



# ASX ANNOUNCEMENT

## MULTIPLE NEW IOCG TARGETS IDENTIFIED AT WHALESHARK

**Miramar Resources Limited (ASX:M2R, “Miramar” or “the Company”)** is pleased to advise that re-modelling of geophysical data at the Whaleshark Project has identified multiple new targets prospective for Iron Oxide Copper-Gold (IOCG) mineralisation (Figure 1).

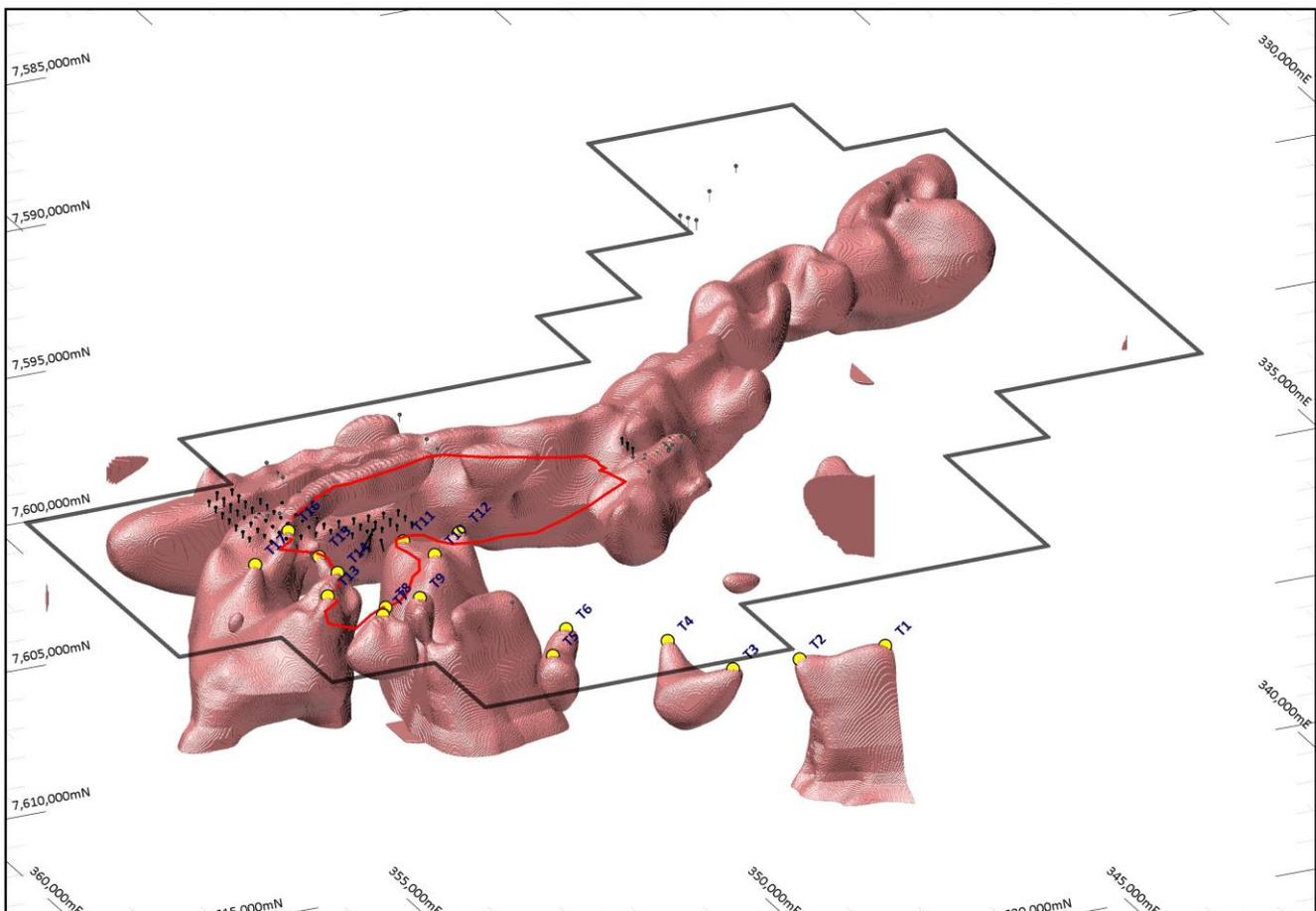
The 100%-owned Whaleshark Project is located approximately 40 kilometres east of Onslow, in the Ashburton region of Western Australia, and is characterised by a Proterozoic banded iron formation, metasediments and a granodiorite pluton beneath approximately 100m of Cretaceous basin sediments.

Aircore drilling in 2022 intersected geochemical anomalism and alteration suggestive of IOCG mineralisation, whilst EIS co-funded diamond drilling completed in 2023 intersected chalcopyrite in two holes, including within an iron-rich NW-trending structure cross-cutting the granodiorite.

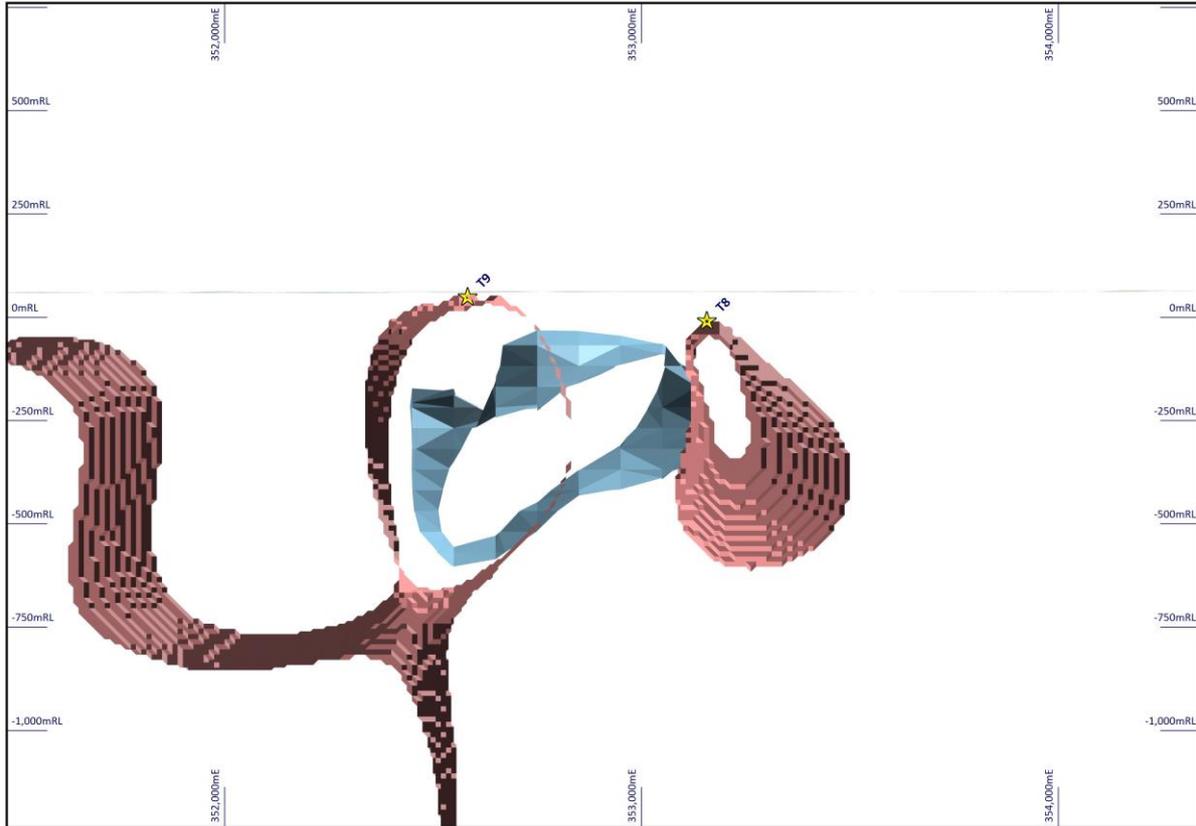
Miramar’s Executive Chairman, Mr Allan Kelly, said the new modelling had identified several new targets with overlapping gravity and magnetic anomalies (Figures 2 and 3), which is a key signature of many large IOCG deposits (Figure 4).

*“At Whaleshark, we have strongly anomalous copper, gold and other IOCG pathfinders, IOCG-style alteration and copper sulphide mineralisation associated with iron-rich rocks,” Mr Kelly said.*

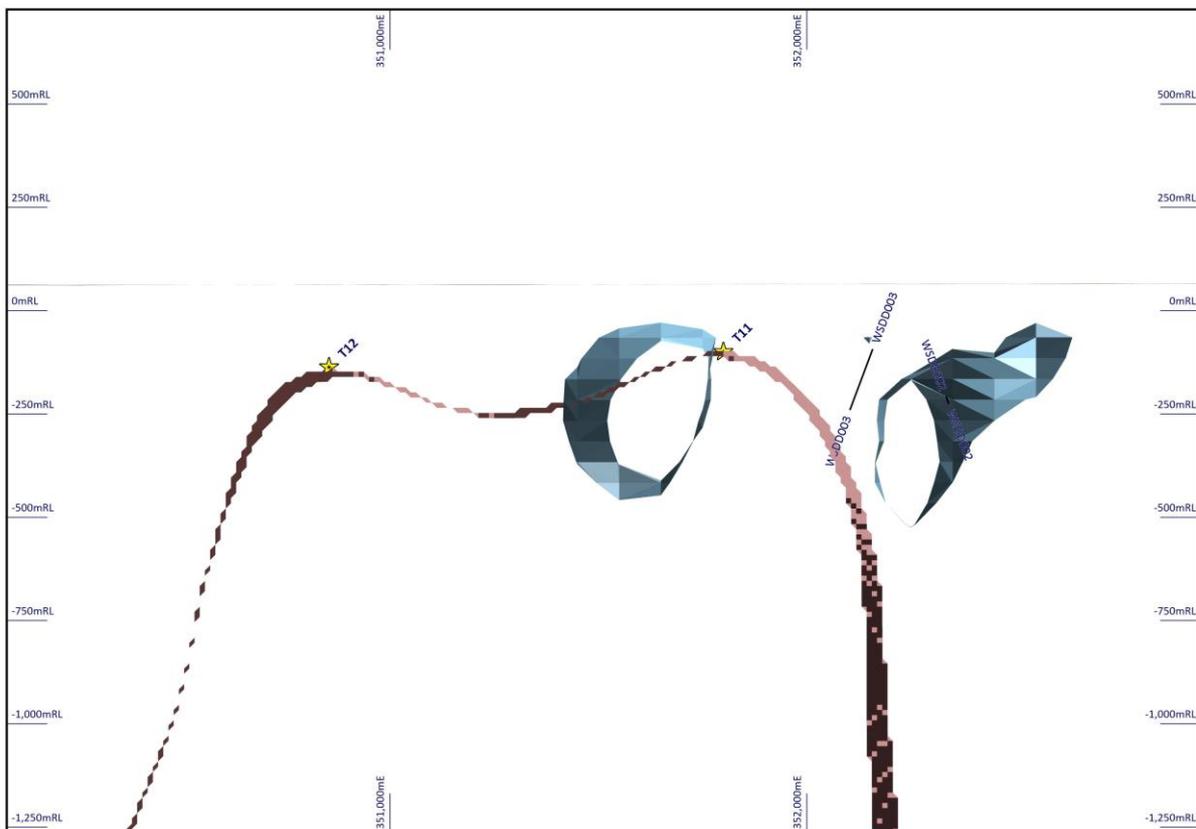
*“A key advantage of exploration at Whaleshark is that the prospective basement rocks are much shallower than in other IOCG provinces, such as the Stuart Shelf in South Australia,” he added.*



**Figure 1.** Oblique view (looking southwest) of Whaleshark magnetic inversion model and new targets in relation to granodiorite pluton (red polygon) and drilling (black dots).



**Figure 2.** Cross Section of T8 and T9 Targets (looking north) showing overlapping magnetic (pink) and gravity (blue) inversion models.



**Figure 3.** Cross Section of T11 and T12 Targets (looking north) showing overlapping magnetic (pink) and gravity (blue) inversion models in proximity to 2023 diamond hole WSDD003.



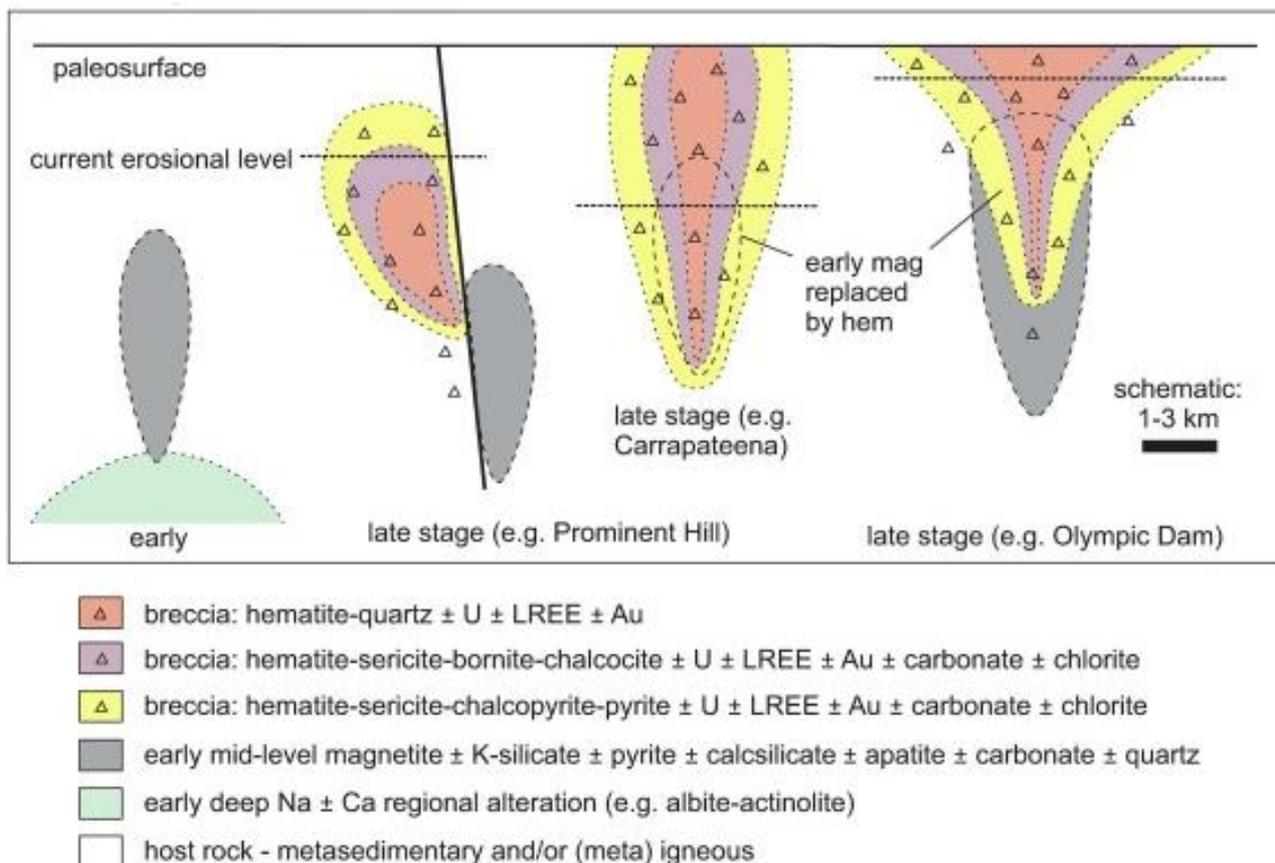
**About the MVI modelling technique**

In the early 2000's, research at the University of British Columbia (UBC) led to the development of a susceptibility modelling algorithm that generated 3D exploration models from magnetic field data observations. This approach has worked well, but it makes one fundamental assumption - that the subsurface is magnetised solely by induction and that the field produced is in the same direction as the Earth's inducing field.

3D susceptibility modelling cannot account for magnetic remanence and other anisotropic phenomena as these factors distort the magnetic field, leading to inaccuracies in interpretation and incorrect drill-hole placement when testing magnetic anomalies. Furthermore, over the past decade it has become increasingly apparent that magnetic remanence is far more prevalent than was previously thought, affecting both crustal rocks and zones of mineralisation.

A novel computational method has recently been developed to address the issue of remanence. Magnetisation Vector Inversion ("MVI") is a technique for solving the magnetisation amplitude and direction, irrespective of remanent magnetisation. This advancement has been facilitated by distributed computing, with inversions conducted via networked cloud-based parallel processors. The MVI method is applicable across various geological scenarios and several significant mineral discoveries have demonstrated that MVI offers a more reliable representation of sub-surface geology compared to traditional 3D modelling techniques.

At Whaleshark, the analysis of the MVI voxel model has facilitated structural analysis, including the identification of collapse structures and the mapping of hydrothermal migration and zones of pervasive alteration. Additionally, deep fluid pathways that delineate host environments for larger deposits have been mapped.



**Figure 4.** Examples of IOCG deposits showing relationship between early and/or deeper magnetite and later and/or shallower hematite mineralisation (Skirrow, 2022).



### Whaleshark - next steps

The Company is examining methods to refine and prioritise various the bedrock IOCG targets at Whaleshark before further drilling, including by completing infill gravity surveys and conducting ground and/or airborne magnetotelluric (MT) surveys.

### Exploration Update

Miramar remains active across several projects including the following:

The Company is currently drilling at its 80%-owned **Gidji JV Gold Project**, located 15kms north of Kalgoorlie, to refine bedrock gold targets under the Gidji Paleochannel. The current drilling program is approximately two thirds completed with first assay results expected in coming weeks.

The Company has also recently completed a field trip to the **Bangemall Ni-Cu-PGE Project** in the Gascoyne region of Western Australia, where Miramar has proved the existence of mafic cumulate rocks and nickel and copper sulphides in multiple RC drill holes over a strike length of approximately 35km, as discussed in previous ASX releases on 31 October 2024, 12 December 2024 and 6 February 2025.

The Company has secured a geophysical contractor to complete a detailed magnetic and electromagnetic survey at Bangemall which will be co-funded through the WA Government's regional geophysics programme, part of the Exploration Incentive Scheme (EIS).

The survey is expected to commence in early July and take approximately 4 weeks to complete.

**For more information on Miramar Resources Limited, please 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.

### Reference:

**Skirrow, R.G., 2022.** "Iron oxide copper-gold (IOCG) deposits – A review (part 1): Settings, mineralogy, ore geochemistry and classification" Ore Geology Reviews, Volume 140, January 2022.



**About the Whaleshark Project**

Miramar’s 100%-owned Whaleshark Project is located in the Ashburton region of WA, approximately 40km east of the town of Onslow.

The Project is located at the northwestern end of the Proterozoic Capricorn Orogen and is characterised by a magnetite banded iron formation and granodiorite intrusion beneath approximately 100m of Cretaceous sediments of the Northern Carnarvon Basin.

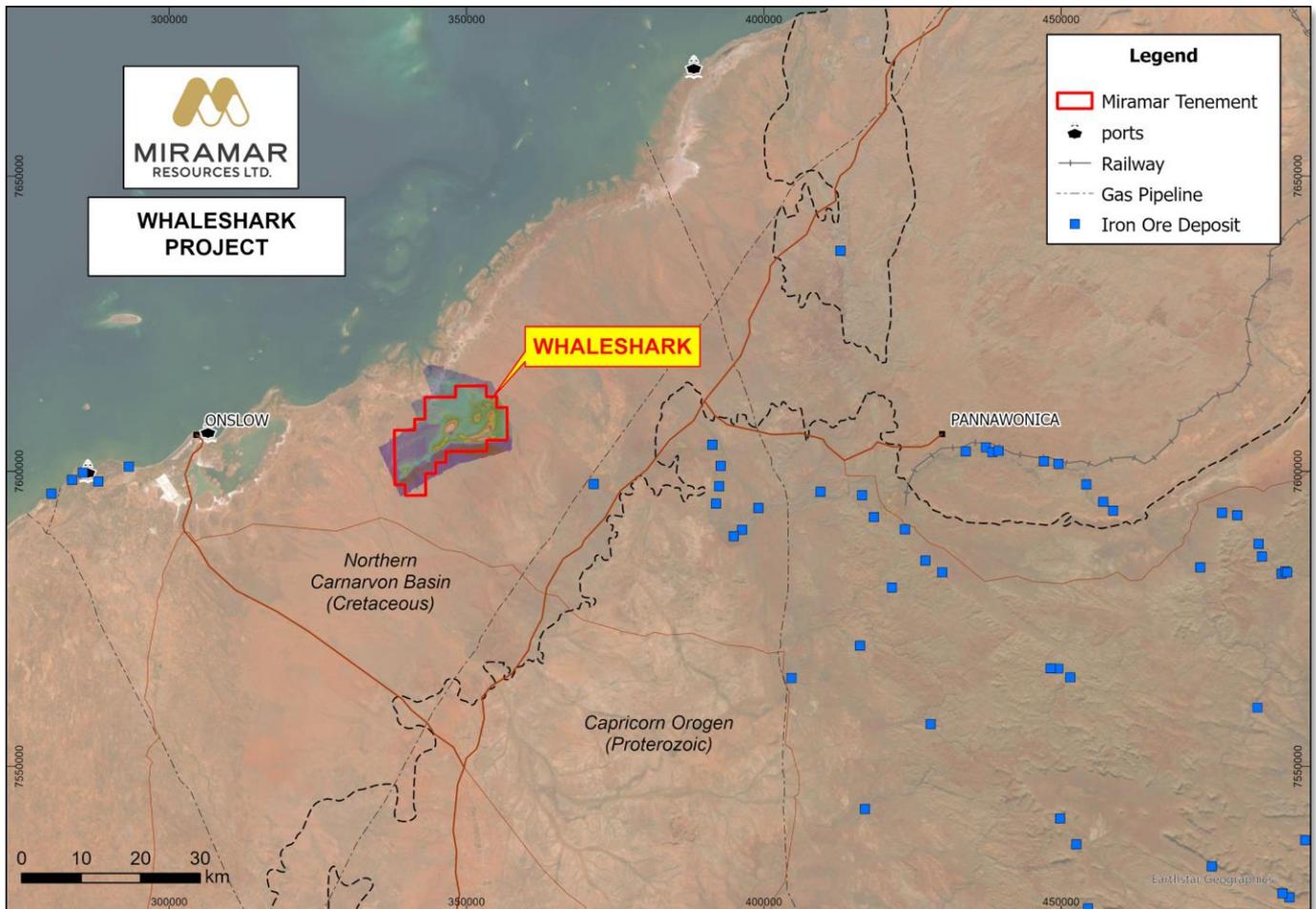
Historical exploration for IOCG mineralisation in the mid 1990’s included diamond drilling which intersected gold mineralisation in one of the banded iron formation units.

In mid-2022, Miramar identified strongly anomalous IOCG pathfinders in shallow aircore drilling beneath Mobile Metal Ion surface geochemical anomalism, whilst EIS co-funded diamond drilling completed in 2023 intersected primary copper sulphide mineralisation within structures crosscutting the granodiorite.

The Project has potential for discovery of significant copper and/or gold mineralisation beneath relatively shallow cover and contains a significant amount of magnetite-rich banded iron formation.

The Whaleshark Project is surrounded by significant infrastructure including:

- the North West Coastal Highway,
- the Dampier-Bunbury Natural Gas Pipeline,
- port facilities at Onslow, Mardie and Cape Preston,
- operating DSO and magnetite iron mining and processing operations
- proposed green energy projects





## COMPETENT PERSON STATEMENT

The information in this report that relates to Exploration Targets or 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:

- 19 December 2023 - *Large Scale Magnetite Iron Opportunities at Whaleshark*
- 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 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 aims to create shareholder value through discovery of high-quality mineral deposits and the Company’s Board has a track record of discovery, development and production within Australia, Africa, and North America.





## JORC 2012 Table 1 – 1996 Whaleshark Detailed Magnetic Survey

### Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>• <i>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</i></li> <li>• <i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li>• <i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li>• <i>In cases where ‘industry standard’ work has been done this would be relatively simple (eg ‘reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay’). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No drilling data presented</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>• <i>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</i></li> </ul>	<ul style="list-style-type: none"> <li>• No drilling data presented</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>• <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li>• <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li>• <i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No drilling data presented</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>• <i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li>• <i>The total length and percentage of the</i></li> </ul>	<ul style="list-style-type: none"> <li>• No drilling data presented</li> </ul>



Criteria	JORC Code explanation	Commentary
	<i>relevant intersections logged.</i>	
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No drilling data presented</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i></li> <li>• <i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Detailed aeromagnetic surveys flown using a Scintrex optically pumped cesium vapour model VIW 2321-H8</li> <li>•</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No drilling data presented</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>• <i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i></li> <li>• <i>Specification of the grid system used.</i></li> <li>• <i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Sample points located with differential GPS (Ashtech Ranger XII)</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>• <i>Data spacing for reporting of Exploration Results.</i></li> <li>• <i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i></li> <li>• <i>Whether sample compositing has been</i></li> </ul>	<ul style="list-style-type: none"> <li>• Sample interval 7 meters or less</li> <li>• Line spacing 100 metres</li> <li>• Flying height 50 metres</li> <li>• Data spacing is suitable for mapping geology and structure</li> </ul>



Criteria	JORC Code explanation	Commentary
	<i>applied.</i>	
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>• If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>• Flight lines oriented 156°-336° which is roughly perpendicular to the strike of the major Banded Iron Formation units</li> <li>• Orientation of mineralized structures is unknown</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>• The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>• Not relevant as no drilling data presented</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>• The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>• Not relevant as no drilling data presented</li> </ul>

## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>• Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>• The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>• The exploration was conducted on E08/3166 which is owned 100% by “MQ Minerals Pty Ltd”, a wholly owned subsidiary of Miramar Resources Limited</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>• Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>• Exploration has been previously completed by other companies including WMC Resources Limited and Spectrum Minerals Limited, and included RC and diamond drilling, along with various geophysical surveys</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>• Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>• The target is IOCG mineralisation +/- BIF-hosted gold mineralisation</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>• A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> <li>○ easting and northing of the drill hole collar</li> <li>○ elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>○ dip and azimuth of the hole</li> <li>○ down hole length and interception depth</li> <li>○ hole length.</li> </ul> </li> <li>• If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the</li> </ul>	<ul style="list-style-type: none"> <li>• No drilling data reported</li> </ul>



Criteria	JORC Code explanation	Commentary
	<i>report, the Competent Person should clearly explain why this is the case.</i>	
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li><i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</i></li> <li><i>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i></li> <li><i>The assumptions used for any reporting of metal equivalent values should be stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>No drill results reported</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li><i>These relationships are important in the reporting of Exploration Results.</i></li> <li><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li><i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</i></li> </ul>	<ul style="list-style-type: none"> <li>No drill results reported</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li><i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i></li> </ul>	<ul style="list-style-type: none"> <li>Figure 1 shows new magnetic model created from historic data</li> <li>Figures 2 and 3 show example cross sections for gravity and magnetic targets</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li><i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i></li> </ul>	<ul style="list-style-type: none"> <li>All data shown</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li><i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i></li> </ul>	<ul style="list-style-type: none"> <li>No other relevant data</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li><i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>Further diamond drilling planned</li> </ul>