



# ASX ANNOUNCEMENT

## LARGE-SCALE MAGNETITE IRON OPPORTUNITIES IDENTIFIED AT WHALESHARK

- Thick magnetite iron intersections >25% Fe identified in historic drill holes
- Similar scale opportunity to the Maitland River/Miaree magnetite iron deposits

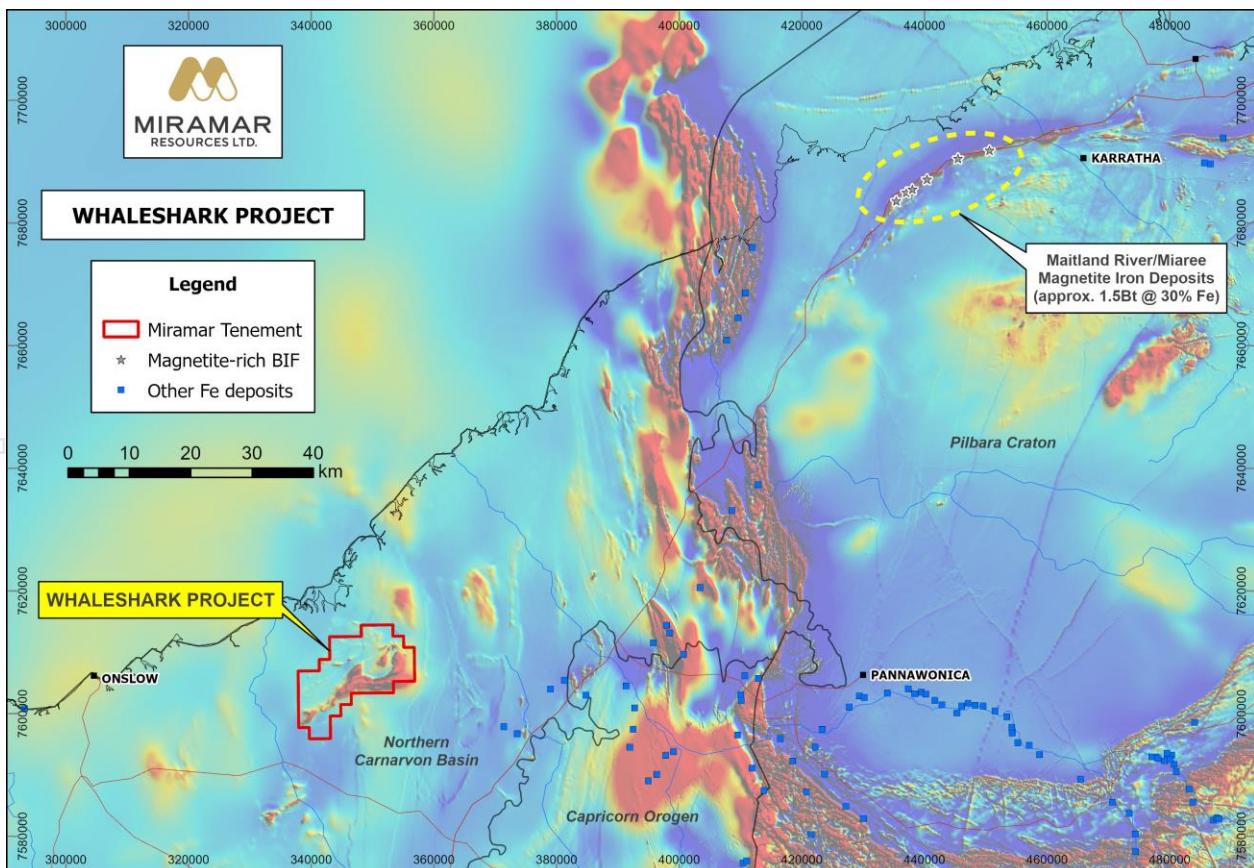
Miramar Resources Limited (ASX:M2R, "Miramar" or "the Company") advises that a review of historical drilling data has revealed potentially very significant magnetite iron opportunities at the Company's 100%-owned Whaleshark Project in the Ashburton Region of WA (Figure 1).

Drilling conducted at Whaleshark by Western Mining Corporation (WMC) in the 1990's, whilst exploring for iron oxide copper-gold, intersected significant widths of magnetite-rich banded iron formation averaging >25% Fe beneath younger sediments, with several holes ending in mineralisation (Figures 2 and 3).

Miramar recently re-examined those holes, following completion of its own diamond drilling campaign.

Miramar's Executive Chairman, Mr Allan Kelly, said the magnetic anomalies seen at Whaleshark are similar in scale to the 1.5 billion tonne Maitland River and Miaree magnetite iron deposits<sup>1</sup>.

*"The recognition of two potentially very large magnetite iron deposits is very significant for Miramar, especially given the location of the Whaleshark Project with respect to existing infrastructure," he added.*



**Figure 1.** Regional magnetic image showing Whaleshark Project in relation to the Maitland River and Miaree magnetite iron deposits.

<sup>1</sup> Iron Ore Holdings Ltd ASX Release, 4 June 2012 and Iron Mountain Mining Ltd ASX Release, 13 August 2012

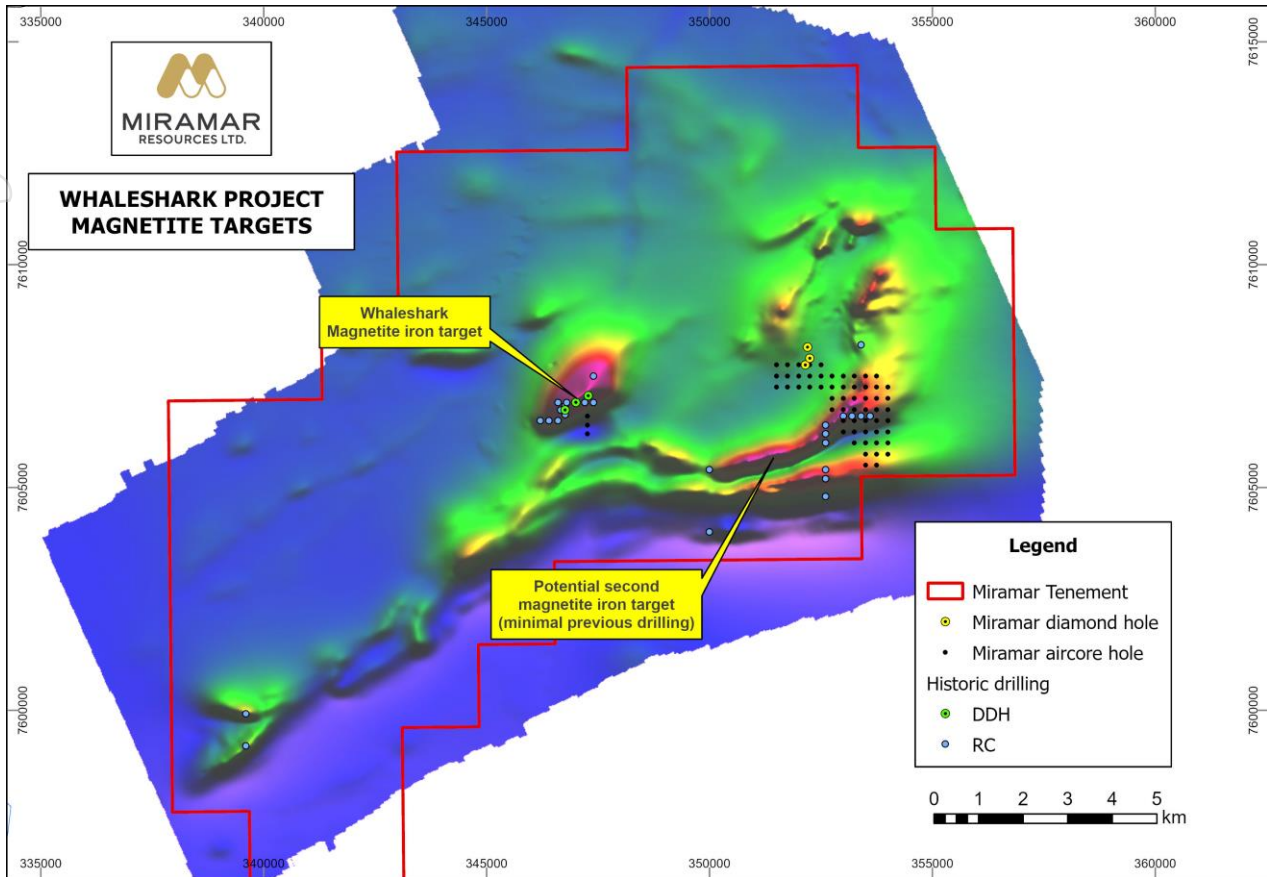
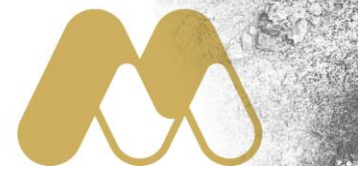


Figure 2. Magnetic image of Whaleshark Project showing magnetite iron targets.

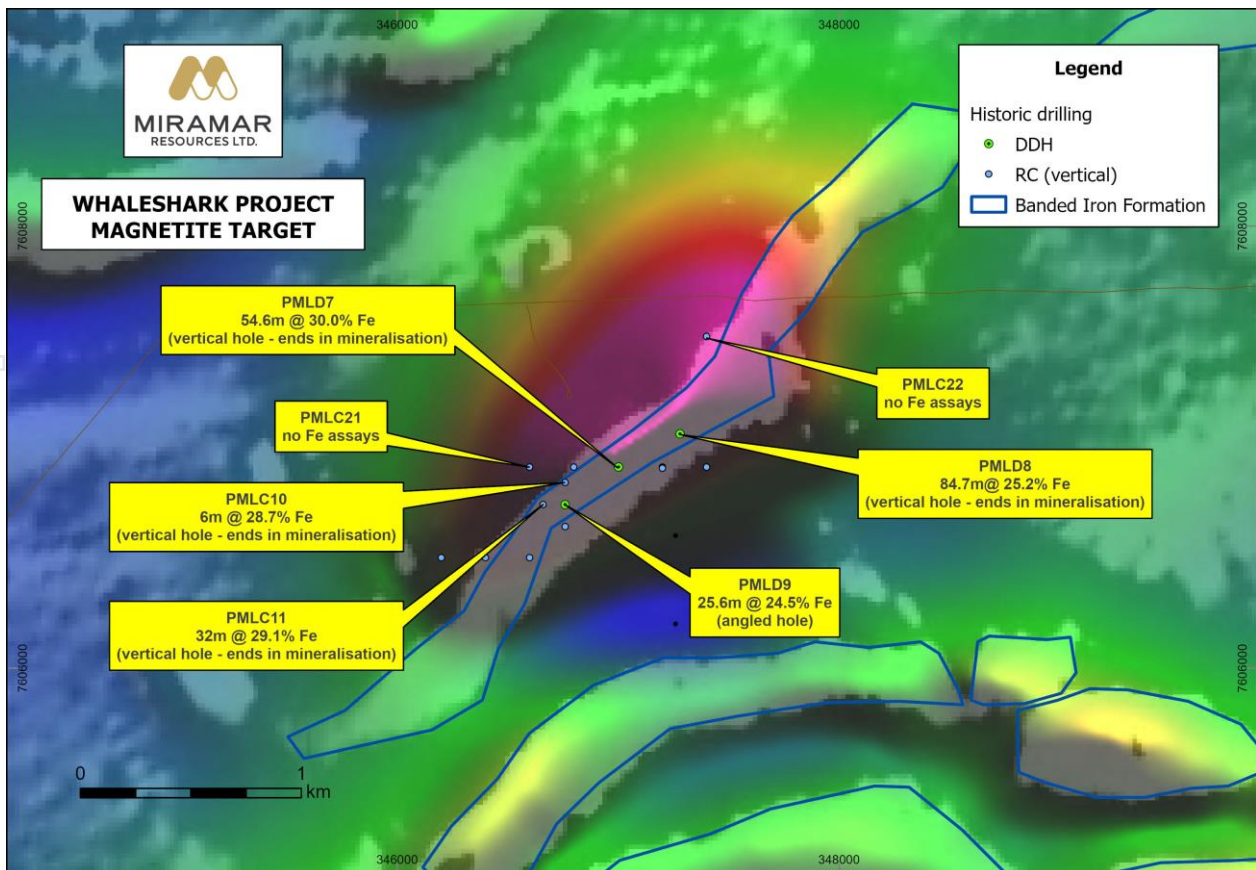
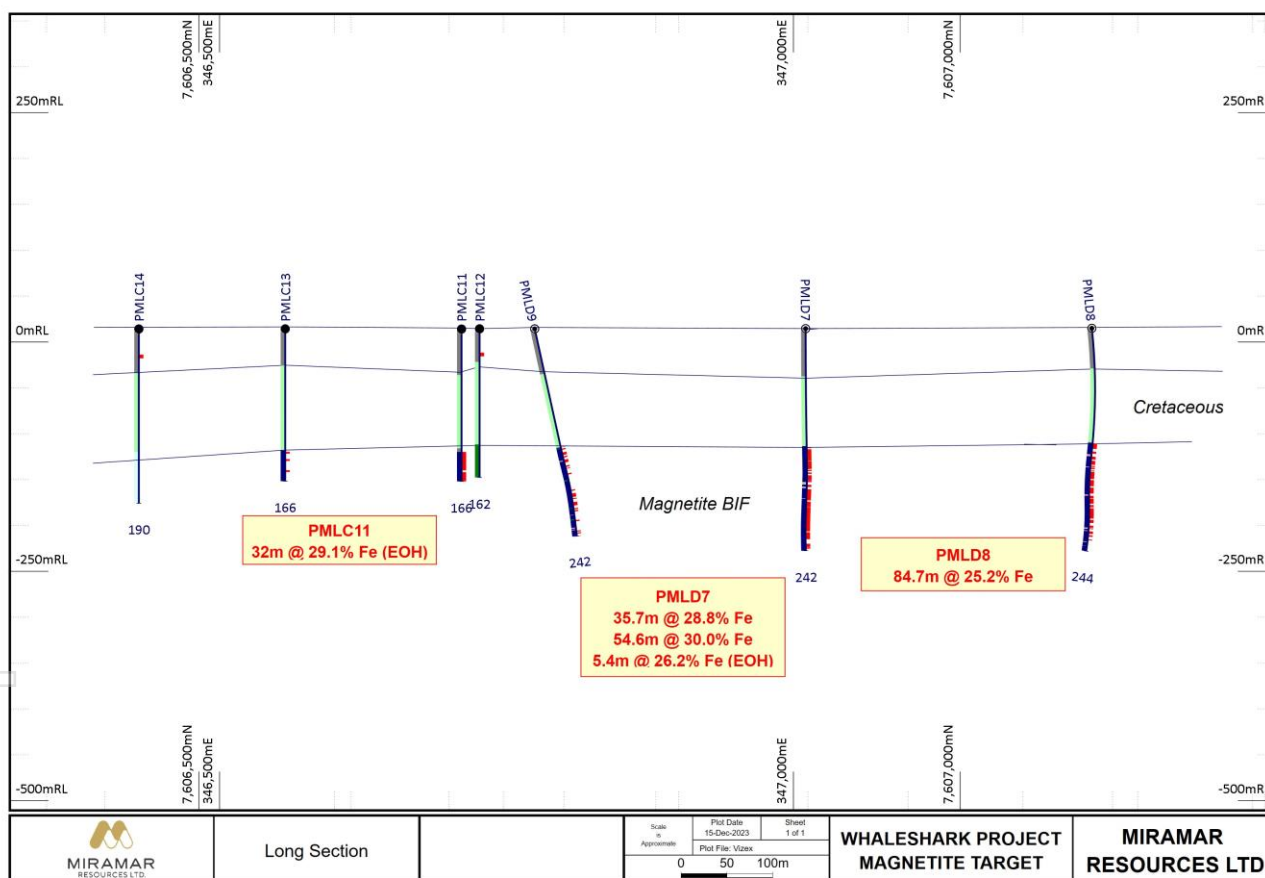


Figure 3. Magnetic image (RTP/2VD) of Whaleshark magnetite target showing historic drilling results.



**Table 1.** Summary of Whaleshark historic drill results

Hole ID	From	To	Interval	Fe %
PMLC10	148	154 EOH	6	28.7
PMLC11	134	166 EOH	32	29.1
PMLD7	131.55	167.2	35.65	28.8
	175	229.6	54.6	30.0
	234.6	240 EOH	5.4	26.2
PMLD8	140.3	225	84.7	25.2
PMLD9	137.5	163.1	25.6	24.5
	187.6	197.5	8.5	25.9
	203.5	213	9.5	23.9



**Figure 4.** NE-SW Long Section of Whaleshark magnetite target showing WMC drilling.

A larger and virtually untested magnetite target is observed on the southern side of the granodiorite pluton.

Drill testing of the second magnetic anomaly is limited, with only a handful of historic RC holes that were not assayed for iron, and recent aircore holes completed by Miramar in 2022 that ended in 18-32% Fe.

In general, the basement is significantly shallower within this target, with average cover thickness in the order of 25-30m.



Miramar staff recently inspected core from the historic WMC drill holes stored at the GSWA core library in Perth, along with consultant Tim Craske, who worked on the Whaleshark Project with WMC.

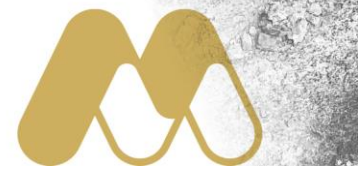
Along with examining PMLD9, which intersected gold mineralisation in sulphidised BIF (Figure 5), Miramar staff noted similarities between the banded iron formation seen at Whaleshark and limited samples of the Cleaverville Formation, which hosts the Maitland River and Miaree magnetite iron deposits in the Pilbara (Figure 6).



**Figure 5.** Sulphidised BIF intersected in PMLD9 which originally returned 0.4m @ 1.9g/t Au.



**Figure 6.** Comparison of magnetite-rich banded iron formation from the Cleaverville Formation (centre) with samples from historic Whaleshark diamond drill holes (left and right).



## Upcoming work

As a result of work completed to date, the Company believes there is potential for multiple styles of mineralisation within the Whaleshark Project including, but not limited to:

- BIF and/or intrusion related gold (e.g. Homestake, Hemi)
- iron oxide copper-gold (e.g. Ernest Henry, Starra)
- magnetite iron (e.g. Maitland River, Miaree)
- roll-front uranium (e.g. Manyingee, Bennet Well)

The Company is finalising exploration work to be completed at Whaleshark during 2024 which will include:

- a low-cost passive seismic survey to map the depth to basement across the Project
- a heritage survey covering potential drill sites
- further aircore drilling to map basement geology +/- interface geochemical anomalism

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 Hematite and Magnetite iron Ore

**Hematite** is a non-magnetic iron oxide mineral. Pure hematite contains 69.9% Fe by molecular weight and has been the dominant iron ore mined in Australia since the early 1960s. Approximately 96% of Australia's iron ore exports are high-grade hematite, the bulk of which has been mined from deposits in the Hamersley province of Western Australia.

High-grade hematite ore is referred to as direct shipping ore (DSO) as, once mined, the ore goes through a simple crushing and screening process before being exported for steel making. Australia's hematite DSO from the Hamersley province averages from 56% to 62% Fe.

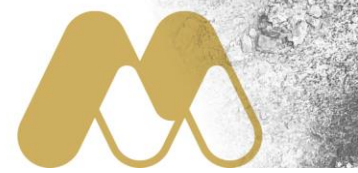
**Magnetite** is a highly magnetic iron oxide mineral that contains 72.4% Fe by molecular weight, which is higher than hematite. Magnetite ores, however, generally have a lower ore grade than hematite ore, generally 20-30% Fe, owing to the presence of impurities.

Like hematite ores, magnetite ores require initial crushing and screening but also undergo a second stage of processing using the magnetic properties of the ore to produce a higher-grade concentrate and pellets containing 65% to 70% Fe which can be used in blast furnaces or in direct reduction steel-making plants.

The pellets have a higher grade than hematite DSO currently being exported from the Hamersley province and can also contain lower levels of impurities, such as phosphorous, sulphur and aluminium. Thus, magnetite pellets are a premium product and attract higher prices from steel makers which can offset the lower ore grades and higher costs of production.

Large magnetite iron deposits occur across Australia including:

- the Pilbara region of Western Australia,
- Karara in Western Australia's mid-west, and
- Savage River in Tasmania.



## 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.

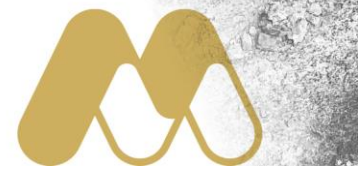
Mr Kelly has sufficient experience that is relevant to the style of mineralisation and type of deposits under consideration and to the activity being undertaken to Qualify as a “Competent Person” as defined in the 2012 Edition of the ‘Australasian Code for Reporting of Exploration Results, Mineral Resources 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 Whaleshark 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 at the Whaleshark Project is contained in the following ASX Announcements:

- 20 October 2023 - *Whaleshark IOCG Exploration Update*
- 4 September 2023 - *Copper Mineralisation Confirmed at Whaleshark*
- 7 August 2023 - *Diamond Drilling Underway at Whaleshark*
- 14 June 2023 – *Whaleshark Project Update*
- 21 April 2023 – *Successful EIS Application for Whaleshark Diamond Drilling*
- 14 February 2023 - *Significant Basement Copper and Cobalt Results Upgrade Whaleshark IOCG Potential*
- 14 December 2022 – *Whaleshark REE Results Upgrade IOCG Potential*
- 7 Nov 2022 - *Aircore Drilling Confirms IOCG Potential at Whaleshark*
- 18 Aug 2022 – *Drilling underway at Whaleshark Copper-Gold Project*
- 13 Dec 2021 – *Large IOCG targets outlined at Whaleshark*
- 3 Sep 2021 - *Whaleshark Soil Survey Outlines Numerous Large Targets*



**About the Whaleshark Project**

The Whaleshark Project is located in the Ashburton region of Western Australia, approximately 40km east of the coastal town of Onslow.

The Project is characterised by a banded iron formation and granite intrusion beneath approximately 100m of Cretaceous sediments of the Northern Carnarvon Basin.

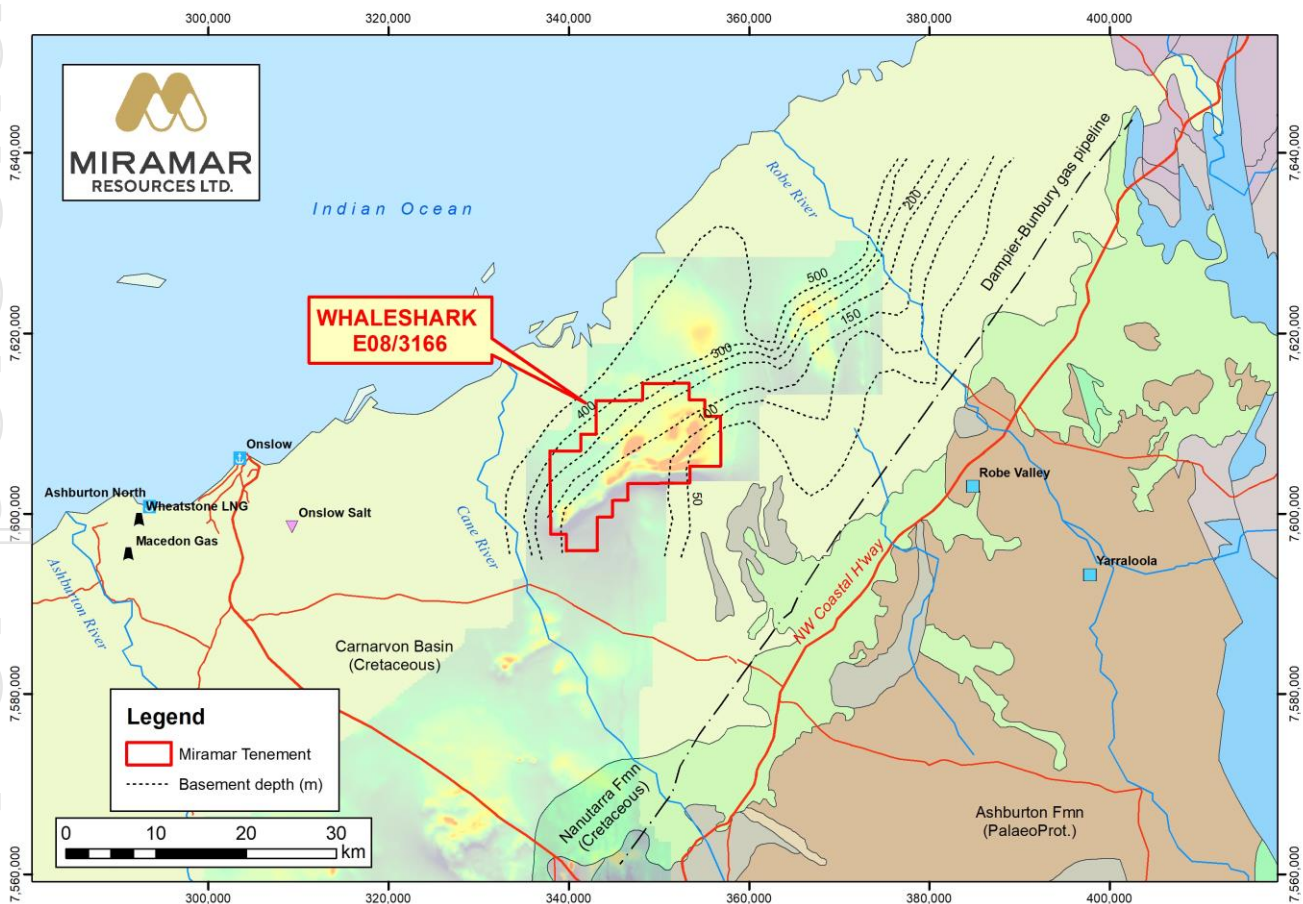
The Project has potential for discovery of:

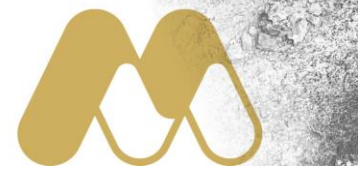
- Iron oxide copper-gold
- Banded iron and/or intrusion-related gold
- Magnetite iron ore
- Roll-front uranium (e.g. Manyingee, Bennet Well)

In 2022, Miramar identified strongly anomalous Cu, Co, Au, Ag and other IOCG pathfinders in shallow aircore drilling beneath surface geochemical anomalism.

Follow-up diamond drilling in 2023, co-funded under the WA government Exploration Incentive Scheme (EIS), intersected copper sulphide mineralisation in two of three holes.

The Project is surrounded by significant infrastructure including a major highway, gas pipeline and a new port facility at Onslow.

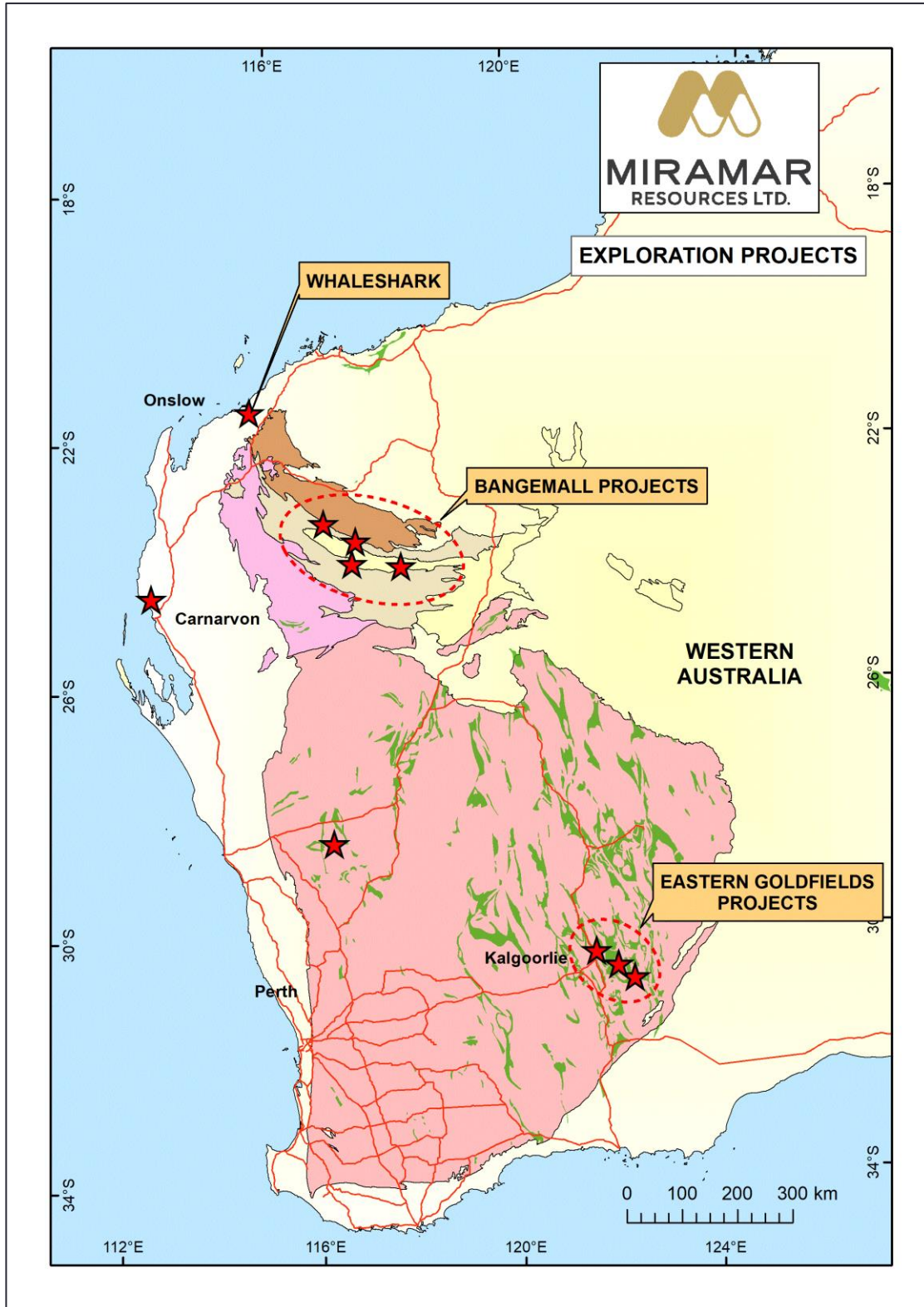




**About Miramar Resources Limited**

Miramar Resources Limited is an active, WA-focused mineral exploration company exploring for gold, IOCG, Ni-Cu-PGE and REE deposits in the Eastern Goldfields, Murchison 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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