



ASX Announcement | 14 December 2018

## DIAMOND DRILLING UPDATE

- First assay results received and being interpreted
- Quartz-carbonate breccia intersected adjacent to a void
- Two new drill holes planned near the Pacific Mine to test for sweet spots within the alteration system
- Priority targets are the intersection between structures and the Pacific Horizon and depth extension of the Pacific Mine

Eagle Mountain Mining Limited (ASX:EM2) ("Eagle Mountain" or the "Company") is pleased to provide an update on the ongoing drilling program at the Silver Mountain Project in Arizona, USA.

Drilling to date has focussed on the northern section of the Pacific Horizon and the Quartz-Carbonate Breccias, two of the four styles of mineralisation at the Silver Mountain Project.

Incomplete assay results from the first two drill holes (18SMDD001 and 18SMDD003) have been received and are currently being interpreted.

Preliminary interpretation of core samples suggests that the alteration zones in the vicinity of the Pacific Mine could be part of the same mineralised system which generated the high-grade breccias found on the waste dump.

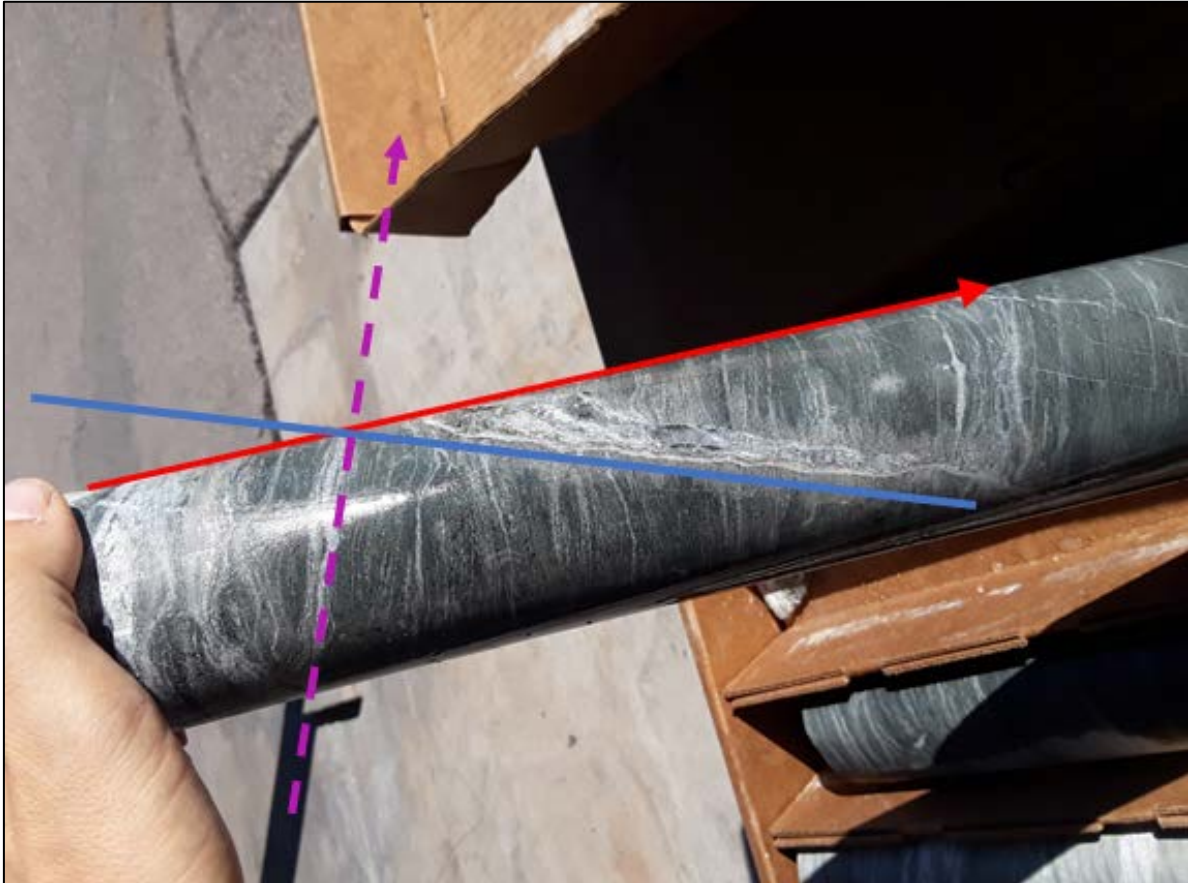
Hole 18SMDD001 intersected quartz-carbonate breccia adjacent to a void which is interpreted as a stope of the Pacific Mine.

The current drilling orientation was designed to be perpendicular to the trend of the Pacific Horizon. Analysis of core samples showed that some structures associated with alteration are not effectively tested by the current drilling orientation (Figure 1). A change in the direction of drilling is required to intersect these prospective structures at an optimal angle.



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*Figure 1 Correlation between current drilling orientation (red) and quartz-carbonate veining (blue line, parallel to actual vein). The ideal drilling orientation to test the vein is the dashed purple arrow.*

The Company has developed a strategy to test new targets which involves:

- Changing the drilling orientation to intersect some of the structures associated with mineralisation at a more favourable angle;
- Testing the intersection of structures with the Pacific Horizon at a possible “sweet spot” where mineralisation could have been focussed; and
- Drilling the potential depth extension of the Pacific Mine, below the historical workings.

Two new holes have been planned based on the current geological interpretation and will commence in the next few weeks.

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Seven drill holes have been completed to date and the rig is currently finalising the last hole near the Buffalo mine (**Figure 2**, dump samples up to 11.1% Cu and 10.7 g/t Au<sup>1</sup>). The rig will then move back to the Pacific Mine area.

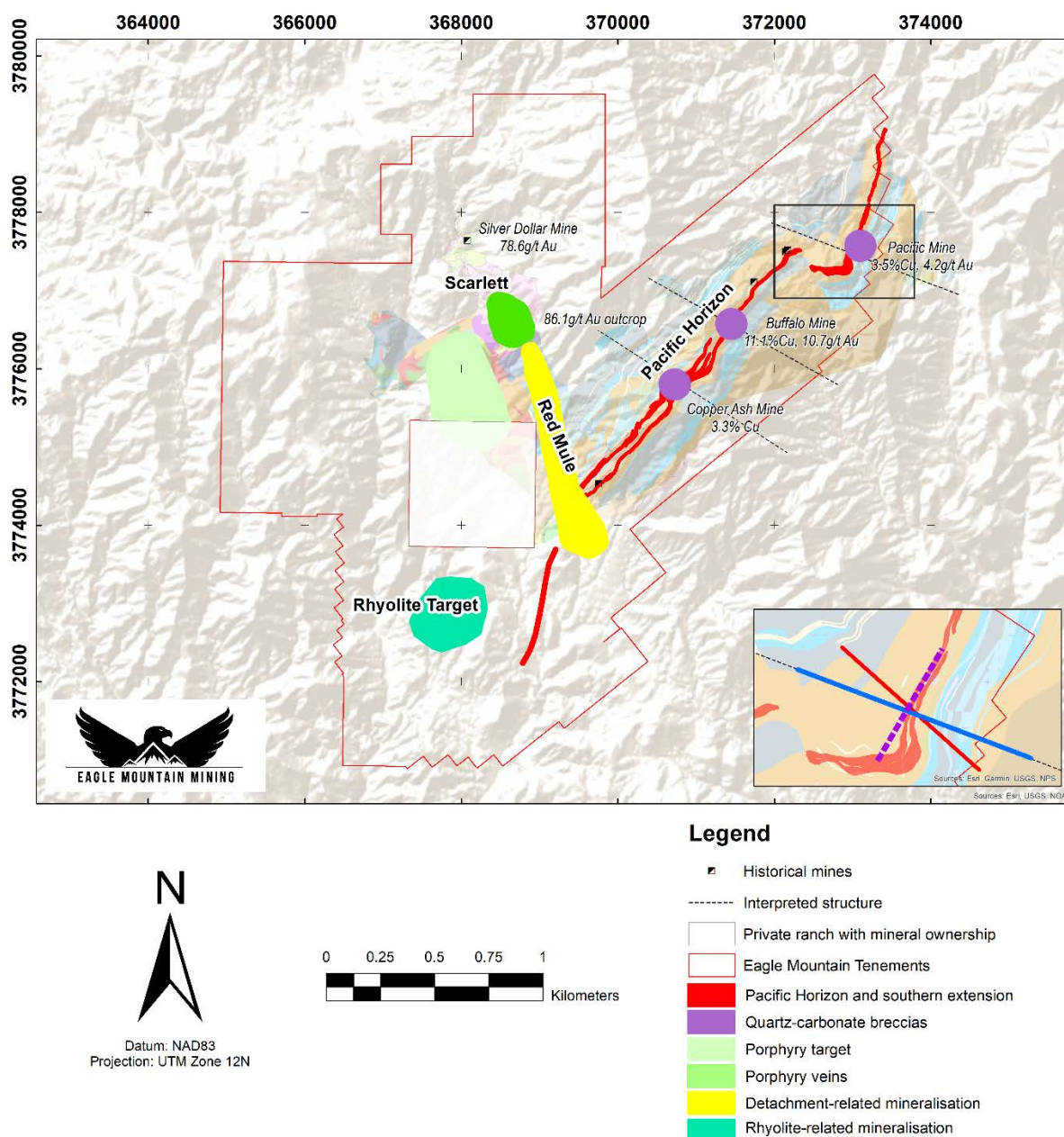


Figure 2 Silver Mountain Project overview with landholding and unique mineralisation styles. Inset shows the correlation between current drilling orientation (red), veining (blue) and ideal drilling orientation (purple) as presented in Figure 1

<sup>1</sup> Refer to Company prospectus, ASX announcement 14 March 2018, for JORC Table 1



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A downhole electromagnetic survey is also currently being completed on six of the holes to test for massive sulphide mineralisation.

Eagle Mountain's Managing Director Charles Bass commented:

*"We will be back at the Pacific Mine shortly with two very clear objectives: change the drilling orientation to test the new structural model and drill below the historical workings to intersect the depth extension to the mine. We will drill two holes that were not part of the original program. I am looking forward to receiving the results from these new holes and the other holes we have drilled at Silver Mountain."*

Drilling operations will be suspended from 20 December for ten days for the holiday season.

The Company looks forward to keeping shareholders informed as further drilling is completed and results come to hand.

For further information please contact:

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## COMPETENT PERSON STATEMENT

Information in this report relating to Exploration Results is based on information compiled under the supervision of Mr Charles Bass who is an employee of the company. Mr Bass is a Fellow of the Australasian Institute of Mining and Metallurgy and a Fellow of the Australian Institute of Geoscientist. He holds shares and options in the Company. Mr Bass has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Bass consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

Where the Company references results from previous ASX announcements, JORC Table 1 disclosures are included within them. The Company confirms that it is not aware of any new information or data that materially effects the information included in those announcements, and that the form and context in which the Competent Persons findings are presented have not been materially modified from the original reports.

## EAGLE MOUNTAIN MINING LIMITED

Eagle Mountain is a copper-gold explorer focused on the strategic exploration and development of the highly-prospective Silver Mountain Project located just outside of Phoenix, Arizona.

Arizona is at the heart of America's mining industry and home to some of the world's largest copper discoveries. Silver Mountain, which comprises three prospects, Pacific Horizon, Scarlett and Red Mule, lies on the same geological setting that hosts world-class porphyry copper mines such as Bagdad, Miami and Resolution, one of the largest undeveloped copper deposits in the world. It also lies on the southern extension of the metallogenic belt that hosts United Verde and Iron King.

The Company is undertaking an aggressive exploration drilling program in the first half of FY19.

Eagle Mountain is led by founder and Managing Director Charles Bass. Mr Bass has a proven track record in mining, having previously co-founded both Eagle Mining Corporation, a highly successful gold miner, and Aquila Resources, which was acquired by Baosteel and Aurizon Holdings for \$1.4 billion in 2014.



# JORC Code, 2012 Edition – Table 1 report template

Exploration Update (ASX 14 December 2018) – Diamond drilling update

## 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><i>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.</i></li> <li><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Not applicable. No sampling results reported. The release refers to qualitative observations on core samples completed by the Company’s geologist.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li><i>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).</i></li> </ul>	<ul style="list-style-type: none"> <li>Diamond drilling, HQ3 size. Downhole surveys are performed every 30.5m (100 feet) using an AXIS Magshot system. The core is oriented using Boart Longyear’s Truecore™ system to allow measurement of structural information.</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li><i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li><i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Core recoveries are recorded by the drillers at the rig and verified by Company’s personnel during core logging</li> <li>In order to maximise sample recovery and core quality all drilling is performed with a “triple tube” set up where two splits are inserted in the barrel to minimize core displacement and core loss.</li> <li>Drilling intersected a void of 1.3m, interpreted to be a historical stope</li> <li>No assays are being reported. No correlation between recoveries and grade observed.</li> </ul>
Logging	<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</i></li> </ul>	<ul style="list-style-type: none"> <li>A quick log is completed on site and detailed logging (geological and geotechnical) is performed at the Company’s logging facility in</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>Mineral Resource estimation, mining studies and metallurgical studies.</i></p> <ul style="list-style-type: none"> <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>	<p>Tucson. All holes discussed have been quick logged. Detailed logging of the first two holes is completed while the remaining holes are still being logged in detail.</p> <ul style="list-style-type: none"> <li>• Logging is both qualitative and quantitative in nature. Portable XRF and magnetic susceptibility measurements are taken at regular intervals on the core. The core is also scanned with a spectrometer.</li> </ul>
Sub-sampling techniques and sample preparation	<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>• Not applicable. No sampling reported.</li> </ul>
Quality of assay data and laboratory tests	<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>• Not applicable. No assay data reported</li> </ul>
Verification of sampling and assaying	<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>• Not applicable. No significant intersections reported.</li> <li>• Not applicable. No drilling results reported</li> <li>• No assay adjustment performed</li> </ul>
Location of data points	<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> </ul>	<ul style="list-style-type: none"> <li>• NAD83 UTM Zone 12N</li> <li>• National Elevation Dataset. Horizontal resolution of approximately 10m and vertical resolution of 1m</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <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>• Drill holes are located with a hand-held GPS with an estimated horizontal accuracy of <math>\pm 5\text{m}</math></li> </ul>
<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>• Not applicable. No sample data reported.</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>• The relationship between drilling orientation and orientation of key mineralised structure is yet to be determined</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>• Core boxes are picked up at the rig by Company personnel and kept under locked storage on site and at camp. Weekly core pick ups are completed by ALS Global and core delivered to the Company's core shed in Tucson. After processing, samples are collected by ALS Global and delivered to its own laboratory for assaying. Each box location and movements are recorded in a Chain of Custody database. During transport the core and samples are tamper-proofed.</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 sampling techniques have been completed.</li> </ul>

## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The Silver Mountain project consists of 26 patented mining claims, 424 unpatented mining claims and 6 state exploration permits. The company hold a 100% interest in the mineral rights for all tenements. The Company also owns the surface rights for the 26 patented mining claims (private property). Refer to the 2018 Annual Report for details</li> </ul>



Criteria	JORC Code explanation	Commentary
Exploration done by other parties	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>It is believed that the first mining claims to the Pacific Horizon prospect were staked in 1898.</li> <li>Between 1906 and 1912 the Pacific Copper Mining Company sunk a 150 m (500 feet) shaft in to the gossan at the site of the Pacific Mine</li> <li>Some drilling was carried out in 1966 though it is not clear who conducted the program (possibly Heinrichs GeoExploration)</li> <li>In 1968, Heinrichs GeoExploration conducted some dual frequency IP, resistivity and magnetic geophysical surveys. This was followed by further geophysical surveys in 1978 using Very Low Frequency (VLF) Electro Magnetics (EM)</li> <li>KOOZ contracted Applied Geophysics in 1978 to run EM surveys (VLF, MaxMin II and Crone Horizontal Shootback) over selected areas</li> <li>The most detailed (unpublished) mapping over the property was carried out by Kennecott in 1991 and 1992, focussing on the eastern and central areas of the Pacific Horizon prospect</li> <li>The Kennecott mapping was based on previous work done by Winegar et al., (1978) and the only mapping since 1992, was done by Ferguson &amp; Johnson (2013, Arizona Geological Survey), which only touches on the Pacific area</li> </ul>
Geology	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>There are four types of deposit style: <ul style="list-style-type: none"> <li>Proterozoic volcanogenic massive sulphides in Precambrian greenstone</li> <li>Quartz-carbonate breccia with associated copper-gold-silver mineralisation</li> <li>Younger (Laramide arc) Cu-Au porphyry and associated high-grade gold veins</li> <li>Overprinting and remobilisation of fluids and deposits by Cainozoic transtension giving detachment style mineralisation</li> </ul> </li> </ul>
Drill hole Information	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <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</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable. No drilling results are being reported. Once complete assays for the holes mentioned in this release are received and interpreted, the information will be included in the relevant announcement.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>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.</i>	
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>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.</i></li> <li><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>Not applicable. No data aggregation methods were applied.</li> </ul>
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <li><i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li><i>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').</i></li> </ul>	<ul style="list-style-type: none"> <li>Not applicable. No drilling results are being reported</li> </ul>
<i>Diagrams</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Appropriate maps are attached to this announcement</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Not applicable. No geochemical results reported.</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>No other meaningful and material exploration data beyond this and previous market releases and the information in the Independent Geologist Report included in the Company's Prospectus</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li><i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>Further work will include interpretation of logging and assay results and additional drill holes in the Pacific Mine area.</li> </ul>