



# ASX ANNOUNCEMENT

## GIDJI JV PROJECT – EXPLORATION UPDATE

- **RC drilling intersects altered and sulphidised dolerite at Marylebone East with immediate follow-up RC and diamond drilling underway**
- **High-priority target with historic high-grade drill results identified at “Lake”**
- **Approvals received for 10,000m aircore campaign at Boorara North**

**Miramar Resources Limited (ASX:M2R, “Miramar” or “the Company”)** is pleased to provide an update on exploration activities at the Company’s 80%-owned Gidji JV Project in the Eastern Goldfields of WA.

The Gidji JV Project (“Gidji” or “the Project”) is located within the Boorara Shear Zone, approximately 15km north of Kalgoorlie. Miramar has been actively exploring at Gidji since listing on the ASX and believes there is potential for discovery of a new gold camp, with multiple deposits, through systematic exploration.

Miramar’s Executive Chairman, Mr Allan Kelly, said that, like many other exploration companies, Miramar is currently experiencing significant delays in obtaining Programme of Work (POW) approvals, difficulties in securing suitable drill rigs and extended wait times for assay results due to ongoing COVID staffing issues and overwhelming demand.

*“Despite the challenging environment, we have been able to continue advancing multiple targets through systematic exploration at Gidji, and elsewhere,” he said.*

### Marylebone East RC Drilling

Two RC holes were drilled at Marylebone East to test beneath consecutive aircore holes with high-grade gold results (Figure 1). The programme was planned around an RC rig travelling between two other jobs.

The two holes, **GJRC023** and **GJRC024**, intersected spinifex textured komatiite and pyroxenite which appears to have been intruded by a later dolerite unit (Figure 2). Both the ultramafic rocks and the dolerite were intensely chlorite-sericite altered with widespread quartz veining, fine-grained disseminated pyrite mineralisation and sporadic, coarse-grained pyrite, arsenopyrite and chalcopyrite (Figure 3).

Analysis of samples from **GJRC024** by portable XRF indicated pervasive alteration from 147m downhole.

Both holes repeated the supergene Au anomalism seen in aircore holes at the interface between the paleochannel sediments and the weathered basement and **GJRC024** returned an intercept of **1m @ 1.17g/t Au** at the lower contact between the dolerite and the ultramafic rocks.

Miramar’s Executive Chairman, Mr Allan Kelly, said that, along with the presence of the mineralised dolerite, which fits the “Paddington lookalike” model, the amount of alteration, quartz veining and sulphides was indicative of a significant hydrothermal system capable of forming a large primary gold deposit.

*“GJRC024 is the most exciting RC hole we have drilled at Gidji to date, and indicates we are getting closer to locating a source of the gold mineralisation seen in our aircore drilling,” he added.*

*“We believe we have all the key ingredients present for a significant gold deposit at Gidji and now, for the first time, we have evidence of both the targeted dolerite host rock, seen at Paddington and Panglo, and primary gold mineralisation in an RC drill hole beneath our high-grade aircore results,” he said.*

*“The Marylebone East aircore gold anomaly is over 500m long, so we believe there is the opportunity for a substantial bedrock gold discovery, given the large gold footprint,” he added.*

The Company has commenced follow-up RC and diamond drilling at Marylebone East in order to gather more information about the geology, alteration and mineralisation of this high-priority target, as well as the orientation of any potentially mineralised structures.

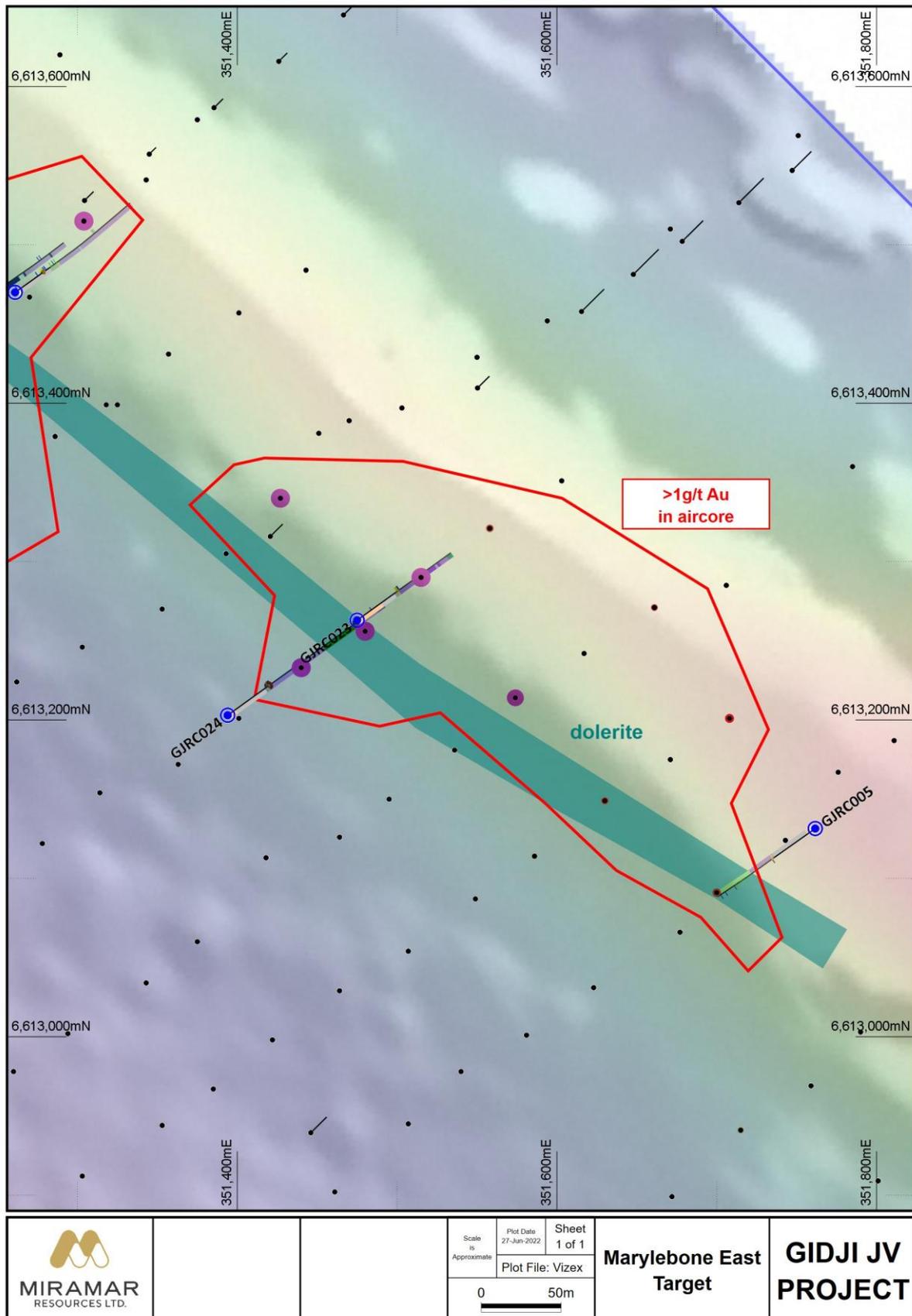


Figure 1. Marylebone East showing new RC holes in relation to aircore footprint and UAV magnetics.

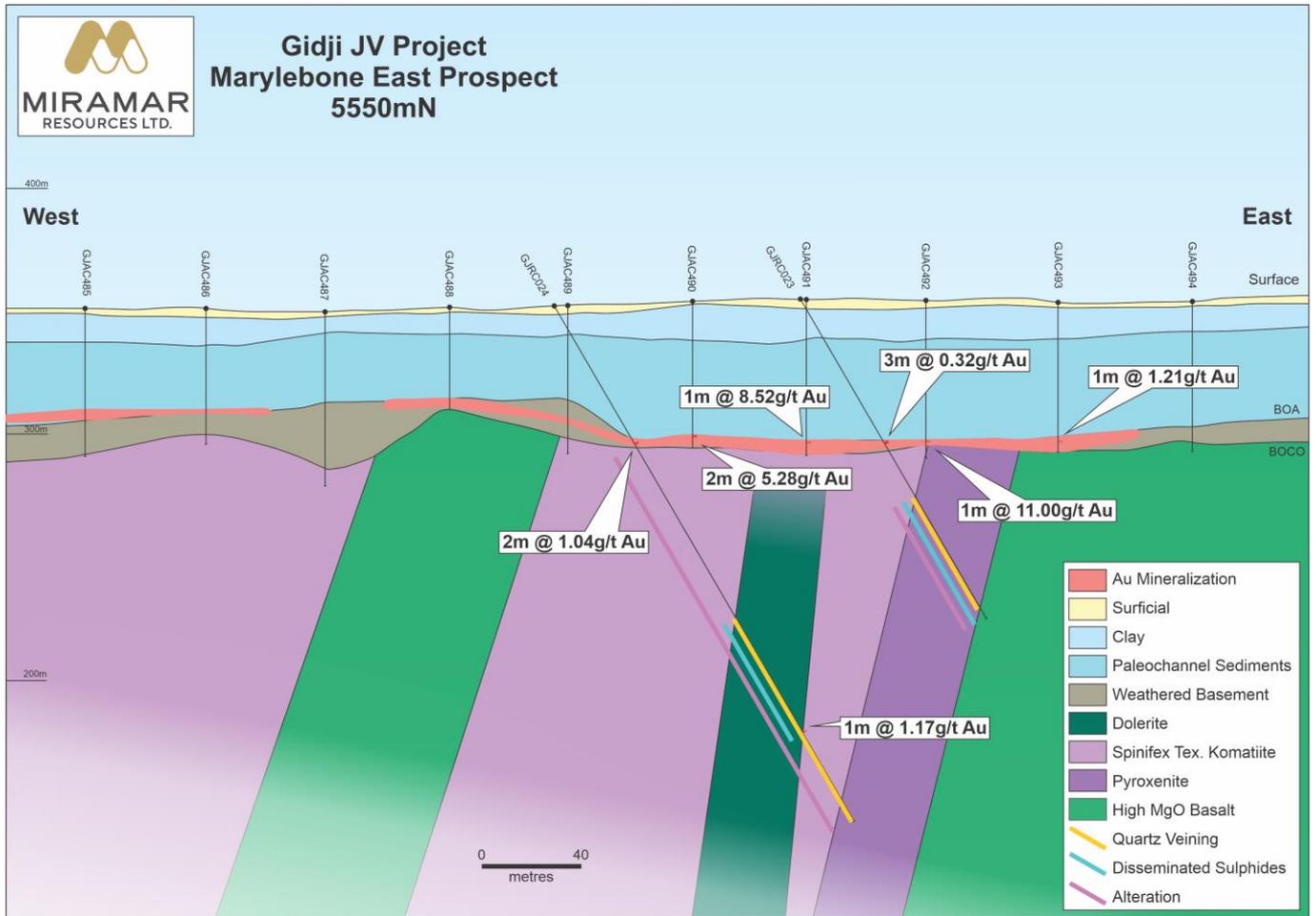
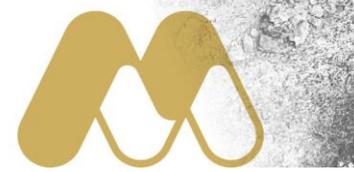


Figure 2. Interpreted cross section of Marylebone East target.



Figure 3. Intensely altered and sulphidised dolerite in GJRC024 (168-169m).



## Northern Targets

The Company is pleased to advise that, following the recent receipt of POW and heritage approvals, the Company will shortly commence a substantial aircore drilling campaign over the 4km long northern portion of the Boorara Shear Zone (Figure 4).

The “**Boorara North**” target apparently contains the same geology as Marylebone, and the Paddington deposit further north, but has only been sporadically drilled with wide-spaced shallow RAB drilling.

Given the lengthy delays in receiving assay results, and the recent capital raising, the Company has elected to combine the proposed first and second phase drilling campaigns into a single programme.

The upcoming programme will therefore comprise approximately 200 aircore holes, drilled to “refusal”, on a nominal 200m x 50m grid, and will take approximately 4 weeks to complete.

Given the extensive strike length of the “Highway Ultramafic”, which hosts nickel sulphide mineralisation at the historic Scotia nickel mine and the Saints nickel deposit being developed by Auroch Minerals Limited, the Boorara North target also has significant unrealised potential for komatiite-hosted nickel sulphide mineralisation and potentially also lateritic nickel mineralisation.

In addition to gold analysis, Miramar routinely analyses aircore samples for a multi-element suite which includes nickel, copper, chromium, and cobalt, which can be used to highlight potential nickel targets.

In addition to the Boorara North target, at least one other high priority gold target has been identified for near-term drill testing following the ongoing review of historical drilling data for the Project.

The “**Lake**” target is located at an obvious flexure of a thin wacke unit within a broader felsic volcanoclastic package. The flexure is coincident with a zone of demagnetisation suggesting hydrothermal alteration and/or gold mineralisation.

Aircore drilling conducted by Goldfields Exploration in 1995/1996 initially intersected anomalous Au results above a package of sandstone, carbonaceous shales and felsic and intermediate tuffs which were then followed up with further aircore and then nine RC drill holes.

The RC drilling intersected a gently west dipping sequence of altered and sheared shales, sandstone and feldspathic wacke and tuff units with westerly dipping primary gold mineralisation (Figure 5).

Significant results from the RC drilling were as follows:

- **PPRC316** – 3m @ 0.6g/t Au (84-87m)
- **PPRC321** – 2m @ **5.32g/t Au** (69-71m)
- **PPRC322** – 3m @ **3.6g/t Au** (101-104m) and 4m @ 0.63g/t Au (122-126m)

No further RC drilling was completed and subsequent aircore drilling did not return significant results. The ground was surrendered in 2000 and no further work completed.

The tenor of the gold mineralisation increases towards the NW and it appears there may also be a north-westerly plunge component meaning the follow-up aircore holes 100m to the north may have been too shallow. Limited aircore drilling to the southeast is also mostly shallow.

Given the combination of the structural setting, the historic high-grade drill results and the potential strike length of the target, which exceeds 1km, Miramar has elevated the status of this target and planned an RC drilling programme testing along strike and down dip from the historic results.

The RC programme will be completed as soon as all relevant approvals are received and a suitable drill rig secured.

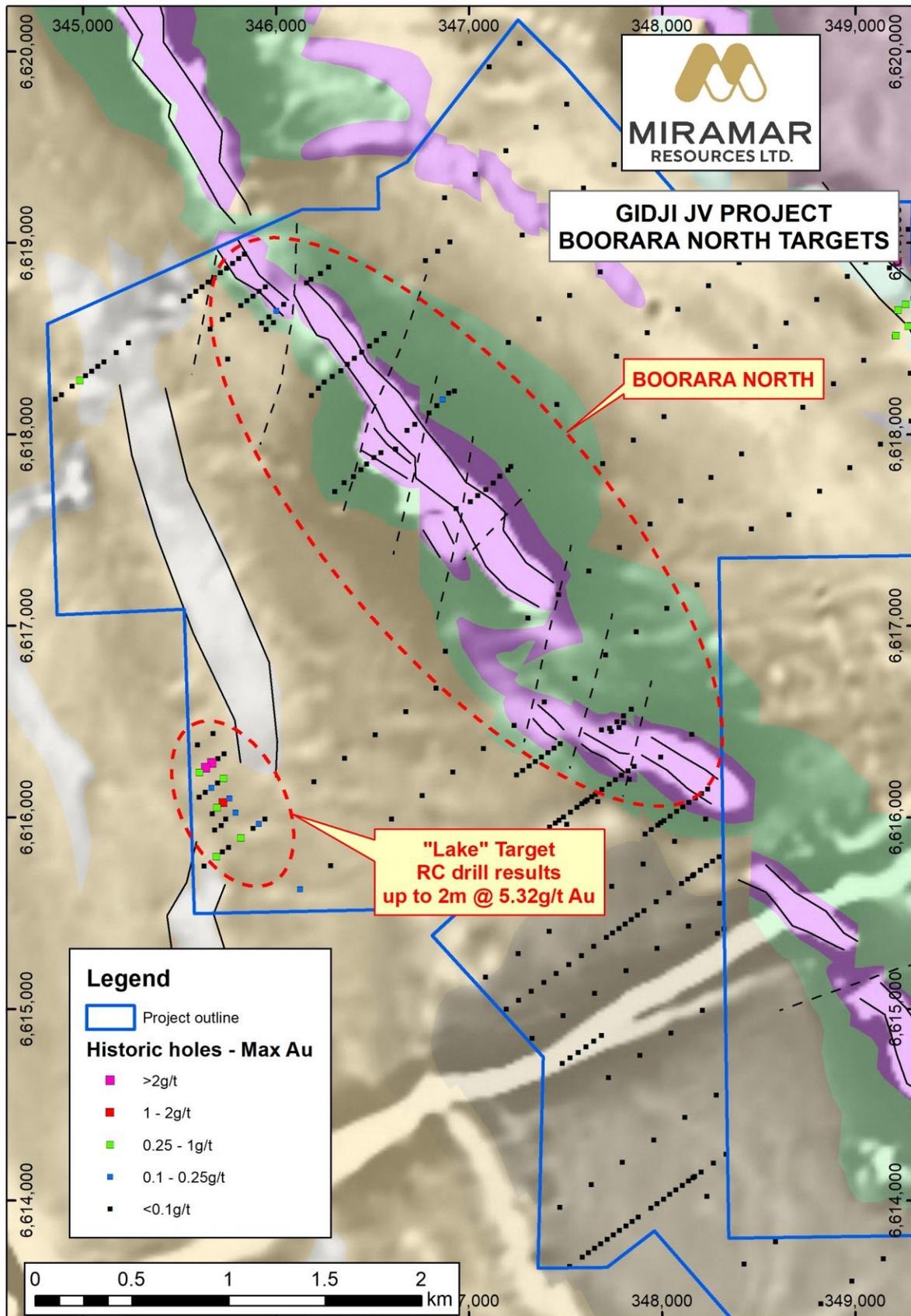
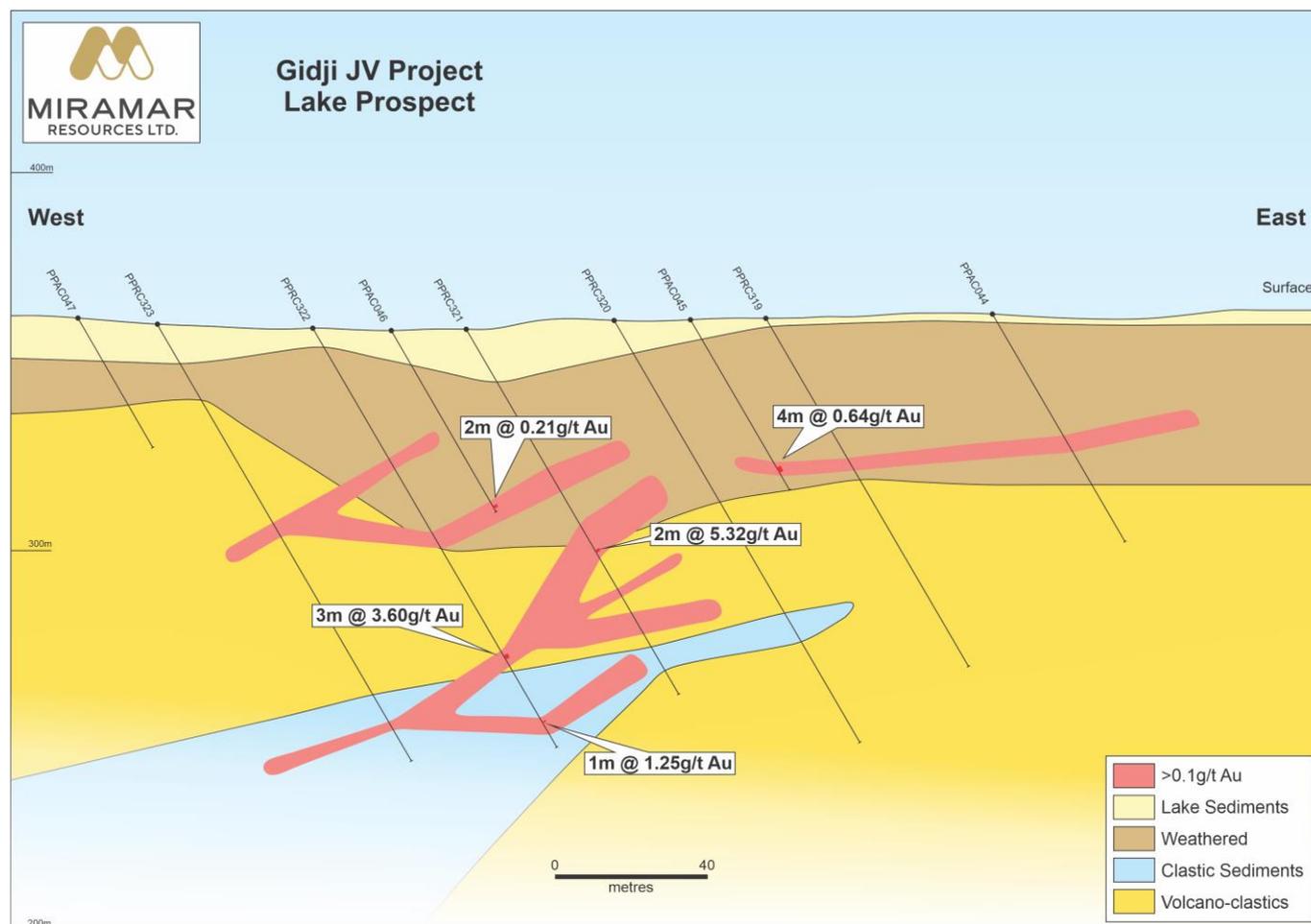


Figure 4. Northern targets showing historical drilling and GSWA geology over 1VD magnetic image.



**Figure 5.** Cross section of historic drilling at Lake target (looking towards NW).

### Upcoming exploration work programmes

Miramar advises that the Company is still awaiting a significant number of assays from the Blackfriars and Highway aircore drilling campaigns completed in April.

Follow-up aircore and/or RC drilling of these two high-priority targets is expected once the results are received and interpreted.

Other proposed work at Gidji includes the following:

- IP survey over the 8-Mile target to help refine potential further diamond drilling
- awaiting soil sampling results from “The Jog” target with RC and/or diamond drilling planned

Parallel to the substantial work programmes at Gidji, the Company is:

- locating a suitable rig to complete diamond drilling on the lake at Glandore East
- planning reconnaissance aircore drilling at the Randalls project
- conducting gravity and heritage surveys at Whaleshark in preparation for aircore drilling
- planning geochemical sampling of the late-time EM anomalies identified at Mt Vernon and a reconnaissance visit to the Blue Bar prospect, both within the Bangemall Ni-Cu-PGE project.



Table 1. Marylebone East RC drill hole information

Hole ID	Easting	Northing	RL	Dip	Azimuth	EOH Depth
GJRC023	351,475	6,613,263	350	-60	054	145
GJRC024	351,394	6,613,203	350	-60	054	240

Table 2. Significant RC assay results &gt;0.25g/t Au

Hole ID	From	To	Interval	Au g/t	Comments
GJRC023	61	64	3	0.32	Supergene enrichment at unconformity
GJRC024	62	64	2	1.04	Supergene enrichment at unconformity
	198	199	1	1.17	Contact between dolerite and U/M

For more information on Miramar Resources Limited, please visit the company's website at [www.miramarresources.com.au](http://www.miramarresources.com.au) 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.



## 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 Gidji JV 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 Gidji JV Project, including hole collar information, is contained in the following ASX Announcements:

- 26/5/2022 *Gidji JV - Exploration Update*
- 8/4/2022 *Multiple High-Grade Gold Results from Gidji JV*
- 10/3/2022 *Nickel Sulphide Targets Identified at Gidji JV*
- 1/2/2022 *RC Drilling Underway at Marylebone*
- 10/1/2022 *New Target at Gidji JV Increases Camp-Scale Potential*
- 22/12/2021 *Gidji drilling results indicate potential new gold camp*
- 25/11/2021 *Gidji JV Exploration Update*
- 7/10/2021 *Significant Gold Results from Gidji JV Drilling*
- 23/09/2021 *Multiple High-Grade Gold Results from Marylebone*
- 13/09/2021 *Gidji JV Tenements Granted*
- 2/08/2021 *Aircore Drilling Grows Marylebone*
- 29/06/2021 *New Aircore Results Upgrade Gidji Targets*
- 3/06/2021 *RC and Aircore Drilling Underway at Gidji JV*
- 11/05/2021 *Aircore Drilling Extends and Upgrades Marylebone*
- 6/05/2021 *Gidji JV Project Exploration Update*
- 15/04/2021 *Gidji Diamond Drilling - Additional Information*
- 12/04/2021 *Gidji Drilling Extends Runway and Hits Visible Gold*
- 16/03/2021 *Drilling Underway at Gidji*
- 11/02/2021 *High-grade gold at Gidji upgrades targets*
- 1/02/2021 *Gidji drilling intersects visible gold and outlines multiple targets*

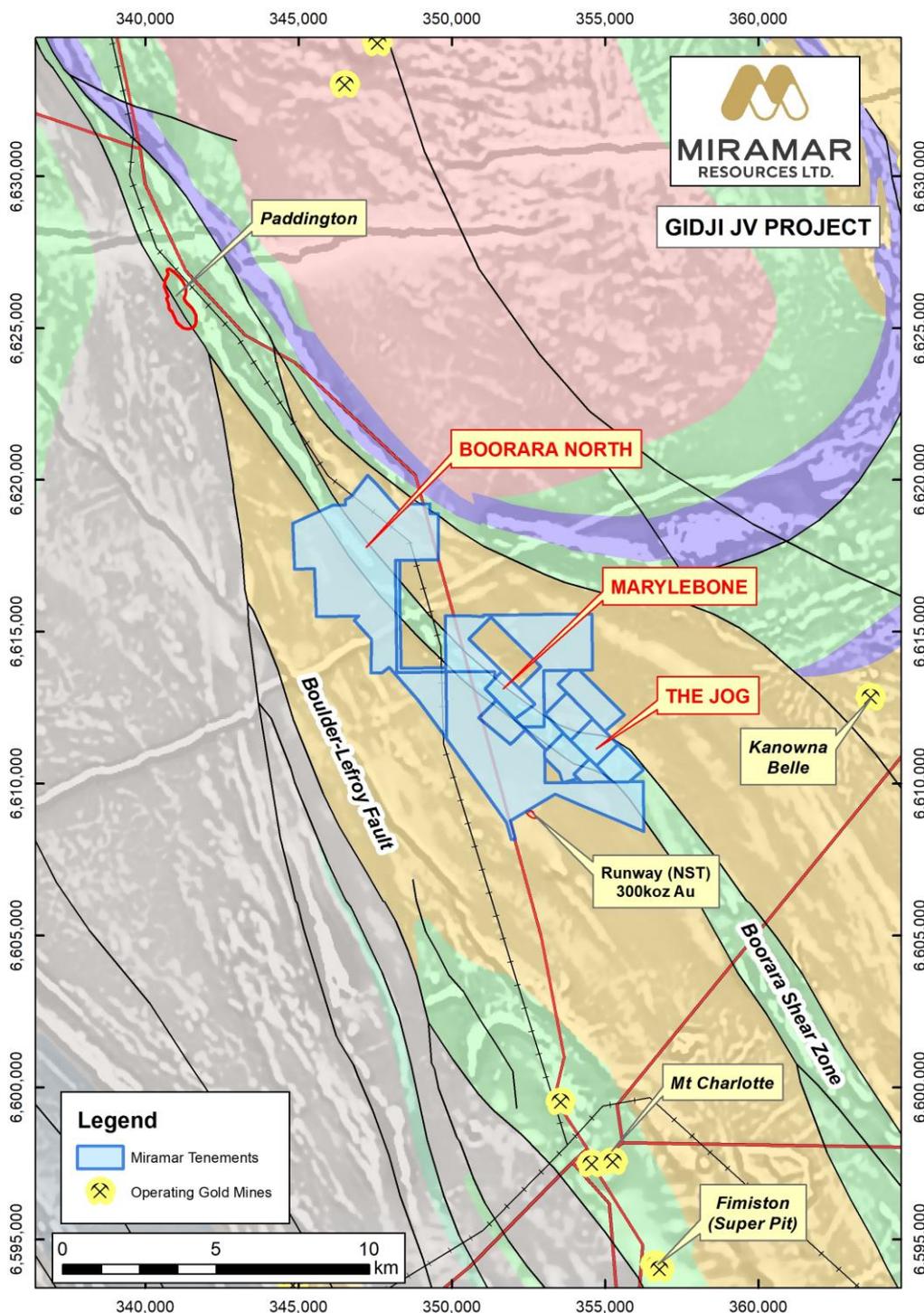


### About the Gidji JV Project

The Gidji JV Project is located approximately 15km north of Kalgoorlie and in proximity to several gold mining and processing operations. Miramar purchased an 80% interest in a number of tenements along the Boorara Shear Zone, as part of the October 2020 IPO.

The Project is underexplored due to a layer of transported material over the most prospective geology.

The Company has been actively exploring the project since listing on the ASX resulting in the discovery of several new targets including “Marylebone” which has the same geological sequence as the nearby 4 million ounce Paddington gold deposit.

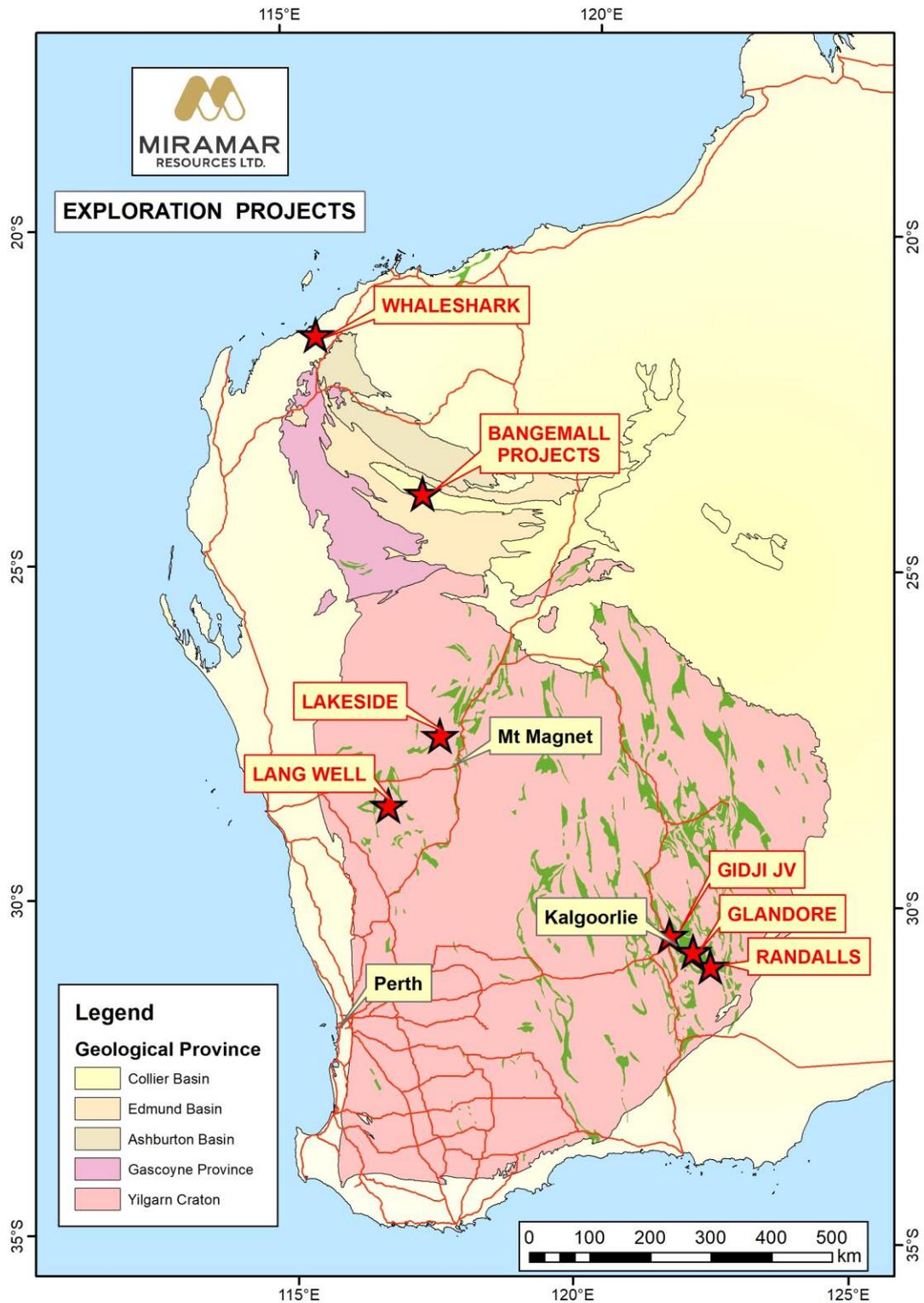




**About Miramar Resources Limited**

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.





## JORC 2012 Table 1 – Gidji JV RC Drilling

### 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>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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Approximately 25kg of sample was recovered from each meter via a riffle splitter</li> <li>The hole was not sampled above 50m downhole</li> <li>A 2.5-3kg sub-sample was collected in a calico bag directly off the side of the splitter</li> <li>The entire sample was sent for gold analysis by 50g fire assay which is an industry standard technique for this type of sample.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>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).</li> </ul>	<ul style="list-style-type: none"> <li>RC drilling</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Sample recovery was recorded where applicable.</li> <li>Recovery was generally excellent except through the overlying paleochannel clays</li> <li>Sampling commenced at 50m in each hole</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the</li> </ul>	<ul style="list-style-type: none"> <li>Samples were logged for colour, weathering, grain size, geology, alteration and mineralisation where possible</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>• Samples collected for each meter drilled below 50m</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>• Samples were assayed for gold by fire assay of 50g samples with 0.01ppm lower detection limit</li> <li>• Analytical technique is suitable for this style of exploration with the caveat that the sample size is relatively small if coarse gold is encountered</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 verification undertaken at this stage</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>• Hole collar locations were recorded with a handheld GPS in MGA Zone 51S</li> <li>• RL was also recorded with handheld GPS but accuracy is variable</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>• Drilling is limited and not suitable for resource estimation</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>Drill holes were designed at right angles to the prevailing strike of the local geology</li> <li>The dip of prospective geology and/or mineralisation is unknown at this stage</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>Samples were transported from site directly to the laboratory by Miramar staff</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>No audits have been undertaken</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 P26/4221 which are owned 80% by Miramar Goldfields Pty Ltd and 20% by Thunder Metals Pty Ltd</li> <li>Miramar Goldfields Pty Ltd is a wholly owned subsidiary of Miramar Resources Limited</li> <li>Miramar has an exploration JV with Thunder Metals Pty Ltd</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 Goldfields and KCGM, and included auger drilling, RAB, aircore and limited RC drilling.</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 Archaean greenstone-hosted mesothermal 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 report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>See Table 1 for all hole locations and significant results &gt;0.25g/t Au</li> </ul>



Criteria	JORC Code explanation	Commentary
<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 clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>Intervals reported over 0.25g/t Au with maximum of 1 sample of internal dilution</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li><i>These relationships are particularly 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 assumptions about true width or orientation of mineralisation can be made from the current programme</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 all drill holes</li> <li>Figure 2 shows a cross section of 2 holes</li> <li>Table 2 lists all significant results</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>Table 2 lists significant results</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 RC and Diamond drilling planned</li> </ul>