

## **COPPER AND GOLD MINERALISATION AT CHAIN POOL**

- Rock chip sampling extends "Joy Helen" Cu-Pb-Ag-Au occurrence
- Copper mineralisation discovered in Mundine Well Suite dolerite dyke

**Miramar Resources Limited (ASX:M2R**, "Miramar" or "the Company") is pleased to advise that rock chip sampling at the Chain Pool Project, in the Gascoyne region of Western Australia, has extended the strike length of copper (Cu), lead (Pb), silver (Ag) and gold (Au) mineralisation at the Joy Helen prospect and discovered copper mineralisation within a dolerite dyke of the 755Ma Mundine Well Suite.

The Mundine Well Dolerite is the same geological unit that hosts Ni-Cu-Co-PGE sulphide mineralisation within the "Money Intrusion" at Dreadnought Resources Limited's Mangaroon Project.

Miramar's Executive Chairman, Mr Allan Kelly said the Chain Pool Project had potential for the discovery of multiple mineralisation styles.

"There is potential for a significant strike length of shallow high-grade copper-lead-silver and gold mineralisation at Joy Helen which has not been effectively explored previously," he said.

"In addition, we have also proved the existence of copper sulphide mineralisation within dolerite dykes which crosscut the Project," he added.



Figure 1. Chain Pool Project showing recent and historic rock chip sampling.



The Company recently completed a grid soil survey and reconnaissance rock chip sampling at the Chain Pool Project, following the grant of Exploration Licence E08/3676.

Rock chip sampling has increased the strike length of high-grade copper, lead and silver mineralisation at Joy Helen, and recorded the first significant gold result, 0.8g/t Au, in CP007 at the northern end of the prospect (Figures 2 and 3).

The recent rock chip sampling has now outlined high-grade copper, silver and lead mineralisation over about 400m of strike, however a single historic rock chip within the Barlee Range Nature Reserve indicates that mineralisation could be present over a total strike length of almost 1 kilometre, including approximately 700m outside the Nature Reserve.

The Company is currently waiting on results from a grid soil geochemical survey, which covers the prospect outside the Nature Reserve.

In addition to the sampling at Joy Helen, reconnaissance rock chip sampling was completed over the wider project area, with a focus on sampling the multiple N-S trending dolerite dykes which belong to the 755Ma Mundine Well Suite, which hosts Ni-Cu-Co-PGE mineralisation within the "Money Intrusion", further south.

Several rock chip samples contained fine-grained disseminated sulphides, predominantly pyrite, but sample CP011 also contained chalcopyrite and malachite mineralisation (Figure 4).

Table 1 lists all significant rock chip results at Chain Pool so far.

The Company is planning further work at Chain Pool once it has received the results of the soil sampling programme including:

- Infill soil sampling at Joy Helen if required
- Permitting for a maiden aircore drilling programme at Joy Helen
- Further systematic rock chip sampling of the Mundine Well dolerite dykes

For more information on Miramar Resources Limited, please visit the company's website at <u>www.miramarresources.com.au</u>, 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.





Figure 2. Joy Helen Prospect showing rock chip sampling and soil survey locations.





Figure 3. Secondary copper mineralisation (malachite) in sample CP007 from Joy Helen.



Figure 4. Primary (chalcopyrite) and secondary (malachite) copper mineralisation in dolerite (CP011).



Comula	Fasting	N a stile iss as	Au	Ag	Cu		Pb		Sb	Zn
Sample	Easting	Northing	ppm	ppm	ppm	%	ppm	%	ppm	ppm
CP001	374431	7428437	0.064	40.34		3.34		54.5	71.15	405
CP002	374460	7428346	0.041	36.16		5.42		36.7	82.6	2659
CP003	374460	7428346	0.066	73.48		5.48		42.0	51.81	925
CP004	374467	7428366	0.055	23.70		3.78		32.0	24.42	398
CP005	374478	7428381	0.038	34.48	4535			29.7	23.06	3913
CP006	374484	7428433	0.032	8.60		3.22		6.67	26.02	521
CP007	374569	7428588	0.807	59.49		7.23		26.7	65.34	856
CP008	374805	7428502	0.003	0.11	189		428.6		0.16	143
CP009	374799	7428437	0.002	BDL	99.2		41.3		0.09	131
CP010	374777	7428391	0.002	BDL	104		27.9		0.07	139
CP011	370128	7426548	0.001	9.85	670.9		4443.2		0.20	154
CP012	370130	7426550	BDL	1.05	553.9		386.8		0.16	67
CP013	370238	7427199	BDL	0.26	187.1		117.9		0.10	159
CP014	370292	7427626	0.001	0.09	179.1		27.9		0.11	153
CP015	370366	7428056	BDL	0.09	159		24.3		0.08	153
CP016	369750	7428392	BDL	BDL	66.4		7.7		0.09	136

Table 1. Rock chip sample locations and significant results

"BDL" - Below lower detection limit

## **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.

Information on historic and recent exploration results from the Chain Pool Project, including JORC Table 1 and 2 information where applicable, was included in the following ASX Announcements:

- 18 July 2024 "High-grade copper, lead and silver results from new Gascoyne Project"
- 27 August 2024 "Chain Pool tenement granted"
- 30 October 2024 "Exploration Underway at Chain Pool Project"



## About the Chain Pool Project

The Chain Pool Project is located approximately 275km northeast of Carnarvon, in the Gascoyne region of Western Australia and consists of a single 100%-owned Exploration Licence, E08/3676.

The Project straddles the boundary between a Durlacher Supersuite granite, which hosts the Yangibana and YIN REE deposits, and the Edmund Basin, including the high-grade "Joy Helen" copper-lead-silver-zinc occurrence.

The Project has been crosscut by later N-S trending dolerite dykes of the 750Ma "Mundine Well Suite" which hosts Ni-Cu-Co-PGE sulphide mineralisation within the "Money Intrusion" further south.

Miramar applied for E08/3676 in December 2023 and it was granted in August 2024.

Initial reconnaissance rock chip sampling around the Joy Helen workings in July 2024, prior to the grant of the tenement, returned several high-grade results, including:

- 5.49% Cu, 42.0% Pb and 73.48g/t Ag
- 5.43% Cu, 36.7% Pb, 36g/t Ag and 0.27% Zn

The Project has potential for various styles of mineralisation including:

- SEDEX Pb-Zn-Ag mineralisation hosted in the Irregully Formation, similar to the Abra deposit
- Carbonate-hosted "Mississippi Valley Type" (MVT) Pb-Zn mineralisation
- Mafic intrusion-hosted magmatic Ni-Cu-Co-PGE sulphide mineralisation hosted in dolerite dykes of the 755Ma Mundine Well Suite





### **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.





## JORC 2012 Table 1 – Chain Pool rock chip sampling

## **Section 1 Sampling Techniques and Data**

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <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> <li>Samples totaling approximately 2kg were collected at each site</li> </ul>
Drilling techniques	<ul> <li>Drill type (eg core, reverse circulation, openhole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diametre, 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> <li>No drilling data provided</li> </ul>
Drill sample recovery	<ul> <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>	No drilling data provided
Logging	<ul> <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>	No drilling data provided



Criteria	JORC Code explanation	Commentary
	relevant intersections logged.	
Sub- sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>No drilling data provided</li> <li>Each sample was crushed and pulverized to -75um in its entirety</li> <li>No sub-sampling</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometres, handheld XRF instruments, etc, the parametres used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>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.</li> </ul>	<ul> <li>Samples were analysed by: <ul> <li>4-acid digest followed by ICPMS and</li> <li>50g fire assay and ICPMS for Au, Pd and Pt</li> </ul> </li> <li>Samples with over range Cu, Pb, Fe and Ti were re-assayed by ore grade analysis</li> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>No verification completed</li> </ul>
Location of data points	<ul> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>Sample locations recorded using handheld GPS and recorded in MGA Zone 50S</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been</li> </ul>	<ul> <li>Sample spacing suitable for initial reconnaissance</li> </ul>



Criteria	JORC Code explanation	Commentary
	applied.	
Orientation of data in relation to geological structure	<ul> <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>	No assumptions can be made
Sample security	The measures taken to ensure sample security.	<ul> <li>All samples transported from site to the laboratory by Miramar staff</li> </ul>
Audits or reviews	<ul> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	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	<ul> <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> <li>E08/3676 is 100% owned by MQ Minerals Pty Ltd, a 100% owned subsidiary of Miramar Resources Limited</li> </ul>
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul> <li>Previous exploration conducted by CRA, Herald Resources and Dominion Mining Limited comprised limited rock chip sampling</li> </ul>
Geology	<ul> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul> <li>SEDEX or Mississippi Valley Type Pb-Zn- Ag-Cu mineralisation</li> <li>Potential for Ni-Cu-Co-PGE mineralisation in Mundine Well dolerite dykes</li> </ul>
Drill hole Information	<ul> <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> <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</li> </ul>	No drilling data presented



Criteria	JORC Code explanation	Commentary
	clearly explain why this is the case.	
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	No aggregation conducted
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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').</li> </ul>	No drilling data presented
Diagrams	<ul> <li>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.</li> </ul>	<ul> <li>Figures 1 and 2 show location of all recent and historic sampling in relation to historic workings</li> </ul>
Balanced reporting	<ul> <li>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.</li> </ul>	<ul> <li>Table 1 lists all samples with results for Au, Ag, Cu, Pb, Sb, Ti and Zn</li> </ul>
<i>Other substantive exploration data</i>	<ul> <li>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.</li> </ul>	No other relevant data
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>Further rock chip sampling and infill soil sampling will be completed</li> <li>Planning for grid aircore drilling campaign</li> </ul>