

## ASX ANNOUNCEMENT

TUESDAY, 24 JANUARY 2023

### VISUAL RESULTS FROM FIRST DEEP TEST MRN22005

Maronan Metals' first deep test below the lead-silver mineralisation has intersected visible lead sulphides where the Eastern and Western horizons were predicted further highlighting the integrity of the geological model.

Multiple intervals of lead sulphide mineralisation are visible in carbonate exhalative, and in some cases meta-pelite, from 1232 – 1243 metres and 1290 – 1304 metres downhole as the Western Horizons and between 1404 metres to 1425 metres as the Eastern Horizons (Table 1). Copper sulphide mineralisation is variably developed between 1304 metres and 1404 metres downhole (Table 1).

MRN22005 was terminated at 1543.8 metres and the core is currently being logged and sampled in preparation for assaying. Results are anticipated in about 6 weeks.

This deep hole will now be used as a platform to undertake down-hole electromagnetic surveying to assist off-hole targeting towards high sulphide zones. Down-hole surveying is scheduled to begin shortly.



[Figure 1] Image of half core showing strong galena mineralisation at 1295m downhole from within the Western Horizon

Managing Director Richard Carlton said:

*“Our first deep drill test MRN22005 continues to highlight the remarkable continuity of the lead-silver horizons at Maronan. We look forward to receiving the assays and DHEM results to help plan our next deep holes.”*



a)



b)



c)



d)



e)



f)

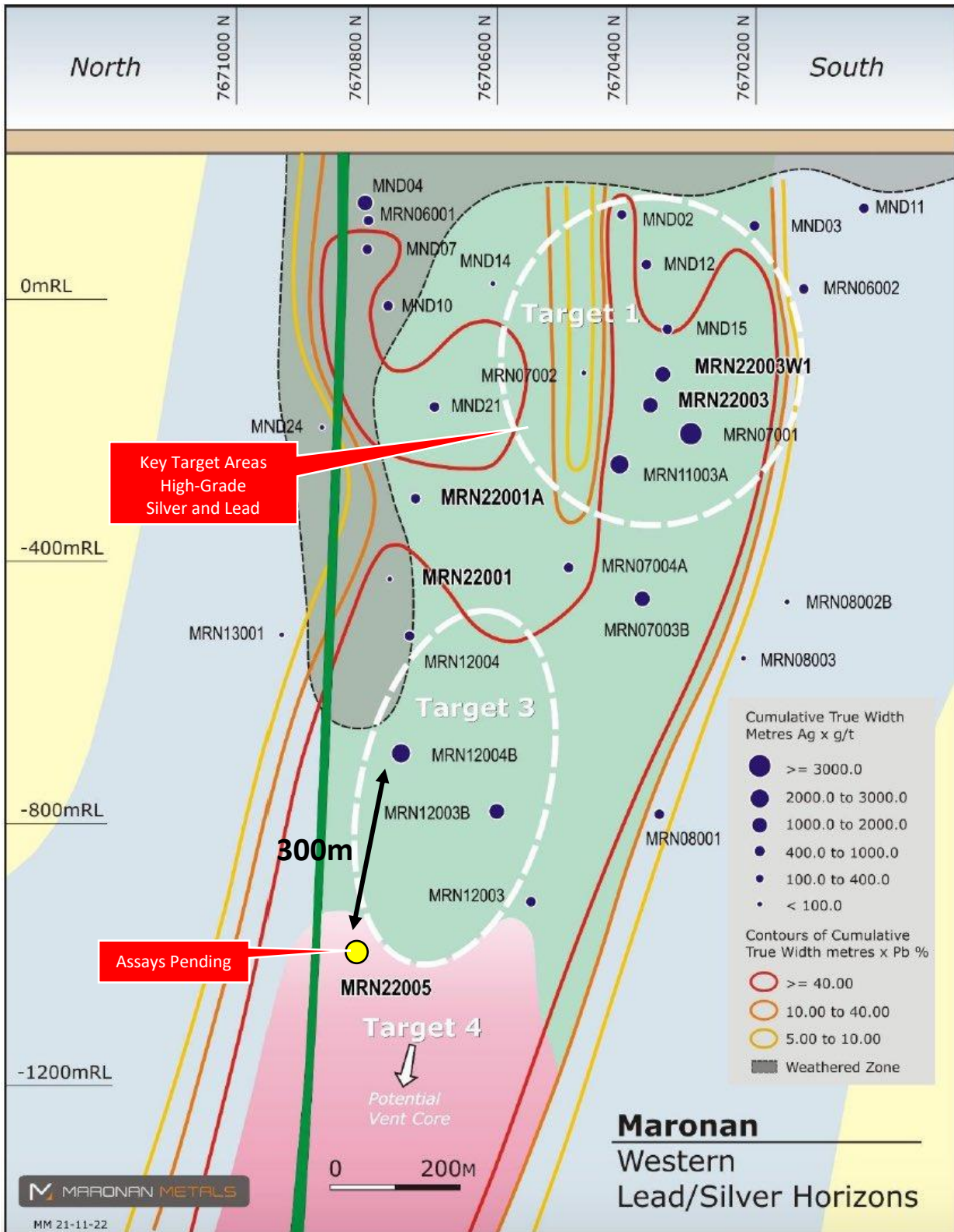
[Figures 2a to 2f] Selected drill core photographs from mineralised intervals in MRN22005. Drill core is NQ2 diameter. (a) Strong galena mineralised pelite adjacent to Western Horizon carbonate exhalative from 1296m downhole. (b) Strong galena mineralised carbonate exhalative from Eastern Horizon at 1404m downhole. (c) Pyrrhotite – galena mineralised carbonate exhalative from the eastern horizon at 1414m downhole. (d) Galena – pyrrhotite – chalcopyrite mineralised carbonate exhalative from 1424m. (e) Pyrrhotite – chalcopyrite mineralisation at 1384m downhole. (f) Magnetite – pyrrhotite – chalcopyrite mineralisation at 1387m downhole.

[Table 1] Visual estimates of mineralisation in MRN22005.

From	To	Min1	%	Min2	%	Comment
0	127.7					No mineralisation of note.
127.7	128.6	Py	<1			Pyrite along fracture planes
148.3	186	Py	<1			Pyrite along fracture planes
335	336	Po	<1			Vein form
337.1	337.5	Po	<1			Vein form
367.5	376.65	Po	30 - 50			Po rich breccia zone at bottom contact of black graphitic shale zone
340	460	Po	1 - 3			Minor Po throughout, increased (1-3%) Po in the black shale unit
505	555	Po	1 - 3			Po in altered zone at base of graphitic schist zones have common Po (1-3%)
912.5	916.5	Po	5 - 10	Cpy	1 - 3	Po dominate sulphide in exhalative. Some Chalcopyrite
1030	1033	Py	<1			Trace Pyrite
1120	1162	Po	1 - 3	Cpy	<1	The ECMt (magnetite carbonate) There is some Py with the sulphide phases in these units.
1232.9	1235.4	Po	5 - 10	Ga	1-3	Western Horizon
1235.4	1242.7	Ga	5-10	Po	1 - 3	Western Horizon
1290.5	1291	Ga	1-3			Western Horizon
1291.5	1294.7	Ga	5-10			Western Horizon
1294.7	1296.5	Ga	10-15			Western Horizon
1296.5	1297.1	Ga	5-10			Western Horizon
1301.9	1304	Ga	1-5			Western Horizon
1304	1326	Cpy	1 - 3	Po	1 - 3	Copper Zone
1329.8	1335.5	Cpy	1 - 3	Po	1 - 3	Copper Zone
1342.5	1349	Ga	1 - 3	Cpy	<1	Po 1 - 3% Context for galena requires further interpretation
1349	1350	Po	<1	Cpy	<1	Copper Zone
1376	1380	Po	5 - 10	Ga	5-10	Cpy <1% Eastern Horizon,
1380	1383	Po	<1	Cpy	<1	Copper Zone
1383	1390	Po	10 - 30	Cpy	1 - 3	Copper Zone
1390	1396	Py	1 - 3	Cpy	<1	Copper Zone
1401	1404	Po	3 - 5	Cpy	<1	Copper Zone
1404	1407.4	Ga	10 - 20	Po	3 - 5	Eastern Horizon
1411.1	1415.3	Ga	5 - 10	Py	5 - 10	Eastern Horizon
1421	1424.6	Po	10 - 30	Ga	5 - 10	Cpy <1%, Sph <1% Eastern Horizon
1533	1534	Cpy	<1	Po	<1	Chalcopyrite-Pyrrhotite vein
1533.03	1543.8					No Mineralisation of note

Abbreviations: Py – Pyrite; Po – Pyrrhotite, Ga – Galena, Cpy – Chalcopyrite, Sph - Sphalerite





[Figure 3] Long section view of the Western Horizon. Note, MRN22005 is approximately 300 metres below MRN12004B on the Western Horizon and 120 metres below MRN12004B on the Eastern Horizon.

[Table 2] MRN22005 Drill Hole Details.

Drill Hole	East	North	RL	Dip	Azimuth	Hole Depth	Target	Assay Results
MRN22005	490660	7670730	211	-80	75	1543.8	Target 4 – Vent Core	Expected – Mar 23

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](http://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 style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>Sampling has been half-core sampling of diamond drill core. Core has been cut using an automatic corewise core saw.</li> <li>Samples have been submitted for assay analysis with ALS Global at the Mt Isa Laboratory. Samples are crushed and pulverized to 85% passing 75um. Samples are then assayed using the Au-AA25 (30g fire assay) and ME-MS61 assay methods (48 element ICP-MS suite). For samples that return over-limit assays from the ME-MS61 assays, samples are re-assayed using the OG62 method.</li> <li>Maronan Metals has included standard and blank samples to monitor laboratory performance at a rate of approximately 1:25 samples. In addition to this, ALS has also included addition standard and blank materials to monitor the performance of the laboratory.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul style="list-style-type: none"> <li>MRN22005 – Diamond Drilling. PQ3: 0 – 89.9m; HQ3: 89.9 – 650.6m; NQ2: 650.6m – 1543.8m.</li> <li>HQ and NQ Drill core is oriented using the Reflex ACT3 digital orientation tool</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul style="list-style-type: none"> <li>Overall – drill recoveries are excellent. There is some core loss drilling through the transported cover sequence. Otherwise, recovery was close to 100%</li> <li>Recovery was recorded for every drill run by measuring the length of the run drilled vs the length of core recovered.</li> <li>It is not known at this point in time whether there is a relationship between sample recovery and grade, or whether sample bias has occurred due to preferential loss or gain of material.</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>Logging</i>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <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 readings have been collected using a K10 Magnetic Susceptibility machine.</li> <li>• Logging of lithology and alteration is qualitative. Logging of sulphide mineralisation is 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>
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <i>Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.</i></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Drill core was cut in half using an automatic core saw. Drill core was cut slightly off the orientation line, with sampling of the half core that did not have the orientation line.</li> <li>• The sampling method utilized is considered appropriate for the styles of mineralisation at the Maronan project.</li> <li>• Certified Standards were inserted at a rate of 1:25 samples. Two different sets of standards are utilized, one for the lead, silver, zinc mineralisation (OREAS 135B; OREAS 136; OREAS 315; OREAS 317) and one for the copper, gold mineralisation (OREAS 520; OREAS 521; OREAS 523; OREAS 601C)</li> <li>• Blanks were inserted at a rate of 1:25 samples.</li> <li>• No duplicate second-half drill core samples have been submitted.</li> <li>• No specific grain size analysis has been completed on the Maronan project, however sampling methods utilized are consistent with those used by other mining and exploration projects targeting similar styles of mineralisation in the Mt Isa Belt.</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>Quality of assay data and laboratory tests</i>	<ul style="list-style-type: none"> <li><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li><i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i></li> <li><i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i></li> </ul>	<ul style="list-style-type: none"> <li>Samples were assayed by Au-AA25 (30g fire assay) technique for gold and the ME-MS61 method for Ag, Al, As, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cs, Cu, Fe, Ga, Ge, Hf, In, K, La, Li, Mg, Mn, Mo, Na, Nb, Ni, P, Pb, Rb, Re, S, Sb, Sc, Se, Sn, Sr, Ta, Te, Th, Ti, Tl, U, V, W, Y, Zn and Zr. For over limit samples of Ag, Cu, Pb, Zn, samples are assayed by the ore grade OG-62 method. Au-AA25 is considered a total assay method for gold. ICP-ME61 is considered a “near total” digest method, with only the most resistive minerals (eg Zircons) only partly dissolved.</li> <li>The methods of assaying utilized are considered appropriate for the style of mineralisation targeted</li> <li>Standard and Blank samples were inserted at a rate of 1:25 samples each.</li> <li>The standards used displayed acceptable levels of accuracy and precision.</li> <li>Blank samples submitted were within acceptable limits and do not show any indications of sample contamination during preparation.</li> <li>No duplicates at the sampling stage were submitted</li> <li>Pulp duplicates displayed an acceptable level of precision</li> <li>The standards used displayed acceptable levels of accuracy and precision.</li> </ul>
<i>Verification of sampling and assaying</i>	<ul style="list-style-type: none"> <li><i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li><i>The use of twinned holes.</i></li> <li><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li><i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>No assay results are included in this report.</li> <li>Logging is completed to two contract senior exploration geologists working for Maronan Metals, and is reviewed by Maronan Metals exploration manager.</li> <li>No holes have been twinned at this stage of exploration.</li> <li>Logging is saved into a logging template excel spreadsheet. Upon completion of logging, this data is uploaded into an access database containing logging from the Maronan 2022 drill program. The access database and logging spreadsheet are saved on the Maronan Metals server.</li> </ul>
<i>Location of data points</i>	<ul style="list-style-type: none"> <li><i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i></li> <li><i>Specification of the grid system used.</i></li> <li><i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>The drill collar for MRN22005 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>



Criteria	JORC Code explanation	Commentary
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li>• <i>Data spacing for reporting of Exploration Results.</i></li> <li>• <i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i></li> <li>• <i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <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>• No sample compositing has been applied</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>• <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <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 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. MRN22005 intersect the modelled mineralisation at a dip of -60 towards 100 (true north). True width is interpreted to be approximately 75% of the downhole intercept. The drilling orientation is not considered to have introduced a sampling bias.</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>• <i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <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</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>in Cloncurry is secured by a six foot fence and gates are locked at all times when no personnel are at the yard.</p> <ul style="list-style-type: none"> <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>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No audits or reviews of the sampling techniques and data have been conducted</li> </ul>