QMINES LIMITED
ZERO CARBON CRITICAL METALS

18th September 2023 ASX:QML

QMINES LIMITED

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

QMINES DELIVERS FIFTH RESOURCE AT DEVELIN CREEK

Highlights

- Following the acquisition of Develin Creek, QMines delivers its fifth Resource since listing in only May 2021;
- The Develin Creek Resource now stands at **3.2Mt @ 1.61% CuEq for 51,360t** CuEq;
- Importantly, 47% of this Resource sits in the Indicated JORC category;
- Combined Mt Chalmers and Develin Creek Resources now stand at **15.1Mt @ 1.3% CuEq for 195,800t** CuEq;[1] and
- QMines is preparing resource, metallurgy and geotech drilling at Develin Creek ahead of a Pre-Feasibility Study.

Overview

QMines Limited (**ASX:QML**)(**QMines** or **Company**) wishes to advise that following QMines review of work undertaken by Zenith Minerals Limited (**Zenith**) and previous exploration companies at the Develin Creek project in 2014, 2021 and 2022, the Company is providing an updated Mineral Resource Estimate (**MRE**) for the Develin Creek project, located approximately 90km north west of Rockhampton in Queensland.

QMines has reviewed all historical drilling results delivered by Zenith for the Develin Creek project and provides this updated MRE reported at a 0.5% Copper Equivalent (**CuEq**) cut-off, suitable for open pit optimisation. Table 1 shows the updated MRE for the Sulphide City, Scorpion and Window copper and zinc deposits.

Resource Category	Tonnes (Mt)	Grades			
		Cu (%)	Zn (%)	Au (g/t)	Ag (g/t)
Indicated	1.5	1.21	1.25	0.18	7.1
Inferred	1.7	0.92	1.20	0.16	4.8
Total	**3.2**	**1.05**	**1.22**	**0.17**	**5.9**

Table 1: Develin Creek MRE at a 0.5% CuEq cut off. CuEq = (Cu + 0.45*Zn) and is based on metal prices of A$8,400/t Cu, A$3,300/t Zn and preliminary recoveries of 72% for Cu and 82% for Zn.

[1] ASX Announcement, Resource Increases by 104% with 84% now in Measured & Indicated, 22 November 2022.

Develin Creek Project

The Mineral Resource updated for Develin Creek includes the Sulphide City, Scorpion and Window deposits which are located approximately 90km northwest of Rockhampton, Queensland.

Access to Develin Creek is via an unsealed road through the town of Marlborough from the north or Glenroy from the south.

The deposits are located within EPM 17604 which was formally held by Mackerel Metals a subsidiary of Zenith which were granted in 2008 and expire in 2025.

The Develin Creek Project was acquired by QMines on 28th August 2023[1] and this Resource update has been prepared by the Company's Independent Resource Geologist, Mr Steve Hyland of Hyland Geological Mining Consultants (**HGMC**).

The prospect is located within the Forrest Home Pastoral Lease and the tenement is in good standing with no known impediment for the future grant of a mining lease.

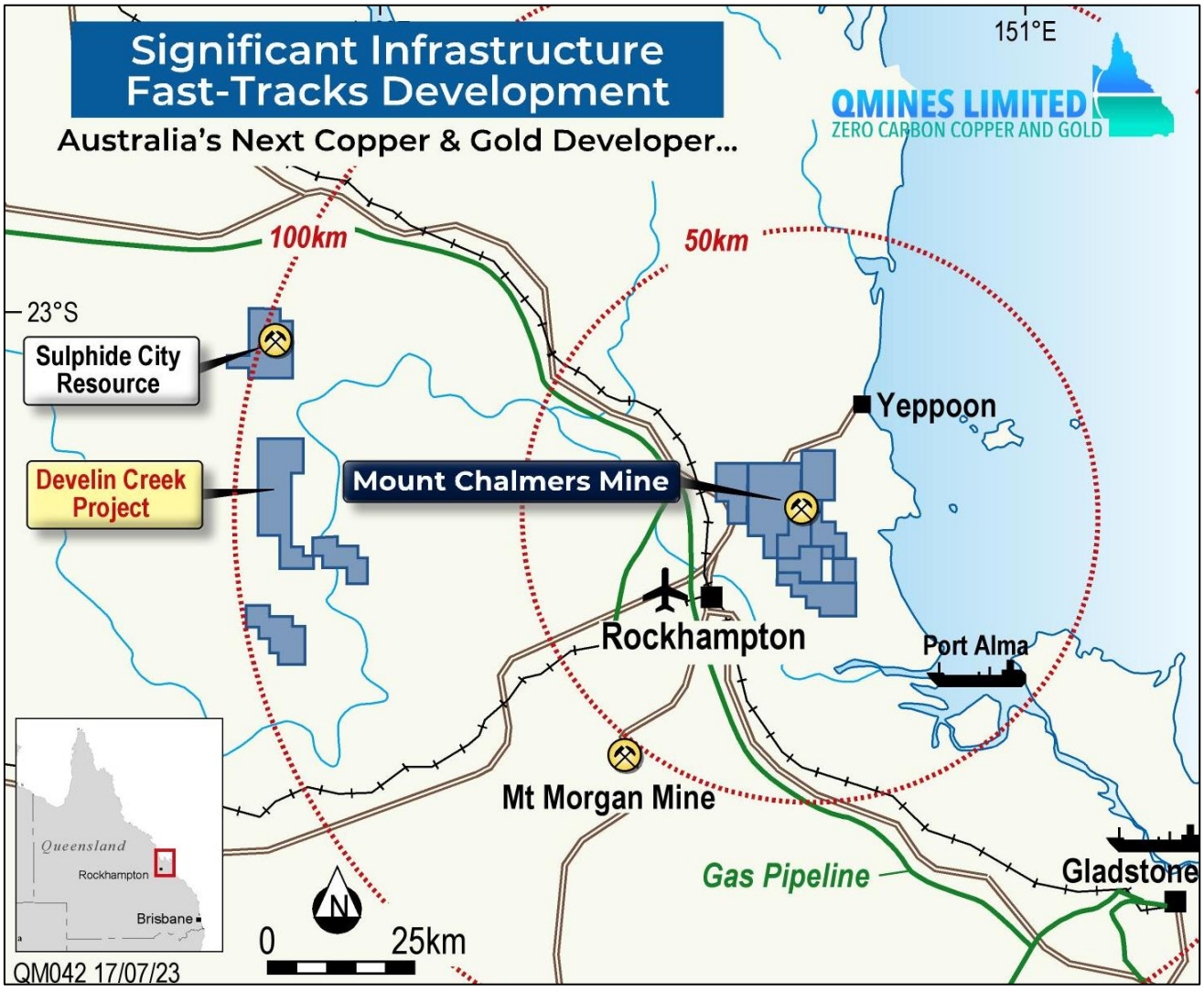

Figure 1: Map showing the location of the Develin Creek project near QMines Mt Chalmers project.

[1] ASX Announcement, Acquisition of High-Grade Develin Creek Project, 28 August 2023.

Project Background

The Develin Creek project consists of several Volcanic Hosted Massive Sulphide (**VHMS**) copper-zinc deposits.

Mineralisation at Scorpion, Window and Sulphide City were discovered and initially drilled to 50m spacing by Queensland Metals Corporation (**QMC**) in the early 1990s. Eventually the project was relinquished, and the current tenement granted to Icon Resources. Icon vended the project into Fitzroy Resources as part of an Initial Public Offering in 2010. Fitzroy undertook a small drilling program to extend the known resource in 2011.

On 28th August 2023, QMines announced that it had signed a term sheet to acquire an initial interest of 51% of the Develin Creek project from Zenith and retains the right to acquire the remaining 49% interest within 12 months.[1]

Geology

The Develin Creek project covers part of the Rookwood Volcanics which form a narrow, discontinuous north-south orientated belt that extends the length of the project and hosts the known base metals mineralisation (Figure 3). There are three main areas of known mineralisation within the project area. The Develin Creek area in the north, Snook 18km south and the Comanche area, which is also in the south. These areas all fall within EPM 17604. The Rookwood Volcanics are variably exposed and concealed by lateritised tertiary sediments, and younger quaternary deposits (Figure 3).

To date no real consensus exists regarding the tectonic setting of the Rookwood Volcanics. The presence of VHMS deposits, and thick basaltic sequences with only minimal sediment components suggests that the Rookwood Volcanics were deposited in a relatively deep marine basin, and interpretation of the available litho-geochemical data may imply a back-arc or mid-ocean ridge setting.

The host volcanic sequence of the deposit is a thick pile of basaltic pillow lavas and hyaloclastite breccias with only minor massive basaltic feeder dykes and minor chemical chert, black mudstone containing magnetite, jasper, bedded sulphides, volcanic mudstone-sandstone and polymictic breccias. The dominance of pillowed lava facies implies subaqueous deposition but gives no indication of relative water depth, although there is a consensus that VHMS deposits form at water depths of generally greater than 1,000m.

Mineralisation styles reported from the main prospect areas include massive and banded sea-floor sulphide deposits; reworked, polymictic breccia deposits; distal, graded sedimentary sulphide deposits; massive, sub-seafloor replacement deposits and stringer zone quartz-sulphide vein deposits. These styles of mineralisation are characteristic of VHMS deposits and conceptualised for Develin Creek in Figure 2.

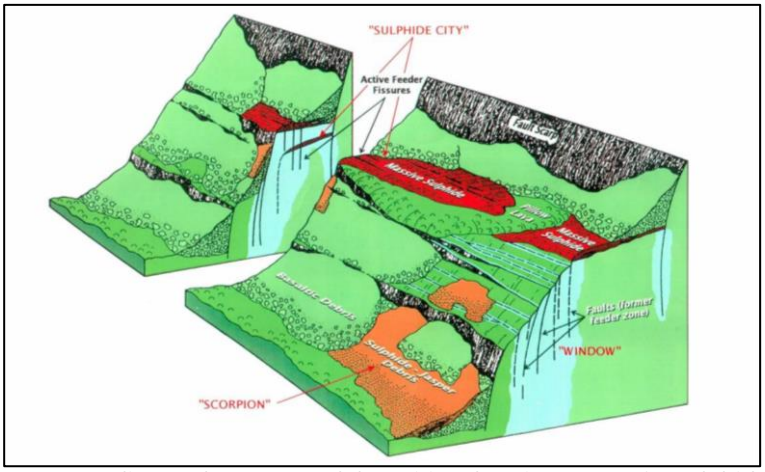

Figure 2: Develin Creek conceptual depositional environments for sulphides.

[1] ASX Announcement, Acquisition of High-Grade Develin Creek Project, 28 August 2023.

Geology (Continued)

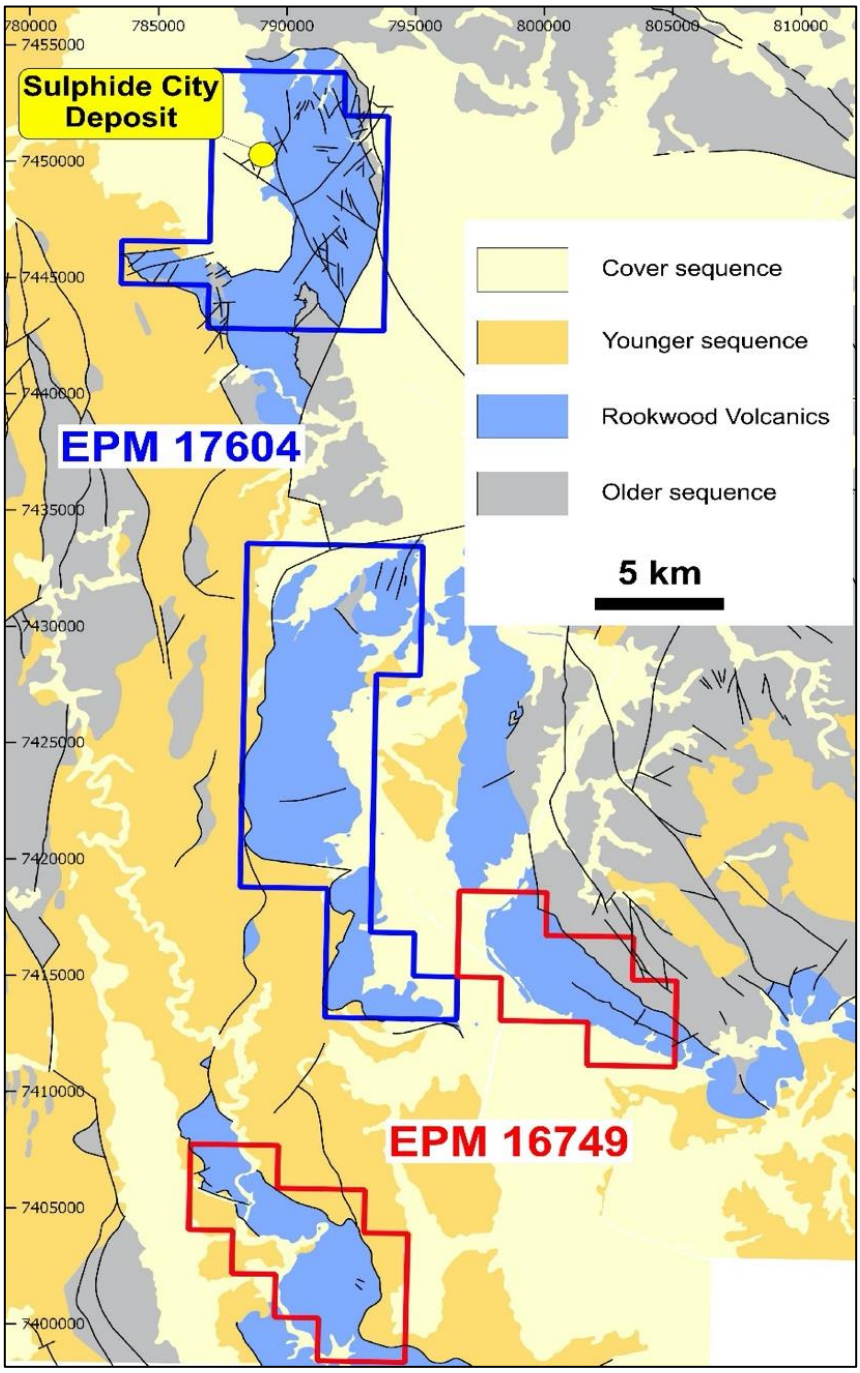

Figure 3: Develin Creek geology, tenements and deposit location.

Drilling

Exploration drilling has been undertaken by three parties:

- Initial discovery and drill out to 50m centres by Queensland Mining Corporation (**QMC**) using percussion and diamond drilling between 1992 to 1993;
- Follow-up and extensional drilling by Fitzroy Resources (**FR**) using RC and diamond drilling in 2011; and
- Verification drilling by Zenith using RC and diamond drilling in 2014, 2021 and 2022.

Table 1 summarises the drilling in the vicinity of the Mineral Resource only and Figure 4 shows the spatial distribution of the drilling programs. The QMC drilling relates to early exploration activity and is therefore more widespread. Fitzroy and Zenith drilling was targeted to the known mineralisation and its extensions.

Drilling (Continued)

Contribution of the drill programs to the Mineral Resource Estimate can be summarised in terms of metres drilled within the resource domains as 62% QMC percussion drilling, 2% Fitzroy drilling and 36% Zenith drilling. Diamond drilling was typically HQ and NQ sized core and percussion and RC drilling 4½ or 5½ inch diameter hammer.

QMC percussion drilling was by open hole and was the focus of verification drilling by Zenith. The verification drilling was initially thought to result in higher grades but over the larger program the drilling indicates similar average results confirming the original QMC percussion results. All drilling has been used for the Mineral Resource Estimate except for the exclusion of five holes due to incomplete sampling or poor orientation. In each case there are better sampled, nearby drilling available.

Company	Year	Drill Type	Drill Holes	Hole Range	Drilled (m)	Average Depth (m)
QMC	1992-1993	DD	46	DDH-001 - DDH-049	14,384*	313
		Percussion	129	PD-001 - PD-258	21,665	168
		Percussion	7	PW-001 - PW-007	529	76
Fitzroy	2011	DD	6	FRWD0001 - FRWD0006	1,510	252
		RC	2	FRWC0007 - FRWC0008	362	181
Zenith	2014, 2021-2022	DD	3	ZDCDD001 - ZDCDD003	561	187
		RC	8	ZDCRC0001 - ZDCRC0008	1,310	164
		RC	17	ZSCRC002 - ZSCRC024	2,491	147
		RC/DD	6	ZSCCD004 - ZSCCD023	1,417	236
QMC Total			**182**		**36,578**	
Fitzroy Total			**8**		**1,872**	
Zenith Total			**34**		**5,778**	

Table 1: Sulphide City deposit drilling summary.

* Note the meterage of diamond drilling (**DD**) is overrated as QMC pre-collar depth are not currently identified.

Sampling

Industry standard practices for sampling techniques for the style of mineralisation were employed at the Develin Creek deposit.

QMC and Fitzroy diamond core within mineralisation was sampled at 1 to 2m intervals, with half core splits sent to the laboratory. Zenith drilling used regular 1m intervals of half core with some sub-sampling (some ¼ core when field duplicates were used). Diamond core was sawn in half, with half core (some ¼ core) on 1 to 2m intervals.

QMC percussion samples were obtained by compositing 1m samples from the rig into 3m samples unless sulphide mineralisation was noted then shorter 1 or 2m intervals were sampled. Samples from each percussion interval were collected in a cyclone and split using a 3-level riffle splitter. Wet samples were grab sampled for assay and the residual sample left to dry for later resampling if necessary.

Sampling (Continued)

Fitzroy and Zenith RC samples (1m) were split with an on-rig riffle splitter and sampled with a sample spear for 3 or 4m composites in the hanging wall and foot wall. RC samples were generally not composited in mineralised zones.

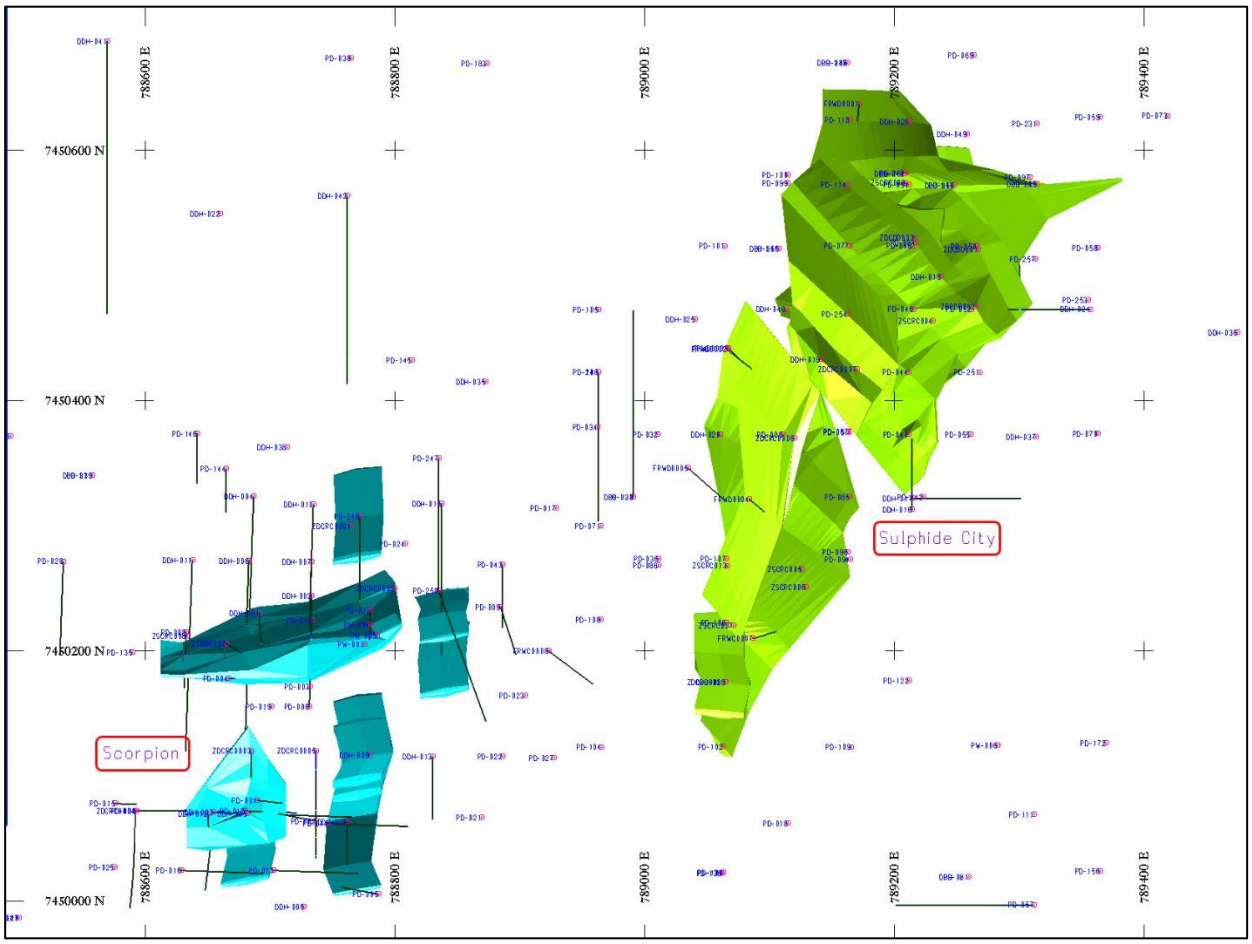

Figure 4: Develin Creek drilling and resource wireframes at Sulphide City (green) and Scorpion (blue).

Sample Analysis

Sample preparation and assaying was undertaken by commercial laboratories for all programs using industry common practice of the day. The analytical techniques used were:

- AAS by QMC (1990s);
- ICP-OES by Fitzroy (2011); and
- ICP-AES by Zenith (2014, 2021, 2022) and gold was by fire assay.

From 2011 all grade intervals (> 1% base metals) were re-assayed with a 4-acid digestion level method.

Interpretation

There is sufficient confidence in the geological interpretation of massive sulphide horizons traceable over numerous drill holes and drill sections. The previous interpretation has been refined but was largely demonstrated by the recent infill drilling by Zenith and was extended by previous drilling by Fitzroy and Zenith.

Interpretation (Continued)

Surface mapping of outcrop, drill hole intercept logging and assay results as well as limited structural interpretations have formed the basis for the current geological interpretation. Very little surface expression of the massive sulphide exists.

The precise extents and geometry cannot be defined due to the limitations of the current drill coverage. Further work is required to better define the geometry and extents of the mineralised sulphide horizons but no significant downside changes to the interpreted mineralised volume are anticipated.

QMines and HGMC used previous Zenith Minerals / ResEval mineralisation wireframes as guidance for an updated revision of the Develin Creek Resource model. HGMC developed a revised set of Copper-Zinc mineralisation model wire frames to attain more mineralisation continuity by utilising new and slightly lower delineation cut-off grades for the main economic elements Copper and Zinc. The initial mineralisation reinterpretation was done on an E-W and N-S section basis. The nominal mineralisation interpretation threshold level was at approximately 0.2 to 0.3% Cu and similarly with the Zn item.

These were modified locally to ensure incorporation of other anomalous and likely economically important elements including gold and silver. Modelling of the wireframes was aligned using certain guidelines, such as mineralisation extrapolation, should extend no further than approximately 25m and half-way to the next section in the case of mineralisation observed to cease on any given section line. In some places mineralisation wireframes were extended further to describe expected continuity, however these zones were not necessarily classified or used for mineralisation reporting purposes.

The newly developed revised wireframes have varying orientations and dips, following the upper contact of pepperites (ancient seafloor horizons).

One (1) mineralisation type ("ZON1 = 1 or 2") domain code was designated for the wireframe 'solid' models located at the 'Scorpion' and 'Sulphide City' mineralisation areas. All material outside the mineralisation domains was designated as a default 'waste zone' (ZON1='-1'). Wireframes when completed were then checked for geometric integrity before being used for reviewing contained sample composite geostatistics. Wireframe extents were generally limited by the drill spacing distance. QMines have reviewed and accepted the resulting mineralisation modelling wireframes.

QMines and HGMC also constructed a new set of weathering and oxidation state profile surfaces based on a reinterpretation of the geological logging from drilling. These surfaces were used to code an 'oxidation state' code in the block model (where OXID = 1, 2 or 3 for 'oxide', 'transitional' & 'fresh/sulphide' material respectively). Both the mineralisation zones and waste zones were assigned according to the same OXID code regime in the block model.

The revision and establishment of a more rigorous weathering / oxidation state has required a small redistribution of relative bulk densities overall when compared to previous reporting. The resulting changes have resulted in comparatively more weathered and transitional material with inherent lower bulk densities being interpreted and modelled.

Zenith's previous use of slightly higher bulk density values comes from an assessment that the available Sulphur assays suffered from an upper detection limit of 10% and at this level when used in conjunction with Iron (Fe) values may have produced locally elevated bulk density values. Some high bulk density values previously derived of around 4.0 t/m^3 or more should only reflect zones with very high sulphide content notwithstanding some of the high Fe-S content may only be pyrite within VHMS style mineralisation.

Interpretation (Continued)

With this interpretation in mind, QMines has opted for using lower overall average bulk densities for tonnage estimation. QMines has assessed the long-range extent of high-density material as being relatively restricted but does accept that some localised high values are present as they are consistent with some of Zenith's observations of some of the high RC sample bag and core sample weights onsite.

Table 2 below shows the bulk density values assigned by QMines and HGMC in the revised Develin Creek resource block model.

OXID Code	Waste Zone Bulk Density	Mineralisation Zone Bulk Density
OXID=1	2.00 tonnes / cubic metre	2.20 tonnes / cubic metre
OXID=2	2.30 tonnes / cubic metre	2.50 tonnes / cubic metre
OXID=3	3.00 tonnes / cubic metre	3.20 tonnes / cubic metre

Table 2: Develin Creek Resource Block Model - Dry Bulk Density Assigned (by OXID Code).

Notes:

Default Oxide: Below topographic surface to Base of Complete Oxidation (**BOCO**) – Bulk density set to 2.0 tonnes / cubic metres – OXID=1
Transition: From BOCO to Top of Fresh Rock (**TOFR**) – OXID=2
Fresh / Sulphide: From TOFR to base of block model – OXID=3

The copper and zinc mineralisation was interrogated using directional spatial analyses to generate representative semi-variogram models for selected parts of each deposit area. Analysis was concentrated on those zones and area domains containing most 1m composites to achieve reliable results. The nugget, sill and range parameters derived from the semi-variogram models were used to guide and assign settings for the Ordinary Kriging (OK) interpolation processing runs within the resource block models. Semi-variograms were also generated for the gold and silver element items where possible.

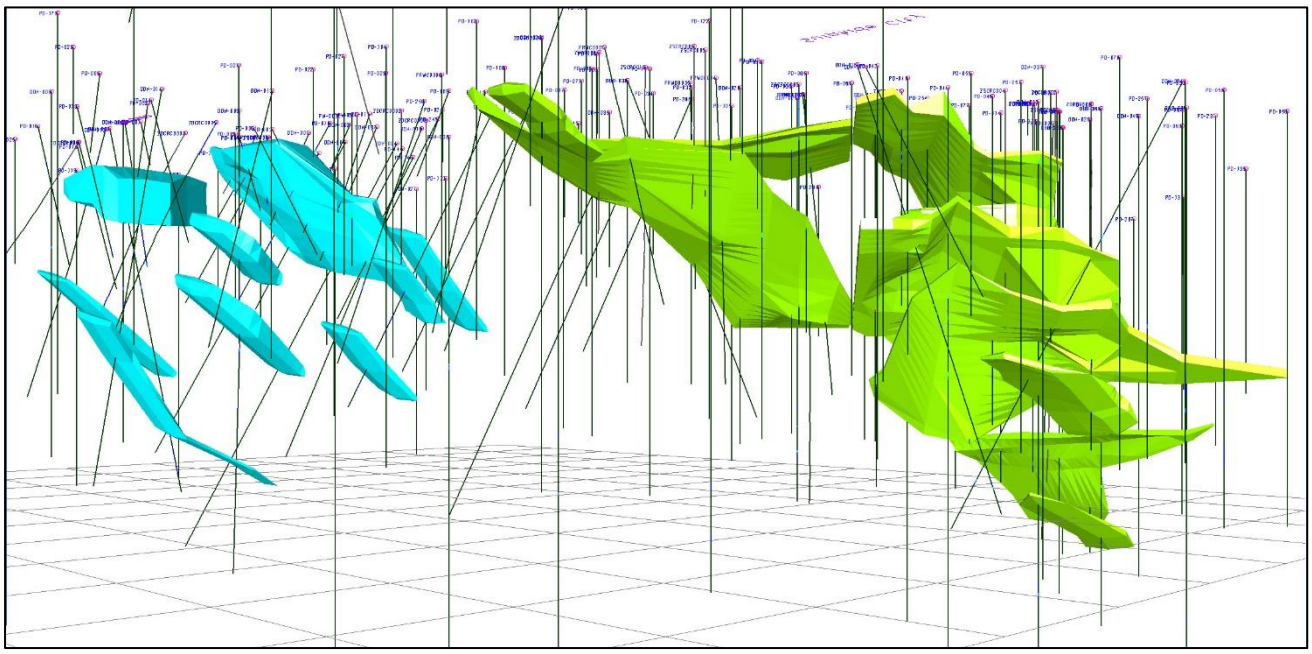

Figure 5: Develin Creek resource wireframes & drilling 'Scorpion' Area (blue) and 'Sulphide City' Area (green) (Oblique view Azim 315 degrees, Dip -0 degrees – looking towards North-West).

Resource Estimation

One (1) block model was constructed to cover the Develin Creek deposit. The block model contained a ZON1 item to designate mineralisation in the Scorpion Area (ZON1=1) and in the Sulphide City Area (ZON1=2).

These mineralisation domain (ZON1) wireframes were used for the primary block model coding, followed by resource estimation and resource reporting. The current ZON1=1-2 mineralisation domain boundaries are derived from updated 3D wire-frame modelling based on the recent QMines and HGMC revised mineralisation interpretation work. The wire-frame modelling has been constructed using a consistent standardised approach and has sufficiently resolved the detail related to the main mineralised structures and interpreted features such as fault 'off-sets'.

Consideration was given to the selective mining unit ("SMU") range required for the Develin Creek Resource model so that it would be consistent with that used in similar sized copper-zinc deposits which typically have relatively thin and small-scale mineralised zones.

For the revised Develin Creek Resource Block Model, a block size of 8.0m (E) x 6m (N) x 2.5m (RL) was selected for the following reasons:

- This block size fairly represents deposit scale, geology and mineralisation;
- Will adequately capture sufficient numbers of the source 1m down-hole composites which will inherently preserve sample variability as a part of block model interpolation;
- Reasonably fits within the nominal drill section spacing of 25m to 50m;
- Fairly represents the spatial continuity of observed higher grade zones as shown in Semi-Variogram models;
- Is consistent with the short scale variability of copper and zinc distribution in typical copper deposits;
- Is fit for purpose i.e. blocks can be used as is (smallest SMU), combined (larger SMUs) or divided (e.g. 4.0m x 3.0m x 2.5m grade control 'sub-blocks').

For block model construction purposes, the ZON1 wireframes were treated as hard boundaries i.e. searches and interpolation did not extend beyond this limit.

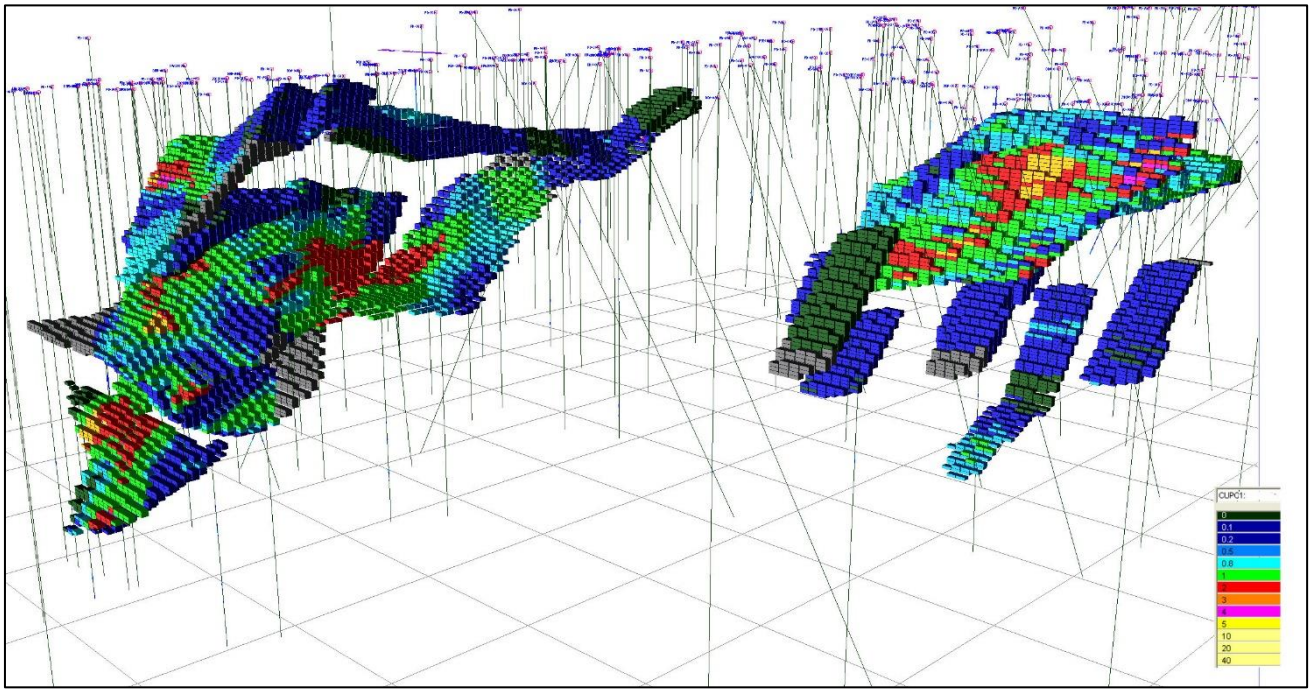

Figure 6: Copper grade distribution from block model - 'Sulphide City' area (left) and Scorpion area (right) – Oblique View (Azim 135 degrees, Dip -15 degrees – looking South-East).

Resource Estimation (Continued)

For the OXID (oxidation state) items in the block model, the zones of Oxide, Transition and Primary / Fresh material were coded using hard surface boundaries and coded according to a '50% block-in / block-out' basis of blocks in contact with the interface between two (2) different material types.

Figures 6 and Figure 7 show the general distribution of the interpolated elements copper and zinc in the block model. Significant non-correlation between the copper and zinc element items are clearly visible in these views.

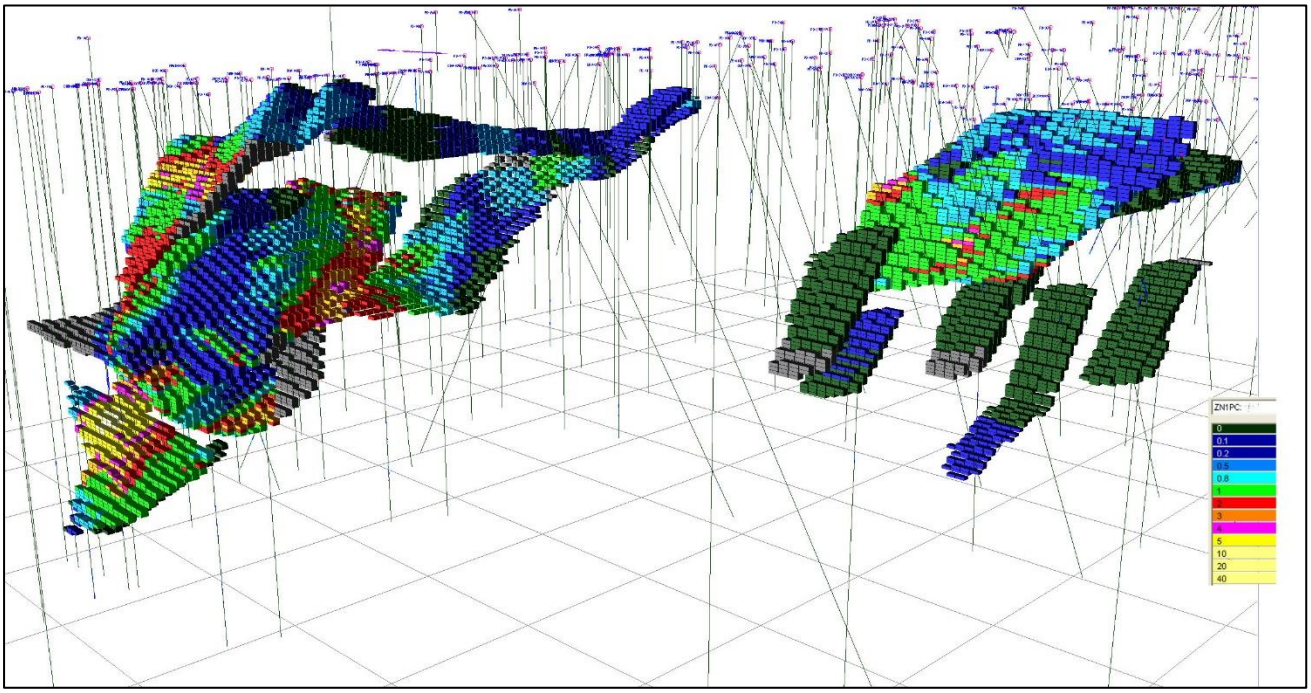

Figure 7: Zinc grade distribution from block model - 'Sulphide City' area (left) and Scorpion area (right) – Oblique View (Azim 135 degrees, Dip -15 degrees – looking South-East).

Resource Classification

The deposits are largely drilled on a 50m gid pattern of predominantly vertical and some inclined drill holes. Zenith drilling has targeted verification of some locations resulting in additional drilling and a slightly higher drilling density than 50m. Based on this underlying data the Resources within the Develin Creek 'Scorpion' and 'Sulphide City' areas have been classified into the 'Indicated' and 'Inferred' categories.

The classification used by HGMC at Develin Creek is based on ancillary block model item codes. The first of these ancillary codes is the DIST1 item which is a record of the shortest distance of any given interpolated block to the nearest 1m composite within the anisotropic weighted search ellipsoid. Also used were the COMP (number of composites used in interpolation of a block) and the KERR item (the local kriging variance calculated for the interpolated block). The DIST, COMP and KERR items were ultimately condensed into a relative confidence code (CONF) which was then rationalised (condensed) down to a RCAT (Resource Category) item for reporting purposes. The CONF and RCAT values assigned are based on a set of 'estimation confidence level' thresholds derived from probability analysis in conjunction with other classification 'modifying factors' that are appropriate for the deposit area being considered.

Resource Classification (Continued)

By way of example, all blocks with distances of less than 20m from block to composite (DIST<20) were usually designated as RCAT=2 or 'Indicated' resources. Similarly, all blocks between 20m and approximately 50m distance were usually designated as RCAT=3 or 'Inferred'. Distances for blocks greater than 50m (average drilling spacing) from the nearest composite were designated as RCAT=4 of 'Unclassified'. These designations were additionally simultaneously modified by similar thresholds for the COMP and KERR item values.

A general Classification view is displayed in Figure 8 below depicting graphically the relative distribution of resource classification categories (RCAT Item) for the two (2) main Develin Creek mineralisation areas.

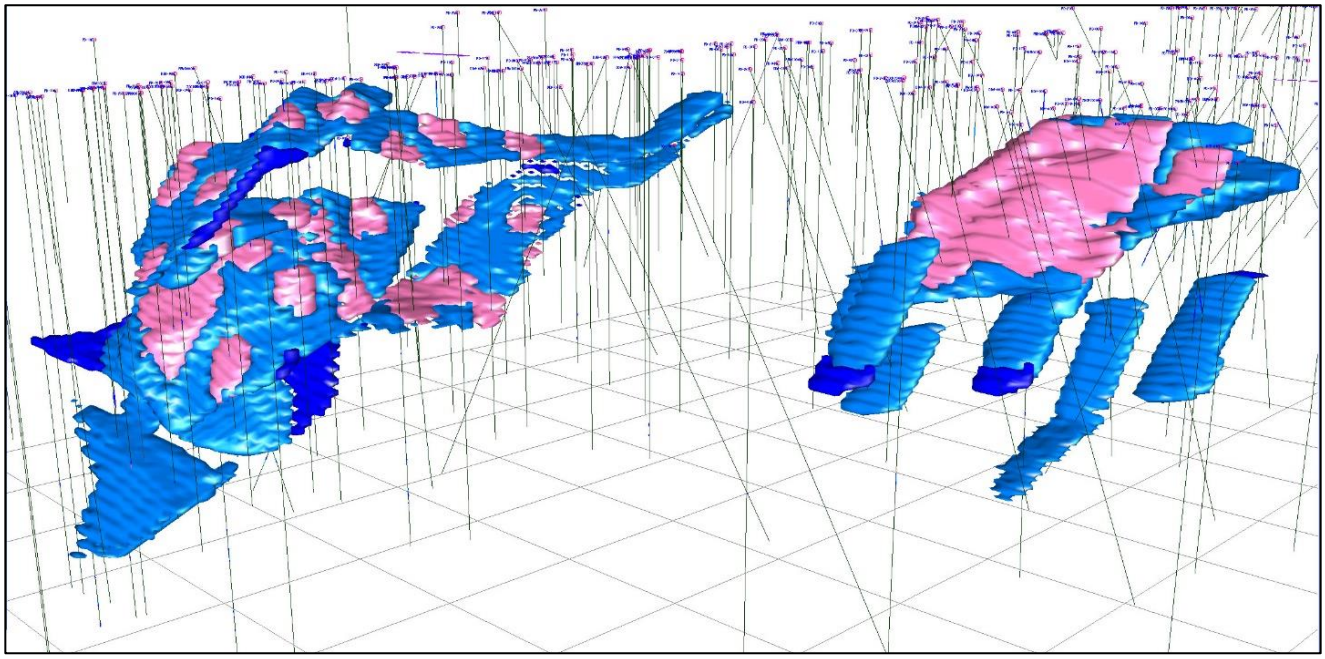

Figure 8: General view of mineralisation classification – Pink RCAT=2 (Indicated), Blue RCAT=3 (Inferred) and Dark Blue RCAT=4 (Not-Classified) – Oblique View (Azim 135 degrees, Dip -15 degrees – looking South-East).

Mining & Cut-Off Grade

Copper equivalence (**CuEq**) was used for interpreting and reporting since the Mineral Resource has similar quantities of copper and zinc sulphides. A 0.5% CuEq cut-off was used for interpretation and reporting, and this is considered close to the likely economic cut off for bulk open pit mining and processing by flotation.

A higher grade 1.0% CuEq cut-off is also provided to indicate the core of the Mineral Resource. This cut-off would be more suited for potential underground mining if sufficient material were available to develop an underground mine. Many of the deeper portions of Sulphide City and Scorpion deposits dip over 50˚ and could support potential underground mining using stoping methods.

Metallurgy

Metallurgical testwork completed to date include:

- Preliminary rougher test work on RC chips in 2015 by Independent Metallurgical Operations Pty Ltd;
- Additional flotation testwork on 190kg of drill core in 2021 by Core Metallurgy Pty Ltd; and
- Follow-up mineralogy on the metallurgical sample in 2022 by Core Metallurgy Pty Ltd.

Metallurgy (Continued)

Both programs indicated the high sulphide samples from Develin Creek float easily and that copper and zinc are recoverable with over 90% reporting to a low grade concentrate. The work demonstrated iron sulpide is predominantly pyrite at a ratio of around 10 to 1 compared to copper and zinc sulphides as chalcopyrite and sphalerite. Some intergrowth of chalcopyrite with pyrite means significant regrinding will likely be required to adequately liberate the minerals and achieve a saleable grade concentrate. This will likely result in some additional metal loss with testwork indicating:

- For zinc, initial rougher floation recovers 82% of the zinc to a 32% zinc concentrate; and
- For copper, initial rougher floation with regininding and processing recovers 72% of the copper to a 21% copper concentrate.

This work has recently been completed and has preliminary findings, with further investigation required. The work did not summarise or review gold and silver recovery but concentrate analyses suggest both gold and siler recoveries may be low at 10 to 20% via floataion. Further work is required to substantiate these results or determine if alternative recovery processes, such as via carbon-in-leach (CIL), are available.

Mineral Resource Estimate

The Mineral Resource is reported at a cut-off suitable for open pit mining. No open pit mining study work has been completed to date. Economic viability of the Mineral Resource at this stage has been accounted for by:

- Excluding material too distant from drilling interval 'points of observation'; and
- Reclassifying deeper thin mineralisation where necessary as Inferred resources.

QMines and HGMC has maintained the use of the Copper Equivalent (**CuEq**) reporting basis as used by Zenith Minerals Ltd. The CuEq calculations are based on rounded metal prices as at August 2022 and rely heavily on the copper and zinc items which have had some estimated process recovery values applied. No metallurgical testing to arrive at recovery values for gold and silver have been carried out and so have not been used in Copper Equivalent calculations by Zenith or QMines to date.

It is expected that some gold and silver will be recoverable in any given mineral processing rout and will provide at least some significant economic benefit. As with all metal equivalent calculations, they are subject to frequent change and the use of the recovery and metal prices described below are only for interpretation of the likely potential value of a polymetallic deposit such as Develin Creek.

Lead grades have been estimated in the resource model but are sufficiently low to not represent any significant economic value. Lead may need consideration as a contaminant needing appropriate containment within a mining and mineral processing scenario.

The function used by Zenith and continued at this time by QMines is as follows:

CuEq = (Cu + 0.45*Zn) – (based on metal prices of A$8,400/t Cu, A$3,300/t Zn and preliminary recoveries of 72% for Cu and 82% for Zn).

Mineral Resource Estimate (Continued)

Resource Category	Tonnes (Mt)	Grades			
		Cu (%)	Zn (%)	Au (g/t)	Ag (g/t)
Indicated	1.5	1.21	1.25	0.18	7.1
Inferred	1.7	0.92	1.20	0.16	4.8
Total	**3.2**	**1.05**	**1.22**	**0.17**	**5.9**

Table 4: Mineral Resource Estimate at the Develin Creek project at a 0.5% CuEq cut-off.

Metal	Contained Metal			
	Cu (t)	Zn (t)	Au (Oz)	Ag (Oz)
Total	**33,700**	**39,100**	**17,500**	**604,300**

Table 5: Mineral Resource Estimate Contained Metals at the Develin Creek project at a 0.5% CuEq cut-off.

Assessment of the Mineral Resource against the JORC Table 1 criteria are provided in Appendix A.

Weathering	Classification	Mt	BD t/m³	CuEq (%)*	Cu (%)	Zn (%)	Au (g/t)	Ag (g/t)
Oxide	Indicated	0.13	2.20	1.283	1.044	0.530	0.13	3.72
	Inferred	0.05	2.20	0.855	0.578	0.614	0.04	1.79
Transition	Indicated	0.04	2.50	1.747	1.400	0.773	0.21	6.86
	Inferred	0.05	2.50	1.178	0.901	0.615	0.03	1.84
Fresh	Indicated	1.31	3.20	1.825	1.222	1.338	0.18	7.44
	Inferred	1.62	3.20	1.485	0.929	1.235	0.17	4.99
Sub Total	Indicated	1.48	3.05	1.776	1.212	1.252	0.18	7.10
	Inferred	1.71	3.13	1.458	0.918	1.199	0.16	4.81
Total		**3.20**	**3.10**	**1.605**	**1.055**	**1.223**	**0.17**	**5.87**

Table 6: Develin Creek Mineral Resource estimate using 0.5% CuEq lower cut-off.

* CuEq = (Cu + 0.45*Zn) and based on metal prices of A$8,400/t Cu, A$3,300/t Zn and preliminary recoveries of 72% for Cu and 82% for Zn.

The resource estimates are classified in accordance with the Australasian Code for Reporting of Identified Mineral Resources and Ore Reserves (JORC, 2012).

Mineral Resource Estimate (Continued)

The MRE contained in this report covers the Develin Creek deposit and has been completed by an independent resource geologist, Mr Stephen Hyland, Principal Consultant Geologist with Hyland Geological and Mining Consultants (**HGMC**). Mr Hyland is a Fellow of the Australian Institute of Mining and Metallurgy and holds relevant qualifications and experience as a qualified person for public reporting as required by the JORC Code in Australia. Mr Hyland consents to the inclusion in this report of the information in the form and context in which it appears.

The classifications, summarised in Tables 1, 4, 5 and 6 are considered appropriate on the basis of drill hole spacing, sample interval, geological interpretation and representativeness of all available assay data. The defined mineralisation within the deposit is classified as Indicated and Inferred resources and shown as block model in Figures 6 and 7 of this report. The resource is based on an ordinary Kriging interpolated block model. The resource upgrade information contained in this report is subdivided by mineralised domains and material type.

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

Mineral Resource Estimate

The information in this report that relates to mineral resource estimation is based on work completed by Mr. Stephen Hyland, a Competent Person and Fellow of the AusIMM. Mr. Hyland is Principal Consultant Geologist with Hyland Geological and Mining Consultants (**HGMC**), who is a Fellow of the Australian Institute of Mining and Metallurgy and holds relevant qualifications and experience as a qualified person for public reporting according to the JORC Code in Australia. Mr Hyland is also a Qualified Person under the rules and requirements of the Canadian Reporting Instrument NI 43-101. Mr Hyland consents to the inclusion in this report of the 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 rights to 100% of The Mt Chalmers (Cu-Au) and Develin Creek (Cu-Zn) deposits. The Company's Mt Chalmers and Develin Creek projects are located within 90km of Rockhampton in Queensland.

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 make new discoveries, commercialise existing deposits and transition the Company towards sustainable copper production.

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

206,215,512

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

QMines Limited (ASX:QML)

Registered Address: Suite J, 34 Suakin Drive, Mosman NSW 2088
Postal Address: PO BOX 36, Mosman NSW 2088
Website: www.qmines.com.au

Telephone: +61 (2) 8915 6241
Peter Nesveda, Investor Relations
Andrew Sparke, Managing Director

Email: info@qmines.com.au
Email: peter@qmines.com.au
Email: andrew@qmines.com.au

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

JORC Code, 2012 Edition – Table 1 report

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 (eg 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 (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.*	• QMines has completed a revised resource estimate for the Develin Creek deposit based on all available data as supplied by previous project owners Zenith Minerals Ltd. • Zenith has previously reported that majority of the Develin Creek data has been acquired according to industry best practice standards and techniques. QMines has assessed the drilling and sampling methods used at Develin Creek to be appropriate for the mineralisation style as observed and interpreted. • Previous QMC and Fitzroy diamond core sampling programs typically used 1-2m sample intervals, with half-core splits sent for lab assay analysis. • Zenith drilling had consistent 1m half-core intervals, occasionally using ¼ core for field duplicates. • QMC PD samples involved combining 1m rig samples into 3m samples. If sulphides were detected, 1 or 2 m intervals were used. Samples were cyclone collected and passed through a 3-level riffle splitter and divided into required sample size. Wet samples were set aside for assay, with remainder dried for subsequent later re-sampling if required. • Fitzroy RC drilling produced 1m samples which were divided with an on-site splitter. These samples were re-

Criteria	JORC Code explanation	Commentary
		sampled using a spear to generate 3m composite samples for initially interpreted non-mineralised zones. • Zenith's RC samples were also taken at 1m intervals with appropriate continuous stream splitting aimed at generating 3 kg sub-samples using drill-rig mounted equipment. Non-mineralised zones were samples using a spear to generate 4m composites. • Mineralised samples, dense with high sulphide content, required Zenith drilling to use up to 500PSI air pressure and foam to enhance sample return when necessary.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• Three main exploration drilling phases occurred at Develin Creek by various operators. • Between 1992-1996, QMC drilled: + 46 diamond holes + 129 PD holes (predominantly NQ, some HQ) + 7 water bores. • Icon/Fitzroy's 2011 extensional drilling consisted of: + 2 RC holes + 6 diamond tails (mainly NQ2, some HQ) • Zenith's verification and infill drilling in 2014 and 2021/22 included: + 31 RC holes (6 with diamond tails) + 3 diamond drill holes • Diamond drilling primarily used tails on RC-drilled percussion through Tertiary cap rock.

Criteria	JORC Code explanation	Commentary
		• Most core samples were not oriented due to being vertical. Spear orientations were available for a few angled holes. • QMC's PD drilling utilized a 5 ½ inch hammer bit, with holes PVC-cased to the basement. Drilling depths varied from 21m - 310m. Roughly 25% of PD holes were halted early due to difficult drilling conditions in the Tertiary sequence. • Fitzroy's RC drilling used a 4 ½ to 5 ¼ inch face sampling hammer with depths ranging between 82m - 232m. • Zenith's RC drilling used 5 and 5 ½ inch face sampling hammer bits, with drilling depths of between 60m - 289m.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• Zenith's RC recovery in mineralised zones was visually assessed and deemed acceptable. • Diamond core recovery, primarily from the Zenith drilling programs, was reported and logged as having a 99% recovery rate and minimal loss in mineralised segments. • PD and RC recoveries, while not quantified, were visually judged as satisfactory in mineralised zones. • Diamond cores were aligned into continuous sequences with recovered sample lengths cross-referenced with core block markings. • PD and RC samples underwent visual inspections for recovery, dampness, and contamination. It was reported that samples of uniform quality were acquired

Criteria	JORC Code explanation	Commentary
		using a cyclone and splitter, which was consistently cleaned to minimize cross-sample contamination. • Sample recovery within mineralisation zones was reported as typically high, with no obvious sampling bias.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• Diamond core, PD, and RC drill chips were meticulously logged, noting lithology, oxidation levels. • Logging for Diamond core, PD, and RC chips also documented mineralisation, and alteration. • Diamond core was also logged with core samples stored on-site. Example type holes drilled prior to 2011 were revisited and re-sampled, while representative RC chip samples were retained for later use. • For drilling programs prior to 2011, core samples were photographed, logged for magnetic susceptibility with selected samples sent for petrography study. • All drill holes were possible were logged comprehensively, excluding some percussion pre-collars in the Tertiary cover material.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field*	• Diamond core was cut into halves, and further cut to ¼ core for duplicate samples. Samples were collected at 1-2 m intervals. • Percussion and RC samples were gathered on the rig using standard cyclone and splitters. Compositing before lab submission was typically 3 m by QMC and 2 m by Fitzroy. • Samples were recorded as dry or wet. • Some details of historical sampling QAQC are not comprehensively recorded. • Commercial assay laboratories were used for sample preparation and analysis. • Zenith sent samples to ALS Laboratories in Brisbane

Criteria	JORC Code explanation	Commentary
	duplicate/second-half sampling. • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	where they were crushed, riffle split, and pulverized then analyzed. • Zenith's QAQC measures included: + Insertion of certified reference materials for copper, zinc, silver, and gold. + Duplicate samples from selected mineralised intervals for routine testing. • Initial sampling involved limited field duplicates of PD, RC, and ¼ core. Resamples were taken from pulps, coarse rejects, and leftover cores. Zenith reported that RC field duplicates had satisfactory correlation. A set of twinned or proximate drill holes were drilled for short range mineralisation grade verification. • Given the consistency and thickness of observed intersections, the sampling approach, and assay ranges, the sample sizes are considered to adequate to provide representative sampling of the main base metal mineralisation types at Develin Creek.
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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy*	• The Analytical techniques for Develin Creek employed were: + AAS by QMC (1990s) + ICP-OES by Fitzroy (2011) + ICP-AES by Zenith (2014, 2021/22) for base metals. Gold was analysed via fire assay. Re-analysis of elevated (>1%) base metal samples was done, with additional multi-element ICP analysis on select mineralisedmineralised intervals (pre-2011).

Criteria	JORC Code explanation	Commentary
	(ie lack of bias) and precision have been established.	• During the 2011 and 2014 drilling programs, some intervals with >1% base metals underwent re-assay with a 4-acid digestion. • Pre-2011, no geophysical or handheld tools were used for drilling, except occasional magnetic susceptibility recording. • In 2011, handheld XRF readings were used on two diamond holes. By 2014, magnetic susceptibility was logged for every drilled meter. • Limited duplicate samples were sent; labs included standards and blanks. Zenith's QAQC entailed inserting duplicates and certified reference materials for copper, zinc, gold, and silver. QA/QC results showed a strong match between reference materials and lab-reported analyses.
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 verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Significant intersections were validated by subsequent project work, with a re-sampling of pulps and core by Outokumpu in the mid-1990s. Visual checks confirmed sulphide content, and selected mineralised segments underwent re-analysis using ¼ samples. • Zenith drilled several holes near QMC's earlier percussion drills to validate the deposit and prior outcomes. Zenith commented that holes used as twin holes were not always at minimum distance but they sufficiently close enough to adequately verify previous drilling and sampling results. Some results variations were observed but were considered to generally align with short-scale deposit variances. • All field data, including geological logging, sampling, and bulk density measurement details, were recorded on paper logs using standard templates which were later digitized. • No significant modifications were done subsequent to

Criteria	JORC Code explanation	Commentary
		initial recording, except standard procedures for managing values below the analytical detection limit.
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.*	• QMC's drill collar positions were surveyed by licensed surveyors and cross-checked using conventional and differential GPS. • Starting 2011, collars were surveyed using handheld GPS, later adjusted to precise topographic surfaces. • QMC's PD holes, mostly vertical, lacked down hole surveys. Diamond holes were surveyed post-drilling with an Eastman camera which generally showed minimal variation. • In 2011 and 2014, every 50 m of both diamond and RC holes were surveyed using a Reflex camera. • A local grid, oriented to AMG grid north, was set up by QMC in 1993 with known survey points being verified with differential GPS in 1995. • Between 1993-94, a licensed surveyor accurately surveyed topography, drill collar locations, and elevations. • Recent reports utilize GDA94 Zone 55 coordinates. • Precise topography information was sourced from the Queensland Government LiDAR Survey. • Current GPS-surveyed drilling is sufficient for present modelling and resource estimation studies, with elevations adjusted to accurate topographic survey elevations.
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.*	• Drill holes were spaced at 50 m both along and across strike. • Data spacing and distribution confirm spatial and grade continuity, supporting both Inferred and Indicated Mineral Resource classification definitions. • Percussion samples were typically composited to 3m,

Criteria	JORC Code explanation	Commentary
	• *Whether sample compositing has been applied.*	whilst mineralised intercepts used in the resource model were often collected at 1-2m. • RC samples were taken every 1 m in mineralised zones and 3m in non-mineralised areas. • Zenith's RC samples followed a 1 m interval in mineralised areas and 4 m in non-mineralised zones.
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.*	• At Sulphide City, drilling sections run Northwest to Southeast relative to grid north, perpendicular to the sulphide lenses' strike. Most drilling is vertical, effectively testing the gently dipping lenses. • At the Scorpion area, sections are oriented North to South. The bulk of drilling here dips towards the south at -60°, effectively intersection the steeper lenses as reasonably optimal angles. • A review of the available Develin Creek drilling data by QMines confirms the drilling orientations used to intersect mineralised zones were close to perpendicular with respect to the majority of observed mineralisationmineralisation. This minimised some of the potential sampling bias associated with the main known structural orientations.
Sample security	• *The measures taken to ensure sample security.*	• QMC core samples were logged and sent from the Marlborough compound to the Townsville assay laboratory. PD samples were prepared at the drill site before being dispatched to the lab. • Fitzroy's RC samples were bagged on site, bundled in bulka-bags on pallets, and sent directly to the lab via a 3rd party contractor. • Zenith's RC samples were also bagged on site, moved to bulka-bags, and transported to a 3rd party contractor for shipment to the lab. Core was logged and sampled on site, then handed to the same contractor for lab

Criteria	JORC Code explanation	Commentary
		dispatch.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• In Nov 2011, ResEval reviewed Zenith's drilling. They made onsite recommendations for refining the drilling process, suggesting better management of surface disturbance, monitoring of RC sample split sizes, and adjustments to the rotary RC sample splitter.

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 obtaining a licence to operate in the area.*	• The deposit is situated in Exploration License EPM 17604, • The Develin Creek Project now wholly owned by QMines Limited after acquiring the project from Zenith Minerals Ltd. Zenith had previously agreed to initially buy 51% equity from Fitzroy Resources, with an option for the remaining 49% within 24 months (See ASX release, 7 July 2014). • The prospect lies within the Forrest Home Pastoral Lease. • The tenement is well-maintained with no foreseeable obstacles to securing a future mining lease.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Mineralisation at the Scorpion deposit was first pinpointed by Queensland Metals Corporation (QMC) in late 1992. • From 1993 to 1995, QMC conducted comprehensive exploration at Develin Creek and southern prospects.

Criteria	JORC Code explanation	Commentary
		• By July 1995, QMC and Outokumpu Mining Australia Pty Ltd (OMA) initiated a joint venture. OMA formulated the Develin Creek deposits' initial resource estimate but exited the joint venture in 1996. QMC, later rebranded as Australian Magnesium Corporation, retained the tenements until 2002. • Icon Limited procured the tenement and by 2007, established a resource estimate for Sulphide City, Scorpion, and Window using prior drilling data. • Fitzroy Resources took over the project from Icon, conducted varied explorations, and drilled 12 holes post their October 2010 listing. One noteworthy drill at FRWD0002 unveiled significant mineralisation, expanding the resource's known boundary to the south. • Zenith Minerals carried out additional, drilling and project development work with a new resource estimate carried out by ResEval geological Consultants and reported in August 2022.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Develin Creek project contains numerous copper-zinc-gold-silver volcanic hosted massive sulphide (VHMS) deposits within a largely unexplored volcanic belt. • Mineralisation includes copper-zinc-gold-silver deposits in massive sulphide, stringer, and breccia styles, rooted in basalts.

Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
		• Zenith's exploration findings are recorded in prior ASX announcements on these dates:
		  + 26 November 2014
		  + 5 July 2021
		  + 2 September 2021
		  + 16 December 2021
		  + 24 March 2022

Criteria	JORC Code explanation	Commentary
	○ *dip and azimuth of the hole* ○ *down hole length and interception depth* ○ *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	+ 7 June 2022
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• This report doesn't include exploration results or aggregates. • Resource estimation by HGMC utilised length weighting 1m composite intervals. • The Copper equivalent grade (CuEq) for resource estimation and reporting used by ResEval was calculated using: + Copper equivalence CuEq = (cu + 0.45*zn). + This was based on current round metal prices in June 2022 of $8,400/t Cu, $3,300/t Zn and preliminary recoveries for Cu of 72% and Zn or 82%,. • Preliminary RC rougher tests suggest > 90% recovery for both Cu and Zn. Equal recovery is currently assumed for all elements. • Lead grade isn't considered due to its low very low concentration in the Develin Creek deposit and its relatively low economic value. • The copper equivalent used for the previously reported Mt Chalmers deposit are calculated based on the following formula: CuEq(%) = (Cu grade x Cu recovery) + ((Pb grade x Pb recovery x Pb price)/Cu Price) + (Zn grade x Zn price x Zn recovery)/Cu price) + ((Au grade x Au price x Au recovery)/Cu price) + ((Ag grade x Ag price x Ag recovery)/Cu price). All

Criteria	JORC Code explanation	Commentary
		grades are converted to % and prices converted to $/T prior to calculating CuEq. Commodity price used: Au price of US$1,900/oz, Ag price of US$25/oz, Cu price of US$6,655/t, Pb price of US$2,450/t, and Zn price of US$3,450/t. The following metallurgical recoveries have been applied: 86.5% Au, 70.5% Ag, 97.0% Cu, 85.0% Pb and 77.5% Zn
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	• No exploration results are included in this report. • Deposits shift from flat to a steep northern dip, as previously identified in project drilling. • Drilling is primarily vertical or steeply angled, adjusted to best intersect the steeper portions of the deposit.
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.*	• Various diagrams are presented in body of text
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• Exploration results are not presented in this report.
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.*	• QMC and later companies conducted surface sampling and mapping across various field campaigns. • Multiple geophysical surveys, including aeromagnetics, induced polarisation, and electromagnetics, were performed by different entities.

Criteria	JORC Code explanation	Commentary
Further work	• *The nature and scale of planned further work (eg 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.*	• More drilling is needed at the Sulphide City's south-western extent where mineralisation is open-ended. • Priority is given to drill testing surrounding the Mineral Resources based on geological, geochemical, and geophysical targets. • Further metallurgical testing is essential, building on the 2021 programs.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• The drill hole databases for Develin Creek are maintained by QMines (In conjunction with Orr & Associates). The data set was originally sourced from previous project owners Zenith Minerals Ltd which was stored as computer server-based Excel spreadsheets. • The Competent Person from HGMC has verified the internal referential integrity of the databases used in resource modelling and resource estimation. • Various data validation checks were carried out to ensure there were no duplicate records or any grade item values or location data was out of range. • To date QMines has not as yet carried out its own 'on-ground' checking of collar positions and related historic data against logged records.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• A site visit the Develin Creek deposit area has not been undertaken by the Competent Person responsible for the resource estimation at this stage of project development. The competent person has visited similar mining projects in the near vicinity of the Develin Creek

Criteria	JORC Code explanation	Commentary
		area and is familiar with the region and general geologic terrane. The Competent Person has also relied upon project reports by other consultants including ResEval Geological Consultants also recent discussions with QMines personnel that have visited the Develin Creek and nearby exploration areas.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• All available Percussion, RC and Diamond drilling data was used to build the Develin Creek mineralisation model and for guiding Mineral Resource estimation. Recent verification RC conducted by Zenith has further assisted with mineralisation interpretations and the reliable designation of resource categories. • The total number of drill-holes available for use in estimation is 357 which is deemed a sufficient number to define the identified massive sulphide mineralisation zones within the Develin Creek deposit. • QMines notes that Zenith, (the previous project operators) used their additional drilling programs to help confirm local grades and the general extents of mineralisation. This drilling also added to developing some additional understanding of the structural geology framework using drill hole intercept logs with associated assay analyses, and preliminary structural feature logging. • The geological interpretation work carried out by Zenith and previous project owners also relied upon surface mapping of the limited outcrop, • It has been noted by Zenith and confirmed by QMines that additional drilling coverage's will be required to accurately ascertain the extents of mineralisation and local scale geometry variability.

Criteria	JORC Code explanation	Commentary
		• The mineralisation geometry is characterised by a diverse dimensions & orientations which is interpreted as resulting from mineralisation emplaced through intrusion of volcanogenic magma or fluids within marine sediments producing some evidence of peperite type textures within the rock matrix. • Some evidence of faulting is present within the deposit zones which has affected mineralisation complexity. Zenith and QMines note that additional diamond drilling will be required to carry out future comprehensive structural geological studies. • Mineralisation envelopes developed for both Develin Creek were interpreted in cross-section from drill hole data. A nominal 0.2-0.3% Cu edge lower cut-off was initially developed (or approximately 0.5% CuEq). The mineralisation domains developed were also locally adjusted to capture and delineate the majority of significant Zinc, and also some of the related minor low-level Lead, Gold and Silver mineralisation.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• The majority of Develin Creek mineralisation is interpreted as a mineralised corridor trending SW-NE for approximately >850m. • The mineralisation envelopes modelled withing this corridor present as two (2) clearly defined mineralised zones covered by relatively dense drill patterns (Referred to as the Scorpion and Sulphide City Zones) which are separated by a gap of approximately 200 m. • The mineralisation thickness ranges from

Criteria	JORC Code explanation	Commentary
		approximately 5 m to 20 m in the Sulphide City zone and approximately 5 m to 25 m in the Scorpion zone. Mineralisation in the majority of deposit areas extends to approximately 350 m below topographic surface. • Both the Sulphide City and Scorpion zones have variable dip and thickness with some zone observed having thicknesses of up to 30m. • The Scorpion area has approximate dimensions of 200m E-W and 300m N-S and extends to 280m depth from surface. • The Sulphide City area spans 300m E-W and 500m N-S with a series of stacked lenses extending to a depth of approximately 350m from topographic surface.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and*	• All available RC and Diamond drilling data was used to build the Mt. Develin Creek mineralisation model used for guiding Mineral Resource estimation. • QMines has acquired all available drilling and assay information from previously generated Zenith Minerals Ltd drilling databases (as at end June 2023) for use in resource modelling. An updated drilling, geological logging and assay database was used to define and model contained geological logging and analytical data for the main elements Cu, Pb, Zn, Au & Ag. • The majority of drill collar positions at both Develin Creek were surveyed 'pre-Zenith' by QMC where drill hole collar positions were surveyed by licensed surveyors using survey 'Total Station' with crosschecking of some historical holes by Zenith using conventional and differential GPS. Zenith also used conventional and differential GPS to locate drill-hole

Criteria	JORC Code explanation	Commentary
	the search employed. • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	collars for their most recent drilling programs. The survey control for collar positions is considered adequate for the estimation of resources as stated. • The mineralised domains at both Develin Creek were interpreted from the drilling data provided to QMines by Zenith. Sets of cross- sectional 3D strings were generated throughout the deposit area. These were then linked to generate 3D wire-frames. Mineralised wire-frame domains were used for statistical analysis and grade estimation. The development of wire-frames was tightly controlled and were not extended (extrapolated) beyond 1 average section spacing from the last drill-hole 'point of observation'. • A set of wire-frame weathering surfaces at Develin Creek were also modelled to highlight broad material type and bulk density characteristics which overprint the mineralised zones. These codes are used to flag bulk density differences for tonnage estimation and preliminary metallurgical domain differences. • Within the Develin Creek block model a series of seven (7) mineralisation AREA domains were also defined to segregate major changes in mineralisation zone orientation. These AREA domains were used to define localised mineralisation distribution characteristics and search ellipsoid orientation for block model interpolation. • Spatial statistical analysis was carried out on the main analytical assay data items. Sample data was composited to one (1) metre down-hole intervals initially

Criteria	JORC Code explanation	Commentary
		based on the Copper analytical item. This also included equivalent compositing for the Pb, Zn, Au & Ag items. The composite probability distributions were interrogated for each element within each AREA domain to review localised average grades, composite 'outlier' values and related coefficient of variation. • Composites in contained each AREA domain were also used to generate both down-hole and where possible longer range between hole semi-variograms models to guide establishing of interpolation ranges and relative nugget and sill ratios used in Ordinary Kriging interpolation for block model grade assignment. • One (1) block model was constructed for the total deposit area at Develin Creek, combining geology and mineralisation modelling for the Cu, Pb, Zn, Au and Ag elements. The Block model was constructed using a 3D array of blocks with dimensions of using 8.0 m x 6.0 m x 2.5 m (E-W, N-S, Bench) block cells coded with the mineralisation wire-frames. • The Block Model coordinate boundaries at Develin Creek (Zone 55) are; 788,400 mE to 789,504 mE – (13,88 x 8.0 m blocks) 7,449,940 mN to 7,450,696 mN - (126 x 6.0 m blocks) -225 m RL to 135 m RL - (144 x 2.5 m benches) • The Ordinary Kriging (OK) interpolation method was used for the estimation of Cu, Pb, Zn, Au and Ag items using variogram parameters defined separately from the geostatistical analysis if each element. A minor

Criteria	JORC Code explanation	Commentary
		outlier 'distance of restriction' approach was applied during the interpolation process for all items in selected domains in order to reduce the unwanted spatial influence of very high-grade outlier composite samples. The distance of restriction was set at 16m and when the local AREA domain threshold value was at approximately the 99th percentile level. • The kriging interpolated grades for each element used different interpolation parameters as determined from an independent 'AREA' domain variography analysis and was contained within the mineralised zone wire-frames. No extrapolation of grades outside the mineralisation wire-frame was permitted. • Dry Bulk Density ("density") was assigned by as average bulk density values were applied according to the oxidation state. All bulk density measurements used for assignment in the block model were adopted from Zenith's available measured bulk density measurements taken from the historic drilling database and diamond core samples acquired during all the most recent Zenith drilling programs. • As noted in Zenith's previous resource estimation work, Zn and Cu are not strongly correlated and display some distinct localised separate zonation in places. Elements Au and Ag are the most strongly associated Cu with a slightly reduced correlation with Zn. • Lead (Pb) grades have been interpolated in the block model but are of relatively low (matching low Pb analytical data values) and therefore will be for the

Criteria	JORC Code explanation	Commentary
		foreseeable future of negligible economic importance. The interpolated Cu, Zn, Au and Ag are at significantly higher levels and it is expected any extracted mineral resource is likely to include suitable processing methods (eg flotation) to recover concentrates containing these beneficial elements. • An early resource estimate by Geostats in 2014 used a higher 1 % CuEq cut-off used as part of the mineralisation interpretation. **Zenith's subsequent estimate with ResEval geological consulting services and using an updated mineralisation zone 'un-folding / re-folding' approach produced an additional 45% in tonnage and a 15% lower grade when considered in conjunction with 5% lower bulk density.** Zenith used lower bulk density values as a conservative approach since they assessed the determinations from core were often biased towards a slightly high level. • **QMines has subsequently used more conservative bulk densities overall, largely as a consequence of establishing a more rigorous weathering / Oxidation state profile within the deposit. The resulting changes have resulted in comparatively more weathered and transitional material being interpreted and modelled.** • No mining activity has been carried out withing thew Develin Creek deposit area to date. • No detailed assumptions have been made with respect to the recovery of by- products or individual metals and

Criteria	JORC Code explanation	Commentary
		this aspect of metallurgical testing is a priority for QMines ongoing project development work. • No acid mine drainage or deleterious element studies have yet been commissioned. The mining materials and related mine waste products are assumed to be little different from those encountered in other nearby mines with significant production histories. • The new QMines generated block model for Develin Creek has been validated through visual validations on-screen by comparing local interpolated block grades with the underlying sample / composite set. Other validation included review of local and global statistical comparisons of Block vs composite grades as well as trend plot analysis on an area basis per block model bench
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• All tonnages at Develin Creek are reported on a dry basis. • There is as yet no pilot scale or mining scale mineralised material extraction program to help assess the typical bulk in-situ moisture content.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• QMines has applied a 0.3% Cu lower cut-off to reported tonnes and grade. This cut-off is considered in line with current copper price in conjunction with associated beneficial elements Pb, Zn, Au & Ag and favorable mineral processing considerations related to the expected likely open pit mining and processing procedures. This cut-off reasonably reflects the likely costs expected for processing from a flotation plant to produce copper and zinc concentrate products with

Criteria	JORC Code explanation	Commentary
		contained gold and silver. • Zenith's previous reporting used a higher grade 1% CuEq cut-off to align reporting should a more selective open pit be considered or if an underground mining options are pursued.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• It is assumed the majority of the Develin Creek will be mined using open pit mining methods with some limited underground mining in deeper locations should a more selective underground target for deeper higher grade mineralisation of sufficient volume be defined. • No mining dilution ore loss factors have applied to the Mineral Resource. QMines notes some detailed grade control drilling at Develin Creek will help refine resource geometry and grade distribution and this is expected will provide additional Mineral Reserve detail including expected 'ore loss or 'dilution' prior to any mining production activity taking place. • The block model was developed on 8m(X) x 6m(Y x 2.5m(Z) blocks assuming a 2.5m bench is needed to better resolve some of the relatively shallow dipping mineralisation. • A minimum composite intercept with of 1m was used for estimation which adequately inform the 2.5m block model benches. • Domain boundaries are interpreted at a 0.2% to 0.3% Cu cut-off and are used as hard boundaries for block model coding and grade interpolation.

Criteria	JORC Code explanation	Commentary
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• Since Acquiring the Develin Creek project from Zenith no additional metallurgical studies have yet been carried out by QMines. This is seen as priority project work prior to any further project development or ongoing drilling and resource estimation planning. • Zenith's preliminary test work on RC chips indicated a saleable copper and zinc concentrates would be achievable at >90% (see ZNC ASX announcement dated 27 May 2015). • Additional flotation test-work by Zenith was commissioned through Core Metallurgy Pty Ltd in Queensland in 2021 which showed in Zinc Flotation tests that good selectivity, with 85% Zn recovery was possible from a 25% 'mass pull'. A subsequent test conducted under the same conditions is reported to have achieved a slightly higher grade but lower recovery. Zenith also noted that a regrind and single-stage clean step was found to increasing the grade further to 31.7% with negligible recovery loss with further improvements considered possible by using finer material grinding. • For Copper Flotation tests Zenith reported copper concentrate production with a grade of 21% for an overall recovery of 72%. • Zenith's analysis of mineral liberation data through floatation from two samples with a particle size of P80 75 µm indicated that a 10% copper concentrate grade could be derived with an overall recovery of 90%. To

Criteria	JORC Code explanation	Commentary
		achieve a >20% copper grade and >80% copper recovery a significantly smaller grind in order of P80 ~10-15 µm would likely be required. • Overall Zenith considered as suitable particle size could be achieved to using low Cu:Zn ratio ore to achieve a ~20% zinc grade for a 90% zinc recovery. To improve these concentrate grades and recoveries significantly finer grinding would be necessary. • The sulphides species present at Develin Creek consistent with other massive sulphide deposits relatively nearby in the same mineral province which have been in production in recent times.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• This project is only at an early stage of its life and no detailed assumption regarding possible waste and process residue disposal options have been made yet. • It is noted that the Develin Creek project is located in an area of historic mining where mining activities have included waste dumps and tailings disposal dams. It is therefore assumed no major environmental factors would prevent the initiation of construction of similar well designed disposal options. • The high sulphide content of Develin Creek mineralisation will require suitable waste disposal engineering designs with sufficient chemical neutralization or buffering of any acidic components. The QMines notes there are likely identified suitable sources of alkaline (carbonate) material in the vicinity of the project area which can be used for waste dump and tailings dam treatment. Future work will need to investigate the best local carbonate material source.

Criteria	JORC Code explanation	Commentary
		• No unusual flora or fauna has been observed to date at the project area, however detailed environmental surveys will still need to be completed for any feasibility level study.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• Zenith derived Bulk density measurements from 442 drill core samples noting that 132 of these measurements were from inside resource domains. An additional 1,132 chip samples bulk density measurements from the mineralised resource domains were also acquired during Zeniths Resource Modelling and Resource Estimation work. Zenith observed only a weak positive relationship of bulk density with Cu and Zn but conversely a strong positive correlation with S and Fe owing to the high pyrite content. • QMines assessed this measurement work for the Develin Creek mineralisation and conservatively modified or adapted this to arrive at new 'material type' average bulk density assigned values as follows: Weathered/Oxide = 2.00 t/m^3, Transition = 2.30 t/m^3 and Fresh (Sulphide) = 3.00 t/m^3. For Mineralised Oxide Zone = 2.20 t/m^3, Mineralised Transition Zone = 2.50 t/m^3 and for Mineralised Fresh Zone = 3.20 t/m^3. • As noted in previous Zenith review work, there is only a weak positive relationship of bulk density with Cu and Zn but a strong positive correlation with S and Fe. Zenith's use of higher bulk density values comes from

Criteria	JORC Code explanation	Commentary
		their assessment that the available Sulphur assays suffered from an upper detection limit of 10% and at this level when used in conjunction with and Iron (Fe) values for derived bulk density calculations may result in locally elevated values • High bulk density values of around 4 t/m^3 derived reflect the very high sulphide content drilled and the HMS style was deemed by QMines as on average being high. Some localized high values are likely valid as they are consistent with some of Zenith's observations of some of the high RC sample bag and core sample weights onsite.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The classifications or resources arrived at for Develin Creek is largely within the Indicated and Inferred category and is considered appropriate on the basis of drill hole spacing, sample interval, geological interpretation, and sample representativeness and reliably variography using all the available assay data. • The drilling spacing typically on a 50 m drilling grid is sufficient to support classifying the majority of mineralisation into the Inferred category with some mineralisation classified into the Indicated category locally where appropriate with higher drilling and sampling density. Extrapolation of mineralisation was limited to a hard wire-frame boundaries limited to no more than one half the average section or drill-hole spacing and limited to approximately 20-25m. • The classification criteria have employed multiple 'ancillary' interpolation parameters including 'distance

Criteria	JORC Code explanation	Commentary
		of composite to model block' (DIST1), 'number of composite available within the search ellipsoid' (COMP1) for each block interpolation and the local kriging variance' (KERR1) for each block. • The DIST1, COMP1 and KERR1 item values are 'condensed into a 'quality of estimate' (QLTY) or resource estimation confidence item which is in turn the used a guide to help define the 'resource category. • From the final QLTY item a set of 3D 'consolidated' Resource Category wireframes were developed. These are refined where necessary and then applied to the RCAT Resource Reporting Item in the block model. • Classification of the resources has been assigned by the Competent Person and includes a series of project specific 'modifying factors' appropriate for the Resource estimation. • Indicated excludes material below a depth of 200m in the Sulphide City area mineralisation and similarly below a depth of 120m from surface at the Scorpion area to discount the estimation confidence and likelihood of open pit mining extraction.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• The mineral Resource model and associated resource estimation for Develin Creek has been reviewed in comparison with the previous resource estimation work carried out previously by Zenith Minerals Ltd. No unexpected major changes, discrepancies or issues have been identified.

Criteria	JORC Code explanation	Commentary
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The precision of the Mineral Resource estimate is denoted by its classification as Indicated (when drilled and sampled at higher densities of less than 50m) and Inferred as appropriate. • The Mineral Resource statement represents the assessed reliability and relative certainty of mineralised resources on a deposit (broad) scale. • The Competent Person considers the mineral resource to be a robust and accurate global estimate of the contained metal as the estimation has been constrained within defined mineralisation wire-frames. • The Resource classification applied to the Resource reflects the Competent Person's confidence in the estimate. • There is to-date no recorded mining history at the Develin Creek project area and therefore no available recorded mineral production data.