# ASX ANNOUNCEMENT

MIRAMAR RESOURCES LTD.

## HIGH-GRADE GOLD RESULTS FROM MARYLEBONE INCREASE POTENTIAL FOR LARGE NEW DISCOVERY

- **Multiple high-grade gold results from Marylebone (Gidji JV)**
- **6g/t Au intersected over at least 300m of strike along "Paddington contact"**
- **1.9km long gold footprint open to NW on newly granted tenements**

**Miramar Resources Limited (ASX:M2R**, "Miramar" or "the Company") is pleased to advise that it has received multiple high-grade gold results from the Marylebone target within the Company's 80%-owned Gidji JV Project in the Eastern Goldfields region of Western Australia.

The new results from 1m resplits of the Phase 3 aircore drilling programme confirm the potential for Paddington and/or Panglo-style gold mineralisation at Marylebone.

Significant results include:

- **GJAC306 – 1m @ 6.92g/t Au (48-49m)**
- **GJAC315 – 3m @ 2.61g/t Au (45-48m) including 1m @ 6.16g/t Au**
- **GJAC318 – 1m @ 3.54g/t Au (53-54m)**
- **GJAC325 – 4m @ 1.11g/t Au (46-50m) including 1m @ 3.55g/t Au**
- **GJAC328 – 1m @ 5.15g/t Au (52-53m)**

The Marylebone target comprises two parallel zones of coherent supergene gold mineralisation along the contact between mafic and ultramafic rocks in similar stratigraphic positions to the 4Moz Paddington deposit, the 125koz Panglo deposit and other gold deposits along the Boorara Shear Zone.

**GJAC306** and **GJAC315**, which both intersected +6g/t Au, are located approximately 300m apart along the "Paddington contact", whilst the +3g/t Au intersections in **GJAC318** and **GJAC325** are located 200m apart and appear equivalent to the position of the Panglo deposit (Figure 1).

The northwest trending contacts are crosscut by later north-south trending faults, similar to Paddington.

The footprint of the Marylebone target now extends for over 1.9km and remains open to the northwest on the recently granted Gidji JV tenements (see ASX release dated 13 September 2021).

Miramar's Executive Chairman, Mr Allan Kelly, said the new results continued to reinforce the significance of the Marylebone target and the potential for a large new gold discovery close to Kalgoorlie.

*"The new results include the most significant gold numbers received from Gidji to date and have also helped us identify the structures with the closest similarities to the Paddington and Panglo gold deposits along strike to the northwest," Mr Kelly said*

*"Our aircore drilling is still relatively wide spaced, given the stripped weathering profile present beneath the transported material, and the average hole depth to date at Marylebone is only about 60m, whereas the primary mineralisation at Paddington reportedly starts at about 70m, just below the supergene enriched gold zone," Mr Kelly said.*

*"We are very excited about the opportunity for a new discovery at Marylebone and also look forward to testing the newly granted tenements along strike to the northwest, where the same geology seen at Marylebone continues for at least another 1.4km, but is virtually undrilled," he added.*

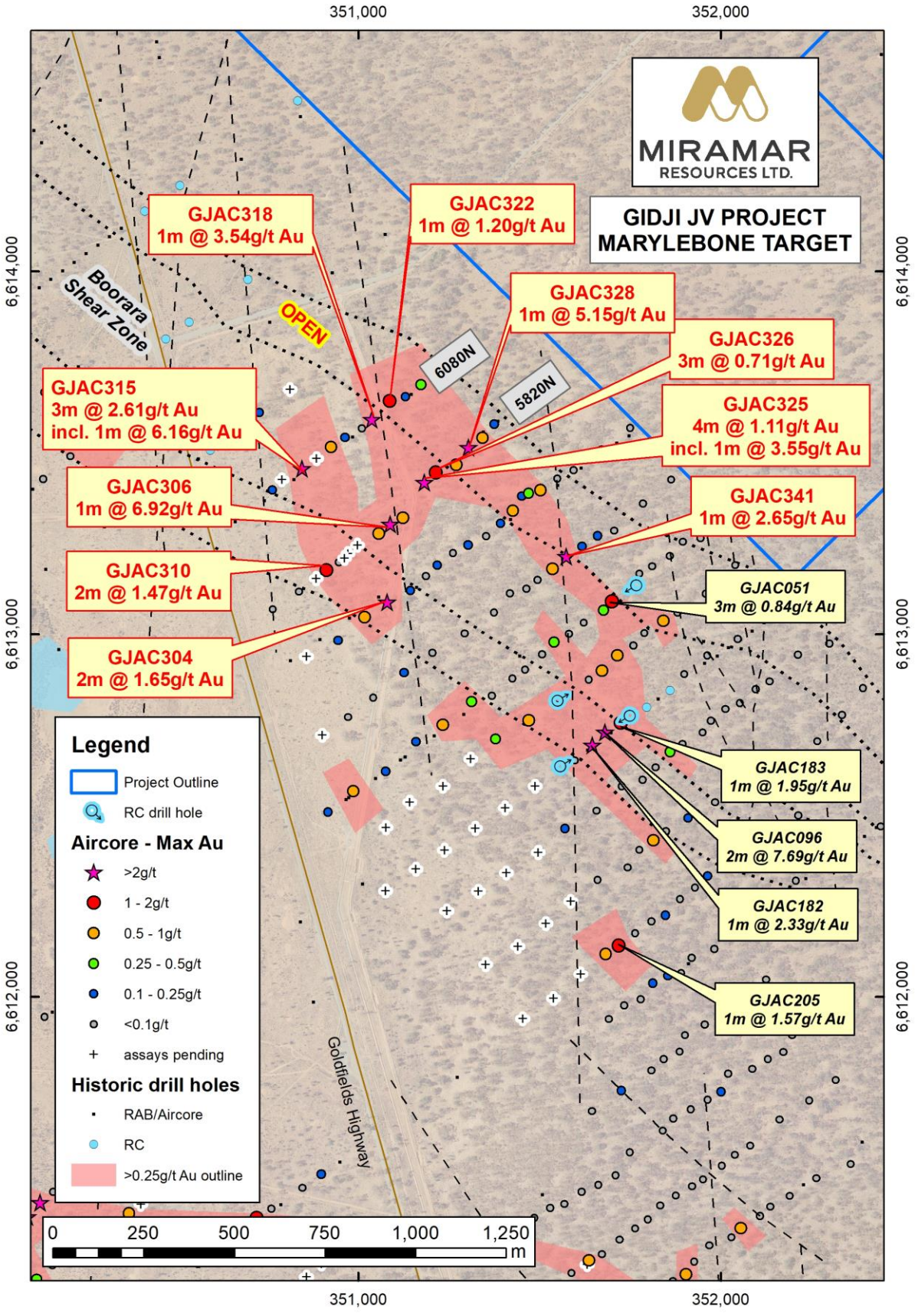



***Figure 1.*** *Marylebone target showing significant drilling results.*

Section **6080N** is the northernmost complete section of aircore drilling at Marylebone to date. The drilling on this section traverses the sequence of Black Flag sediments, alternating ultramafic and mafic rocks, and at least one thin horizon of black shale (Figure 3).

Coherent supergene gold anomalism >0.1g/t Au at the contact between transported material and weathered Archean basement extends over 600m laterally on this section.

The highest grade results on this section, in **GJAC315** and **GJAC318,** are both located proximal to mafic units in positions apparently equivalent to the Paddington and Panglo deposits. The gold mineralisation in **GJAC318** is coincident with 6.28g/t Ag indicating proximity to a bedrock source.

The current drill spacing is roughly 50m across strike whereas the Paddington bedrock footprint is reportedly only 30-40m across. Assays for GJAC431 and 432, completed as infill holes, are pending.

There is no historic drilling north of this section for over 360m, where two aircore holes spaced 100m apart intersected 4m @ 0.4g/t Au and 4m @ 0.34g/t Au.

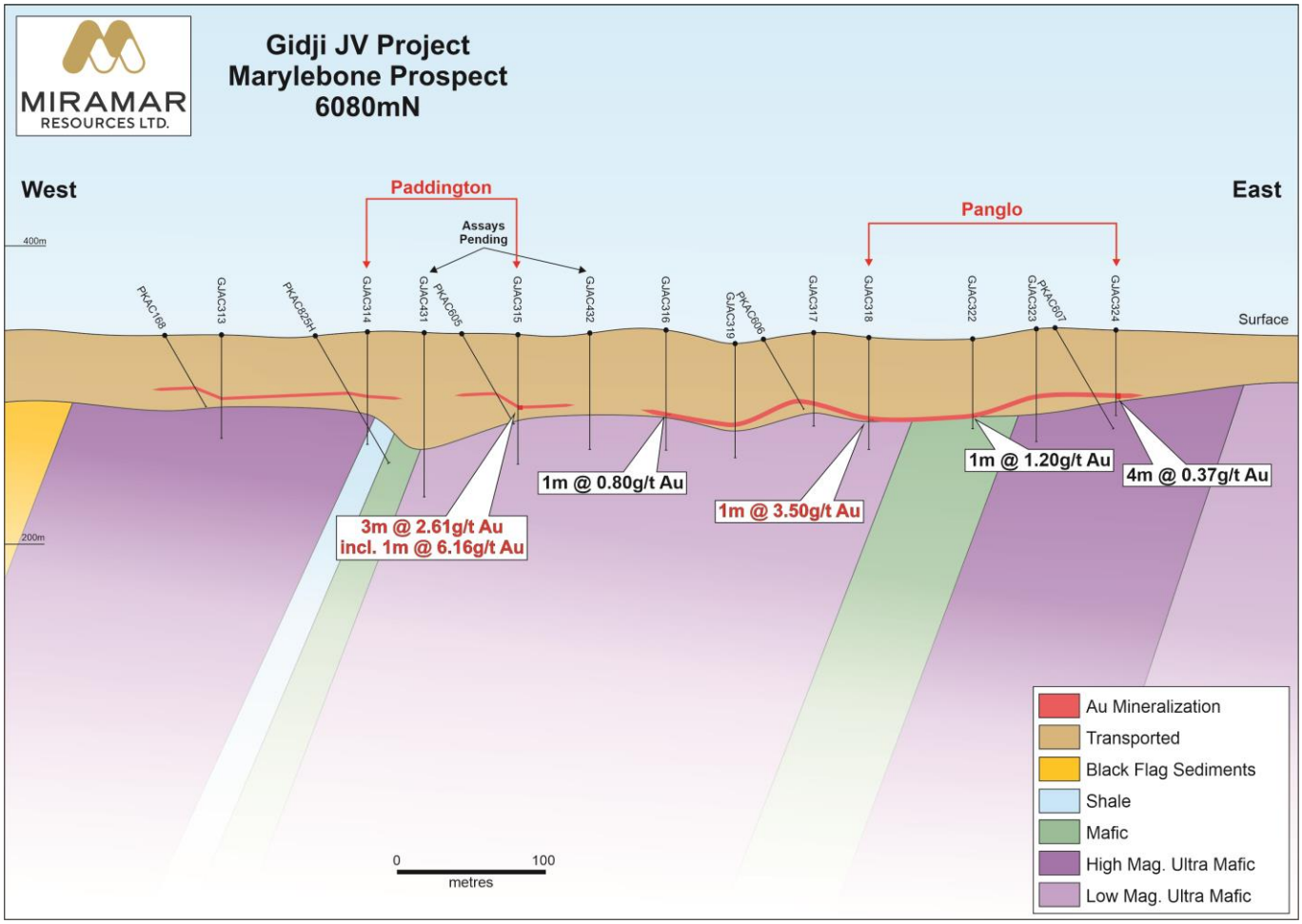



***Figure 2.*** *Cross Section 6080N (local grid)*

Section **5820N** is located approximately 260m south of Section 6080N and intersected a similar sequence of rocks but with only one potential mafic intrusive unit identified to date.

Coherent supergene gold anomalism >0.1g/t Au at the contact between transported material and weathered Archean basement also extends over 600m laterally on this section with gaps in the drill coverage due to a pipeline and the presence of a hard silcrete layer intersected in GJAC308 and GJAC309.

**GJAC306** ended in a weathered mafic unit in the interpreted Paddington position but did not reach "blade refusal" and is considered an ineffective test. Despite this, **GJAC306** intersected **1m @ 6.9g/t Au** at 48-49m, towards the base of the transported material, and ended in >0.1g/t Au at 61m with coincident anomalous Ag and Sb indicating proximity to a bedrock source.

**GJAC325** to **GJAC328** intersected the interpreted Panglo position, although no mafic rocks were identified in these holes. **GJAC325** intersected supergene gold (**4m @ 1.11g/t Au**) towards the base of the transported material above lower grade basement gold anomalism, whilst the gold anomalism intersected in **GJAC326** to **328** (including **1m @ 5.15g/t Au**) is hosted in the weathered basement and associated with anomalous Ag, Mo and Sb.

The current drill spacing is also roughly 50m across strike, apart from the where the pipeline crosses the section, and with assays pending for GJAC428 and 429.

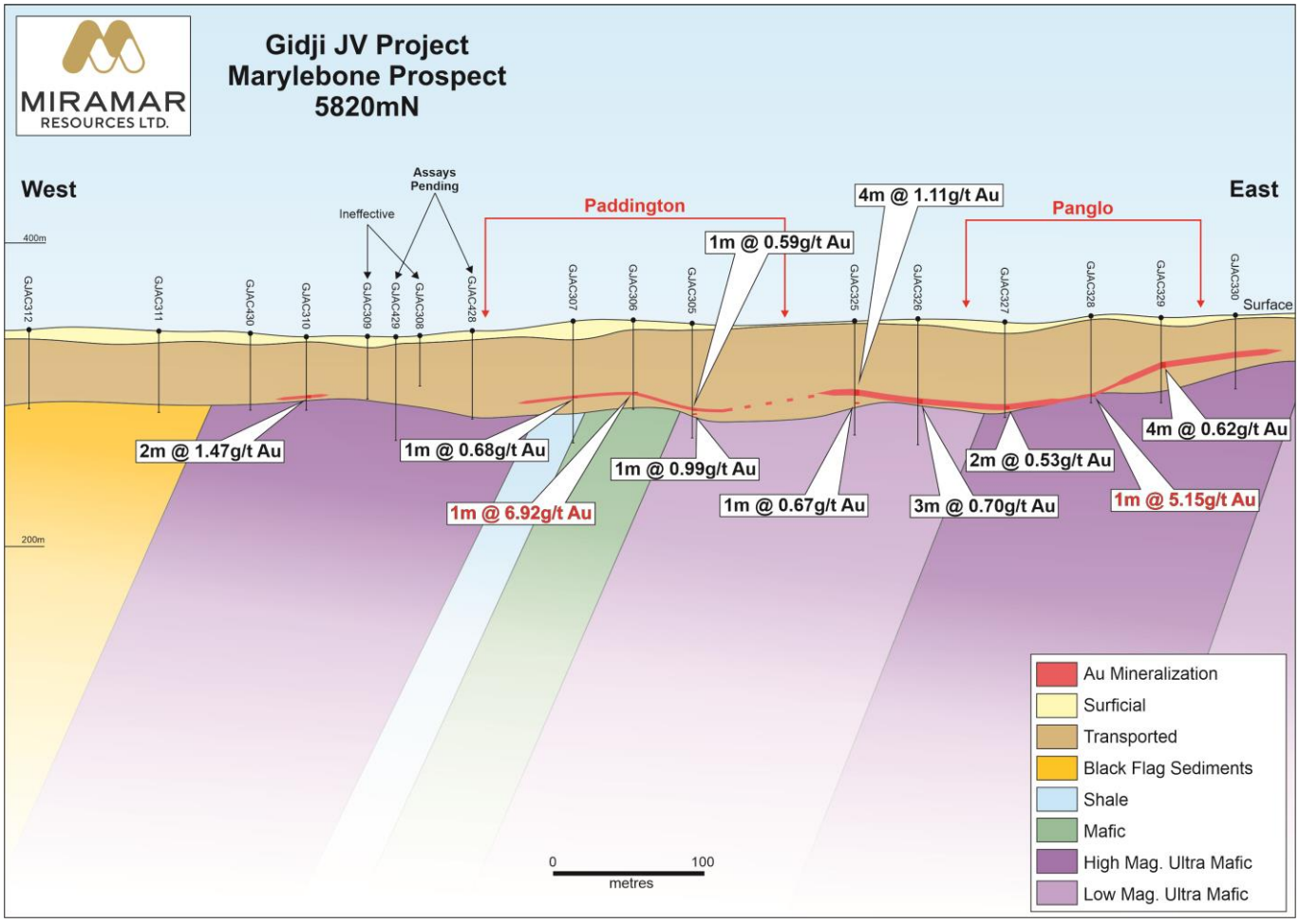



***Figure 3.*** *Cross Section 5820N (local grid)*

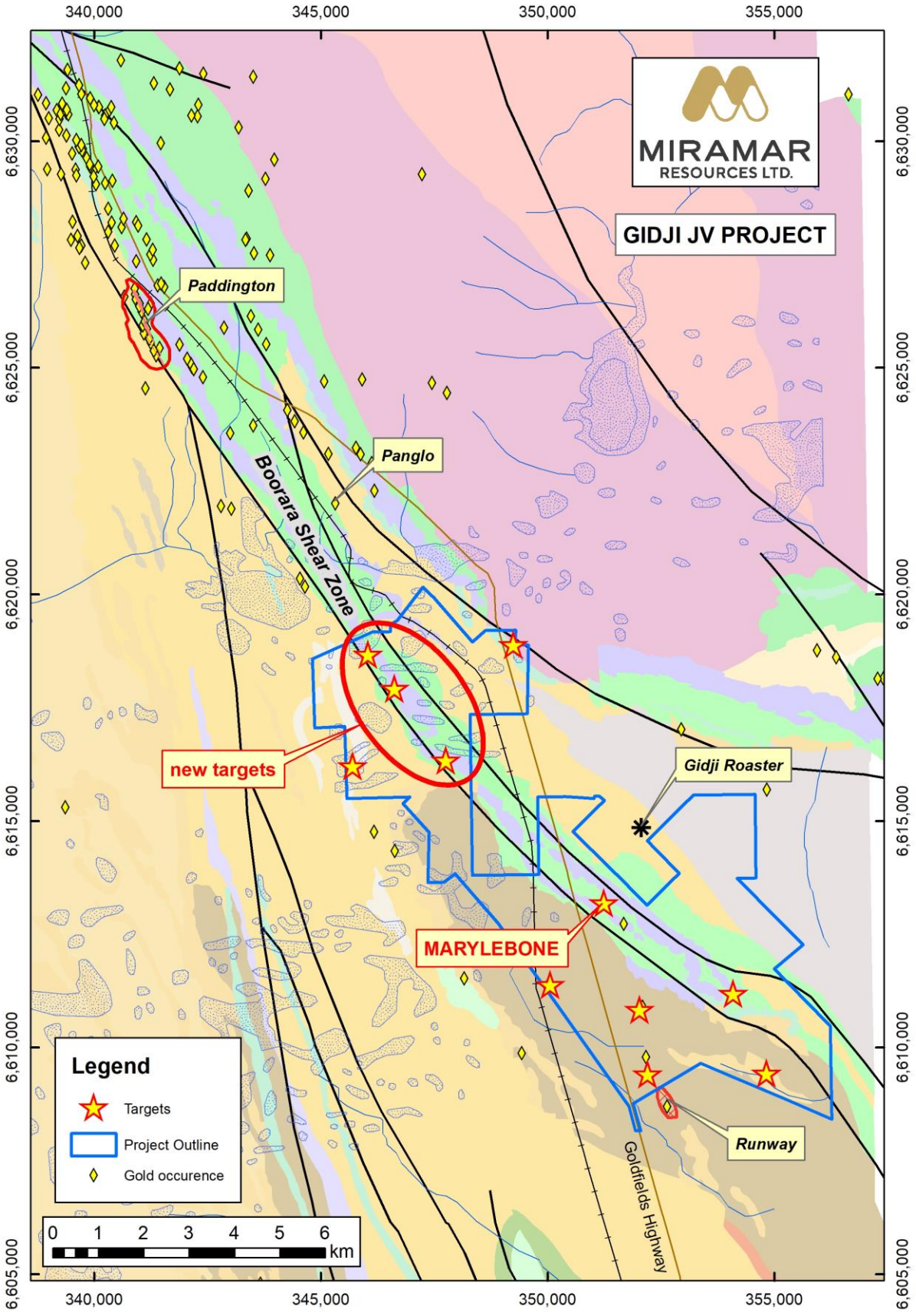



***Figure 4.*** *Regional setting of the Marylebone target in relation to the Paddington and Panglo deposits.*

The Company is waiting on assay results from several “Phase 4” aircore holes testing the western and north-western boundaries of the Marylebone target and planning is underway for further infill and deeper drilling at Marylebone and along strike to the northwest once permitted.

**Glandore lake drilling completed**

The Company advises that it has successfully completed the first lake drilling campaign at the Glandore Project, located approximately 40km east of Kalgoorlie, and will provide further information to the market once assays are received.

**For more information on Miramar Resources Limited, please visit the company’s website at www.miramarresources.com.au, follow the company on LinkedIn and/or Twitter @MiramarRes or contact:**

Allan Kelly
Executive Chairman
info@miramarresources.com.au

Margie Livingston
Ignite Communications
margie@ignitecommunications.com.au

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 presentation of the matters based on his information and in the form and context in which it appears.

Information on 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.

**Table 1.** Significant results (>0.25g/t Au) from Gidji JV aircore drilling resplits.

| Hole ID | Easting | Northing | EOH Depth | From (m) | To (m) | Interval (m) | Au (g/t) | Notes |
|---|---|---|---|---|---|---|---|---|
| GJAC299 | 350987 | 6612567 | 72 | 48 | 50 | 2 | 0.67 | 4.1g/t Ag |
| GJAC303 | 351017 | 6613047 | 55 | 53 | 54 | 1 | 0.97 | |
| **GJAC304** | **351080** | **6613089** | **66** | **50** | **52** | **2** | **1.65** | |
| | | | | ***including*** | | ***1*** | ***2.49*** | |
| GJAC305 | 351123 | 6613321 | 75 | 56 | 57 | 1 | 0.59 | 3.3g/t Ag |
| | | | | 59 | 60 | 1 | 0.99 | |
| **GJAC306** | **351088** | **6613303** | **61** | **48** | **49** | **1** | **6.92** | |
| GJAC307 | 351057 | 6613278 | 81 | 50 | 51 | 1 | 0.68 | |
| **GJAC310** | **350913** | **6613176** | **49** | **40** | **42** | **2** | **1.47** | **1.9g/t Ag** |
| **GJAC315** | **350845** | **6613457** | **84** | **45** | **48** | **3** | **2.61** | |
| | | | | ***including*** | | ***1*** | ***6.16*** | |
| GJAC316 | 350925 | 6613516 | 78 | 52 | 53 | 1 | 0.80 | |
| | | | | 55 | 56 | 1 | 0.31 | |
| **GJAC318** | **351038** | **6613592** | **73** | **53** | **54** | **1** | **3.54** | **6.3g/t Ag** |
| **GJAC322** | **351087** | **6613643** | **59** | **51** | **52** | **1** | **1.20** | |
| GJAC324* | 351173 | 6613688 | 54 | 40 | 44 | 4 | 0.37 | |
| **GJAC325** | **351182** | **6613419** | **76** | **46** | **50** | **4** | **1.11** | |
| | | | | ***including*** | | ***1*** | ***3.55*** | |
| | | | | 54 | 55 | 1 | 0.67 | |
| **GJAC326** | **351214** | **6613446** | **85** | **55** | **58** | **3** | **0.71** | |
| GJAC327 | 351270 | 6613467 | 61 | 54 | 56 | 2 | 0.53 | 1.7g/t Ag |
| **GJAC328** | **351304** | **6613515** | **59** | **52** | **53** | **1** | **5.15** | **3.3g/t Ag** |
| GJAC329* | 351343 | 6613541 | 51 | 24 | 28 | 4 | 0.62 | |
| **GJAC341** | **351574** | **6613214** | **63** | **55** | **56** | **1** | **2.65** | **6.2g/t Ag** |
| GJAC347 | 351313 | 6612815 | 56 | 54 | 55 | 1 | 0.44 | |
| GJAC348 | 351233 | 6612750 | 57 | 53 | 54 | 1 | 0.56 | 4.82g/t Ag |

**Notes**

- Hole coordinates previously reported (see ASX Release dated 2 August 2021)
- All holes drilled vertically to “blade refusal” where possible
- Intervals reported above 0.25g/t with maximum 1 sample of internal dilution
- Samples initially assayed by aqua-regia with re-analysis by 25g fire assay for Au >2,000ppb

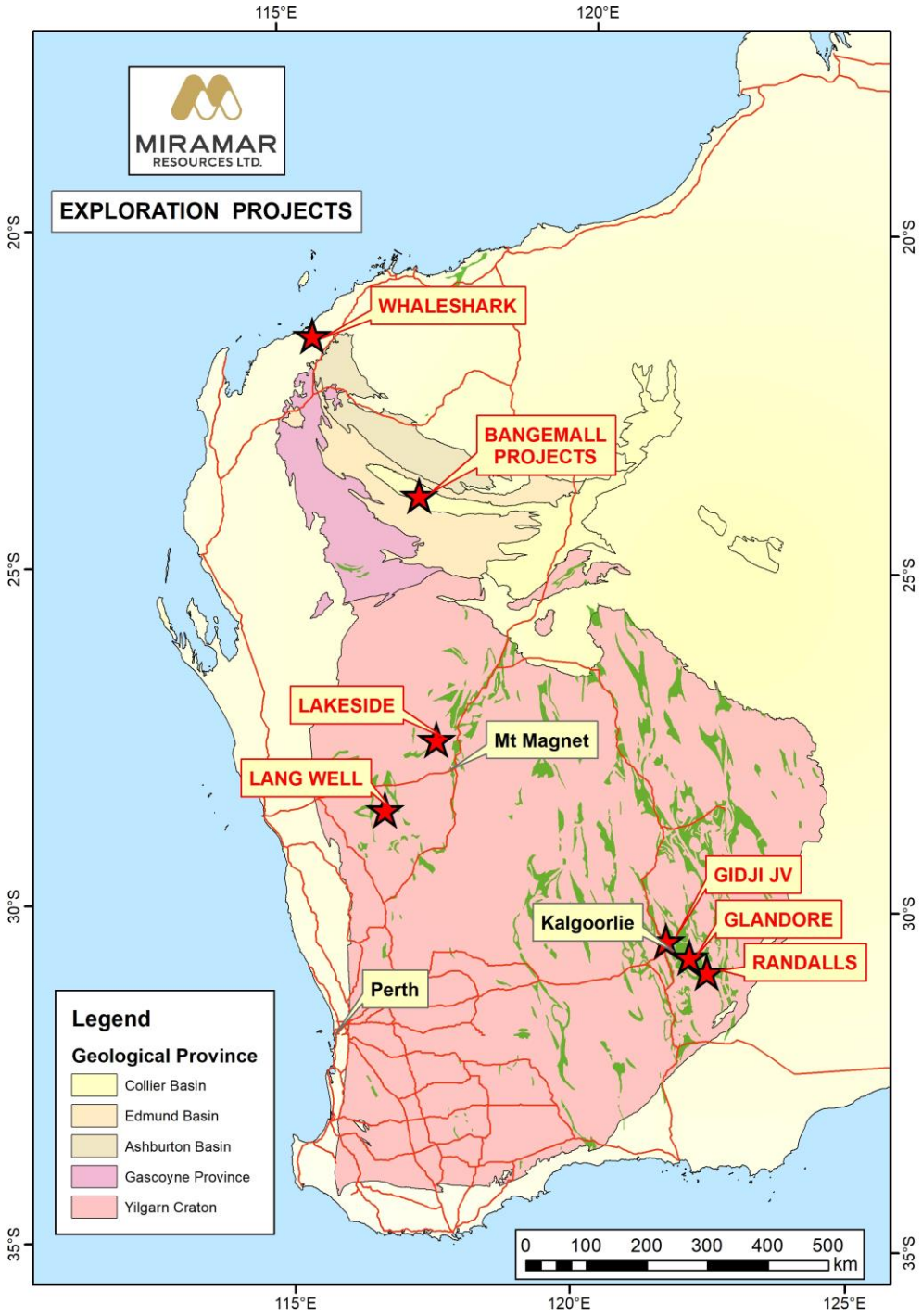
* denotes 4m composite sample to be re-assayed

## ABOUT MIRAMAR RESOURCES LIMITED

Miramar Resources Limited is a WA-focused mineral exploration company with highly prospective exploration projects in the Eastern Goldfields, Murchison and Gascoyne regions of Western Australia.

Miramar listed on the ASX in October 2020, following a heavily oversubscribed $8 million IPO.

Miramar's Board has a track record of successful discovery, development and production within Australia, Africa, and North America, and aims to create shareholder value through the acquisition, exploration and monetisation of high-quality mineral assets.



## JORC 2012 Table 1 – Gidji JV Aircore Drilling

## Section 1 Sampling Techniques and Data

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

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| ***Sampling techniques*** | • *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.*<br>• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*<br>• *Aspects of the determination of mineralisation that are Material to the Public Report.*<br>• *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.* | • 4m composite samples compiled from individual 1m sample piles<br>• Samples average 3kg in weight<br>• Samples with significant results are resplit by taking individual 1m samples for re-assay |
| ***Drilling techniques*** | • *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).* | • Aircore drilling to "blade refusal" |
| ***Drill sample recovery*** | • *Method of recording and assessing core and chip sample recoveries and results assessed.*<br>• *Measures taken to maximise sample recovery and ensure representative nature of the samples.*<br>• *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.* | • Comments recorded for samples with low recovery |
| ***Logging*** | • *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.*<br>• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc)* | • Samples were logged for colour, weathering, grain size, geology, alteration and mineralisation where possible |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | *photography.*<br>• *The total length and percentage of the relevant intersections logged.* | |
| ***Sub-sampling techniques and sample preparation*** | • *If core, whether cut or sawn and whether quarter, half or all core taken.*<br>• *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*<br>• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*<br>• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*<br>• *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.*<br>• *Whether sample sizes are appropriate to the grain size of the material being sampled.* | • 4m composite samples combined from individual 1m samples piles to achieve approximately 3kg of sample<br>• Samples with significant results are resplit by taking individual 1m samples for re-assay |
| ***Quality of assay data and laboratory tests*** | • *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*<br>• *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.*<br>• *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.* | • Samples were assayed using an aqua-regia digest followed by analysis of gold and multi-elements by ICPMS with lower detection limit of 1ppb Au<br>• QAQC samples inserted at frequency of 4 QAQC samples (i.e. standard, blank duplicate) per 100 samples |
| ***Verification of sampling and assaying*** | • *The verification of significant intersections by either independent or alternative company personnel.*<br>• *The use of twinned holes.*<br>• *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*<br>• *Discuss any adjustment to assay data.* | • Samples with >0.25g/t Au will be re-assayed as 1m re-splits |
| ***Location of data points*** | • *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.*<br>• *Specification of the grid system used.*<br>• *Quality and adequacy of topographic control.* | • Hole collar locations were recorded with a handheld GPS in MGA Zone 51S<br>• RL was also recorded with handheld GPS but accuracy is variable |
| ***Data spacing and distribution*** | • *Data spacing for reporting of Exploration Results.*<br>• *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate* | • Drilling was planned to infill phase 1 aircore drilling to achieve an average spacing of 150-200m x 50m<br>• The spacing is appropriate for the stage of exploration |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | *for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.*<br>• *Whether sample compositing has been applied.* | • 1m sample piles were composited over 4m<br>• Samples with significant results are resplit by taking individual 1m samples for re-assay |
| ***Orientation of data in relation to geological structure*** | • *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*<br>• *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.* | • Drill lines were completed perpendicular to the trend of the main geological units and parallel to previous drill lines.<br>• It is likely that the mineralized structures trend at a different orientation to the regional geology |
| ***Sample security*** | • *The measures taken to ensure sample security.* | • Samples were transported from site directly to the laboratory by Miramar staff |
| ***Audits or reviews*** | • *The results of any audits or reviews of sampling techniques and data.* | • No audits have been undertaken |

## Section 2 Reporting of Exploration Results

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

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| ***Mineral tenement and land tenure status*** | • *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.*<br>• *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.* | • The exploration was conducted on E26/214, P26/4221 and P26/4222 which are owned 80% by Miramar Goldfields Pty Ltd and 20% by Thunder Metals Pty Ltd<br>• Miramar Goldfields Pty Ltd is a wholly owned subsidiary of Miramar Resources Limited<br>• Miramar has an exploration JV with Thunder Metals Pty Ltd |
| ***Exploration done by other parties*** | • *Acknowledgment and appraisal of exploration by other parties.* | • Exploration has been previously completed by other companies including Goldfields and KCGM, and included auger drilling, RAB, aircore and limited RC drilling. |
| ***Geology*** | • *Deposit type, geological setting and style of mineralisation.* | • The target is Archaean greenstone-hosted mesothermal gold mineralisation. |
| ***Drill hole Information*** | • *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:*<br>  ○ *easting and northing of the drill hole collar*<br>  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*<br>  ○ *dip and azimuth of the hole*<br>  ○ *down hole length and interception depth*<br>  ○ *hole length.* | • See Table 1 and Figure 1. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | • *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.* | |
| ***Data aggregation methods*** | • *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.*<br>• *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.*<br>• *The assumptions used for any reporting of metal equivalent values should be clearly stated.* | • Intervals reported over 0.25g/t Au with maximum of 1 sample of internal dilution |
| ***Relationship between mineralisation widths and intercept lengths*** | • *These relationships are particularly important in the reporting of Exploration Results.*<br>• *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.*<br>• *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').* | • No assumptions about true width or orientation of mineralisation can be made from the current programme |
| ***Diagrams*** | • *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.* | • See attached Tables and Figures |
| ***Balanced reporting*** | • *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.* | • All holes shown in Figure 1 |
| ***Other substantive exploration data*** | • *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.* | • No other relevant data |
| ***Further work*** | • *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out* | • Further aircore, RC and/or diamond drilling planned |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | *drilling).*<br>• *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.* | |