

CORPORATE

Share Price **3.6p**

Ticker	ARCM
Index	FTSE AIM
Sector	Mining
Market Cap	£44.2m
Shares in Issue	1,227m
NAV (per Share)	0.3p

Performance	All-Share	Sector
1 month:	36%	(6)%
3 months:	37%	(7)%
12 months:	12%	(14)%
High/Low	4.4 / 2.4	

Last Results

Next Results

Next Event



Source: © 2020, S&P Global Market Intelligence

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Marketing Communication

This document has not been prepared in accordance with legal requirements designed to promote the independence of investment research. Please refer to important disclosures towards the end of this document.

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ARC Minerals

Anglo deal signed - drills already turning

ARC recently announced (RNS 27.10.23) that regulatory conditions pertinent to its joint venture with Anglo American (Anglo JV or the Deal) had been met, subject to minor conditions. The highly regarded Zambia Copper Project (ZCP) is now being advanced under the stewardship of Anglo, the drills are already turning. Under the terms of the Deal, Anglo can earn a 70% interest in the ZCP by investing an aggregate \$88.5m, inclusive of \$14.5m paid in cash to ARC's 67% owned subsidiary, Unico. We believe that the Deal is highly favourable for ARC and stands head-and-shoulders above other similar deals between junior explorers and mining majors in the resurgent Zambian Copper Belt (ZCB). The deal provides ARC with cash to pursue other ventures in southern Africa, a region the Board knows well, and we believe ensures the best possible chance of success for the ZCP as it will be advanced by Anglo's expert exploration team and supported by funding beyond the typical junior explorer in such restricted capital markets. We foresee one of three outcomes: i) a major discovery with ARC owning a substantial stake of a project of significant value ii) ARC has a substantial interest in a significantly derisked copper project too small for the mining majors but of significant value to a mid-cap or junior miner, or iii) no significant discovery is made. Either way, ARC has secured upfront funding to pursue other opportunities, and the project will have been advanced and derisked at no expense to ARC. We see fair value at 5.8p per share, though recognise significant upside.

- Discovery Upside** – The ZCP is a highly coveted project in a resurgent copper region that offers true discovery potential. It is pertinent to note that Anglo's experts have previously worked the ZCP, and we argue that this is why ARC has been able to reach such favourable terms for the Anglo JV. Though location and positive exploration vectors do not guarantee exploration success, Anglo's overt interest and commitment to potentially invest tens of million dollars, in a pre-resource project, does, we believe, hint at their belief that the ZCP has a real chance for exploration success. We argue that exploration led by Anglo's expert team offers the optimal chance of exploration success, which will clearly benefit both parties. If a discovery is made, history suggests it will have a significant impact on ARC's valuation, if no discovery is made ARC has already secured significant upfront cash payments and millions of dollars of exploration spend.
- Funded Exploration** – Having secured the Anglo JV, exploration of the ZCP is funded and ARC has secured non-diluting upfront cash payments to advance exploration at other assets - this is a rare and enviable position to be in.
- Foothold in the emerging Kalahari Copper Belt** – Covered by desert sands, the KCB has long been overlooked in favour of the more mature (and easier to explore) ZCB. This is changing and the KCB is emerging as an exciting copper-silver destination; Khoemacau Copper Mining's Zone 5 mine, and Sandfire Resource's T3 development project are testament to the potential of the KCB. With its Virgo project, ARC has secured a controlling interest in two highly prospective claims in similar geology and within 20km of the Zone 5 mine and 40km of the T3 project. Exploration is early stage though results are encouraging; two multi-kilometre copper-nickel anomalies have been identified in soils; one of which is coincident with the DKF-NPF geological contact a regionally significant exploration vector, the other is related to faulting at the dome edge.

WHI View: In our opinion the Anglo JV is a deal with no downside. We see fair value at 5.8p/sh, and recognise significant upside potential - the market shows that a significant discovery can result in value uplifts of 10-15x.

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Important disclosures and certifications regarding companies that are the subject of this report can be found within the disclosures page at the end of this document.

ARC Minerals	1
Anglo deal signed - drills already turning	1
Investment Case	3
Key Risks and Other Considerations	4
Valuation	5
Zambian Copper Project	5
Upside – What exploration success might look like at ZCP	6
Valuing exploration success	6
Virgo Project	6
Cash and Corporate Costs	7
Arc Minerals	8
The Anglo JV	8
The Zambian Copper Project	9
Virgo Project	9
The Domes Region	10
Copper Market Outlook	11
Market overview	11
Outlook & Price	11
Shareholders	12
Arc Minerals Team	12
Board Members	12
Key Management	12



arc minerals

Free-carried JV with Anglo American

Funded exploration

We see fair value at 5.8p/sh

Significant potential for a re-rating

Investment Case

Having cemented the Anglo JV to advance the ZCP, ARC is in an enviable position, rarely enjoyed by junior explorers. The ZCP, ARC's flagship project, will be funded and explored by Anglo's expert teams, this, we believe, offers the best chance of exploration success. If exploration is fruitful, history suggests it will translate to ARC's valuation, we argue that a maiden resource could push ARC's share price beyond 20p based on the historical effect of major discoveries we see on junior miners (e.g. SolGold and Greatland Gold). The JV provides upfront cash that ARC will use to identify opportunities and invest in project development across southern Africa, a region the Board knows well, and a region that is seeing renewed interest as copper demand surges and South American copper development and production is hampered by social and political unrest. With its controlling interest in the Virgo project, ARC has already secured a position in the emerging KCB, we expect that ARC will identify further opportunities in the region, and, unlike many peers, it will have the funds to pursue them. **We see fair value at 5.8p per share**, but we recognise scope for significant upside in the event of exploration success at the ZCP.

- **Discovery Upside** – The ZCP is in the highly prospective ZCB and is highly coveted. Though location and positive exploration vectors do not guarantee exploration success, the overt interest and commitment to potentially invest tens of million dollars in what is a pre-resource project by Anglo's industry leading exploration team does hint in their belief that the ZCP has a better chance of success than many other projects. We argue that exploration led by Anglo's team offers the best chance of exploration success. If a discovery is made both parties will benefit. History shows that a significant discovery and maiden resource will propel ARC's valuation. With copper demand surging and with supply from major South American copper mines interrupted by political and social events, the timing of the deal may prove to be serendipitous. On the full conclusion of the Anglo JV, and subject to a discovery, **we see the potential for ARC to have a share value in excess of 20p.**
- **Funded Explorer** – Having secured the Anglo JV, ARC has emerged as a funded junior explorer, a rare and enviable position given the current capital markets. Anglo will deploy its expertise and operational capacity to advance the ZCP, this allows ARC to focus its efforts on identifying its next projects. The Board has extensive regional experience and is, we argue, ideally positioned to leverage its collective knowledge to identify the next big opportunity.
- **Foothold in the emerging Kalahari Copper Belt** – Covered by desert sands, the KCB has long been overlooked in favour of the more mature (and easier to explore) ZCB. This is changing and the KCB is emerging as an exciting copper-silver destination; Khoemacau Copper Mining's Zone 5 mine, and Sandfire Resource's T3 development project are testament to the potential of the KCB. With its Virgo project, ARC has secured a controlling interest in two highly prospective claims within 20km of the Zone 5 mine and 40km of the T3 project. Exploration is early stage, though results are encouraging; two multi-kilometre copper-nickel anomalies have been identified in soil; one of which is coincident with the DKF-NPF geological contact a regionally significant exploration vector, the other is related to faulting at the dome edge.

Key Risks and Other Considerations

Investing in ARC does carry certain risks – many in common with similar companies – and we highlight the most significant risks as we see them below. **Overall we consider ARC to be a low risk company.**

Jurisdiction Risk - Low

Jurisdiction Risk – ARC’s assets are in Zambia and Botswana, both are stable democracies and recognised “mining jurisdictions”. There are numerous examples of foreign domiciled mines successfully operating in these countries. **We consider jurisdiction risk to be low.**

Capital Market Risk - Low

Capital markets – Junior explorers typically rely on access to capital markets to fund project development. ARC has secured forward payment from Anglo American as part of the recently announced JV agreement, furthermore Anglo will fund the exploration development of the Zambian project. ARC is well funded and for the time being and is not likely to require capital funding in the near future. **We consider capital risk to be low.**

Commodity Price Risk - Low

Commodity Price – Mining companies are naturally exposed to fluctuating metal prices, more so companies reliant on a single commodity. As a pre-production company ARC’s sensitivity to fluctuating metal prices is reduced, and in our opinion, the outlook for copper (ARC’s principal focus), is bright with strong demand and forecast deficit for years to come. **We consider commodity price risk to be low.**

Currency Risk - Low

Currency Risk – ARC is London listed with sterling denominated accounts, and operational activities in Botswana and Zambia. The transfer of monies between currencies is subject to fluctuation exchange rates. **We consider jurisdiction risk to be low to moderate.** Operating in some African countries has shown there can be delays in procedural arrangements.

Permitting Risk - Low

Permitting Risk – ARC has interest in early-stage projects with limited permitting requirements. The process for drill permitting is well established in Zambia and Botswana, and, in our opinion, is not likely to present problems. **We consider permitting risk to be low.**

Exploration Risk - Low

Exploration Risk – All explorers are exposed to exploration risk; simply put, a deposit exists or it does not and no amount of money spent exploring will generate one. With the Anglo deal ARC is shielded from some exploration risk, Anglo will spend its money and draw on its expertise to evaluate the ZCP – if a discovery is made both parties benefit, if not, ARC shareholders have been spared some of the exploration risk and already benefitted from forward payments. ARC’s Botswana project carries the same exploration risk as any other project. **We consider exploration risk to be low.**

Valuation

Our fair value for ARC is **5.8p**

We adopt the sum of the parts approach to determine our fair value for ARC; we consider the Zambian Copper Project and the Virgo Project, as well as estimates of cash and corporate costs. **We see fair value in ARC at 5.8p/sh.**

We also consider the potential impacts on our fair value i) should exploration of the ZCP lead to a maiden resource, and ii) if the JV agreement progresses to full completion.

Table 1: ARC Minerals Valuation (US\$m*)

		Valuation US\$m	Valuation £m**	Owned	Risk*	Valuation GBPp/sh#
Zambian Copper Project (ZCP)	Transaction	126.4 [^]	105.4	67%	100%	5.8
Virgo Project	Peer Comp	1.9	1.6	75%	100%	0.1
Cash***	WHIe	2.3	2.0			0.2
Corporate Costs***	NPV ₁₀	(3.0)	(2.5)			(0.2)
Fair Value						5.8
ZCP Maiden Resource	ZCP 10x	1264.3	1053.6	26.8%¹		23.0
ZCP JV Completion	ZCP 15x	1896.4	1580.4	20.1%²		25.9

Source: WH Ireland Research.

* Subjective risk ** WHI est FX US\$:£ = 1.20:1. *** first payment of Anglo JV [^]The value placed on the project by Anglo # Shares outstanding = 1,225,744,781 ¹ 67% of 40% ² 67% of 30%

Zambian Copper Project

The ZCP in the ZCB is a pre-resource project with significant potential.

Valuing potential is not straightforward, though history shows that tangible success (i.e. discovery drill hole, maiden resource, resource upgrade, and progression through engineering and economic studies) is likely to accrete significant value to ARC.

We determine a base value for the ZCP using the terms of the Anglo JV (first reported - RNS 12.05.22):

- **Phase 1** - Anglo will pay \$14.5M in staged cash payments to Unico Minerals Ltd (67% ARC) and invest up to \$24m in exploration expenditures (total \$38.5M) within three years and 180 days of the signing of the Agreement (RNS 20.04.23) to secure a **51%** interest in ZCP.
- **Phase 2** - Anglo may elect to increase its interest in the ZCP to **60%** by investing a further \$20M (total \$58.5M) within two years of the completion of Phase 1.
- **Phase 3** – Anglo may elect to increase its interest in the ZCP to **70%** by investing a further \$30M (total \$88.5M) within two years of the completion of Phase 2.

We determine the value of the ZCP using the value that Anglo places to earn 70% of the project. Anglo will, in total, pay \$88.5m for 70% of the ZCP project (which calculates at \$125.4m for 100%). ARC's interest in the project was 67%, prior to Anglo's involvement, we therefore calculate that ARC's stake is worth \$84.7m (being 67% of \$125.4m).

We consider that Phases 2 and 3 are dependent on exploration success, should the JV advance beyond Phase 1 we would revise our valuation approach and fair value, but note that in similar cases there has been a significant rise in the value of the junior partner. We show what could be achieved in exploration success (a maiden resource and recognition of a deposit) and full completion of the JV.

Upside – What exploration success might look like at ZCP

Though it is not possible to suggest the size and viability (technical or economic) of any future resource, we can consider the impact that exploration success has had on other AIM listed junior explorers and use this to gauge how exploration success might develop our valuation of ARC.

We highlight two AIM listed explorers that delivered on exploration potential - Solgold with its Cascabel Project in Ecuador, and Greatland Gold's Havieron project in Western Australia.

We look at how the market capitalisation of Solgold and Greatland Gold evolved as the projects progressed through key trigger events. We compare the market capitalisation of both companies at three stages of development i) pre-resource, ii) maiden resource, and iii) subsequent resource updates (Table 2).

Both Solgold and Greatland Gold enjoyed significant re-ratings (x7 and x71 respectively) after they reported maiden resources. The more explosive nature of Greatland's breakout (x71) might reflect the project location, prevailing market conditions and early interest from a mining major. **We believe that it is relevant to note that the ZCP is in a tier 1 mining jurisdiction and that it has already attracted a mining major.**

Table 2: Valuing Exploration Success (\$m)

Company	Mkt Cap at first significant drilled interval	Mkt Cap at Maiden Resource	Uplift from first significant drilled interval	Day Count - first drilled interval to maiden resource	Mkt Cap at Resource Update	Uplift from first significant drilled interval	Day count -Maiden resource to resource update
Solgold	87	625	7.2x	1,591	1,022	11.7x	2,689
Greatland Gold	24	1,677	70.9x	986	744	31.5x	1,442
Average			39x			21.6x	
Multipliers applied to forward looking success cases			10x			15x	

Source: WH Ireland Research

Valuing exploration success

Based on our two examples – we are not aware of any other AIM listed explorers with comparable recent success – we conservatively suggest that a **maiden resource for the ZCP** could generate a **10x uplift** in the value of ZCP. This would likely represent the completion of Phase 2 of the JV. Should the JV progress through Phase 3 (**JV Completion and reporting of updated resource**) we anticipate an updated resource and suggest that the uplift in value may reach **15x**, this compares to 12x uplift for Solgold and 32x uplift for Greatland Gold.

Virgo Project

The Virgo Project is a pre-resource project in proximity to large development projects in the emerging KCB. We value Virgo considering ARC's agreement to acquire 75% of the project and comparing recent transactions in the KCB.

ARC entered into an agreement with Alvis-Crest (RNS 04.11.21) to acquire 75% of the Virgo project for £1.2m, the agreement provided the option for ARC to acquire the remaining 25% of the project for a further \$5m.

Since 2020, a number of public transactions have been completed for projects in the KCB, these transaction value the projects between approximately £2.52m and £0.35m (Table 3). ARC's deal for the Virgo Project falls within this range.

Table 3: Kalahari Copper Belt projects - Summary of recent transactions

July 8th 2022 – Kavango Resources (AIM:KAV No Rec) acquired a 50% interest in the Kanye Resources JV for £180k – **valuing the project at £360k**

May 18th 2022 – Power Metals (AIM:POW No Rec) acquired a 35% interest in the Molopo Farms Complex for £807k – **valuing the project at £2.31m**

Sept 16th 2021 – Sandfire Resources (ASX:SFR No Rec) acquired nine licences from Galileo Resources for a cash payment of US\$1.4M and shares with a value (at the time) of AUD\$2.43M – **valuing the project at approximately £2.52m**

May 1st 2020 – Sandfire Resources (ASX:SFR No Rec) acquired Trans Kalahari Copper for an upfront cash payment of AUD\$2M with provision made for additional payment based on exploration success – **valuing the project at approximately £1.11m**

Source: WH Ireland Research

ARC's agreement with Alvis-Crest initially values the Virgo project at £1.6m, neatly within the range of values paid for projects in the Kalahari Copper Belt (£2.5m to \$0.36m). **We value the Virgo Project at £1.6m.** Contingent on further evaluation and at its election, ARC could acquire the remaining 25% of the Virgo Project for additional US\$5m (~£4.17M) indicating a value for the project at £5.37m.

Cash and Corporate Costs

The latest available financial statements for ARC are interims for the period ending June 30th 2023:

- We consider cash of \$2.3m, this is the value of the first cash from Anglo to Arc (\$3.5m x 67%), expected imminently.
- Using the last three years of accounts, we estimate corporate costs on a NPV₁₀ basis at (£2.5m).

Arc Minerals

We argue that the favourable terms that ARC has secured for the Anglo JV reflects the high regard in which Anglo hold the ZCP, and that this reflects how they view the potential of the project.

We highlight two recent deals for early-stage copper projects in the ZCB, agreed between junior explorers and the mining majors.

These deals emphasize the renewed importance of the ZCB in the search for new copper resources.

The Deals

Potential cash payments

ARC – Anglo American = \$14.5m

MMA – Rio Tinto = \$3m

AFM – First Quantum Minerals = 0

Investment in exploration

ARC – Anglo American = \$74m

MMA – Rio Tinto = \$48m

AFM – First Quantum Minerals = \$2m plus milestones that require further investment though not defined in dollar terms.

Retained Interest

ARC – 30%

MMA – 25%

AFP – 25%

Compared to other deals, on all metrics, the ARC-Anglo deal is significantly more favourable to the junior partner.

ARC is a junior explorer with a focus on copper exploration in southern Africa. It recently entered a favourable joint venture agreement with Anglo American (Anglo JV) to explore the Zambian Copper Project (ZCP) in the Zambian Copper Belt (ZCB).

ARC also has a 75% interest in Alvis-Crest, the holder of two prospecting licences (the “Virgo Project”) in Botswana’s Kalahari Copper Belt. ARC is actively investigating other opportunities in southern Africa.

The Anglo JV

Following a significant period of comprehensive due-diligence, ARC Minerals recently announced (RNS 27.10.23) that, subject to minor conditions, it had entered joint venture agreement with Anglo American (Anglo JV) for the ZCP. The terms of the deal in favour of ARC are perhaps the best (if not the best) secured by a junior with a top-tier mining company in recent history. It is pertinent to note that Anglo’s geoscientists know the project well having previously worked it.

Under the terms of the Anglo JV, Anglo will make a direct cash payments to ARC of \$14.5m and invest a further \$74m to fund exploration and acquire a 70% stake of the ZCP. In addition to exploration funding, Anglo will deploy its industry leading expertise to the ZCP to deliver the best bang for buck. We believe if something of significance is there to be found this combination of funding and expertise will find it to the benefit of both parties. Alternatively, if nothing is found, ARC has lost nothing in terms of money spent in the ground, a true win-win.

To gauge the high regard in which Anglo holds the ZCP we can reference other recent deals agreed between junior explorers and mining majors in the ZCB:

Midnight Sun Mining (TSXV:MMA N/R) and Rio Tinto (LSE:RIO N/R) – the deal relates to the Solwezi licences. Under the terms of the staged deal Rio could earn 75% by investing a total of \$51m - \$3m in cash payments (\$700k upfront), and \$48m on exploration expenditure.

A further point of reference is the recent deal between **First Quantum Minerals (TSX:FM N/R) and African Pioneer (LSE:AFP N/R)**. Under the terms of the deal FM has the option to acquire four exploration licences in the ZCB in return it must i) invest \$2m in exploration (\$500k across each of four licences, ii) produce a technical report detailing a 300kt contained copper resource, to secure 51% interest, and iii) advance technical studies and report a positive decision for the commercial development of a mine to increase ownership to 75%.

The difference in the terms agreed between ARC and Anglo, and the other deals are stark. We believe this points towards the very high regard in which Anglo holds the ZCP.

On the full conclusion of the Anglo JV, the ZCP will have been significantly advanced and we foresee one of three outcomes; i) a major discovery is made and ARC owns 30% of a project of significant value ii) ARC has a 30% interest in a significantly derisked copper project too small for the mining majors but of significant value to a mid-cap or junior miner, or iii) no significant discovery is made.

History shows that the first outcome would result in a significant value uplift for ARC, the second outcome would also accrete significant value to ARC and its shareholders. We also believe that the third outcome should be viewed positively; having secured significant upfront cash payments that will maintain the business and fund future endeavours, the ZCP would have evaluated and derisked by an expert team at no cost to ARC.

The Zambian Copper Project

The ZCP is in Zambia's North-Western Province approximately 900km from Lusaka. ARC has a 67% in Unico Minerals Ltd, the holder of the ZCP licences.

Anglo American have previously explored ZCP and rate the area very highly

Geologically ZCP is located in the Domes Region of the Zambian Copper Belt, on the western flank of the Kabompo Dome; this setting is host to all the major Zambian copper mines. ARC secured the ZCP, one of the last dome-related areas of Zambia yet to be explored in any detail – an area with considerable exploration potential. It is worth noting that Anglo American have prior experience of the ZCP licences and with the signing of the JV agreement evidently rate the potential of ZCP very highly.

In the Domes region three major copper mines have come online: First Quantum Minerals' Sentinel and Kansanshi mines and Barrick Gold's Lumwana mine. The region accounts for more than 80% of Zambian copper production, which shows the importance of the region.

ARC has invested significantly in exploration and demonstrated the exploration potential of ZCP

ARC has invested significant time and resources to advance the ZCP and a number of compelling exploration targets, including high-grade copper oxides with near-term production potential have been identified:

- Drilled around 22,000 m
- Taken 75,000 soil samples, and
- Flown 10,000 line km's of airborne geophysical surveys covering the entire licence area.

Virgo Project

ARC has secured a foothold in the emerging Kalahari Copper Belt.

ARC has a controlling stake (75%) over two prospecting licences (the "Virgo Project") in Botswana's Kalahari Copper Belt; two notable deposits have been discovered locally:

- Khoemacau Copper Mining's Zone 5 copper-silver mine has a significant 166Mt resource grading 2% copper and 26 g/t silver in what is considered one of the most prospective areas of the Kalahari Copper Belt – roughly 15km from the Virgo Project. The Zone 5 mine commenced operations in 2021 and achieved full production in December 2022 – annual LOM production around 60,000 copper and 1.6Moz silver. Resources remain open and the 20-year LOM is likely to be extended with further exploration.
- Following the completion of Definitive Feasibility Studies (2020), Sandfire Resources (ASX:SFR No Rec) approved the US\$259M development of the T3 copper-silver project, roughly 40km from the Virgo Project. The DFS considered an initial 3.2Mtpa operation expanding to 5.2Mtpa that would return LOM revenues in excess of US\$2.45bn.

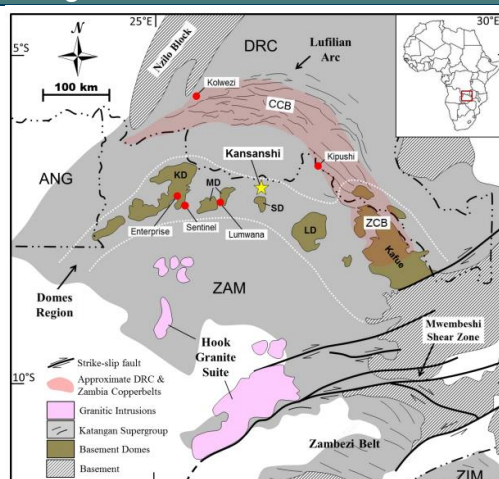
Discoveries to date hint at the wider potential of the Kalahari Copper Belt; continued exploration under shallow cover is likely to provide further success.

To date, exploration at the Virgo Project is limited; two copper-nickel anomalies extending over 3 and 2.5km strike have been identified in soils. One the soil anomalies is coincident with the highly prospective DKF-NPF contact, the other is related to extensional faulting around the dome edge.

The Zambian Copper Belt

The metallogenic province of the Central African Copperbelt is hosted in metasedimentary rocks of the Neoproterozoic Katanga Basin. The lowermost sequences were deposited in a series of restricted rift basins, which were then overlain by laterally extensive, organic rich, marine siltstones and shales. These units (Ore Shale) contain the bulk of the ore deposits within the Copperbelt. This “ore” horizon is overlain by what became an extensive sequence of mixed carbonate and clastic rocks of the Upper Roan Group. The Roan Group now forms a northerly directed, thin-skinned, thrust-and-fold orogenic system, the Lufilian Arc, which resulted from the convergence of the Congo and Kalahari cratons. This arcuate metallogenic province is divided into two distinct districts, the Zambian and Congolese (or Katangan Copperbelts).

Figure 1: Regional geologic/tectonic map of the Central African Copperbelt showing the Copperbelt and Domes region



Source: T. J MacIntyre. PhD thesis submitted to Colorado School of Mines 2018 – *GEOLOGY AND GEOCHEMISTRY OF THE KANSANSHI CU-(AU) DEPOSIT, NORTH-WESTERN PROVINCE, ZAMBIA*. CCB = Congolese Copperbelt; ZCB = Zambian Copperbelt; KD = Kabompo Dome; MD = Mwombezhi Dome; SD = Solwishi Dome; LD = Luswishi Dome; Kafue = Kafue Anticline. Map modified from Heijlen *et al.* (2008) and Naydenov *et al.* (2014).

The Domes Region

The ZCP is in the “Domes” region on the western edge of the Kabompo Dome, which lies to the south and west of the Copperbelt proper (Figure 1). It is exploring in the same geology stratigraphy and structural setting as First Quantum’s (TSX:FM No Rec) Sentinel and Barrick Gold’s (TSX:ABX No Rec) Lumwana deposits.

It is worth understanding what i) a super-large copper deposit in this area looks like, ii) the rock package, and iii) the surface geochemical anomalies it exhibits.

Sentinel, the closest deposit to ZCP is a stratabound, sediment-hosted sulphide deposit hosted within a structurally thickened, northwest dipping carbonaceous meta-pelitic rock, known as “Kalumbila phyllite”. Copper mineralisation at Sentinel is generally limited to the strongly deformed phyllite unit. The orebody strikes approximately east-west for 11 kilometres and mineralised horizons dip 20 to 30 degrees in a northerly direction, generally parallel to the dominant foliation. The main copper-bearing mineral is chalcopyrite, which typically occurs within bedding/foliation parallel quartz-kyanite-carbonate mm-scale veinlets. The deposit is huge – the current Measured and Indicated resource estimate is 761.7Mt grading 0.45%Cu – enough for another 12 years at the current rate of production (59mt/yr).

Copper Market Outlook

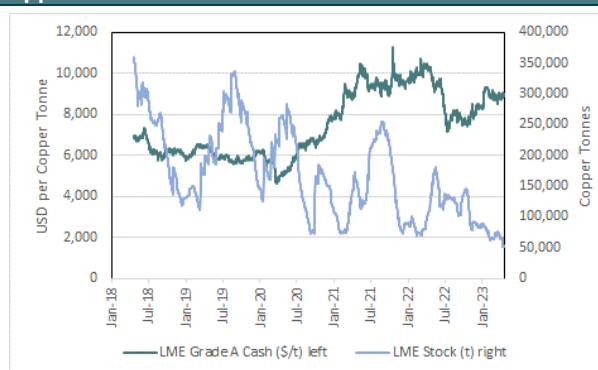
Market overview

Copper is the third most commonly mined metal and is a massively traded commodity. The malleable nature of copper has seen it fashioned into utensils and jewellery over millennia, the ability of copper to defeat the spread of germs with uses in medical environments saw copper make the headlines during the covid pandemic. For a long time copper has been widely used in construction. However, as concerted efforts are made to decarbonise the world it is copper's use in electrical motors, wires, cables, wind and solar power facilities that will see demand for the red metal surge with the supply demand balance trending to deficit in the longer-term.

In 2021, over 60% of global copper was sourced from five countries, Chile, Peru, China, Congo and the USA. Production from Chilean mines is becoming more expensive and social unrest in Chile and Peru has seen a number of major projects delayed for many years.

Serious questions remain as to whether copper supply can meet surging demand, many advanced projects in Chile and Peru have stalled in the face of social unrest and the timeline from discovery to new projects coming online typical exceeds 10 years. Concerns around supply capacity have seen copper prices reach new highs and stocks plummet (Figure 2). The copper price achieved all-time highs in October 2021 at over \$11,300/t and amidst continued covid lockdowns in China and fears of a global recession prices reached a recent low of \$7,160/t in July 2022, China reopened and prices have since established an upward trend and stock continue to deplete.

Figure 2: LME Copper Price and Stock



Source: WH Ireland research, S&P Capital IQ

Outlook & Price

The outlook for copper is bright with significant shortfalls in supply forecast. We consider that the long-term price of copper will be \$8,000/t.

Shareholders

Table 7. Arc Minerals' Shareholders (July 2023)

	Shares (m)	Percent holding (%)
Karl-Erik von Bahr		7
Lärarnas Riksförbund		5
Hargreave Hale		4
Total >4%		16
	1,225.7	100

Source: WH Ireland Research, Arc Minerals
Directors own 2.8% of the outstanding share capital

Arc Minerals Team

Board Members

Nick von Schirnding – Director and Executive Chairman – Nick von Schirnding has over 25 years' experience in the mining sector across a number of geographies. Nick was CEO of Asia Resource Minerals plc, a FTSE listed mining company. Prior to this Nick was a senior executive with Anglo American plc and De Beers. Mr von Schirnding is also chairman of Fodere, a private minerals processing business with a plant at Highveld steel and a non-executive director of Jangada Mines plc, Orusur and Edenville, all listed on AIM in London.

Rémy Welschinger - Finance Director – Remy Welschinger is the founder and managing director of Limehouse Capital, an investment holding company specialising in natural resources projects. Up until 2018, he was head of commodities sales in Europe for Deutsche Bank. Prior to that, Mr Welschinger was an Executive Director in the Fixed Income and Commodities division of Morgan Stanley in London. Mr Welschinger graduated from Cass Business School, London, with a MSc in Investment management.

Brian McMaster - Non-Executive Director – Brian McMaster has over 20 years' experience in the area of corporate reconstruction and turnaround and performance improvement and 20 years in the mining and exploration industry. Brian's recent experience includes founding Harvest Minerals and Jangada Mines, AIM listed companies with Potash and PGM projects in Brazil respectively, as well as numerous reorganisations and the recapitalisation and listing of 12 Australian companies.

Valentine Chitalu - Non-Executive Director – Valentine Chitalu is an entrepreneur in Zambia and southern Africa specialising in private equity and local private sector development. He is the co-founder and Chairman of Phatisa Group, a private equity fund manager in Sub-Saharan Africa, and has previously worked for the CDC Group in London and Lusaka, focusing on identifying investment opportunities and portfolio management, and was Chief Executive Officer of the Zambian Privatisation Agency where he was responsible for the divestiture of over 240 enterprises. Valentine is a Chartered Certified Accountant and holds a Masters in Economics from Cambridge University.

Key Management

Vassilios Carellas - Chief Operating Officer – Vassilios Carellas is a natural resources professional with over twenty-five years of corporate and operations experience in the mining and exploration industry. Corporate experience includes the executive management and financing of two publicly listed exploration and development minerals companies, while operating experience gained in the general management of producing mines, mining operations and exploration activities.

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Recommendation	Total Stocks	Percentage %	Corporate	Percentage %
Corporate	65	100.0	65	100.0
Buy	0	0.0	0	0.0
Speculative Buy	0	0.0	0	0.0
Outperform	0	0.0	0	0.0
Market Perform	0	0.0	0	0.0
Underperform	0	0.0	0	0.0
Sell	0	0.0	0	0.0
Total	65	100.0	65	100.0

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A draft of this research report has been shown to the company following which factual amendments have been made.

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Company/Issuer Disclosures

Company Name	Table of interest number	12-month recommendation history	Date
ARC Minerals (ARCM)	2,3,4,5,7	Corporate	25.01.21

<https://www.whirelandplc.com/capital-markets/research-recommendations>

Companies Mentioned

Company Name	Recommendation	Price	Price Date/Time
Anglo American (LSE:AAL)	No Rec	GBP 20.84	31/10/2023 16:30
Rio Tinto (LSE:RIO)	No Rec	GBP 52.62	31/10/2023 16:30
First Quantum Minerals (TSX:FM)	No Rec	CAD 14.66	31/10/2023 16:30
African Pioneer (LSE:AFP)	No Rec	GBP 0.02	31/10/2023 16:30
Midnight Sun Mining (TSXV:MMA)	No Rec	CAD 0.21	31/10/2023 16:30
Sandfire Resources (ASX:SFR)	No Rec	AUD 6.02	31/10/2023 16:30
Khoemacau Copper Mining (Private)	No Rec	PRIVATE	
Barrick Gold (TSX:ABX)	No Rec	CAD 22.24	31/10/2023 16:30

Headline	Date
Searching for "Tier 1" elephants in Zambia	06.10.21
Anglo deal signed - drills already turning	03.11.23

Recommendation	From	To	Analyst
Corporate	25.01.21	present	CA
<i>Current Analyst (CA), Previous Analyst (PA)</i>			

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