



MT CHALMERS

14 February 2023

Highlights



Results for six Reverse Circulation holes for 1,190 metres have been received;



Step-out drilling targeted north and south extensions of the Mt Chalmers deposit;



Significant intersections include:

12m @ 3.03% CuEq from 158m;

14m @ 0.75% CuEq from 83m; and

3m @ 0.85% Cu Eq from 47m;



Airborne VTEM Max survey now completed with interpretation underway; and

Tracker 1 and 2 reconnaissance has commenced in anticipation of these results.

Overview

QMiners Limited (ASX:QML) (QMiners or Company) is pleased to provide the following update on exploration and resource drilling operations at its flagship Mt Chalmers Copper and Gold Project, located 17km north-east of Rockhampton, Queensland (Figure 1).

The Company completed a six-hole reverse circulation (RC) drilling program at Mt Chalmers for 1,190 metres at the end of November 2022. With the Mt Chalmers third and fourth Mineral Resource Estimate (MRE) delivered in November, this recent round of drilling aimed to test more distal extents of the deposit. Base and precious metal results from this drilling can be seen in Table 1, drill collar locations in Figure 2 and cross section AA' in Figure 3.

The drilling results have delivered several intersections with copper equivalent grades up to 3.03% CuEq in hole MCRC051, which extends the mineralisation towards the north-west.

Overview (Continued)

In the north, drillhole MCRC051 intersected high-grade mineralisation of **3.03% CuEq over 12 metres** from 158 metres. Nearby holes MCRC052 and MCRC053 were able to close the resource to the northwest. Hole MCRC050 was a greenfields exploration hole that tested a soil anomaly over a structural target. While this hole failed to intersect mineralisation it did end in altered footwall rock similar to the alteration underlying the Mt Chalmers resource.

To the south, drillhole MCRC054 intersected 0.32% CuEq over 10 metres from 44 metres and 0.31% CuEq over 8 metres from 91 metres while drillhole MCRC055 intersected 0.75% CuEq over 14 metres from 83 metres and 0.85% CuEq over 3 metres from 47 metres. Mineralisation in these two drillholes is dominated by sphalerite (zinc) which reflects the distal extension of the system.

Future drilling is expected to target Mt Warminster before moving to the large regional Cu-Zn soil anomalies. Drill targeting will greatly benefit from the recently completed VTEM Max airborne EM survey which has recently been completed and is undergoing interpretation.

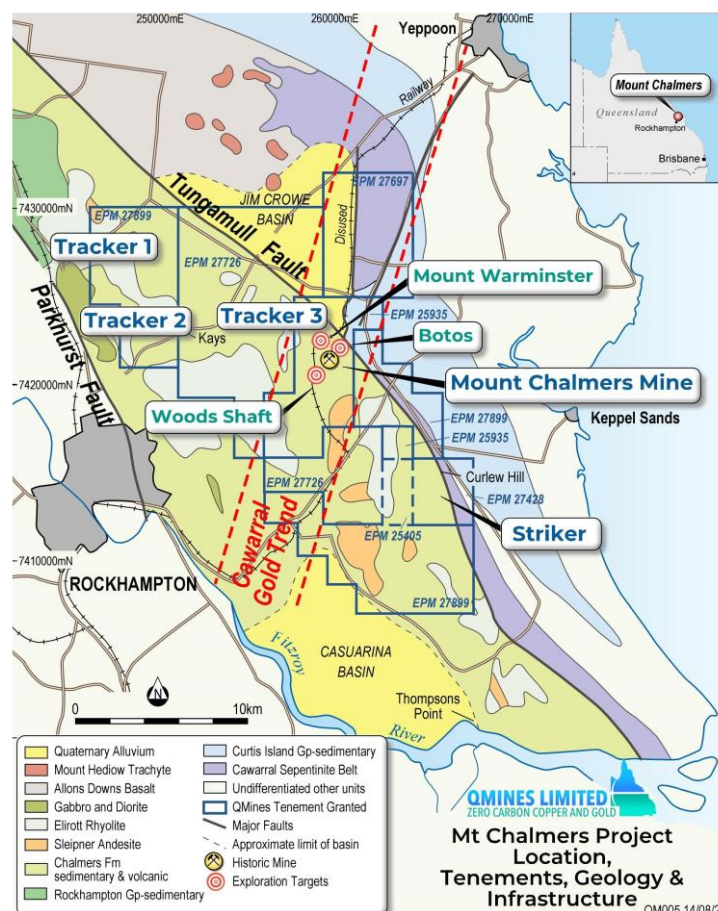


Figure 1: Location of Mt Chalmers Project, tenure, geology & infrastructure.

Management Comment

QMiners Managing Director, Andrew Sparke, comments:

"We are pleased to have intersected further mineralisation in the more distal parts of the resource, which shows the system to be larger than previously thought. Results from the recently completed airborne EM survey are eagerly awaited and expected shortly.

The ongoing campaign to identify resource extensions are continuing, along with drilling of satellite targets and our large geochemical and new geophysical anomalies. With no shortage of quality drilling targets, we look forward to a prosperous year ahead for our shareholders."

Electromagnetic Survey

QMiners' VTEM Max airborne electromagnetic (EM) geophysical survey has now been completed with 1,814 kilometres flown as planned. Data is currently being assessed by the Company's geophysical consultant and preliminary results are expected later this month.

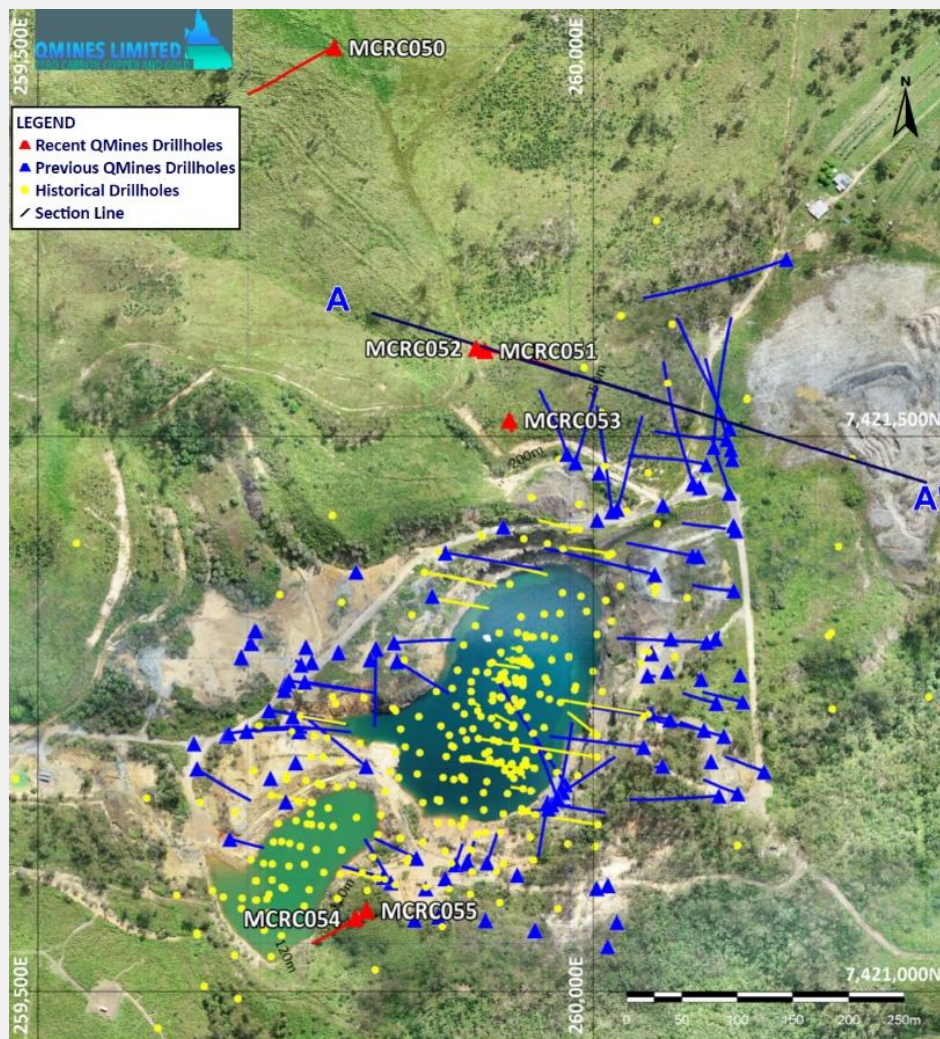


Figure 2: Mt Chalmers RC drillhole collar locations from November 2022 drilling.

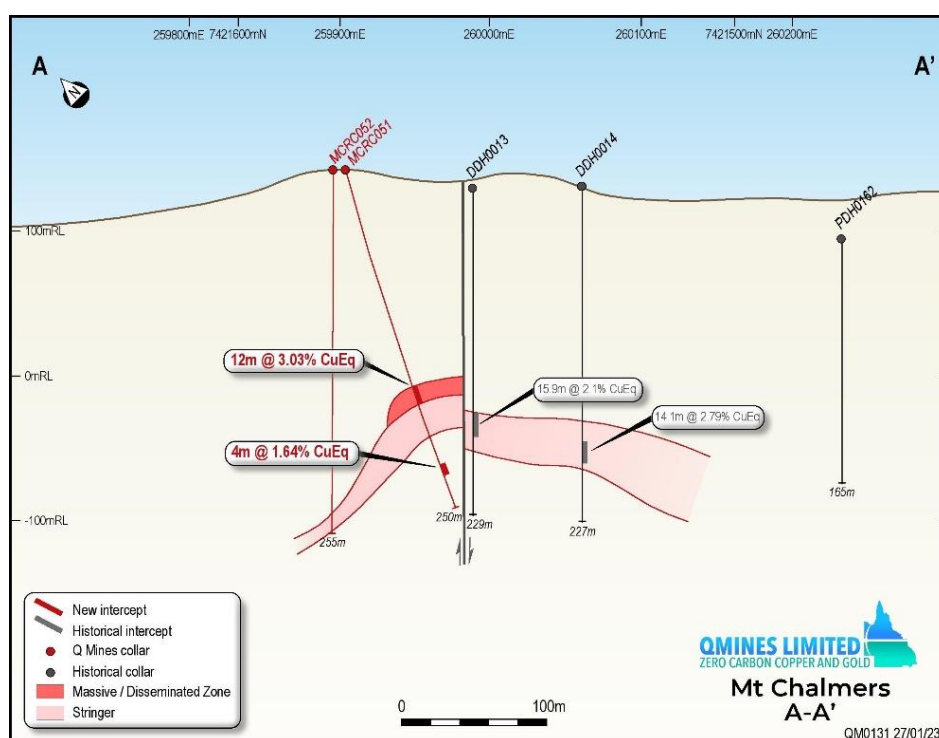


Figure 3: Section AA' Mt Chalmers November drilling 2022.

Significant Intercepts

Hole ID	MGA East*	MGA North*	mRL	Dip	MGA Azi*	Max Depth	M from	M to	Int (m)	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)	CuEq (%)
MCRC050	259767	7421850	159	-75	240	245	No Significant Intercepts								
MCRC051	259903	7421577	144	-75	100	250	158	170	12	0.73	36.8	0.64	0.82	3.08	3.03
MCRC052	259895	7421579	144	-90	360	255	No Significant Intercepts								
MCRC053	259925	7421515	149	-90	360	200	No Significant Intercepts								
MCRC054	259786	7421066	112	-70	235	120	44	54	10	0.13	10			0.32	0.32
and							91	99	8	0.17	9.6			0.23	0.31
MCRC055	259796	7421073	112	-90	360	120	47	50	3	0.4	36.8			0.5	0.85
and							83	97	14	0.22	15.9		0.49	0.7	0.75

Table 1: Mt Chalmers significant intersections November 2022.*

*Note MGA 94_56

- In reported exploration results, length weighted averages are used for any non-uniform intersection sample lengths. Length weighted average is (sum product of interval x corresponding interval assay grade), divided by sum of interval lengths and rounded to two decimal points.
- No top cuts have been considered in reporting of grade results, nor was it deemed necessary for the reporting of significant intersections.

* Downhole intersections contained in this announcement in the vertical drill holes reported, represent true widths of the assayed mineralised intersections contained in Table 1.

* Downhole intersections contained in the announcement in drill holes at ~60-degree dip, represent approximately 87% true width of the assayed mineralised intersections contained in Table 1.

What's Next?



Updated metallurgical testwork for the Mt Chalmers deposit;



Delivery of a pit optimisation for use in the proposed Pre-Feasibility study;



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



Interpretation of the recently completed VTEM™ Max airborne Electromagnetic survey; and



Commence drilling prospective regional targets.

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

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.

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.¹

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

137,836,077

Unlisted Options

7,950,000 (\$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 parameters 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.

Contact

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¹ ASX Announcement - [Mt Chalmers Resource Upgrade](#), 22 November 2022.

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
<i>Sampling techniques</i>	<ul style="list-style-type: none"> <i>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.</i> <i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i> <i>Aspects of the determination of mineralisation that are Material to the Public Report.</i> <i>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.</i> 	<ul style="list-style-type: none"> QMINES continued drilling operations at Mt Chalmers, drilling 6 reverse circulation percussion (RC) holes for 1,190 metres. RC samples were collected at 1m intervals from an on-rig cyclone cone splitter with 2-3kg, or approximately 10% of the split sample saved in calico bags except for duplicate samples with each being 1-2kg, or approximately 5% of the total sample. During drilling, to avoid contamination, four individual calicos were placed in polyweave bags and sealed for delivery to the assay lab. Samples were sent by road to ALS Laboratories in Brisbane, crushed, pulverised and riffle split delivering 200g pulp for base metal and precious metal assay. Handheld portable XRF (pXRF) measurements of base metals i.e. Cu, Pb and Zn were taken of unsieved RC drilling material at appropriate horizons to check for fine grained disseminated base metal mineralisation. Anomalous readings resulted in these samples being submitted for conventional assay.
<i>Drilling techniques</i>	<ul style="list-style-type: none"> <i>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).</i> 	<ul style="list-style-type: none"> RC drilling was completed by the company's KWLRC350 rig with booster and auxiliary compressor and using 5 m, 102 mm diameter RC rods and a 143 mm percussion face sampling hammer.

Criteria	JORC Code explanation	Commentary
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> • Method of recording and assessing core and chip sample recoveries and results assessed. • Measures taken to maximise sample recovery and ensure representative nature of the samples. • 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. 	<ul style="list-style-type: none"> • Rock chips from each RC metre were collected in chip trays and logged. • The majority (>95%) of RC samples were dry. Calico sample bags used in this program are of a sufficiently fine weave as to retain almost all of the sample fine fraction even when saturated. • Drilling methods were consistent with current industry practices.
<i>Logging</i>	<ul style="list-style-type: none"> • 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. • Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. • The total length and percentage of the relevant intersections logged. 	<ul style="list-style-type: none"> • All drilling was competently logged by Company geologists with all logging data digitised electronically into a Panasonic Toughbook. • Logging codes were established prior to commencement of drilling operations by H & S Consultants and are a mixture of quantitative and qualitative data. • Geological information consists of lithology descriptions, alteration, mineralisation, veining, weathering etc. • All data is available in a digital format. • All chip trays have been digitally photographed and stored in the Company NAS drive.
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> • If core, whether cut or sawn and whether quarter, half or all core taken. • If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. • For all sample types, the nature, quality and appropriateness of the sample preparation technique. • Quality control procedures adopted for all sub- 	<ul style="list-style-type: none"> • RC samples were collected from a cyclone with a cone splitter delivering 10% representative sampling per linear metre drilled. Duplicate samples were collected every 25 m and 75 m drilled in the drilling sequence with duplicate samples being a 50-50% split sample from the same cone splitter. • ALS Laboratories dry the samples prior to crushing and pulverising. All sample material from each RC sample

Criteria	JORC Code explanation	Commentary
	<p><i>sampling stages to maximise representivity of samples.</i></p> <ul style="list-style-type: none"> <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> <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i> 	<p>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.</p>
<p><i>Quality of assay data and laboratory tests</i></p>	<ul style="list-style-type: none"> <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i> <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> <i>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.</i> 	<ul style="list-style-type: none"> All samples for assay were submitted to ALS Laboratories in Brisbane. Ag, As, Ba, Cu, Pb, S and Zn were determined by ALS (ME-ICP61) using ICP-AES on a four-acid digest. Au was determined using ALS method AA25 (fire assay with AAS finish on a 30 g pulp). Sample preparation and base metal analysis was undertaken in Brisbane and Fire Assay undertaken by ALS in Townsville. The Company submits batches to ALS from drill programs as they come to hand. Reporting on QAQC results for all drillhole samples submitted between February 2021 and November 2022 has been undertaken by Lisa Orr of Orr and Associates, who found that QMines' QAQC is consistent with current industry practice for a drill program. Duplicate samples of cone splits are inserted at 50 m intervals and are utilised to monitor laboratory reproducibility. With coefficients of variation under 17% there is no significant bias in assayed results from duplicates assayed. Certified Reference Materials (CRM) are supplied by OREAS and GEOSTATS Pty Ltd and are inserted at 20 m intervals with suitable CRMs being used to monitor laboratory accuracy. With 275 out of 294 CRMs reporting within 3 standard deviations of certified values a success rate of 95.1% was achieved. Blank samples of barren gravel are inserted at 33 m intervals. 194 of 196 blanks reported within 2 SDs for 99% success.

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> 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 A Thermo Scientific Niton XL3t handheld portable pXRF unit was used as a first pass check for fine grained disseminated base metal mineralisation in RC drilling material. Reading times were 20 seconds. The device has automatic calibration after switch on, and 4 CRM standards were also used to test for precision.
<i>Verification of sampling and assaying</i>	<ul style="list-style-type: none"> <i>The verification of significant intersections by either independent or alternative company personnel.</i> <i>The use of twinned holes.</i> <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i> <i>Discuss any adjustment to assay data.</i> 	<ul style="list-style-type: none"> Since early 2021, all documentation and digitisation of data has been undertaken by the company database manager, Lisa Orr of Orr and Associates. The drill hole database is stored as an Access database and housed independently in an external NAS drive and backed up in a cloud storage system.
<i>Location of data points</i>	<ul style="list-style-type: none"> <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> <i>Specification of the grid system used.</i> <i>Quality and adequacy of topographic control.</i> 	<ul style="list-style-type: none"> QMiners has implemented a complete conversion by local mine surveyors of all historical drill collar surveys and local gridding utilised by previous explorers. The local work has been validated by MINECOMP Surveying. Conversion has been from local grids to GDA 94 MGA Zone 56. Some drill hole collars positions 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. The Company has flown a Digital Terrain Model (DTM) using drone survey technology. The quality and accuracy of the DTM has been validated and processed independently of the data capture by MINECOP Surveying.
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <i>Data spacing for reporting of Exploration Results.</i> <i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral</i> 	<ul style="list-style-type: none"> The drill programs have been designed to validate historical drill hole data, expand the resource envelope and make new discoveries Line and drill hole spacing is not applicable

Criteria	JORC Code explanation	Commentary
	<p><i>Resource and Ore Reserve estimation procedure(s) and classifications applied.</i></p> <ul style="list-style-type: none"> <i>Whether sample compositing has been applied.</i> 	<ul style="list-style-type: none"> No composite sampling has been applied
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <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> <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> 	<ul style="list-style-type: none"> The Mt Chalmers deposit is generally flat-lying and most drillholes are vertical to give an optimal intersection angle with mineralisation. Angled holes from the current program have been oriented to reach otherwise inaccessible targets. Downhole intersections contained in this announcement in drill holes at for example ~60-degree dip represent approximately 87% true width of the assayed mineralised intersections contained in Table 1 of this announcement. At Woods Shaft the geometry is more complex and true widths are less certain. There is no obvious sampling bias with the drilling orientation.
<i>Sample security</i>	<ul style="list-style-type: none"> <i>The measures taken to ensure sample security.</i> 	<ul style="list-style-type: none"> Samples were collected directly from the cone splitter into individual numbered calico sample bags, then 4 calico bags are inserted into polyweave bags, sealed and tied. Polyweave bags were numbered in sequence and placed in large bulka bags. 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.
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <i>The results of any audits or reviews of sampling techniques and data.</i> 	<ul style="list-style-type: none"> Sampling techniques were established by the Company geologist. Results were reviewed and validated by the Company database geology manager. Exploration results are not audited independently.

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"> <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> <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> 	<ul style="list-style-type: none"> QMiners Pty Ltd has two 100% owned subsidiaries, Dynasty 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 Rockhampton in coastal central Queensland, Australia. The project covers an area of historic gold and copper mining, which comprises an area of 198 km². The Project is free and unencumbered by either joint ventures or any other equity participation of the tenement. QMiners 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 & Mines is conducting remediation works on minor acid mine waste draining from a mineralised mullock dump. All the tenements are for “all minerals” excepting coal. Note that the granted tenements allow QMiners to carry out many of their planned drilling programs under relevant access procedures applying to each tenement. All the EPMs are subject to the Native Title Protection Conditions with respect to Native Title. 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 QMiners’ main prospects but may have impacts on regional programs in places. All annual rents and expenditure conditions have been paid and QMiners has been fully compliant.
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <i>Acknowledgment and appraisal of exploration by other parties.</i> 	<ul style="list-style-type: none"> INAL, CEC and Geopeko were generally recognized as highly competent exploration companies that used appropriate techniques for the time. Written logs and hardcopy sections of their work are considered good.

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> Federation was a small explorer that was entirely focused on defining the Mt Chalmers resource. They used a very competent geologist, Alex Taube, for the drilling program. Alex Taube is widely respected for his knowledge about VHMS deposits in North Queensland.
<i>Geology</i>	<ul style="list-style-type: none"> <i>Deposit type, geological setting and style of mineralisation.</i> 	<ul style="list-style-type: none"> Mt Chalmers 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 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. Researchers have shown that the Mt Chalmers mineralization is a well-preserved, volcanic-hosted massive-sulphide ("VHMS – Kuroko style") mineralized system containing zinc, copper, lead, gold and silver. Mineral deposits of this type are syngenetic and formed contemporaneously on, or in close proximity to, the sea floor during the deposition of the host-rock units deposited from hydrothermal fumaroles, direct chemical sediments or replacements (massive sulphides), together with disseminated and stringer zones within these host rocks.

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> • The oldest rocks in the area, the 'footwall sequence' of pyritic tuffs, are seen only in the Mt Chalmers open pit and in drill holes away from the mine. The rock is usually a light coloured eutaxitic tuff with coarse fragments, mainly of chert, porphyritic volcanics and chloritic fiamme (fiamme are aligned, "flame-like" lenses found in welded ignimbrite) and other pyroclastic rocks and indicate subaerial deposition. Eutaxitic texture, the layered or banded texture in this unit, is commonly caused by the compaction and flattening of glass shards and pumice fragments around undeformed crystals). The alteration (silicification, sericitization and pyritization) of this basal unit becomes more intense close to mineralization. • The 'mineralized sequence' overlying the 'footwall sequence' consists mainly of tuffs, siltstones and shales and contains stratiform massive sulphide mineralization and associated exhalites: thin barite beds, chert and occasionally jasper, hematitic shale and thin layers of bedded disseminated sulphides. Dolomite has been recorded in the mineralized sequence close to massive sulphides. This sequence represents a hiatus in volcanic activity and a period of water-lain deposition. • The 'hanging wall sequence' is a complex bedded series of unaltered crystal and lithic rhyolitic tuffs and sediments with breccia zones and occasional chert and jasper. • A mainly conformable body of andesite, ranging from 10 m to 250 m thick, intrudes the sequence; it usually occurs just above the 'mineralized sequence'. A quartz-feldspar porphyry body intrudes the volcanic sequence and in places intrudes the andesite. • The rocks in the mine area are gently dipping, about 20° to the north in the Main Lode mine area and similarly dipping south at the West Lode: the predominant structure is a broad anticline trending north-north-east. Slaty cleavage is strongly developed in some of the rocks, notably in

Criteria	JORC Code explanation	Commentary
		<p>sediments and along fold axes. Such cleavage is prominent in areas close to the mineralization.</p> <ul style="list-style-type: none"> • Doming of the rocks close to the mineralization has been interpreted by detailed work in the open cut to be largely due to localized horst block-faulting (Taube 1990), but the doming might also be a primary feature in part. Steep dips are localized and usually the result of block faulting. The Main Lode outcrop and West Lode outcrop are variably silicified rocks which, by one interpretation, may have been pushed up through overlying rocks in the manner of a Mont Pelée spine (Taube 1990), but in any case, form a dome of rhyolite / high level intrusions of the Ellrott Rhyolite. The surrounding mineralized horizon is draped upon the flanks of domal structures and dissected by at least three major faults.
<i>Drill hole Information</i>	<ul style="list-style-type: none"> • 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"> ◦ easting and northing of the drill hole collar ◦ elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar ◦ dip and azimuth of the hole ◦ down hole length and interception depth ◦ hole length. • 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. 	<ul style="list-style-type: none"> • Exploration Results are reported in the body of the relevant announcements in Table 1.

Criteria	JORC Code explanation	Commentary
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <i>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.</i> <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> <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i> 	<ul style="list-style-type: none"> In reported exploration results, length weighted averages are used for any non-uniform intersection sample lengths. Length weighted average is (sum product of interval x corresponding interval assay grade), divided by sum of interval lengths and rounded to two decimal points. No top cuts have been considered in reporting of grade results, nor was it deemed necessary for the reporting of significant intersections. All Copper Equivalent (CuEq) figures included in this announcement are calculated based on the following formula: $\text{CuEq}(\%) = (\text{Cu grade} \times \text{Cu recovery}) + ((\text{Pb grade} \times \text{Pb recovery} \times \text{Pb price}) / \text{Cu Price}) + (\text{Zn grade} \times \text{Zn price} \times \text{Zn recovery}) / \text{Cu price} + ((\text{Au grade} \times \text{Au price} \times \text{Au recovery}) / \text{Cu price}) + ((\text{Ag grade} \times \text{Ag price} \times \text{Ag recovery}) / \text{Cu price})$. All grades are converted to % and prices converted to \$/T prior to calculating CuEq. Commodity price used: Au price of US\$1,900/oz, Ag price of US\$25/oz, Cu price of US\$6,655/t, Pb price of US\$2,450/t, and Zn price of US\$3,450/t. The following metallurgical recoveries have been applied: 87% Au, 70.5% Ag, 97.0% Cu, 85.0% Pb and 77.0% Zn. Mt Chalmers VHMS is a polymetallic base and precious metal mineral system, cut off grades used by the Company in calculating mineralised intersections are 2,500 ppm Cu, 0.1 ppm Au and 1 ppm Ag, 0.5% Zn and 0.5% Pb or 2,000 ppm Cu, 0.1 ppm Au, 1 ppm Ag, 2,000 ppm Zn and 2,000 ppm Pb (mid-2022 change).
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <i>These relationships are particularly important in the reporting of Exploration Results.</i> <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i> <i>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').</i> 	<ul style="list-style-type: none"> At Mt Chalmers, the drilling has generally intersected the mineralization at high angles. The majority of holes drilled at Mt Chalmers Copper Project are vertical in nature. Holes drilled on other dips are reported in the Significant Intercepts table. True widths in e.g. 60-degree dipping holes are not reported. True width at 60 degrees is approximately 87% of the down hole intersection.

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<i>Diagrams</i>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Maps, sections, mineralized intersections, plans and drill collar locations are included in the body of the relevant announcement.
<i>Balanced reporting</i>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Table 1 in the body of the announcement.
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> CEC and Geopeko completed some brownfields exploration to assist with defining the resource including Induced Polarization surveys and Sirotem (electromagnetic method) surveys. Federation concentrated on defining the resource estimates. INAL completed greenfields exploration in the 1960's and 1970's. Exploration included geological mapping, soil and rock chip sampling, costeaning and rotary percussion drilling. In 2021 QMines digitized the results of soil geochemical grids obtained from the Geological Survey of Queensland consisting of 19,000 samples collected by various workers for its use in ongoing target generation. Mitre Geophysics Pty Ltd completed a downhole EM survey in June 2022, results of which are described in the body of the announcement including a link to the relevant report. No other exploration data is considered meaningful at this stage.
<i>Further work</i>	<ul style="list-style-type: none"> The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible 	<ul style="list-style-type: none"> Infill and resource expansion drilling is being undertaken to upgrade and potentially expand the current resource estimates. An airborne VTEM electromagnetic survey has been confirmed for January 2023.

Criteria	JORC Code explanation	Commentary
	<i>extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i>	<ul style="list-style-type: none"> • Drillhole planning for the Mt Warminster exploration target is in progress. • Follow up surface exploration at the Tracker 1,2 and 3 soil geochemical anomalies is underway.