

### **ASX ANNOUNCEMENT**

**WEDNESDAY, 14 JUNE 2023** 

#### WESTERN HORIZON DELIVERS STICKS OF SEMI-MASSIVE GALENA

Maronan Metals is pleased to report a third, thick interval of strong visible lead sulphide mineralisation from the ongoing drill program at its Maronan Silver-Lead Copper-Gold project located 90 kilometres north of the giant Cannington Silver-Lead-Zinc Mine in Northwest Queensland.

Drill hole MRN23008 intersected a 19 metre down hole interval of visible galena (lead sulphide) mineralisation including some visible sphalerite (Table 1) and core sticks of semi-massive galena breccia as shown in Figure 1 below.

This thick interval of visible galena mineralisation correlates with the Western Horizon (Figure 2 and Figure 4) and is situated only 280 metres below surface and 170 metres above drill hole MRN07001 which intersected 14.5 metres grading 11.1% lead, 133g/t silver including 6.5 metres grading 18.1% lead, 255g/t silver (refer to Red Metal Limited ASX announcement dated 4 June 2007).

In addition, MRN23008 encountered a 4 metre intercept of strong visible galena mineralisation along the parallel Eastern Horizon (or SSZ) further highlighting its remarkable continuity (Table 1, Figure 3).

The exciting visible mineralisation in MRN23008 follows on from strong assay and visual results recently reported from the silver-rich Eastern Horizon in MRN23005 and MRN23007 (refer to MMA: ASX announcements dated 29 May 2023 and 1 June 2023). Assays for MRN23007 and MRN23008 are anticipated in July 2023.

Step-up hole MRN23009 located about 100 metres closer to surface has commenced (Figure 2).



[Figure 1] MRN23008 - Core stick of semi-massive galena matrix breccia from the Western Horizon around 322m down hole.

Chairman: Simon Bird

Managing Director: Richard Carlton

Non-Executive Technical Director: Rob Rutherford

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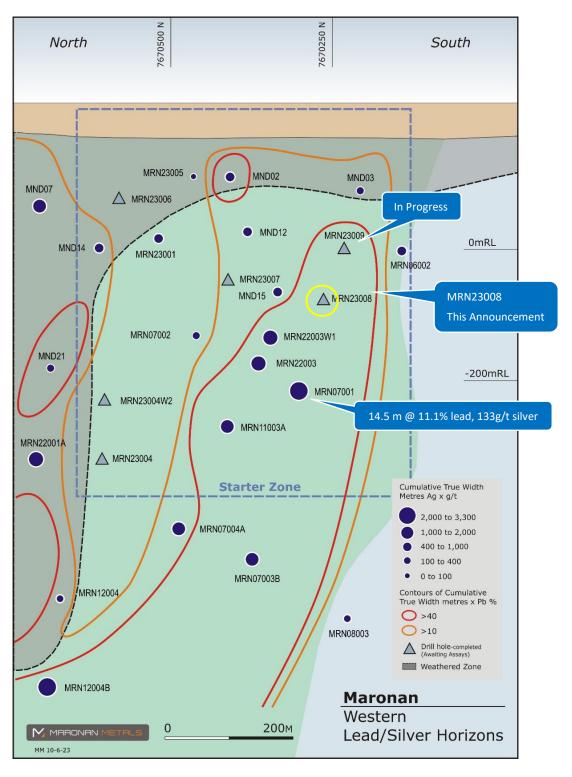
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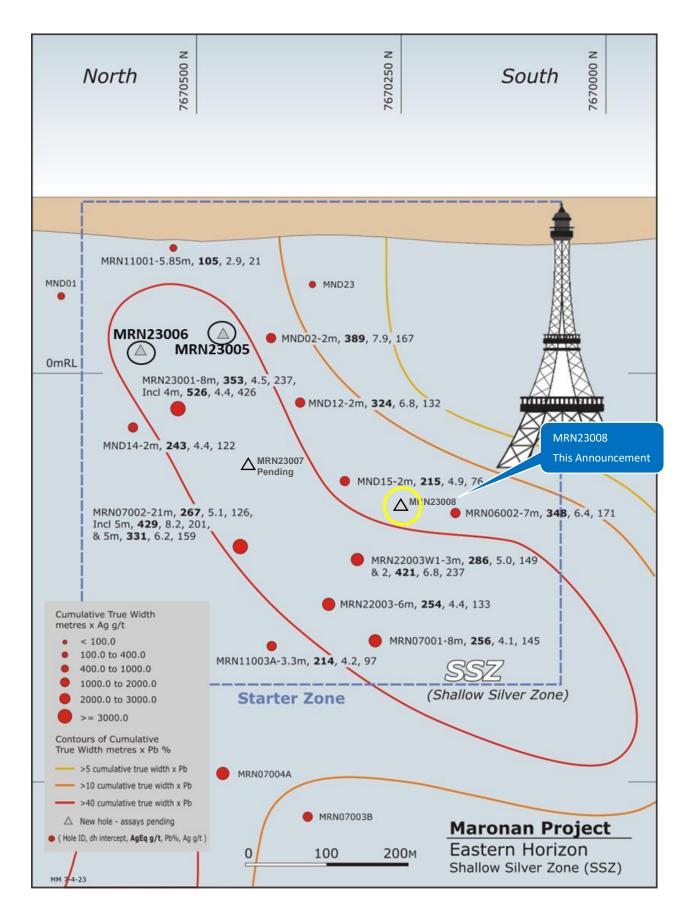
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#### Managing Director Richard Carlton said:

"Our geologists are very excited by this drill hole which supports their interpretation of a steep downdip plunge control to the high-grade lead-silver mineralisation. Closer spaced drilling is revealing two continuous parallel zones of shallow high-grade mineralisation within the Starter Zone which adds to its economic significance."



[Figure 2] Western Horizon long section within the Starter Zone showing MRN23008 and follow-up hole MRN23009.



[Figure 3] Eastern Horizon long section within the Starter Zone showing MRN23008 and follow-up hole MRN23009.

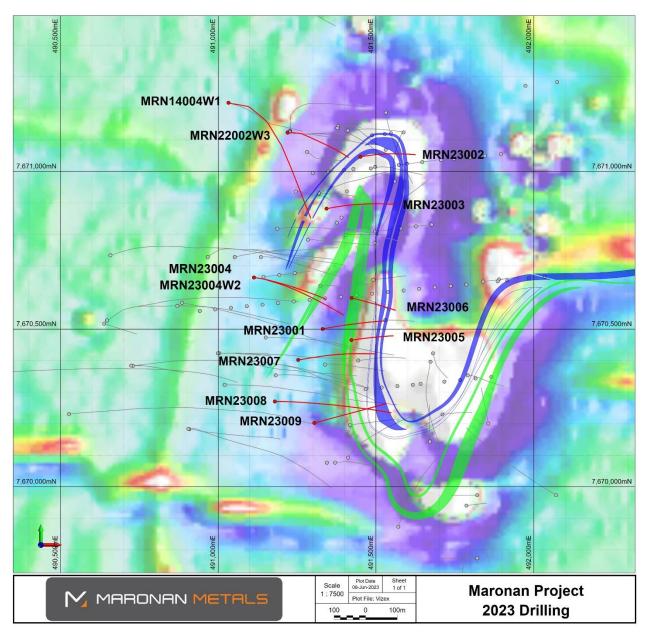
#### **Visual Estimate of Mineralisation**

Please note that caution should be taken with respect to interpreting visual results. Visual estimates of mineral abundance should never be considered a proxy or substitute for laboratory analyses where concentrations or grades are the factor of principal economic interest. Visual estimates also potentially provide no information regarding impurities or deleterious physical properties relevant to valuations.

[Table 1] Visual estimates of mineralisation in MRN23008.

From	То	Min1	%	Min2	%	Comment
225	225.8	Ga	0.5			Galena veins mm scale. 10mm section of 50% galena
246	247.2	Ga	0.1			Fine mm scale veins of galena with trace sphalerite.
252	261	Ga	0.5			Fine mm scale veinlets of galena
265	270	Ga	0.5			Fine mm scale veinlets of galena
295	296	Ру	3-5	Сру	0.5-1	
310	311	Ру	0.5-1	Sph	0.5-1	
320	322	Ро	1-3			
322	323	Ga	10-20	Ро	5-10	Western Horizon - Semi massive sulphide
323	327	Ga	5-10	Ро	3-5	Western Horizon
330	331	Ро	1-3			Western Horizon
331	333	Ро	3-5			Western Horizon
333	335	Ga	5-10	Sph	1-3	Western Horizon - galena and sphalerite
335	337	Ga	5-10	Sph	3-5	Western Horizon - galena and sphalerite
337	339	Ga	1-3			Western Horizon
339	341	Ga	5-10			Western Horizon
341	343	Ga	1-3			
343	346	Ga	5-10			
367	371	Ру	Trc			
393.5	402	Ро	Trc	Сру	Trc	
416	417	Ру	0.5 – 1	Сру	Trc	
463	464	Ру	3-5	Сру	0.5-1	
488	493	Ру	Trc	Сру	Trc	
504	511	Ро	3-5			
518	519	Ро	1-3			Po in a vein
534	538	Ga	5-10	Ро	1-3	Eastern Horizon – good galena mineralisation
552	553	Сру	1-3			

Abbreviations: Cpy – Chalcopyrite, Ga – Galena; Po – Pyrrhotite, Py – Pyrite, Sph – Sphalerite, Trc – Trace.



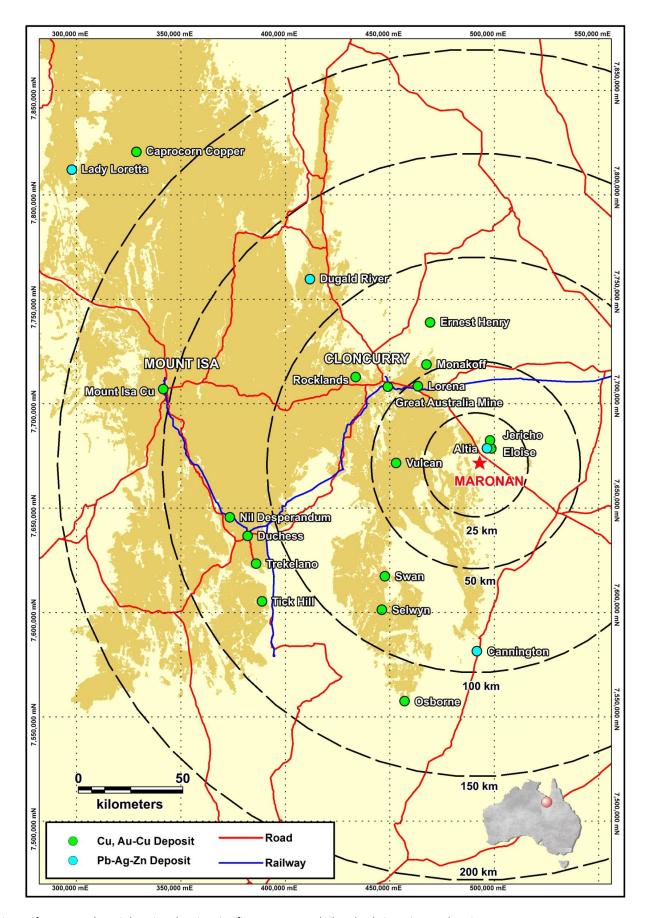
[Figure 4] Location of 2023 Drilling at Maronan over magnetic image, and with the Eastern (Blue) and Western (Green) horizons shown at the ORL (200m below surface)



[Figure 5] A: Galena mineralisation in the Western Horizon (333 – 334m) B: Galena-sphalerite mineralisation (334 – 335m). C: Sphalerite – galena mineralisation (335 – 336m). D: A zone of massive sulphide (galena-pyrrhotite) in the Western Horizon zone (321–322m). E: Galena mineralisation within pyroxene facies Western Horizon (340-341m). F: Galena mineralisation in pyroxene facies on the Eastern Horizon. Drill core diameter is NQ2 (50.6mm).

[Table 2] Summary of drilling completed since 1 January 2023.

Drill Hole	East	North	RL	Dip	Azimuth	Hole Depth	Target	Assay Results
MRN22005	490660	7670730	211	-80	75	1,543.8m	Target 4 - below MRN12004B.	ASX Release: 4/4/23
MRN23001	491330	7670500	212	-60	80	366m	Starter Zone	ASX Release: 18/4/23
MRN23002	491447	7671050	212	-70	80	421.0m	NFZ - Gold	Expected Q2 2023
MRN23003	491343	7670883	211	-65	80	450.9m	NFZ - Target 2 up- plunge	Expected Q2 2023
MRN22002W3	491227	7671127	210.8	-80	90	759.7	NFZ -Target 2	Expected Q2 2023
MRN23004	491111	7670663	211	-80	100	834.8	Starter Zone to Target 3 Link	Expected Q2 2023
MRN23004W2	491111	7670663	211	-80	100	720.6	Starter Zone to Target 3 Link	Expected Q2 2023
MRN23005	491423	7670460	210	-60	85	272.6	Starter Zone	ASX Release: 29/05/2023
MRN23006	491421	7670599	210	-60	105	299.4	Starter Zone	Expected June 2023
MRN14004W1	491033	7671217	210	-88	92	1320m	Copper-Gold Zone/DHEM Plate	Expected July 2023
MRN23007	491254	7670402	211	-60	85	450.3	Starter Zone	Expected July 2023
MRN23008	491180	7670270	210	-60	90	615	Starter Zone	Expected August 2023
MRN23009	491305	7670202	210	-60	75	In Progress	Starter Zone	



 $[Figure\ 6]\ Maronan\ deposit\ location\ showing\ significant\ copper\ and\ silver-lead-zinc\ mines\ and\ projects.$ 

This announcement was authorised by the Board of Maronan Metals Limited.

Richard Carlton,

**Managing Director** 

**ASX: MMA** 

For enquiries on your shareholding or change of address please contact:

Automic Group on 1300 288 364; or www.investor.automic.com.au.

#### **Competent Persons Statement**

The information in this report that relates to Exploration Results is based on and fairly represents information and supporting documentation compiled by Mr Robert Rutherford, who is a member of the Australian Institute of Geoscientists (AIG). Mr Rutherford is the Non-Executive Technical Director of the Company. Mr Rutherford has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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" (the JORC Code). Mr Rutherford consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

## **JORC Code, 2012 Edition – Table 1 report template**

### **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 (eg 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>	No sampling results are included in this release
Drilling techniques	<ul> <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> <li>MRN23008 – Diamond Drilling. PQ3: 0 – 53.0m; HQ3: 53.0 – 155.4m; NQ2: 299.4 – 615.0m</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>	<ul> <li>Overall – drill recoveries are excellent. There is some core loss drilling through the transported cover sequence. Otherwise, recovery was close to 100%</li> <li>For MRN23008: Between 0 – 38.6m (base of transported cover) recoveries averaged around 67%. Below this, recoveries were typically 100%. Drill core recoveries have been recorded for the full drill hole.</li> <li>There is no relation between sample recovery and grade in MRN23008.</li> </ul>

Criteria	JORC Code explanation	Commentary
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 relevant intersections logged.</li> </ul>	<ul> <li>Drill core has been logged for lithology, alteration and mineralisation and geotechnical RQD has been recorded. Specific Gravity measurements have been taken using the Archimedes Method (Dry Weight/(Dry Weight – Wet Weight). Magnetic Susceptibility reading have been collected using a K10 Magnetic Susceptibility machine.</li> <li>Logging of lithology and alteration is qualitative. Logging is sulphide mineralisation considered to be semi-quantitative in nature.</li> <li>All drill core has been photographed</li> <li>The total length (100%) of recovered drill core for each drill hole has been logged.</li> </ul>
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>	Not Applicable
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, 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.</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>	No assays are reported in this release
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> </ul>	Not Applicable

Criteria	JORC Code explanation	Commentary
Location of data points	<ul> <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> <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>The drill collar for MRN23008 was laid out by handheld Garmin 66i GPS unit</li> <li>The drill hole collar was surveyed in MGA94 grid system.</li> <li>Topographic relief has been surveyed during a detailed 50 metre x 50 metre gravity survey. The region is flat with relief varying less than 3 metres over the project area.</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 applied.</li> </ul>	<ul> <li>No assay results are reported in the announcement</li> <li>The spacing between drill hole pierce points when viewed on a longitudinal section at Maronan is about 200 metres both vertically and laterally but locally varies between about 100 and 400 metres.</li> <li>The drill pierce point spacing is sufficient to outline the structural geometry, broad extent of mineralisation and grade variations in the mineral system and is of sufficient spacing and distribution to infer a Mineral Resource.</li> <li>Drill spacing immediately around MRN23008 is between 70 – 170m. There is very limited drilling to the immediate south of MRN23008</li> <li>No sample compositing has been applied</li> </ul>
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>	<ul> <li>Bedded mineralisation appears folded about steep plunging tight to isoclinal fold structures. Limbs of the folds and the axial planar foliation are sub-parallel and dip between 60 and 80 degrees towards the west northwest. Structurally remobilised mineralisation in MRN14007 and other holes appears to parallel the axial plane to the northern fold structure which dips between 60 and 80 degrees towards the west northwest. East directed drilling provides a representative, unbiased sample across the isoclinal folded bedded mineralisation and axial planar, structurally remobilised mineralisation. The core to bedding angle of mineralisation typically varies between 20 and 50 degrees but can be locally more or less where bedding is folded.</li> <li>Continuity of the lead and silver mineralisation appears to have a steep bias, in the down dip-direction of the bedding, down the plunge direction of the northern fold structure. Fold structures, mineral and intersection lineations measured from the core indicate a steep plunge of about 70 degrees towards 284 degrees (grid). Causes of lateral and vertical variations of the grade and thickness of</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul> <li>mineralisation within the bedding planes have not been resolved because of the wide spacing of the drilling.</li> <li>Modelled zones of mineralisation at the Maronan Project strike approximately 010 and dip ~ 70W. MRN23008 intersect the modelled mineralisation at a dip of -51 towards 096 (true north). True width is interpreted to be approximately 85% of the downhole intercept. The drilling orientation is not considered to have introduced a sampling bias.</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>Drill core is kept at the drill rig which is manned 24/7 until it is collected by Maronan Metals personnel. Maronan Metals personnel transport the drill core to Maronan Metals yard in Cloncurry. The yard in Cloncurry is secured by a six foot fence and gates are locked at all times when no personnel are at the yard.</li> <li>Samples are collected from the Maronan Metals yard by Cloncurry Couriers and transported to ALS Mt Isa.</li> <li>Samples are transported in bulka bags sealed with a cable tie.</li> <li>Upon receipt on samples at ALS Mt Isa, the dispatch is checked and a sample receipt sent to Maronan Metals confirming the dispatch details.</li> </ul>
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	<ul> <li>A selection of historic pulps from drilling completed by Red Metal between 2011 – 2014 were submitted to ALS Mt Isa for check assaying utilising the same assay protocol as the current Maronan Metal program. Results from this program display a very strong correlation between the original Red Metal assays and the Maronan Metal check assays.</li> </ul>

# **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> </ul>	<ul> <li>Maronan is located within EPM 13368 situated in the Cloncurry region of north-west Queensland. EPM 13368 is owned 100% by Maronan Metals Limited. No material ownership issues or agreements exist over the tenement. An ancillary exploration access agreement has been established with the native title claimants and a standard</li> </ul>
	<ul> <li>The security of the tenure held at the time of reporting along with any</li> </ul>	landholder conduct and compensation agreement has established

Criteria	JORC Code explanation	Commentary
	known impediments to obtaining a licence to operate in the area.	with the pastoral lease holders.  The tenements are in good standing and no known impediments exist
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	• The extent of mineralisation at Maronan has been defined by 54 diamond core drill holes drilled by five different companies since 1987 until the present (Table 10). Shell Minerals/Billiton/Acacia discovered base metal mineralisation on the project in 1987 and completed 16 shallow holes to 1993. From 1995 to 1996 MPI completed 3 holes into the northern and southern fold hinge structures. From 2001 to 2004 Phelps Dodge completed 6 holes. BHP Cannington undertook a campaign of lead-silver exploration from 2006 to 2008 completing 13 holes. Red Metal Limited has completed 16 holes from 2011 to the 2022 seeking depth extensions to the bedded lead-silver and separate copper-gold mineralisation. Maronan Metals was spun out of Red Metals in 2022 and has subsequently drilled two holes and is continuing to explore the Maronan project.
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>Exploration on Maronan has identified two separate styles of mineralisation, bedded lead-silver mineralisation partially overprinted by structurally controlled, copper-gold mineralisation.</li> <li>The lead-silver mineralisation is of a similar style to the nearby Cannington deposit, one of the world's largest silver and lead producing operations. The Maronan lead-silver mineralisation occurs in two separate but sub-parallel banded carbonate-lead sulphide-magnetite-calcsilicate units referred to as the Western (Upper) Banded Lead Sulphide and Eastern (Lower) Banded Lead Sulphide horizons. The two horizons can be separated by up to 100 metres of quartz clastic meta-sediments (psammites, pelites and quartzite). At the northern fold structure the horizons are folded forming a steep plunging tight to isoclinal fold structure with attenuated or transposed limbs and a thickened hinge zone region.</li> <li>The overprinting copper-gold mineralisation can be compared with the ISCG mineralisation styles at the nearby Eloise and Osborne ore bodies. Mineralisation is associated with intense silica alteration within a bedding-parallel structure focused between the Western and Eastern Lead-Silver mineralised zones and comprises strong pyrrhotite with variable chalcopyrite and minor magnetite.</li> <li>Both mineralisation styles have shown improvement in grade and</li> </ul>

Criteria	JORC Code explanation	Commentary
		widths at depth and remain open down-plunge and at shallow levels between the existing wide spaced intercepts.
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 clearly explain why this is the case.</li> </ul>	Refer to Tables 1& 2 in the ASX announcement.
Data aggregation methods	<ul> <li>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.</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 assay results have been reported in this announcement
Relationship between mineralisatio n 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>	<ul> <li>No assay results have been reported in this announcement</li> <li>Modelled zones of mineralisation at the Maronan Project strike approximately 010 and dip ~ 70W. MRN23008 intersects the mineralisation at a good angle. True Thickness is estimated to be approximately 85% of the Downhole thickness.</li> </ul>
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>	See Figures 2 to 4 included in this announcement.
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>	No assays are being reported in this announcement

Criteria	JORC Code explanation	Commentary
Other substantive exploration data	<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>	There is no other substantive exploration data to report
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>Maronan Metals Ltd is well funded and intends to continue with ongoing exploration at the Maronan Project. A program of approximately 10,000m drilling is being planned to test the high quality targets at Maronan.</li> <li>See previous ASX Release (ASX:MMA; 29 April 2022; MMA Investor Presentation) which shows proposed exploration areas to be targeted by Maronan during this drilling campaign</li> </ul>