






GEOPHYSICAL SURVEY IDENTIFIES 34 NEW TARGETS



MT CHALMERS

26th April 2023

Highlights

-  VTEM™ Max survey completed in February has successfully located thirty four electromagnetic anomalies for field investigation;
-  Further analysis has identified five “high quality” electromagnetic conductors with coincident soil anomalies;
-  Groundbreaking Induced Polarisation and Resistivity inversion analysis to find hidden anomalies is also underway;
-  The data will now be combined with the Company’s digital database that includes lithology, structure, alteration, mineralised rock units and soil geochemistry; and
-  Field investigations are now underway with drilling programs to commence on high priority targets immediately thereafter.

Overview

QMiner Limited (ASX:QML) (QMiner or Company) is pleased to announce initial results of its large airborne geophysical survey at its flagship Mt Chalmers Copper and Gold Project, located 17km north-east of Rockhampton, Queensland (Figure 1).

Following the completion of QMiner’s basin wide VTEM™ survey in February, data, maps and sections were supplied to the Company by Geotech and UTS Geophysics. The data was then interpreted by QMiner geophysical consultants, Mitre Geophysics (Mitre), who have identified and ranked multiple anomalies that may be related to other Volcanic Hosted Massive Sulphide (VHMS) systems similar to the Company’s Mt Chalmers deposit.

In addition, high-level data analysis to discriminate between shallow targets and surface ‘noise’ is currently being undertaken by European consultancy EMergo SRL. This analysis is being funded by the Queensland Governments Collaborative Exploration Initiative for innovations in the exploration for critical minerals.

Overview

QMiners selected the survey area to coincide with the most prospective VHMS corridor through the volcanic Berserker Beds, host to multiple large Cu-Zn soil geochemical anomalies as well as the Mt Chalmers mine and satellite Exploration Targets (Figure 2). The survey consisted of 1,814 line-kilometres flown north-south at 100 metre line spacing, within the Company's tenement holdings.

VTEM Max System

The Company chose the Versatile Time Domain Electromagnetic (VTEM™) system over other systems due to its superior ground and conductive overburden penetration because of its high dipole moment transmitter. Together with high resolution (2-3m) and enhanced software, the systems provided superior results to other systems in this case.

The VTEM™ Max system is able to locate discrete conductive anomalies as well as map vertical and lateral variations in resistivity. It includes a high sensitivity magnetometer, and both electromagnetic and magnetic data are collected as separate datasets.

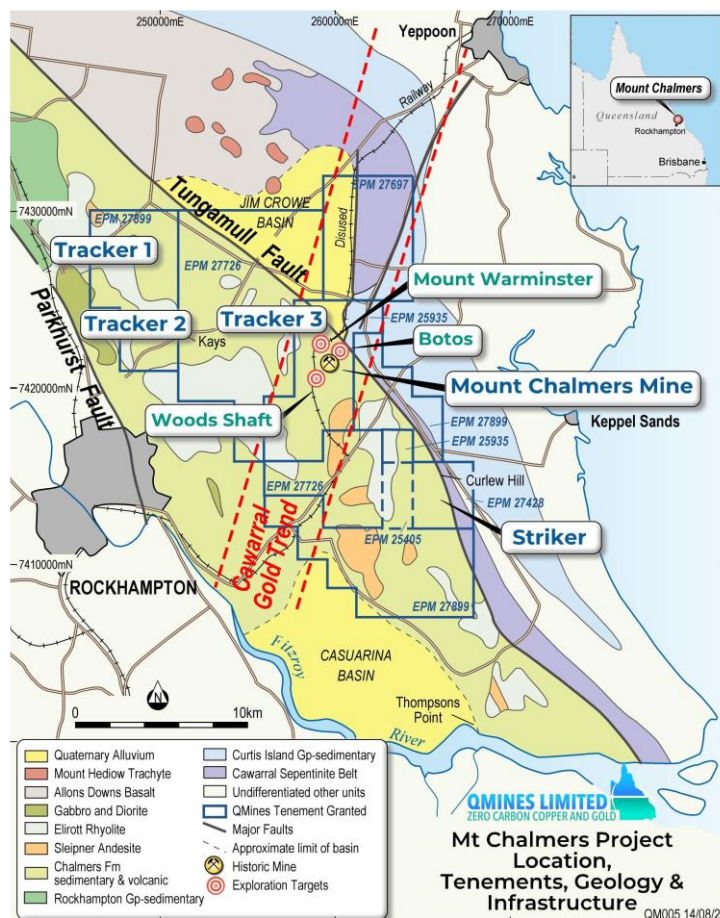


Figure 1: Location of Mt Chalmers Project, tenure, geology & infrastructure.

Management Comment

QMiners Managing Director, Andrew Sparke, comments;

"The Company has been compiling regional data on the Mt Chalmers project for the past 24 months. With the addition of high-quality electromagnetic and magnetic imagery, we now have a multilayered dataset with five high quality electromagnetic targets with supporting geochemistry and geology. The potential for a new discovery is now significantly improved and the Company will commence drilling operations to test these targets over the coming weeks."

Previous Airborne Surveys

A small part of the QMiners tenement area was flown by VTEM™ in 2007 and reprocessing by Mitre revealed the method was successful in detecting the Mt Chalmers massive sulphide deposit. This survey also raised questions about why conductance lows occur over some known soil anomalies which have mineralised drilling intercepts. The likely cause is Induced Polarisation (IP) effects, the result of the electromagnetic (EM) fields causing polarisation of fine-grained clay and sometimes sulphides. The effect of this polarisation is to hide the signals generated by massive sulphides, impacting the depth of investigation of the airborne EM survey.

Previous Airborne Surveys (Continued)

At Mt Chalmers, known mineralisation at several of the named VHMS prospects is coincident with IP-effected data and suggests that the alteration is generating polarisation signals that can be mapped (if correctly processed) by airborne EM. This indicates that, with better processing, EM could map more components of the VHMS system. That is, the standard EM response would delineate the massive sulphides (where previously too badly affected by IP-effects) and the extracted chargeability data would help delineate clay alteration or even peripheral disseminated sulphide aprons, which may vector to massive sulphides, and which may contain sufficient metal to be stand-alone prospects. Furthermore, the resistivity model may also help delineate silicified host rock that can be identified as resistive.

Current EM Survey

The current EM survey data collected in February 2023 covered in excess of 1,800 line kilometres. Mitre Geophysics has identified and ranked 34 EM anomalies for field investigation.

Of these, five are considered high quality conductors which are not due to man-made objects identified in aerial imagery. These conductors are shown in Figures 3 and 4 as Priority 1 Targets.

The IP processing will also generate exploration targets for future drilling. Other clear signals include the remanent mineralisation at Mt Chalmers, and ophiolites along the north-eastern corner of the survey area. Of particular interest is a large conductor south of New Zealand gully.

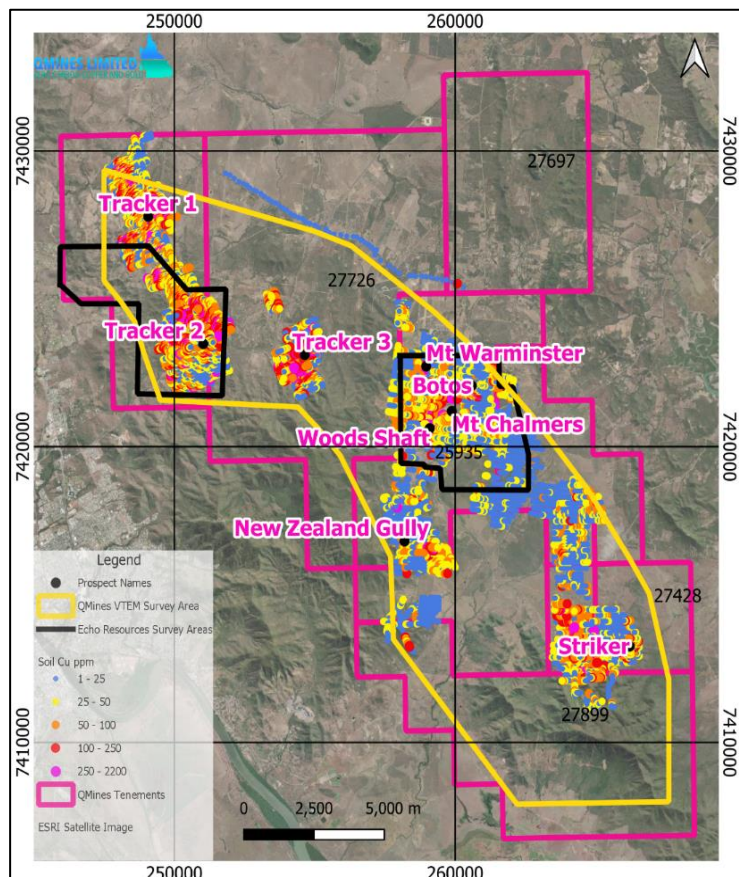


Figure 2: VTEM™ survey area in yellow.

This conductor is highlighted in Figures 3 & 4 and coincides with surface geochemistry obtained by the Company from digitising Geopeko historical soil data. The Company has digitised extensive lithology polygons and structures from 75 historical geology maps covering the Bereserker beds. The digitization program captured all available geological information on the 75 maps that was recorded in the form of text notes. The Company has generated over 8,000 data points that include additional information on lithology and alteration.

In addition to this, there is also a large library of historical georeferenced interpreted geology cross sections (Map Info Discover 3D and Micromine formats) and 3D solid geology models.

Current EM Survey (continued)

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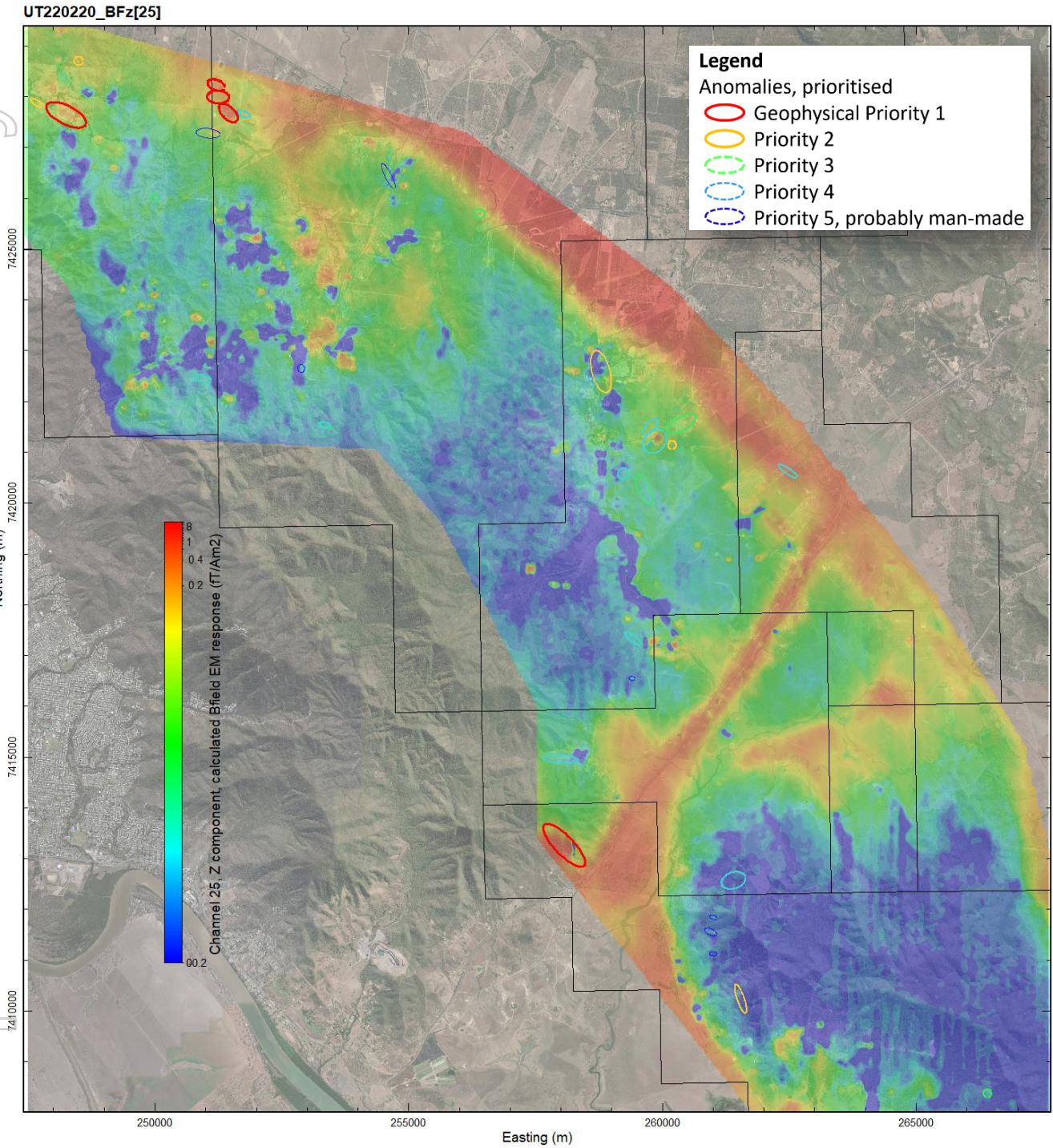


Figure 3: VTEM anomalies superimposed on the EM response for channel 25, Z component, calculated Bfield.

Of the 75 surface maps generated by Geopeko, the 1:25,000 base map has been used as a general guide regarding the distribution of mineralised units. This coverage includes key altered/mineralised units such as alteration zones, gossanous zones, pyrite, pyritic siltstone, pyritic tuff, pyritic tuff siltstone and various other types of tuff.

Current EM Survey (Continued)

Inversion of the Mt Chalmers EM data to obtain both an IP model and conductivity model is a new development in airborne EM (AEM) processing. This work is currently being undertaken by specialists, EMergo SRL of Cascina, Italy. This work has significant potential to greatly improve the response of mineralisation through surface noise and, in some cases, enable the direct detection of disseminated sulphide ore deposits through their IP signal.

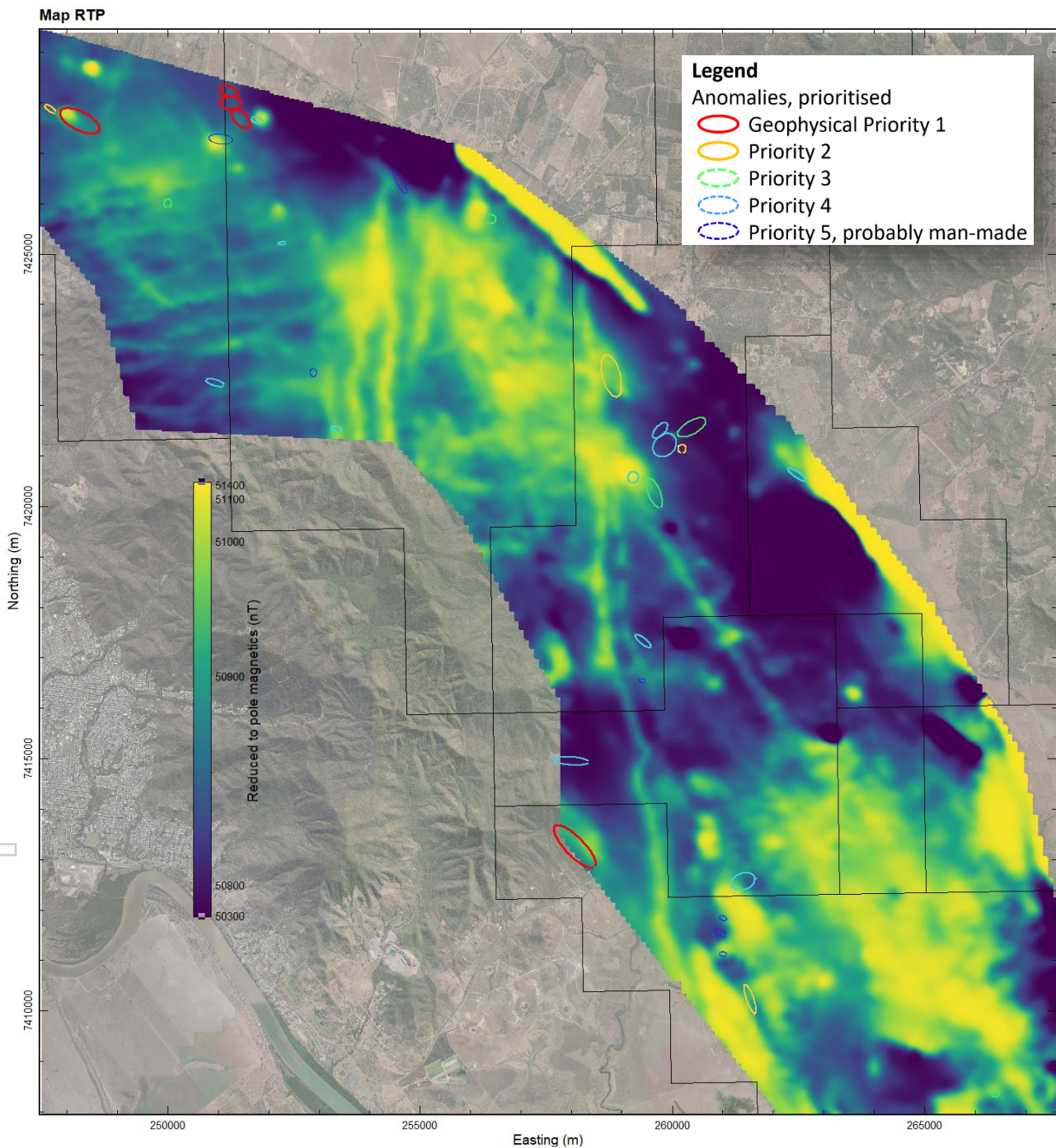


Figure 4: EM anomalies superimposed on the reduce to pole magnetics, displayed with a viridis colour pallet.

Current EM Survey (Continued)

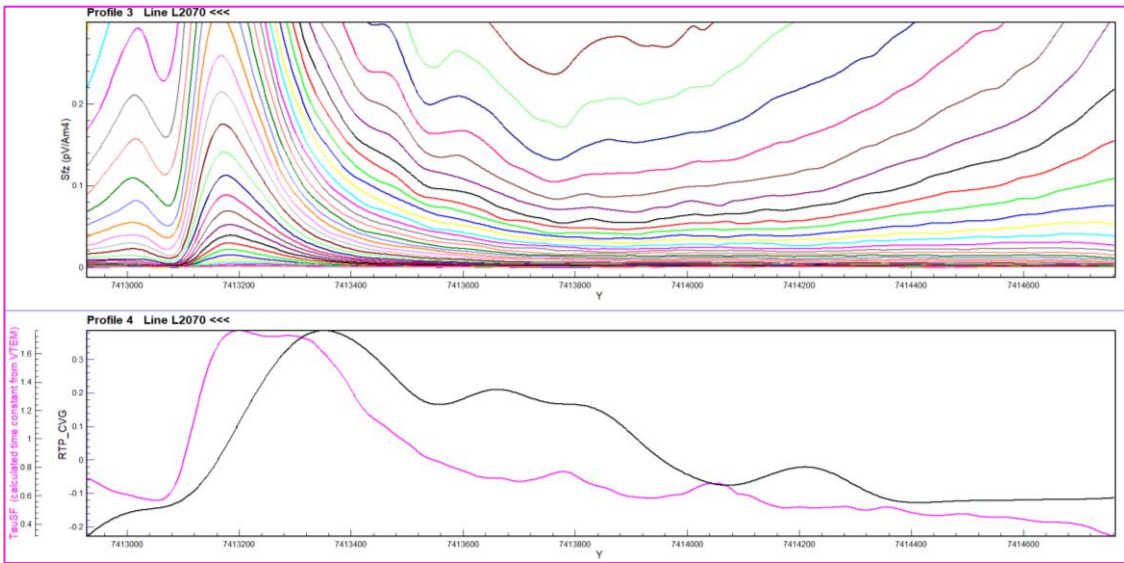


Figure 5: Excellent strong EM+mag response over conductor, line position is shown in Figure 4.

The data reveals that the most existing targets are associated with elevated ground conductivity (Figure 6, left). The three Tracker prospects are associated with a broad area of elevated conductance while Mt Warminster, Botos, Mt Chalmers and Woods Shaft lay along a north - south trending conductance 'ridge'. These two plateaux appear highly prospective, as possible areas of increased VHMS activity.

The new aeromagnetics (Figure 6, right) data provides a clearer picture of the structural trends and now better explains the basin rift history in greater detail. Two major north – south magnetic lineaments transect the area and bound discrete blocks with differing internal architecture. Further study may allow a better understanding of rift history and consequent VHMS conduit development.

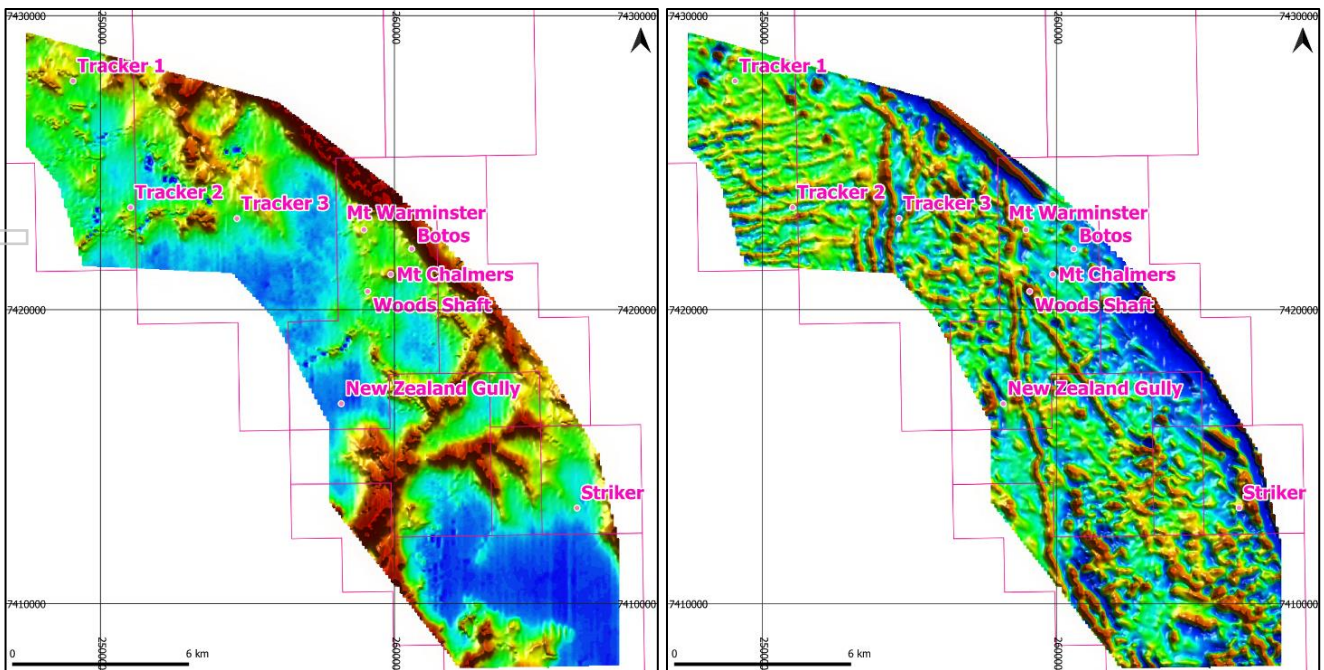


Figure 6: VTEM S1z [20] (left) and RTP IVD (right).

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Current EM Survey (Continued)

The QMines VTEM™ Max survey has provided a broader and much higher resolution coverage of a wider area than the 2007 survey (Figure 2) and has delivered improved EM+IP signal which has enabled new processing algorithms to be used on the data. These processing algorithms are being used by EMergo to model the EM and IP signals at Mt Chalmers. They will also be used to map the variation in ground resistivity and also to clean the data from the effect of polarisation and also give an approximate map of ground polarisation.

By taking the extra step of doing a full spatially constrained 1D smooth inverse EM+IP model of the VTEM™ data, QMines will gain a map of true ground resistivity, a map of polarisation effects and an 'IP effects-clean' EM dataset where previously hidden EM responses can potentially be more easily recognised.

A tenement scale resistivity and chargeability model will allow much better visualisation of silicified zones and of the relative silica content of the various lithologies, particularly the prospective Ellrott Rhyolite diapirs. As such it will be a particularly useful mapping tool. The two models, when overlain with the aeromagnetism, surface geology and geochemistry should enable a more thorough search of basement metals than the simplistic 'bump hunting' approach normally applied.

The near-surface geochemistry, indications from mapping and the presence of gossans all suggest that some VHMS bodies in the Berserker Beds may have in part been eroded away, possibly removing conductive massive sulphides but leaving geophysically resistive, viable Cu-rich stringer zones behind.

The targets represent an exciting phase in QMines progression of the Mt Chalmers project with the addition of exciting new greenfields targets. The targets will be fast tracked for drilling in 2023 using the Company owned RC drilling rig. The company is currently ground truthing these anomalies and ranking them for imminent drill testing.

What's Next?



Final metallurgical test work results for the Mt Chalmers deposit;



Delivery of the results of a recent carbon audit to meet the requirements of the Climate Active program and retain our Zero Carbon certification;



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



IP inversion of the VTEM™ Max data for additional targets; 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.

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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

137,360,101

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.

QMines Limited (ASX:QML)

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Contact

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	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> Type: Geotech Versatile Time-Domain EM System Transmitter-receiver geometry: In-loop, vertical dipole Transmitter coil: 35 m diameter Transmitter <ul style="list-style-type: none"> Base frequency: 25Hz Pulse width: 7 ms Peak dipole moment: 700,000 NIA Waveform: Trapezoid Receiver <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Processing Software Platforms: Geosoft Oasis Montaj and Proprietary Software Navigation 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-

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. 	<p>programmed survey grid. The flight path was drawn using linear interpolation between x,y positions from the navigation system.</p>
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. They 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 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 GDA 94, UTM zone 56S in Oasis Montaj.

Criteria	JORC Code explanation	Commentary																																																																																																
		<p>Block Coordinates</p> <table border="1"> <thead> <tr> <th colspan="2" style="background-color: #cccccc;">Mt Chalmers</th> <th colspan="2" style="background-color: #cccccc;">Continue</th> </tr> <tr> <th colspan="2" style="background-color: #cccccc;">WGS84 UTM Zone 56S</th> <th colspan="2" style="background-color: #cccccc;">WGS84 UTM Zone 56S</th> </tr> <tr> <th style="background-color: #cccccc;">X</th> <th style="background-color: #cccccc;">Y</th> <th style="background-color: #cccccc;">X</th> <th style="background-color: #cccccc;">Y</th> </tr> </thead> <tbody> <tr><td>247500</td><td>7429360</td><td>266800</td><td>7415239</td></tr> <tr><td>256000</td><td>7427005</td><td>266900</td><td>7415046</td></tr> <tr><td>256100</td><td>7426946</td><td>267618</td><td>7412069</td></tr> <tr><td>258853</td><td>7424869</td><td>267618</td><td>7408003</td></tr> <tr><td>259800</td><td>7424142</td><td>262200</td><td>7407915</td></tr> <tr><td>260000</td><td>7423991</td><td>262100</td><td>7408008</td></tr> <tr><td>260100</td><td>7423894</td><td>261000</td><td>7409411</td></tr> <tr><td>260300</td><td>7423684</td><td>257800</td><td>7413489</td></tr> <tr><td>260700</td><td>7423264</td><td>257800</td><td>7416100</td></tr> <tr><td>260800</td><td>7423159</td><td>256200</td><td>7419141</td></tr> <tr><td>260900</td><td>7423054</td><td>255900</td><td>7419713</td></tr> <tr><td>262200</td><td>7421688</td><td>255800</td><td>7419872</td></tr> <tr><td>262400</td><td>7421470</td><td>255200</td><td>7420529</td></tr> <tr><td>262700</td><td>7421094</td><td>254500</td><td>7421294</td></tr> <tr><td>263000</td><td>7420718</td><td>254400</td><td>7421345</td></tr> <tr><td>264000</td><td>7419465</td><td>249400</td><td>7421585</td></tr> <tr><td>265000</td><td>7418210</td><td>248800</td><td>7423548</td></tr> <tr><td>265100</td><td>7418045</td><td>248600</td><td>7424218</td></tr> <tr><td>266400</td><td>7415899</td><td>248500</td><td>7424442</td></tr> <tr><td>266600</td><td>7415569</td><td>247500</td><td>7425611</td></tr> <tr><td>266700</td><td>7415404</td><td></td><td></td></tr> </tbody> </table>	Mt Chalmers		Continue		WGS84 UTM Zone 56S		WGS84 UTM Zone 56S		X	Y	X	Y	247500	7429360	266800	7415239	256000	7427005	266900	7415046	256100	7426946	267618	7412069	258853	7424869	267618	7408003	259800	7424142	262200	7407915	260000	7423991	262100	7408008	260100	7423894	261000	7409411	260300	7423684	257800	7413489	260700	7423264	257800	7416100	260800	7423159	256200	7419141	260900	7423054	255900	7419713	262200	7421688	255800	7419872	262400	7421470	255200	7420529	262700	7421094	254500	7421294	263000	7420718	254400	7421345	264000	7419465	249400	7421585	265000	7418210	248800	7423548	265100	7418045	248600	7424218	266400	7415899	248500	7424442	266600	7415569	247500	7425611	266700	7415404		
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Data spacing and distribution	<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 Resource and Ore Reserve estimation procedure(s) and classifications applied.</i> <i>Whether sample compositing has been applied.</i> 	<ul style="list-style-type: none"> This survey was conducted with a total of 1,814 line km in an area approximately 181 km². The survey was flown at a nominal traverse line spacing of 100 m in a North-South direction. The helicopter maintained a mean terrain clearance of 83 m which translated into an average height of 35 m above ground for the bird-mounted VTEM system and 73 m above ground for the magnetic sensor. 																																																																																																
Orientation of data in relation to geological structure	<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. The line spacing and orientation of the survey is considered adequate for this style of target and geologic interpretation. 																																																																																																

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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"> The Geotech / UTS raw data was obtained by Mitre Geophysics Pty. Ltd. (Mitre) on behalf of QMines and reprocessed in April 2023. 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 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. 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.

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> 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.
<p>Exploration done by other parties</p>	<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.
<p>Geology</p>	<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 faults that are interpreted to have developed during and after basin formation.

Criteria	JORC Code explanation	Commentary
		<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 mineralized sequence close to massive sulphides. This sequence represents a hiatus in volcanic activity and a period of water-lain deposition.

Criteria	JORC Code explanation	Commentary
		<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. • The entire VTEM survey area has covered 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.

Criteria	JORC Code explanation	Commentary
Other substantive exploration data	<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.
Further work	<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 extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	<ul style="list-style-type: none"> QMines continues to undertake exploration, 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.