ASX ANNOUNCEMENT

MIRAMAR RESOURCES LTD.

SIGNIFICANT BASEMENT COPPER AND COBALT RESULTS UPGRADE WHALESHARK IOCG POTENTIAL

- **Strongly elevated copper, cobalt and silver in bedrock aircore results**
- **Highest copper, cobalt and silver results from Whaleshark to date**
- **Geochemistry and alteration signatures comparable with large IOCG deposits**

Miramar Resources Limited (ASX:M2R, "Miramar" or "the Company") is pleased to advise that results from analysis of end of hole samples from aircore drilling at the Company's 100%-owned Whaleshark Project have increased the potential for the Project to host iron oxide copper gold (IOCG) mineralisation.

The Whaleshark Project ("Whaleshark" or "the Project") is located approximately 40km east of Onslow, in the Ashburton region of Western Australia, and is characterised by a large folded Proterozoic banded iron formation and granite complex under approximately 100m of Cretaceous Carnarvon Basin sediments.

The Company believes there is potential for discovery of a large IOCG deposit at Whaleshark.

End of hole (EOH) samples from the 2022 aircore drilling campaign were analysed for a multi-element suite, including IOCG pathfinders and elements diagnostic of hydrothermal alteration.

WSAC010 (80m), at the northern edge of the drill pattern, intersected strongly elevated copper (**435.5ppm**), cobalt (**888.9ppm**), silver (**7.71g/t**) along with anomalous tungsten and rhenium (Figure 1).

WSAC010 returned the highest copper and cobalt results from Whaleshark to date and overlies a 500m x 750m gravity anomaly within the granite intrusion which is bisected by a NW trending structure.

According to publicly available information, the large Ernest Henry IOCG deposit shows similar coincident copper and cobalt anomalism at the unconformity directly above the deposit (see Appendices).

Hole **WSAC035** (67m) intersected **165ppm Cu** and **0.16g/t Au** adjacent to the same basement structure.

EOH results for sodium (Na) and potassium (K) show coherent anomalism (Figure 3) suggesting the presence of sodic and potassic alteration in the basement rocks, which is a key signature of significant IOCG mineralisation.

The magnitude of the Na and K anomalism is also comparable to the Ernest Henry data (see Appendices).

Importantly, the implied potassic alteration, usually proximal to IOCG mineralisation, is adjacent to the highest copper and gold results.

Miramar's Executive Chairman, Mr Allan Kelly, said the Company was excited about the latest results which further confirmed the similarities between the Whaleshark Project and world-class IOCG deposits.

"At Whaleshark, we have the right aged rocks, the right style of alteration and the right combination of elements typically associated with IOCG mineralisation," Mr Kelly said.

"As we continue to explore the project, we see more similarities with the signatures of various large IOCG deposits," he added.

"The advantage we have at Whaleshark is that the basement is much shallower than in other IOCG provinces such as the Gawler Craton, which makes it easier for us to explore," he added.

"We are looking forward to getting back on the ground at Whaleshark this year and uncovering the potential of this exciting project for our shareholders," he said.

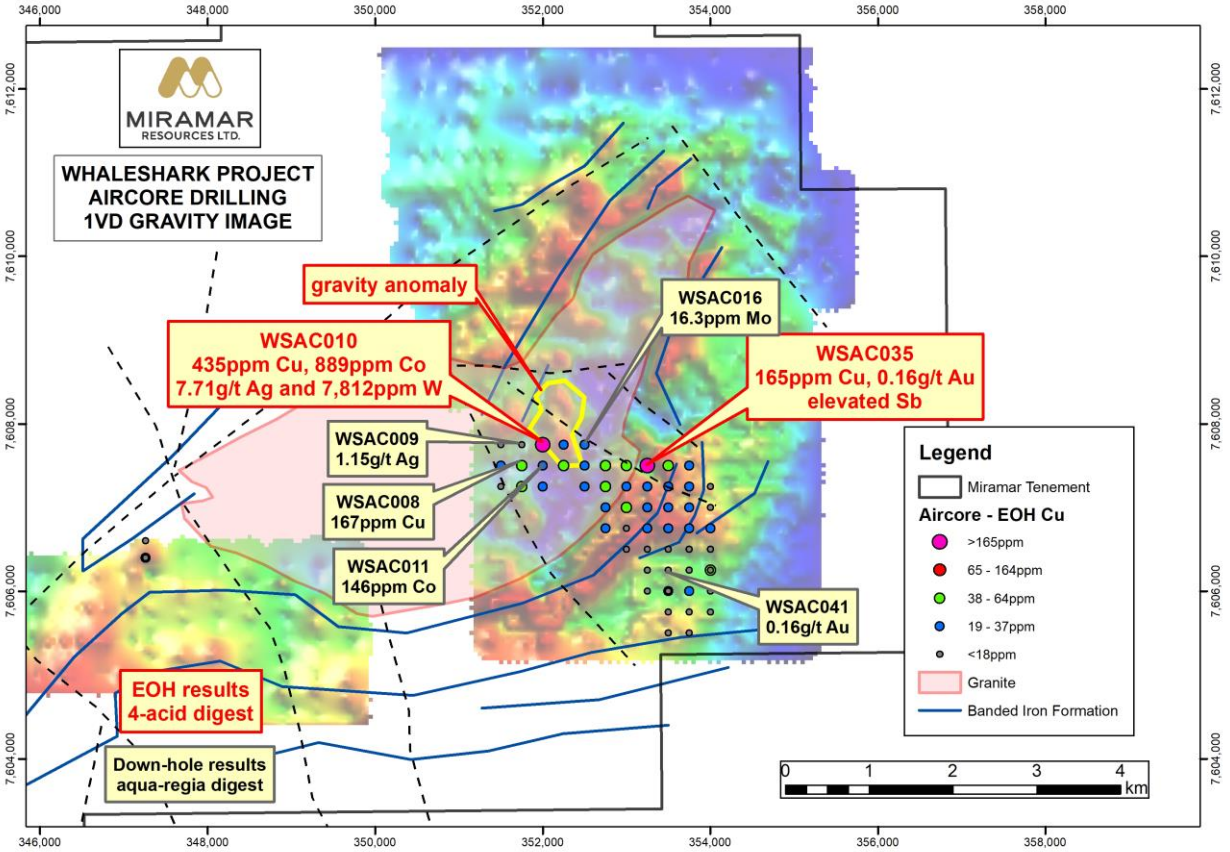

Figure 1. *Whaleshark aircore drilling showing EOH copper results over 1VD gravity image.*

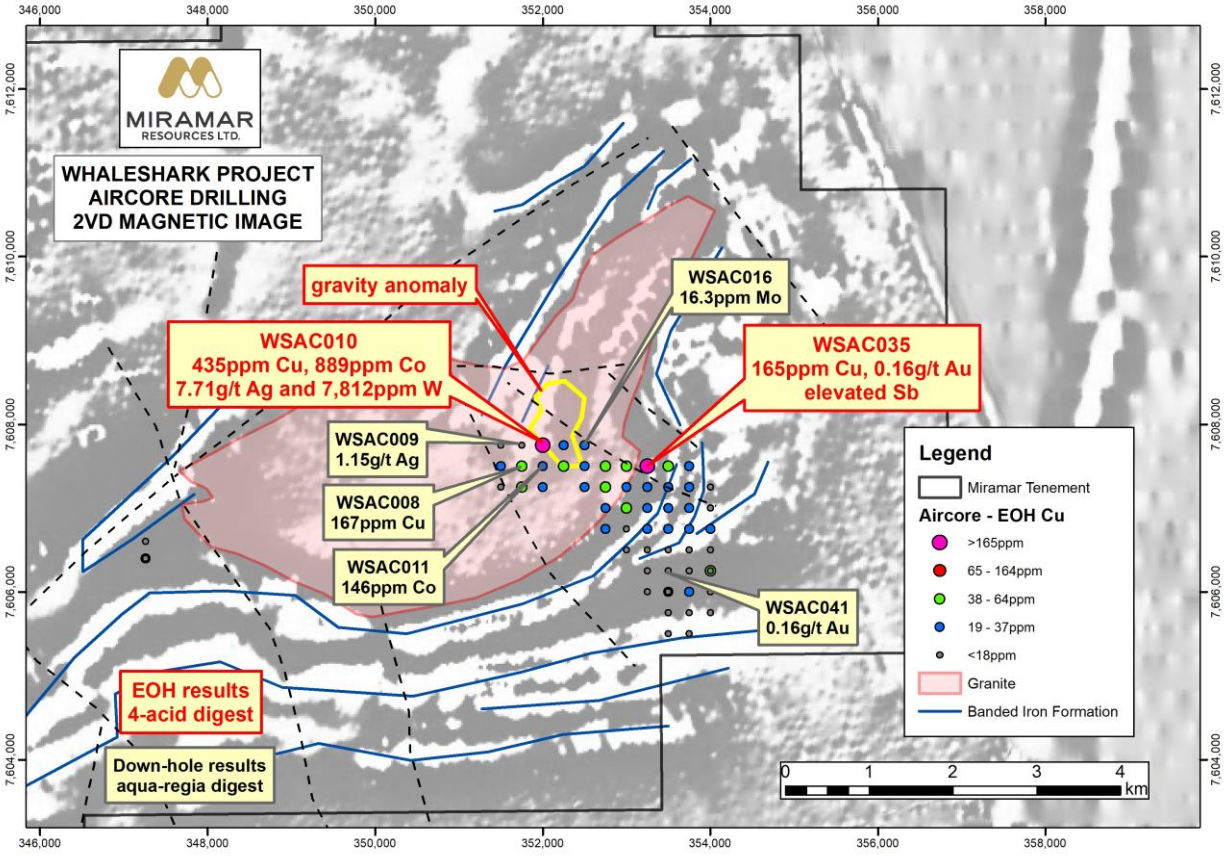

Figure 2. *Whaleshark aircore drilling showing EOH copper results over 2VD magnetic image.*

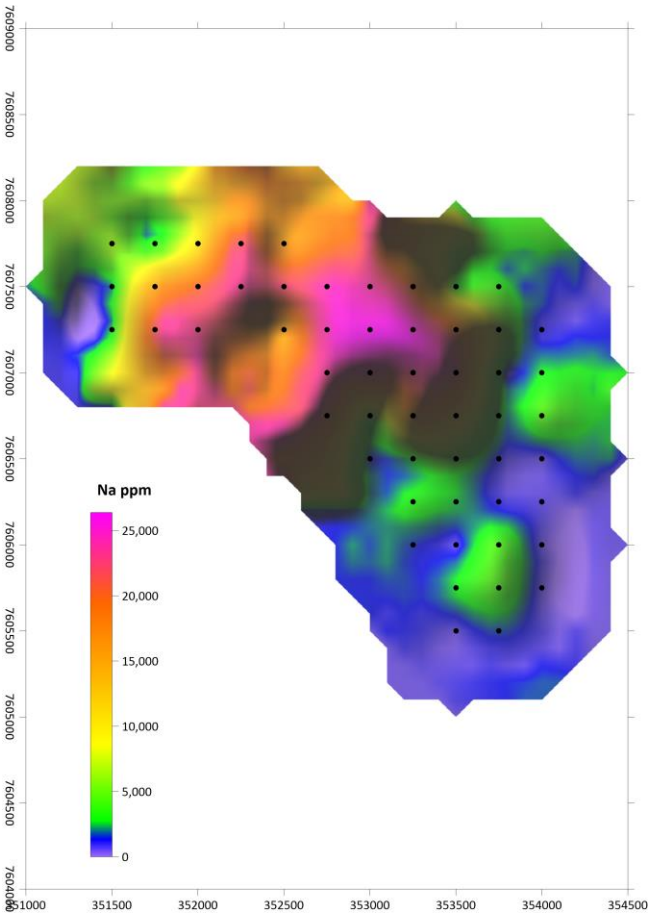

Figure 3. *End of hole Na results implying sodic alteration.*

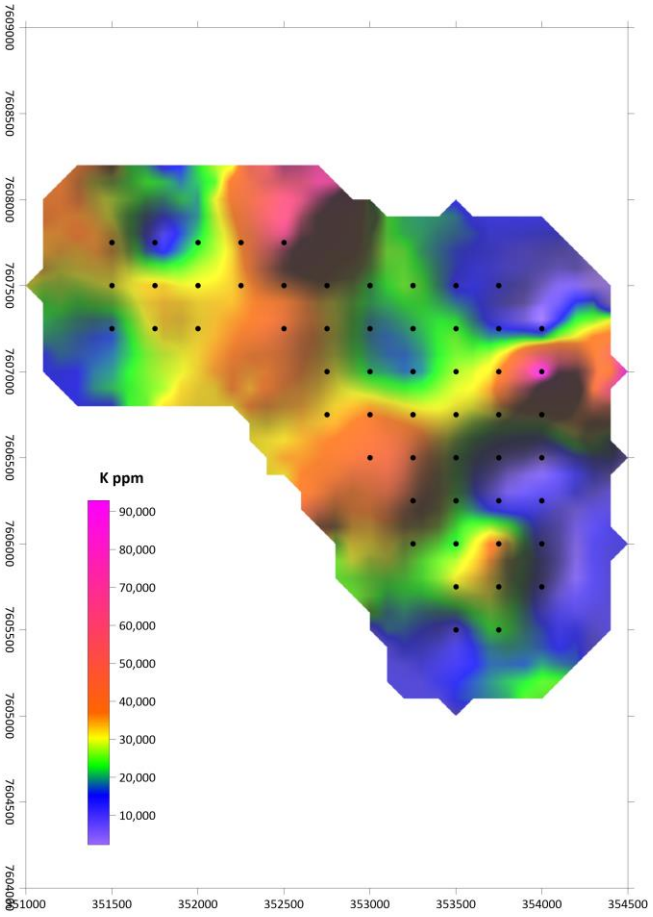

Figure 3. *End of hole K results implying potassic alteration.*

Future work

The Company plans to conduct further work at Whaleshark in 2023 including:

- Completion of a heritage survey and ground EM surveys over potential drill targets
- Bedrock diamond drilling and/or interface aircore drilling, depending on results of the EM survey

For more information on Miramar Resources Limited, please visit the company's website at 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.

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 Whaleshark Project, including JORC Table 1 and 2 information, is included in the Miramar Prospectus dated 4 September 2020.

Information on recent exploration carried out by Miramar Resources Limited, including JORC Table 1 and 2 information, is included in the following ASX Announcements:

- 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*

IOCG Deposits – A summary

Iron oxide copper gold (**IOCG**) and iron sulphide copper gold (**ISCG**) deposits host significant amounts of copper and gold mineralisation in association with iron oxide and/or iron sulphide minerals (hematite/magnetite and/or pyrite/pyrrhotite respectively).

These deposits can be very large, in the order of hundreds of millions of tonnes, and have average copper and gold grades in the order of 1% and 1g/t respectively, which make them attractive exploration targets.

The Merlin Mo-Re deposit in Queensland, the Kiruna iron-oxide apatite deposit in Sweden and the various high-grade Tennant Creek Au +/- Bi and Cu deposits are considered part of the IOCG/ISCG "family".

The deposits occur on the margins of large igneous bodies, usually a granite, which has intruded into a sedimentary sequence, and where an iron-rich host rock (e.g. a Banded Iron Formation) is also present.

Most significant IOCG/ISCG deposits, including all those located in Australia, are almost exclusively restricted to Mesoproterozoic to Neoproterozoic basement rocks (i.e., 850 million to 1.6 billion years ago).

The deposits occur within "provinces" where a range of sizes, grades, depths and styles can exist, for example the multiple deposits along the eastern edge of the Gawler Craton in South Australia (Figure 4).

Alteration signatures can be widespread, stretching over 10's to 100's of square kilometres, and include a mixture of regional and/or earlier sodic-calcic alteration with later and/or proximal potassic alteration.

Ore minerals include primary chalcopyrite, plus bornite and chalcocite, with pyrite and hematite in IOCG deposits, and pyrite and pyrrhotite in ISCG deposits.

The classic exploration process for IOCG deposits includes looking for a significant gravity anomaly, caused by dense hematite, adjacent to a magnetic anomaly.

Electrical geophysical techniques are also useful for highlighting potential IOCG and/or ISCG mineralisation, given the expected high amounts of iron sulphides present.

Examples of significant IOCG/ISCG deposits worldwide are listed below:

Location	Deposit	Size (Mt)	Grade (Cu %, Au g/t)	Ref.
Gawler Craton South Australia	**Olympic Dam**	10,100	0.62, 0.28	[i]
	Carrapateena	900	0.56, 0.24	[ii]
	Prominent Hill	180	0.9, 0.8	[iii]
	Hillside	337	0.6, 0.14	[iv]
Cloncurry Queensland	**Ernest Henry**	88	1.28, 0.73	[v]
	Starra	253	0.34, 0.48	[vi]
	Eloise	3	5.5, 1.4	[vii]
	E1	48.1	0.72, 0.21	[viii]
Punta del Cobre Chile	**La Candelaria**	470	0.95, 0.22	[ix]
	Mantos Blancos	170	1.4	[x]
Carajas Brazil	**Salobo**	1,926	0.59, 0.34	[xi]
	Cristalino	500	1.0, 0.25	[xii]
	Sossego	355	1.1, 0.28	[xiii]

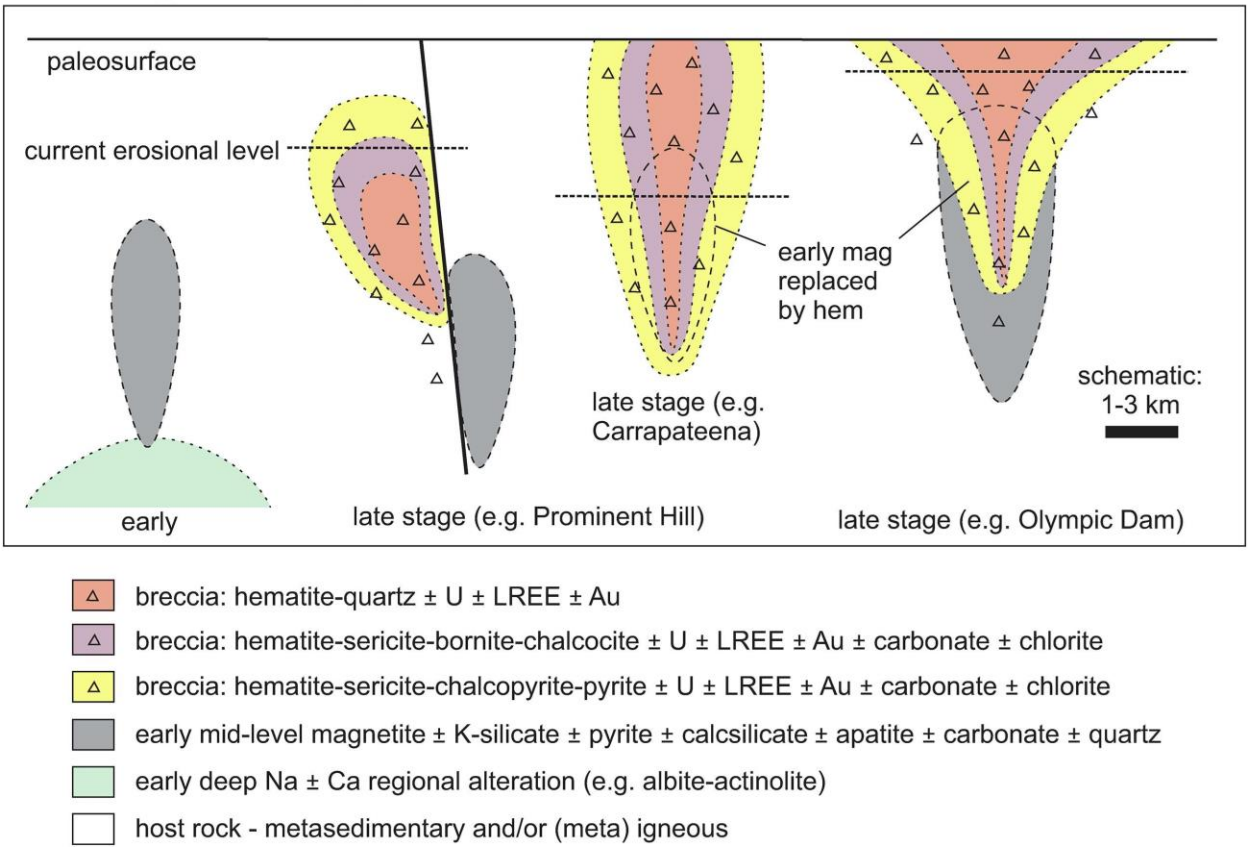


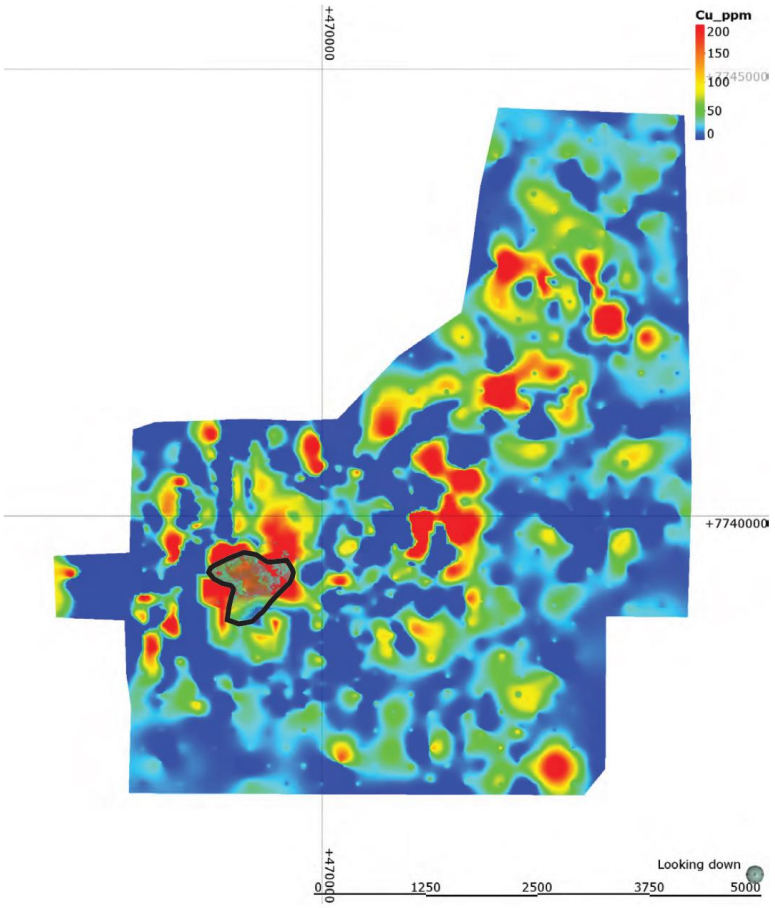
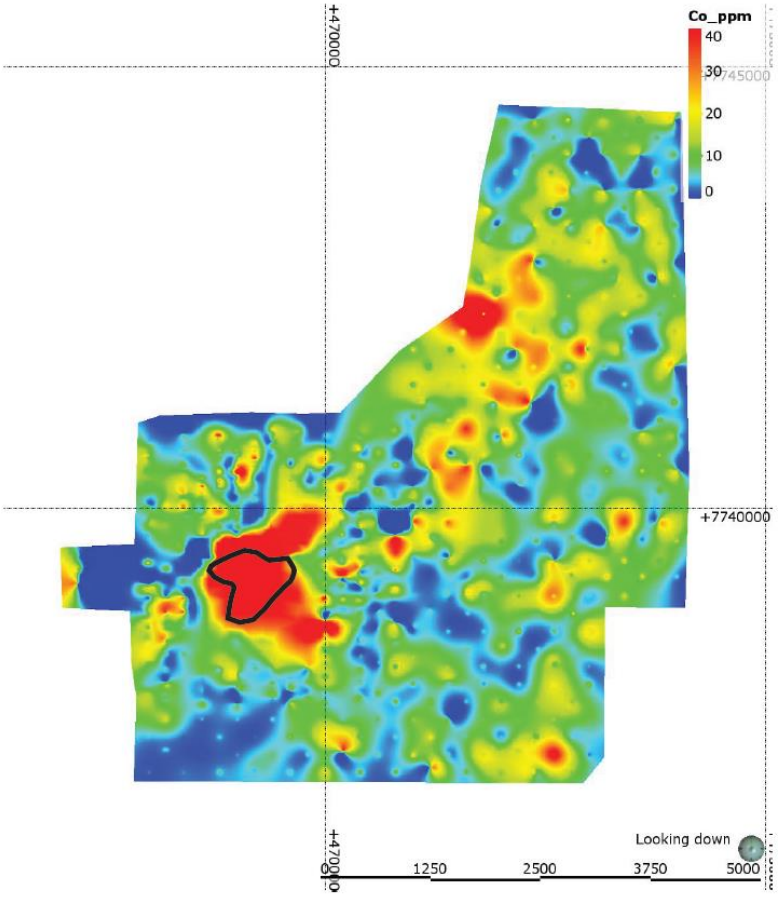
Figure 4. *Schematic cross sections of deposit-scale zoning and hydrothermal alteration in IOCG deposits formed in "post-orogenic" settings, with examples from the Gawler Craton. (Skirrow, 2022).*

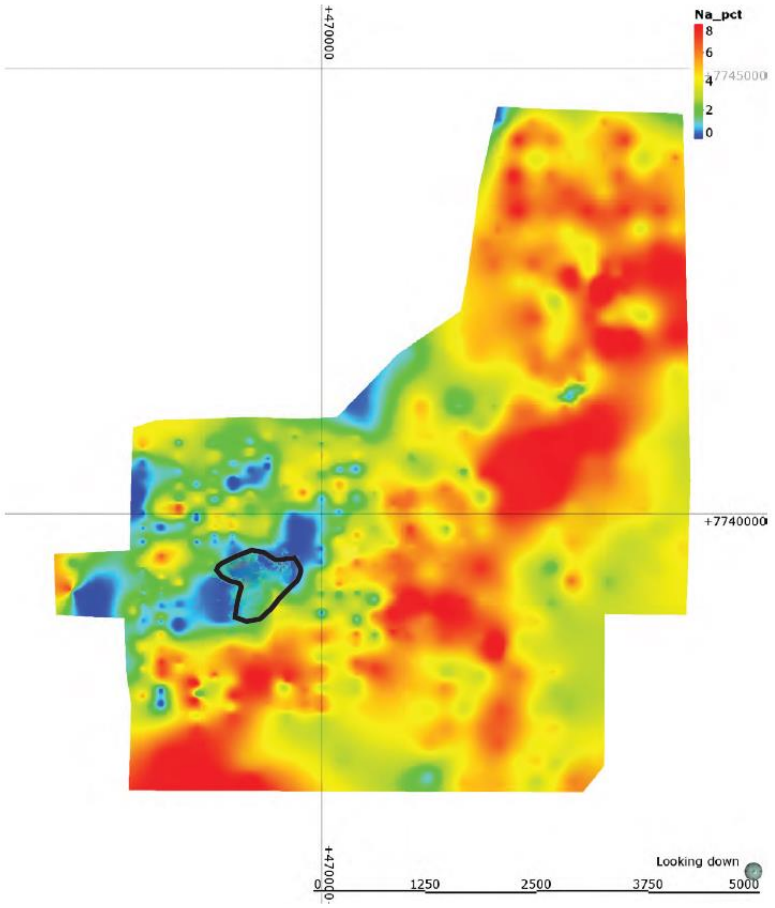
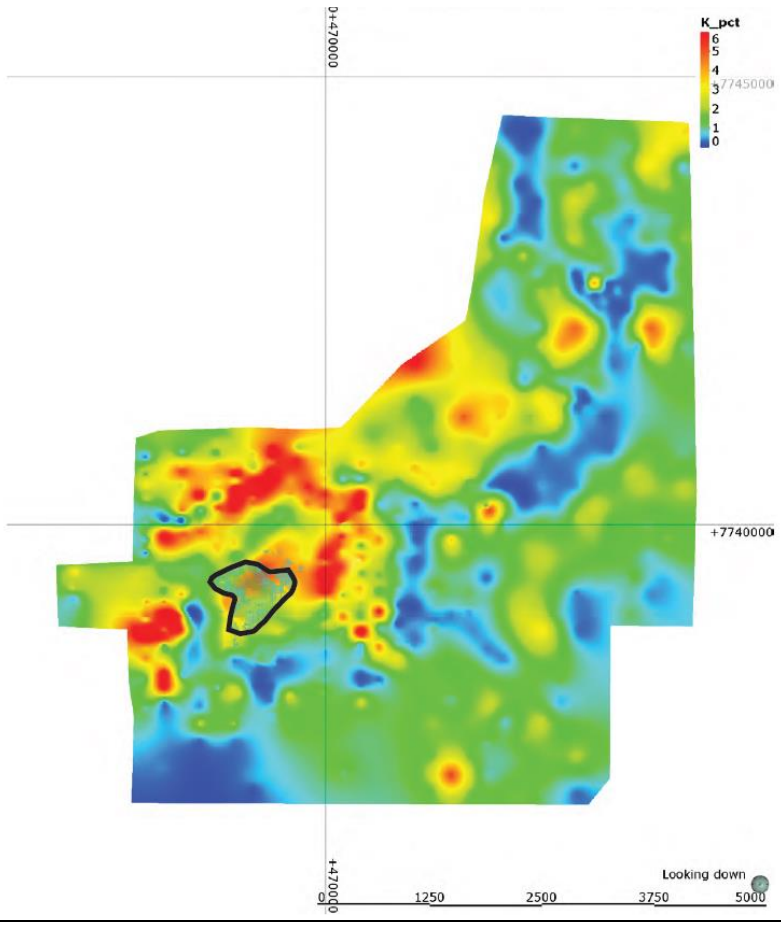
References:

Skirrow, R. G., "Iron oxide copper-gold (IOCG) deposits – A review (part 1): Settings, mineralogy, ore geochemistry and classification". Ore Geology Reviews Volume 140, January 2022, 104569.

Northwest Mineral Province Deposit Atlas, Ernest Henry and E1 deposits.

APPENDICES (Northwest Mineral Province Deposit Atlas)

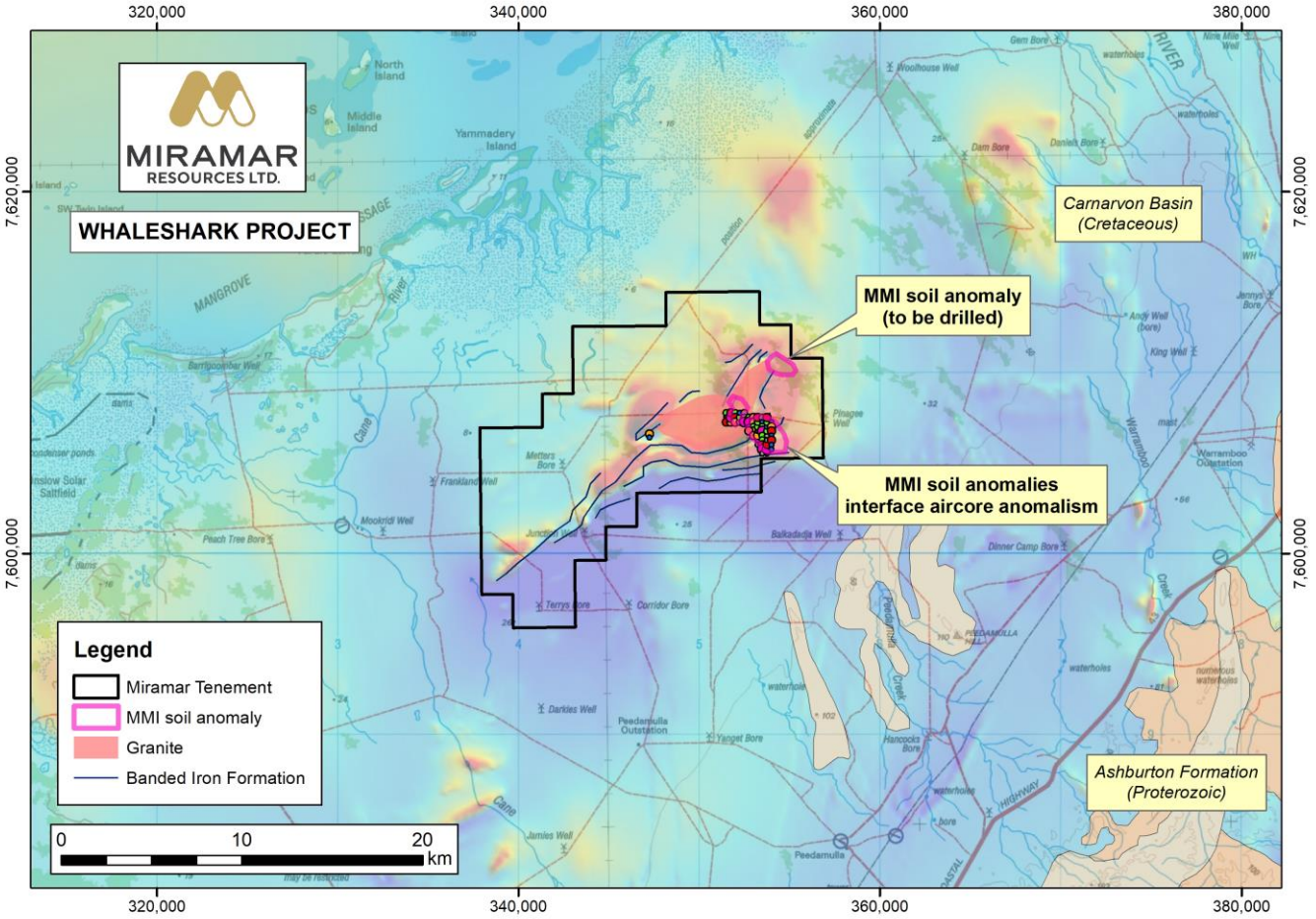
	*Image showing **Cu** values on the Proterozoic unconformity surface. Solid black line denotes the approximate position of the Ernest Henry ore outline.*
	*Image showing **Co** values on the Proterozoic unconformity surface. Solid black line denotes the approximate position of the Ernest Henry ore outline.*

	*Image showing **Na** values on the Proterozoic unconformity surface. Solid black line denotes the approximate position of the Ernest Henry ore outline.*
	*Image showing **K** values on the Proterozoic unconformity surface. Solid black line denotes the approximate position of the Ernest Henry ore outline.*

ABOUT THE WHALESHARK PROECT

The Whaleshark project is located 40km east of Onslow, WA, and is characterised by a large, folded banded iron formation (BIF) and granite complex buried under approximately 100m of Cretaceous Carnarvon Basin sediments.

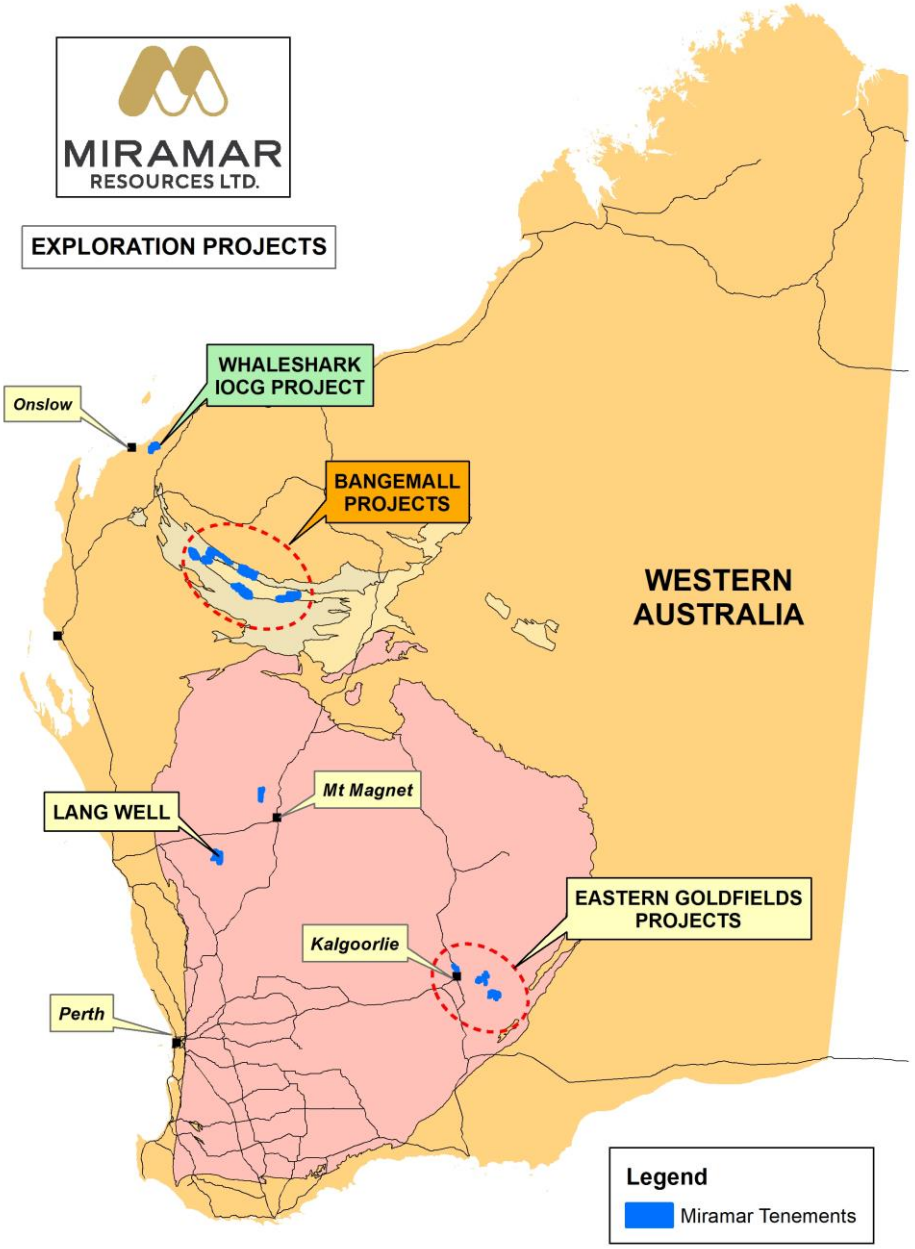
The project is located at the northwestern end of the Capricorn Orogen and has potential for Proterozoic IOCG and/or BIF-hosted gold mineralisation.



ABOUT MIRAMAR RESOURCES LIMITED

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

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 – Whaleshark Aircore EOH Analysis

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.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *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.*	• Samples were selectively picked from the last meter drilled in each hole • Samples averaged 50-100g in weight
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 recognizable Proterozoic basement
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *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.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the*	• Samples were logged for colour, weathering, grain size, geology, alteration and mineralisation where possible

Criteria	JORC Code explanation	Commentary
	relevant intersections logged.	
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *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.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• Samples were collected from the last meter drilled in each hole • Samples average 50-100g in weight
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.* • *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.* • *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 a 4-acid "total digest" followed by analysis of multi-elements by ICPMS • Gold was analyzed by 25g fire assay
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• No verification conducted to date
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.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• Hole collar locations were recorded with a handheld GPS in MGA Zone 50 • RL was also recorded with handheld GPS but accuracy is variable
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *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.* • *Whether sample compositing has been*	• Drill holes were completed on a 250m x 250m grid • The spacing is appropriate for the stage of exploration

Criteria	JORC Code explanation	Commentary
	applied.	
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.* • *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 planned on a square gird covering the MMI soil anomalism • 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 to Onslow by Miramar staff • Samples were then shipped to the laboratory by a road freight contractor
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.* • *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 E08/3166 which is owned 100% by "MQ Minerals Pty Ltd", a wholly owned subsidiary of Miramar Resources Limited
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• 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
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The target is IOCG mineralisation +/- BIF-hosted 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:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	  ○ *hole length.*
	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not*
		• Figure 1 shows all aircore drilling completed to date.
		• Hole collar coordinates were previously listed in ASX dated 7 November 2022

Criteria	JORC Code explanation	Commentary
	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.* • *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.* • *The assumptions used for any reporting of metal equivalent values should be stated.*	• Significant results reported for each EOH sample
Relationship between mineralisation widths and intercept lengths	• *These relationships are important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *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 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 • Collar information for all holes completed previously reported in ASX release dated 7 Nov 2022
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 drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• Further aircore drilling planned, followed by geophysics and diamond drilling of basement targets

[i] BHP, Annual Report, 30 June 2022
[ii] Oz Minerals Limited, Resource Statement, 30 June 2022
[iii] Oz Minerals Limited, Resource Statement, 30 June 2022
[iv] Rex Minerals Limited, 2015
[v] Evolution Mining Limited, 30 June 2022
[vi] Sleigh D W W, 2002
[vii] Porter, “pre mining resource, 1998”
[viii] EXCO, 2010
[ix] Porter, “Pre-mining mineable reserve”.
[x] Porter, “pre-mining resource”
[xi] Porter, “uncut resource, 2000”
[xii] Porter “resource to 2001”
[xiii] Porter, “2001 Resource”