the Gascoyne region of Western Australia.

Miramar believes the Bangemall Project has significant potential for Ni-Cu-PGE mineralisation related to Kulkatharra Dolerite sills, which are 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 previously flew a Versatile Time Domain Electromagnetic (VTEM) survey which identified multiple late-time EM anomalies where a dolerite sill intrudes into sulphidic sediments (Figure 1).

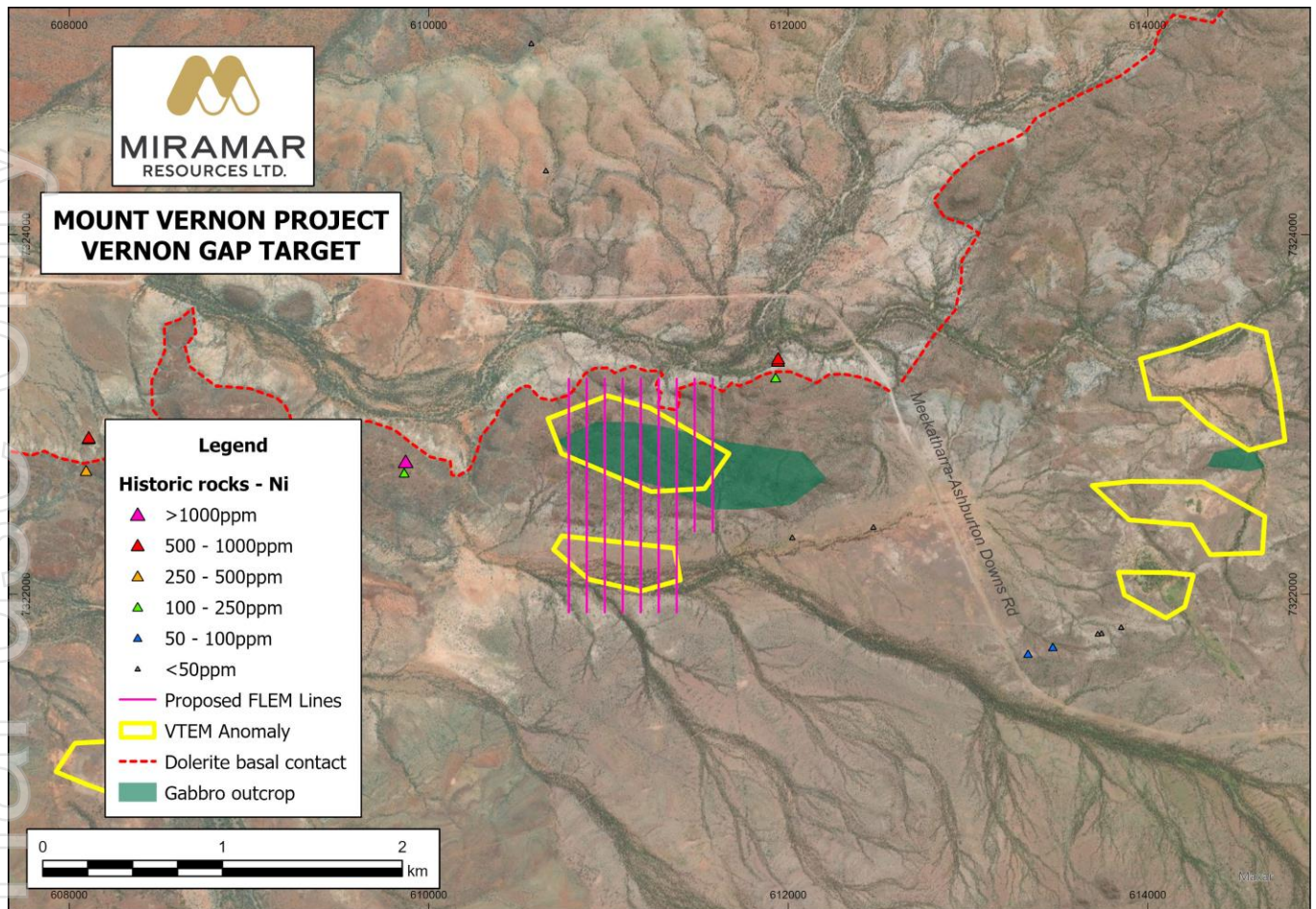
Subsequent reconnaissance rock chip sampling identified coarse-grained sulphides (pyrite) in outcropping fine grained chill margin of the dolerite and coarser-grained gabbro at several locations.

The FLEM survey will test several high priority VTEM anomalies to refine targets for future drill testing, including the “Vernon Gap” target where a strong late-time VTEM anomaly is seen beneath sulphides in outcropping gabbro and adjacent to significant Ni and Cu results in historic sampling (Figure 2).



**Figure 1.** Mount Vernon Project showing dolerite sills and late-time VTEM anomalies (Z channel 45).





**Figure 2.** “Vernon Gap” Target showing proposed FLEM survey lines in relation to VTEM anomaly, outcropping gabbro and historic rock chip samples.

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 deposits in Siberia.

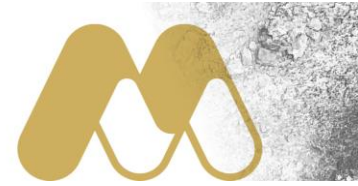
“We believe the Bangemall has the potential to be an entirely new nickel province in which we have built a commanding land position, and we look forward to continuing to uncover the potential of this very large project,” he said.

### Upcoming 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 therefore includes:

- Completion of FLEM surveys over selected high-priority VTEM anomalies at Mount Vernon, followed by modelling and RC drill testing
- Ground checking historic SkyTEM anomalies at the newly granted Trouble Bore Licence
- 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.

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**About the Bangemall Project**

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

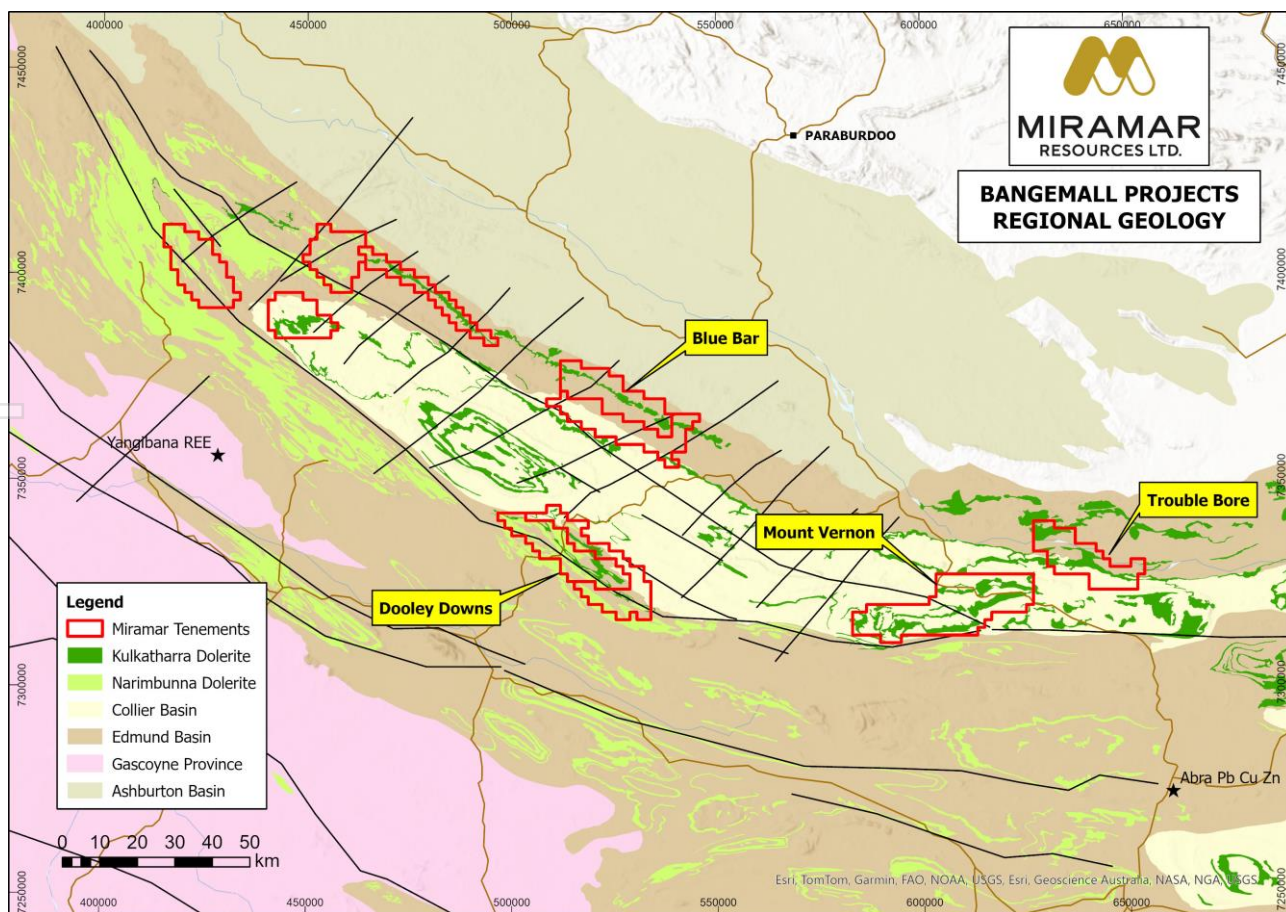
The Proterozoic Edmund and Collier Basins have been intruded by numerous Kulkatharra Dolerite sills, part of the Warakurna Large Igneous Province, and the same age as the Giles Complex which hosts the large Nebo and Babel Ni-Cu deposits in the West Musgraves.

The region has previously 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).

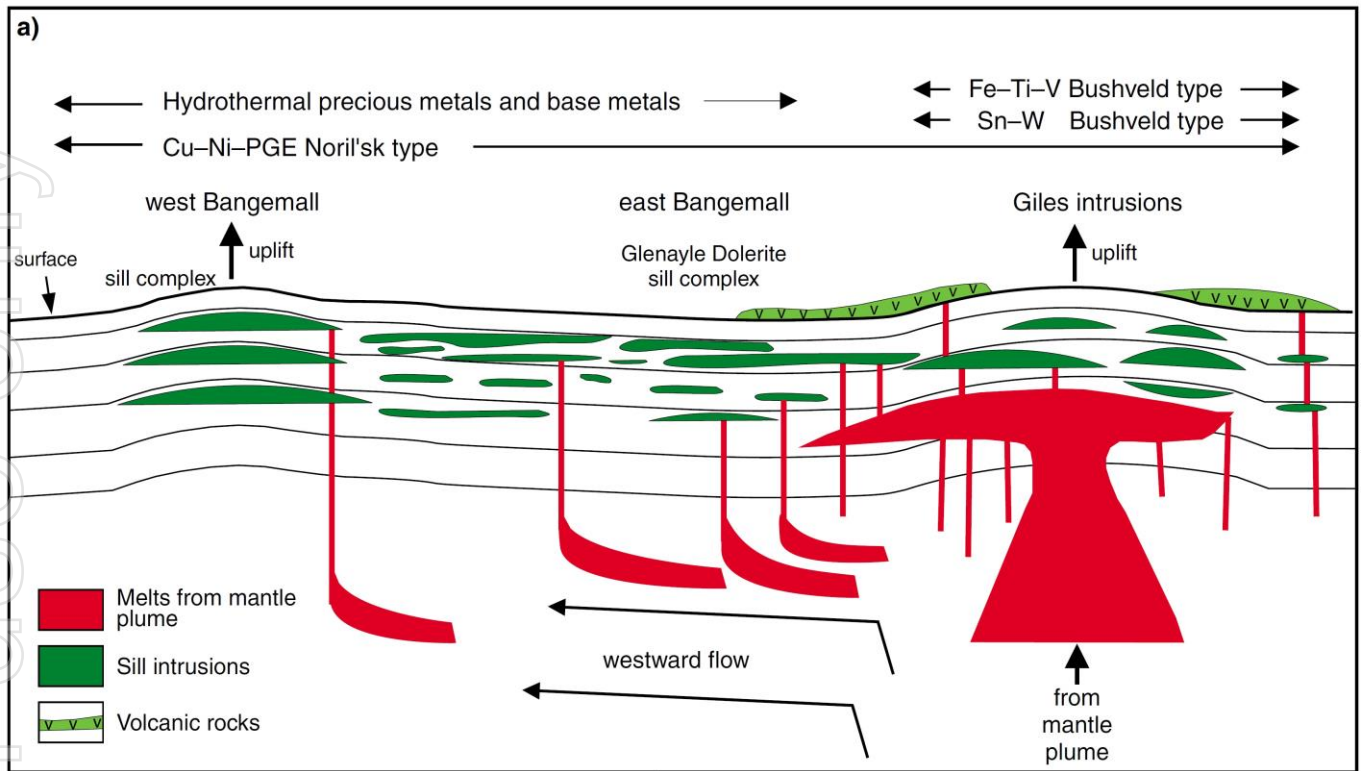
Since 2020, Miramar has built a strategic land position in the Bangemall region, focussing on areas containing key ingredients and/or regional-scale indicators for Proterozoic Ni-Cu-PGE mineralisation:

- 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.



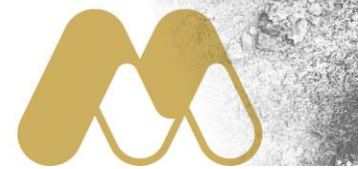
**Figure 3.** Bangemall Projects showing regional geology and Kulkatharra Dolerite sills.



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

**References**

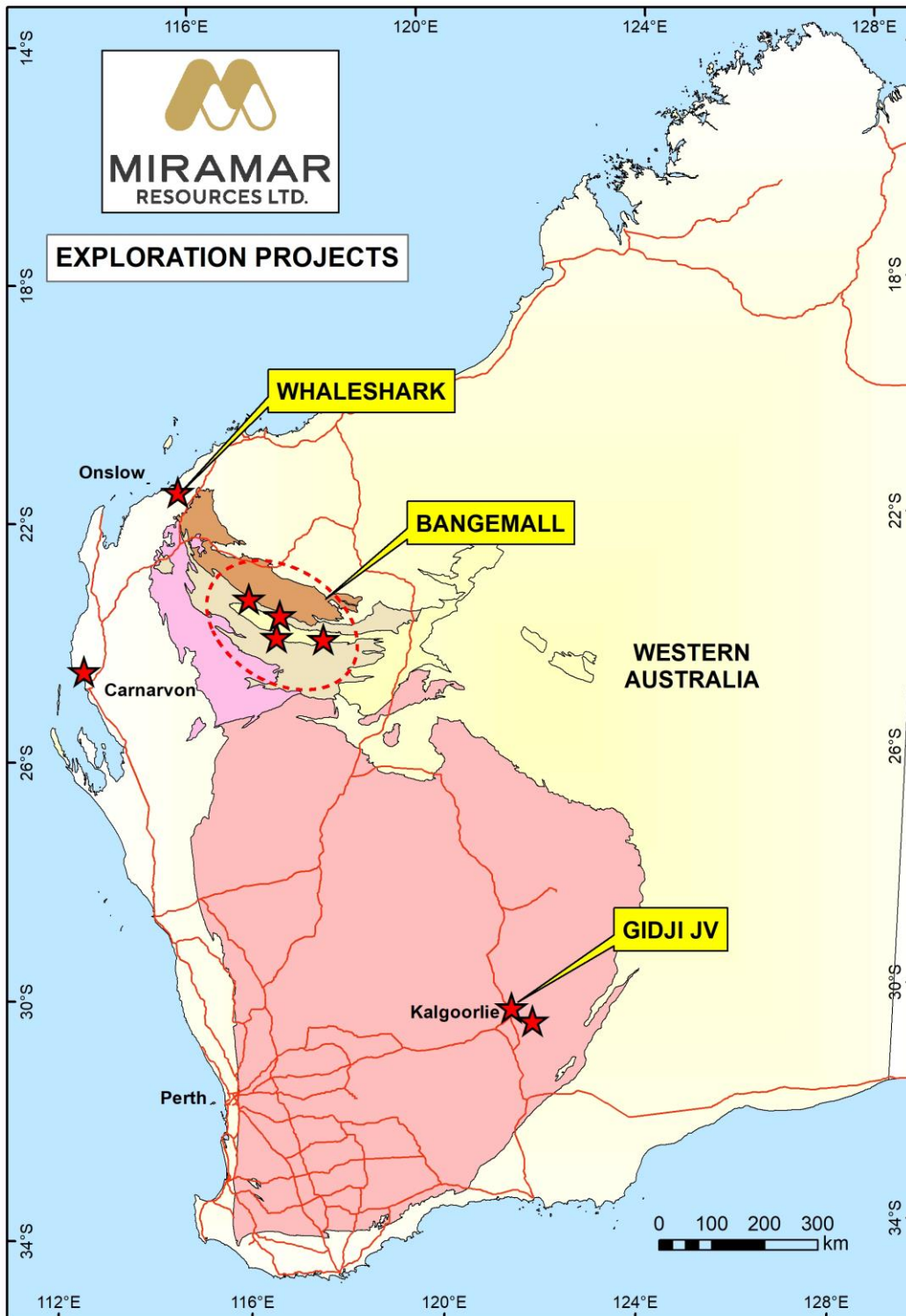
MORRIS, P. A., AND PIRAJNO, F., 2005, Mesoproterozoic Sill Complexes of the Bangemall Supergroup in Western Australia: Geology, Geochemistry and Mineralisation Potential. GSWA Report 99.



### About Miramar Resources Limited

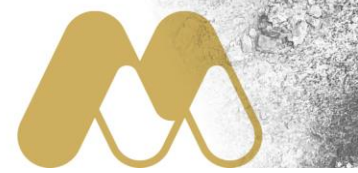
Miramar Resources Limited is an active, WA-focused mineral exploration company exploring for gold, copper and Ni-Cu-PGE deposits in the Eastern Goldfields and Gascoyne regions of WA.

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.



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## 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”*