

ACN 103 367 684

## **ASX ANNOUNCEMENT**

## **17 DECEMBER 2014**

#### **ASX Code: RDM**

Red Metal Limited is a minerals exploration company focused on the exploration, evaluation and development of Australian copper-gold and basemetal deposits.

#### **Issued Capital:**

174,771,919 Ordinary shares

7,125,000 Unlisted options

#### **Directors:**

Rob Rutherford Managing Director

Russell Barwick Chairman

Joshua Pitt Non-executive Director

#### **RED METAL LIMITED**

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Queensland Explorer of the Year 2013

## **MARONAN PROJECT UPDATE**

MRN14008 intersected the prospective carbonate-lead sulphide stratigraphy at the predicted down hole depth some 290 metres down plunge of the strong lead and silver mineralisation intersected in MRN13002 (Figure 1 and Figure 4). The targeted stratigraphy occurs over 101 metres down hole and contains five separate intervals of lead sulphide mineralisation. These occur over a combined intercept thickness of approximately 33 metres with the widest being about 20 metres down hole. True widths are estimated to be about 50% of downhole widths. Assay results are expected by mid-January.

## **ASSAY RESULTS - DRILL HOLE MRN14007**

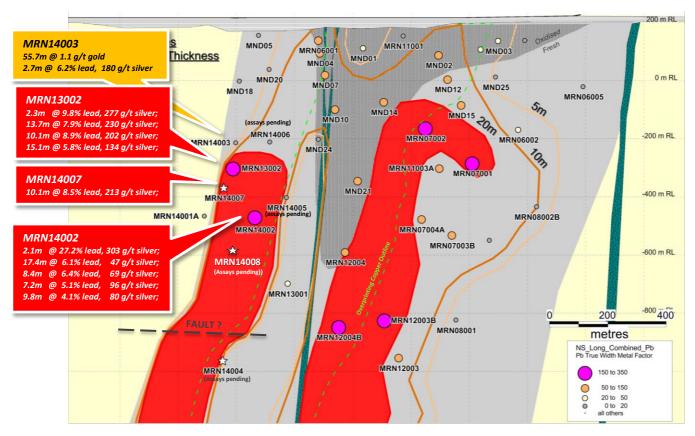
The structurally remobilised lead mineralisation in drill hole MRN14007 has returned a high-grade lead and silver intercept of 10.1 metres from 579.4 metres down hole assaying 8.5% lead and 213g/t silver plus three other intercepts of lesser grade and width (see Table 1). Estimated true widths are about 40% of down-hole widths.

The pierce point of MRN14007 is located 35 metres north and 60 metres below the strong lead and silver mineralisation in MRN13002 (Figure 1). This result highlights scope for potentially mineable widths of the structurally remobilised mineralisation focused at the apex to the fold structure (Figure 3). Core observations and structural data indicate this mineralisation style could persist parallel to the axis of the northern fold structure perhaps as a series of steep plunging, pipe-shaped and planar bodies (Figure 3).

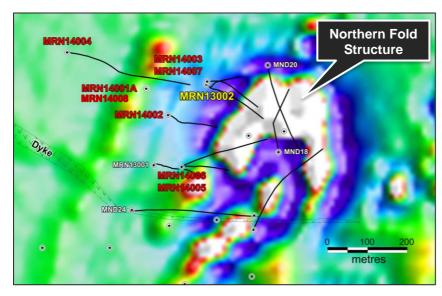
## **DISCUSSION**

The 2014 program has outlined the broad geometry and provided an indication of the grade variations of the lead and silver sulphide mineralisation within the northern fold structure between the 400 and 800 metre depth levels. The northern fold structure was first intersected in 2013 with drill hole MRN 13002.

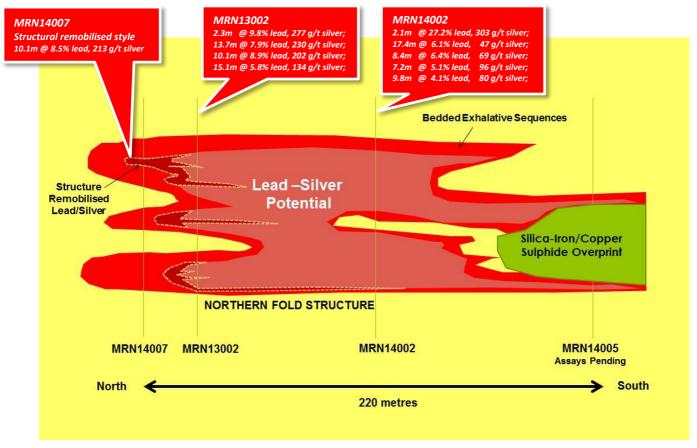
Future work programs will be designed once all logging and assay data from this program are at hand and the geologic and economic significance of the results assessed.



[Figure 1] Maronan Project: Working long section showing completed holes MRN14001A, MRN14002, MRN14003, MRN14007 (assays reported) and MRN14004, MRN14005, MRN14006 and MRN14008 (assays pending). The interpreted extent of the large iron and copper sulphide vein zone is outlined as a green dashed line – this zone partially overprints the earlier formed, bedded lead and silver mineralisation in MRN13001, MRN14005 and MRN14004. Red Metal interpret there to be potential for thickened carbonate-lead sulphide sequences at the hinge zone to the northern fold structure situated to the north of MRN14004.



[Figure 2] Maronan Project: Drill hole location plan showing current holes around the lead-sulphide mineralisation in MRN13002 (yellow). Drill holes MRN14001A, MRN14002, MRN14003, MRN14005, MRN14006 and MRN14008 MRN14007 evaluating the shallower ore potential around MRN13002. MRN14004 is the first deep test targeting the down plunge extension of the northern fold structure.



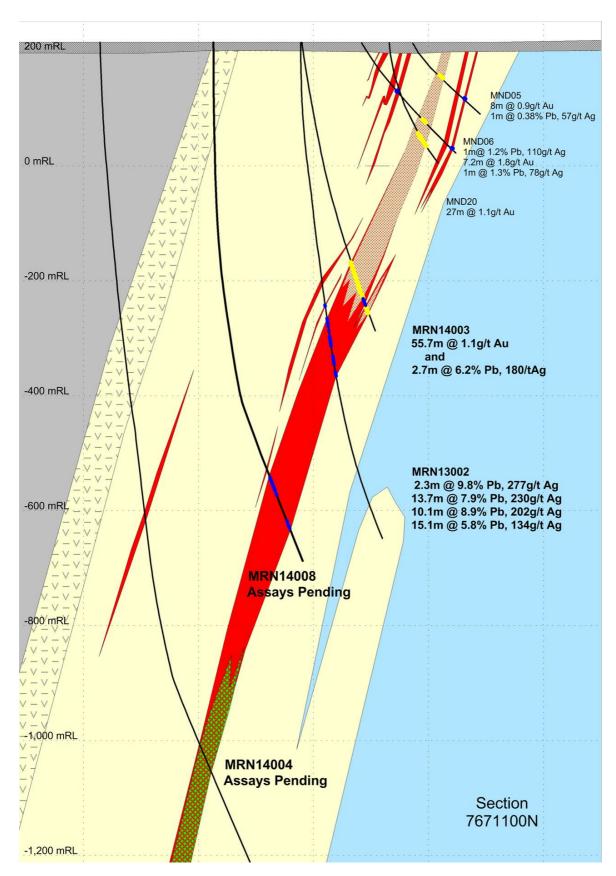
[Figure 3] Maronan Project: Schematic level plan at about -400m RL highlighting the broad geometry of the northern fold structure and the region offering potential for lead and silver sulphide mineralisation. Note the thickened sequences at the hinge to the northern fold structure and general increase in grade towards the apex of the fold. The prospective sequences thin towards the south and the lead and silver mineralisation appears depleted where overprinted by the silica, iron and copper sulphide veins. Step out drill hole MRN14008 is located about 250 metres below MRN13002.

[Table 1] Summary of assay results from MRN14007 applying a nominal 1.0% lead cut-off grade.

Hole ID	From (m)	Down-hole Intercept (m)	Estimate True Width (m)	Lead wt%	Silver g/t	Gold g/t
MRN14007	579.4	10.1	4.2	8.5	213	0.2
plus	591	2.0	1.2	1.8	71	0.2
plus	594	0.7	0.4	7.6	173	0.1
plus	596.7	1.3	0.7	1.8	70	

[Table 2] Drill hole collar survey data for the 2014 holes.

Hole ID	GDA94_E (m)	GDA94_N (m)	Azimuth	Dip	Depth (m)	Status
MRN14001A	491227	7671127	003	-83	839	Reported
MRN14002	491282	7671061	047	-90	805.4	Reported
MRN14003	491380	7671143	076	-82	525.8	Reported
MRN14004	491029	7671218	094	-88	1403.1	Assays Pending
MRN14005	491319	7670929	071	-87	778	Assays Pending
MRN14006	491319	7670930	065	-74	567.9	Assays Pending
MRN14007	491378	7671137	0	-90	705.7	Reported
MRN14008	491226	7671125	050	-89	925.1	Assays Pending



[Figure 4] Maronan Project: Working cross section showing MRN13002 and the recent step-out drill holes MRN14008 and MRN14004 (assays pending). Red Metal interpret there to be potential for thickened carbonate-lead sulphide sequences at the hinge zone to the northern fold structure situated to the north of MRN14004 (see Figure 1).

For further information concerning Red Metal's operations and plans for the future please refer to the recently updated web site or contact Rob Rutherford, Managing Director at:

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**Rob Rutherford** 

**Managing Director** 

Russell Barwick

Chairman

The information in this report that relates to Exploration Results is based on information compiled by Mr

Robert Rutherford, who is a member of the Australian Institute of Geoscientists (AIG). Mr Rutherford is the Managing Director of the Company. Mr Rutherford has sufficient experience which is relevant to the style of mineralization 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.

Table 3 JORC 2012 Sampling Techniques and Data

Criteria	JORC 2012 Explanation	Commentary
Sampling Techniques	Nature and quality of sampling	The extent of mineralisation at Maronan has been defined by 49 HQ/NQ diamond core drill holes drilled by four different companies since 1987 until the present. The spacing between drill hole pierce points when viewed on a longitudinal section is about 200 metres both vertically and laterally but varies between about 100 and 400 metres. The 49 holes average 669m deep and range in depth between 150m and 1469m. Holes were generally angled towards grid east between -55 and -90 degrees to optimally intersect the mineralised zone. Mineralisation in MRN14007 is defined by NQ core
		Physical core is available for 39 of the 49 holes. Paper copies of original laboratory reports and geological logs are available for 15 historic holes. Digital laboratory reports and geological and geophysical logs are available for the 34 more recent holes.
	Include reference to measures taken to ensure sample representativity and the appropriate calibration of any measurement tools or systems used.	At Maronan ½ NQ core or ¼ HQ diameter core has been sampled to ensure sample representivity for all holes. Continuous geologically defined intervals were regularly sampled at a 1.0 meter interval locally down to 0.4 metre or up to 1.5m based on geological controls. These high quality samples were logged for lithology, density, magnetic susceptibility, structure, RQD and other attributes.
		MRN14007 was sampled using ¼ NQ core. Second ¼ NQ core duplicate samples were collected to check sample representativity at selected intervals. Quality control checks using standards, blanks or duplicates are included at a sample rate of about one in ten.
	Aspects of the determination of mineralisation that are Material to the Public Report.	Diamond core drilling was used to obtain nominal 1 metre samples from which up to 3kg of ½ or ¼ NQ or ¼ HQ diameter core was pulverised to produce a subsample for four-acid (near total) digest and multielement analysis using ICP/OES and ICP/MS determinations. Gold was determined using a separate 50g charge for fire assay. High-grade base metal results >1% were repeated using an ore-grade ICP/AES technique which utilises an aqua-regia acid digest suitable for high-sulphide ores.
Drilling Technique	Drill type (eg core, reverse circulation, openhole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. 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.).	For MRN14007 a conventional wire-line core rig was utilised to extract HQ and then NQ diameter core samples in mineralisation. MRN14007 was drilled as an HQ wedge off previous hole MRN13002.  Core orientation measurements were attempted every 3 to 6 metre core run using a Reflex ACT orientation tool. The majority of measurements were successful

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Drill Sample Recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	The length of recovered core and the core rock quality are logged for each core run. Core recovery throughout the fresh sulphide mineralised zones in MRN14007 is very good (100%).
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	Diamond core is reconstructed into continuous runs on an angle iron cradle and marked with orientation lines. Depths are checked against depths marked on the core blocks and rod counts are routinely performed by the drillers.
	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.	Insufficient data is available to determine a bias relationship between poor sample recovery and grade. Not relevant with respect to MRN14007 samples.
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.	Quantitative geotechnical logging including RQD, core recovery, fracture frequency, and qualitative hardness are measured for each core run.
	Whether logging is qualitative or quantitative in nature.	Qualitative and quantitative codes and descriptions are used to record geological data such as lithology, mineralisation, alteration and structure prior to sampling. Magnetic susceptibility is quantified for every assay sample interval (about 1 metre) within the mineralised section and every core run (3 to 6 metres) within the hanging wall and footwall rocks. Density is quantified for every assay sample interval.
	Core photography	Core is photographed wet and dry.
	The total length and percentage of the relevant intersections logged.	The total mineralised length of drill hole MRN14007 has been geologically and geotechnically logged.
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	MRN14007 was sampled using ¼ NQ diameter core and cut so as to preserve the orientation mark.
,		Pre-collar material is logged but not assayed and preserved as a record in chip trays or bags.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	The sample preparation of recent diamond cores follows industry best practice and sample preparation involving oven drying, coarse crushing of the ½ or ¼ NQ core or ¼ HQ core sample to 70% <6mm then pulverising of the whole (<3kg) sample to 85% < 75 microns.
	Quality control procedures adopted for all sub-sampling stages to maximise representativity of samples.	QC controls have been variable during the life of the project. Recent field QC procedures, including drill hole MRN14007, involve using certified reference materials as assay standards along with blanks and sample duplicates. In weathered zones with native copper quartz washes were used. The insertion rate for standard, blanks and duplicates in the mineralised zones is about 1 in 10 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.

MRN14007 was sampled using ¼ NQ core. Second ¼ NQ core duplicate samples were assayed to check sample representativity at selected intervals. Results from MRN14007 show a variability of between 10% and 15% in areas of gold >1g/t.

Whether sample sizes are appropriate to the grain size of the material being sampled.

The sample size are considered appropriate to correctly represent the sulphide mineralisation based on the styles of mineralisation (medium-coarse-grained, bedded lead sulphide and medium-grained copper vein zones), the thickness and consistency of the intersections, the sampling methodology and the percent assay grade range of the mineralisation.

# 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.

Recent samples use four acid (near total) digest techniques and multi-element analysis using an ICP/MS determination. The acids used are hydrofluoric, nitric, perchloric and hydrochloric acids suitable for silica and sulphide based samples. High-grade base metal results >1% were repeated using an ore-grade ICP/AES technique which utilises an aqua-regia acid digest suitable for high-sulphide ores.

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.

No geophysical tools were used to determine element concentrations at Maronan

Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.

Although variable through the projects history, industry standard QA and QC controls have been applied to most of the 34 more recent holes. No QC data is available for the 15 historic holes

For recent samples certified reference materials with a good range of values and blanks were inserted blindly and randomly at a rate of 1 in 10 over the mineralised intervals while the laboratory routinely runs duplicate checks from the pulverised sample. All base metal results greater than 1% are re-assayed using an ore-grade technique. Results highlight that the sample assay values are accurate and that contamination has been contained. Routine repeat or duplicate analyses by the laboratory reveal the precision of the analysis is within acceptable limits.

The QA/QC procedures of the historic assay data are unknown and their level of accuracy and precision is unknown.

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Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	Core from MRN14007 has been visually verified by the Managing Director and a Senior Geologist.
	The use of twinned holes.	No holes have been twinned at this stage of exploration.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Primary data was entered in the field into a portable logging device using standard drop-down codes. Text data files are exported and stored in an Access database. Mapinfo software is used to check and validate drill-hole data.
	Discuss any adjustment to assay data.	No adjustments or calibrations were used in any of the assay data.
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.	The collar position for MRN14007 has been surveyed by Handheld GPS using MGA_GDA94, Zone54 datum. The drill trace for MRN14007 was surveyed using a Reflex down-hole camera and a gyroscope. Resent drilling indicates that the end-of-hole position determined by the Reflex survey instrument is typically within 5 metres of the gyroscopically surveyed location.
		All holes in the Maronan database have been surveyed down-hole using Reflex style and conventional Eastman down-hole cameras. Gyroscope surveys have been completed on 8 of the recent Maronan holes. The collar positions of historical holes were located using a locally established grid with an AGD66 datum. Location accuracy of the historical holes is estimated at 1-5 metres. Recent holes have been located using hand held GPS systems accurate to about 2-5 metres.
	Specification of the grid system used.	All recent holes use MGA_GDA94_Zone54 datum. Historic holes used a local grid with an AGD66 datum and have been converted to a MGA_GDA94 datum.
	Quality and adequacy of topographic control.	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.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	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. MRN14007 is about 35 metres north and 65 metres vertically below the pierce point of MRN13002.
	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.	The drill pierce point spacing is sufficient to outline the broad extent of mineralisation and grade variations in the mineral system however no Mineral Resources or Reserves have been defined to date.
	Whether sample compositing has been applied.	No sample compositing has been 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.	The structural remobilised mineralisation in MRN14007 appears to parallel the axial plane to the northern fold structure which trends xxx and dips between 60 and 80 degrees towards the west. East directed drilling provides a representative, unbiased sample across the mineralisation. The core to bedding angle of mineralisation in MRN14007 varies between 21 and 51 degrees.
	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.	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 degree towards 284 degree (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.
Sample security	The measures taken to ensure sample security.	Chain of custody is managed by Red Metal. Samples from Maronan are packaged and stored at the company's field house in Cloncurry. The company's personal deliver the samples to NQX freight office in Cloncurry for deliver to a laboratory in Townsville. The freight company and laboratory provide an online tracking service for all samples.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No external audits have been undertaken at this early stage.

# Table 4 JORC 2012 Reporting of Exploration Results

Criteria	JORC 2012 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.	Maronan is located within EPM 13368 situated in the Cloncurry region of north-west Queensland. EPM 13368 is owned 100% by Red Metal Limited. No material ownership issues or agreements exist over the tenement. An ancillary exploration access has been established with the native title claimants and a standard landholder conduct and compensation agreement has established with the pastoral lease holders
	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 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 49 diamond core drill holes drilled by five different companies since 1987 until the present. Shell/Billiton/Acacia discovered base metal mineralisation on the project in 1987 and completed 15 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 silver-lead exploration from 2006 to 2008 completing 12 holes. Red Metal Limited has completed 16 holes from 2011 to the present seeking depth extensions to the bedded silver-lead and separate copper-gold mineralisation.
Geology	Deposit type, geological setting and style of mineralisation.	Exploration on Maronan has identified two separate styles of mineralisation, bedded lead-silver mineralisation partially overprinted by structurally controlled, copper-gold mineralisation.
		The silver-lead mineralisation is of a similar style to the nearby Cannington deposit, one of the world's largest silver and lead producing operations. The Maronan silver-lead mineralisation occurs in two separate but sub-parallel banded carbonate-lead sulphide-magnetite-calcsilicate units referred to as the Upper Banded Lead Sulphide (Upper BLS) and Lower Banded Lead Sulphide (Lower BLS) 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.
		The overprinting copper-gold mineralisation can be compared with the IOCG 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 Upper LBS and Lower LBS and

		chalcopyrite and minor magnetite.  Both mineralisation styles have shown improvement in grade and widths at depth and
		remain open down-plunge and at shallow levels between the existing wide spaced intercepts.
Drill hole Information	A summary of all information material to the understanding of the exploration results including a tabulation of survey information for all Material drill holes:	Refer to Table 2 for drill hole survey data for MRN14007.
Data aggregation methods	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.	All mineralised intervals have been length weighted. No top-cuts have been applied. A nominal 1% lead and 0.5g/t gold lower cut-off grade is applied unless stated otherwise.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	None are reported.
Relationship between mineralisation widths and intercept lengths	These relationships are particularly 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 (e.g. 'down hole length, true width not known').	True widths for MRN14007 are estimated to be 40% to 54% of down-hole widths.
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.	Refer to Figures 1 to 3 in this report
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.	Refer to Tables 1 for a summary of assay data from drill hole MRN14007
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.	The specific gravity of the structure remobilised lead and silver mineralisation in drill hole MRN14007 ranges from 3.33 to 4.03 and averages about 3.75. No metallurgical work on the recovery of lead and silver has been undertaken.
Further work	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).	A wide spaced step-out program is in progress.