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On Friday's Close

Analyst : Warwick Grigor

Caravel Minerals: Looking for leverage on a higher copper price

Caravel offers high leverage to copper price

We have been aware of Caravel Minerals (CVV) for some time but have been somewhat dismissive due to the low grade of 0.28% Cu. However, we must not forget that this low grade makes it highly levered to the copper price, and that commodity's recent strength brings this observation into greater focus. If you are a copper bull then there could be room for a stock like this in your portfolio.

We took the time on Tuesday to have a presentation from Caravel to see what else the Company offers apart from leverage, and to consider how economic its large tonnage, low grade project in WA might be.

A Scoping Study would be useful

Indicative answers to this question are contained in a Scoping Study completed in 2019, but shareholders have been deprived of the benefit of this Study because of overbearing and dogmatic regulators. In direct contravention of its continuous disclosure policy, the ASX has prevented this information from being released to shareholders. Why? It seems that the low market capitalisation of Caravel is the problem. ASIC can't see how a company capitalised at less than \$20m can fund a \$400-500m project, so it won't allow the Scoping Study to be released. Doh!

In our mind this is a capricious abuse of the authority of the ASX/ASIC. It is bad exercise of regulatory powers. Suppression of a responsibly prepared Scoping Study that could have a material impact on the share price is highly discriminatory against shareholders. It is like the ASIC is standing on the throat of a junior company just because it is a small company. Small company lives matter!

In the absence of an ASX released Scoping Study on which to rely, we have had to take the data available and compare it with other projects to work up reasonable estimates.

Location and infrastructure get a big tick

The first point to note is its location 150 km NE of Perth, in the wheatbelt. You could not get a better location in the best jurisdiction for mining in the world. This immediately offers the opportunity for minimisation of capital costs.

Favourable geology and metallurgy

The Caravel deposits are located within a 30 km long continuous, almost exclusively chalcopyrite copper belt, with traces of molybdenum. It can appropriately be described as porphyry-style mineralisation not dissimilar to some of the large porphyries found in the USA.

The reported Mineral Resource at a 0.15% cut-off grade is 661 Mt at 0.28% Cu and 55 ppm Mo, but a cut-off grade of 0.3% gives you 248 Mt at 0.39% Cu and 77 gpt Mo. It lies beneath a 30-50m cap of weathered material that can be pre-stripped at minimal cost. Interestingly, there seems to

be little or no supergene enrichment on the contact between the weathered saprolite and the chalcopyrite copper orebody that will be processed.

The metallurgy seems to be uncomplicated, making the production of a clean, > 25% Cu chalcopyrite concentrate quite simple. Copper recovery of 92% is expected.

Economies of scale with large projects

With such a large resource the company has the opportunity to develop a long-life mine at optimised scale. A 16 Mt pa operation producing 45,000 tpa of copper would be a good starting point. The capex for this could be in the order of A\$450-500m. Once everything is bedded down and operating well, the company could start to think about doubling the size of the operation and it would still have a mine life in excess of 20 years. That life would provide a good buffer on the capital payback period that would likely be about four years.

Very low waste to ore ratios of 0.5:1 in the first five years, and 1:1 thereafter, will be very useful in keeping cash cost in the order of US\$1.50/lb of copper produced. With copper prices recently around US\$3.20/lb, this is starting to look attractive.

Large, 180 t trucks could enable contractor mining costs of around \$2.40 pt based on a specific gravity of 2.6. Owner-mining could bring this cost down even further, with the recent fall in diesel prices putting additional downwards pressure on costs.

Financing large projects is always an issue

The ASX is correct in believing that \$500m of financing is a tall order, but no-one in their right mind would expect an ASX junior to do this on its own. Caravel's job is to advance the project as far as it can ahead of doing some sort of joint venture or corporate deal with an established copper company. Such a company would make project finance much easier to obtain due to the availability of a balance sheet to help secure project funding. We will judge the abilities of management according to how good a deal it can do on this front.

In the meantime we can expect the share price to move according to the copper price, the firming up of feasibility numbers and expansions to the resource base that may come from continuing exploration. But more, there is another exploration angle developing.

Positioning itself for exploration success

Chalices's Cu-Ni-PGM discovery has been a dramatically successful event that has changed the perspectives for this style of mineralisation in WA's south-west. Acting on this, Caravel is actively pursuing exploration programs at prospects that include Toolbrunnup, which has anomalous Ni-Cu-PGM showings similar in scale to that of Julimar. At Mt William, 110 km south of Perth, it is in negotiations to

obtain a controlling interest in what seems to be a 3.5 km long intrusive body.

So, how does it sit in the market today?

At a share price of 9.2¢ the market capitalisation is only \$23.2m, which suggests that there is no premium for what the large copper project might be worth. In the near term the blue sky interest is more likely to come from the exploration projects. Thus, there is a good balance in the portfolio that prevents the company from being characterised as one-dimensional. A rising copper price will add more interest.

In August it undertook an SPP at 4¢ that raised \$1m, in addition to a July placement at 4¢ that raised a similar amount of money. As at 30/9/20, its cash balance was \$1.9m but that doesn't go far. A prudent company would be seeking additional funding in the short term.

Stop Press: Just as we finished this piece on Caravel last Wednesday, it went into a trading halt on Thursday to place \$2.8m worth of shares at 8¢.

Disclosure: Interests associated with the author do not hold shares in Caravel Minerals, but they have applied for shares in the placement being undertaken. FEC may receive fees on any stock it places to itself or other clients.

Managing expectations in a porphyry drill-out

One of the challenges for exploration companies is to responsibly manage the expectations of shareholders. In a world where the punters tend to spend 10-20 seconds looking at headlines of ASX releases before deciding to act, the headline is very important, as are the highlights. However, you need to read into the body of the release to get a proper appreciation of what is being said.

Take Los Cerros (LCL), as an example. It recently announced results from Hole TS-DH10 and TS-DH11 that were drilled into the Tesorito porphyry. The better hole was #11, with an intercept of 262m at 0.84 gpt from surface, including 32m at 1.7 gpt from 144m. Hole # 10 recorded 9m at 1.15 gpt from 26m before continuing into barren country rock. It seems like one hole was excellent, though at a grade a little softer than the 1 gpt benchmark of other holes, and the other hole was in a different ballpark. You need to look at the objectives of each hole before casting judgement.

Hole 10 was a more risky hole because it was a step-out designed to test the eastern boundary limits. It actually did this, showing the mineralisation extended by an additional 70-100m, finding that a previously unknown fault truncated the mineralisation in this direction. The knowledge thereby gained points to the mineralised porphyry heading off to the west at a dip of 60-70 degrees in parallel to the newly found fault. Thus, it was a useful hole.

Hole 11 was lighter in grade, but there isn't much point in becoming too analytical about this grade difference. Significantly, it hit the higher grade horizon within the spacial expectations established by earlier drilling. The results were reasonably predictable if you look at Figure 1 in the ASX release. So, the conclusion should be that this is a well behaved orebody, so far.

As the geologists sit down to decide where to put the next holes, directors need to consider what the best program will be. Should LCL be stepping out to push the boundaries to

see just how big this is, or should it build confidence in what is already understood? If it decides to step out by, say 50m to the west of TSDH02, one could reasonably expect a huge intercept through the guts of the orebody that would excite the market. Alternatively, it could drill to the west of TSD11, which may test the orebody extension at depth, but it might not hit any near surface grade. Yet another option would be to drill in a southerly direction from TSD05 to also test the guts of the orebody in that direction. Which would be the best? Which is more likely to please shareholders? There is a balance that can be achieved.

From my point of view it would be best to have at least two drill holes reported at the one time so that expectations would not be skewed one way or the other, prematurely. One hole could be a more conservative step out that will be useful in adding to data needed for a resource calculation in due course, while another could continue to test the boundaries of mineralisation. You would then be getting the best of both worlds. At this point it would be a fair generalisation to continue with the belief that this is a big orebody and each new hole will become absorbed into the database rather than being individually significant.

Getting the right wording for West Wits

Shareholders are incessantly asking when West Wits will be granted the mining rights to its project in South Africa. That is actually not the correct question. WWI already been granted the EA, which is the final step in granting the mining right. Subsequently there is an appeals process that has to be worked through, but this process has now been exhausted with no negative impact other than elongated time.

The real question to ask now is "when will WWI be free to start mining?" The reality is that the DFS has to be completed first. The delays from the appeals process have been happening in parallel to the DFS work, so there is in effect no delay.

Alicanto announced 500,000 oz at 1.8 gpt

It was a pleasant surprise to see Alicanto announce a 500,000 oz resource at 1.8 gpt, in Guyana, last week. Remember this was the project that Nord Gold withdrew from.

AQI is well ensconced in Sweden now with some world class geology, so as good as 500,000 oz may appear, it is unlikely that the Company will want to change its focus from Sweden. A smart deal would involve some sort of divestiture, selling part or all of the Guyana projects to a Canadian company that is better positioned geographically.

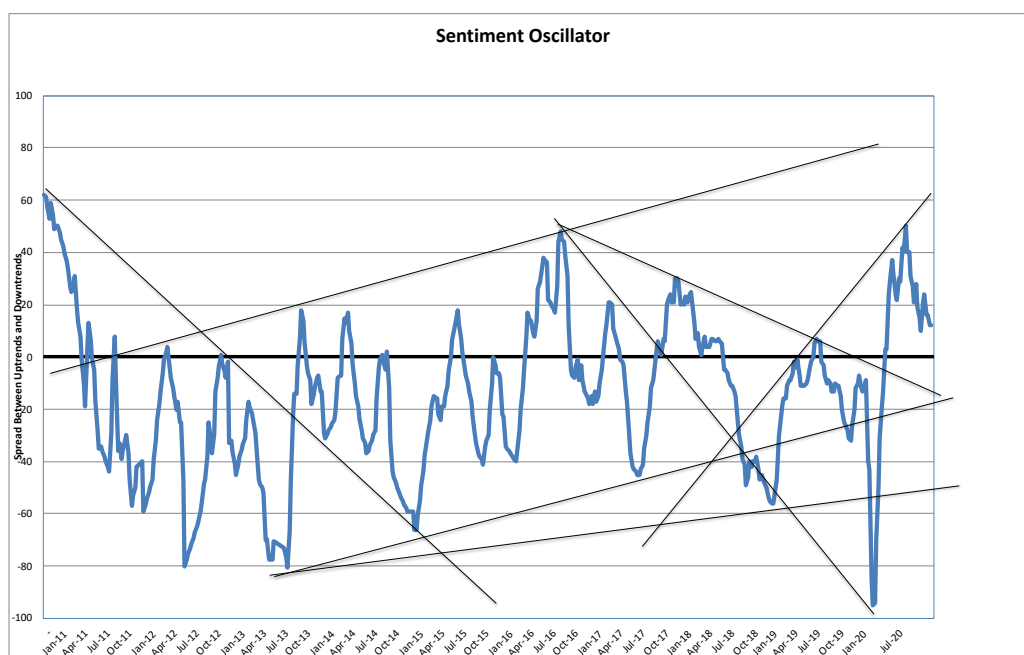
As we write AQI is in a trading halt to raise \$6m, which will place it in a well-funded position to step up the pace of drilling in Sweden.

A brilliant video on formation of deposits

AQI released a brilliant video showing how the Swedish deposits were formed. It is well worth watching for those who want to understand a bit more about the geology. Click on the link below.

<https://bit.ly/3n6dbP2>

Disclosure: Interests associated with the author hold shares in Alicanto, Los Cerros and West Wits and have received capital raising fees.



Sentiment Oscillator: Sentiment was a little softer. There were 40% (44%) of the charts in uptrend and 28% (32%) in downtrend on Friday's close.

Detailed Chart Comments


NB. Only the bold comments have been updated. Comments in grey type are from previous weeks and will be less relevant. Please note that this list is a cross section of the market. It IS NOT a list of recommendations.

Indices	Code	Trend Comment	
All Ordinaries	XAO	surge to another new high	
Metals and Mining	XMM	breached downtrend	
Energy	XEJ	breached downtrend	
Stocks	Code	Trend Comment (updated comments in bold)	Main Interest
Alpha HPA	A4N	at highs	HPA
Adriatic Resources	ADT	breached downtrend, but pullback	zinc, polymetallic
Aeon Metals	AML	testing support	copper + cobalt
Alkane Resources	ALK	breached uptrend, heading down	gold, zirconia
Alicanto Minerals	AQI	off its highs	base metals, silver, gold
Allegiance Coal	AHQ	down	coking coal
Alliance Resources	AGS	slump	gold predevelopment
Alto Metals	AME	new high	gold exploration
American Rare Earths (was BPL)	ARR	off its highs	rare earths
Apollo Consolidated	AOP	breaching downtrend	gold exploration
Arafura Resources	ARU	on support	rare earths
Aurelia Metals	AMI	down	gold + base metals
Australian Potash	APC	testing downtrend	potash
Auteco Minerals	AUT	down	gold exploration







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BHP	BHP	testing downtrend	diversified, iron ore
Base Resources	BSE	pullback	mineral sands
BBX Minerals	BBX	breached uptrend	gold exploration
Beach Energy	BPT	breaching downtrend	oil and gas
Beacon Mining	BCN	sideways	gold production
Bellevue Gold	BGL	new high	gold exploration
Blackstone Minerals	BSX	down	nickel
Blue Star Helium	BNL	new high	gas, helium
Breaker Resources	BRB	still in LT downtrend	gold exploration
Buru Energy	BRU	sideways	oil
Calidus Resources	CAI	sideways	gold
Capricorn Metals	CMM	down	gold
Caravel Minerals	CVV	breaching downtrend	copper
Central Petroleum	CTP	sideways through uptrend	oil/gas
Chalice Gold	CHN	new high	nickel, copper, PGMs, gold exploration
Chase Mining	CML	collapse on negative drill result	nickel/copper/PGE
Chesser Resources	CHZ	on support	gold exploration
Cobalt Blue	COB	off its lows	cobalt
Cyprium Metals	CYM	surge higher	copper
Dacian Gold	DCN	rallying	gold
Danakali	DNK	down	potash
Davenport Resources	DAV	rising	potash
De Grey	DEG	down	gold
E2 Metals	E2M	surge on drill result	gold exploration
Ecograf (was Kibaran)	EGR	pullback	graphite
Element 25	E25	new high	manganese
Emerald Resources	EMR	sideways	gold
Euro Manganese	EMN	heavy pullback	manganese
Evolution Mining	EVN	sideways	gold
Firefinch	FFX	testing uptrend (was Mali Lithium)	gold
First Graphene	FGR	gently rising	graphene
Fortescue Metals	FMG	testing downtrend	iron ore
Galaxy Resources	GXY	rising strongly	lithium
Galena Mining	G1A	rising	lead
Galilee Energy	GLL	breaching uptrend	oil and gas, CBM
Genesis Minerals	GMD	uptrend	gold
Gold Road	GOR	down	gold
Highfield Resources	HFR	rising	potash
Hillgrove Resources	HGO	gently higher	copper
Iluka Resources	ILU	demerger	mineral sands
Image Resources	IMA	falling back to support line	mineral sands
Independence Group	IGO	risen to meet resistance line	gold
ioneer (was Global Geoscience)	INR	steeply higher	lithium
Ionic Rare Earths (Oro Verde)	IXR	gentle uptrend	rare earths

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Jervois Mining	JVR		gently lower	nickel/cobalt
Jindalee Resources	JRL		new high	lithium
Kin Mining	KIN		testing uptrend	gold
Kingston Resources	KSN		testing downtrend	gold
Kingwest Resources	KWR		spike higher	gold
Legend Mining	LEG		down	nickel exploration
Lepidico	LPD		sideways	lithium
Lindian Resources	LIN		higher	bauxite
Lithium Australia	LIT		testing uptrend	lithium
Los Cerros	LCL		falling back to support line	gold exploration
Lotus Resources	LOT		testing downtrend	uranium
Lucapa Diamond	LOM		at lows	diamonds
Lynas Corp.	LYC		new high	rare earths
Mako Gold	MKG		back in downtrend	gold exploration
Manhattan Corp	MHC		strong rally	gold exploration
Marmota	MEU		drifting lower	gold exploration
Marvel Gold (was Graphex)	MVL		on support line	gold exploration
MetalTech	MTC		testing downtrend	gold
MetalsX	MLX		down	tin, nickel
Metro Mining	MMI		rallying	bauxite
Mincor Resources	MCR		rising	gold/nickel
Musgrave Minerals	MGV		down	gold exploration
Myanmar Minerals	MYL		breaching uptrend	lead, zinc, silver
Nelson Resources	NES		testing uptrend	gold exploration
Neometals	NMT		rising	lithium
Northern Minerals	NTU		back to support line	REE
Northern Star Res.	NST		testing support	gold
NTM Gold	NTM		takeover bid	gold exploration
Oceana Gold	OGC		heavy fall	gold
Oklo Resources	OKU		down	gold expl.
Orecorp	ORR		breaching uptrend	gold development
Orocobre	ORE		rising	lithium
Oz Minerals	OZL		breached downtrend	copper
Pacific American Holdings	PAK		strongly higher	coal
Pacifico Minerals	PMY		testing downtrend	silver/lead
Pantoro	PNR		testing downtrend	gold
Panoramic Res	PAN		on support line	nickel
Peak Resources	PEK		uptrend	rare earths
Peel Mining	PEX		downtrend	copper
Peninsula Energy	PEN		down again	uranium
Poseidon Nickel	POS		rising	nickel
Pure Minerals	PM1		correcting lower	nickel/cobalt/HPA
Pensana Metals	PM8		off its highs	rare earths
Perseus Mining	PRU		down	gold

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Pilbara Minerals	PLS		rising	lithium
Polarex	PXX		down	polymetallic exploration
Ramelius Resources	RMS		down again	gold production
Red5	RED		continuing down	gold
Red River Resources	RVR		new high	zinc
Regis Resources	RRL		down	gold
Regergen	RLT		testing downtrend	gas, helium
Resolution Minerals	RML		down	gold exploration
Resolute Mining	RSG		down	gold
RIO	RIO		breaching downtrend	diversified, iron ore
Rumble Resources	RTR		down	gold exploration
Salt Lake Potash	SO4		breaching downtrend	potash
Saracen Minerals	SAR		weaker	gold
St Barbara	SBM		testing downtrend	gold
Sandfire Resources	SFR		Downtrend	copper
Santos	STO		breached downtrend	oil/gas
Saturn Metals	STN		breached downtrend	gold exploration
Sheffield Resources	SFX		sideways	mineral sands
Sky Metals	SKY		on support line	gold exploration
St George Mining	SGQ		rising	nickel
Silex Systems	SLX		down	uranium enrichment technology
Silver Mines	SVL		on support line	silver
Sipa Resources	SRI		down	general exploration - Ni,Cu, Co, Au
Stanmore Coal	SMR		breached steepest downtrend	coal
Strandline Resources	STA		down	mineral sands
Sunstone Metals	STM		uptrend breached	
Talga Resources	TLG		rising	graphite
Technology Metals	TMT		surge higher	vanadium
Tesoro Resources	TSO		testing support line	gold exploration
Theta Gold Mines	TGM		uptrend	gold
Thor Mining	THR		on support line	gold exploration
Tietto Minerals	TIE		down	gold
Titan Minerals	TTM		breaching downtrend	gold
Vango Mining	VAN		down	gold
Venturex	VXR		rising	zinc
Vimy Resources	VMY		still in downtrend	uranium
West African Resources	WAF		off its highs	gold
Westgold Resources	WGX		slump to support line	gold
West Wits Mining	WWI		rising	gold
Western Areas	WSA		down	nickel
Whitehaven Coal	WHC		rising	coal
Wiluna Mining	WMX		sideways	gold
Yandal Resources	YRL		surged higher	gold exploration
Zinc Mines of Ireland	ZMI		testing downtrend	zinc

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Totals	40%	59	Uptrend
	28%	41	Downtrend
		146	Total

Guides to Chart Interpretations

- Charts usually go pass from one trend (up or down) into the other via a period of indecision and uncertainty during which the trend can either recover or change. This period is signified by the orange colour. The orange represent both the greatest risk and greatest reward possibilities.
- Once a chart is in confirmed up or downtrends it is not uncommon for 10-20% of that trend to have already transpired.
- There are trends within trends. The focus of this chart review is the immediate trend that affects the sentiment i.e. it can be a downtrend within a long-term uptrend.
- Not every chart warrants a new comment every week. The new comments are in bold type. Grey type comments may be dated.
- Individual charts provide a single view. It is valuable to look at charts of other companies in similar commodities, and the overall sentiment is also very valuable. Not many stocks can swim against the tide.
- We periodically add or delete charts, some times for obscure reasons. If a chart consistent gives poor signals or is very erratic, we may delete it. Sometimes we add a chart because we want to see what all the fuss is about. We do have a preference for charting stocks that we cover in our research as well.
- Errors and omissions may occur from time to time, especially in fast moving markets.

Amber Lights in Tables: Just a reminder if when the amber light is used in the table – it is when the charts are ambiguous or when there is a change of trend taking place. If a chart is breaching a downtrend it can either be a positive sign or a trap. Only once it has done more work can it be confirmed as a new uptrend. Maybe it is a new uptrend (or conversely a new downtrend); the risk takers can decide to jump on board early (or sell). They will maximise their profits (or minimise their losses if indeed it is the start of the new uptrend (downtrend). More risk-averse investors should wait a little longer, being prepared to give up some of the gains in return for greater certainty.

Weightings of Sectors Represented in the Company Charts			
Sector	No. of Companies	Weighting	
Gold	37	25.3%	
Gold Exploration	25	17.1%	
Nickel	12	8.2%	
Oil/Gas	7	4.8%	
Lithium	8	5.5%	
Zinc/Lead	7	4.8%	
Rare Earths	7	4.8%	
Copper	8	5.5%	
Mineral Sands	5	3.4%	
Iron Ore/Manganese	5	3.4%	
Potash/Phosphate	5	3.4%	
Coal	4	2.7%	
Uranium	4	2.7%	
Graphite	2	1.4%	
Bauxite	2	1.4%	
Silver	2	1.4%	
Cobalt	1	0.7%	

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Tin	1	0.7%	
Diamonds	1	0.7%	
Other	3		
Total	146		

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