QMINES LIMITED
ZERO CARBON CRITICAL METALS

31st January 2024

ASX:QML

QMINES LIMITED

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

QMINES FAST-TRACKS DEVELOPMENT WITH SIGNIFICANT PROGRESS MADE TOWARDS PFS

Highlights

- Significant progress made towards the Mt Chalmers and Develin Creek Pre-Feasibility Study;
- **Plant design, flow sheet, pit optimisations, metallurgy, tailings storage facility, CAPEX and OPEX now complete;**
- Open pit optimisation from Mt Chalmers shows potential for 12.3Mt of mined material, a **66% increase on prior studies**;
- Develin Creek and Woods Shaft optimisations indicates potential for an **additional 1.7Mt of open pit material**;
- Low strip ratio achieved at Mt Chalmers and Woods Shaft open pits with **4.0:1 and 4.7:1** respectively; and
- The PFS contemplates a 1.0Mtpa process plant with potential for **+12 year mine life from open pit mining operations.**

Overview

QMines Limited (**ASX:QML**)(**QMines** or **Company**) is pleased to announce the Company has made significant progress during the Queensland wet season with its planned Pre-Feasibility Study (**PFS**) assessing the viability of its Mt Chalmers and Develin Creek copper projects (Figure 1) as a stand-alone mining operation.

Work undertaken by the Company and its independent consultants since November 2023, include the completion of three geotechnical diamond drill holes at the Mt Chalmers deposit, completion of the PFS level metallurgical test work, design of the treatment plant and flow sheet, PFS level design of the Tailings Storage Facility (**TSF**) and updated open pit optimisation estimates.

Management Comment

QMines Managing Director, Andrew Sparke, comments;

"With the recent acquisition of the Develin Creek project, the Company has now shifted its focus to the delivery of a Pre-Feasibility Study, which we have fast tracked over the current Queensland wet season."

"QMines staff and team of consultants have rapidly advanced the PFS, for which I'm pleased to say, is on budget and well ahead of schedule. I would like to thank those involved for their tremendous efforts over the last few months and to our shareholders for their patience whilst we deliver this large body of work."

"Open pit copper projects with low stripping ratios in mining friendly jurisdictions are extremely rare, and we believe the Mt Chalmers project has the potential to be the next genuine Australian copper producer. With 12.3Mt of potential open pit material supporting the potential for a 12 year mine life, we have something truly unique at Mt Chalmers."

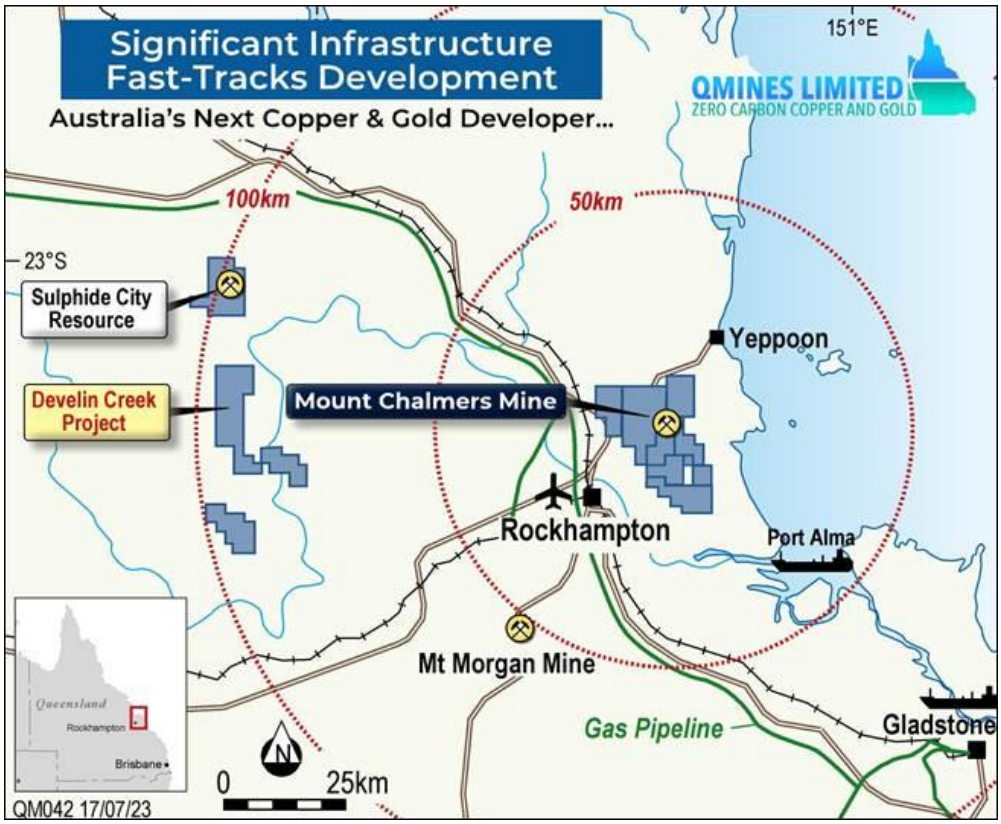

Figure 1: Location of the Mt Chalmers and Develin Creek projects and infrastructure.

Mt Chalmers Optimisation

QMines have now completed the Mt Chalmers open pit optimisation estimate for its Mt Chalmers project area with the outcome shown in Table 1.

The open pit optimisation estimates have been undertaken by Mr Gary McCrae of Minecomp Pty Ltd (**Minecomp**) and are based on the Mineral Resource Estimate (**MRE**) announced by the Company on the 22nd November 2022[1] and 18th September 2023.[2] The Company's combined MRE can be seen in Table 2 and Mt Chalmers open pit optimisation block model can be seen in Figure 2.

[1] ASX Announcement, Resource Increases by 104% with 84% in Measured & Indicated, 22 November 2022.
[2] ASX Announcement, QMines Delivers Fifth Resource At Develin Creek, 18 September 2023.

Mt Chalmers Optimisation (Continued)

The Mt Chalmers optimisation estimate factors in the metallurgical recovery to concentrates for base and precious metals, the projected metal price assumptions and the production cost assumptions as shown in Table 3. The Develin Creek open pit optimisation estimate has also been delivered by Minecomp with final pit designs and mine schedule for the PFS due for completion over the coming weeks.

Geological, grade block models and mineral resource estimates undertaken by QMines independent resource geologist, Hyland Geological Mining Consultants (**HGMC**), for the Mt Chalmers, Develin Creek and Woods Shaft deposits were provided to Minecomp in September 2023 and used to expand the previous Mt Chalmers optimisation estimates reported in February 2023.[1]

Shell Number	Total Material							Waste Volume	Total Volume	Strip Ratio
	Volume	Tonnes	Cu Grade	Pb Grade	Zn Grade	Au Grade	Ag Grade			
	(BCM)	(t)	(%)	(%)	(%)	(%)	(%)	(BCM)	(BCM)	(BCM)
1	457,489	1,523,777	1.07	0.21	0.49	1.36	11.17	1,466,593	1,924,082	3.2
2	636,436	2,124,090	0.96	0.21	0.46	1.15	10.57	2,116,143	2,752,580	3.3
3	1,046,890	3,458,477	0.94	0.15	0.34	0.91	8.11	5,259,858	6,306,748	5.0
4	1,297,998	4,271,974	0.87	0.16	0.36	0.81	7.74	6,167,132	7,465,130	4.8
5	1,764,825	5,775,140	0.76	0.14	0.32	0.68	6.61	7,815,396	9,580,221	4.4
6	2,158,967	7,042,307	0.70	0.13	0.30	0.60	6.12	8,878,267	11,037,235	4.1
7	2,725,707	8,857,800	0.64	0.12	0.28	0.52	5.56	11,292,683	14,018,390	4.1
8	3,230,965	10,438,729	0.60	0.11	0.25	0.46	5.08	13,177,355	16,408,320	4.1
9	**3,832,953**	**12,327,072**	**0.56**	**0.10**	**0.24**	**0.41**	**4.71**	**15,293,730**	**19,126,683**	**4.0**
10	4,323,080	13,861,593	0.53	0.09	0.23	0.37	4.44	17,301,855	21,624,934	4.0
11	4,836,688	15,476,511	0.52	0.09	0.22	0.34	4.23	20,343,319	25,180,008	4.2
12	5,216,977	16,661,889	0.50	0.08	0.21	0.32	4.07	22,573,337	27,790,314	4.3

Table 1: Mt Chalmers open pit optimisation using a copper cut-off grade of 0.3%.

It is important to note that 88% of the Mt Chalmers MRE falls in the Measured and Indicated categories and 47% of the Develin Creek MRE falls in the Indicated category.

The Mt Chalmers open pit optimisation estimate delivered by Minecomp further strengthens the Company's view that the Mt Chalmers and Develin Creek projects have significant development potential as one of very few open pit copper mining projects in Australia.

[1] ASX Announcement, Robust Pit Optimisation Advances Mt Chalmers Towards PFS, 27 February 2023.

Mt Chalmers Optimisation (Continued)

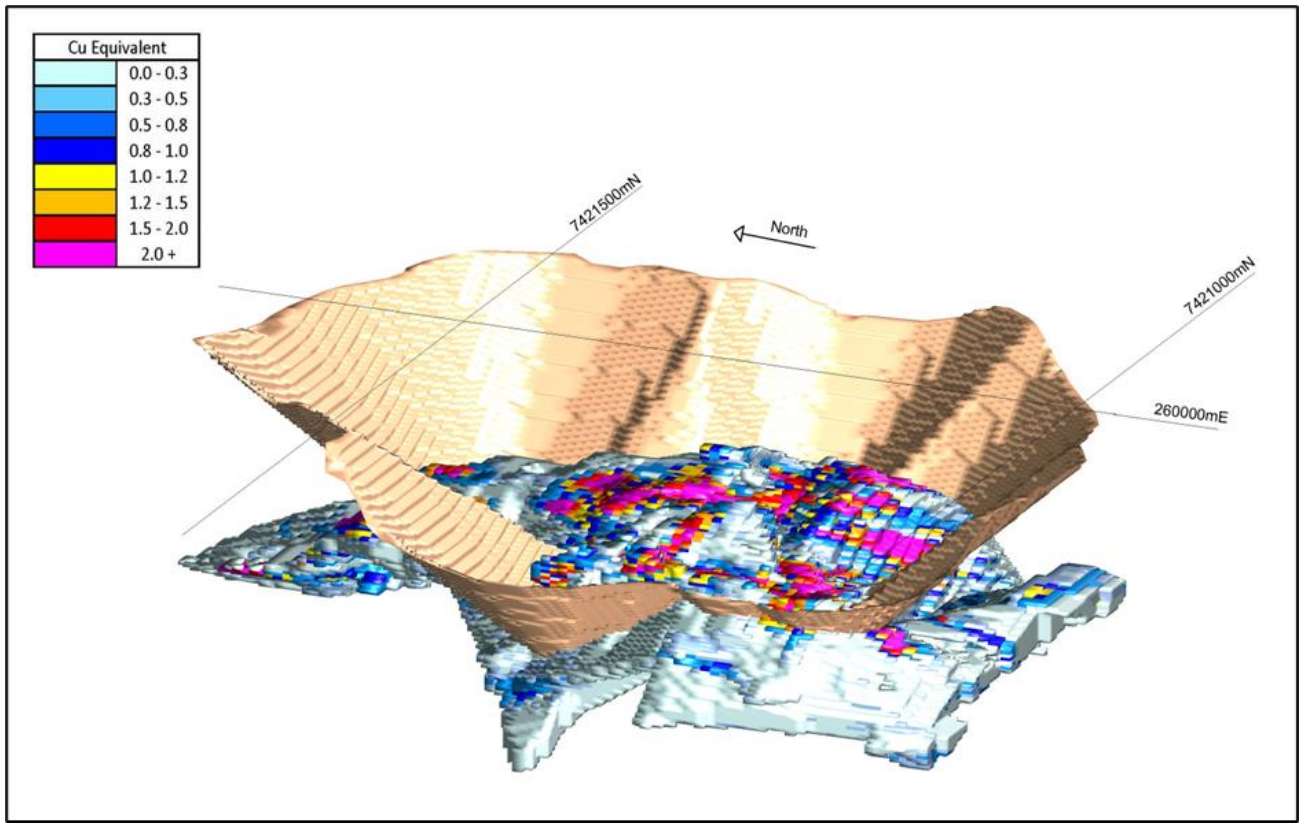

Figure 2: Mt Chalmers pit optimisation grade shell and resource block model looking north.

[1]Resource Category	TONNES (Mt)	Grades					Contained Metal				
		Cu (%)	Au (g/t)	Zn (%)	Ag (g/t)	Pb (%)	Cu (t)	Au (Oz)	Zn (t)	Ag (Oz)	Pb (%)
Mt Chalmers											
Measured	4.2	0.89	0.69	0.23	4.97	0.09	37,759	93,769	9,832	675,547	3,923
Indicated	5.8	0.69	0.28	0.19	3.99	0.07	39,925	51,508	11,058	741,936	3,916
Inferred	1.3	0.60	0.19	0.27	5.41	0.13	7,907	7,964	3,494	228,104	1,716
Woods Shaft											
Inferred	0.54	0.5	0.95	-	-	-	2,700	16.493	-	-	-
Develin Creek											
Indicated	1.5	1.21	0.18	1.25	7.1	-	18,150	8,681	18,700	342,405	-
Inferred	1.7	0.92	0.16	1.2	4.8	-	15,640	8,745	20,400	262,350	-
Total	**15.1**						**122,100**	**187,200**	**63,500**	**2,250,500**	**9,600**

Table 2: Mt Chalmers, Woods Shaft and Develin Creek Mineral Resource Estimate's at 0.3% Copper cut-off grade, September 2023. (Note: Rounding errors may occur).

[1] ASX Announcement, Resource Increases by 104% with 84% in Measured & Indicated, 22 November 2022.
[1] ASX Announcement, QMines Delivers Fifth Resource At Develin Creek, 18 September 2023.

Optimisation Parameters

Open Pit	Mt Chalmers	Woods Shaft	Develin Creek
Production Costs			
Mining Ore (BCM)	$11.95	$8.70	$6.08
Mining Waste (BCM)	$7.37	$5.70	$5.88
Blasting (BCM)	Oxide $1.80, Transition $3.10, Fresh $4.40	$2.50	$2.50
Grade Control (t ore)	$1.50	$1.50	$1.50
Processing (t ore)	$38.04	$35.00	$35.00
Concentrate Transport (t ore)	$2.31	$6.49	$6.49
General & Administration (t ore)	$5.00	$6.00	$6.00
Rehabilitation (BCM)	$0.20	$0.20	$0.20
Site (BCM)	$1.45	$1.45	$1.45
De-Water)BCM)	$0.30	$0.30	$0.30
State Royalty	Cu 5.0%, Zn 5.0%, Au 3.96%, Ag 4.48%, Py 5.0%	5.0%	5.0%
Processing Recoveries			
Copper	88.8%	95.0%	88.0%
Gold	81.14%	86.5%	85.0%
Silver	67.7%	0.0%	65.0%
Pyrite	85.8%	TBD	TBD
Zinc	81.3%	0.0%	32.0%
Mill Head Grade			
Copper	0.56%	0.33%	1.08%
Gold	0.41g/t	0.94g/t	0.19g/t
Silver	4.7g/t	-	5.10g/t
Zinc	0.24%	-	0.73%
Metals Price Assumptions ($USD - 2027 Forecast)			
Copper	$9,132	$9,132	$9,132
Gold	$1,985	$1985	$1985
Silver	$25	-	$25
Zinc	$2,633	-	$2,633
Pyrite	$250	$250	$250
Exchange Rate ($)	$0.63	$0.63	$0.63
Pit Depth (m)	220m	80m	150m
Volume Ore Mined (BCM)	3,832,953	254,267	337,382
Volume Ore Mined (tonnes)	12,327,072	762,801	1,006,651
Volume Waste Mined (BCM)	15,293,730	1,195,272	3,949,580
Stripping Ratio	4.0:1	4.7:1	11.7:1

Table 3: Optimisation study metal price assumptions, production, processing and recovery estimates, January 2024.

Note: Processing costs have been delivered by Como Engineers through the design of a flow sheet for the process plant with production and mining costs being estimated by Minecomp in conjunction with Auralia Mining Consulting. Metallurgical recoveries to concentrate have been calculated by Como's metallurgists over the previous eighteen months of test work. Recovered grades have been established from the optimisation and open pit design delivered by Minecomp. Metal Price Assumptions have been projected to 2027 and are independent and consensus based and derived from multiple financial institutions.

Develin Creek Optimisation

The Company is in the final stages of completing PFS level metallurgical test work for the Develin Creek project, which is expected to be delivered over the coming weeks. This test work is expanding on historical sighter test work undertaken by Zenith Minerals Limited (**Zenith**) prior to QMines acquiring rights to the project in August 2023.[1] Develin Creek updated MRE can be seen in Table 2.

Shell Number	Total Material							Waste Volume	Total Volume	Strip Ratio
	Volume	Tonnes	Cu Grade	Pb Grade	Zn Grade	Au Grade	Ag Grade			
	(BCM)	(t)	(%)	(%)	(%)	(%)	(%)	(BCM)	(BCM)	(BCM)
1	0	0	0.00	0.00	0.00	0.00	0.00	0	0	-
2	78,513	191,316	1.38	0.00	0.78	0.21	6.62	409,463	487,976	5.2
3	88,994	221,802	1.36	0.00	0.82	0.21	6.85	489,799	578,792	5.5
4	103,485	267,249	1.34	0.00	0.91	0.21	7.48	652,628	756,113	6.3
5	110,126	288,368	1.32	0.00	0.94	0.21	7.69	729,366	839,492	6.6
6	125,968	338,952	1.29	0.00	0.99	0.21	8.10	965,373	1,091,341	7.7
7	132,207	358,377	1.28	0.00	0.99	0.21	8.04	1,053,182	1,185,389	8.0
8	250,072	727,356	1.13	0.00	0.69	0.21	5.22	2,374,940	2,625,013	9.5
9	276,324	811,325	1.11	0.00	0.69	0.20	5.09	2,674,519	2,950,843	9.7
10	291,865	861,056	1.10	0.00	0.69	0.20	5.03	2,912,387	3,204,252	10.0
11	310,085	919,308	1.09	0.00	0.71	0.19	5.06	3,272,716	3,582,801	10.6
12	315,534	936,744	1.09	0.00	0.71	0.19	5.04	3,354,605	3,670,139	10.6
13	325,997	970,220	1.09	0.00	0.72	0.19	5.08	3,650,144	3,976,141	11.2
14	**337,382**	**1,006,651**	**1.08**	**0.00**	**0.73**	**0.19**	**5.12**	**3,932,045**	**4,269,427**	**11.7**
15	338,833	1,011,222	1.08	0.00	0.73	0.19	5.10	3,949,580	4,288,413	11.7
16	342,521	1,023,021	1.08	0.00	0.72	0.19	5.04	3,989,551	4,332,071	11.6

Table 4: Develin Creek "Sulphide City" open pit optimisation estimate.

The current Develin Creek optimisation estimate for the Sulphide City open pit delivers approximately 1Mt of material (Table 4) in an open pit design down to 150 metres in depth with a higher stripping ratio of 11.7:1 (Figure 3). The Develin Creek optimisation estimate will not form part of the Mt Chalmers planned mining schedule until the final metallurgical test work has been completed and recovery to concentrates has been estimated.

Develin Creek has the potential to extend the project life by a further 12 months however, with the current MRE having 47% in the Indicated category, this deposit would require further drilling to improve the confidence in the resource modelling and optimisation estimate.

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

Develin Creek Optimisation (Continued)

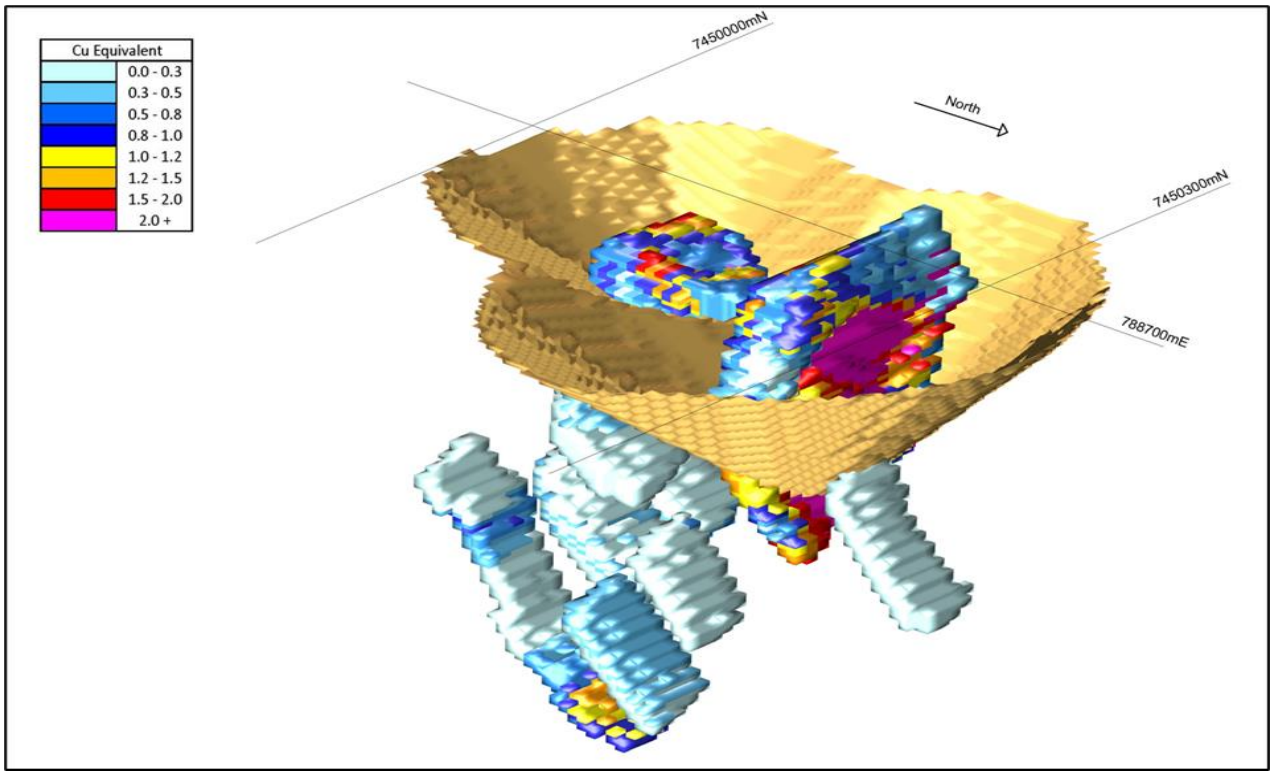

Figure 3: The Develin Creek (Sulphide City) pit optimisation grade shell and resource block model looking north.

Woods Shaft Optimisation

The current Woods Shaft optimisation estimate delivers 737,3374 tonnes of material in an open pit designed to a depth of 80m with a stripping ratio of 4.7:1 (Figure 4). The Woods Shaft optimisation estimate will not form part of the Mt Chalmers planned mining schedule at this stage as the MRE remains in the Inferred category.

The Company plans to undertake further drilling to upgrade the Woods Shaft MRE into the Indicated category as the project develops, and considers there is also potential for expansion of the Woods Shaft resource through near-mine exploration and resource drilling.

The combined Mt Chalmers, Woods Shaft and Develin Creek MRE currently stands at **15.1Mt @ 1.3% CuEq for 195,800t CuEq**[1] with 88% of the Mt Chalmers resource in the Measured and Indicated categories and 47% of the Develin Creek resource in the Indicated Category (Table 2).

Following the initial 51% acquisition of the Develin Creek project from Zenith in August 2023, the Company has now delivered five resource upgrades since listing in May 2021, which includes a maiden QMines resource at the Develin Creek project in September 2023.[1]

[1] ASX Announcement, QMines Delivers Fifth Resource At Develin Creek, 18 September 2023.

Woods Shaft Optimisation (Continued)

Shell Number	Total Material							Waste Volume	Total Volume	Strip Ratio
	Volume	Tonnes	Cu Grade	Pb Grade	Zn Grade	Au Grade	Ag Grade			
	(BCM)	(t)	(%)	(%)	(%)	(%)	(%)	(BCM)	(BCM)	(BCM)
1	2,794	8,104	0.49	0.00	0.00	1.88	0.00	10,769	13,563	3.9
2	3,211	9,312	0.49	0.00	0.00	1.86	0.00	12,141	15,352	3.8
3	31,750	92,075	0.61	0.00	0.00	1.25	0.00	135,285	167,035	4.3
4	41,045	119,029	0.58	0.00	0.00	1.26	0.00	169,309	210,354	4.1
5	64,417	186,810	0.52	0.00	0.00	1.19	0.00	250,357	314,774	3.9
6	73,420	212,917	0.51	0.00	0.00	1.20	0.00	301,323	374,743	4.1
7	80,864	234,505	0.49	0.00	0.00	1.18	0.00	341,501	422,365	4.2
8	86,358	250,437	0.49	0.00	0.00	1.17	0.00	364,578	450,936	4.2
9	95,433	276,757	0.47	0.00	0.00	1.13	0.00	400,275	495,708	4.2
10	113,129	328,074	0.45	0.00	0.00	1.08	0.00	481,530	594,659	4.3
11	179,973	521,923	0.36	0.00	0.00	1.01	0.00	784,994	964,968	4.4
12	219,863	637,602	0.34	0.00	0.00	0.97	0.00	979,101	1,198,964	4.5
13	227,603	660,048	0.34	0.00	0.00	0.96	0.00	1,024,133	1,251,736	4.5
14	239,760	695,305	0.34	0.00	0.00	0.95	0.00	1,103,491	1,343,251	4.6
15	**254,267**	**737,374**	**0.33**	**0.00**	**0.00**	**0.94**	**0.00**	**1,195,272**	**1,449,539**	**4.7**
16	264,907	768,231	0.33	0.00	0.00	0.94	0.00	1,282,633	1,547,540	4.8
17	270,283	783,822	0.33	0.00	0.00	0.93	0.00	1,327,695	1,597,979	4.9

Table 5: Woods Shaft open pit optimisation estimate.

Woods Shaft Optimisation (Continued)

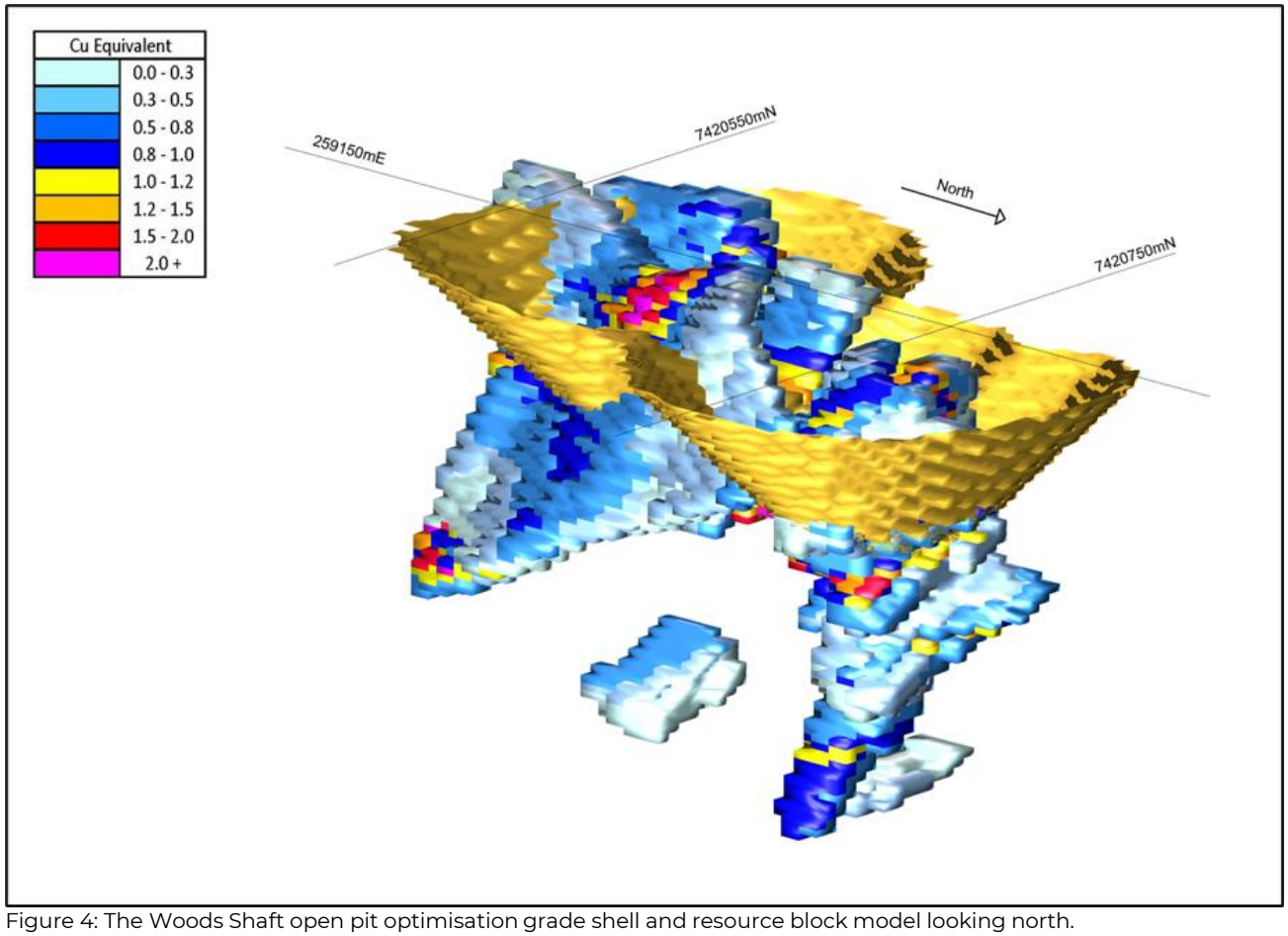

Figure 4: The Woods Shaft open pit optimisation grade shell and resource block model looking north.

Metallurgical Results

Metallurgical test work for the Mt Chalmers project has been ongoing over the past eighteen months and has been managed by COMO Engineers (**COMO**).[1][2][3] The outcome of the extensive test work programme shows the Mt Chalmers project has the capacity to produce three commercial concentrate types, being a copper/gold concentrate, a zinc concentrate, and a pyrite concentrate from a standard floatation style treatment plant. The recoveries from the three concentrates can be seen in Table 7 below. These inputs relate to the Mt Chalmers project and have been utilised in calculating the estimated contained metal (recovered) from the treatment plant seen in Table 6.

Recovered Contained Metal	Mt Chalmers Pit	Woods Shaft Pit	Develin Creek Pit	Total
Copper Tonnes	61,300	2,215	9,567	**73,082**
Gold Ounces	131,847	18,705	4,990	**155,542**
Zinc Tonnes	24,053		2,352	**26,404**
Silver Ounces	1,261,105		107,289	**1,368,394**
Pyrite Tonnes (Concentrate)	1,365,300	TBD	TBD	**1,365,300**

Table 6: Estimated contained metal (recovered) from the Mt Chalmers, Woods Shaft and Devlin Creek pit optimisations.

[1] ASX Announcement, Excellent Metallurgical Results From Preliminary Testwork, 30 March 2022.
[2] ASX Announcement, Updated Metallurgy Confirms High Recoveries, 29 March 2023.
[3] ASX Announcement, Metallurgical Testwork Confirms Outstanding Recoveries & Environmental Outcomes, 1 June 2023.

Metallurgical Results (Continued)

Concentrate	Mass	Copper		Lead		Zinc		Sulphur		Iron		Silver		Gold		Cyanide
	%	%	% dist	%	% dist	%	% dist	%	% dist	%	% dist	ppm	% dist	ppm	% dist	Leachability %
Copper	2.74	26.0	88.8	11.1	78.1	3.21	7.86	32.9	14.9	25.9	10.7	149.7	53.6	26.1	47.5	35.7
Zinc	1.88	1.53	3.58	1.24	5.99	48.5	81.3	35.2	10.9	9.92	2.81	57.5	14.1	9.98	12.4	71.3
Pyrite	11.11	0.25	3.98	0.21	6.58	0.27	2.47	32.1	61.95	29.7	51.82	13.6	20.76	2.13	21.24	79.6
Tails	84.27	0.03	3.62	0.04	9.30	0.12	8.39	0.84	12.30	2.62	34.63	1.00	11.58	0.25	18.88	Untested
Reconstituted Feed	100.0	0.80	100.0	0.39	100.0	1.16	100.0	31.82	100.0	23.05	100.0	53.04	100.0	6.32	100.0	42.7

Table 7: Metallurgical recoveries achieved for the three Mt Chalmers concentrates.

Whilst the Company's focus has been on delivering marketable copper and zinc concentrates, the Company elected to extend test work to consider the viability of producing a pyrite concentrate. The addition of the pyrite concentrate represents a further income stream whilst also significantly reducing the environmental impact of the project.

As pyrite in tailings dams oxidises, it increases the acidity of the tailings dam, commonly known as Acid Mine Drainage (**AMD**). One of the primary outcomes from the extensive test work undertaken in developing the pyrite concentrate is that sulphur grades delivered into the proposed tailings storage facility are consistently less than 1% by volume. This significantly enhances the environmental credential of the project by substantially reducing the risk of AMD.

The Mt Chalmers copper and zinc concentrates produced from the recent test work are very clean and possess low deleterious elements.

The pyrite market appears to be growing with sulphuric acid being used extensively in the chemicals and fertiliser industries. Recent market appraisals of point to significant increases in the use of sulphuric acid in the renewable energy market and the manufacture of batteries and solar cells.

Annual Concentrate Production - 1Mtpa Treatment Plant		
Concentrate	**Mass Pull (%)**	**Tonnes Per Annum (t)**
Copper	2.74	27,400
Zinc	1.88	18,800
Pyrite	11.11	111,000
Total:	**15.73%**	**157,200**

Table 8: Concentrate production mass pull estimate, Mt Chalmers project metallurgical recovery.

Based on the metallurgical mass pulls and the proposed 1Mtpa Mt Chalmers treatment plant, the Mt Chalmers project has been designed to produce three concentrates as shown in Table 8. COMO Engineers have estimated the pyrite concentrate will be produced from both the Mt Chalmers Volcanic Hosted Massive Sulphide (**VHMS**) and Stringer material that occurs within the Mt Chalmers deposit.

It is expected that three different pyrite concentrates will be produced which can be seen in Table 9. These concentrates will have different grade and volumes and are expected to attract different pricing.

Metallurgical Results (Continued)

Pyrite Concentrate	Mass (%)	Sulphur (%)	Iron (%)	Gold (g/t)	Silver (g/t)	Tonnes Per Annum (t)
High Grade Pyrite	5.95	47.3	41.5	2.76	15.0	59,500
Mid Grade Pyrite	1.54	34.9	32.3	3.01	20.0	15,400
Low Grade Pyrite	3.61	6.89	10.1	0.81	9.0	36,100
Total:	**11.1**					**111,000**

Table 9: High grade, Mid grade and Low pyrite concentrate grades with mass pulls and metals content.

As part of the Pre-Feasibility Study reporting, COMO Engineers have delivered the preliminary treatment plant design and flow sheet for the project based on this metallurgical test work and metal recoveries for the Mt Chalmers project. The flow sheet and mill design layout in plan view can be seen in Figures 5 and 6 below.

COMO are expected to deliver the final PFS metallurgy report in February 2024 and follow up with the final PFS report incorporating all documentation and outcomes relating to the treatment plant flow sheet, treatment plant design requirements and the OPEX and CAPEX estimates.

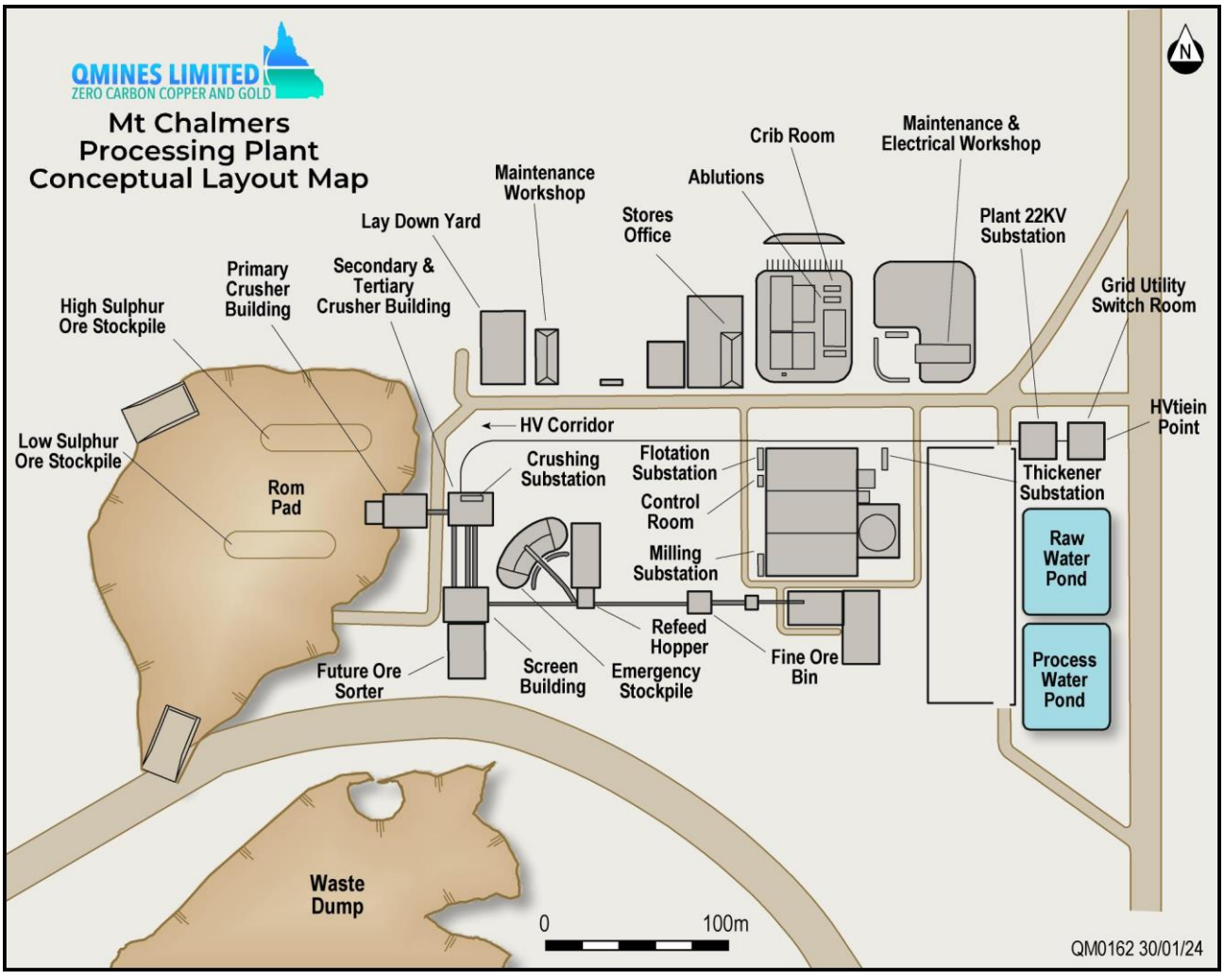

Figure 5: Mt Chalmers conceptual project treatment plant design and site layout.

Metallurgical Results (Continued)

Summary of COMO Metallurgical Study

The VHMS and Stringer hard rock mineralisation at the Mount Chalmers mine site is amenable to the proposed flotation concentrate flowsheet. Como concludes:

- The VHMS ore produces saleable copper, zinc and pyrite concentrates.
- The Stringer ore produces saleable copper and pyrite concentrates.
- Flotation recovery from blends of VHMS and stringer were consistent with results from 100% VHMS and 100% Stringer ore.
- There are no fatal flaws identified in the current strategy by QMines.
- The mineralisation type is classified as 'complex Copper-Lead-Zinc', and requires regrinding and differential flotation of concentrates, to achieve saleable concentrate grades.
- Copper recovery to rougher concentrate is consistently above 90% for all samples tested.
- Lead tends to report to the copper concentrate, due to the fine size distribution of the galena particles. Ongoing work is underway to determine a methodology to reduce the lead content in the final copper concentrate to a standard concentrate grade of 6% lead or less.
- Perfect separation of zinc from copper is difficult due to ultrafine chalcopyrite particles within sphalerite particles.
- Production of a pyrite concentrate from the Copper-Zinc flotation tailings is potentially economically viable with the sulphur concentration in the pyrite concentrate sufficiently high providing potential for use as a feedstock for sulphuric acid production.

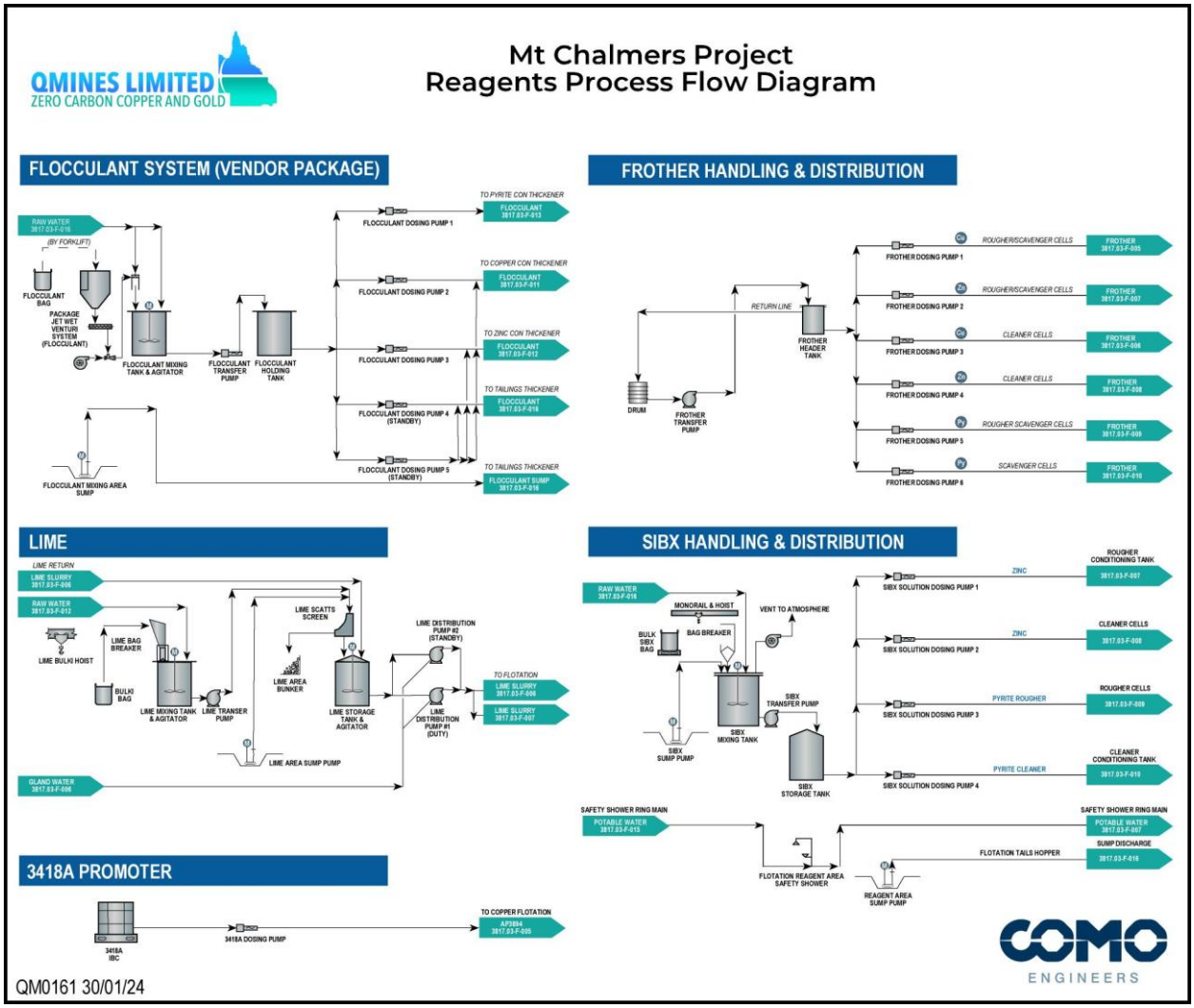

Figure 6: Mt Chalmers Copper Project treatment plant design and site layout.

Metallurgical Results (Continued)

- Test work demonstrates that the pyrite concentrate may be cyanide leached to recover approximately 75% of the gold within the pyrite concentrate.
- Gravity test work is encouraging, with a single test producing a recovery of 36% of the gold in the concentrate, of which 68% was cyanide soluble.
- Calculated gold grades in the leach tests were higher than the assay grades, indicating the potential for coarse gold in the ore.
- Tailings samples show consistently less than 1% sulphur demonstrating a low environmental risk in terms of potential acid mine drainage.

Pre-Feasibility Study

QMines is pleased to report that significant progress has been made in recent months with multiple deliverables for the PFS. The study contemplates the viability of the Mt Chalmers and Develin Creek projects as a stand-along mining and processing operation.

The Company commenced the PFS in July 2023, engaging COMO Engineers to design the proposed treatment plant and finalise metallurgical test work that commenced in April 2022, and to establish the treatment plant design parameters and flow sheets based on the outcome of the extensive metallurgical test work.

Additionally, the Company engaged multiple study team consultants to deliver various aspects required to complete and deliver the PFS. The PFS study team at this stage consists of the members outlined in Table 10 below.

PFS Study Team	Deliverables
COMO Engineers	Metallurgical Studies
COMO Engineers	Treatment Plant Design/Flow Sheet
COMO Engineers	Process Plant CAPEX
COMO Engineers	Power Study
Minecomp Pty Ltd	Pit Optimisations and Design
COMO Engineers	Process OPEX
Minecomp Pty Ltd	Mine Site Design and Layout
Auralia Mining Consultants	Mining Scheduling
PSM Geotechnical	Geotechnical Study
EGI Pty Ltd	Environmental Geochemistry
LMGS Pty Ltd	Tailings Storage Facility
LMGS Pty Ltd	Water Balance Study
UTM Global	Heritage and Native Title
UTM Global	Legal Tenement Report
Tetra Tech / Coffey	Environmental Study
Tetra Tech / Coffey	Permitting Pathway

Table 10: Mt Chalmers PFS study team.

Pre-Feasibility Study (Continued)

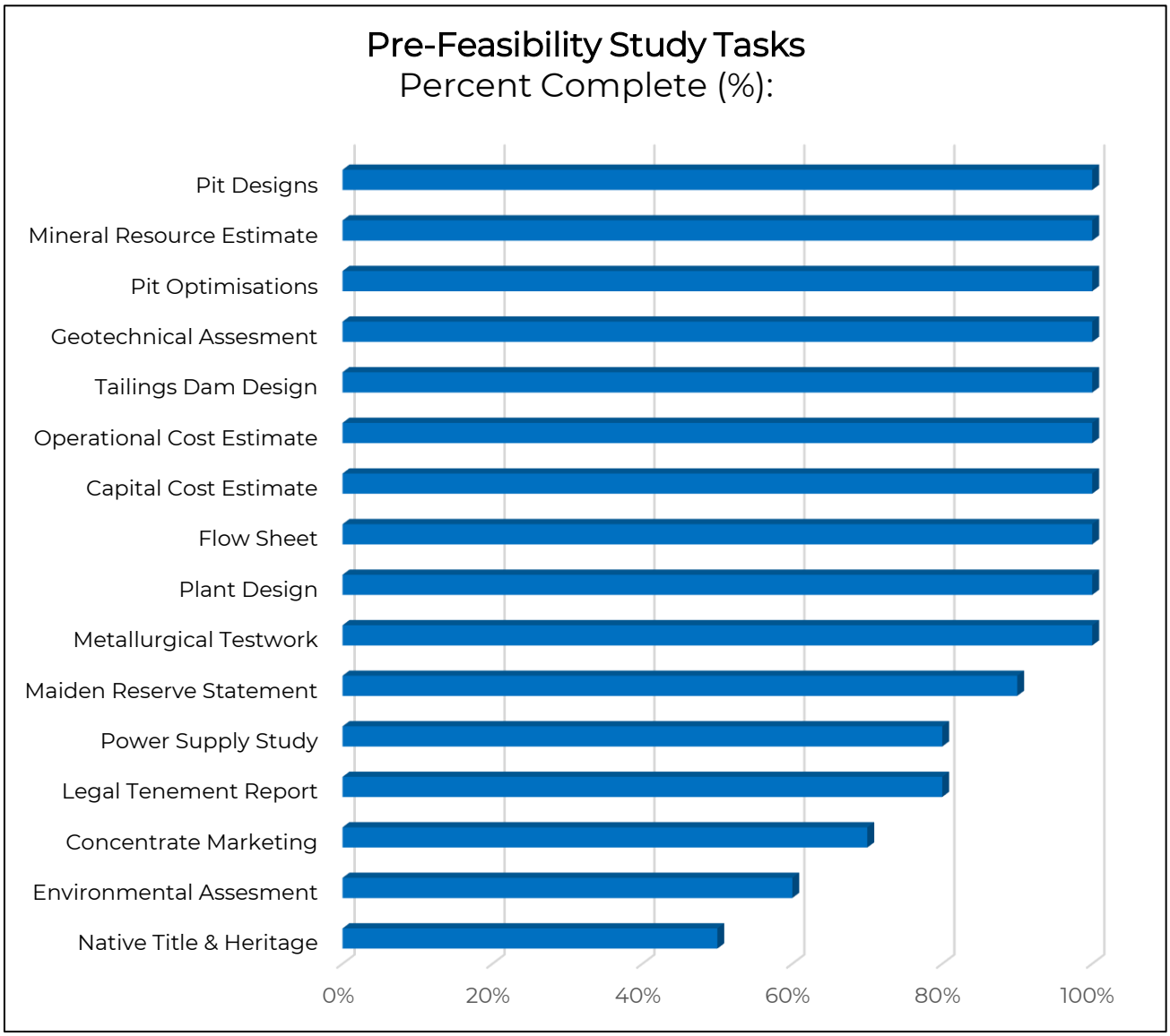

Figure 7: PFS deliverables completed and pending completion, January 2024.

Representatives from COMO Engineers, Minecomp, Auralia Mining Consulting, PSM Geotechnical, Environmental Geochemistry International and Land and Marine Geological Services conducted required site visits in Q4-2023. The group inspected multiple potential treatment plant locations (Figure 8), one onsite at Mt Chalmers and two offsite located in Rockhampton.

In Q4-2023, representatives from the Company travelled to Melbourne to meet with several metals traders to discuss the Mt Chalmers and Develin Creek projects and potential offtake arrangements. Initial feedback from these discussions was pleasing, with strong interest shown in the projects by multiple parties.

The Company has previously forecast the PFS and the maiden ore reserve statement are to be completed and delivered in Q2-2024, which is currently tracking ahead of schedule.

Pre-Feasibility Study (Continued)

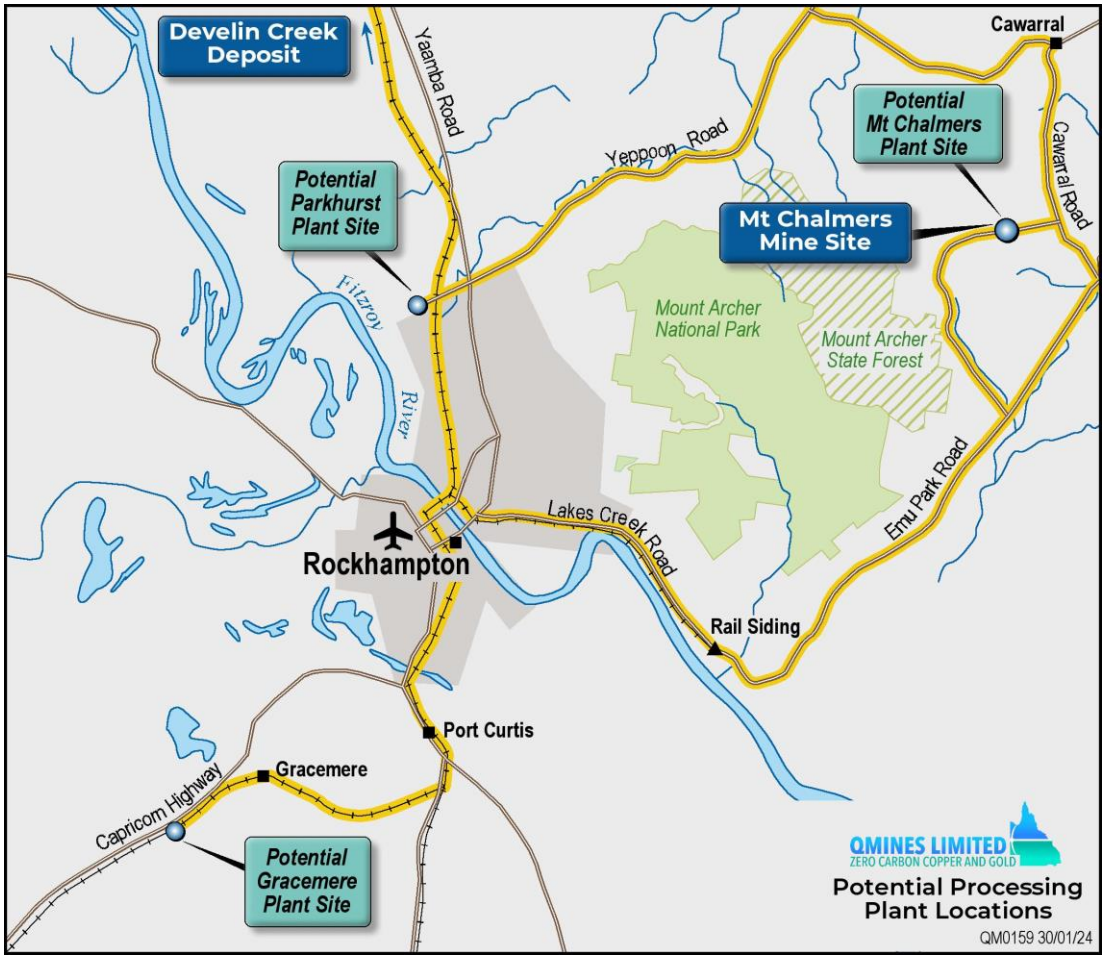

Figure 8: Potential processing plant locations assessed as part of the PFS.

Figure 9: QMines staff completing geotechnical drilling at Mt Chalmers, January 2024.

Cautionary Statement

The study referred to in this ASX announcement is conceptual in nature. It is a preliminary technical optimisation study designed to assess the Mt Chalmers and Develin Creek projects potential for open pit mining of base and precious metals and to assist in determining the likely depth of open pit mining and potential tonnes of material from those open pits. The study is preliminary in nature and not intended as a feasibility study. It should be understood by the reader that this announcement reports on preliminary outcomes of early-stage open pit optimisation works on the Mt Chalmers and Develin Creek deposits. The outcomes presented here should not be considered as anything other than preliminary guidance on the potential for future development of the Mt Chalmers and Develin Creek Projects. It does not account for the capital costs of a processing plant or other pre-mining capital required to deliver the project, infrastructure works and or the permitting approvals for the project. Work completed to date is insufficient to support estimation of a Mineral Reserve or to provide assurance of an economic development case at this stage. The study includes material that has been categorised as Inferred. It is anticipated that further drilling will be undertaken to improve confidence in this material for potential conversion to Indicated or better categories.

Competent Person Statement (Mineral Resource)

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.

Competent Person Statement (Pit Optimisation)

The Information in this Report that relates to the Open Pit Optimisation Study and is based on information compiled by Mr Gary McCrae, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy. Mr McCrae is a full-time employee of Minecomp Pty Ltd. Mr McCrae has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken 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”. Mr McCrae consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Competent Person Statement (Metallurgy)

The Information in this Report that relates to Metallurgical Test Results is based on information compiled by Mr Mark Hargreaves, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy (AusIMM). Mr Hargreaves is a full-time employee of Como Engineers Pty Ltd. Mr Hargreaves has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken 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”. Mr Hargreaves consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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.

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 and Develin Creek projects now have a Measured, Indicated and Inferred Resource (JORC 2012) of **15.1Mt @ 1.3% CuEq for 195,800t CuEq**.[1][2]

QMines' objective is to make new discoveries, commercialise existing deposits and transition the Company towards sustainable copper production.

Projects & Ownership

Mt Chalmers (100%)

Develin Creek (51% with rights to 100%)[2]

Silverwood (100%)

Warroo (100%)

Herries Range (100%)

QMines Limited

ACN 643 212 104

Directors & Management

ANDREW SPARKE
Executive Chairman

ELISSA HANSEN (Independent)
Non-Executive Director & Company Secretary

PETER CARISTO (Independent)
Non-Executive Director (Technical)

JAMES ANDERSON
General Manager Operations

GLENN WHALAN
Project Geologist (Competent Person)

Shares on Issue

210,926,049

Unlisted Options

9,950,000 ($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 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)

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[1] ASX Announcement - Mt Chalmers Resource Upgrade, 22 November 2022.
[2] ASX Announcement – QMines Delivers Fifth Resource at Develin Creek, 18 September 2023.

JORC Code, 2012 Edition – Table 1 Mt Chalmers and Develin Creek Mineral Resources

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td>Sampling techniques</td><td>

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.

</td><td>

The Mt Chalmers and Woods Shaft deposits have been drilled with a combination of percussion drilling (“PDH” open hole percussion, reverse circulation drilling (“RC”) and diamond core holes (“DD”) amounting to 514 drill holes for 43,919 metres.
Develin Creek deposits have been drilled with a combination of percussion PDH and RC plus diamond for a total of 44,228 metres.

<table>
<tr><td>Drill Hole Table - QMines</td><td colspan="3">Mt Chalmers</td></tr>
<tr><td>Hole Type</td><td>Number</td><td>RC (m)</td><td>Diamond (m)</td></tr>
<tr><td>Diamond</td><td>20</td><td></td><td>2466.4</td></tr>
<tr><td>RC Precollar Diamond Tail</td><td>24</td><td>1714.2</td><td>1721.47</td></tr>
<tr><td>RC Only</td><td>50</td><td>8003.0</td><td></td></tr>
<tr><td>RC Precollar - Diamond tails incomplete</td><td>9</td><td>513.1</td><td></td></tr>
<tr><td>Sub Total:</td><td>103</td><td>10,230.3</td><td>4,187.87</td></tr>
<tr><td>Drill Hole Table - Historic</td><td colspan="3"></td></tr>
<tr><td>Hole Type</td><td>Number</td><td>PDH (m)</td><td>Diamond (m)</td></tr>
<tr><td>Diamond</td><td>32</td><td></td><td>3,393.95</td></tr>
<tr><td>PDH Precollar Diamond Tail</td><td>72</td><td>4,106.81</td><td>3,894.82</td></tr>
<tr><td>PDH Only</td><td>237</td><td>11,824.43</td><td></td></tr>
<tr><td>Sub Total:</td><td>341</td><td>15,931.24</td><td>7,288.77</td></tr>
<tr><td>Total:</td><td>444</td><td>26,161.54</td><td>11,476.64</td></tr>
</table>
</td></tr>
</table>

Criteria	JORC Code explanation	Commentary

Drill Hole Table - QMines	Woods Shaft		
Hole Type	**Number**	**RC (m)**	**Diamond (m)**
RC Only	11	905	
Sub Total:	**11**	**905**	
Drill Hole Table - Historic			
Hole Type	**Number**	**PDH (m)**	**Diamond (m)**
Diamond	7		1,154.58
PDH Precollar Diamond Tail	1	150	43.4
PDH Only	33	3,273.8	
RC Only	**8**	**754**	
Sub Total:	**59**	**4,177.8**	**1,197.98**
Total:	**70**	**5,082.8**	**1,197.98**

Hole Type	Number	RC (m)	Diamond (m)
Mt Chalmers	**444**	**26,161.54**	**11,476.64**
Woods Shaft	**70**	**5,082.8**	**1,197.98**
Total:	514	31,244.34	12,674.62

Criteria	JORC Code explanation	Commentary
		DEVELIN CREEK PROJECT

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**	

- Sampling consists of either 1 m intervals of chip material sub-sampled to 2 kg for RC samples or 1 m sawn or split half core samples yielding approximately a 3-5 kg sample.
- At the laboratory, all sample material from each diamond core and RC sample submission is crushed and pulverized to give a 200 g representative sample from which a sub-sample of 30 g is taken for base metal analysis and a 30 g charge for gold.
- There is no documentation concerning the analytical method used by Geopeko, but the work was completed at the Mt Morgan ("MML") minesite laboratory and presumably the analysis was to industry standard for the time. The Federation sample prep and analysis was completed by a commercial laboratory using a mixture of ICP and 50 g charge fire assay with atomic absorption spectroscopy ("AAS") for base metals and gold, respectively.
- Diamond drilling utilised HQ triple tube with diamond core sampling consisting of between 0.3 m and 1.5 metre intervals of core. Samples were cut with a Sandvik wet core saw yielding 1-5 kg core samples (dependent on sample intervals) into calico sampling bags. RC samples were collected at 1m intervals from an on-rig cyclone cone splitter with 2-3kg, or approximately 10% of the split sample saved in calico bags except for duplicate samples with each being 1-2kg, or approximately 5% of the total sample. In each case 4 individual calicos are placed in polyweave

Criteria	JORC Code explanation	Commentary
		bags and sealed for delivery to the assay lab. Samples are sent by road to ALS Laboratories in Brisbane, crushed, pulverised and riffle split delivering 200 g pulp for base metal and precious metal assay. • Handheld portable XRF (pXRF) measurements of base metals i.e. Cu, Pb and Zn were taken of unsieved RC drilling material at appropriate horizons to check for fine grained disseminated base metal mineralisation. Anomalous readings resulted in these samples being submitted for conventional assay. **DEVELIN CREEK PROJECT** • 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 2 m intervals, and half core splits sent to the laboratory. • Zenith drilling used regular 1 m intervals of half core with some subsampling (some ¼ core when field duplicates were used) • QMC PD samples were obtained by compositing 1 m samples from the rig into 3 m samples unless sulphide mineralisation was noted then shorter 1 or 2 m 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. • Fitzroy RC samples (1 m) were split with an on-rig riffle splitter and sampled with a sample spear as 3 m composites in the hangingwall and footwall. RC samples were not composited in mineralized zones. • Zenith RC samples were collected on 1 m intervals from onboard cyclone and cone or riffle splitters aiming for 3 kg sub samples. RC samples were collected with a sample spear as 4 m composites in the hanging-wall and footwall. RC samples were not composited in mineralized zones. • Mineralized samples are high in sulphides and relatively dense. Zenith drilling used up to 500PSI air pressure (with 1,000PSI booster) and foam to improve ample return when needed. **METS TEST WORK** • Samples for metallurgical testing were taken from drill core. • The company drilled HQ triple tube with diamond core sampling consisting of between 300 mm and 1.5 metre intervals of core. • The core was sawn in half lengthways (parallel to long core axis) using a Sandvik wet core saw yielding 1-5 kg core samples into calico sampling bags. 4 individual calicos are placed in polyweave bags and sealed for delivery to the assay lab. • Samples of half core are sent by road to ALS Laboratories in Brisbane, crushed, pulverised and riffle split delivering 200 gm pulp for base metal and precious metal assay. • Half core from holes MCDD017 and MCDD044 was initially sent to ALS for standard

Criteria	JORC Code explanation	Commentary
		geochemical analysis with results used for resource estimation with results previously reported to the ASX. • The remaining half core from MCDD017 and MCDD044 was submitted to ALS Metallurgy and to Auralia Metallurgy for metallurgical testing. • Management of the metallurgical program was undertaken by Como Engineers of Perth. • Three composite samples were prepared: Comp 1 (Cu/Pb/Zn Comminution), Comp 1 (Cu/Pb/Zn), and Comp 2 (stringer) • The first Comp 1 sample was used in comminution tests • The composites represented examples of massive sulphide mineralisation (Comp 1) and stringer style mineralisation (Comp 2) • Each prepared composite was then control-crushed to <3.35 mm, blended, and homogenised via a rotary sample divider (RSD) before 1 kg charges were split for further testing. Comp 1 Cu/Pb/Zn Comminution Comp, as well as a sub-sample of Comp 2 Stringer was used for Bond ball mill work index (BWi) determination. • Comp 1 Cu/Pb/Zn and Comp 2 Stringer was utilised for flotation testing. • Core from Develin Creek holes ZDCDD001, ZDCDD002 and ZDCDD003 was initially sent to ALS for standard geochemical analysis with results used for resource estimation with results previously reported to the ASX. • The remaining half core from holes ZDCDD001, ZDCDD002 and ZDCDD003 was submitted to ALS Metallurgy and to Auralia Metallurgy for metallurgical testing.
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• In 2021 percussion drilling was with a Mayhew 1000 or a Mayhew 1500 rig with 114.5 mm down hole hammer bit and 140mm percussion face sampling hammer. In early 2022 QMines acquired a KWLRC350 rig with booster and auxiliary compressor and using 5 m, 102 mm diameter RC rods and a 143 mm percussion face sampling hammer and this was used to drill all RC holes in 2022. • For the Peko diamond drilling core sizes ranged from NQ to BQ whereas for Federation diamond drilling was mostly HQ size with some NQ where needed. • In 1995 Great Fitzroy Mines NL drilled eight vertical RC holes at Woods Shaft using a Schramm RC rig. No sampling or procedural data is available however the program was managed by Alex Taube, former chief geologist with Geopeko at Mt Chalmers. • Many historical holes were initially drilled using an open hole percussion or RC drilling method and tailed with a DD hole. • The vast majority of drillholes were vertical. • QMines diamond drilling was undertaken using a multi-purpose UDR 650 track mounted rig, and a Hydco 1000 Dual purpose truck mounted rig. Diamond tails were drilled by a track mounted Hyundai Dasco 7000 diamond core rig. • Coring was by HQ triple tube with the core sample being orientated using REFLEX ACT111 core orientation tool. No historical core orientation data is available. **DEVELIN CREEK PROJECT**

Criteria	JORC Code explanation	Commentary

		• Exploration drilling has been completed over three main phases by different operators. The following subset the Develin Creek local area.
		• QMC completed drilling 1992 to1996 that included:
		  ○ 46 diamond holes,
		  ○ 129 PD holes (some HQ but mostly NQ)
		  ○ 7 water bores
		• Icon/Fitzroy completed extensional drilling 2011 that included:
		  ○ 2 RC holes
		  ○ 6 diamond tails (some HQ but mostly NQ2)
		• Zenith completed verification and infill drilling in 2014 and 2021/22 including:
		  ○ 31 RC holes, 6 with diamond tails
		  ○ 3 diamond drill holes
		• Diamond drilling is mainly a diamond tails on pre-collared percussion of RC drilling through the Tertiary cap rock.
		• Core was generally not oriented with most being vertical holes. Some spear orientations were recorded in some angled holes.
		• QMC open hole PD drilling comprised a nominal 5 ½ inch diameter hammer with all holes cased with PVC to solid basement. Hole depths range from 21m to 310m. About 25% of the PD holes were abandoned prior to achieving their intended depth due to unfavourable drilling conditions and extreme difficulty in penetrating the tertiary cover.
		• Fitzroy RC drilling comprised a nominal 4 ½ or 5 ¼ inch diameter face sampling hammer. Hole depths range from 82m to 232m.
		• Zenith RC drilling comprised a nominal 5 or 5 ½ inch diameter face sampling hammer. Hole depths range from 60 to 289m.
		• **METS DRILLING**
		• Diamond Drilling was undertaken using a multi-purpose UDR 650 track mounted rig, and a Sandvik 710 track mounted drill rig using HQ triple tube and core barrel.
		• Coring was HQ triple tube with the core sample being orientated using REFLEX ACT111 core orientation tool.

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.*	• No historic sample recovery data is available for either the DD or the RC drilling. Historical reports indicate 90% recovery from the Geopeko drilling except for weathered and oxide zones (these zones have been mined out). • No documentation of historical RC sampling procedures is available • Geopeko investigated the risk of sample bias due to loss of fines. Only a small number of samples were collected, too few for anything conclusive, but there were indications of a small preferential concentration of sulphides in the samples of retained drill cuttings with an associated increase in Cu, Ag and possibly Au grade (results for Au were reported as erratic). • The drilling methods are considered to be of industry standard at the time of drilling and would normally have been expected to give reliable results suitable for resource estimation.

Criteria	JORC Code explanation	Commentary
		• With a lack of recovery data it is not possible to establish if there is a relationship between sample recovery and metal grade. • QMines diamond core recovery was excellent with between 93 - 95% of all diamond core recovered from both the mineralised and unmineralized zones. RC chips from each metre were collected in chip trays and logged. The majority (>95%) of RC samples were dry. Calico sample bags were of a sufficiently fine weave as to retain almost all of the sample fine fraction even when saturated. • Drilling methods are consistent with current industry practices with no sample bias and are representative in nature. **DEVELIN CREEK PROJECT** • Zenith's RC recovery was visually assessed and considered to be acceptable within the mineralized zones. • Diamond core recovery was logged with minimal core loss recorded in mineralised intervals. Zenith's core recovery is 99%. • PD and RC recovery was not measured or recorded but visually assessed and considered to be acceptable within the mineralized zones. • Diamond core was reconstructed into continuous runs, depths being checked against the depth marked on the core blocks. • PD and RC samples were visually checked for recovery, moisture and contamination. A cyclone and splitter were used to provide a uniform sample and these were routinely cleaned. Sample recovery was generally very high within the mineralisation zones. No bias is expected to have occurred during sampling **METS TEST WORK.** • Mines diamond core recovery was excellent with between 93 - 95% of all diamond core recovered from both the mineralised and unmineralized zones.
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.*	• All historical drilling was competently logged with the production of hardcopy logs and cross sections. All hardcopies had appropriate levels of information for a resource estimate to be completed. • McDonald Speijers Pty Ltd ("MS"), consultant resource geologists, built the current digital database in 1995 from sighting the original drill logs and kept records. John Macdonald, Principal Geologist with MS, transcribed and compiled some of the hardcopy data including visual verification into digital data. • Logging consisted of a series of codes that were a mixture of quantitative and qualitative data. • Geological information originally consisted of lithology descriptions, alteration, mineralisation, and oxidation levels. Not all of this data is available in a digital format. • QMines drilling output has been competently logged by Company geologists with all logging data digitised electronically into Panansonic Toughbook. • Logging codes were established prior to commencement of drilling operations by H & S

Criteria	JORC Code explanation	Commentary
		Consultants and were a mixture of quantitative and qualitative data. • Geological information originally consisted of lithology descriptions, alteration, mineralisation and oxidation levels. All data is available in a digital format. • All core and chip trays have been digitally photographed and stored in the Company NAS drive. **DEVELIN CREEK PROJECT** • All drill holes were logged in full apart from some percussion pre-collars through the cover sequence.Diamond core, PD and RC drill chips were logged in detail through the entire hole, with records kept of lithology, degree of oxidation, etc. Diamond core was geotechnically logged for recovery. Diamond core was stored on site with key holes systematically re-logged and re-sampled (before 2011). A small representative sample of RC chips was collected for each interval sampled, and these have been retained for future reference. • Diamond core, PD and RC chip logging included records of lithology, mineralisation, and alteration. • Core was photographed and, pre-2011 magnetic susceptibility logged with selected samples submitted for petrography. All drill holes were logged in full apart from some percussion pre-collars through the cover sequence.Diamond core, PD and RC drill chips were logged in detail through the entire hole, with records kept of lithology, degree of oxidation, etc. Diamond core was geotechnically logged for recovery. Diamond core was stored on site with key holes systematically re-logged and re-sampled (before 2011). A small representative sample of RC chips was collected for each interval sampled, and these have been retained for future reference. Diamond core, PD and RC chip logging included records of lithology,mineralisation, and alteration. Core was photographed and, pre-2011 magnetic susceptibility logged with selected samples submitted for petrography.
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 duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• Geopeko diamond core was sampled under geological control, but generally averaged about 1 m in sample length. Most of it was sampled using a mechanical core splitter with 50% taken for sample prep and assay. Some mineralised intervals were cut with a diamond saw with 50% of the interval sent to the MML laboratory at the Mt Morgan mine site for preparation and assay. No information is available about sample prep procedures used for this work. • Geopeko percussion drilling involved dry cuttings being collected via cyclones and riffled to give a sample of about 2 kg for submission to the laboratory. The RC samples were submitted to the MML laboratory at the Mt Morgan mine site for preparation and assay. No information is available about sample prep procedures used for this work. • Wet samples were collected in 2 ways. In the West Lode area samples were collected in a fine gauze catcher and mixed on a groundsheet before being coned and quartered. Sample intervals ranged from 1-2m. This sample collection method would have led to large losses of fines. In the Main Lode area wet samples were collected in half 44-gallon drums and transferred to hessian bags. When dry they were riffle split. This was a better method, but

Criteria	JORC Code explanation	Commentary
		fines would still have been lost when water flows were high and the collecting drum overflowed. Sample collection methods from Woods Shaft drilling are unknown. • The larger core from the 1995 Federation diamond holes was logged and mineralised intervals were selected on the basis of visual assessment. Quarter core samples (HQ core size) were collected using a diamond saw with the samples sent for sample prep and assay. • The Federation core samples were submitted to Australian Laboratory Services P/L for preparation at their Rockhampton facility and assay at their Townsville laboratory. The sample preparation scheme involved jaw crushing to an unknown size followed by pulverisation of the total sample in a Labtechnics LM5 mill to a nominal 90% passing -75um. • A barren quartz flush was used after each set of sulphide-rich samples at an unknown insertion ratio. • QMines Operations – All recovered diamond core was cut using a Sandvik core cutting wet saw. • Core was cut in half (parallel to the long-core axis) for submission with duplicates cut in quarters (parallel to the long-core axis) • ALS Laboratories dry the samples prior to crushing and pulverising. All sample material from each diamond core and RC sample submission is crushed and pulverized to a nominal 90% passing 75 µm giving a 200 g representative sample from which a sub-sample of 30 g is taken for base metal analysis and a 30 g charge for gold. • RC sampling was collected using a cyclone with a cone splitter delivering 10% representative sampling per metre drilled. Duplicate samples were collected every 25 m and 75 m drilled in the drilling sequence with duplicate samples being 50-50% split sample from the same cone splitter. • Drill core sample size was based on lithological, mineralisation or recovery boundaries and the minimum 30-centimetre core length is generally considered adequate. The RC sample weights of 3-5 kilograms exceed Gy's minimum. **DEVELIN CREEK PROJECT** • Diamond core was sawn in half, with half core (some ¼ core when field duplicates were used) on 1 to 2 m intervals. • All percussion and RC samples were collected on the rig using standard cyclone and riffle or cone splitters as described. Some samples were composited to generally 3 m by QMC and to 2 m by Fitzroy prior to lab submission. • Samples were recorded as dry or wet. • Exact sample preparation and QAQC for historic sampling is not described but sample preparation and analysis was undertaken by commercial laboratories. • Zenith's samples were dispatched to ALS Laboratories in Brisbane where • RC and core samples were crushed and then riffle split before being pulverized to 70% passing -75 microns. A subsample of pulverized material was then submitted used analysis. • Zenith's field QAQC procedures included :

Criteria	JORC Code explanation	Commentary
		○ the insertion of certified reference materials covering copper, zinc, silver and gold grades. ○ duplicates samples were collected of selected mineralised intervals and submitted for routine analysis. ○ Limited field duplicates of PD, RC and ¼ core were submitted during initial sampling. Both pulps and coarse rejects (and remaining core) were retained and subsequently resampled. Zenith's RC field duplicates returned satisfactory values. Zenith drilling targeted several twin or nearby drilling for verification purposes. ○ Sample sizes are considered to be appropriate to accurately represent the base metal mineralisation at Develin Creek based on the thickness and consistency of the intersections, the sampling methodology and the percent value assay ranges for the primary elements. **METS TEST WORK SAMPLING** • Core was sawn in half lengthways. Half core was initially assayed for use in resource estimation. The second half of the core was submitted for metallurgical testing. • Core from drillhole MCDD017 was used for almost all metallurgical testwork completed to date. Core from hole MCDD044 is now being used for blend work and will also be used in future testing as material from MCDD017 becomes depleted. • A continuous section of half-core from 21.95 m to 82.6 m in drillhole MCDD017 and from 38.9 m to 121.4 m in hole MCDD044 was submitted representing the two main mineralisation types on the project (massive sulphide and stringer mineralisation in each hole). • Sub-samples for comminution testing were taken at approximately 1 m lengths (~0.5 kg each). Samples for the metallurgical testing were taken over 0.8 to 1.4 m lengths generally representing 1 – 6 kg each. • Each prepared composite was then control-crushed to <3.35 mm, blended, and homogenised via a rotary sample divider (RSD) before 1 kg charges were split for further testing. Comp 1 Cu/Pb/Zn Comminution Comp, as well as a sub-sample of Comp 2 Stringer was used for Bond ball mill work index (BWi) determination. Comp 1 Cu/Pb/Zn was utilised for flotation testing. The sample sizes are considered appropriate for the stage of testing and representative of the materials to be tested.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks,*	• Geopeko samples were submitted to the MML laboratory at the Mt Morgan mine site for analysis. No technical details have been located regarding sample preparation procedures or assaying methods. The Mt Morgan operation has since shut down and the laboratory no longer operates. • Federation initially used an ICP method (1C587) for Cu, Pb, Zn, S, Ag, As, Ba, Fe and Mn. After about the first 3-4 batches of samples the laboratory introduced an AAS method (A101) to check Cu, Pb, Zn and Ag assays for higher grade samples. Fire assaying of a 50 g charge with

Criteria	JORC Code explanation	Commentary
	duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	an AAS finish (PM209) was used for gold. • Great Fitzroy submitted drill samples to the ALS laboratory at Townsville for analysis of Cu Pb Zn and As by method G001 and Au by method PM209. No sampling or QAQC data is available. • Peko submitted 352 samples for check assaying to Australian Laboratory Services (ALS) in Brisbane on a regular basis during their drilling programmes, although results for Au, Ag and Pb in particular were not always available. The drill logs recorded the results for these "duplicates" and MS were able to compile and analyse. They concluded there was no significant bias for Cu, Au, Ag and Zn. However, there was a significant positive bias with the check laboratory for Pb but this was not significant for the resource as Pb is not treated as an economic commodity. The MML silver results were adjudged to have poor precision but for relatively low silver values. • Federation undertook check assaying at an independent laboratory, but the results are not available. • There are no reports from any of the drilling campaigns of any standards being used to assess the accuracy of the analysis. • Despite the lack of documentation describing the analytical methods and the lack of QAQC it is reasonable to assume that the analysis was to an industry standard for the time and that the results would be reasonable, especially for the level of classification of the resource estimate. • QMines Operations – All samples for assay were submitted to ALS Laboratories in Brisbane. • Ag, As, Ba, Cu, Pb, S and Zn were determined by ALS (ME-ICP61) by ICP-AES on a four-acid digest, Au was determined using ALS method AA25 (fire assay with AAS on a 30 g pulp). Sample preparation and base metal analysis was undertaken in Brisbane and Fire Assay undertaken by ALS in Townsville. • The Company submits batches to ALS from drill programs as they come to hand. Reporting on QAQC results for all drillhole samples submitted between February 2021 and November 2022 has been undertaken by Lisa Orr of Orr and Associates, who found that QMines QAQC is consistent with current industry practice for a drill program. • Duplicate samples of riffle splits (RC samples) and quarter core (diamond drilling samples) are utilised to monitor laboratory reproducibility. With coefficients of variation under 17% there is no significant bias in assayed results from duplicates assayed. • Certified Reference Materials (CRM) and blanks (supplied by OREAS and GEOSTATS Pty Ltd) are inserted at regular intervals with suitable CRMs being used to monitor laboratory accuracy. With 275 out of 294 CRMs reporting within 2 standard deviations of certified values a success rate of 94% was achieved. • Blank samples of barren gravel are inserted at 33 m intervals. 194 of 196 blanks reported within 2 SDs for 99% success. • Internal laboratory QAQC reports are delivered by ALS with certification of assay method used and certified assay results. These results are delivered to the project Geologist, Drill

Criteria	JORC Code explanation	Commentary
		hole data base manager and the Company. • A Thermo Scientific Niton XL3t handheld portable pXRF unit was used as a first pass check for fine grained disseminated base metal mineralisation in RC drilling material. Reading times were 20 seconds. The device has automatic calibration after switch on, and 4 CRM standards were also used to test for precision. **DEVELIN CREEK PROJECT** • The analytical techniques used were by • AAS by QMC (1990s) • ICP-OES by Fitzroy (2011) • ICP-AES by Zenith (2014, 2021/22) for base metals and fire assay for gold with re-analysis of all elevated (>1%) base metal samples supplemented by multi-element ICP analysis of selected mineralised intervals as considered appropriate (pre-2011). Gold was by fire assay. • In 2011 and 2014, all grade intervals (> 1% base metals) were re-assayed with a 4 acid digestion level. • No geophysical or hand-held tools were utilised for the drilling programmes (magnetic susceptibility was locally collected) pre-2011. • In 2011, handheld XRF readings were recorded over the whole length of two diamond holes. Magnetic susceptibility was recorded every metre during the 2014 campaign. • Limited duplicates were submitted and standards and blanks were included by the laboratory. Subsequent re-sampling and check analyses (and re- assay of mineralised samples) is acceptable. Zenith's field QAQC procedures included the insertion of duplicate samples and certified reference materials for copper, zinc, gold and silver covering a range of concentrations to match the mineralisation. QA/QC reviews indicated a good correlation between reference materials and analyses reported by the laboratory. **METS TEST WORK** • All samples were analysed at ALS Laboratories which is a commercial ISO accredited laboratory. • QMines used a variety of QAQC control CRM's and blanks on initial assaying. • Internal laboratory QAQC samples were used. • The following analytical methods were employed for the metallurgical testing:

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><th>Element/Output</th><th>Method</th></tr>
<tr><td>Gold in ores and leach residues:</td><td>Fire assay/ICP-MS</td></tr>
<tr><td>Gold in solution:</td><td>Direct ICP-MS</td></tr>
<tr><td>Arsenic:</td><td>Arsenic digest/ICP-OES finish</td></tr>
<tr><td>Sulphur speciation:</td><td>Sherritt method Labfit CS2000 analyser</td></tr>
<tr><td>General element scan:</td><td>Mixed acid digestion/ICP-OES finish</td></tr>
<tr><td>Antimony:</td><td>Antimony digest/ICP-OES finish</td></tr>
<tr><td>Fluorine:</td><td>ISE</td></tr>
<tr><td>True SG:</td><td>Helium pycnometer</td></tr>
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</td></tr>
<tr><td>Verification of sampling and assaying</td><td>• 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.</td><td>• Historical drillhole intersections have now been digitised and viewed by QMines Geologists and by HGMS resource Geologist.
• QMines has cross checked selected data, while building a new geological database, based on scanned open files held by the Queensland Dept of Mines, all drillhole collars were checked and random drill logs checked. No issues were noted.
• QMines state that all available data was compiled and verified by John Macdonald, Principal Geologist with McDonald Speijers Pty Ltd and documented in “MOUNT CHALMERS DEPOSIT UPDATED MINERAL RESOURCE ESTIMATE & REVIEW OF ASSOCIATED DATA COLLECTION PROCEDURES”
• John Macdonald used a complete set of original drill logs, plus mine records which at the time were available at the MML mine site offices.
• There is no documentation of any adjustment to the data that has included inserting half lower detection limit values into the database, insertions of blank values where no sample recorded etc.
• QMines Operations – Significant intersections have been validated by the Company’s project geologist.
• A number of historical holes at Mt Chalmers and at Woods Shaft have been twinned as part of the validation process of historical data.
• Documentation and digitisation of historical data has been undertaken by Lisa Orr of Orr and Associates the Company geological data base manager with all historical data verified. Drill hole data base is stored in an Access database and housed independently in an external NAS drive and backed up in a cloud storage system.

DEVELIN CREEK PROJECT
• Significant intersections have been verified by personnel of subsequent companies working on the project including a systematic program of re-sampling pulps and core by Outokumpu during the mid-1990’s. Samples were visually inspected to confirm sulphide content and ¼ samples were re-submitted for re- analysis of selected portions of the mineralised intervals.
• Zenith undertook a number of holes close to previous QMC percussions drilling to verify the</td></tr>
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Criteria	JORC Code explanation	Commentary
		deposit and previous results. These are not strict twin holes but provided sufficient verification of the previous work. Variations in results are noted but are within the expected short scale variance for the deposits. • Field data was all recorded on paper hardcopies (geological logging, sampling intervals, sample submission forms, density determinations etc on standardised templates). These data were transferred to a digital database. • No adjustments were made, other than industry standard approach for storing and managing below analytical detection limit values.
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.*	• The earliest grid shown on plans was an exploration grid established by CEC which originated at the North Shaft, which was assigned coordinates of zero for both easting and northing. • Geopeko subsequently established a mine grid, again using the North Shaft as the origin, which was assigned coordinates of 5,000 m E & 5,000 m N. A network of local control stations was set out by MML staff surveyors. • All previous data (such as drill collar locations) were converted by Geopeko to mine grid which appears to have been used consistently for both exploration and production work. This includes Woods Shaft. • Control points for the Geopeko mine grid survive and this grid was also used for all Federation and MS work. A Rockhampton based surveyor (R E Harris) who previously worked as a mine surveyor on the project with MML conducted all surface surveys for Federation. • Local mine control survey points are still in existence, and these have been re-surveyed by QMines using a Differential Global Positioning System. • QMines has converted the Local Grid to GDA94 MGA Zone 56 grid using ArcGIS software, using a combination of local mine control survey points and landmarks. • The current topography was defined using a photogrammetric survey conducted by Capricorn Survey Consultants Pty Ltd on behalf of Federation in May-June 1995. This was based on photography flown in November 1992 and used ground controls established by MML in the 1970's to provide a tie in between AMG and mine grid coordinates. • Pre-open pit topography was available as photogrammetric contour plans dated November 1978, generated by Geo-Spectrum (Aust) for MML. These were presented at 1:500 and 1:1000 scale over the mine area with contour intervals of 1 m and 2 m, respectively. They were apparently based on photography flown in 1973. • MS digitised the 1:1000 scale plan over the area of the resource model to allow volumes to be estimated for the Peko pit and for subsequent excavations at the south end of the pit, pit backfill and surface dumps • Percussion holes, which make up 73% of the total number of holes available, were not surveyed downhole. However, it should be noted that virtually all of them were vertical and are considered by QMines to have had very limited deviation. • For pre-Federation diamond drill holes, logs and sections only showed evidence of down hole surveying for 1 hole but the survey details are not recorded in the log. The remainder of the

Criteria	JORC Code explanation	Commentary
		diamond drill holes are assumed not to have been surveyed downhole. • Federation drill holes were surveyed at intervals of approximately 50 m using an Eastman single shot borehole survey camera supplied by the drilling contractors. • QMines have assumed that all pre-1995 holes were straight, simply using the recorded collar bearings and dips for downhole surveys. This will no doubt result in some errors in the 3D location of samples, but since hole depths are typically about 50-150 m and most holes are vertical into flat-dipping rocks, serious hole deviations are not expected to have been common. • QMines has implemented a complete conversion of all historical drill collar surveys and local gridding utilised by previous explorers with Rockhampton based mine surveyors undertaking the conversion with the local work being validated by MINECOMP Surveying. • Conversion from local grid to GDA 94 MGA Zone 56. • All drill hole collars are picked up by and validated by the site surveyors. • The Company has flown a new Digital Terrain Model (DTM) over Mt Chalmers using drone survey technology. • The quality and accuracy of the DTM has been validated and processed independently of the data capture by MINECOP Surveying. • Queensland Government Lidar has been used as the DTM at Woods Shaft. **DEVELIN CREEK PROJECT** • QMC drill hole collar positions were surveyed by licenced surveyors with some crosschecking using conventional and differential GPS. • From 2011, drill hole collars were surveyed by handheld GPS. They were subsequently adjusted to available acute topographic surface. • QMC PD holes have no down hole surveys but are vertical in most cases. QMC diamond holes were surveyed at the end of hole with an Eastman survey camera. These displayed little variation • In 2011 and 2014, down hole surveys were completed every 50 m for both diamond and RC holes using a down hole Reflex camera. • A local grid was established by QMC in 1993 by a licenced surveyor and oriented AMG grid north, points on the baseline were subsequently picked up with differential GPS in 1995 to facilitate accurate grid conversions. • The topography and drill collar locations and elevations were accurately surveyed by a licenced surveyor over the period 1993-94. • All recent work and reporting use GDA94 Zone 55 coordinates. • Accurate topography is available as an open-source Queensland Government LiDAR Survey. Though recent drilling is only GPS surveyed it is adequate for the current study and classification and elevations corrected to the accurate topography survey.

Criteria	JORC Code explanation	Commentary
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• The Geopeko drilling was initially on a nominal pattern of 40 m x 40 m which was subsequently infilled to a nominal 20 m x 20 m over most of the deposit, but with considerable local variation in hole spacings. • Federation locally infilled or extended the 40 m x 40 m pattern, but on an irregular basis because of the access difficulties presented by the water-filled open pit. • At the northern end of the stringer zone where the mineralisation becomes deeper the pattern ranges from about 40 m x 40 m to 40 m x 80 m. • Geopeko drilling at Woods Shaft covered a nominal 25 metre x 50 metre grid with gaps and extensions that were partly infilled by Great Fitzroy. • Historical downhole sampling was between 1 m and 3m intervals. • The data point spacing is appropriate for the use in generating Mineral Resources at the appropriate levels of confidence. • No sample compositing has been undertaken. • QMines drill programs have been designed to validate historical drill hole data, expand the resource envelope and make new discoveries. • Line and drill hole spacing is not applicable • No composite sampling has been applied **DEVELIN CREEK PROJECT** • Drill holes were generally spaced 50 m along strike, and 50 m across-strike. • The data spacing and distribution is sufficient to demonstrate spatial and grade continuity of the mineralized horizon to support the definition of Inferred and in places Indicated Mineral Resource. • Percussion samples were composited to 3 m intervals and submitted for assay analysis however most mineralised intercepts incorporated in the resource model were sampled over 1 to 2 m intervals. • RC samples were collected at 1 m intervals within the mineralized zones and 3 m intervals in non-mineralized zones. • Zenith RC samples were collected at 1 m intervals within the mineralized zones and 4 m intervals in non-mineralized zones. **METS TEST WORK** • Data spacing not applicable for this release. • Sample compositing has been undertaken using crushing, blending and then homogenising.
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.*	**METS DRILL HOLES** • Hole MCDD017 was drilled at a dip of -56o and hole MCDD044 at a dip of -45° through a generally flat-lying mineralised zone. • These drill intercepts are not considered true widths. True width is approximately 90% of the MCDD017 drill intercepts and 66% of the MCDD044 intercepts. • The Mt Chalmers deposit is generally flat-lying and virtually all drillholes are vertical thus

Criteria	JORC Code explanation	Commentary
		giving a good intersection angle with the mineralisation. • QMines angled holes have been oriented such to reach otherwise inaccessible targets. • Downhole intersections in drill holes with for example ~60-degree dip represent approximately 87% true width of the assayed mineralised intersections. • At Woods Shaft the known extent of the deposit dips at 40 degrees to the southeast. Further drilling there will clarify the overall geometry. • There is no obvious sampling bias with the drilling orientation. • These holes were designed to increase the mineralised interval for the purposes of obtaining sufficient material for metallurgical testing. **DEVELIN CREEK PROJECT** • In Sulphide City, drilling sections are orientated Northwest to Southeast with respect to grid north. • This orientation is perpendicular to the strike of the sulphide lenses. The majority of the drilling at Sulphide City is vertical, adequately testing the gently dipping sulphide lenses. • In Scorpion, drill sections are orientated North to South with respect to grid North. The majority of the drilling is drilled towards the South, with -60º dipping holes adequately testing the steeper lenses. • Drilling at Window is at various orientations aimed at testing the deposit orientation that appears to have a slightly horizontal stratification within a pod of broad disseminated style of mineralisation intersected. • The drillhole orientations detailed above were planned to intersect the mineralised lenses as close to a perpendicular angle as possible, and thus it is not believed any sampling bias was introduced regarding the orientation of main structures.
Sample security	• *The measures taken to ensure sample security.*	• There is no documentation describing the process of securing historical samples at site and their transportation to the laboratory. • QMines core samples were cut onsite by Company workers and inserted into individual numbered calico sample bags. RC samples were collected directly from the cone splitter into individual numbered calico sample bags. In each case 4 calico bags were inserted into sealed, cable tied polyweave bags, which were numbered in sequence and placed in large bulka bags. • The bulka bags were then delivered by Company staff to a commercial freight depot in Rockhampton and shipped directly to the ALS Laboratory in Brisbane overnight. **DEVELIN CREEK PROJECT** • QMC drill core was logged and sampled at the Marlborough exploration compound with bagged samples dispatched by road freight to the laboratory in Townsville. • QMC PD samples were sub-sampled and sealed in polyweave bags at the drill site for dispatch to the laboratory. • Icon RC samples were bagged on site, placed in bulka-bags and secured for transport on

Criteria	JORC Code explanation	Commentary
		pallets and then shipped directly using a 3rd party contractor to the laboratory. • Zenith RC samples were bagged on site, placed in bulka-bags and transported to a 3rd party contractor where samples were shipped to the laboratory. Core was logged and sampled on site. Samples were then delivered to a 3rd party contractor for dispatch to the laboratory. **METS CORE SAMPLING** • Core samples from both holes were taken from the drill site in HQ core trays to core yard wrapped in cling wrap, sealed with core tray lids, stacked on pallets then delivered by company staff to Centurion Freight Rockhampton and shipped directly to ALS Laboratory Brisbane Laboratory for delivery to ALS Balcatta.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• MS essentially completed an audit of the sampling techniques with the 2005 Mineral Resources. The audit concluded that "After extensive validation and editing MS are satisfied that the drill hole database files used for resource estimation are reasonably complete and free of serious errors, within the practical limitations imposed by the age of some of the data". • QMines sampling techniques have been established by the Company Geologist. Results are reviewed and validated by the Company database geology manager. • Exploration results are not audited independently. **DEVELIN CREEK PROJECT** • ResEval reviewed Zenith drilling in Nov 2011. Onsite recommendations were made to refine the ongoing drilling and included improvements to management surface disturbance, monitoring of RC sample split size and adjustment 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.*	• QMines Pty Ltd has two 100% owned subsidiaries, Dynasty Gold Pty Ltd and Rocky Copper Pty Ltd, through which the Company has a 100% beneficial interest in the Mt Chalmers Project. The Mt Chalmers Project is held in EPM 25935 and EPM 27428 located 25 kilometres east of the City of Rockhampton in coastal central Queensland, Australia. The project covers an area of historic gold and copper mining, which comprises an area of 198 km2. Woods Shaft is included in EPM 25935. • 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

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		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 many of their planned drilling programs under relevant access procedures applying to each tenement. • All the EPMs are subject to the Native Title Protection Conditions with respect to Native Title. • Declared Irrigation Areas, Declared Catchment Areas, Declared Drainage Areas, Fossicking areas and State Forest, are all land classifications that restrict exploration activity. These are not affecting QMines' main prospects but may have impact on regional programs in places. • All annual rents and expenditure conditions have been paid and fully compliant **DEVELIN CREEK PROJECT** • The deposit is located within EPM 17604 the 100% Fitzroy Copper Pty Ltd owned exploration licence. Zenith has entered into an agreement with Fitzroy Resources, owner of Fitzroy Copper to purchase initial 51% equity with an option to purchase the remaining 49% within 24 months (Refer to ASX release dated 7 July 2014). • The prospect is located within the Forrest Home Pastoral Lease. • The tenement is in good standing with no known impediment to future grants of a mining lease
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• CEC and Geopeko are generally recognized as competent companies using appropriate techniques for the time. Written logs and hardcopy sections are considered good. • Federation was a small explorer that was entirely focused on defining the Mt Chalmers resource. They used a very competent geologist, Alex Taube, for the drilling program. Alex Taube is widely respected for his knowledge about VHMS deposits in North Queensland. • Great Fitzroy was also a small explorer that focused on Mt Chalmers as well as Woods Shaft and satellite VHMS targets. They also employed Alex Taube to manage the drilling program at Woods Shaft. **DEVELIN CREEK PROJECT** • Mineralisation was first identified in late 1992 by Queensland Metals Corporation (QMC) over what is now the Scorpion deposit. Between 1993 and 1995, QMC undertook an extensive geological and geophysical exploration program focused on the Develin Creek area and other prospects to the South. • In July 1995, QMC entered into a joint venture agreement with Outokumpu Mining Australia Pty Ltd (OMA) to continue exploration. OMA completed the first resource estimate for the Develin Creek deposits, then withdrew from the joint venture in 1996 and QMC (which later changed name to Australian Magnesium Corporation) maintained

Criteria	JORC Code explanation	Commentary
		the tenements until relinquished 2002. • Icon Limited (Icon) acquired the tenement and in 2007 completed a resource estimate for Sulphide City, Scorpion and Window from historical drilling data. • Fitzroy Resources acquired the project from Icon and listed via prospectus dated October 2010 and subsequently completed a HeliTEM survey, minor DHEM, some geochemical sampling and drilling of 12 holes. Of those 12 holes, 6 diamond holes were drilled to the south and east of the Develin Creek resource. Drill hole FRWD0002 collared near the southern edge of the resource intersected 13.5m grading 3.3%Cu, 4.0%Zn, 0.5g/t Au and 30g/t Ag in massive sulphide from 182m. The mineralisation was intersected in a position that extends the known limits of the resource by around 40 m to the south where it remains open to further upside. In addition, Fitzroy completed 3 RC holes at the Lygon Prospect and a further 2 south of the Develin Creek resource area.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Mineralization at both Mt Chalmers and Woods Shaft 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 lithology consists mainly of acid to intermediate volcanics, tuffaceous sandstone and mudstone, (Kirkegaard and Murray 1970). The strata are generally flat lying, but locally folded. Most common are rhyolitic and andesitic lavas, ignimbrites or ash flow tuffs with numerous breccia zones. Rocks of the Berserker Beds are weakly metamorphosed and, for the most part, have not been subjected to major tectonic disturbance, except for normal faults that are interpreted to have developed during and after basin formation. • Late Permian to early Triassic gabbroic and dioritic intrusions occur parallel to the Parkhurst Fault. Smaller dolerite sills and dykes are common throughout the region and the Berserker Beds. • Researchers have shown that the Mt Chalmers mineralisation is a well-preserved, volcanic-hosted massive-sulphide (“VHMS – Kuroko style”) mineralised 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

Criteria	JORC Code explanation	Commentary
		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, sericitisation and pyritisation) of this basal unit becomes more intense close to mineralisation. • The 'mineralised sequence' overlying the 'footwall sequence' consists mainly of tuffs, siltstones and shales and contains stratiform massive sulphide mineralisation 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 mineralised sequence close to massive sulphides. This sequence represents a hiatus in volcanic activity and a period of water-lain deposition. • The 'hanging wall sequence' is a complex bedded series of unaltered crystal and lithic rhyolitic tuffs and sediments with breccia zones and occasional chert and jasper. • A mainly conformable body of andesite, ranging from 10 m to 250 m thick, intrudes the sequence; it usually occurs just above the 'mineralised 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 syncline trending north-north-west. 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 mineralisation. • Doming of the rocks close to the mineralisation has been interpreted by detailed work in the open cut to be largely due to localised horst block-faulting (Taube 1990), but the doming might also be a primary feature in part. Steep dips are localised 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 mineralised horizon is draped upon the flanks of domal structures. • At Woods Shaft sulfide stringer mineralization is the main mineralization style with an overlying disseminated sulphide exhalite horizon. Massive sulfides not detected to date. Hosted by volcanics of the Berserker Beds, the geology is similar to that of Mt Chalmers but with greater siltstone thicknesses suggesting more distal deposition under lower energy conditions. The sulfide stringer zone at Woods Shaft is largely restricted to siliceous pyroclastics underlying this siltstone. As such, a similar temporal mineralizing event to that of Mt Chalmers is recognized. The disseminated sulfide exhalite is similar to that at the more distal margins of Mt Chalmers. • The geometry of the Woods Shaft mineralization is so far less clear than at Mt Chalmers due to less drillhole data. Surface mapping and drill data suggest a mineralized dome

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>structure which has been slightly modified by folding to produce a north-south trending anticline (dome) with a mineralized core. It is envisaged that this dome has formed similarly to the domal uplift at the core of the Mt Chalmers mineral system.

DEVELIN CREEK PROJECT
• The Develin Creek base metal project hosts several copper-zinc-gold-silver volcanic hosted massive sulphide (VHMS) deposits and covers an extensive belt of underexplored prospective volcanic rocks.
• Mineralisation comprises massive sulphide, stringer and breccia style copper-zinc-gold-silver deposits, hosted by basalts.</td></tr>
<tr><td>Drill hole Information</td><td>• 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
○ 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.</td><td>• No exploration results are presented in this release.

METS DRILL HOLE DATA
<table><tr><th>Hole ID</th><th>MGA East</th><th>MGA North</th><th>RL</th><th>Dip</th><th>MGA Azi</th><th>EOH depth</th></tr><tr><td>MCDD017</td><td>259731.2</td><td>7421238.6</td><td>91.3</td><td>-60</td><td>96</td><td>93.1</td></tr><tr><td>MCDD044</td><td>259974.7</td><td>7421186.1</td><td>91.3</td><td>-45</td><td>328</td><td>154.9</td></tr></table>
DEVELIN CREEK PROJECT
• Exploration results completed by Zenith are documented in previous ASX announcements:
○ 26 November 2014
○ 5 July 2021
○ 2 September 2021
○ 16 December 2021
○ 24 March 2022
○ 7 June 2022
• Five historic drill holes were excluded on the basis of incomplete drilling or assaying or poor sample orientations. The exclusion are not significant with other nearby drilling available for estimation. The domain contact information for the excluded drilling was still used to assist the interpretation.</td></tr>
<tr><td>Data aggregation methods</td><td>• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.
• 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</td><td>• In reported exploration results, length weighted averages are used for any non-uniform intersection sample lengths. Length weighted average is (sum product of interval x corresponding interval assay grade), divided by sum of interval lengths and rounded to two decimal points.
• No top cuts have been considered in reporting of grade results, nor was it deemed necessary for the reporting of significant intersections.
• All Copper Equivalent (CuEq) figures included in this announcement are calculated based</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
	aggregations should be shown in detail. • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	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 grades are converted to % and prices converted to $/T prior to calculating CuEq. Two commodity prices are used - a historic price included in the MRE and a current price included in the pit optimisation study which is more likely to reflect the actual project economics. The historic prices are: Au price of US$1,900/oz, Ag price of US$25/oz, Cu price of US$6,665/t, Pb price of US$2,450/t, and Zn price of US$3,450/t The current prices are: Au price of US$1,850/oz, Ag price of US$25/oz, Cu price of US$8,500/t, Pb price of US$2,200/t, and Zn price of US$3,200/t. The following metallurgical recoveries have been applied: 86.5% Au, 70.5% Ag, 97.0% Cu, 85.0% Pb and 77.5% Zn • Mt Chalmers VHMS is a polymetallic base and precious metal mineral system, cut off grades used by the Company in calculating mineralised intersections are 2,500 ppm Cu, 0.1 ppm Au and 1 ppm Ag, 0.5% Zn and 0.5% Pb or 2,000 ppm Cu, 0.1 ppm Au, 1 ppm Ag, 2,000 ppm Zn and 2,000 ppm Pb (mid-2022 change). **DEVELIN CREEK PROJECT** • Exploration results and aggregates are not presented in this report. • Compositing for resource estimation used length weighting to regular 3 m intervals • Cueq (copper equivalent grade) used for this resource estimate is derived from the formula: ○ Cueq = Cu% + (Zn% x 0.393) + (Au g/t x 0.69) + (Ag g/t x 0.0077) ○ This is based on rounded metal prices as of June 2022 of $8400/tonne Cu, $3300/t Zn, $1800/oz Au and $20/oz Ag. • The only metallurgical work is some preliminary RC rougher test work that indicated similar > 90% recovery for both Cu and Zn. AT this stage equal recovery is assumed for all elements. • Lead grade is excluded as the grades are low enough to not present a significant economic value.
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 (e.g. 'down hole length, true width not known').*	• Exploration results are not presented in this report. • The deposits vary from flat to steep northly drip with the changes occurring in a regular manner recognized earlier in the project drilling. • Drilling is mostly vertical or at a steep angle and orientations adjusted to cross steeper dipping part of the deposit at the best possible angle.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These*	• Maps, sections, mineralised intersections, plans and drill collar locations are included in the body of the relevant announcement.

Criteria	JORC Code explanation	Commentary
	should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	
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.*	• No exploration results are presented in this release **METS TEST WORK** • This release reports a summary of recent PFS level test work completed based on all current metallurgical testing of mineralized samples submitted.
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.*	• CEC and Geopeko completed some brownfields exploration to assist with defining the resource including Induced Polarisation surveys and Sirotem (electromagnetic method) surveys. • Federation concentrated on defining the resource estimates. • Great Fitzroy compiled known geophysics and collected magnetic data which has not been made public. • 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 for QMines in June 2022. • No other exploration data is considered meaningful at this stage. **DEVELIN CREEK PROJECT** • Surface sampling and mapping were completed over different field campaigns by QMC and subsequent companies. Several geophysical surveys were completed by different companies (aeromagnetics, induced polarisation, electromagnetics). **METS TEST WORK** • This release refers to recent metallurgical testing of drill core samples from the Mt Chalmers resource. See the body of the release for details.
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• Infill and resource drilling at nearby exploration target Woods Shaft and Develin Creek project areas will continue in 2024. • Evaluation of other QMines VHMS prospects in the Berserker Beds is underway. • Delivery of the Pre-Feasibility Study is scheduled for H2 2024 • DFS level METS test work to continue in 2024 • Environmental studies and permitting review in H2 2024 **DEVELIN CREEK PROJECT** • Additional drilling is required to test the south-western strike extent of the Sulphide City mineralised zone where mineralisation remains open ended. • Drill testing of geological, geochemical and geophysical targets in the area surrounding the Mineral Resources is a high priority.

Criteria	JORC Code explanation	Commentary
		Additional metallurgical testwork is required to expand upon the 2021 metallurgical testwork programs.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in the preceding section 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 Mt. Chalmers and Woods Shaft are maintained by QMines (In conjunction with Orr & Associates). • The Competent Person has verified the internal referential integrity of the databases use in resource modelling and resource estimation. • Some historic drill holes required elevation adjustment to the 'pre-mining' topographic surface. • No other significant errors or concerns were encountered. **DEVELIN CREEK PROJECT** • Zenith data is stored on a server as Excel spreadsheets • Data validation included cross validation of the database table and checks for downhole interval integrity ad completement and grade ranges checks. Physical checking of the historic data against records has not been undertaken at this stage.
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.*	• The Competent Person consolidating the drilling and sampling data is a contractor to QMines and has not visited the site. • A site visit to both the Mt. Chalmers and Woods Shaft deposit areas has been undertaken by the Competent Person responsible for the resource estimation and open pit optimisation estimates on October 3rd to October 5th 2022. The competent person has also relied upon reports from various different personnel that have visited and worked at the Mt. Chalmers Mine and nearby exploration area. **DEVELIN CREEK PROJECT** • John Horton from ResEval visited site and inspected previous core and two RC drill rigs in the process of drilling at Sulphide City deposit on 21-22 Oct 2021 as part of the MRE released by Zenith. • PFS study team visited the site in 2023
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.*	• Comprehensive Pit mapping at Mt. Chalmers to capture both the geological and structural information used to guide resource modelling has been carried out with a comprehensive structural mapping study carried out by Dr Brett Davis of Olinda Gold Pty Ltd. Mineralization modelling has been guided by the combined geological and structural information as is currently available. • Only a limited amount of mapping and geological interpretation information is available for the Woods Shaft deposit area. • Mineralisation envelopes developed for both Mt. Chalmers and Woods Shaft were

Criteria	JORC Code explanation	Commentary
		interpreted in section from drill hole data. A nominal 0.2-0.3% Cu edge lower cut-off was initially developed. The mineralization developed was also locally adjusted to capture and delineate the majority of significant and related Zinc, Lead, Gold and Silver mineralisation where possible. • The mineralisation envelopes are contained within a reliably interpreted geological and structurally mapped package that is confirmed to correlate with the majority of sulphide mineralization. **DEVELIN CREEK PROJECT** • There is a reasonable level of confidence in the geological interpretation of massive sulphide horizons traceable over numerous drill holes and drill sections. The interpretation has been refined but was largely demonstrated by the recent infill drilling by Zenith and was extended by drilling previous drilling by Fitzroy. • Further infill drilling is required to better define exact geometry of the interpreted mineralized horizons and the structural geological framework. • 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 mineralized sulphide horizons but no significant downside changes to the interpreted mineralized volume are anticipated. • All wireframes have varying orientations and dips, following the upper contact of pepperites (ancient sea- floor horizons). A combination of assays and lithology were used to define these wireframe envelopes, with a cut-off of approximately 0.5% Cueq was used to for resource domaining. • Base of weathering was interpreted from available logging of weathering, tertiary caprock logging and input from available sulphur assays. There is evidence the mineralized unit is affected by faulting. The current understanding is limited where diamond drilling is available and further work is required to better define the structural geological framework.
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 the geologically interpreted Mt. Chalmers mineralised occurrence has an approximate >1.2 km strike length. • The mineralisation thickness ranges from approximately 5 m to 50 m, with average thickness being approximately 10-30 m. Mineralization in the majority of deposit areas extends to approximately 200 m below topographic surface. • Mineralisation has been modelled both above pre-existing pit excavation surface to ensure mineralization modelling continuity.

Criteria	JORC Code explanation	Commentary
		• The approximate dimensions for the historic pit area is: 1. Old Mt. Chalmers Pit – 480 m long, 200 m wide and 80 m deep. • The Woods Shaft deposit area has an approximate 350 m strike length. The mineralisation thickness ranges from approximately 5 m to 30 m, with average thickness being approximately 10-20 m. Mineralization in the majority of deposit areas extends to approximately 140 m below topographic surface. **DEVELIN CREEK PROJECT** • There are two mineralized areas separated by a gap of 200 m. Both have variable dip and thickness but included some zones up to 30 m in vertical width. • The Window – Scorpion area is 200 m E by 480 mN by 220 m RL • Sulphide City area is 330 m E by 490 mN by 314 m RL and comprises a series of lenses some of which are stacked.
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 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.*	• All available RC and Diamond drilling data was used to build the Mt. Chalmers and Woods Shaft mineralisation models and for guiding Mineral Resource estimation. Recent verification RC and Diamond drilling carried out by QMines at Mt. Chalmers has also enabled consolidation of some of the estimated resources designated to a higher level of resource category. • QMines has acquired new assay information from recent drilling programs (up to end October 2022). An updated drilling, geological logging and assay database was used to define and model the mineralised domains for Cu, Pb, Zn, Au & Ag. • The majority of drill collar positions at both Mt. Chalmers and Woods Shaft have been surveyed. Newly drilled holes were accurately surveyed by QMines. Some of the collar positions were adjusted according to LiDAR acquired Topographic DTM surface data. Some historical un-surveyed drill hole collar elevations were draped onto a 'pre-mining' topographic DTM surface and were checked in order to match the known surveyed drilling. The survey control for collar positions is considered adequate for the estimation of resources as stated. • The mineralised domains at both Mt. Chalmers and Woods Shaft were interpreted from the drilling data provided by QMines. 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 mostly not extended (extrapolated) beyond 1 average section spacing from the last drill-hole 'point of observation'. • All known (small scale) remnant mining stope volumes below the current Mt. Chalmers pit have been removed from the mineralisation coding wire-frames. These volumes are not included in the resource estimate. • A set of wire-frame weathering surfaces and broad material type wire-frames at the Mt.

Criteria	JORC Code explanation	Commentary
		Chalmers deposit area were also modelled to highlight lithological and bulk density characteristics and differences that overprint the mineralized zones. These codes are used to flag bulk density differences and preliminary metallurgical domains. • At Mt. Calmers a series of nine (9) mineralisation AREA domains were also defined to segregate major changes in mineralization zone orientation. These AREA domains were used to define localized mineralization distribution characteristics and search ellipsoid orientation for block model interpolation. • At Woods Shaft a total of four (4) mineralisation AREA domains were also defined to segregate major changes in mineralisation zone orientation. • Spatial statistical analysis was carried out on the main assay data items. Sample data was composited to one metre down-hole intervals initially based on the Copper item. This also included equivalent compositing for the Pb, Zn, Au & Ag items at Mt. Chalmers. At Woods Shaft the Au item in addition to the Cu item at were statistically reviewed. The composite probability distributions were interrogated for each element within each AREA domain to review localized average grades, composite 'outlier' values and related coefficient of variation. • Composites in each AREA domain were used to generate both down-hole and where possible longer range between hole semi-variograms models to establish 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 Mt. Chalmers, combining geology and mineralization 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 5.0 m x 8.0 m x 2.0 m (E-W, N-S, Bench) block cells coded with the mineralisation wire-frames. • At Woods Shaft a new block model describing the Copper and Gold Mineralisation was constructed with the same 5.0 m x 8.0 m x 2.0 m (E-W, N-S, Bench) block cell sizes used at Mt. Chalmers. • The Block Model coordinate boundaries at Mt. Chalmers (GDA94 MGA Zone 56) are; ○ 259,200 m E to 260,600 m E – (280 x 5.0 m blocks) ○ 7,420,400 m N to 7,421,800 m N - (175 x 8.0 m blocks) ○ -240 m RL to 160 m RL - (200 x 2.0 m benches) • The Block Model coordinate boundaries at Woods Shaft (GDA94 MGA Zone 56) are; ○ 258,800 m E to 259,500 m E – (140 x 5.0 m blocks) ○ 7,420,360 m N to 7,421,000 m N - (80 x 8.0 m blocks) ○ -70 m RL to 130 m RL - (100 x 2.0 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 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

Criteria	JORC Code explanation	Commentary
		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 main mineralized zone wire-frame. No extrapolation of grades outside the mineralization wire-frame was permitted. • At Mt. Chalmers Dry Bulk Density ("density") was assigned by using a nearest neighbour precursor interpolation pass before subsequent The average bulk density values were applied in the main material types and oxidation state with the designation of vales assigned representing the average bulk density for each material type. All bulk density measurements used for assignment in the block model were taken from the available measured bulk density measurements from the historic drilling database and the new diamond core samples acquired during all the recent QMines drilling programs. • The average bulk density assigned values used at Mt. Chalmers are : Stringer Zone = 3.10 t/m3, Exhalite Zone 3.20 t/m3, Massive Sulphide/Exhalite zone = 3.80 t/m3, Weathered/Oxide = 2.20 t/m3, Transition = 2.50 t/m3 and Fresh (Sulphide) = 3.00 t/m3. • At Woods Shaft there is currently limited bulk density information is available thus a default 2.9 t/m3 has been assumed for all mineralisation zones which are observed to be contained in fresh rock material extending very close to the topographic surface. • At Develin Creek bulk density applied in the mineralised zone is oxide material 2.2tm3, transitional material 2.5tm3 and fresh material 3.2tm3. **DEVELIN CREEK PROJECT** • A total of 10 wireframe envelopes (domains) were interpreted based on the 0.5 Cueq cut-off. • Most wireframes comprised a low variance, and also a low coefficient of variation. Top-cuts were applied to elements only to manage extreme grades. • Variograms were modelled using unfolding of the lenses for all the domains combined and indicate ranges of 70 to 90 m for Cu, Zn, Au and Ag. • A 3D block model was generated using Maptek Vulcan software. Parent blocks were 10 m x 5 m x 5 m size with sub-blocking to 5 m x 2.5 m x 1.25 m. • Estimation used 3 m drill composites. • Block grades were estimated using Ordinary Kriging on single pass searches with radii of 120 by 120 by 30 m and maximum of 15 composites, 3 composite per drill hole and maximum 5 drill holes. • Zn and cu are only weakly associated and in places display zonation. Au and Ag are associated with both Zn and more strongly with Cu. • Pb grades are reported but are of minor economic significance. Cu, Zn, AU and Ag all are of sufficient grade to be considered as viable economic targets for extraction using flotation methods and assuming Au and Ag will report to the Cu or Zn concentrates.

Criteria	JORC Code explanation	Commentary
		• Previous estimates by Geostats in 2014usea higher 1 % Cueq cut-off for interpretation. Comparison with the current estimate indicates an additional 45% tonnages with 5% lower density and 15% lower grade. The lower density is due to a more conservative approach as core density determinations are often slightly biased high. The lower tonnage and additional metal is both a result of the lower grade used for interpretation but also the additional extension of the resources from Zenith drilling. • Outokumpu also modelled the Develin Creek deposit in 1995, using a manual sectional non-JORC compliant estimate. Three Cu-Zn mineralized bodies were interpreted, these being Sulphide City, Scorpion and Window. The easternmost bodies, the Sulphide City and the Sulphide Heights are lenses of massive sulphides with 0.6 Mt @ 2.28% Cu and 4.01% Zn, while the Scorpion body 500m southwest is a reworked breccia mineralisation with 0.3 Mt @ 2.52% Cu and 1.79% Zn. The Outokumpu geological interpretations based on detailed drill core logging were used as a guide to creating the resource wireframes of the current estimate. • No mining to date • No assumptions have been made with respect to the recovery of by- products or individual metals. • No acid mine drainage or deleterious element studies have yet been commissioned. • The Develin Creek block model was validated by several methods, including visual validations on-screen, global statistical comparisons and SWATH plots
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 Mt. Chalmers, Woods Shaft and Develin Creek are reported on a dry basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• A 0.3% Cu cut off has been applied to reported tonnes and grade. This cut-off is considered in line with current copper price in conjunction with associated beneficial elements Zn, Au & Ag and favourable mineral processing considerations. **DEVELIN CREEK PROJECT** • The classified Mineral Resource is reported beneath the topography and tertiary cap surfaces using principally a 0.5% Cueq cut-off suitable for open pit mining and processing. This reasonably reflects the likely costs expected for processing from a flotation plant to produce copper and zinc concentrate products with contained gold and silver. A higher grade 1% Cueq cut-off is also presented to indicate the effect if a more selective open pit of underground mining option is required.
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*	• The resource for the three project areas is constrained within optimised pit shells run by Minecomp using the following mining cost projections, metallurgical processing recoveries and forecast metal price assumption as detailed below.

Criteria	JORC Code explanation	Commentary
	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.	

Open Pit	Mt Chalmers	Woods Shaft	Develin Creek
Production Costs			
Mining Ore BCM	$11.95	$8.70	$6.08
Mining Waste BCM	$7.37	$5.70	$5.88
Blasting BCM	Oxide $1.80, Transition $3.10, Fresh $4.40	$2.50	$2.50
Grade Control/ t ore	$1.50	$1.50	$1.50
Processing t/ore	$38.04	$35.00	$35.00
Concentrate Transport/t ore	$2.31	$6.49	$6.49
Ore Haulage Minesite/ t ore	$1.00	$1.00	$5.21
General & Administration/t ore	$5.00	$5.00	$5.00
Rehabilitation BCM	$0.20	$0.20	$0.20
Contractor Management BCM	$1.40	$1.40	$1.40
De-Water BCM	$0.30	$0.30	$0.30
State Royalty	Cu 5.0%, Zn 5.0%, Au 3.96%,	5.00%	5.00%

Criteria	JORC Code explanation	Commentary

	Ag 4.48%, Py 5.0%		
Processing Recoveries			
Copper	88.80%	95.00%	88.00%
Gold	81.14%	86.50%	85.00%
Silver	67.70%	0%	65.00%
Pyrite	85.14%	?	?
Zinc	81.30%	0%	32.00%
Mill Head Grade			
Copper	0.56%	0.33%	1.08%
Gold	0.41g/t	0.94g/t	0.19g/t
Silver	4.7g/t	0	5.10g/t
Zinc	0.24%	0	0.73%
Metals Price Assumptions ($USD - 2027 Forecast)			
Copper	$9,132	$9,132	$9,132
Gold	$1,985	$1,985	$1,985
Silver	$25	0	$25
Zinc	$2,633	0	$2,633
Pyrite	$337	$337	$337
Exchange Rate ($)	$0.63	$0.63	$0.63
Pit Depth (m)	220m	80m	150m

Criteria	JORC Code explanation	Commentary
		Volume Ore Mined (BCM) 3,832,953 254,267 338,833 **Volume Ore Mined (t)** 12,327,072 762,801 1,084,266 **Volume Waste Mined (BCM)** 15,293,730 1,195,272 3,949,580 **Stripping Ratio** 5:01 4.7:1 11.7:1 • Any future mining activity at Woods Shaft is also likely to be open pit as mineralisation is observed to be present very close to the topographic surface. • Detailed grade control and or further resource definition drilling at the Woods Shaft project will refine resource geometry and grade distribution and is expected will provide reserve detail in 2024 and or prior to any proposed mining activity. **DEVELIN CREEK PROJECT** • Develin Creek has been estimated and reported as principally an open pit target however it may also provide a more selective underground target for deeper and steeper mineralization. • No mining dilution ore ore loss factors have applied to the Mineral Resource. • The block model was developed on 10 by 5 by 5 m parent blocks assuming a 5 m likely bench height for mining. • A minimum intercept with of 3 m was used for estimation assuming open pit mining of ore could be undertaken on flitches down to 2.5m in height. Domain boundaries are interpreted at a 0.5% Cueq cut-off and are used as hard boundaries for estimation.

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.*	• Metallurgical Recovery for the PFS level testwork completed by COMO Engineers is used for the Mt. Chalmers deposit are as follows :
		  • Copper 88%
		  • Gold 81.14%
		  • Zinc 81.3%
		  • Silver 67.7%
		• Metal recovery parameters for the Woods Shaft deposit mineralisation are based on the Mt Chalmers recovery data.
		• Metallurgical recovery assumptions at Mt. Chalmers have been based on final PFS level metallurgical study undertaken by COMO Engineers as part the PFS deliverables contained

Criteria	JORC Code explanation	Commentary

		in the announcement.
		• In August 2021 QMines delivered ~230 kg of diamond core from holes drilled at Mt Chalmers Copper Project to ALS Metallurgical Laboratory in Balcatta Western Australia.
		• Under the supervision of COMO Engineers drill core representing the copper/gold stringer ore and the copper, lead and zinc exhalite ore were prepared as two master composites to generate comprehensive flotation testwork.
		• Results from this METS float testwork are indicative of metallurgical recoveries for Mt Chalmers base and precious metals ore and have been used as recovery data in the copper equivalent Resource Estimate calculation. The PFS metallurgical study has been completed in entirety with several new additional tests now being undertaken to further improve recoveries to a DFS level and are expected to be finalised early in H1 2024.
		• Metallurgical recovery estimate for the Develin Creek project are based on historical sighter test work undertaken by Zenith Minerals Limited prior to the QMines acquisition of that project.
		• QMines currently are finalising PFS level METS test work for the Develin Creek project and expect this test work to be finalised in Q1 2024.
		
		DEVELIN CREEK PROJECT
		
		• No detailed metallurgical test work is available at this stage.
		• Some preliminary rougher test work on RC chips indicated a saleable copper and zinc concentrates were achievable and similar copper and zinc recovery was indicated at >90% (see ZNC ASX announcement dated 27 May 2015)
		• Additional flotation testwork was completed at Core Metallurgy Pty Ltd in Queensland in 2021.
		  • Zinc Flotation - Initial Zn rougher flotation testing achieved good selectivity, with 85% Zn recovery from a 25% mass pull, with a subsequent test conducted under the same conditions achieving a slightly higher grade but lower recovery. A regrind and single-stage cleaner was found to be capable of increasing the grade further to 31.7% with very little loss of recovery, and so it is believed that further increases in grade may be possible through additional cleaner stages and/or a finer regrind
		  • Copper Flotation – rougher plus cleaner stages succeeded in producing a copper concentrate grade of 21% with an overall recovery of 72%.
		  • Mineral liberation analysis of the two samples at the current target particle size of P80 75 µm indicates that the concentrate can theoretically achieve a 10% copper grade and 90% copper recovery during the copper rougher flotation. However, to achieve a >20% copper grade and >80% copper recovery on the final concentrate, a significant regrinding (to a P80 of ~10-15 µm) on the rougher concentrate will be

Criteria	JORC Code explanation	Commentary
		required. • For the current particle size, the low Cu:Zn ratio ore can theoretically achieve approximately 20% zinc grade and 90% zinc recovery. To achieve a final concentrate that has >40% zinc grade and >80% zinc recovery, significant regrinding is also required. • The sulphides appear consistent with other massive sulphide deposits of a similar nature that are currently in production.
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.*	• Both the Mt. Chalmers and Woods Shaft resources are located in an area of historic mining which included waste dump and tailings disposal it is assumed no environmental factors would prevent reactivation/extension of these disposal options. • The Company has developed a saleable pyrite concentrate with less than 1% sulphur by volume projected to go into tailings. The TSF has been designed as a lined tailings facility to further minimise AMD. • Additional environmental considerations mitigating noise and dust have been implemented in the PFS including sealed haul roads, green power to site, electric haul trucks, all mill, floatation circuits and crushing circuits have been designed as being housed in buildings with scrubbers, TSF and waste dumps have been designed as integrated landforms utilising the site contours, Additional dammed water storage has been designed to capture rainfall for process water not tapping into the local water tables and included in the mine plan design and CAPEX estimates. **DEVELIN CREEK PROJECT** • 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. • The high sulphide content of the deposit will require waste disposal engineering design and buffering but is considered manageable. The Rockhampton area has several sources of carbonate material suitable for dump buffering. Future work will need to investigate local carbonate sources.No unusual flora or fauna was observed on the project however environmental surveys still remain to be done.
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*	• Dry Bulk Density (DBD) has at Mt. Chalmers and the Woods Shaft project been determined from both historical and new Archimedes and densitometer measurements taken from core samples from the recent QMines drilling programs. Additionally, some rock chip samples and bulk samples acquired during recent exploration activity have also been used. • Laboratory based Archimedes methods have been used to determine bulk density from RC Chip and diamond core samples. The bulk densities derived appear appropriate for the rock material and mineralization types described and for the main weathering and oxidation material states present. • The density measurements have been averaged in all deposit areas according to the

Criteria	JORC Code explanation	Commentary
	process of the different materials.	geologically logged domains and according to their weathered (oxidized or fresh) characterization. Some bulk density values were retained from previous (historic) block model. • The Mt. Chalmers 'overprint' bulk density assignments by material type are as follows: Stringer zone = 3.10 t/m^3, Exhalite Zone = 3.20 t/m^3, Massive Sulphide Zone = 3.80 t/m^3, Weathered/Oxide = 2.20 t/m^3, Transition = 2.50 t/m^3; Fresh (Sulphide) = 3.00 t/m^3. **DEVELIN CREEK PROJECT** • A total of 442 density values from diamond drill core were derived from all the drilling programs with 1132 samples from the mineralized resource domains. • There is only a weak positive relationship of bulk density with Cu and Zn but a strong positive correlation with S and Fe. Since many sulphur assay suffer from an upper detection limit of 10% the region formulae of density with Fe was used to assign density to available Fe assays and estimate bulk density to the block model. • Trial estimates assigning average domain bulk density indicated only marginal differences to the global resource since the density Cu/Zn relationship is only weak. High bulk density values of around 4 t/m^3 reflect the very high sulphide content drilled and the VHMS style of deposit and is consistent with the weight of RC sample bags and core inspected 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 Mineral Resource for the Develin Creek has been classified as Inferred wherever interpreted which is typically on a 50 m drilling grid. Exploration of the domain and Inferred is based on half the drill spacing towards waste or unmineralized drilling. • Areas of Indicated are assigned where drilling intersects three or more drill holes within a 50 m radius. This spacing is support by well-structured variograms with ranges of 70 to 90 m. Extrapolation of indicates limited to 10 m to account for the risk of a more abrupt edge to the domains. • Indicated excludes material below the main Sulphide City mineralization zone a below a depth of 250 beneath surface to account to the lower likelihood of economic viability.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• No audits of the Mineral Resource estimate have been undertaken at this time.
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 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. **DEVELIN CREEK PROJECT** • The relative accuracy of the Mineral Resource estimate is reflected in the classification of

Criteria	JORC Code explanation	Commentary
	• *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 Mineral Resource as Inferred and indicated when sufficiently drilled to 50 m or less. • The Mineral Resource statement reflects the assumed accuracy and confidence as a global estimate. • No production data is available.