

Australia's next Copper and Gold producer

We initiate coverage on QMiners with a current fair valuation of \$0.157, representing a 138% expected upside from the current share price of \$0.066. The company is a Queensland-based copper-gold explorer with resources located near Rockhampton. QMiners owns several deposits and prospects, with its flagship asset being the Mt Chalmers project, followed by Develin Creek. QMiners' JORC-compliant defined Mineral Resource Estimate (MRE) across all its assets is 15.1Mt @ 1.3% CuEq for 195,800t CuEq. As per its recently concluded PFS, the Mt Chalmers project is positioned at the top of its comparable ASX-listed copper explorer peer group across a number of investment return indicators. QMiners' management exhibits a record of executing on stated goals, with the Company delivering 6 resource upgrades since its IPO in 2021 and a likely 7th one to come later in 2024. This record provides assurance for the delivery of further goals, such as enlarging the scale of the Mt Chalmers project by incorporating resources from its many other assets, particularly Develin Creek.

Mt Chalmers Project – Best-in-Class Investment Returns

Mt Chalmers PFS investment metrics include a Pretax NPV of A\$373m, an IRR of 54%, a payback of 1.84 years and a cumulative EBITDA of A\$828m over a currently planned 10.4-year life. The project is expected to produce 105,000 copper equivalent tonnes, with a low C1 processing cost of just US\$2.14/lb CuEq and a low initial capex outlay of A\$191m. These strong metrics lead to QMiners performing at the top of its copper explorer peer set, composed of explorers that have also conducted feasibility studies. There are many causes for this, from being favourably exposed to both copper and gold, effectively being a brownfield project and being well connected to infrastructure, given the proximity to Rockhampton. These metrics are set to become even better if, as is expected, QMiners brings in additional scale to Mt Chalmers.

Prospects tied to favourable copper and gold markets

QMiners' prospects are closely tied to the prospects of copper and, secondarily, gold. Each of these metals is supported by durable tailwinds. The copper market is subject to a material, looming supply side deficit due to a lack of quality new deposits being found, such as QMiners' and then post-discovery taking a long time to reach production. All the objective metrics thus far lead to the conclusion that QMiners is on its way to quickly entering the production stage, leading to the prospect of attractive shareholder returns.

Valuation range of A\$0.131-\$0.182 per share

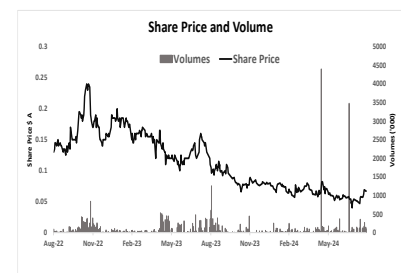
We value QMiners at A\$0.131 per share in a Base-Case scenario and A\$0.182 per share in an Upside-case scenario. We undertake a sum-of-parts approach to value QMiners, incorporating a high degree of conservativeness to each pivotal assumption, leading us to confidently formulate an attractive investment thesis.

MAU Valuation (A\$ m)	Base Case	Upside Case
Net Enterprise Value	40.0	56.9
Cash	5.0	5.0
Debt	1.5	1.5
Total Market Value of Equity	43.5	60.4
Number of shares on Issue (m)	331.3	331.3
Implied price (A\$)	0.131	0.182
Current price (A\$)	0.066	0.066
Upside (%)	98.9%	176.3%
Mid-point Target Price (A\$)	0.157	

Metals and Mining

Date	5 Sept 2024
Current Price (A\$)	0.066
Target Price (A\$)	0.131-0.182
Price / NAV (x)	0.42x
Market Cap (A\$m)	19.2m
52-week L/H (A\$)	0.036 / 0.12
Free Float (%)	75.2%
Bloomberg	QML.AU
Reuters	QML.AX

Price Performance (in A\$)



Business description

QMiners (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 and 1982. QMiners was listed on the ASX in 2021.

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Disclosure - Readers should note that East Coast Research has been engaged and paid by the company featured in this report for ongoing research coverage.

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Investment Rationale

Investors should note that the closer QMines gets to becoming an operating mine the more its valuation will be a function of its cash flow and earnings generation potential, leading to its intrinsic valuation becoming materially higher than that of even our current Upside Case. Based on all the current objective metrics available, QMines looks set to enter the production stage within a few years' time, leading it to significantly outperform the average copper explorer. For example: for mines that started production in the 2020–2023 period, the average lead time between discovery to production was ~17 years.

QMines (ASX: QML) is a Queensland-based predevelopment copper and gold mining company, focussed on taking its flagship Mt Chalmers project to the production stage whilst continuing to conduct exploration works across its numerous other deposits and prospects. QMines' two main assets are the Mt Chalmers (copper-gold) project and the Develin Creek (copper-zinc) project. QMines owns rights to 100% of both Mt Chalmers and Develin Creek. Both assets (especially Mt Chalmers) are near Rockhampton, which is a well-established mining centre. This lowers the anticipated capex and opex-related costs for Mt Chalmers, in addition to derisking the project's commercialisation and future operation. Additionally, Mt Chalmers is a brownfield project, having been a historical high-grade copper-gold mine. It is a shallow open pit project, and it has already been subject to a robust PFS, which has found the project to be highly economically attractive across a range of scenarios. QMines' current strategic focus has strong merits, with the Company having recently lodged a mining lease application whose assessment could be expedited. QMines is also focused on incorporating some of its other deposits/prospects, particularly those at Develin Creek, into a larger-scale mining plan for Mt Chalmers. A larger scale mine at Mt Chalmers would lead to material additional economic value that is not currently captured in the PFS. Overall, QMines' current combined Mineral Resource Estimate (MRE) across its different assets equates to 15.1Mt @ 1.3% CuEq for 195,800t CuEq with 76% of the resources in the Measured and Indicated categories, leading it to be well leveraged to a copper market that is afflicted by supply-side deficits.

Mt Chalmers' top-ranked PFS stage results

QMines' PFS for the flagship Mt Chalmers project was completed in April of this year, and the project was found to be top-ranked across many key metrics in its copper-based, predevelopment peer set that is currently amidst the economic feasibility assessment stage. The PFS derived results such as a Pretax NPV of A\$373m, an IRR of 54%, a payback of only 1.84 years and a cumulative EBITDA of A\$828m over the project's currently planned 10.4-year life. Across key economic indicators such as IRR, payback period, and, crucially, NPV/Capex, the Mt Chalmers project leads its peer set, in addition to also having a relatively low anticipated capex impost, which also de-risks the project's funding and execution. These are strong results that will be notably enhanced even further if, as is likely, QMines is able to instil additional scale in the Mt Chalmers project (all the deposits are in relatively close proximity to each other).

Economic strengths based on many factors

Underpinning the strong PFS stage economic assessment of Mt Chalmers are several durable factors across revenues, costs, capex and strategy. In terms of revenues, the Mt Chalmers project plans to sell 3 concentrates: copper, zinc, and pyrite, with gold being a component of all 3, but especially the copper one. Consequently, QMines' revenues are beneficially exposed to copper (~52%) and gold (~30%), with the prospects of both commodities supported by many tailwinds. The base metals within the concentrates are expected to attract good levels of payabilities given the level of underlying metal prices, high grades and low levels of impurities. The Mt Chalmers' mineralisation is of a high grade, and the orebody is shallow and flat-lying, helping to reduce overall capex and opex costs. Opex costs and revenues are also helped with testing results finding high metal recovery rates, leading to the project being amenable to standard mining processing methods. Mt Chalmers' markedly low capex outlay is associated with the project's open

pit status on a brownfield site, in addition to its use of standard mining methods. These positive economic aspects will be further enhanced if a larger-scale mining plan at Mt Chalmers is achieved, especially due to the integration of the Develin Creek assets, which contain higher-grade copper, zinc, and silver. The project also stands out due to its environmental planning aspects across tailings, water management and energy sources, which will help with receiving a mining lease approval (Mt Chalmers has been officially certified as being carbon neutral, a rare achievement for a miner).

Management that delivers results

Since listing just over 3 years ago, QMines has achieved many notable milestones. In this time, management has delivered an impressive 6 resource upgrades with the recently commenced drilling program at Develin Creek likely to lead to a 7th. A comprehensive PFS study has been done on Mt Chalmers, and within a few months since the PFS' completion, a mining lease application has been lodged, which, given Mt Chalmers' attributes, could be subject to accelerated approval. Management has shown adeptness in focusing on activities that are most impactful for shareholder value creation, such as divesting non-core assets and seeking to integrate other copper and base metal deposits that it has into a larger mining plan for Mt Chalmers.

Copper market has many supporting tailwinds

The bulk of QMines' revenues are linked to its copper reserves. Globally, the discovery of high-grade copper assets that are also close to infrastructure is becoming increasingly rarer. Hence, there are supply-side issues, whilst at the same time, due to factors such as the energy transition to renewable energy, which is fundamentally more demanding of copper than fossil fuels, there will be a strong continuing uptick in copper demand. This looming copper supply deficit is not only premised on renewable energy; copper is of vital use across a range of industries, including increasingly data centres and AI. Hence, despite the unavoidable short-term volatility, over the medium and long terms, the consensus market view is that copper prices remain at elevated levels.

Our Conservative Valuation supports QMines being materially undervalued.

As discussed at length in the Valuation section, we have instilled a number of conservative assumptions in our methodical sum of parts valuation of QMines, with the Mt Chalmers project and QMines Develin Creek assets / other deposits being subjected to different valuation methodologies, but both still consistently incorporating our theme of including conservative assumptions. **This leads us to be able to confidently assert a strong investment thesis for QMines across our Base and Upside Cases.** Additionally, to illustrate the directional upside that investors can benefit from by investing in QMines, as the Company draws closer to becoming an operating mine, we have conceived an even more bullish case called the Special Case, which was not an input into our final midpoint price target. We have arrived at a fair current valuation of A\$0.131 per share in the Base Case and A\$0.182 per share in the Upside Case. Our mid-point target price of A\$0.157 represents a 138% upside potential to the current share price of A\$0.066.

The key risks to our thesis include copper and gold price risk, resource over-estimation and cost underestimation (although material buffers have been included), risk of delays in receiving a mining lease and equity dilution tied to funding needs.

The medium to long term view on copper is consistently bullish across different market analysts. QMines' prospects are also levered to gold which continues to go from strength to strength.

QMiners is positioned well

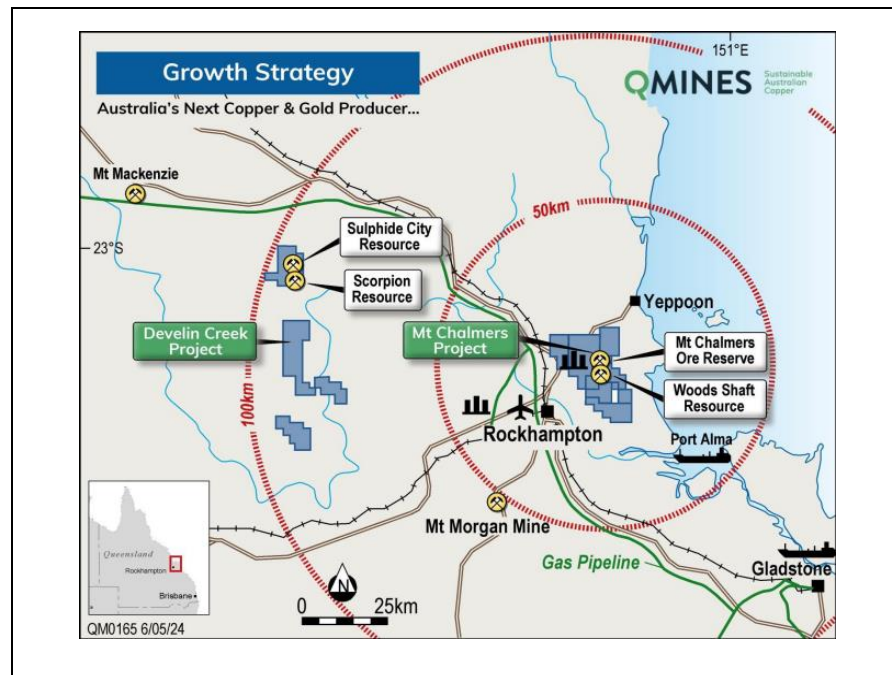
QMiners is positioned well due to its highly mineralised, prospective portfolio of copper, gold and other base metals endowed assets which are located very close to well-developed infrastructure and are progressing quickly in their pre-development stages.

The Company's main project, the Mt Chalmers copper-gold project, benefits from being an open pit project with shallow mineralisation, which was previously an active open pit mine that saw production between 1898 and 1982. Mt Chalmers' status as being effectively a brownfield project is associated with economic benefits that accrue to QMiners, such as lowering capital expenditure outlays needed to ramp the project due to the level of existing infrastructure already in place.

QMiners assets are located within the Australian State of Queensland and are all within proximity to the city of Rockhampton in Central Queensland. Refer below to Figure 1. The Company's flagship Mt Chalmers (copper-gold) project is situated 17km northeast of Rockhampton, whilst its other key asset, the Develin Creek (copper-zinc) deposit, is located about 90km west of the Mount Chalmers project location.

Mt Chalmers' status as being a brownfield project located within a well-established mining region in Rockhampton materially derisks QMiners' ambitions.

Figure 1: Locations of QMiners' assets



Sources: Company

As discussed later, although QMiners has 100% interest in several deposits and exploration sites, its 2 main assets in order of economic significance are: 1. The Mt Chalmers Project (100% owned) and 2. The Develin Creek deposit (51% owned, with rights to acquire the residual 49%). These two advanced projects cover an area of 604 km², with the Mt Chalmers project covering an approximate area of 334 km² and being comprised of 5 exploration permits for minerals.

These two projects are significant in terms of their mineral resources and are prospective for additional discoveries: **QML's current resource base across Measured, Indicated and Inferred Resources (JORC 2012) is 15.1Mt @ 1.3% CuEq for 195,800t CuEq.**

Economic advantages of the Rockhampton location

Rockhampton's mining friendly status also endows QMines with the strategic option of potentially investing into downstream copper / base metal processing assets, allowing QMines to capture additional value across the copper / base metal value chain. QMines is considering this option.

Rockhampton is the major service centre for the southern Bowen Basin. Direct rail infrastructure servicing the Gladstone and Townsville ports is located 18 kilometres from the Mt Chalmers' site. Driving time from Rockhampton airport to the site is ~ 40 minutes, with the Mt Chalmers site being easily accessible on sealed roads via either Emu Park Road or Yeppoon Road. Relevant mining-related service industries, such as steel, concrete, bulk transportation, mining equipment, heavy vehicles, construction and mining labour force, and permanent accommodation, are all within a 20-kilometre radius of the site.

This proximity to Rockhampton, which is an established mining area, reduces forecasted supply chain costs across both a planned mine development and operation stage for the Mt Chalmers project. For example, the PFS for Mt Chalmers exhibits low C1 mine processing costs of just US\$2.14/lb CuEq and a key root cause for that, apart from the project's shallow mineralisation and open pit status, is that its concentrate output was costed as shipped to the port of Gladstone, which is near the Mt Chalmers site location reducing its mining operating costs.

QMines and Mt Chalmers, a concise history: The Mt Chalmers deposit contains recoverable copper, gold, silver, zinc, and sulphur. The deposit was discovered in 1860, with small-scale underground gold and then copper mining undertaken periodically until 1943. The total estimated extraction during that period was 434,899 tonnes, yielding 10,220 tonnes of copper, 1,587 kilograms of gold and 5,630 kilograms of silver. Since 1960, extensive exploration culminated in open pit mining by Geopeko Limited between 1979-1982, with ore transported to Mount Morgan via rail for processing. Total historical production at Mt Chalmers by 1982 was 1.2 Mt @ 3.6 g/t Au, 2.0% Cu and 19 g/t Ag. From April 2021 through December 2023, QMines undertook approximately 20,000 metres of confirmation and resource drilling, resulting in the delivery of a mining resource that boasts contained metal of approximately 75,000t Cu, 160,000oz Au, 30,000t Zn and 1.8Moz Ag. QMines intends to mine and process this deposit, and in this regard, the Mount Chalmers project was the subject of a comprehensive Pre-Feasibility Study (PFS) that was completed in April 2024. The findings of the PFS are supportive of the Mt Chalmers project's strong economic attractiveness and further growth potential, which have led to the formulation of our strong investment thesis for QMines. QMines itself was listed in May 2021 after acquiring 100% ownership interest in the Mt Chalmers deposit.

Copper and gold are supported by strong structural growth theses

QMines exposure to both copper and gold which are arguably two of the commodities with the most credible long term investment theses is of material value to prospective investors both in terms of investment return potential and portfolio risk management.

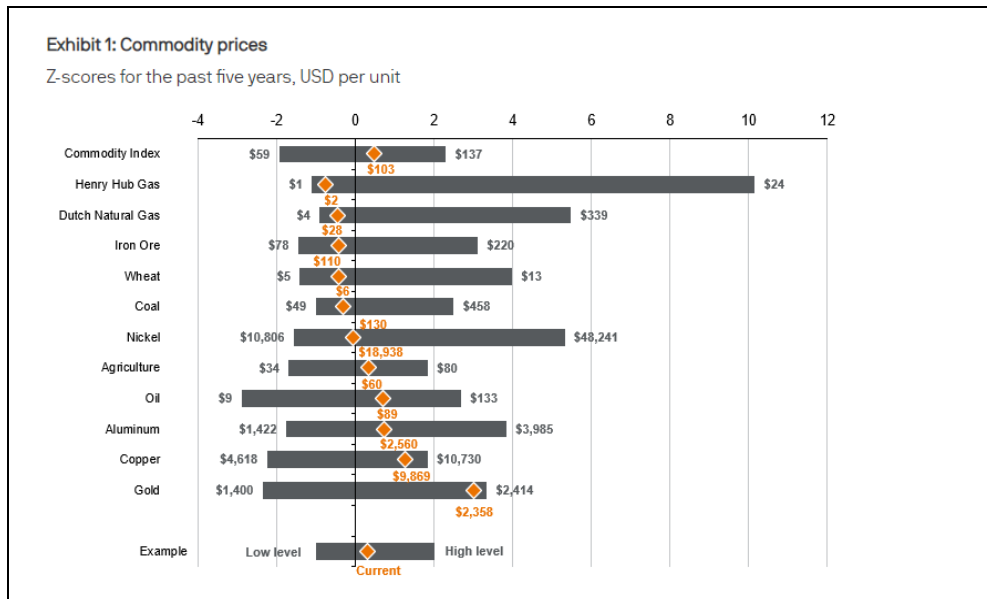
QMines Mt Chalmers Project is planned to produce and sell copper, zinc and pyrite concentrates. This will remain the case even if the Develin Creek assets are eventually integrated into the Mt Chalmers mine plan as expected.

Consequently, Mt Chalmers' life of mine revenues are 52% attributable to copper, with gold representing close to 30%. Investors should note that QMines' balanced exposure to both copper and gold will be valuable going forward, and this is not just because both assets are currently trading above their 5-year averages (refer below to Figure 2) and are expected to remain at elevated levels due to supportive structural reasons that indicate a new normal (discussed in more detail later).

Another key reason in support of QMines' balanced exposure is that copper and gold generally exhibit opposing trends across different stages of the economic cycle, **leading to what is effectively a risk management mechanism that QML investors benefit from.** Investors would not have this benefit if they were to invest in either a pure-play copper or gold explorer/developer or even an entity with a less balanced exposure to both key metals. Refer to Figure 3 below for a depiction of how the copper-to-gold ratio generally trends with US treasury yields (a proxy for the economic cycle). Apart from noting the

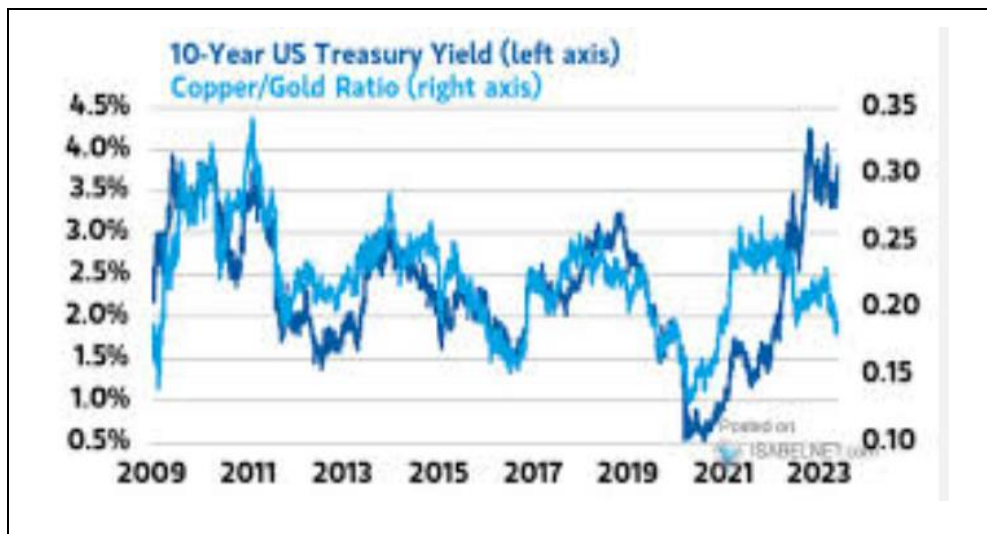
leading indicator quality of the copper-to-gold ratio, investors should note that during times of generally rising interest rates, copper outperforms in relation to gold – this does not mean that gold underperforms, but just that on a relative basis, copper does better. Hence, amidst such a growth-oriented stage of the economic cycle, QMines’ financials would likely outperform those of a pure-play gold player due to its material exposure to copper. Whilst when within a declining growth economic cycle that is associated with falling interest rates, gold generally outperforms copper in a relative sense. This does not mean that copper necessarily underperforms, especially given all the supply-side deficit issues that are supportive of a long-term bullish thesis on copper, but just that it underperforms relative to gold. Hence, in such a scenario, QMines’ financials, due to their exposure to gold, would generally outperform those of a pure-play copper player.

Figure 2: copper and gold price trends



Sources: JP Morgan Research

Figure 3: Copper/Gold ratio trends vs US Treasury Yields



Sources: Bloomberg

QML’s Copper Assets are of a high grade and its overall Resources showcase a history of increasing

As shown below in Figure 4, QMines’ flagship project, Mt Chalmers, exhibits an average copper grade of 0.75%, indicating its strong economic attractiveness. Copper grades for new mines have been declining globally as it becomes increasingly harder to find new high-prospectivity deposits, especially ones that are located close to infrastructure.

As shown below in Figure 5, Mt Chalmers’ average copper grade is notably higher than the average copper grade for both currently operating mines around the world and those that are within the PFS stage. Copper grades are a key causal factor for overall economic attractiveness. Lower copper grades necessitate the need to move more rocks, which, in turn, equates to higher costs. If the copper grades are good and the deposit is not well connected to infrastructure, mining development and processing costs consequently rise. **QMines’ assets, especially the Mt Chalmers project, perform strongly on both of these key pivotal metrics, leading to its attractive PFS stage economic evaluation.**

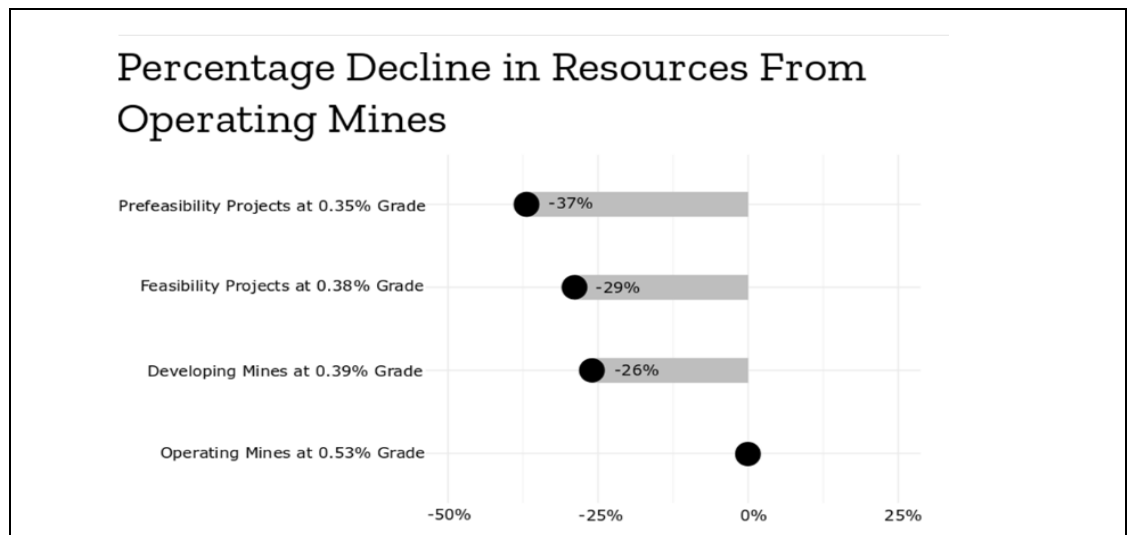
Figure 4: Mt Chalmers deposit’s resource metrics

Deposit ²	Resource Category	Tonnes (Mt)	Cut Off (% Cu)	Cu (%)	Au (g/t)	Zn (%)	Ag (g/t)	S (%)
Mt Chalmers	Measured	4.2	0.3%	0.89	0.69	0.23	4.97	5.37
Mt Chalmers	Indicated	5.8	0.3%	0.69	0.28	0.19	3.99	3.77
Mt Chalmers	Inferred	1.3	0.3%	0.60	0.19	0.27	5.41	2.02
Total²		11.3	0.3%	0.75	0.42	0.23	4.60	4.30

Sources: Company

Figure 5: Mt Chalmers deposit’s resource metrics

The earlier the stage the copper project is the lower the average grade. In this regard, QMines copper grades stand out vs its comparison set.



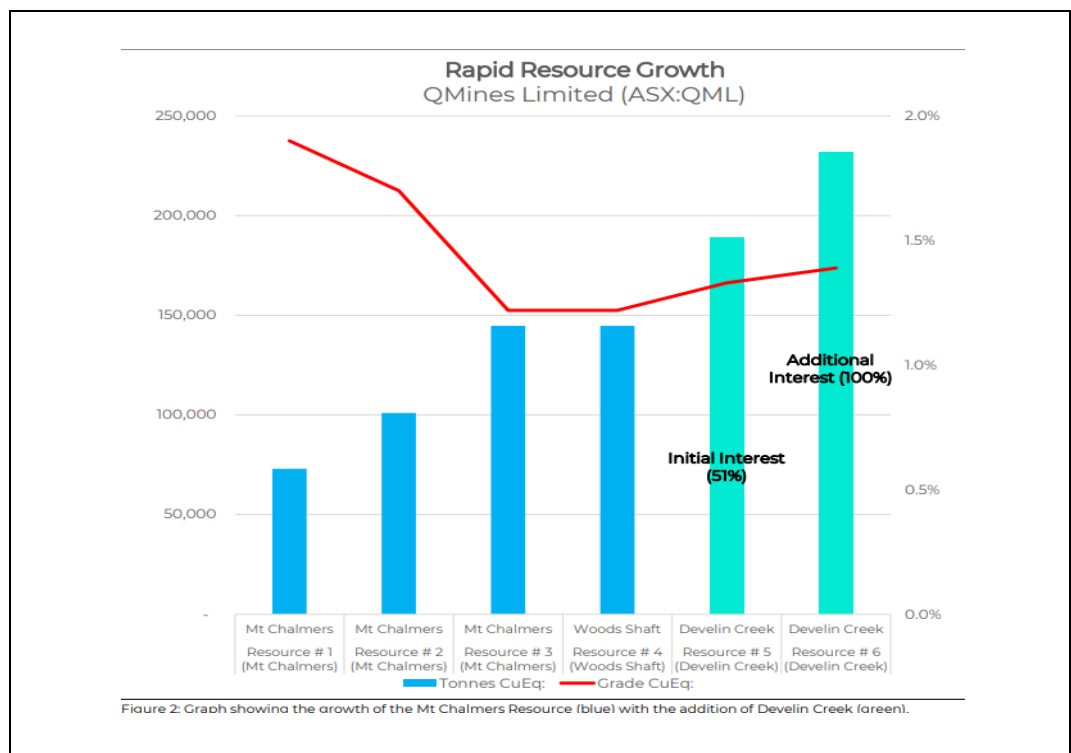
Sources: www.mining.com

QMines’ exploration and M&A strategy have been instrumental in achieving regular upward revisions in its resource base. As shown below in Figure 6, since listing in May 2021, QMines has showcased 6 upward resource updates:

A 7th resource upgrade related update is expected later in 2024 relating to QMines' Develin Creek assets

- 3 upward resource revisions associated with the Mt Chalmers deposit itself.
- An additional maiden Mineral Resource Estimate (MRE) for the Woods Shaft Deposit. N.B. the Woods Shaft Deposit is located only 700m southwest of the Mt Chalmers open pit. Hence, it is considered to be a part of the Mt Chalmers project, which has effectively led to the Mt Chalmers resource being subject to 4 upward revisions since QMines' IPO. The Woods Shaft deposit's MRE, however, was not a part of the Mt Chalmers PFS' economic evaluation that was completed in April of this year.
- An additional initial upward revision due to acquiring a 51% stake in the Develin Creek Project.
- A further revision due to acquiring the option to expand its interest in the Develin Creek Project to 100% (current stake is 51%)
- **7th resource update expected later in 2024:** QMines expects to deliver a 7th update later this year, increasing its resource base consequent to the recently commenced drilling program at Develin Creek.

Figure 6: QMines record of achieving regular upward revisions in its mineral resources



Sources: Company

Figure 7: QMiner defined resources across all its assets

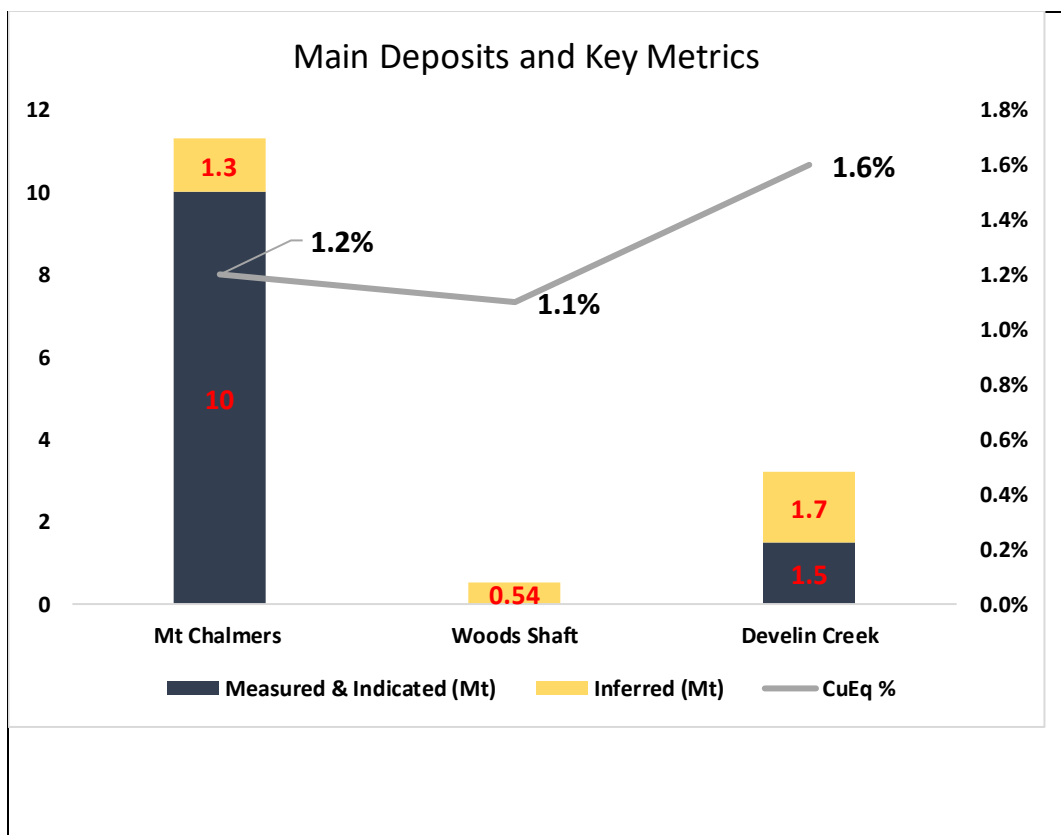
Deposit	Resource Category	Tonnes (Mt)	Cut Off (% Cu)	Cu (%)	Au(g/t)	Zn(%)	Ag(g/t)	S(%)
Mt Chalmers	Measured	4.2	0.3%	0.89%	0.69	0.23%	4.97	5.37%
Mt Chalmers	Indicated	5.8	0.3%	0.69%	0.28	0.19%	3.99	3.77%
Mt Chalmers	Inferred	1.3	0.3%	0.60%	0.19	0.27%	5.41	2.02%
Mt Chalmers Total		11.3	0.3%	0.75%	0.42	0.23%	4.60	4.30%
Woods Shaft	Inferred	0.54	0.3%	0.5%	0.95			
Develin Creek	Indicated	1.5	0.5%	1.21%	0.18	1.25%	7.10	
Develin Creek	Inferred	1.7	0.5%	0.92%	0.16	1%	4.80	
Develin Creek Total		3.2	0.5%	1.05%	0.17	1.22%	5.90	

Sources: Company

Based on these upward revisions, as indicated above in Figure 7, QMiner's current combined Mineral Resource Estimate across its different assets equates to 15.1Mt @ 1.3% CuEq for 195,800t CuEq with 76% of the resources in the Measured and Indicated categories – refer below to Figure 8.

Figure 8: QMiner main deposits' key metrics

Infill drilling at Woods Shaft and Develin Creek will likely transition a material portion of the Inferred Resources into Indicated.



Sources: Company, East Coast Research

QMines growth strategy

Following the successful completion of a PFS on its flagship Mt Chalmers deposit in April 2024, QMines aims to continue to grow its resource base by conducting further drilling works. **Investors should note that QMines' assets include 5 known deposits that are currently not a part of the Mt Chalmers PFS/Mine plan but have the high potential to be eventually included.** These are the Scorpion, Sulphide City, Woods Shaft, Mt Warminster and Botos deposits.

Supporting our investment thesis, we note that the core of QMines' strategy is to seek avenues to expand Mt Chalmers' scale by bringing in resources from its other deposits and prospects. **As explained below, this scale-based strategy will be conducive for material shareholder value creation. All of QMines' deposits are still open for further discoveries, including Mt Chalmers and hence QMines has indicated that there is 6-8Mt of additional ore resources across its asset base that could be brought into a larger scale Mt Chalmers mine plan.**

QML's strategy in terms of specific deposits is to:

- Prioritise, exploration and drilling works on **assets that currently have defined mineral resources** such as:
 - The Scorpion and Sulphide City deposits that together constitute the Develin Creek Project (**main focus of the current drilling program**).
 - The Woods Shaft deposit (located 700m south west of the Mt Chalmers open pit).

QMines has recently announced the commencement of its drilling program at the Develin Creek Project. In addition to extensional drilling, QMines will undertake infill drilling at the two Develin Creek deposits aimed at upgrading a material portion of the Inferred resources into the Indicated category, in addition to expanding the project's resource base. QMines' maiden drilling program at Develin Creek is planned to consist of up to 10,000 meters (60 holes) of RC drilling. This is QMines' main current focus. QMines intends to eventually bring the Develin Creek deposits into a new, larger Mt Chalmers mine plan.

- Continue to conduct exploration works on promising **assets that currently do not have defined MRE** because extensive drilling and sampling works are yet to be done on them. These assets are mostly categorised as Exploration Targets and include:
 - The Mt Warminster deposit
 - The Botos deposit
 - The Artillery Road prospect

Given their locations and mineralisation, all of the above-mentioned prospects and deposits have the potential to eventually be included in a larger scale Mt Chalmers project. Although the Woods Shaft, Mt Warminster, and Botos deposits are in very close proximity to the large Mt Chalmers Deposit (refer below to Figure 9), the possibility of integrating assets into one large mining plan also includes both of the Develin Creek Project deposits.

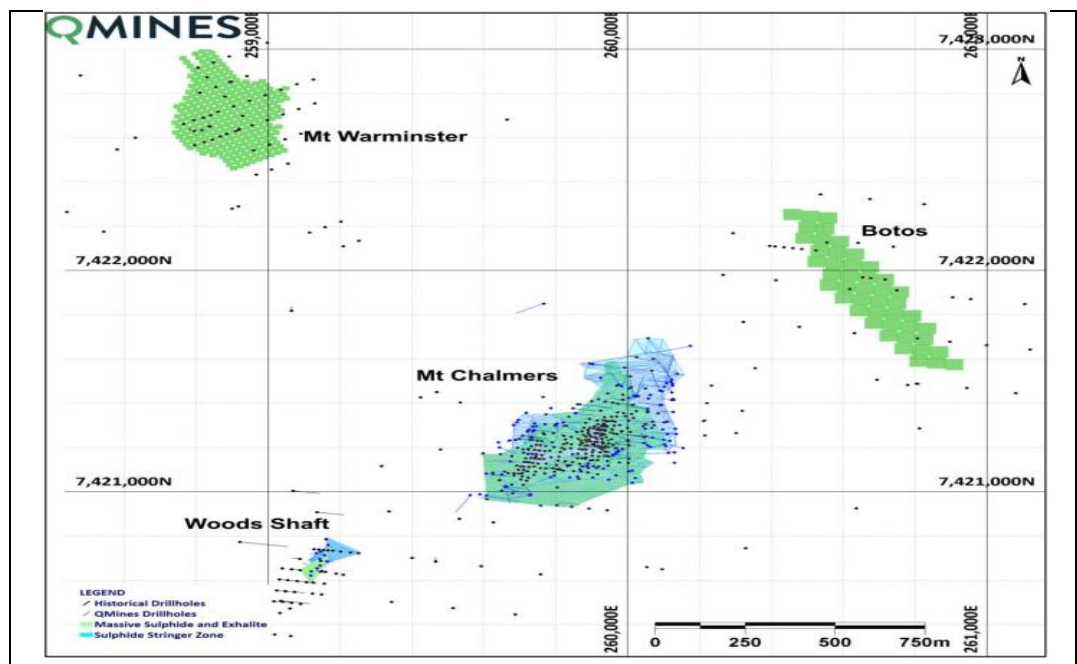
We think QMines objective for a larger scale mining operation at Mt Chalmers is both an effective strategy and is achievable given management's prior record of delivering on stated goals.

This integration of assets would create material economic value to investors because QMiners would derive financial efficiency benefits from a larger scale mining operation

at Mt Chalmers. QMiners management is aware of this and has already made arrangements for drilling, exploration, funding and other planning activities to adequately address this optionality.

The financial efficiency related benefits consequent to a larger scale Mt Chalmers Project are not just due to increased production volumes being amortised over relatively fixed mining development and processing costs that do not rise in line with the increase in mined ore. Those are just one aspect of the economic benefits derived from larger scale. The copper mineralisation across the two Develin Creek deposits is of the VHMS type (Volcanic Hosted Massive Sulphide), leading to the Develin Creek mineralisation being of a higher grade than Mt Chalmers'. As a result, the output from Develin Creek, if blended with Mt Chalmers', could lead to higher concentrations of minerals (and hence higher prices from buyers) in the concentrates that are planned to be sold.

Figure 9: Location proximity of deposits



Sources: Company

Additionally, investors should note that even though QMiners may from time to time show opportunistic interest and activities in other high prospectivity tenements and assets, QMiners management has been deliberate in focussing its exploration strategy to revolve around the Mt Chalmers Project and other copper based assets and deposits that are complementary to the Mt Chalmers Project. This focussed approach is the one most conducive to the materialisation of benefits associated with larger scale mining operations. In this regard, in 2023 QML divested some of its non-core gold and base metal projects that are located in south east Queensland, away from the core Mt Chalmers Project area in Rockhampton.

Apart from divestment, this approach is also associated with focussed M&A, with QMiners prudently acquiring the rights to own 100% (current ownership 51%) of the

The latest placement sees QMines being well funded for its current drilling and exploration program.

Develin Creek project due to its prospectivity and scope for integration with Mt Chalmers.

Funding options for growth strategy

QMines in early August 2024 announced a \$ 5m placement, which was subject to significant investor interest. The placement is planned to be structured across 2 tranches. Capital raised from the placement will be used to fund QMines’ exploration and development plans at the Mt Chalmers and Develin Creek projects, payment for the remaining 49% interest in the Develin Creek project and for general working capital needs. Hence QMines will have the requisite capital to fund its growth strategy plans over the short to medium term.

Investors should also note that in accordance with prior trends and supporting the view that QMines management’s interests are closely aligned with its broader shareholder base, QMines’ Executive Chairman and the GM of Operations both also took part in this placement.

Additionally, to minimise the dilution impact to equity and to accelerate activities associated with its Mt Chalmers PFS, in Jan 2024 QMines raised \$1.5m in debt capital from 2 private entities. The willingness of private entities to lend debt capital to QMines is indicative of the quality of its Mt Chalmers Project and other deposits and prospects.

QMines has high quality assets

Extensive Drilling History

QMines’ copper, gold and other base metal resource estimates have been derived as per the provisions of the JORC 2012 Mineral Code and hence have been subject to robust drilling and sample testing to ensure their reliability.

Refer below to Figure 10 for a summary of the drilling record at Mt Chalmers across a combination of percussion drilling, Reverse Circulation (RC) drilling and diamond core drilling. Only RC and diamond core drilling data were used to build the Mt Chalmers Mineral Resource Estimate.

Figure 10: Mt Chalmers exploration drilling record

Hole Type - QMines	Number	RC (m)	Diamond (m)
Diamond	20		2,466.4
RC Pre-collar Diamond Tail	24	1,714.2	1,721.47
RC Only	72	11,299.0	
RC Pre-collar - Diamond Tails Incomplete	9	513.1	
Sub Total:	125	13,526.3	4,187.87
Drill Hole Table - Historic			
Hole Type	Number	PDH (m)	Diamond (m)
Diamond	32		3,393.95
PDH Pre-collar Diamond Tail	72	4,106.81	3,894.82
PDH Only	237	11,824.43	
Sub Total:	341	15,931.24	7,288.77
Total:	466	29,457.54	11,476.64

Sources: Company

These different types of drilling activities have been conducted by both Mt Chalmers’ previous operators and QMines. Since acquiring the project, QMines has undertaken

several diamond core and RC drilling programs (~20,000m of confirmation and exploratory drilling). The recent diamond and RC drilling work undertaken by QMines is associated with sample recovery rates on average of between 93-95%, adding assurance to the attractive grade estimations in the project's MRE.

The Mt Chalmers deposit is a generally flat-lying mineral deposit. The majority of drillholes were drilled vertically providing a good intersection angle with the mineralisation. Holes drilled on sixty-degree dip are estimated to represent 87% of the down hole intersection.

QMines' Develin Creek project MRE is also supported by extensive drilling works. These were all conducted by prior owners of the Develin Project, but QML undertook a comprehensive review of the data prior to providing an updated MRE. Refer to Figure 11 below for a summary of the historical drilling works across diamond core, RC and percussion drilling types done at Develin Creek. In August of this year, QMines announced that it has commenced its maiden RC drilling program at the Develin Creek project, with the overarching aim to bring the project into a larger, integrated Mt Chalmers mining plan.

Figure 11: Develin Creek exploration drilling record

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

Sources: Company

The Mt Chalmers Project – Key Highlights

The Company's flagship asset, the Mt Chalmers high grade copper- gold project was subject to a comprehensive economic evaluation through a PFS study that concluded in April 2024. The results are supportive of the view that the Mt Chalmers project is a financially attractive one that can be economically commercialised at scale using industry standard mining techniques, leading to the materialisation of the following robust PFS stage financial metrics which support our strong investment thesis for QML:

- **Pretax NPV of A\$373m, an IRR of 54% and a cumulative EBITDA of A\$828m over the project's life.**

The project is expected to produce 105,000 tonnes copper equivalent (CuEq) over a 10.4 year mine life. C1 mine processing costs are low - estimated at just US\$2.14/lb CuEq. The current assumptions informing the PFS' NPV have assumed that the 1.0Mtpa of ore will be processed over the mine's operating life. Investors should note that this amount is likely to be materially increased upwards, enhancing the project's economics as

additional deposits, such as those from Develin Creek and Woods Shaft, which were not assumed to be a part of the project in the PFS, are brought into a larger integrated mining plan for Mt Chalmers.

Other key highlights from the PFS include:

- 1Mtpa on site ore processing plant;
- Capital cost estimate of A\$191m; Initial mine life estimate of 10.4 years;
- Life of mine revenue of A\$1.64B and life of mine free cash flow of A\$636m

The projected metal production, as part of the initial PFS assumptions, which include its life of mine estimate and assumption of non-usage of any minerals from other deposits other than the main Mt Chalmers, include:

- 65,000t copper; 160,000oz gold; 30,600t zinc; 1.8Moz silver; 583,000t pyrite.

The Mt Chalmers Project – root causes for its strong financial returns

The Mount Chalmers project's strong PFS stage returns are tied to key geological, mineralisation and location-based characteristics of the project which, as shown later in the Valuation section, help its key financial metrics able to with stand several downside scenario based assumptions. Additionally, on the flip side, there are several levers for value creation that have conservatively not been factored into the original PFS economic assessment, with additional copper and other base metal resources from other QMines owned deposits being brought into a larger integrated mine at Mt Chalmers being just one of those levers.

Geological and Mineralisation based factors.

As illustrated below in Figure 12, the Mt Chalmers deposit is a shallow, open pit deposit with high grades. The Mt Chalmers' pit depth is estimated to be 220m and will be mined in 3 stages. The Mt Chalmers massive sulphide orebody is a complex copper-zinc-lead-pyrite one.

The geometry of the Mt Chalmers deposit indicates a relatively flat lying asymmetrical massive sulphide mound – refer to Figure 13 below - with drilling results intersecting higher grade copper/gold massive sulphides proximal to the centre of the deposit and high grade lead/zinc/silver in the massive sulphide and exhalate mineralisation distal from the centre of the deposit. Similar metal zoning has also been observed in the stringer/disseminated zone beneath the massive sulphide mineralisation where copper/gold grades are typically higher in the centre and lead/zinc/silver grades typically higher distally and at greater depths. **This flat lying nature of the ore body is a key causal reason for the Mt Chalmers project's attractive economic viability.**

The resource is divided into two mineralisation types, namely massive/exhalite and stringer, and their oxide equivalents. The deposit has an overall strike length of approximately 700 metres north-south and an east-west extent ranging between 250 and 350 metres. Thicknesses of up to 50m for the stringer zone are common with 5

The PFS proposes a conventional drill and blast, load and haul open pit mining operation to supply ore to a processing plant with an annual throughput of 1 million tonnes per annum.

The Mt Chalmers deposit itself is still prospective for additional mineralization.

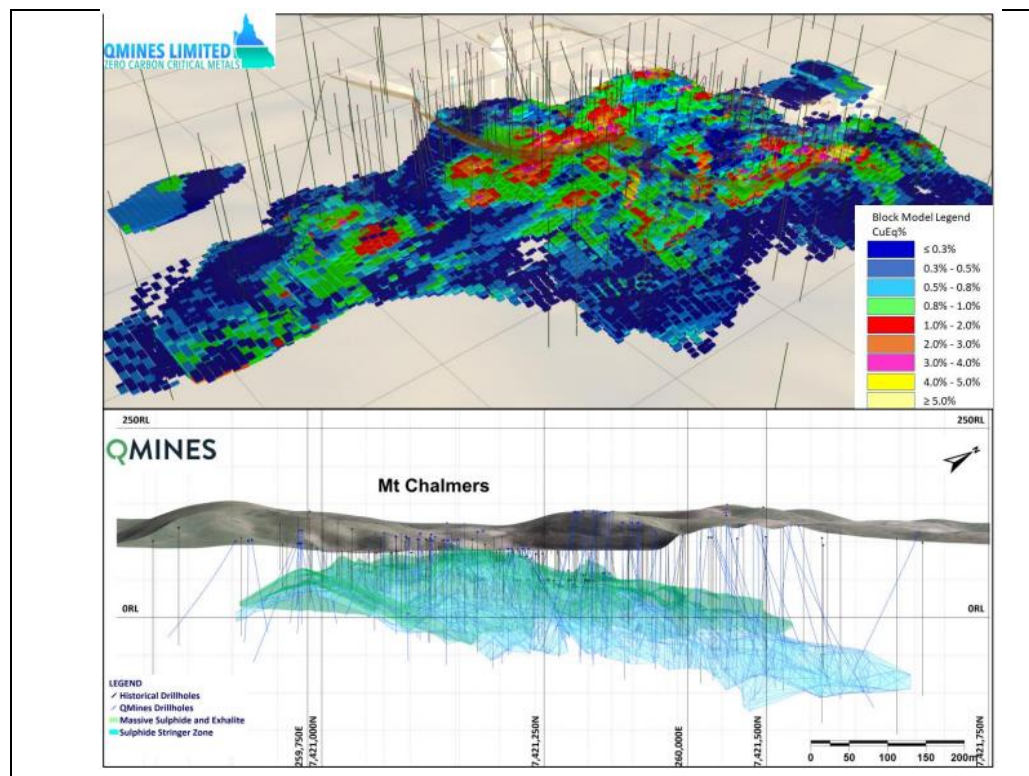
metres to 20 metres being typical for the massive sulphide / exhalite domains. Drilling in 2022 extended the mineralisation outwards in all directions and has revealed the massive sulphide / exhalite horizon to be more widespread than previously thought.

Mt Chalmers mineralisation is exposed in the pits and extends to a vertical depth of just more than 200m below surface. Resource drilling has now closed off the deposit in most areas, but investors should note that the Mt Chalmers deposit still remains open along a fault block to the south west area which has been found to contain high grade mineralisation.

There remains the possibility for further discoveries, particularly in the corridor between the west lode of Mount Chalmers and the Woods Shaft deposit.

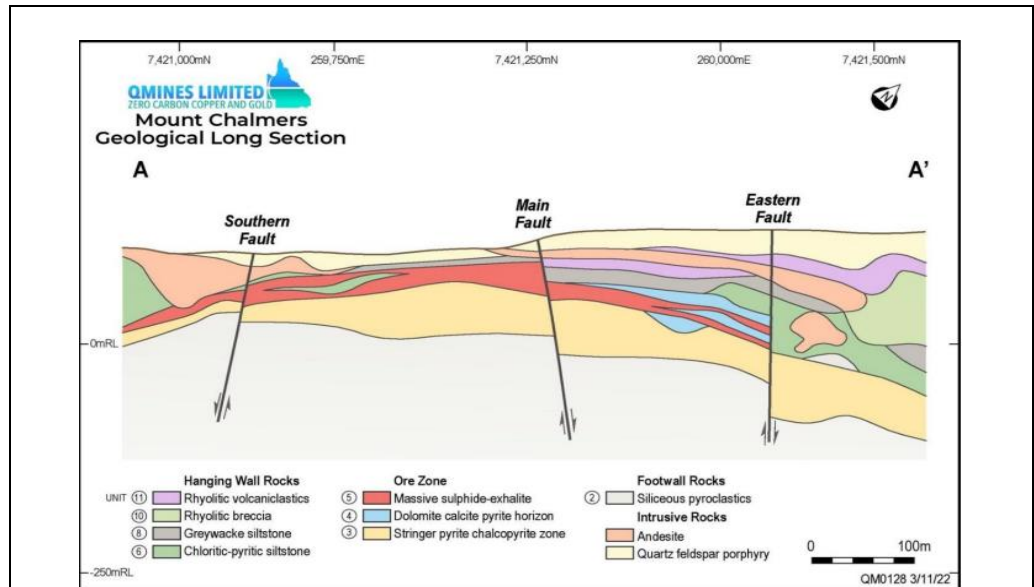
The project’s high PFS stage NPV and IRR demonstrate the benefits derivable by investing in mining projects that are comprised of shallow, open pit deposits – the ore from such deposits is materially cheaper to extract and process than the ore from deposits that are found in deep underground mineralisation. As a result of this, as seen below in Figure 14 Mt Chalmers C1 processing costs per pound of copper equivalent resource is well below the range of recent spot prices per pound that can be assumed for copper. C1 cash costs are an accepted mining industry metric to gauge the cost of extracting and processing the minerals from a mine.

Figure 12: Mt Chalmers deposit geological characteristics



Sources: Company

Figure 13: Mt Chalmers deposit long section

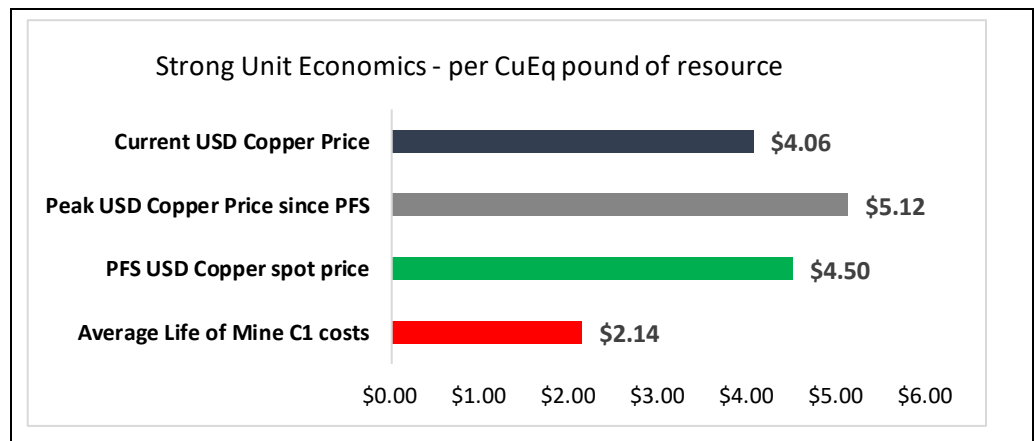


Sources: Company

As noted previously, new copper mines are increasingly of lower average copper grades. Mount Chalmers is a high grade deposit both from the perspective of copper equivalent grades, which take into consideration the other precious and base metal mineralisation, and also copper only grades. Additionally, the nature of the mineralisation at Mt Chalmers makes it conducive to stage the mining such that higher mineral grades are mined earlier in the mine’s life, leading to optimised cash pay back and IRR metrics.

The Mt Chalmers open pit has been effectively designed as a three-stage open pit to aid in maintaining reasonable strip ratios and processing mineral blend targets on site that are planned to be sold. The deposit at Mt Chalmers is comprised of two types of ore material: Volcanic Hosted Massive Sulphide (VHMS) and stringer material. The VHMS material contains copper, gold, zinc, lead, silver and sulphur, whilst the stringer material contains copper, gold, silver and sulphur. The ratio of the two materials in the deposit is 30% VHMS and 70% Stringer, with the VHMS mineralisation being of higher grades and found on top of the stringer material, leading to the stage wise open pit mining plan.

Figure 14: Mt Chalmers’ processing costs and unit economics



Sources: Company, East Coast Research

The level and nature of Inferred Resources assumed in the PFS are not material to result in any notable uncertainty surrounding the PFS' financial outcomes.

Open Pit Resources & Reserves:

The key financial metrics associated with the PFS comprise Measured and Indicated resources (~91%) and Inferred Mineral Resources (~9%). The proportion of resources within the Inferred category is not high and is subject to recategorization into Indicated as further infill drilling is done down plunge – most of the Inferred mineralisation is situated beneath the open pit and hence has not yet been subject to extensive infill drilling. Additionally, the PFS only assumes the initial processing of Inferred resources sometime in year 5, adding to the overall robustness of key net present value based financial metrics. Figure 15 below showcases the translation of the Open Pit resources, across the 3 stages, from the Production Target level which includes Inferred Resources to the Ore Reserve estimate which excludes them.

Figure 15: Mt Chalmers Production Target vs Ore Reserve Estimate

Mt Chalmers Open Pit Design	Production Target, Mt Chalmers Project						
	Volume	Tonnes	Cu Grade	Zn Grade	Au Grade	Ag Grade	S Grade
	(BCM)	(t)	(%)	(%)	(g/t)	(g/t)	(%)
Stage 1	1,020,318	3,364,715	0.91	0.24	0.76	6.3	5.3
Stage 2	586,630	1,929,355	0.45	0.52	0.48	7.0	4.6
Stage 3	1,615,102	5,115,931	0.50	0.25	0.27	4.3	3.6
Total	3,222,050	10,410,001	0.65	0.28	0.49	5.4	4.3

Mt Chalmers Open Pit Design	Ore Reserve Estimate							
	Ore Volume	Ore Tonnes	Waste Volume	Cu Grade	Zn Grade	Au Grade	Ag Grade	S Grade
	(BCM)	(t)	(BCM)	(%)	(%)	(g/t)	(g/t)	(%)
Stage 1	961,938	3,162,457	5,919,793	0.91	0.24	0.76	6.3	5.3
Stage 2	534,062	1,755,404	3,669,324	0.45	0.52	0.48	7.0	4.6
Stage 3	1,471,712	4,655,128	9,696,683	0.50	0.25	0.29	4.3	3.6
Total:	2,967,711	9,572,990	19,285,800	0.63	0.29	0.48	5.5	4.3

Sources: Company

Mt Chalmers' final pit is designed to a depth of 220m and incorporates 60-70° batter angles and 7m berm widths. Ramps are either 15m wide (single lane) or 24m wide (double lane) and have a gradient of 1 in 9.

Recoveries and Optimisation of Concentrates for Sale:

Another causal reason for the planned project's strong economics is that testing results are indicative of high mineral recovery rates of the minerals present at Mt Chalmers. The metallurgy indicates that conventional flotation processing methods will suffice to

The Copper Concentrate specification is a minimum 15% copper however tests show that a concentrate grade as high as 26% can be achieved at a high copper recovery. Integrating Develin Creek will likely result in a boost to these metrics.

recover the key minerals, lowering the cost impost associated with planned mining operations that plan to produce copper, zinc and pyrite concentrates. Conventional mining techniques will suffice despite the orebody itself being mineralogically complex. Figure 16 below details the rates of recovery anticipated in the project based off testing results. 88.8% of the copper resource will be recovered to the copper concentrate, 7.9% of the zinc resource, 47.5% of the gold and 53.6% of the silver. Effectively across the 3 different concentrates, 96.4% of the copper will be recovered. The copper concentrate itself will be composed of 15-25% copper, leading to a high-grade overall copper concentrate.

Figure 16: Mt Chalmers expected metal recoveries

Concentrate Recoveries %	Copper	Zinc	Gold	Silver
Copper Concentrate	88.8%	7.9%	47.5%	53.6%
Zinc Concentrate	3.6%	81.3%	12.4%	14.1%
Pyrite Concentrate	4.0%		21.2%	20.8%
Total mineral recoveries to concentrates	96.4%	89.2%	81.1%	88.5%

Sources: Company

Location advantage leads to high confidence in Mt Chalmers’ eventual production :

The Mt Chalmers project’s location near Rockhampton leads to several advantages which should assure investors that the project is likely to proceed to the production stage and reach there in rapid time. This is because the vital infrastructure / human capital needed to develop and operate a large scale mine are readily available in Rockhampton. Lack of proximity to established infrastructure is often a key reason for delays in a mining project’s commencement.

Direct rail infrastructure servicing the Gladstone and Townsville ports is located 18 kilometres from site. Key service industries needed for mining such as steel, concrete, bulk transportation, mining equipment, heavy vehicles, construction and mining labour force, permanent accommodation are within 20 kilometre radius of the site. Adequate overhead power supply is available from the regional substation. Bulk concentrate is costed as shipped to the port of Gladstone via road haulage to the Rockhampton rail head and rail to Gladstone. QMines has purchased several properties surrounding the historic operation. It is envisaged that this land is sufficient for plant development.

These factors have led to the Mt Chalmers project having a low upfront capital cost outlay of A\$191.9 million, leading to a high NPV/Capex ratio as discussed in more detail in the Valuation section. Apart from the low upfront capital outlay directly leading to the realisation of a high NPV, a high NPV /Capex ratio also increases the odds of the project’s successful progression because both debt and equity capital would readily be available to fund the project. The low capital impost is related to factors such as QMines not needing to invest in an onsite accommodation facility, due to the project’s proximity to

Rockhampton and existing roads and other infrastructure being in place due to the Mt Chalmers deposit being subject to historic mining operations prior to QMiners' ownership.

Economical and environmentally friendly use of Pyrite content:

The Pyrite Concentrate can produce high quality sulphur and iron concentrates with minor gold which is considered a marketable commodity for the production of sulphuric acid and high purity iron ore with gold credits.

In April 2024, QMiners updated the MRE for the Mt Chalmers project to include sulphur, with the aim of producing a pyrite concentrate. The updated resource now includes 484,000 tonnes of sulphur which is aimed to be processed and marketed as a pyrite concentrate containing gold. The zinc and pyrite concentrates will be processed through a Carbon in Leach (CIL) circuit to extract gold and silver before being marketed to third parties

Apart from the benefit derived from having an additional source of revenues, the sale of pyrite concentrate also has a cost saving advantage. The Mt Chalmers ore body contains a high-level sulphur content, and absent the creation a pyrite concentrate a large amount of sulphur would have needed to be discharged into the tailings storage area from the project's processing plant. This removal of excess pyrite from tailings will materially reduce the burden of acid rock drainage control for the mining and mineral processing operations, lowering overall costs and reducing the project's environmental impact.

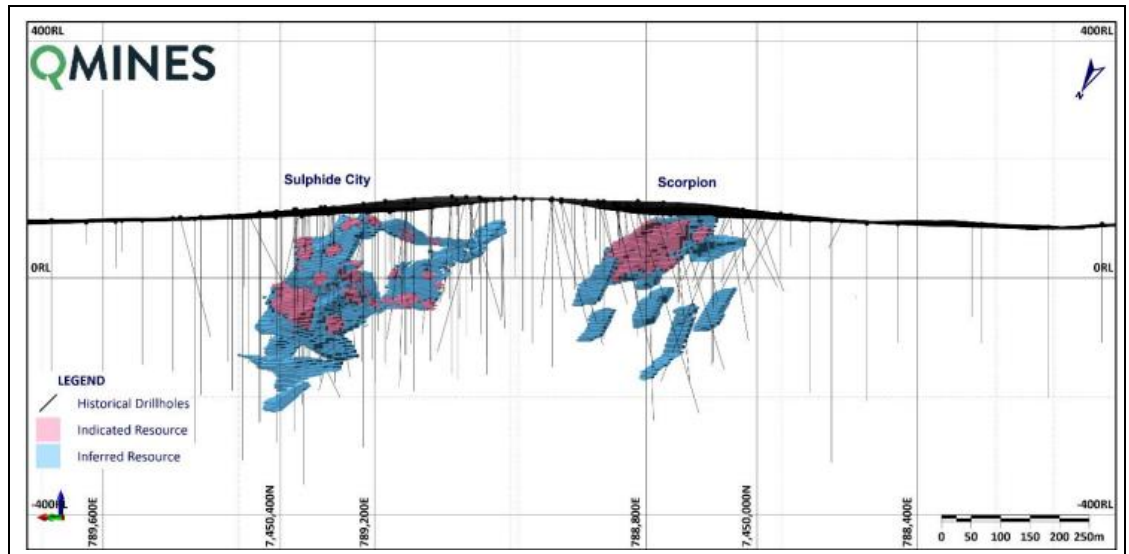
The Develin Creek Project

The Develin Creek copper-zinc project is comprised of two deposits: Sulphide City and Scorpion. Refer to Figure 17 below for block models showing the deposits' Indicated and Inferred Resources. The project is located approximately 90km north-west of Rockhampton.

Both Develin Creek deposits are high grade VHMS type (Volcanic Hosted Massive Sulphide) deposits. And as noted earlier, due to its higher mineral grades vs Mt Chalmers', mineralisation from Develin Creek could eventually be used to increase the sellable mineral content of the concentrates produced at Mt Chalmers. Investors should note that the official integration of Develin Creek into the Mt Chalmers mine plan will likely happen sometime in 2025 after QMiners has assessed the results of its RC drilling program on Develin Creek which commenced in August of this year.

QMiners currently owns 51% of the Develin Creek project but has executed an agreement to acquire 100% ownership. The additional interest (49%) is to be acquired for a further \$1.3m in cash and \$1.0m in shares, with the consideration subject to reduction if QMiners' drillings find lower levels of zinc grades than expected. Investors should note that cash funding to acquire the additional interest has already been secured as per QMiners latest placement.

Figure 17: Develin Creek deposits' block model



Sources: Company

The Woods Shaft Deposit

As shown above in Figure 9, the Woods Shaft deposit is located 700m south west of the Mt Chalmers open pit. Woods Shaft has an Inferred Mineral Resource Estimate of 540,400t 0.5% Cu and 0.95g/t Au for 2,700t Cu and 16,440oz Au. Drilling has defined the mineralisation to extend over 250m in strike, 400m wide and up to 90m in depth and remaining open in multiple directions. The geology of Woods Shaft appears similar to the Mt Chalmers main lode. The Woods Shaft deposit is a gold/copper dominant VHMS / stringer deposit, with the mineral resource estimate predominantly from the preserved stringer zone. Due to its proximity to the Mt Chalmers mine site, Woods Shaft represents a logical extension to a proposed mining operation, creating the potential for further scale-based cost and revenue benefits to Mt Chalmers' PFS NPV. Additional infill drilling has the high likelihood of further expanding Woods Shaft's resource base and converting some of the Inferred resources into Indicated.

The Mt Warminster Exploration Target / Deposit

Mt Warminster is currently a JORC 2012 Exploration Target and is located about 2km northwest of the Mt Chalmers mine site. Historical drilling by Geopeko consisted of 59 holes for a total of 3,194m drilled. The deposit has a strike length of approximately 500m and measures 120m to 350m wide and is 6m to 40m thick. Mt Warminster has been drilled on 50m spaced fences and uses a cut-off grade of 1.0% zinc equivalent. The Exploration Target for the prospect is estimated at:

- 1.5-1.8Mt at 0.5-0.7% Zn; 0.2% Cu, 0.25-0.35% Pb and 8-12 g/t Ag

Botos Exploration Target / Deposit

The Botos prospect is also a JORC 2012 Exploration Target and is located 1km north east of the Mt Chalmers mine site. The Company has identified 42 historic drill holes at Botos that were drilled by Geopeko for a total of 5,469m. The Exploration Target is flat-lying, has an estimated strike length of 750m, is 200m wide with a thickness that varies from 4m to 10m. The 3D geological interpretation is based on 200m spaced sections. Botos is still open along strike. The Exploration Target has an estimated range of:

- 1.5-2.5Mt at 0.5-0.8 g/t Au, 1.1- 1.4% Zn; 0.5-0.7% Pb, 0.1-0.2% Cu and 30- 50 g/t Ag

The Artillery Road Prospect

The Artillery Road prospect was found after a regional EM survey was flown by QMines over the area. Afterward, in late 2023 QMines completed a 13-hole, 2373 meter RC drilling program at the site. The results were positive, confirming copper-zinc mineralisation which will be subjected to further drilling.

Similar to the other deposits and exploration targets, Artillery Road is situated in close proximity to Mt Chalmers only 10- 12km away. Therefore, there exists the real likelihood of this prospect adding scale to the Mt Chalmers mine plan.

Cawarral and Mt Wheeler Goldfields

Earlier this year, QMines announced impressive results from analysing historical rock data from the Cawarral and Mt Wheeler Goldfields. The deposits are an underexplored regional gold target located in an area 6km NE of Mt Chalmers. Multiple bonanza gold grades of up to 256g/t Au from samples have been identified over a broad area from multiple locations within the Company's tenement package with historical RC drillhole MWC07 intersecting 3m @ 154g/t Au. Investors should note that there is potential for the discovery of a high-grade gold deposit in the area, creating an additional future source of upside.

Macroeconomic & Industry Analysis

The Mt Chalmers project's financial attractiveness is closely linked to the eventual evolution of copper and gold prices, with copper contributing to around 52% of the project's revenues as per the April 2024 PFS and gold around 30%. The price assumptions for these two key metals underpinning the PFS' financials outcomes were:

- **USD \$9,850 per ton for copper. USD \$2,350 per oz for gold.**

In terms of copper, as seen below in Figure 18 the current spot copper price is slightly below the PFS' assumed price at \$9,018 per ton after having risen to a peak of ~\$10,500 per ton in May of this year after the PFS was completed. Gold, on the other hand, is continuing its strong 2024 run, with the current price of ~USD \$ 2,450 per oz seeing it higher than the levels assumed in the PFS – refer to Figure 19 below.

We are aligned with the consensus market view that both of these key metals are underpinned by strong structural forces that support their long-term price rises or at the least maintenance at levels consistent with the PFS' assumptions.

Despite this, to add conservativeness to our bullish investment thesis on Qmines, as discussed in the Valuations section, we have assumed lower prices than those in the PFS in formulating our overall recommendation. However, this does not change our long-term bullish view on these two metals. **Given that the Mt Chalmers mine is projected to operate for 10.4 years and possibly longer if larger scale is achieved, investors should ignore short term volatility, focussing on the long-term supply and demand price drivers for both metals which support their prices being at elevated levels.**

The importance of interest rates: the copper to gold price ratio is somewhat linked to the state of the interest rate / economic cycle, with rising interest rate cycles which are inherent in economic upswings being associated with copper generally outperforming

Artillery Road drilling has delivered several intersections with copper equivalent grades up to 1.46% CuEq in hole ARRC013 and individual grades up to 2.43g/t Au, 4.9g/t Ag, 1.02% Cu, 0.12% Pb and 5.12% Zn over 1 metre intervals. Drillhole ARRC013 produced a strong intercept of 15m @ 1.01% CuEq.

As noted earlier, the relative outperformance of either copper or gold vs each other at distinct stages of the economic cycle provides a good portfolio hedge for Qmines

gold. Conversely, falling interest rate cycles which are inherent in economic slowdowns are normally associated with gold outperforming copper. But these are relative outcomes, not absolute. For example, rising interest rate cycles are associated with inflationary periods which are also associated with elevated gold prices due to gold's attribute of being a safe haven asset that unlike currencies hold its value.

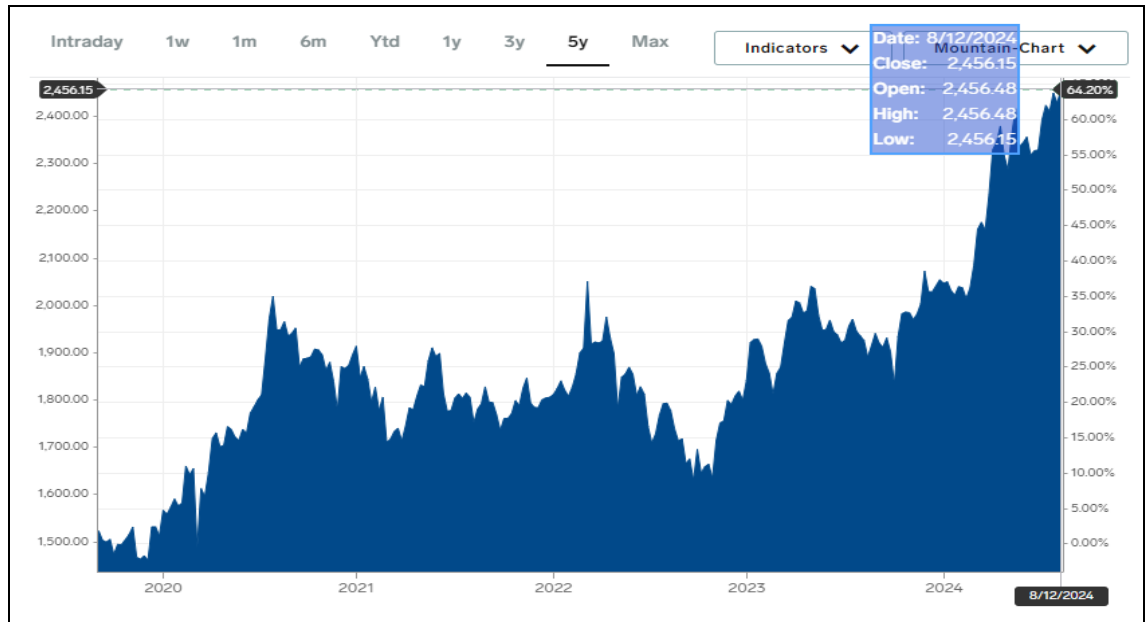
With interest rates likely set to enter an easing cycle later this year, the structural reasons supporting gold to remain at elevated levels is strong, because during periods of lower interest rates the opportunity cost of holding gold which is a non-income yielding asset fall. Additionally, a period of falling interest rates will likely see a reversal of some of the negative investor sentiment that has plagued the junior metals and mining explorer space over the last few years. This has been due to the junior explorer space being reliant on capital raising to commercialise their developments due to a lack of organic cash generation and this issue coinciding with a high-rate environment. Therefore, as we enter a period of lower rates, there will likely be a boost in the valuations of this segment leading to some convergence between their stock performance and the generally strong performance of their underlying metals.

Figure 18: Copper spot price trend over the last few years \$USD/ Tonne



Sources: <https://markets.businessinsider.com/commodities/>

Figure 19: Gold spot price trend over the last few years \$USD / Oz



Sources: <https://markets.businessinsider.com/commodities/>

Electric vehicles use over twice as much copper as gasoline-powered cars.

Copper – underpinned by structural supply deficits

As per the consulting firm Mckinsey, copper will face a material supply gap in the coming years, with demand rising to 36.6 million tonnes by 2031, compared to the current demand of around 25 million tonnes. However, supply is forecast to be around 30.1 million tonnes, leaving a gap of 6.5 million tonnes by the start of next decade. This view of a material looming supply deficit is the consensus view on the copper market, supporting our bullish thesis for the metal and as a result also for Qmines’ potential revenues and valuation.

Demand side root causes for the deficit: copper is the most cost-effective conductor of electricity making it a key metal for not only economic activity in general but also the transition to renewable energy sources.

To keep the energy transition going, millions of feet of copper wiring will be required for strengthening the world’s power grids and hundreds of thousands of tonnes more are needed to build wind and solar farms. An offshore wind turbine, for example, contains 8 tonnes of copper per megawatt of generation capacity. This equates to offshore wind turbines requiring about three times as much copper as does coal-fired powered generation in terms of tons per gigawatt of capacity. Electric vehicles use over twice as much copper as gasoline-powered cars. Additionally, there is more than 180 kg of copper in the average home, creating an additional strong source of demand as global population and urbanisation continue to grow and use more renewable energy sources for electricity.

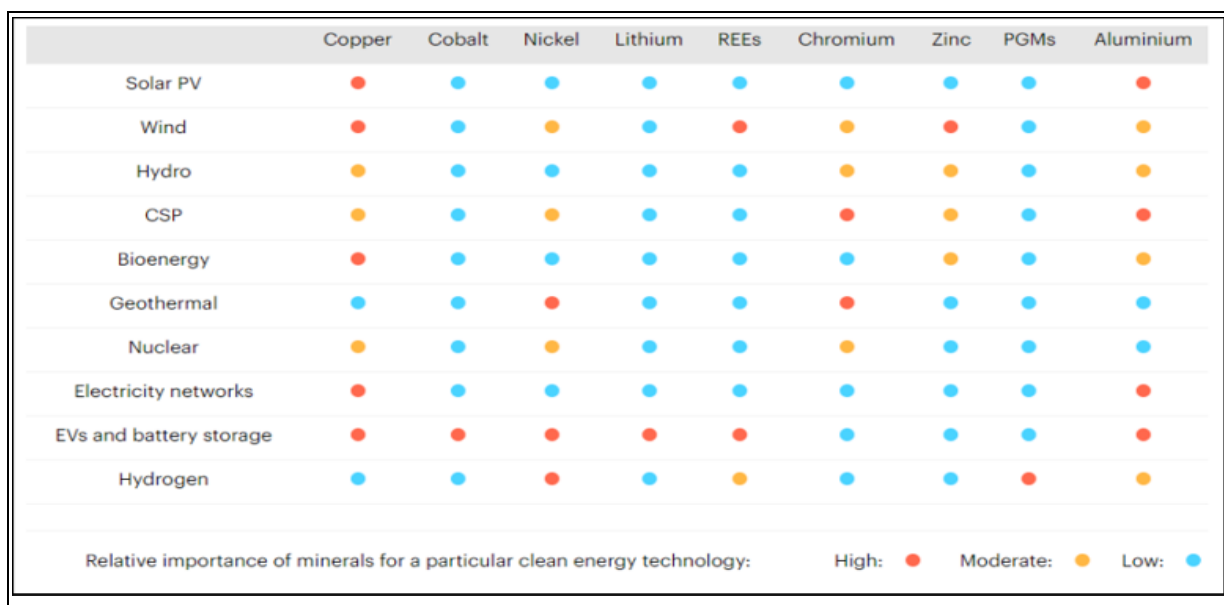
Renewable energy goal targets provide a strong source of growing demand

Due to the renewable energy transition, copper’s end uses are set to grow and become more focused on energy transition applications. For example, as per BHP, the contemporary ratio of traditional sources of copper demand, such as construction,

consumer durables, capital goods, etc., to energy transition end-use demand, is roughly 93:7; by 2035, that ratio shifts to 80:20.

This is because there is now a wider collaborative global effort aimed at achieving further and faster renewable energy transition. Figure 20 below showcases which clean energy technologies are dependent on which critical minerals and metals. As shown, overall, copper is the most crucial metal for clean energy technologies.

Figure 20: Critical minerals and metals for clean energy



Sources: International Energy Agency

It's also worth noting that a viable alternative for copper in the industries where it's predominantly employed because of its unique electrical characteristics is yet to be found. Aluminium, the closest option, is inferior to copper for electrical usages.

Other growing sources of copper demand

On top of the energy transition, copper demand is also set to rise from data centres and artificial intelligence. Copper has a vast role in technology, given its crucial use in wires that connect power grids and data centres around the planet. As one of the best conductors of electricity, copper maximises efficiency in the transmission and distribution of electricity. Its thermal conductivity also helps build efficient heat exchangers, which are vital for cooling in data centres. The inherent ductility and malleability of copper make it ideal for shaping into compact system components, like electrical connectors.

Additionally, technological advancements such as 5G communications and IoT are set to increase the demand for copper due to these technologies' inherent need for efficient electrical conductivity.

Supply Constraints

Structural supply-side issues are also a key causal factor supporting the consensus view of the copper market being characterised by a looming supply-side deficit. New copper mineralisation discoveries are generally of low grades, in addition to new discoveries themselves being scarcer. And even then, it takes a significant length of time for new.

Demand from AI and data centre related sources could potentially add a further one million tonnes to copper demand by 2030

discoveries to transition from discovery to production, with the average length of time being ~ 17 years¹. **This is precisely why investors should be bullish on Qmines because, given its characteristics of being a high-grade copper play, one that is close to well-connected infrastructure and operating within a secure and supportive geopolitical environment, it will ensure that its transition to the development stage happens much quicker.** The geopolitical factor affecting supply is a key one. Based on some measures, half of the current global copper production is based in countries that can be characterised as being either unstable or extremely unstable in terms of their geopolitical climate.

Additionally, investors should note that even though to a great extent copper is recyclable, it's not without significant costs, especially for EV batteries and will still not be able to absorb the increased demand for the metal.

Copper Price Forecasts

Copper has recently fallen from its May 2024 highs of ~ USD \$10,597 to ~ USD \$9,000 per tonne due to slowing global demand, notably from China. Despite this, based on the strong and varied demand drivers for copper and material issues impeding the supply side, we are supportive of the view that copper will bounce back and eventually trade higher than the PFS' assumptions. For example, just in May of this year, Goldman Sachs forecast for the 2024 end-of-year copper price was \$12,000 per tonne.

Gold continues to go from strength to strength.

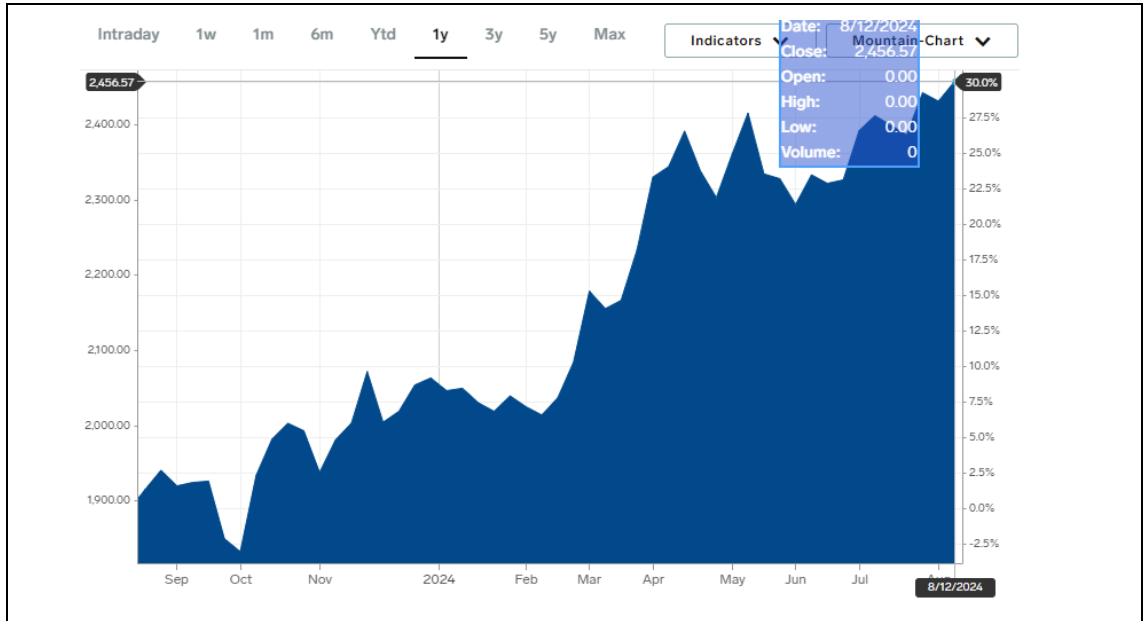
As shown above in Figure 19 and below in Figure 21, gold is amidst a structural bull run, especially in 2024 when it hit all-time highs. We agree with the consensus view that the underpinning factors supporting the price of gold are set to remain, leading to the strong likelihood that we are entering into a new normal of high gold prices given the current uncertain global macroeconomic outlook and heightened geopolitical risk situation.

The summary thesis supporting a structurally elevated gold price occurring across the investment horizon and occurring amidst the current high US and global real interest rate environment despite the traditional negative association between real interest rates and gold is based on the following:

- Aggressive central bank diversification into gold bullion as a hedge against holding the USD as a reserve asset.
- Geopolitical conflicts and uncertainties leading to gold purchases based on its perception as a safe haven asset.
- Concerns over the US fiscal deficit.
- Anticipation that rates will start to fall (in the US and Aus), increasing the demand for non-income-yielding assets such as gold.

¹ S&P Global

Figure 21: Gold spot price's strong run in 2024 \$USD / Oz



Sources: <https://markets.businessinsider.com/commodities/>

The discovery of new deposits with proven gold mineral resources is becoming rarer with time. This results in a stronger investment case for QMines.

Gold's 2024 run has occurred amidst generally high interest rates due to the aforementioned factors, but with interest rates set to start easing in the short to medium term, there will be yet another positive underpinning force for gold to remain at elevated levels because amidst lower interest rates there is an additional economic incentive to hold gold vs fixed income securities.

Extending beyond the short and medium terms, the long-term thesis for gold prices also remains bullish. Over the long term, given the finite supply of gold and the growing annual demand for it across various demand sources, gold prices will continue to trend upwards. Gold is a non-renewable resource, and between 2011 and 2020, the number of gold discoveries fell by 70% relative to 2001 -2010². Hence not only are defined and proven deposits containing gold such as those owned by QMines valuable, they are also increasingly rarer, providing a further vector of support for gold's prices and gold related miners over the long term.

Consequently, we are of the view that the Mt Chalmers PFS gold price assumption of \$ 2,350 is reasonable and as discussed in the Valuations section our investment thesis on QMines is actually based off lower gold price assumptions, adding strong assurance to our thesis.

Lastly, investors should note that a recent JP Morgan report pinpointed the risk of the US entering into a recession by the end of 2024 at 35%, with this risk rising to 45% by the end of 2025. **Gold is a notable outperformer during recessions. There have been 8 recessions in the USA since the early 1970s, and in all but 2 of them, gold has outperformed the S&P 500.**

² <https://www.visualcapitalist.com/sp/visualizing-the-new-era-of-gold-mining/>

QMiners Valuation Methodology

We have valued QMiners using a structured sum-of-parts valuation methodology. QMiners effectively has two different assets, with the main one being the Mt Chalmers project and the secondary one being the Develin Creek assets. QMiners is actively scoping the viability of integrating the two Develin Creek deposits into the main Mt Chalmers mine plan, with its recently commenced extensional and infill-oriented Develin Creek drilling program and associated equity capital raise being aimed at this endeavour.

In this regard, across both our **Base and Upside Cases**, we have:

- **Valued Mt Chalmers** by changing key input assumptions underpinning its original PFS NPV to instil an additional layer of assurance that works to strengthen our undervalued investment thesis on QMiners. Investors should note that the original PFS NPV for Mt Chalmers already included a reasonable level of buffer estimates; however, across both our Base and Upside case scenarios, we have purposefully assumed additional “downside” assumptions to add additional credibility to our thesis. As explained below, this part also included availing comparable peer set data of other ASX-listed copper players
- **Valued the Develin Creek** assets by availing a comparable peer set, resource-based valuation methodology. In this part, we assessed what the relevant \$ EV / ton of copper equivalent resource multiples were for a number of other ASX-listed predevelopment copper miners and then applied that ratio to different estimates (as per the Base and Upside cases) for what the eventual proven and probable ore reserve will end up at Develin Creek post the completion of all the relevant drilling works. Under both the Base and Upside Cases, we have assumed that QMiners, as per its plans, acquires the remaining 49% residual stake in Develin Creek, taking its ownership to 100%.

We have also created an additional scenario, as detailed later, called the **Special Case**, to illustrate the range of credible share price outcomes that could eventuate as QMiners executes its growth strategy. The Special Case results in an even larger possible share price increment to QMiners than the Upside Case. This is because instead of valuing the Develin Creek assets by way of applying the peer set’s \$ EV/ton of copper equivalent resources onto Develin Creek’s copper equivalent resources, we make a reasonable assumption as to how much additional scale is achieved at a larger Mt Chalmers mine operation, taking into account all the other deposits including Develin Creek and also Woods Shaft. As explained later, we also include several other additional conservative /downside assumptions relating to capex and opex cost efficiency in order to make the resultant Special Case’s upside increment inherently more defensible. **The Special Case was conceived for illustrative purposes and is not an input into our target price.**

Valuing the Mt Chalmers Project

The April 2024 PFS had estimated a pre-tax NPV for the Mt Chalmers project alone, based on just the Mt Chalmers current standalone production plan absent any additional scale, to be \$ 373.4 m using a discount rate of 8%. Normal industry practice results in 20% of the PFS stage NPV being a good defensive estimate of what a predevelopment mining project is worth now. The aim of this industry practice is to premise investment theses on reasonable assumptions. As detailed below, even though it can be shown that a 20% ratio is a reasonable ratio to apply based on how comparable ASX-listed copper plays are trading, we

applied a lower 15% ratio, adding further conservativeness to our overall strong investment thesis. Additionally, although there were already some contingencies included as per the PFS's original NPV estimate, both our Base and Upside Cases also assume a lower level of PFS NPV due to our specific assumptions.

We have effectively, as a result, assumed more conservative (lower) assumptions for both:

1. The % to apply to the PFS NPV
2. And the PFS NPV itself

We have done this in order to create a strong, defensible, bullish investment thesis for QMines.

The percentage % of NPV assumption

Figure 22: QMines copper peer set (Co's with economic feasibility studies done)

Company	Code	Region	Minerals	Type	EV \$M	NPV \$m	EV/NPV	Initial Capex \$m	NPV/Capex
Caravel Minerals	CVV	WA	Copper	PFS Update	73	2000	3.6%	1676	1.19
New World Resources	NWC	AZ USA	Copper Zinc Silver	PFS	31	747	4.1%	446	1.67
KGL Resources	KGL	NT	Copper Silver	Feasibility Study	54	241	22.6%	298	0.81
Carnaby Resources	CNB	QLD		Scoping Study	58	272	21.3%	174	1.56
Qmines	QML	QLD	Copper Gold Silver	PFS	15	373.4	4.1%	192	1.95
Peer Set Average excl QML							12.9%		

Sources: East Coast Research

Figure 22 above lists out the relevant sample of current predevelopment copper-related plays on the ASX who have 1. undertaken some sort of economic viability study and 2. Even though they may have other relevant prospects and deposits, the entirety of their current resource estimate is associated with their respective project that was the subject of the economic study.

This is not the case for QMines because the Develin Creek and Woods Shaft deposit collectively constitute either 13% (if based on Measured and Indicated resources only) or 25% (if based on Measured, Indicated and Inferred) of QMines' total resource base. Since it is reasonable to infer that the market will still be valuing some of this residual outside of the current Mt Chalmers mine plan resources that QMines has, especially the Indicated component, then in fact the conclusion is that the QMines' EV-associated with the Mt Chalmers project is trading at even lower than the 4.1% shown above, **adding even further to out strong investment thesis for QMines.**

The average ratio across the peer set for what the current EV is in relation to the NPV of their flagship project is 12.9%. We have used a ratio of 15%, even though this is lower than the 20% metric that is used as part of industry best practice.

Although it's hard to directly 1:1 compare different companies who have projects whose feasibility studies were undertaken with different assumptions/inputs regarding costs, metal price assumptions, etc. (all are still copper dominant), over a sample set, these differences net out. Moreover, what we are really ascertaining is how the current EV, which is a function of current market sentiment, is trending in relation to the NPV; we are not so concerned with the NPV itself per se. **In this regard, investors should note that, in**

general, a company that is more likely to execute its strategy, which is to actually commercialise its mining plan, will consequently trade at a higher EV/NPV ratio. For several reasons, QMines is showcasing strong indication that it will, in fact, execute its growth strategy and will likely take the Mt Chalmers project into the mining stage in an expedient manner; these reasons include:

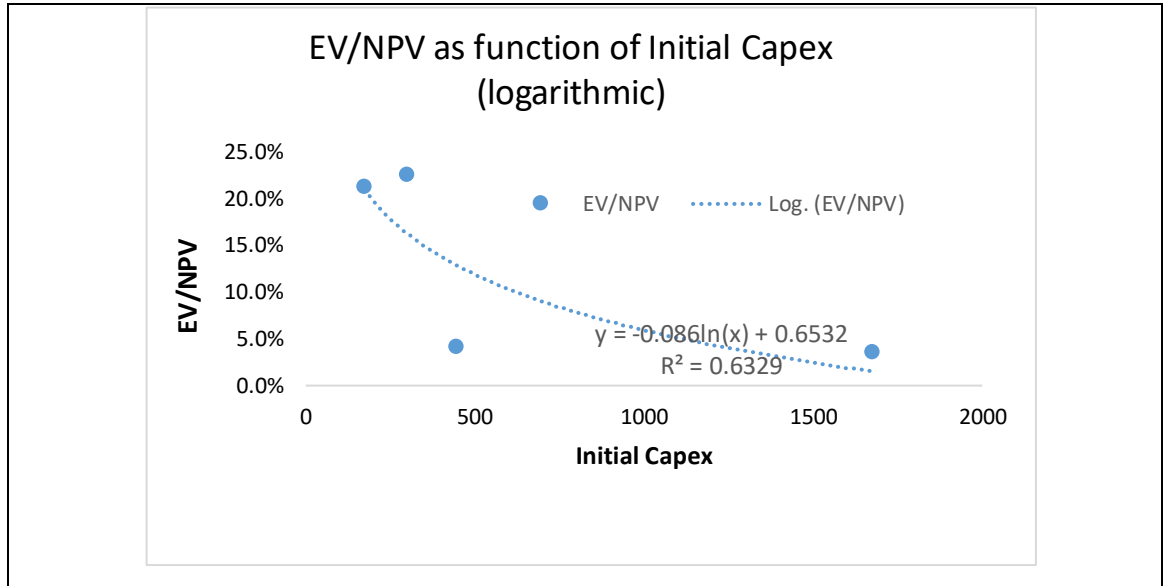
- Just over 3 years after the IPO, QMines has already completed a comprehensive PFS and has shown strategic and operational effectiveness by way of achieving regular increases in its resources.
- In just 3 months, since the PFS was completed in April 2024, QMines submitted its full formal mining lease application. There is also the possibility given the Mt Chalmers project's strong location and environmental attributes for it to receive an accelerated mining approval.
- QMines' management interests and those of its shareholders are very closely aligned - QMines Executive Chairman has a 15% equity stake in the Company.

Hence as a result of these factors, our usage of a 15% ratio across both Base and Upside cases is reasonable.

In terms of the EV/NPV ratio being a function of the likelihood of the project actually progressing to the mining stage, it is also instructive to assess the capital needs (initial capex \$) that the projects in our peer set companies need to operationalise their projects. Refer again above to Figure 22. Given the current high interest rate and uncertain macroeconomic outlook, if there are expected to be high future demands for capital to fund capex, then investors may harbour adverse sentiment toward a stock. In this context, a high capital outlay requirement is best not judged by the ratio of NPV/Capex because of the uncertainty in the NPV actually being realised but can be somewhat gauged by the absolute value of the capex funds anticipated for a company's project. Referring again to Figure 22, we can see that generally, the higher the absolute value of capex funds needed, the lower the EV/NPV ratio for a company is. Refer below to Figure 23 for a log based regression of this relationship, which shows a good reasonableness of fit. In terms of there being other causal factors determining EV/NPV, refer to Figure 24 below, which weakens the thesis that the % of a company's resources that are within the Measured and Indicated category is, in this context, more determinative of the EV/NPV ratio.

As per this regression's assumptions based on the Mt Chalmers anticipated capex outlay of \$192m, which, as per its peer set, is on the lower side both in absolute and relative levels, the appropriate EV / NPV ratio is 20 %. Again, investors should be reassured that we have used a ratio of 15%.

Figure 23: Peer Set Initial Capex as the key causal factor for EV/NPV



Sources: East Coast Research

Figure 24: Peer Set % of Resources within Indicated & Reserves vs EV /NPV

Company	% of Resources within Measured & Indicated	EV/NPV
Caravel Minerals	56%	3.6%
New World Resources	84%	4.1%
KGL Resources	70%	22.6%
Carnaby Resources	61%	21.3%

Sources: Company

The level of Treatment and Refining charges (higher rates than the market rate were assumed) is another example of a conservative assumption that was already a part of the original PFS estimate. Treatment and Refining charges (RC) are discounts to an exchange's quoted metals prices that represent payments to smelters for processing the concentrates into refined metal.

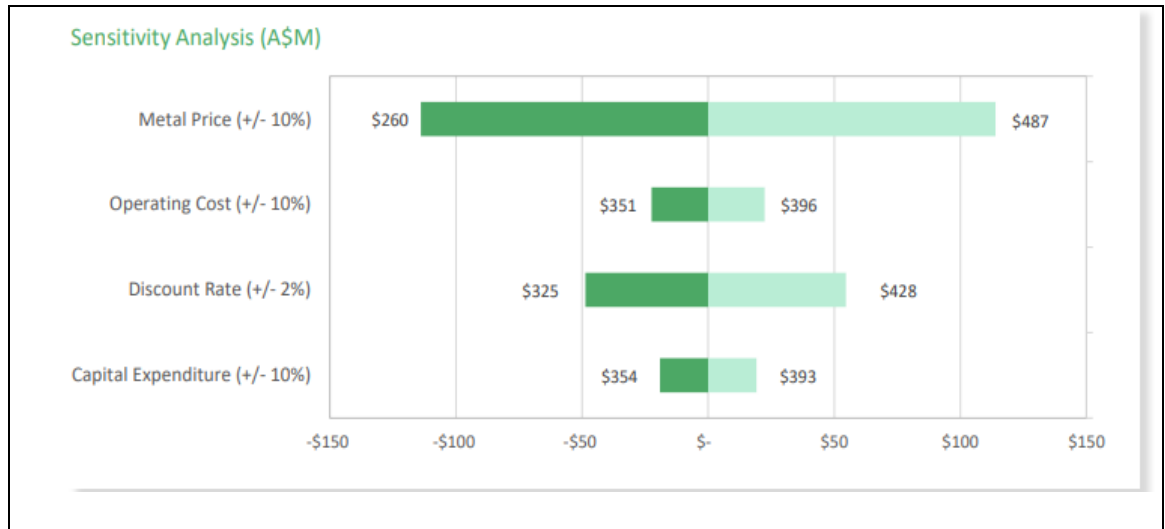
The level of NPV assumed for Mt Chalmers

Underpinning the original Mt Chalmers PFS NPV of \$ 373.4 million are pivotal assumptions relating to the ore amount (9.5MT proven and probable + 837K of inferred - collectively all part of Mt Chalmers' main deposit; excludes other resources from Wood Shaft, Develin Creek etc.) discount rate, capex estimates (\$A 191.9m), opex (A\$ 32.86 per ton, C1 costs – US \$ 2.14/lb), AUD/USD exchange rate, copper, gold prices and other base metal prices used in the 3 concentrates that will be sold, metal recovery rates and so on. The original PFS assumed that the Project is expected to generate copper equivalent 105,000 tonnes over the life of the mine.

The original PFS NPV itself can be seen as having a level of assurance in terms of using 10% contingency amounts on nearly all of the subcomponents of the capex estimate, excluding all non-Mt Chalmers main deposit resources and using a gold price assumption that is lower than the current spot price. **However, to add extra robustness and confidence, we have added even more layers of contingency across both our Base and Upside cases, as explained below.** Since the impact on the NPV from separate factors, such as lower-than-expected copper and gold prices and higher-than-expected

capex / operating costs, are mutually exclusive, we have used the sensitivity analysis given in the PFS, as shown below in Figure 25, to inform our analysis.

Figure 25: Mt Chalmers Project PFS Sensitivity Analysis



Sources: Company

Figure 26: Base Case / Upside Case Sensitivity Analysis Assumptions

Downside factor	Base Case	Upside Case
Original NPV \$A m	373	373
10% lower Metal Prices	-113	N/A
10% higher capex	-19	-19
5% /10% Higher Unit Opex	-11	-22.4
New NPV \$A m	230	332

Sources: East Coast Research

Figure 26 above details how we have differentiated our assumptions across the 2 cases. For example, despite the PFS capex already mostly incorporating a 10% contingency, we have assumed that for the same level of planned mining scale, there is an additional 10% capex increase across both cases. In the Base Case, we have assumed a 5% increase in the unitised opex costs (across both fixed and variable) and a 10% increase in the Upside Case; here, we are assuming that QMines will be more focussed on running a lean operation amidst lower base metal prices. Since none of the other assumed contingencies are impacting planned volumes, a linear relationship between the impact from 5% and 10% can be assumed. The most consequential assumption is the metal price one, with the Base Case assuming a 10% fall from the levels assumed in the PFS. As detailed in our Industry Analysis section, there are strong, long-term tailwinds for both copper and gold; hence in the Upside Case, we have not assumed any adverse impact from lower metal prices. In terms of the discount rate, for the Base Case which sees us conservatively assuming many downside assumptions, these itself obviate the need to assume additional risk loading associated with a higher discount rate.

Mt Chalmers Project Valuation Results

Figure 27: Mt Chalmers EV valuation results

Mt Chalmers Valuation Results	Adjusted NPV \$M	% of NPV	Final \$M EV
Base Case	230	15.0%	35
Upside Case	332	15.0%	50

Sources: East Coast Research

Valuing the Develin Creek Assets

Figure 28: QMines Peer Set \$ EV/Cu Eq Tonne

Company	Main Assets Location	Code	Measured & Indicated Mtonnes	Cu. Eq. %	Cu. Eq. Tonnes	EV mln	\$ EV/Cu Eq Tonne
Caraval Minerals Ltd	WA	CVV	699	0.30%	2,081,500	73	35.05
New World Resources	AZ USA	NWC	9.1	4.76%	433,160	31	71.29
KGL Resources Ltd	NT	KGL	14.47	2.83%	409,596	54	132.91
Eagle Mountain Mining	AZ USA	EM2	15.3	1.64%	250,940	20	77.88
Cannindah Resources Ltd	QLD	CAE	12.8	1.08%	138,650	29	208.44
Peel Mining	NSW	PEX	14	2.47%	345,800	58	166.70
Carnaby Resources	QLD	CNB	11.9	1.65%	196,350	58	295.24
QMines Ltd	QLD	QML	11.5	1.25%	144,000	15	107.15
Average excl Qmines							142

Sources: East Coast Research

The table in the above Figure 28 lists out what the current \$ EV/Copper Equivalent Tonne (only taking into account Measured and Indicated Resources) trading metric is for comparable copper-oriented pre-production explorers / project developers listed on the ASX. As can be gauged, at \$ 107 EV/Cu Tonne of resource, QMines is trading at a ~ 25% discount to its peer set average of \$ 142 EV/Cu Eq Tonne of resource.

Investors should note that there are several factors apart from the level of proven and probable copper equivalent resources that affect the eventual economic attractiveness of a company's exploration assets and, hence, its enterprise valuation. For example, using a peer set, which includes companies whose resources have not been subject to a feasibility study, to value QMines may, in certain circumstances, not be adequately rewarding QMines for having nearer to development – monetisable assets. Another factor is location due to regulatory issues and access to infrastructure. Taking both into account, we can gauge that the 2 other Queensland-based companies, Cannindah Resources and Carnaby Resources, are trading at significantly higher multiples than the average. Additionally, likely reflecting the fact that its assets, unlike Cannindah's, have already been subject to an economic feasibility study, Carnaby is trading at a materially higher premium to Cannindah. Due to the similarity of other factors relevant to economic attractiveness, such as Cu. Eq % grade and level of resources, a reasonable argument can be made for QMines trading more in line with the two other Queensland-based copper players than what it is currently trading at (trading at a ~ 57% discount to those 2).

In terms of other relevant factors, both Carnaby Resources and Cannindah Resources, which are trading well above the peer set average, envisage an open pit mining component similar to QMines' plans for Mt Chalmers. Carnaby, which is trading at more than 2x the peer set average, is also being rewarded for having a short project life –

There are a number of reasons supporting QMines trading at least at the levels of Cannindah Resources or even Carnaby Resources. On an EV/Cu Eq Tonne of resource basis, Carnaby Resources is trading 176% higher than QMines.

~9-12 years on a brownfield project location; both favourable attributes are also inherent to QMines. On the flip side, Caraval's below-average multiple can partly be explained by its low Cu Eq % grade and very long mining life, which are issues that the Mt Chalmers project does not have. Similarly, New World's low multiple is partly caused by its project's ore body being deep in the ground, requiring more expensive underground mining. Again, this is another issue that QMines does not possess

Consequently, investors should note that our base case assumption of using the average peer set multiple \$ 142 EV/Cu Tonne of resource to value the Develin Creek assets is a very conservative assumption, adding to the credibility of our bullish thesis for QMines.

The table below in Figure 29 lists EV valuation results for Develin Creek across the Base and Upside Cases. The Upside Case assumes a 10% higher EV/Cu Eq Tonne of resource value than the Base Case. Additionally, consequent to the results of the current drilling program at Develin Creek, the Upside Case assumes that 80% of the current Inferred categorised resources at Develin Creek transition to Reserve status, whilst only 50% do so under the Base Case. These are all very reasonable, conservatively defined assumptions, even for the Upside Case, because apart from just Develin Creek's prospectivity (including from extensional drilling results), as noted, QMines can avail resources from its other deposits, too.

Figure 29: Develin Creek Valuation Results

Develin Creek Assets Valuation Results	Base Case	Upside Case
Indicated CuEq Mt Resources (assuming 100% ownership)	0.02	0.02
Inferred Cu Eq Resources Mt (Assuming 100% ownership)	0.03	0.03
% of Inferred Resources Converted to Indicated	50%	80%
Net total Cu Eq Resource MT	0.04	0.05
\$ EV/Tonne assumption	\$142	\$156
Value in \$M assuming \$141/tonne	\$5.5	\$7.2

Sources: East Coast Research

Final Net EV Results

Figure 30: Final Net EV Results

QMines Final Net EV \$ M	Base Case	Upside Case
Mt Chalmers	34.5	49.7
Develin Creek	5.5	7.2
Total	40.0	56.9

Sources: East Coast Research

QMines' Equity Valuation Results

Our transition from Enterprise Valuation to Equity Valuation leads to a Base Case share price valuation of \$0.131 and an Upside Case of \$0.182, leading to a blended midpoint valuation of \$0.157, which represents investors with an expected upside of 138% from the current share price of \$0.066 -refer below to Figure 31.

In terms of share dilution, the current ordinary number of shares outstanding is ~ 274m. We have used a notably higher figure for the number of shares on issue as a conservative measure that lowers QMines' eventual equity valuation because of assuming an increase in the share count from a later in 2024 completion of the second tranche of its placement, which, amongst other objectives aims to achieve the full buy out of the Develin Creek assets.

Figure 31: Final Net EV Results

QML's Equity Valuation (A\$ m)	Base Case	Upside Case
Final Net Enterprise Value	40.0	56.9
Cash	5.0	5.0
Debt	1.5	1.5
Total Market Value of Equity	43.5	60.4
Number of shares on Issue* (m)	331.3	331.3
Implied price (A\$)	0.131	0.182
Current price (A\$)	0.066	0.066
Upside (%)	98.9%	176.3%
Mid-point Target Price (A\$)	0.157	
Price / NAV (X)	0.42x	

Sources: East Coast Research

QMines' Special Case Valuation

Investors should note that the closer QMines gets to becoming a producing mine, the higher its valuation will be. Hence, one lever for future shareholder returns is to gauge its progress in securing a mining lease (application already lodged, with the potential for expedited approval). Upon this occurring, QMines can be expected to be valued on the

anticipation of future cash flows and earnings, **leading to its valuation being higher than that of even the Upside Case's that we have defined above.**

Related to this lever that is correlated to the likelihood of becoming a production stage mine is the achievement of a larger-scale mine plan at Mt Chalmers. As discussed earlier, a larger scale Mt Chalmers operation will be associated with mining operating efficiencies that benefit costs and lead to better average concentrate selling prices due to Mt Develin's higher grade copper, silver and zinc grades than that of the existing main deposit at Mt Chalmers. Additionally, larger scale also results in just more revenues and cash flows being generated from the planned mine due to more volumes of output being sold.

Currently, our Upside Case assumes that 80% of the Inferred Resources at a 100% owned Develin Creek asset base will result in ~ 45,903 additional CuEq tonnes of resources that we value at \$156 per Cu Eq tonne, leading to a net EV benefit to valuation of \$7.2m. But this approach still undervalues the Cu.Eq resources in comparison to a situation where the additional reserves from across all of QMines deposits other than Mt Chalmers, particularly Develin Creek, are brought into an integrated larger scale mining operation at Mt Chalmers and then assumed to be later sold. **We have reflected this eventuality in a new case called the Special Case just to illustrate the material potential for possible investment returns.**

The Special Case assumes that 65% of the current non-Mt Chalmers mine production plan ore estimate that the Company has gets eventually included in a larger scaled mine production plan, with a Cu equivalent % grade similar to the current mineralisation at Mt Chalmers. As noted, given Develin Creek's higher grades, this is a reasonable assumption. As a result, an additional 27,550 Cu equivalent tonnes of resources are added to the Mt Chalmers mining plan, representing a 26% increase from the current level. We have then conservatively assumed that:

- Capex levels rise by 33%, even though generally there is scale with capex (this assumed rise would also capture sustainability capex needs).
- C1 operating costs rise by 20%. There are also scale-associated benefits with C1 operating costs, but since these will be somewhat offset by the more distantly spread supply chain across a larger project area, a 20% increment is assessed to be very reasonable.

We have also assumed a higher discount rate of 9% than compared with the PFS' 8% to discount these incremental cash flows, leading to an AUD value NPV benefit from this larger scale being ~\$ 16.1m at current AUD/USD exchange rates. We have not applied a discounting factor to this NPV because the achievement of a larger mine plan itself materially increases the odds of the mining plan being executed.

Refer to Figure 32 and Figure 33 below, which summarise the Special Case's valuation. Consequent to the additional Cu Eq tonne being effectively valued at a much higher level than what can be assumed from a peer set resource based valuation that was used for the current Upside Case, the Special Case leads to an implied share price for QML of \$0.20, representing an effective upside of ~210% from the current QMines share price.

Figure 32: Special Case's \$ EV/ Cu Eq Tonne vs the Upside Case

Larger Scale	Upside Case	Special Case
Additional CuEq tonnes	45,903	27,750
EV Valuation Benefit \$ m	\$7.2	\$16.1
\$ EV/Tonne benefit	\$156	\$579

Sources: East Coast Research

Figure 33: Special Case's Valuation Results

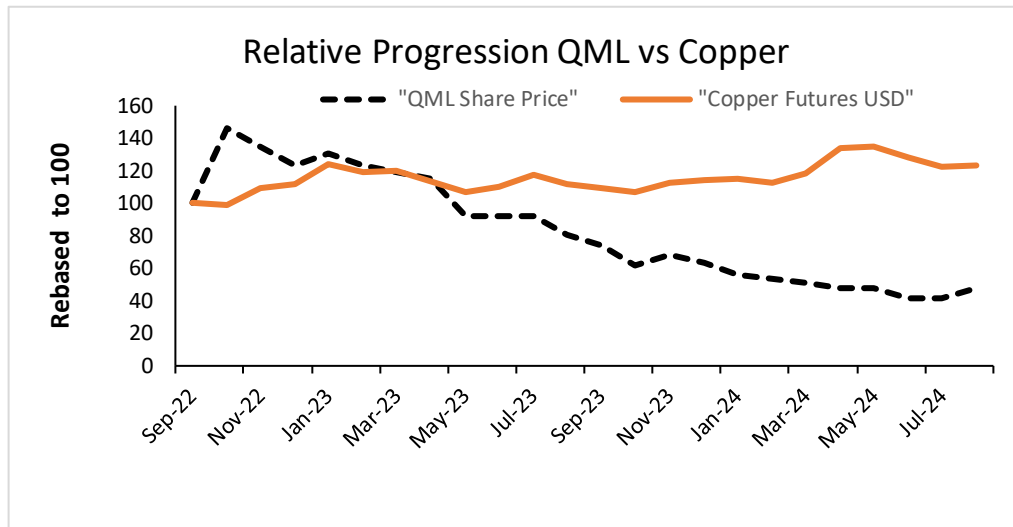
QML's Equity Valuation (A\$ m)	Special Case
Original Upside Case Mt Chalmers EV	49.7
Add EV / larger scale Mt Chalmers	16.1
Cash	5.0
Debt	3.0
Total Market Value of Equity	67.8
Number of shares on Issue* (m)	331.3
Implied price (A\$)	0.20
Current price (A\$)	0.066
Upside (%)	210.1%

Sources: East Coast Research

As shown below in Figure 34, despite QMiner executing its commercialisation strategy well, both in terms of what it has achieved and its pace of achievement, QMiner stock price's (QML) performance has lagged that of the underlying copper price. This is despite QMiner achieving a lot of key milestones since its IPO only a bit over 3 years ago, such as 6 incremental resource upgrades, with the recently commenced Develin Creek drilling program likely to lead to a seventh upgrade and a mining lease lodgement.

The main root cause for this divergence has been adverse investor sentiment against the junior predevelopment mining explorer space in the ASX over the last few years amidst the context of a high-interest rate environment. Junior explorers do not generate any organic cash flows and hence are totally reliant on capital raisings to fund their exploration and commercialisation works. With interest rates both across the US and Australia set to enter an easing cycle later in the year, there will likely be a structural uptick in investor sentiment towards this segment. **We are of the view that QMiner will benefit even more because its flagship project is at a more advanced predevelopment stage, with management executing its stated strategy well.**

Figure 34: QML's share price trend vs copper



Sources: East Coast Research

Re-rating of QMiner

QMiner is currently trading well below our midpoint intrinsic valuation estimate. Achieving the following milestones could lead to a re-rating of the stock, moving the share price closer to our target valuation range:

- **Further excellent exploration results** following the multitude of positive sequential MRE upgrades announced by QMiner since its IPO; if further increases in MRE are announced, particularly consequent to the recently commenced drilling program at Develin Creek, then this would validate our investment thesis.
- **Announcing an upgraded Mineral Resource Estimate (MRE)** will directly impact the stock's valuation. An increase in Indicated and/or Inferred reserves, as well as a conversion of Inferred resources to Indicated in further studies, will enhance QMiner's valuation. The aim of the current drilling program at Develin Creek spans both infill and extensional. Additionally, all QMiner's deposits, including Mt Chalmers, remain open in at least one area, and QMiner has prospective gold and other base metal-related tenements/assets in its portfolio.
- **Completing a revised PFS or a DFS, which includes revised pit-optimization studies across all deposits at Mt Chalmers and also at the two Develin Creek deposits,** would very likely validate our bullish valuation thesis. This is especially so if the ASPs from the planned concentrates to be sold are revised upwards to reflect the higher quality concentrate mix because of using Develin Creek's assets.
- **An announcement of the completion of the full acquisition of Develin Creek or other M&A/investment done to increase mining scale** would quickly re-rate the stock's price. There is the prospect of QMiner investing in downstream processing assets to capture more value across the copper/ base metal value chain.
- **Any further rise in copper prices** will directly impact the project's expected cash flows and return profile.
- **Improvement in the macroeconomic environment** and subsequent relaxation of financial market sentiment would positively impact QMiner's ability to raise funds to develop Mt Chalmers at more

attractive prices, supporting its value-accretive operations and enhancing its valuation.

Risks

Although we are confident that our bullish thesis on QMines is based on reasonable and conservatively defined assumptions, we identify the following key risks to our investment thesis:

- **Underlying commodity price and other assumptions risk:** QMines' valuation is highly sensitive to fluctuations in copper and gold prices. Additionally, its prospects are exposed to AUD/USD ER and TC/RC rates paid to smelters. Unexpected and prolonged adverse changes in these variables would affect our investment thesis.
- **Funding / Equity Dilution risk:** QMines does not currently generate cash flows; it depends on capital raisings to finance its operations. The company may face challenges in securing funds on favourable terms for both further exploration and, more importantly, for preproduction capital works
- **Geological risk:** For an exploration stage company such as QMines, there would always be the risk of downward estimates of resource figures as more drillings, test work and feasibility studies are conducted. Similarly, there also exists a risk of re-categorisation of the Indicated resources to Inferred resources in further studies and adverse changes to assumed dilution and metal recovery rates. Additionally, issues such as pit optimisation and other related geotechnical assumptions need to be further validated prior to mining commencement.
- **Execution and Supply Chain risks and delays:** Although we expect QMines to receive all the requisite regulatory approvals, including a Mining Lease, given that no risk of non-approvals was flagged in the original PFS, issues /delays in this regard may affect QMines' production schedule. Even during the mining stage, QMines is exposed to operational and supply chain risks consequent to the need to effectively execute a large-scale operation that likely spans multiple sites.






Appendix I: QMiners' SWOT Analysis

Figure 35 SWOT Analysis

Strengths	Weaknesses
<p>(1) QMiners possesses proven high-grade copper, gold, silver, zinc and other base metal resources. Its main Mt Chalmers deposit is on an existing brownfield project site and is in very close proximity to Rockhampton, an established mining hub that provides it with access to well-developed infrastructure.</p> <p>(2) The mineralisation at the main Mt Chalmers deposit is shallow and high grade and has been subject to a pit optimisation study and a robust PFS that has established Mt Chalmers' economic attractiveness</p> <p>(3) The Mt Chalmers project focussed PFS shows impressive economics, including a low initial capex (~\$191m), an attractive NPV/Capex ratio, a high IRR (54%) and a short payback period (1.84 yrs)</p> <p>(4) QMiners management has been able to execute its strategy by providing 6 resource upgrades since its IPO 3 years ago. A mining lease application was submitted only 3 months after the PFS was done, and the Company's management holds a material equity stake in QMiners, ensuring the alignment of incentives.</p> <p>(5) QMiners prospects are fundamentally tied to the prospects of copper which is afflicted by both a current and a looming significant supply side deficit that will likely lead to copper prices remaining at elevated levels.</p>	<p>(1) QMiners is not currently generating any cash revenue from core operations and therefore is reliant on capital raisings to continue its exploration operations. Investors are also exposed to equity dilution from other avenues such as stock-based compensation.</p> <p>(2) QMiners' overall valuation, which is composed of the NPV estimate from both Mt Chalmers (majority) and Develin Creek assets, is very dependent on assumptions regarding eventual ore reserves, grades and copper and gold prices. Additionally, QMiners is exposed to TC/RC rates paid to smelters, the AUD/USD exchange rate and metallurgical factors such as eventual recoveries of the mineralisation to the 3 concentrates that are planned to be sold.</p>
Opportunities	Threats
<p>(1) All of QMiners deposits, even the main Mt Chalmers' one, are still currently open for further resource discovery. There is a high chance of a seventh resource upgrade post the completion of the recently commenced drilling program at Develin Creek.</p> <p>(2) There is a high likelihood that there will be an increase in the scale of the Mt Chalmers mining plan, leading to more expansive operations / longer mine life. This is particularly due to incorporating the resources from the Develin Creek assets, which are generally of higher grades, leading also to a likely uplift in the prices that QMiners can obtain from its sale of concentrates. Larger operations are also associated with cost-based efficiencies. Apart from Develin Creek, QMiners has other nearby deposits, such as Woods Shaft, that can also help it achieve a larger-scale operating mine.</p> <p>(3) QMiners is considering investing into downstream processing activities that would provide an additional scale-based benefit. Given Rockhampton's attractive mining supply chain location, QMiners is assessing the merits of it developing a hydrometallurgical plant in Rockhampton. The aim would be to refine some of the concentrates at this plant, reducing overall concentrate haulage costs and margins paid to 3rd party smelters.</p> <p>(4) QMiners is still an active explorer with a large and prospective tenement package that includes prospects for gold deposits in addition to copper-based deposits. QMiners has identified 40 regional targets that provide the scope for additional discoveries and defined resources.</p>	<p>(1) QMiners' overall valuation is very dependent on our estimates for copper (mainly) and gold price. Although our valuation is premised on prices lower than that of the PFS', any unforeseen adverse changes in copper and gold prices, despite them both being supported by structural drivers, would materially negatively impact QMiners' valuation.</p> <p>(2) QMiners is also exposed to other uncertain macroeconomic factors, including a strengthening AUD/USD, and tight credit markets that could lead to challenges for it to raise capital on favourable terms.</p> <p>(3) Although our valuation, across both Base and Upside cases, has included assumptions regarding capex and cost estimates that are higher than those of the original PFS', there is always the residual risk that the original PFS cost estimations, which, although themselves are based off commercial rates and include contingencies, underestimate the actual quantum of these costs more than what our additional buffers account for.</p> <p>(4) QMiners Mt Chalmers project is still only at the PFS stage. The mining lease application has only recently been lodged, and hence a host of environmental, native title and other regulatory approvals need to be met.</p>

Appendix II: Management Team

Figure 36 QMine's Management Team

Name and Designation	Profile
<p>Andrew Sparke Executive Chairman</p> 	<p>Mr Sparke has over 15 years of experience that includes IPOs, private placements, secondary market transactions and listed company compliance. Mr Sparke has served as director of several ASX-listed resources companies, including Alt Resources Ltd (ASX: ARS) and Torian Resources Ltd (ASX: TNR). Mr Sparke is the founder of Olive Capital, an Australian boutique investment house that has advised numerous ASX-listed companies on capital raising and corporate transactions.</p>
<p>Elissa Hansen Non-Executive Director & Company Secretary</p> 	<p>Ms Hansen is a chartered secretary with over 20 years' experience as a company secretary and corporate governance professional. She has worked with boards and management on a range of ASX listed companies including assisting a number of organisations through the IPO process. Elissa is experienced in the specific requirements of companies in industries including resources, information technology, industrials and biotechnology.</p>
<p>Peter Caristo Non-Executive Director & Company Secretary</p> 	<p>Peter is an experienced exploration geologist, with over 24 years' experience in the mineral exploration industry. He has held senior positions at Newcrest Mining Ltd (ASX: NCM), OceanaGold Ltd (ASX: OGC), and Mining Associates. His expertise covers project generation, drill targeting, geological mapping, exploration project management, technical due diligence, and data management, specialising in gold. Peter is the current Chair of the Queensland Branch of the Australian Institute of Geoscientists.</p>
<p>James Anderson GM - Operations</p> 	<p>Mr Anderson is from corporate operational, logistics, and supply chain management and moved into the minerals exploration industry in 2011. He was a founder of Alt Resources Ltd (ASX:ARS), which was recently the subject of a takeover by a large private equity firm. Mr Anderson was formerly the CEO at SMP International and Australia, Managing Director of Aloha and General Manager of Sunseeker International. Mr Anderson is a significant shareholder in the Company.</p>
<p>Glenn Whalan Exploration Geologist</p> 	<p>Senior geologist with 25 years' experience working in Australia, Asia and other continents across a number of commodities types and styles. Glenn has worked for several ASX and TSX listed companies and as a geological consultant including CSA Global. Throughout his career, Glenn has had extensive experience working on Volcanic-Hosted gold and base metals deposit styles. Glenn is formally qualified with a BSc. (Hons), Geology from Macquarie University. Glenn is also a member of the Australian Institute of Geoscientists (AIG).</p>

Source: Company

Appendix III: Analyst's Qualifications

Rahul Tiwari, the analyst on this report, is an equity research analyst at Shares in Value (East Coast Research).

- Rahul has a bachelor's and master's degree in Applied Finance from Macquarie University, a master's in Accounting from UNSW, and an MBA from Cornell University in the USA.
- Rahul has several years of experience across wealth management and investments, infrastructure project finance, private equity and high tech.

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