

# **EXPLORATION POTENTIAL STRENGTHENED WITH EXPANDING TARGET PIPELINE**

# **Highlights**



Geological reconnaissance and mapping have now been completed at the Tracker 1 electromagnetic anomaly;



Tracker 1 is located approximately 2.5km from the recent Artillery Road discovery;



| Tracker 1 was identified as a high priority electromagnetic target following analysis of the recent survey;



Drilling will commence at Tracker 1 as part of the electromagnetic target pipeline; and



Drilling continues unabated at the recent Artillery Road discovery with an update expected shortly.

### Overview<sup>1</sup>

QMines Limited (ASX:QML) (QMines or Company) is pleased to announce that it has now completed initial geological reconnaisance and mapping at the Tracker 1 anomaly at the Company's flagship Mt Chalmers Copper and Gold Project, located 17km north-east of Rockhampton, Queensland (Figure 1).

The Tracker 1 (T1) prospect is approximately 2.5 kilometres from the newly discovered Artillery Road prospect. Field reconnaissance identified outcropping gossan with visible malachite and azurite copper mineralisation with the gossan rock chip samples assaying up to 2.67% Cu. The TI prospect is another high priority electromagnetic (EM) target identified by Mitre Geophysics from the recent VTEM aerial survey (Figure 2).

### **Background**

The TI prospect is a large prospect area with multiple mineralised zones. The most prospective area, VT23, comprises a >300m strike length of copper mineralised stringer zone and outcropping gossan with a consistent copper in soil envelope. Recently assayed rock chip samples from VT23 range between 600ppm and 26,700ppm Cu (2.67% Cu), seen in Figure 3 and Table I below.

This north-south trending zone is reminiscent of the sulphide stringer zone (SSZ) that underlies the Volcanic Hosted Massive Sulphide (VHMS) at Mt Chalmers and is being added to the Company's priority drilling targets.

Situated at the contact between a chloritic, mafic to intermediate volcanic tuff to the west, and fine-grained sedimentary rocks to the east, visible mineralisation occurs as copper carbonates malachite and azurite, and as the copper oxide tenorite. This mineral assemblage is interpreted to be the oxide zone of an underlying sulphide deposit, with the leached zone removed by erosion, similar to the Artillery Road discovery.

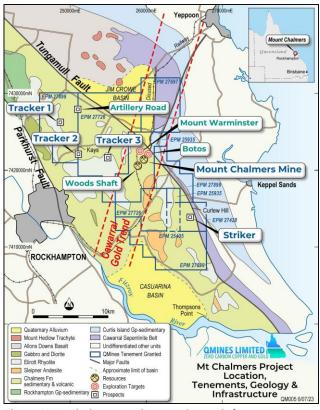


Figure 1: Mt Chalmers project, geology & infrastructure.

### **Management Comment**

QMines Managing Director, Andrew Sparke, comments;

"We have spent a considerable amount of time digitising historical soil and structural data from previous explorers at the  $\Pi$  prospect. With the new electromagnetic anomalies identified at the  $\Pi$  prospect, this area has become another exciting target for future drilling.

"Access negotiations are underway with the landholders and, once completed, the Company will commence exploration at this target."

Reconnaissance mapping along the contact between the tuff and the sediments has identified outcropping silicified and chloritic intermediate tuff with a stockwork of randomly oriented iron oxide +/- quartz stringers.

Rock chip samples collected from this contact were analysed by ALS Laboratories as part of a package of gold plus 9 elements (Au-AA25 and MEICP61). Laboratory results are shown in Figure 2 and Table 1 below.

# **Background (Continued)**

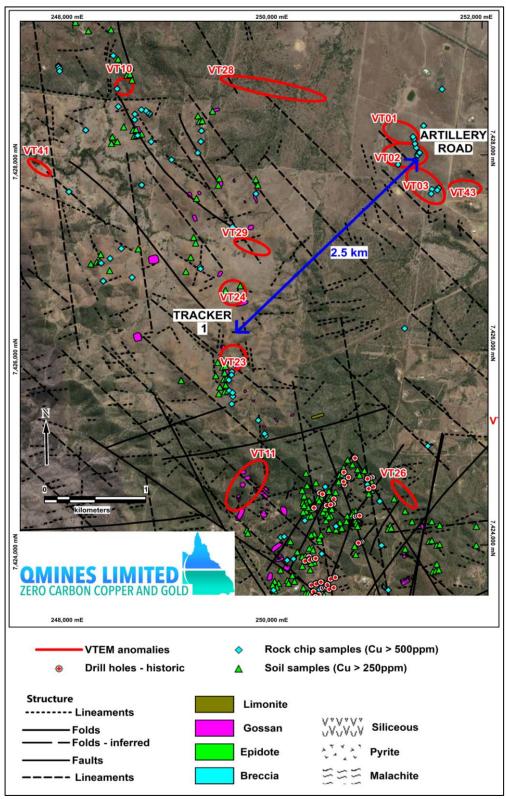


Figure 2: VTEM anomalies (red ovals), aerial image, faults and rock chip samples at Tracker 1.

Historical soil sampling has shown the intermediate tuff to coincide with sustained copper anomalies. VTEM analysis has identified conductors immediately to the north, labelled VT23. Drill targeting of the stringer zone has been planned, and ongoing mapping may identify additional targets.

# **Background (Continued)**

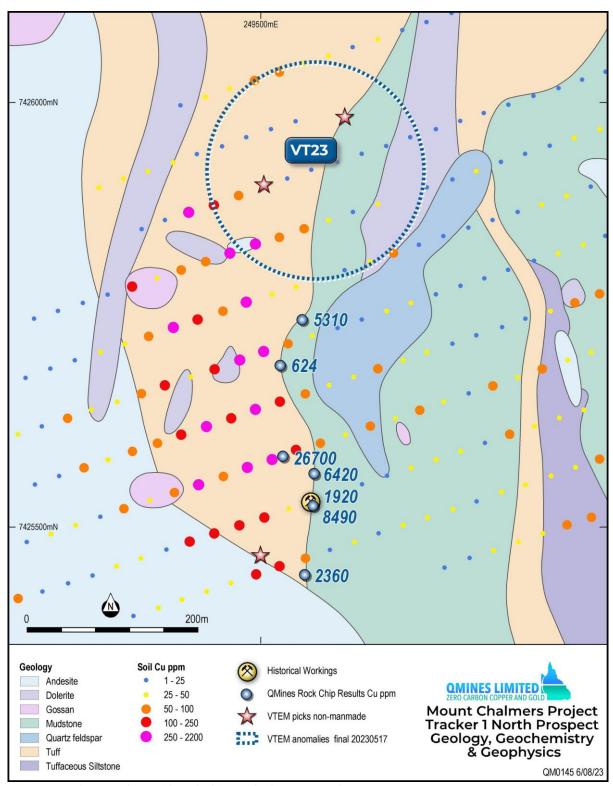


Figure 3: Tracker 1 geology with rock chip results (copper ppm).

# **Background (Continued)**





 $\label{thm:condition} \textit{Figure 4: Oxidised gossan with supergene copper (Azurite/Malachite) located at Mt Chalmers T1 prospect.}$ 

Sample ID	MGA94 East	MGA94 North	Description	Cu ppm
			Multiple float of siliceous, chlorotic, hard tuff with goethite-ptz	
MCRK019	249528	7425582	stringers, like SSZ. Part malachitic.	26,700
			3m chip traverse across exposure on East side of pit. Chlorite-silica mg	
			rock (ex andesite?). CuO in amygdales as well as fracture coatings. Few	
MCRK020	249563	7425527	qtz veins.	1,920
			Outcrop next to collapsed pit, 15 x 10m, some malachite and azurite	
			surface coatings, chlorite-silica mg rock with qtz-geothite-tenorite	
MCRK021	249563	7425523	stringers. 5m chip traverse NE-SW.	8,490
			Grab silica-chlorite altered mg SSZ float on fence track below dolerite	
MCRK022	249553	7425446	contact.	2,360
			Grab at float patch, silica-chlorite stringer sulphide zone (SSZ) with rare	
MCRK023	249561	7425560	malachite coatings.	6,420
			5 x 7m subcrop grab, mg chlorite altered tuff? With Fe-Mn oxide veins,	
MCRK024	249524	7425691	minor qtz veins.	624
			Small float patch of mg chloritic tuff?, Fe-Mn oxide and tenorite veins,	
MCRK025	249551	7425743		5,310

Table 1: Tracker 1 rock chip sample descriptions and copper results.

<sup>\*</sup>MGA 94 Zone 56 UTM datum.

# **Forward-Looking Statements**

This document may include forward-looking statements. Forward-looking statements include, but are not limited to, statements concerning QMines Limited planned exploration program and other statements that are not historical facts. When used in this document, the words such as "could," "plan," "expect," "intend," "may", "potential," "should," and similar expressions are forward-looking statements. Although QMines believes that its expectations reflected in these forward- looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that further exploration will result in the estimation of a further or larger Mineral Resource.

### **Competent Person Statement**

#### **Exploration**

The information in this document that relates to mineral exploration and exploration targets is based on work compiled under the supervision of Mr Glenn Whalan, a member of the Australian Institute of Geoscientists (AIG). Mr Whalan is QMines' principal geologist and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity that 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' (JORC 2012 Mineral Code). Mr Whalan consents to the inclusion in this document of the exploration information in the form and context in which it appears.

#### What's Next?



Continue drilling at the "Artillery Road" Prospect and other priority electromagnetic targets;



Continue ground reconnaissance, mapping and ranking of the 34 electromagnetic anomalies;



Commence "Fixed Loop" electromagnetic survey at the Artillery Road prospect;



Analyse and integrate the VTEM™ inversion results; and



Complete the planned Pre-Feasibility Study on the Mt Chalmers project assessing the potential for a stand-alone mining operation.

#### **About QMines**

QMines Limited (**ASX:QML**) is a Queensland based copper and gold exploration and development company. The Company owns 100% of four advanced projects covering a total area of 1,096km². The Company's flagship project, Mt Chalmers, is located 17km North East of Rockhampton.

Mt Chalmers is a high-grade historic mine that produced 1.2Mt @ 2.0% Cu, 3.6g/t Au and 19g/t Ag between 1898-1982. The Mt Chalmers project now has a Measured, Indicated and Inferred Resource (JORC 2012) of 11.86Mt @ 1.22% CuEq for 144,700t CuEq.<sup>1</sup>

QMines' objective is to grow its Resource base, consolidate assets in the region and assess commercialisation options. The Company has commenced an aggressive exploration program (+30,000m) providing shareholders with significant leverage to a growing Resource and exploration success.

### **Projects** & Ownership

Mt Chalmers (100%) Silverwood (100%) Warroo (100%) Herries Range (100%)

### **QMines** Limited

ACN 643 212 104

#### **Directors & Management**

#### SIMON KIDSTON

Non-Executive Chairman

#### **ANDREW SPARKE**

Managing Director

#### **ELISSA HANSEN (Independent)**

Non-Executive Director & Company Secretary

#### **PETER CARISTO (Independent)**

Non-Executive Director (Technical)

#### JAMES ANDERSON

General Manager Operations

#### Shares on Issue

170,407,605

# **Unlisted** Options

9,450,000 (\$0.375 strike, 3 year term)

# **Compliance** Statement

With reference to previously reported Exploration results and mineral resources, the Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of estimates of Mineral Resources or Ore Reserves, that all material assumptions and technical parametres underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

This announcement has been approved and authorised by the Board of QMines Limited.

#### **QMines Limited (ASX:QML)**

Contact

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# JORC Code, 2012 Edition – Table 1 Mt Chalmers Mineral Resources

# **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 (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</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 (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>Surface rock chip samples were chosen to be as representative of the mineralisation as possible. Tables within the announcement advise whether samples were float grabs or chip traverses etc.</li> <li>Rock chip samples were collected by hammer and inserted into numbered calico bags prior to further bagging into polybags and dispatch to the ALS laboratory.</li> </ul>
Drilling techniques	<ul> <li>Drill type (e.g. core, reverse circulation, open-hole 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).</li> </ul>	Not applicable to this release

Criteria	JORC Code explanation	Commentary
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>	Not applicable to this release
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>All rock-chip samples were described by the collecting geologist. Description includes rock-type, alteration and mineralisation.</li> <li>Geological description in qualitative in nature.</li> <li>Rock-chip samples are not intended to be used in mineral resource estimation or mining studies.</li> </ul>
Sub-sampling techniques and sample preparation	half or all core taken.	<ul> <li>Rock-chip samples are not subsampled prior to admission to a laboratory.</li> <li>ALS Laboratories dry the samples prior to crushing and pulverising. All sample material from each rock-chip sample submission is crushed and pulverized to a nominal 90% passing 75 µm giving a 200 g representative sample from which a sub-sample of 30 g is taken for base metal analysis and a 50 g charge for gold.</li> <li>Rock-chip sampling is intended to highlight areas of interest for further investigation and is representative of potentially mineralised rocks only.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<ul><li>duplicate/second-half sampling.</li><li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li></ul>	
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 (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul> <li>All samples for assay were submitted to ALS Laboratories in Brisbane.</li> <li>Rock chip samples were tested for Ag, As, Ba, Cu, Pb, Zn and As by 4 acid digest with ICPAES finish (method MEICP61). Au was determined using ALS method AA25 (fire assay with AAS finish on a 30 g pulp). Sample preparation and base metal analysis is undertaken in Brisbane and Fire Assay undertaken by ALS in Townsville.</li> <li>Internal laboratory QAQC reports are delivered by ALS with certification of assay method used and certified assay results. These results are delivered to the principal geologist, database manager and the Company</li> <li>Rock-chip samples are reconnaissance in nature and are not used in mineral resource estimation or mining studies. No additional QAQC samples (CRM's or blanks) are included which is considered appropriate for this stage.</li> </ul>
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> <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> </ul>	<ul> <li>No additional verification has been undertaken for this release as only reconnaissance rock-chip samples are being reported.</li> <li>Results reported are in line with expectations based on visual assessment of the samples. All results are stored in the Company's digital database, managed by Orr and Associates.</li> </ul>
Location of data points	<ul> <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>Rock-chip sample locations listed in this release were located by handheld GPS with accuracy of +/-3 m and these will be later picked up by and validated by the site surveyors.</li> <li>Locations recorded and stored as UTM co-ordinates in GDA94, MGA94 Zone 56.</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</li> </ul>	<ul> <li>Rock-chips were taken at locations of interest with no regular spacing.</li> <li>No composite sampling has been applied</li> <li>Sample spacing is not intended to be appropriate for</li> </ul>



Criteria	J	ORC Code explanation	C	ommentary
		Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied.		mineral resource estimation. Geological or grade continuity has not been established based on the current level of sampling, nor was it intended to achieve this.
Orientation of data in relation to geological structure	•	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.  If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	•	This release does not refer to drilling. Rockchip sampling intentionally targets rocks that appear to be altered and/or mineralised for the purposes of generating drill targets. Sample locations are dictated by presence of outcrops, locations of EM anomalies, and are geologically interesting.
Sample security	•	The measures taken to ensure sample security.	•	Samples were collected in the field and immediately placed into a numbered calico bag. Numbered bags were then placed into larger polyweave sacks and into bulka bags by company personnel at the Company camp and exploration office.  The bulka bags were then delivered by Company staff to a commercial freight depot in Rockhampton and shipped directly to the ALS Laboratory in Brisbane overnight.
Audits or reviews	٠	The results of any audits or reviews of sampling techniques and data.	•	No audits or reviews have been undertaken on the data in this release beyond internal exploration procedures.

# **Section 2 Reporting of Exploration Results**

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park	Gold Pty Ltd and Rocky Copper Pty Ltd, through which the Company has a 100% beneficial interest in the Mt Chalmers Project. The Mt Chalmers Project is held in EPM 25935 and EPM 27428 located 25 kilometres east of the City of



Criteria	JORC Code explanation	Commentary
	and environmental settings.  The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	<ul> <li>Rockhampton in coastal central Queensland, Australia. The project covers an area of historic gold and copper mining, which comprises an area of 198 km2.</li> <li>The Artillery Prospect is covered by EPMs 27726 and 27899 which are both directly held by QMines Ltd.</li> <li>The Project is free and unencumbered by either joint ventures or any other equity participation of the tenement.</li> <li>QMines has yet to negotiate any landowner provisions or Government royalties or yet to commence environmental studies within the project area. Currently the Queensland Department of Natural Resources &amp; Mines is conducting remediation works on minor acid mine waste draining from a mineralised mullock dump.</li> <li>All the tenements are for "all minerals" excepting coal.</li> <li>Note that the granted tenements allow QMines to carry out many of their planned drilling programs under relevant access procedures applying to each tenement.</li> <li>All the EPMs are subject to the Native Title Protection Conditions with respect to Native Title.</li> <li>Declared Irrigation Areas, Declared Catchment Areas, Declared Drainage Areas, Fossicking Areas and State Forest are all land classifications that restrict exploration activity. These do not affect QMines' main prospects but may have impacts on regional programs in places.</li> <li>All annual rents and expenditure conditions have been paid and QMines has been fully compliant.</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	This part of the Tracker 1 prospect was previously soil sampled by Geopeko Ltd as part of a wide-ranging regional soil sampling program. No drilling has been recorded in this area.
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>The geology of the Tracker One prospect is described in the body of the Announcement.</li> <li>The Tracker One prospect is situated in the early Permian Berserker Beds, which occur in the fault-bounded Berserker Graben, a structure 120 km long and up to 15 km wide. The</li> </ul>



Criteria	JORC Code explanation	Commentary
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>	graben is juxtaposed along its eastern margin with the Tungamull Fault and in the west, with the Parkhurst Fault.  • The Berserker Beds consist mainly of acid to intermediate volcanics, tuffaceous sandstone and mudstone (Kirkegaard and Murray 1970). The strata are generally flat lying, but locally folded. Most common are rhyolitic and andesitic lavas, ignimbrites or ash flow tuffs with numerous breccia zones. Rocks of the Berserker Beds are weakly metamorphosed and, for the most part, have not been subjected to major tectonic disturbance, except for normal faults that are interpreted to have developed during and after basin formation.  • Late Permian to early Triassic gabbroic and dioritic intrusions occur parallel to the Parkhurst Fault. Smaller dolerite sills and dykes are common throughout the region and the Berserker Beds.  • Not applicable for this release
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and	No data aggregation methods have been used in this release.



Criteria	JORC Code explanation	Commentary
	<ul> <li>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>	
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 (e.g. 'down hole length, true width not known').</li> </ul>	Wide-spaced rock-chip sampling is not adequate to determine geometry of mineralisation.
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.	Maps with sample locations s are included in the body of the relevant announcement.
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.	Tables are provided in the body of the announcement.
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	<ul> <li>Mitre Geophysics Pty Ltd has been engaged by QMines as geophysical consultant, and has identified and modelled the VTEM plates that formed the basis of the Artillery Road prospect.</li> </ul>



Criteria	JORC Code explanation	Commentary
	method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	
Further work	<ul> <li>The nature and scale of planned further work (e.g. 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>QMines plans to continue drill testing the targets identified in this announcement. Reconnaissance (scout) RC drilling using QMines' own rig may lead to further drilling as required.</li> <li>Surface exploration of QMines' other, regional targets is underway in order to prepare new drilling targets.</li> </ul>

