QMINES LIMITED
ZERO CARBON CRITICAL METALS

11th July 2023

ASX:QML

QMINES LIMITED

Australia's First Zero Carbon Copper & Gold Developer...

QMINES MAKES FIRST COPPER & ZINC DISCOVERY FROM ELECTROMAGNETIC SURVEY

Highlights

- Large anomalous copper gossans discovered at new VT01, VT02 and VT03 electromagnetic targets;
- Analysis of outcropping gossans returned readings of up to 0.68% Cu from pXRF;
- The large gossan outcrop extends over 700m with adjacent zinc soil anomaly measuring 400m x 250m;
- The new discovery remains undrilled with a 30 hole drilling program planned and ready to commence; whilst
- Drilling continues at the southwest extension of the Mt Chalmers West Pit.

Overview

QMines Limited (**ASX:QML**) (**QMines** or **Company**) is pleased to announce initial findings from the regional airborne geophysical survey near its flagship Mt Chalmers copper and gold Project, located 17km north-east of Rockhampton, Queensland (Figure 1).

Following identification and ranking of 34 Electromagnetic (**EM**) anomalies by QMines geophysical consultants Mitre Geophysics (Mitre), ground investigations of five of the priority EM targets have now been completed. **Field reconnaissance of the top three targets, VT01, VT02 and VT03 have returned very encouraging signs of mineralisation.**

Gossanous outcrops, comprising iron oxides with visible copper mineralisation (cuprite and tenorite), have been identified measuring over 700m in strike and up to 20 metres wide at surface. A further broad (400m x 250m) zinc soil pXRF anomaly (>100ppm Zinc) has been detected adjacent to the gossan which is coincident with the main EM plate models. Figure 2 shows these features in the newly named "Artillery Road" Prospect.

Overview (Continued)

In addition, inversion modelling of the Versatile Time Domain Electromagnetic (**VTEM**™) data by European consultancy Emergo SRL to generate an Induced Polarisation (**IP**) and EM model is now complete, with results currently being analysed by Mitre.

It is anticipated that this new processing technique will generate additional targets for follow up.

Coincident anomalies from both studies are likely and will be considered as priority targets for rapid reconnaissance and drilling.

Drilling will commence at the priority EM targets immediately after execution of landholder access and compensation agreements between landholders and the Company.

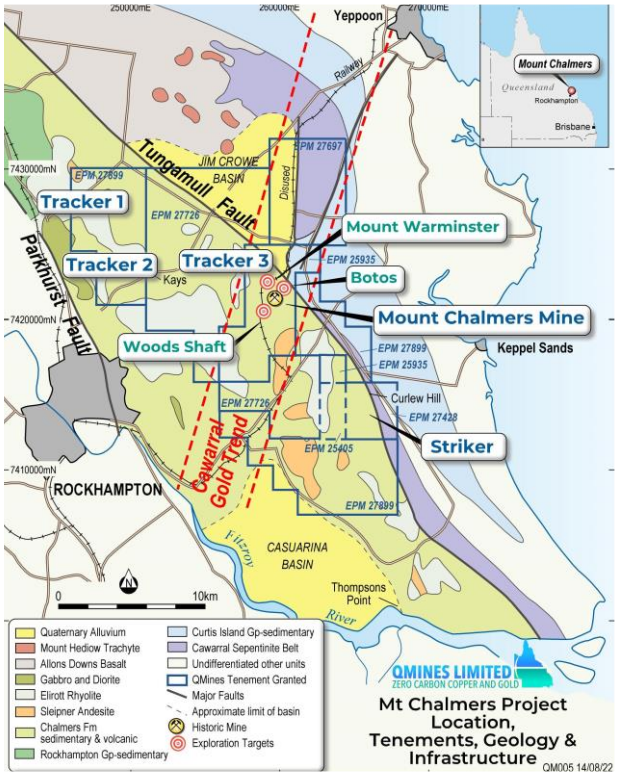

Figure 1: Location of Mt Chalmers tenure, geology & infrastructure.

Management Comment

QMines Managing Director, Andrew Sparke, comments;

"We are extremely pleased to have made a new discovery at the Mt Chalmers Project. The new Artillery Road Prospect has similarities with the Mt Chalmers copper and gold deposit and is proof of the success of the Electromagnetic survey.

With 34 anomalies to review, we are excited by the potential to make further discoveries with ongoing ground reconnaissance currently underway."

Electromagnetic Anomalies

Modelling of the Company's VTEM data by Mitre Geophysics has identified a series of three strong, early to late time EM responses with an associated RTP Total Magnetic Intensity (**TMI**) gradient. The VT01, VT02 and VT03 anomalies have been ranked as priority drill targets by the Company. Priority EM plate model targets are shown in Figure 2 with the TMI and the Digital Terrain Model (**DTM**) contour gradients. The VT01-VT03 anomalies are shown from north to south in Figure 2.

The EM plate models appear to be mostly sub-horizontal however this has not been confirmed. The Company plans to undertake downhole EM surveys during the drilling phase to better define the anomalies.

Based on the strength and the clustering of these three priority EM anomalies, QMines prioritised field investigations which has resulted in the discovery of an extensive zone of copper-bearing gossanous outcrops scattered over seven hundred metres in strike and between five and twenty-five metres in width. In addition, an extensive zinc in soil anomaly has been defined by pXRF adjacent to the copper gossan. Together these now define the "Artillery Road" Prospect (Figure 3).

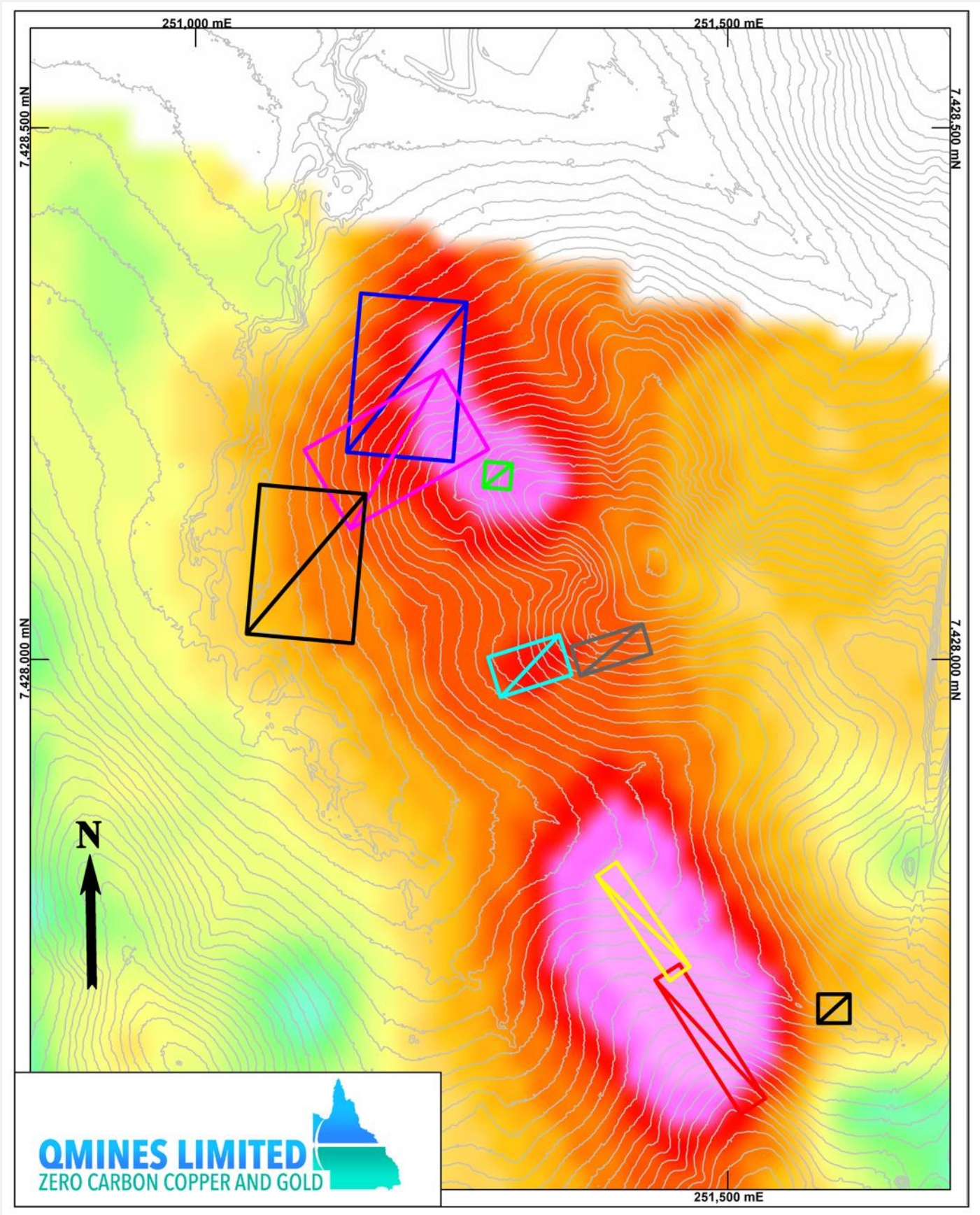

Figure 2: Artillery Road prospect showing EM plate model VT01-VT03 (North to South) projected to surface with TMI RTP and DTM gradient contours.

Electromagnetic Anomalies (Cont)

EM and IP resistivity responses and brief summaries for priority EM targets VT01 through VT03 can be seen in Figures 4 through 6 and in a 3D inversion with DTM in Figure 7.

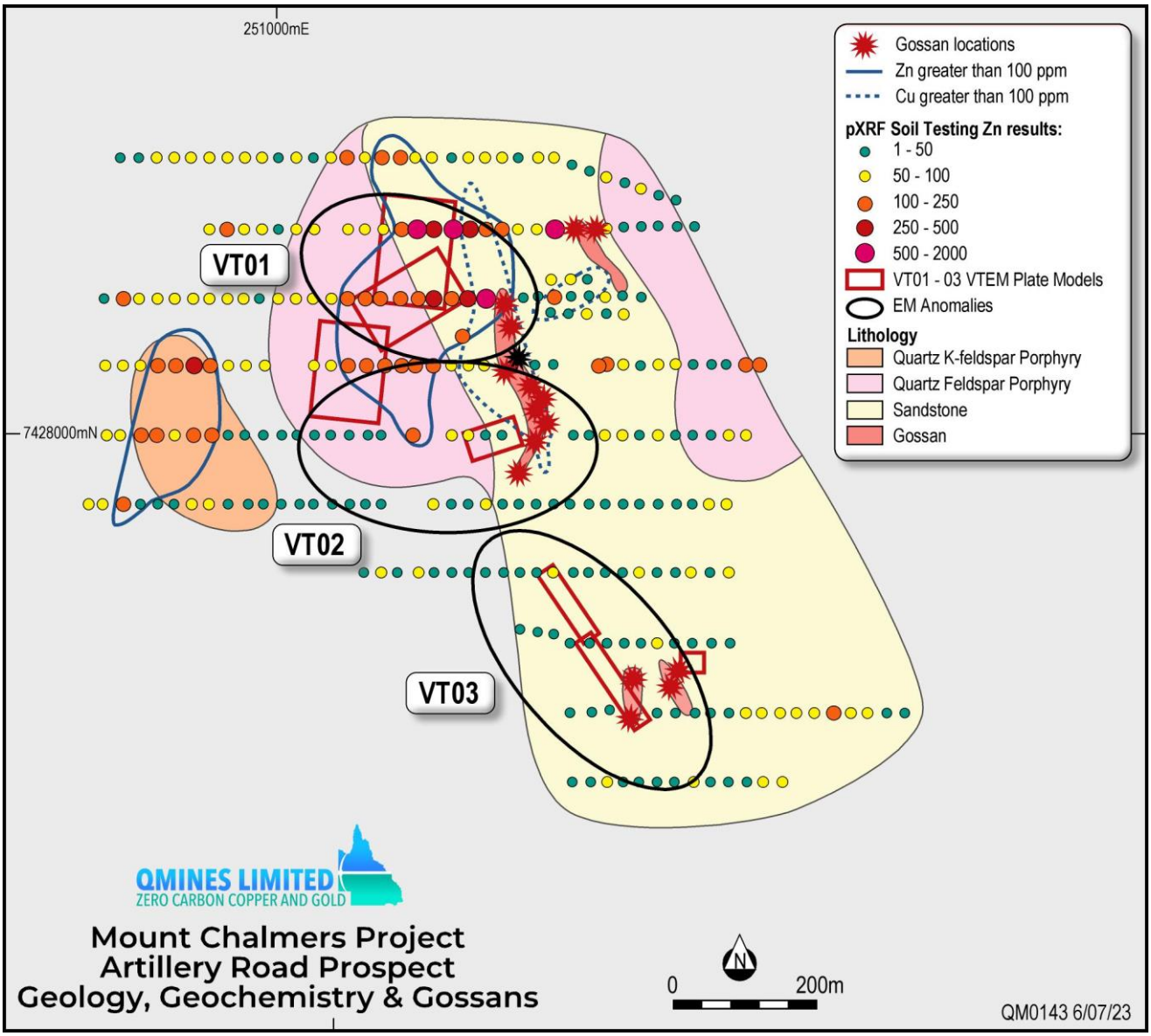

Figure 3: Artillery Road Prospect – Geology, zinc soil geochemistry, gossans and VTEM plate models projected to surface.

Geology

The newly discovered gossans which form low relief subcrops are readily identified at surface. They form breccia cement within siliceous, fine-medium grained sandstone. Occasional red jasperoid clasts are present, with the majority of the clasts being siliceous sandstone. Quartz content appears strongest near the gossans and may reflect silicification.

The gossan comprises the range of iron oxides from soft limonite to specular hematite with minor reddish cuprite (Cu2O) more prevalent towards the north. Tenorite (CuO) was also noted (see Table 1 for pXRF results). Hypogene mineralisation is likely to be semi-massive pyrite with variable base metal sulphides. The gossans are between 5 and 25 metres in width at surface and are scattered over 700 metres in strike, and appear as fault breccias, possibly anastomosing.

Local copper bearing quartz – iron oxide veinlets within the breccia and adjacent wall rock may represent stringers. Small pits into the gossans indicate some historical prospecting.

Quartz plagioclase feldspar porphyry forms blocky float on both sides of the siliceous sandstone and may represent welded tuffs (ignimbrites) on fold limbs. The nature of the outcrops did not allow for structural measurements to be taken. A different quartz K-feldspar porphyry exposure occurs to the west and coincides with a zinc in soil anomaly. Iron oxide veinlets within this porphyry have elevated zinc pXRF values.

Anomaly VT01

Anomaly VT01 is a broad, early to late time response. The high amplitude suggests a highly conductive, shallow, flat lying source. The shallow depth raises the possibility that this feature could be man made or have Superparamagetic effects which are a type of geological noise imitating basement conductors. Ground exploration to date has identified copper bearing gossans across a 700m x 25m zone with an anomalous zinc halo in soils strengthening the case for the EM response to be a Volcanic Hosted Massive Sulphide (VHMS) conductor.

Additionally, the VT01 EM anomaly also coincides with a >20nT magnetic anomaly, increasing the likelihood that it is a basement conductor. Ground reconnaissance did not find any conductive bodies (man made or natural) on surface.

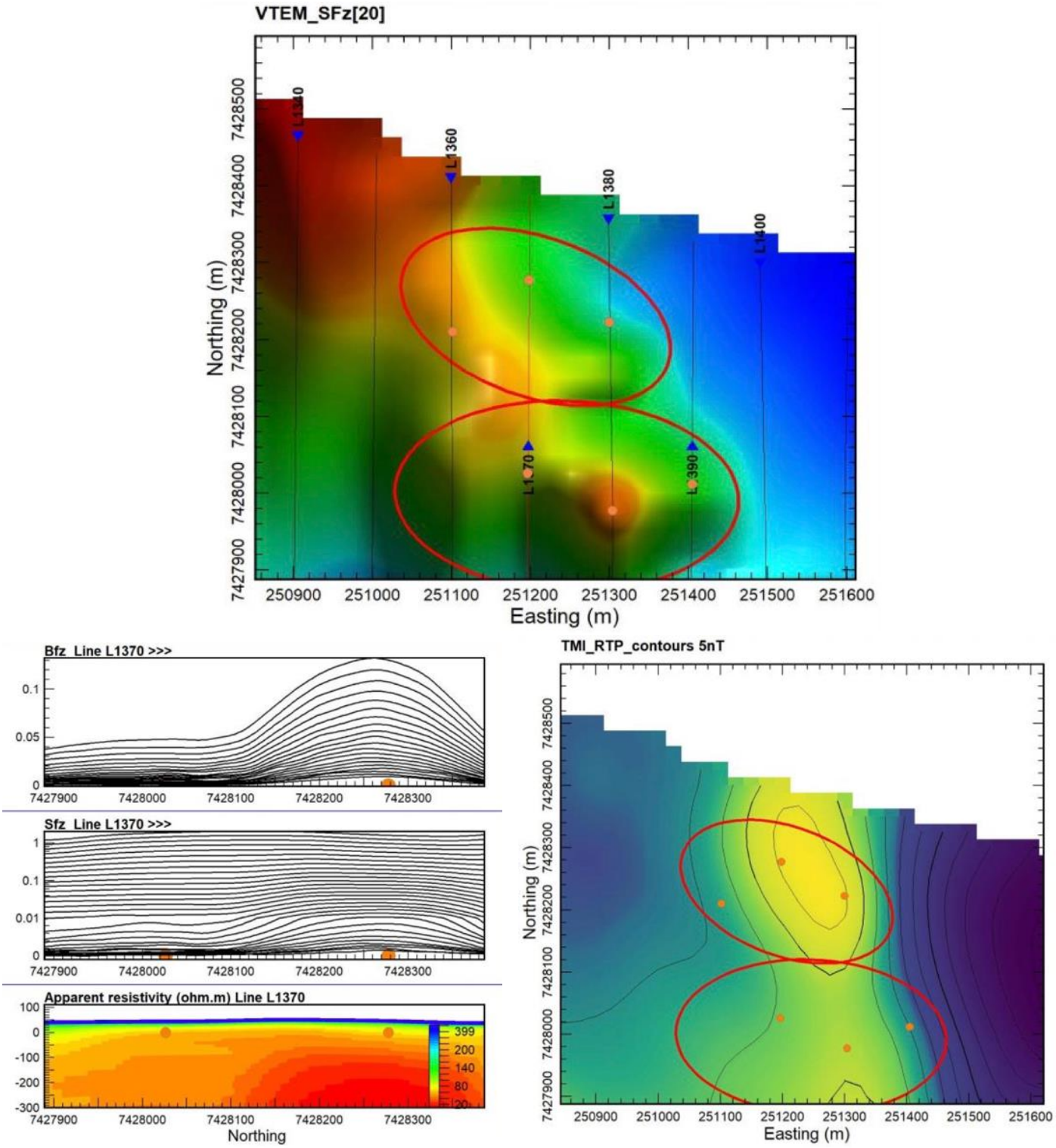

Figure 4: VT-01 VTEM SFz channel 20, Bfz Line 1370, apparent resistivity and TMI RTP contours. VT01 GDA94 MGA65.

Anomaly VT02

Anomaly VT02 is a strong response, but smaller than anomaly VT01. The source is probably also near horizontal and very shallow, raising the possibility that it may be man made, however surface reconnaissance did not locate anything to explain or indicate the VT02 anomaly is a response to a man made feature.

Ground exploration undertaken by the Company has identified copper bearing gossan outcrops across a 700m x 25m zone with an anomalous zinc halo in soils suggesting the EM response may be a VHMS conductor.

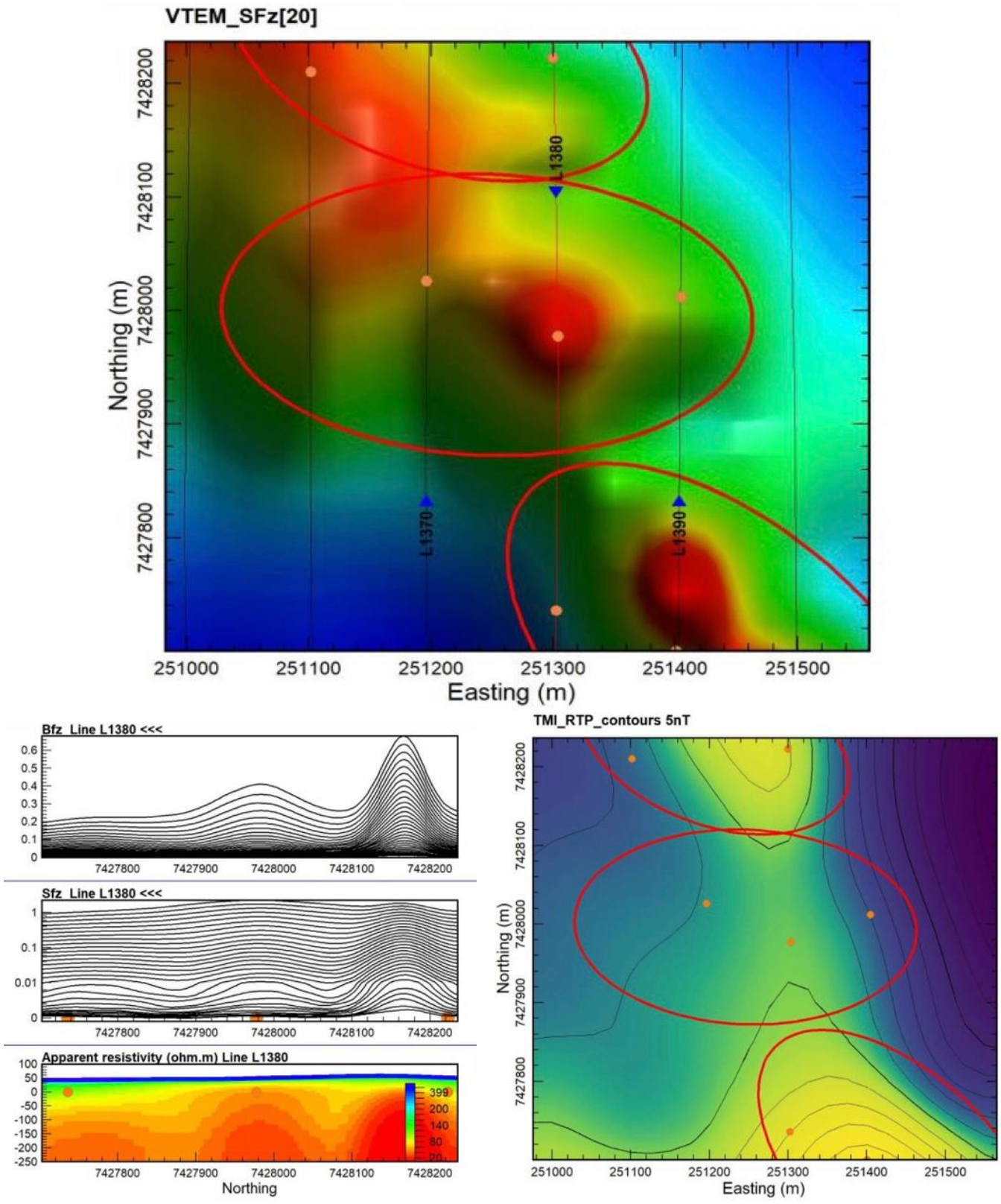

Figure 5: VT-02 VTEM SFz channel 20, Bfz Line1380, apparent resistivity and TMI RTP contours. VT02 GDA94 MGA65.

Anomaly VT03

Anomaly VT03 is the strongest of the three anomalies in the Artillery Road Prospect area. It is a very strong, moderately wide, response in the early to late time channels. Like the others in this group, its high amplitude and shallow nature possibly means it could be man made.

The EM anomaly coincides with the southern end of the identified copper bearing gossan outcrops with the zinc in soil anomaly suggesting the EM response may be a VHMS conductor. Additionally, the VT03 EM anomaly coincides with a >20nT magnetic anomaly, increasing the likelihood that it is a basement conductor. Ground reconnaissance has not located any man made objects.

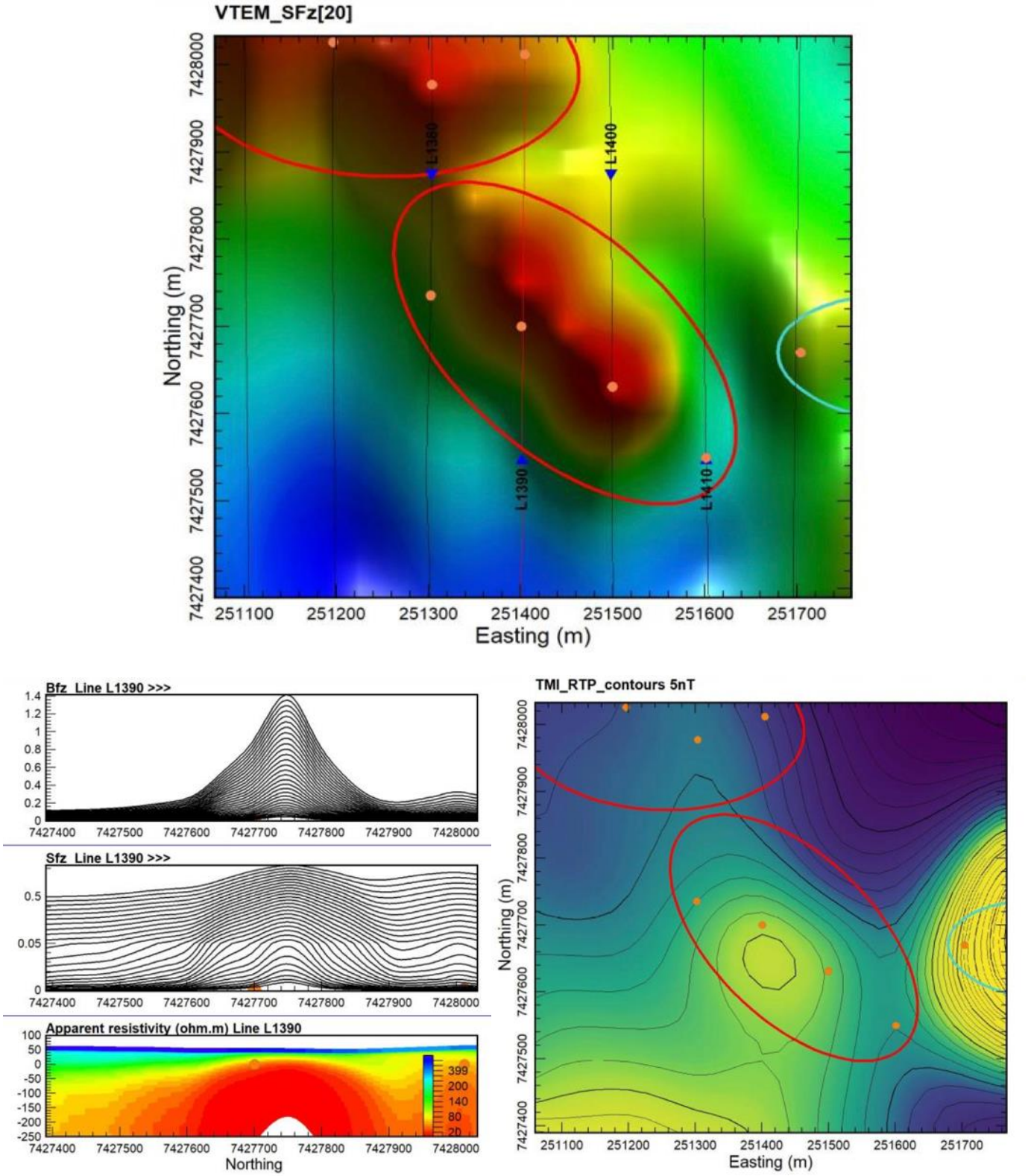

Figure 6: VT03 VTEM SFz channel 20, Bfz Line 1390, apparent resistivity and TMI RTP contours. VT03 GDA94 MGA65.

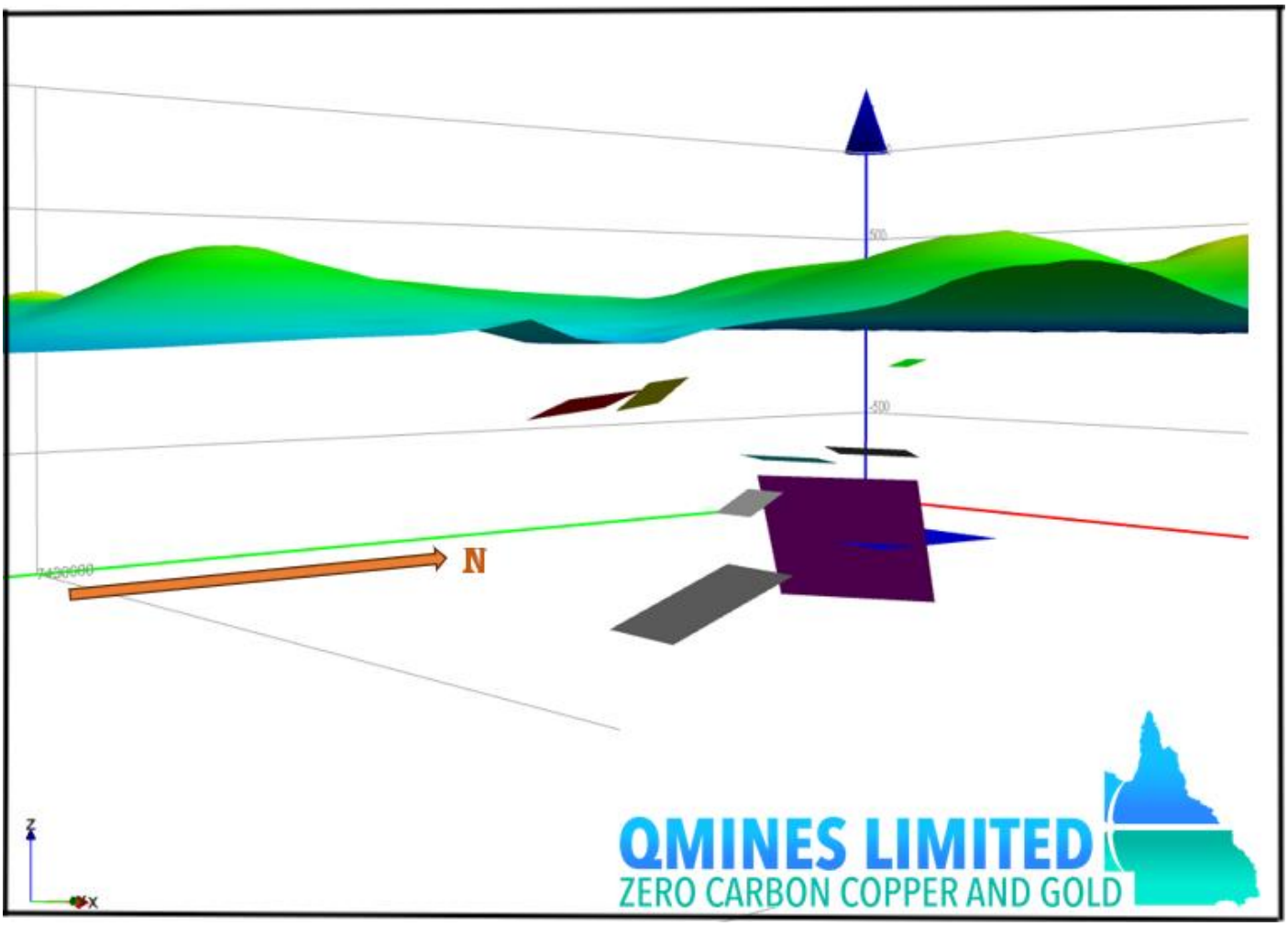

Figure 7: 3D inversion of the Artillery Road Prospect EM plate models and surface DTM rendition.

Geochemistry

Soil pXRF testing across the VTEM plates proceeded at 100m x 25m spacing with auger testing to below the 'A' horizon (5cm). Soils are compact or gravelly and are difficult to penetrate to greater depths. Despite possible ground disturbances as the result of a WWII army camp, coherent copper and zinc anomalies were detected.

The main copper anomaly mimics the northern gossan while the main zinc anomaly covers the largest VTEM plate models. The southern gossans and EM anomalies lack the same soil geochemical footprint which may be due to ground disturbance on site. The Artillery Road Prospect was not soil sampled or referenced by previous explorers. Eighteen rock chip samples have been collected and will be submitted to ALS in Brisbane for analysis. Table 1 shows pXRF results for these samples.

QMines cautions that pXRF results do not constitute laboratory analysis and should be considered as indicative values only. Laboratory analysis results from the surface sampling will be reported to the market as soon as they become available.

Sample ID	GDA94 z 56 East	GDA94 z 56 North	Description	pXRF Cu ppm	pXRF Zn ppm
MCRK045	251179	7427900	Dam wall. Rare float py boxwork gossan.	1605	
MCRK046	251374	7428005	Old pit walls. Pyrite boxwork gossan Breccia with red hematite Fe alteration with minor jasperoid.	1520	
MCRK047	251372	7427995	Float gossan after massive sulphide (pyrite).	1590	
MCRK048	251357	7428072	Float patch (mullock from pit) massive sulphide gossan Breccia.	1209	

Table 1: pXRF results from soil grids at Artillery Road Prospect.

Sample ID	GDA94 z 56 East	GDA94 z 56 North	Description	pXRF Cu ppm	pXRF Zn ppm
MCRK049	251344	7428114	2m x 2m subcrop patch grab massive sulphide gossan breccia.	6750	
MCRK050	251333	7428161	Elongate subcrop 3m x 20m 330-150 degrees massive sulphide gossan breccia	5834	
MCRK051	251326	7428184	At north end of MCRK050 gossan.	2116	
MCRK052	251382	7428022	Pit 5m x 3m x 1.5m deep. Fe oxide softer gossan.	191	
MCRK053	251897	7428008	Quartz K feldspar Porphyry trench spoil next to concrete slab. Epidotic with red hemat alteration patches.	1920	1427
MCRK054	251328	7428303	Green-grey siliceous fine-medium grained quartzite, with Fe oxide-quartz veinlets.	403	2391
MCRK055	251429	7428298	Dark grey weakly siliceous fmg sst with many red hemat partings and veins. Stringers?	3749	
MCRK056	251575	7427660	Ploughed boulders of red-brown massive sulphide (py) gossan.	825	
MCRK057	251562	7427638	4m x 4m float patch massive sulphide gossan breccia. Black tenorite veinlets.	2209	
MCRK058	251510	7427647	Gossan float patch 10m x 3m SE-NW.	1324	
MCRK059	251503	7427601	Weak gossan / ferruginous fmg sandstone patch 7m x 2m SE-NW.	3060	
MCRK060	251784	7427605	Variably ferruginous fmg sst 8m x 3m 300-120 deg. Not gossan but ferrug replacement on fracture planes.	110	
MCRK061	251390	7428022	Gossan breccia 12m x 2m.	652	
MCRK062	251345	7427943	Ploughed up gossan boulders, variable Fe content.	898	

Table 1: pXRF results from soil grids at Artillery Road Prospect.

Leaching of base metals from surface gossans are common. Clear drill targets are present along the gossan trend as well as into the zinc anomaly over the VT01-02 plate models. Targets are subvertical copper and sub-horizontal zinc (copper, lead).

Our understanding of the Mt Chalmers deposit provides some insights into what may be occurring at Artillery Road. The working hypothesis is that the gossans potentially represent a feeder/fissure fault which fed deposition of a zinc bearing massive sulphide horizon.

A program comprising 30 Reverse Circulation (RC) drillholes has been designed to test this prospect. The program aims to define the orientation of the gossans / faults and test the modelled EM plates at VT01 – 03. Early downhole EM (DHEM) surveying and modelling will also assist in defining subsurface target geometry.

Drilling on this prospect is planned to start as soon as access is available.

The discovery of copper gossans and associated base metal soil anomalies at the VTEM plate models illustrates the success of the VTEM method and of the processing and ranking by Mitre. The Company looks forward to advancing further targets.

Figure 8: Artillery Road Prospect gossan outcrops, 251370mE, 7428021mN (GDA94 zone 56).

What's Next?

- Complete drilling of the southwest extension of the Mt Chalmers deposit;
- Commence drilling at the Artillery Road Prospect and other priority EM targets;
- Continue ground reconnaissance mapping and ranking of the 34 EM anomalies;
- Delivery of the results of a recent carbon audit to meet the requirements of the Climate Active program and retain our Zero Carbon certification; and
- Complete the planned Pre-Feasibility Study on the Mt Chalmers project assessing the potential for a stand-alone mining operation.

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.

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

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.

Contact

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[1] 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

Sampling techniques	• *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.*
	• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*
	• *Aspects of the determination of mineralisation that are Material to the Public Report.*
	• *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.*
		• 18 rock chip samples were collected mostly of surface float or subcrop. Where coherent subcrop was encountered then rock chip samples were collected from across the exposure, generally east-west across north-south trending exposures. In the absence of identifiable structure representative surface float was sampled.
		• Float samples are identified as such in Table 1 in the body of the announcement.
		• Soil testing was by hand auger to below the 'A' Horizon, typically 5cm. Gravelly and compact soils rendered deeper sampling untenable.
		• Field testing of both rock chips and soils was undertaken by a portable XRF. Relevant results are shown in Table 1 (rock chip) and Figure 2 (soil) in the body of the Announcement.
		• Geotech's helicopter-borne Versatile Time Domain EM system was used by UTS Geophysics to conduct the survey. The survey was completed using an AS350-B3 helicopter. System parameters are:
		  ○ Type: Geotech Versatile Time-Domain EM System
		  ○ Transmitter-receiver geometry: In-loop, vertical dipole
		  ○ Transmitter coil: 35 m diameter
		• Transmitter
		  ○ Base frequency: 25Hz
		  ○ Pulse width: 7 ms
		  ○ Peak dipole moment: 700,000 NIA
		  ○ Waveform: Trapezoid

Criteria	JORC Code explanation	Commentary

		• Receiver
		  ○ Z, X coils
		• The EM bird was towed 35 m above ground.
		• The flight path followed a 100 m survey line spacing in an North-South direction flying 35 m above ground level.
		• Magnetic data was recorded as well. Parameters are:
		  ○ Type: Geometrics split-beam total field sensor
		  ○ Sampling interval: 0.1 seconds
		  ○ Sensitivity: 0.02 nT
		• The survey was completed February 2023

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.* • *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.* • *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.*	• pXRF field measurements are not a substitute for laboratory analysis, but from experience provide a semi-quantitative indication of expected laboratory results. • pXRF analysis of rock chip samples and soil samples for early-stage reconnaissance is considered appropriate. • The pXRF instrument used was a Niton XL3t analyser. QAQC of this device is regularly undertaken using 3 standards and a silica blank. Measurement timings always exceeded 20 seconds. • For the VTEM data study, Processing Software Platforms were Geosoft Oasis Montaj and Proprietary Software.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data result, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Laboratory analysis of the rock chip samples will provide definitive results. • Soil samples for laboratory analysis were not collected as the pXRF results sufficiently identified meaningful anomalies on site and in real time.
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.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• A handheld Garmin GPS unit was used to identify all sample locations with accuracy +/- 3m. • QMines uses the GDA94 zone 56 datum and UTM grid. • 1m LiDAR imagery is available for the target area but is not relevant to this Announcement.

Criteria	JORC Code explanation	Commentary
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *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.* • *Whether sample compositing has been applied.*	• Soil testing was undertaken on 100m line spacing with 25m testing intervals. • Rock chip samples were collected only where considered appropriate i.e. to test potential mineralisation.
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.*	• Soil sample lines were completed at roughly right-angles to the strike of the geology and gossan outcrops. • Orientation of mineralisation is unknown.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• The content of this announcement is the result of the field review of three of the VTEM anomalies generated from the recent VTEM survey and targeting report generated by Mitre Geophysics.

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 and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to*	• QMines 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 27697, EPM 27428, EPM 25935, EPM 27726 and EPM 27899 located between 10 and 25 kilometres north and 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 336 km2.

Criteria	JORC Code explanation	Commentary
	obtaining a licence to operate in the area.	• The Artillery Prospect is covered by EPMs 27726 and 27899 which are both directly held by QMines Ltd. • The Project is free and unencumbered by either joint ventures or any other equity participation of the tenement. • 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 & 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 QMines to carry out their planned drilling programs under relevant access procedures applying to each tenement. Notices of Entry and Conduct and Compensation agreements will be required before conducting fieldwork and drilling at several new targets. • 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 QMines' main prospects but may have impacts on regional programs in places. • All annual rents and expenditure conditions have been paid and QMines has been fully compliant.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Apart from minor old, shallow pitting there appears to have been no modern exploration at the Artillery Prospect. • Historical Geological Survey of Queensland and Commonwealth airborne magnetic surveys cover the entire QMines EPM areas but the resolution is low and only gross features are recognized.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The geology of the Artillery Prospect is described in the body of the Announcement. There appear to be distinct similarities with the Mt Chalmers deposit in terms of size, structure and mineralization style.

Criteria	JORC Code explanation	Commentary
		• The Mt Chalmers mineralization 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. • 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)

Criteria	JORC Code explanation	Commentary
		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 sediments and along fold axes. Such cleavage is prominent in areas close to the mineralization. • 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

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		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. • The recent QMines VTEM survey has covered the prospective Berserker Beds in the search for similar VHMS deposits, with the Artillery Prospect being a notable candidate to date.
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 and plans are included 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 method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• 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 Prospect.
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).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• QMines plans to drill test the targets identified in this announcement. Reconnaissance (scout) RC drilling using QMines' own rig may lead to further drilling as required. • Surface exploration of QMines' other, regional targets is underway in order to prepare new drilling targets.

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