

Historic EM Survey Confirms Exciting New Targets



MT CHALMERS

16th November 2022

Highlights



QMiner has recently acquired two historic airborne electromagnetic datasets;



The acquisition has successfully identified several new and exciting VHMS targets;



A new electromagnetic helicopter survey is expected to commence in January 2023 and take approximately three weeks to complete;



The survey is designed to locate further VHMS targets and improve drill targeting at the large copper and zinc soil anomalies at Tracker 1, 2 & 3; and



Results from the survey are anticipated early in the new year with follow up drilling of priority targets to commence shortly thereafter.

Overview

QMiner Limited (ASX:QML) (QMiner or Company) is pleased to announce the acquisition of two historical airborne geophysical surveys at its flagship Mt Chalmers copper and gold project, located 17km north-east of Rockhampton, Queensland (Figure 1).

The recent acquisition and modelling of historical Versatile Time Domain Electromagnetics (VTEM™) data collected from both the Mt Chalmers area and the Tracker 2¹ soil geochemical anomaly has revealed an Electromagnetic (EM) response at Mt Chalmers. Importantly it has also shown a coincident EM and copper and zinc soil anomaly, indicating that this geophysical method is suitable for regional Volcanic Hosted Massive Sulphide (VHMS) exploration over the Company's tenement holdings.

¹ ASX Announcement – QMiner to Drill First of Four Large Soil Anomalies, 21 February 2022.
https://cdn-api.markitdigital.com/apiman-gateway/ASX/asx-research/1.0/file/2924-02488847-6A1077919?access_token=83ff96335c2d45a094df02a206a39ff4

Overview (Continued)

As a result, UTS Geophysics Pty Ltd (UTS Geophysics) has been contracted to fly a helicopter borne VTEM™ and magnetic geophysical survey to investigate the VHMS potential of the prospective Berserker Beds within the Company's Mt Chalmers tenements.

Mitre Geophysics, a well-respected geophysical consultancy, has been engaged to oversee the survey and to model this data. Subject to weather, the survey is scheduled to commence in January 2023 with preliminary results expected once complete.

It is anticipated that coincident geochemical and geophysical anomalies generated from this survey will be ranked for on-ground exploration and fast tracked for drilling in Q1-2023 using QMines' recently acquired RC drilling rig.

QMines tenement consultants, UTM Global, are currently preparing notices for distribution in various local media publications prior to the commencement of the survey.

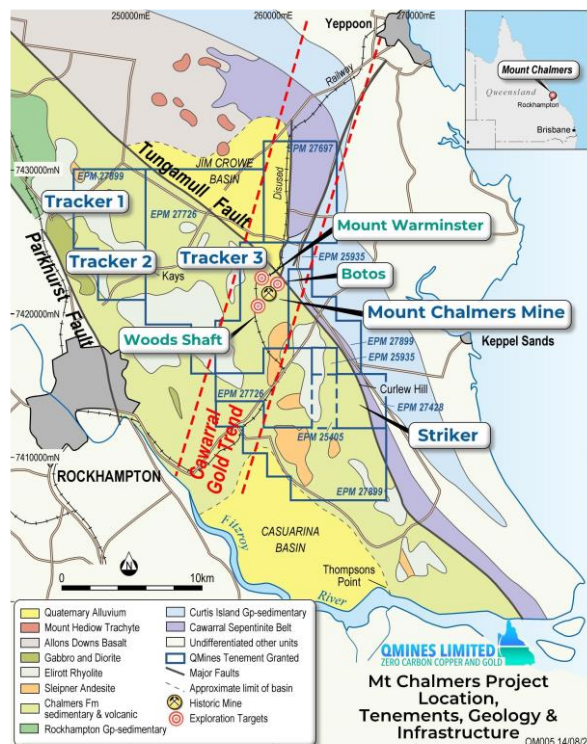


Figure 1: Location of Mt Chalmers Project, tenure, geology & infrastructure.

Management Comment

QMines Executive Chairman, Andrew Sparke, comments;

"Preliminary analysis of the historic electromagnetic data is very encouraging. The data confirms a number of existing soil anomalies whilst also highlighting further exciting targets in several new areas.

The new data demonstrates the upside potential of the Mt Chalmers project and confirms our belief that Mt Chalmers is a district scale opportunity."

VTEM™ Max System

The Versatile Time Domain Electromagnetic (VTEM) is an electrical geophysical method where an electrical current is generated in the earth's surface. As the current passes through conductive material like massive sulphides, a secondary current is generated. The VTEM system measures these secondary currents. The stronger the conductor, the stronger the secondary current that is generated.

The detectability of massive sulphide is dependent on overburden interference, size, depth, geometry, conductance (a product of sulphide mineralogy, percentage sulphide and sulphide grain connectivity), and location with respect to the flight line. Electromagnetic (EM) surveys, particularly airborne EM, have definite limits on detecting small massive sulphide deposits (particularly if they are deep) or weakly conductive ore deposits.

¹ QMines Prospectus, Annexure A, Independent Geologist Report, pages 93-104. Exploration Targets are reported in accordance with the JORC 2012 Code & Guidelines. Note: The Potential quantity and grade of the Exploration Target described in this announcement is conceptual in nature. There has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.

VTEM™ Max System (Continued)

UTS Geophysics describes VTEM™ Max as the most innovative and successful airborne electromagnetic system to be introduced in more than 30 years. The proprietary receiver design using the advantages of modern digital electronics and signal processing delivers exceptionally low-noise levels. Coupled with a high dipole moment transmitter, the result is unparalleled resolution and depth of investigation in precision electromagnetic measurements. Key features include:

- Superior Exploration Depth;
- Low Base Frequency (25 Hz) for Penetration through conductive cover;
- High Spatial Resolution – 2 to 3 metres;
- Improved Interpretability due to Receiver-Transmitter symmetry;
- Spotting drill targets directly from the airborne results; and
- Excellent resistivity discrimination and detection of weak anomalies.

The VTEM™ Max system uses a 35 metre diameter transmitter loop (Figure 2), making it ideal for locating discrete conductive anomalies as well as mapping vertical and lateral variations in resistivity. It includes a high sensitivity magnetometer and both electromagnetic and magnetic data are collected as separate datasets.

The survey is expected to take approximately three weeks to complete, weather permitting. Preliminary maps will be produced shortly after the survey is flown.



Figure 2: Helicopter towing the VTEM transmitter coil (courtesy UTS Geophysics).

Survey Area

The survey area coincides with the most prospective corridor through the volcanic Berserker Beds, host to multiple large copper and zinc soil geochemical anomalies, as well as the Mt Chalmers mine and satellite Exploration Targets.¹² As such the proposed survey area extends to the extremities of the Company's exploration permits and measures some 29km long by 8km wide (Figure 3).

¹ QMines to Drill First of Four Large Soil Anomalies, 21 February 2022. <https://wcsecure.weblink.com.au/pdf/QML/02402944.pdf>

² QMines Prospectus, Annexure A, Independent Geologist Report, pages 93-104. <https://qmines.com.au/prospectus-2/> Exploration Targets are reported in accordance with the JORC 2012 Code & Guidelines. Note: The Potential quantity and grade of the Exploration Target described in this announcement is conceptual in nature. There has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.

Survey Area (Continued)

The Mt Chalmers deposit is a well-preserved VHMS with a flat lying asymmetric mound geometry. This mineralised system contains copper, gold, zinc, lead and silver and VHMS is recognised as being one of the highest-grade mineral systems in the world.

Mineral deposits of this type are deemed syngenetic and formed contemporaneously on, or close to, the sea floor during the deposition of the host-rock units. The mineralisation is believed to have been deposited from hydrothermal fumaroles, or direct chemical sediments or sub-seafloor massive sulphide replacement zones and layers, together with footwall disseminated and stringer zones within the host volcanic and sedimentary rocks.

The Mt Chalmers mineralisation is situated in the early Permian Berserker Beds, which occur in the fault-bounded Berserker Graben, a structure 120km long and up to 15km wide. QMines' recent compilation of historical geological and geochemical data and subsequent analysis has identified the most prospective parts of this graben.

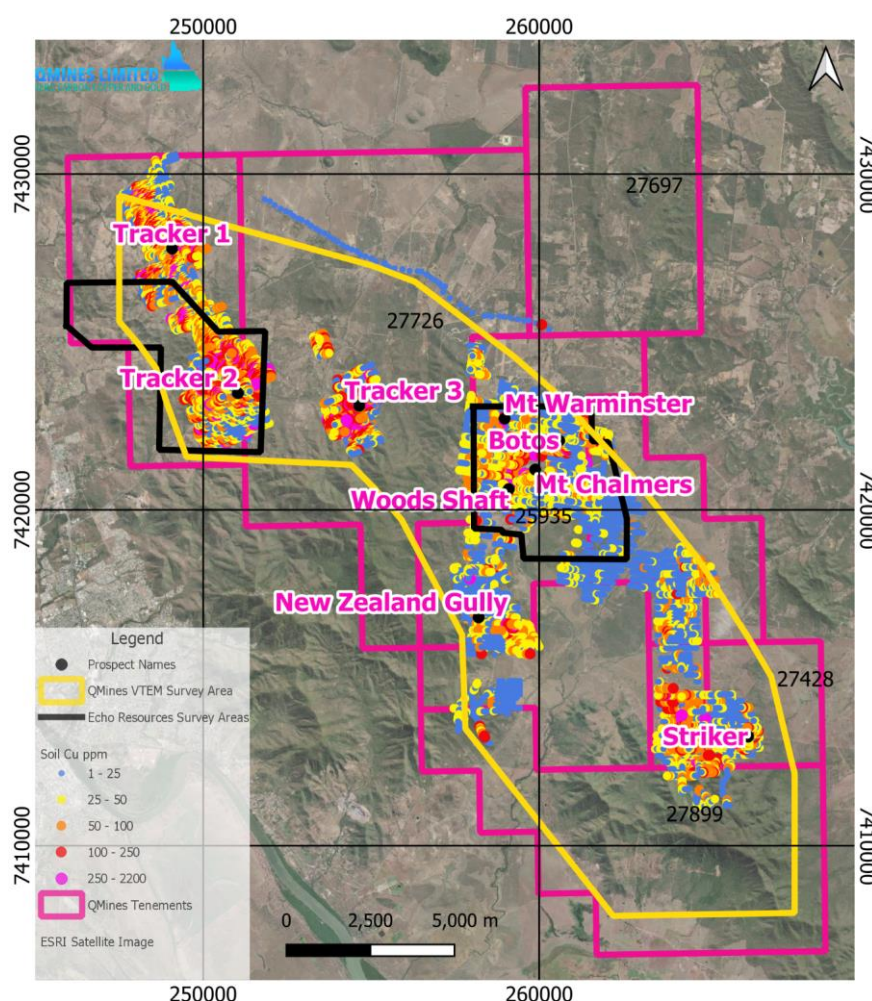


Figure 3: Planned VTEM™ flight paths in yellow and historic EM survey recently acquired in black.

Historical Airborne Surveys

QMines has recently acquired historical VTEM™ data collected by Echo Resources Limited (**Echo**) in 2007 from the Mt Chalmers area and the Tracker 2 soil geochemical target. Mitre Geophysics Pty Ltd (**Mitre**) was recently retained by QMines to acquire and reinterpret the raw data from these two small grids and to identify prospective anomalies.

After removing the effects of conductive overburden, man-made artefacts, stratigraphic conductors and polarisation effects, Mitre was able to isolate discrete conductors likely related to massive sulphides.

Historical Airborne Surveys (Continued)

Mitre found that Mt Chalmers does appear to have an EM response (Figure 4). It is not typical of a strong conductor and that may be due to surface contamination from previous mining, and from the fact that Mt Chalmers is partly mined out. Nevertheless, the anomaly is important as it shows that an EM response is associated with VHMS deposits in this region.

Figure 3 shows the extent of the Echo survey areas, with results presented in Figure 4. The Echo survey was flown in 2007 using significantly less-advanced technology than the planned VTEM™ Max survey. Figure 4 shows apparent conductance at the 480 microsecond time channel (Channel 10) in pV/A/m4, which is a late time channel that best shows deep and/or good conductors.

Conductivity highs are present at the Mt Chalmers, Mt Warminster and Botos targets. Interestingly, Woods Shaft is associated with a conductivity low, and recent drilling at Woods Shaft intersected stringer zone mineralisation, not massive sulphide, in a siliceous host rock. This suggests that silicification, which typically presents as a resistivity anomaly rather than a chargeability anomaly, is reflected in the VTEM™ data as a conductivity low. A similar pattern occurs at Tracker 2, where significant copper and zinc soil anomalies are also coincident with conductivity lows.

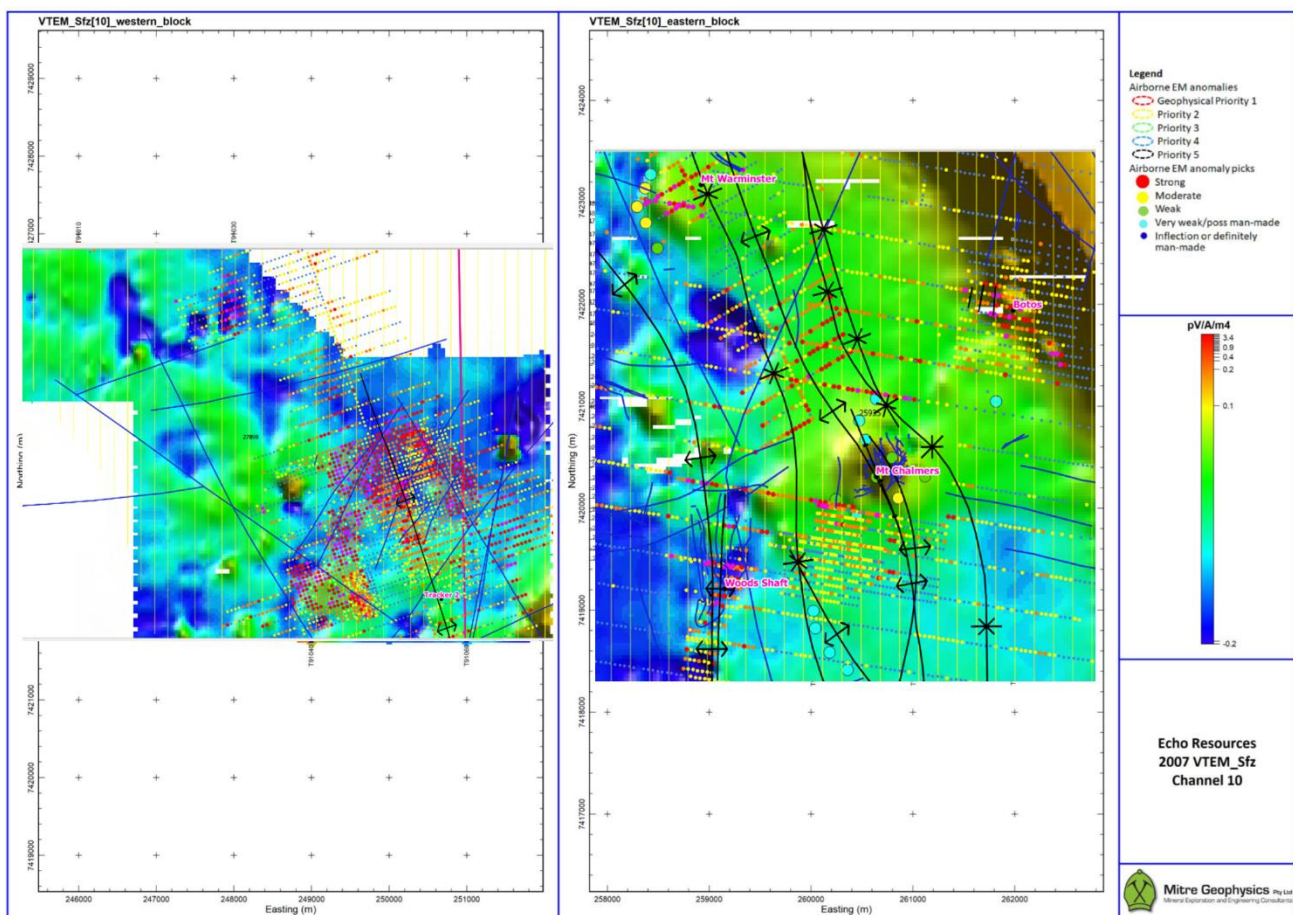


Figure 4: Echo's Tracker 2 area 480µs VTEM response with superimposed Cu soil geochemical results (L) and the Mt Chalmers area (R).

The VTEM™ Max technology is much more advanced and high-powered than the historic VTEM™ survey system used by Echo Resources in 2007. This will provide better quality data and improve targeting.

In addition to the VTEM™ survey, high resolution magnetics data was collected as part of the Echo survey. This data is superior to the magnetic dataset which is available on the open file Geological Survey of Queensland (GSQ) database. Figure 5 shows the Echo aeromagnetic results superimposed on the GSQ results for comparison.

Historical Airborne Surveys (Continued)

The QMines survey, covering the most prospective part of the Beserker Graben, is likely to reveal basin structural architecture as never before.

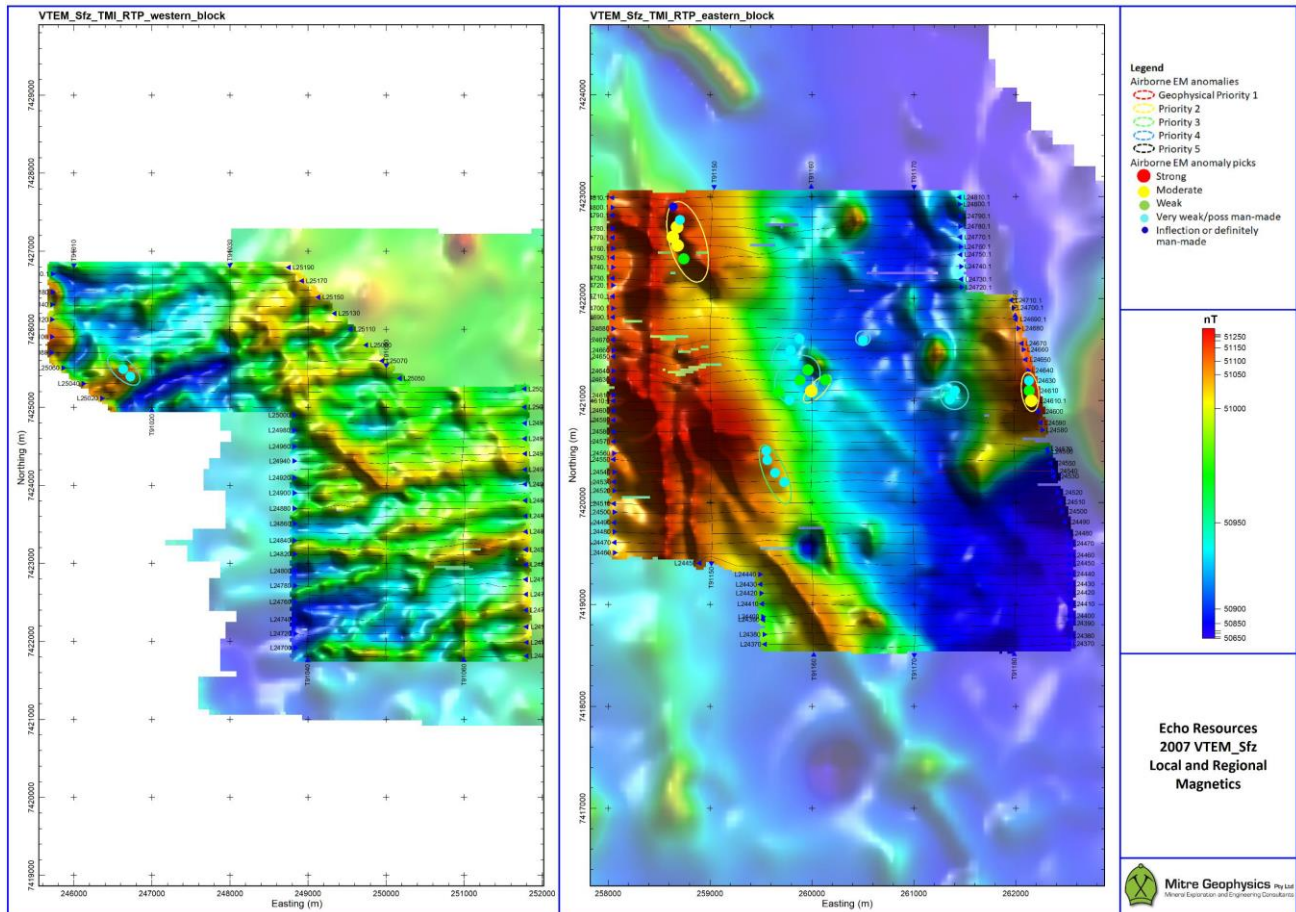


Figure 5: Echo's local TMI magnetics over regional magnetics at Tracker 2 (L) and Mt Chalmers (R).

What's Next?



Continued drilling operations at Mt Chalmers for the planned 30,000 metre RC and Diamond drilling programs;



Regional airborne electromagnetic (EM) survey over the Mt Chalmers project to improve drill targeting for future drilling campaigns;



Further surface exploration and mapping at Tracker 3, one of four large copper and zinc soil anomalies located in the region;



Deliver a third Mineral Resource Estimate for Mt Chalmers in Q4-2022; and



Deliver a fourth Mineral Resource Estimate for Woods Shaft in Q1-2023.

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. Mt Chalmers has a Measured, Indicated and Inferred Resource (JORC 2012) of 5.8Mt @ 1.7% CuEq for 101,000t CuEq¹.

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

ANDREW SPARKE

Executive Chairman

ELISSA HANSEN (Independent)

Non-Executive Director & Company Secretary

PETER CARISTO (Independent)

Non-Executive Director (Technical)

JAMES ANDERSON

General Manager Operations

GLENN WHALAN

Exploration Geologist
(Competent Person – Exploration)

Shares on Issue

137,360,102

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

QMines Limited (ASX:QML)

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Andrew Sparke, Executive Chairman

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Email: peter@qmines.com.au

Email: andrew@qmines.com.au

¹ ASX Announcement - [Mt Chalmers Resource Upgrade](#), 1 December 2021.

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 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"> Geotech’s helicopter-borne Versatile Time Domain EM system was used by Echo Resources. The survey was completed using an AS350-B3 helicopter. System parameters are: <ul style="list-style-type: none"> Type: Geotech Versatile Time-Domain EM System Transmitter-receiver geometry: In-loop, vertical dipole Transmitter coil: 26 m diameter Transmitter <ul style="list-style-type: none"> Base frequency: 25Hz Pulse width: 7.5 ms Peak dipole moment: 322,805 NIA Peak current: 152 Amp Waveform: Trapezoid Receiver <ul style="list-style-type: none"> Coil diameter: 1.2 m Time gate windows: 130 µs – 7540 µs Measurements: dB/dT The EM bird was towed 52 m below helicopter. The flight path followed a 100 m survey line spacing in an East-West direction flying 33 m above ground level. Magnetic data was recorded as well. The survey was completed May 2007
Quality of assay data and	<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</i> 	<ul style="list-style-type: none"> GPS Positioning Type: NovAtel’s WAAS enabled OEM4-G2-3151W. Sampling time: 0.2 sec Magnetometer Type: caesium vapour magnetic field sensor, sensitivity: 0.02 nanoTesla (nT) with sampling interval: 0.1 sec. Base station corrected.

Criteria	JORC Code explanation	Commentary																		
laboratory tests	<p>determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</p> <ul style="list-style-type: none">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.	<ul style="list-style-type: none">Radar Type: Terra TRA 3000/TRI 30 mounted beneath helicopter cockpit. Sampling time: 0.2 secProcessing Software Platforms: Geosoft Oasis Montaj and Proprietary SoftwareNavigation was assisted by a GPS receiver and data acquisition system, which reports GPS co-ordinates as latitude/longitude and directs the pilot over a pre-programmed survey grid. The flight path was drawn using linear interpolation between x,y positions from the navigation system.																		
Verification of sampling and assaying	<ul style="list-style-type: none">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 verification, data storage (physical and electronic) protocols.Discuss any adjustment to assay data.	<ul style="list-style-type: none">The operator was responsible for monitoring of the system integrity. He also maintained a detailed flight log during the survey, tracking the times of the flight as well as any unusual geophysical or topographic feature.On return of the aircrew to the base camp the survey data was transferred from a compact flash card (PCMCIA) to the data processing computer.																		
Location of data points	<ul style="list-style-type: none">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.	<ul style="list-style-type: none">The flight path, recorded by the acquisition program as WGS 84 latitude/longitude, was converted into the WGS 84, UTM zone 56S in Oasis Montaj. <table><tr><th>Blocks</th><th>Line spacing (m)</th><th>Area (Km²)</th><th>Line Distance (km)</th><th>Flight direction</th><th>Line number</th></tr><tr><td>North-East</td><td>100</td><td>17.40</td><td>187.6</td><td>N90°E- N90°W</td><td>L24370 → 24810 T91150 → 91180</td></tr><tr><td>North-West</td><td>100</td><td>16.82</td><td>188.2</td><td>N90°E- N90°W</td><td>L24690 → 25190 T91010 → 91060</td></tr></table>	Blocks	Line spacing (m)	Area (Km ²)	Line Distance (km)	Flight direction	Line number	North-East	100	17.40	187.6	N90°E- N90°W	L24370 → 24810 T91150 → 91180	North-West	100	16.82	188.2	N90°E- N90°W	L24690 → 25190 T91010 → 91060
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		<div>ROCKHAMPTON PROJECT AREA COORDINATES (WGS 84, UTM zone 56S)</div> <table><tr><th>UTM_X Z50S</th><th>UTM_Y Z50S</th></tr><tr><td colspan="2">A139 North-East</td></tr><tr><td>261446.7</td><td>7423099.5</td></tr><tr><td>261469.2</td><td>7422008.7</td></tr><tr><td>261952.7</td><td>7422008.7</td></tr><tr><td>262526.2</td><td>7419613.5</td></tr><tr><td>262526.2</td><td>7418511.5</td></tr><tr><td>259546.3</td><td>7418500.3</td></tr><tr><td>259478.8</td><td>7419399.9</td></tr><tr><td>258062.0</td><td>7419411.1</td></tr><tr><td>258039.5</td><td>7423099.5</td></tr><tr><td>261446.7</td><td>7423099.5</td></tr><tr><td colspan="2">A139 North-West</td></tr><tr><td>248762.4</td><td>7426799.0</td></tr><tr><td>250258.0</td><td>7425281.0</td></tr><tr><td>251787.3</td><td>7425269.7</td></tr><tr><td>251798.5</td><td>7421783.8</td></tr><tr><td>248818.6</td><td>7421795.0</td></tr><tr><td>248796.1</td><td>7425000.0</td></tr><tr><td>247750.4</td><td>7424999.9</td></tr><tr><td>246502.2</td><td>7424999.9</td></tr><tr><td>245692.5</td><td>7425640.8</td></tr><tr><td>245715.0</td><td>7426800.0</td></tr><tr><td>248762.4</td><td>7426800.0</td></tr></table> <div><ul style="list-style-type: none">• This survey was conducted with a total of 376 line km in an area approximately 35 km2.• The survey was flown at a nominal traverse line spacing of 100 m in an East-West direction for both blocks. Tie lines were flown perpendicular to traverse lines at a nominal tie line spacing of 100 m. The helicopter maintained a mean terrain clearance of 85 m which translated into an average height of 33 m above ground for the bird-mounted VTEM system and 73 m above ground for the magnetic sensor.</div>	UTM_X Z50S	UTM_Y Z50S	A139 North-East		261446.7	7423099.5	261469.2	7422008.7	261952.7	7422008.7	262526.2	7419613.5	262526.2	7418511.5	259546.3	7418500.3	259478.8	7419399.9	258062.0	7419411.1	258039.5	7423099.5	261446.7	7423099.5	A139 North-West		248762.4	7426799.0	250258.0	7425281.0	251787.3	7425269.7	251798.5	7421783.8	248818.6	7421795.0	248796.1	7425000.0	247750.4	7424999.9	246502.2	7424999.9	245692.5	7425640.8	245715.0	7426800.0	248762.4	7426800.0
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Data spacing and distribution	<div><ul style="list-style-type: none">• 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.</div>																																																	

Criteria	JORC Code explanation	Commentary
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> The deposit is generally flat-lying. The line spacing and orientation of the survey is considered adequate for this style of target and geologic interpretation.
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> Echo's raw data was obtained by Mitre Geophysics Pty. Ltd. (Mitre) on behalf of QMines and reprocessed in October 2022. The findings form the basis of the current announcement.

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	<ul style="list-style-type: none"> 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 obtaining a licence to operate in the area. 	<ul style="list-style-type: none"> 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 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. 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.

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> Note that the granted tenements allow QMines 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 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	<ul style="list-style-type: none"> <i>Acknowledgment and appraisal of exploration by other parties.</i> 	<ul style="list-style-type: none"> Geopeko carried out limited induced polarization and Sirotem surveys over Mt Chalmers but did not commission any airborne geophysical surveys. 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. Echo Resources is the only company to have flown VTEM over any part of the QMines license areas.
Geology	<ul style="list-style-type: none"> <i>Deposit type, geological setting and style of mineralisation.</i> 	<ul style="list-style-type: none"> 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

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		<p>faults that are interpreted to have developed during and after basin formation.</p> <ul style="list-style-type: none"> • 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) 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

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		<p>mineralized sequence close to massive sulphides. This sequence represents a hiatus in volcanic activity and a period of water-lain deposition.</p> <ul style="list-style-type: none"> • 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 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. • At Woods Shaft sulfide stringer mineralization is the main mineralization style with massive sulfides not detected to date. Hosted by volcanics of the Berserker Beds, the geology is similar to that of Mt Chalmers but with greater

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		<p>siltstone thicknesses suggesting more distal deposition under lower energy conditions. The sulfide stringer zone at Woods Shaft is largely restricted to siliceous pyroclastics underlying this siltstone. As such, a similar temporal and spatial mineralizing event to that of Mt Chalmers is recognized.</p> <ul style="list-style-type: none"> The geometry of the Woods Shaft mineralization is so far less clear than at Mt Chalmers due to less drillhole data. Surface mapping and drill data suggest a mineralized dome structure which has been slightly modified by folding to produce a north-south trending anticline (dome) with a mineralized core. It is envisaged that this dome has formed similarly to the domal uplift at the core of the Mt Chalmers mineral system. The entire planned VTEM survey area will cover the prospective Berserker Beds in the search for similar VHMS deposits.
Diagrams	<ul style="list-style-type: none"> <i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i> 	<ul style="list-style-type: none"> Maps and plans are included in the body of the announcement.
Other substantive exploration data	<ul style="list-style-type: none"> <i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i> 	<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 Q Mines digitized the results of soil geochemical grids obtained from the Geological Survey of Queensland consisting of 19,000 samples collected by various workers

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		<p>for its use in ongoing target generation.</p> <ul style="list-style-type: none"> • 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.
Further work	<ul style="list-style-type: none"> • <i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i> • <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i> 	<ul style="list-style-type: none"> • QMines continues to undertake Infill and resource expansion drilling in order to upgrade and potentially expand the current resource estimates. • Surface exploration of QMines' other, regional targets is underway in order to prepare new drilling targets for 2023.