

Brazilian Critical Minerals has found a point of difference

The US markets continue to show volatility with this week's debate being about the direction of the US economy. Our Metals and Mining Index has been hit by falling iron ore prices, causing BHP, Fortescue and RIO to tumble. Oil prices have been coming off and the uranium price has been drifting. Once again, the only sector offering joy on the commodity price front is gold.

Three extra considerations for gold producers

Gold stocks have been the go-to sector for most of 2024, but in deciding amongst gold producers there are at least three points that you must consider. The first is the extent to which the producers have hedged their gold sales. What price have they hedged at and is this a material drag on the share price? Any company that has hedged over the last year is almost certainly showing a book loss. Why gold producers hedge at all is a mystery to those investors who want leverage to the gold price, but there are two obvious reasons.

The need for debt finance to develop a project invariably comes with a hedge book at the insistence of the bank, but that can turn ugly if the gold price keeps going up. Ask Callidus. A more sophisticated hedge book comprising put and call options can be a better alternative to straight forward sales, but the options come at a cost. Another reason to hedge is where a project is a high cost producer that needs to lock in a minimum price level.

The next consideration is the possibility of companies deciding to process low grade ore stockpiles or just lower grades because the rising gold price has now made them profitable. Call it "low-grading" if you will. The incentive to do this is the ability to increase the mine life. Many gold projects have short mine lives. The longer the budgeted mine life, the more time that is available for the geologists to identify and drill out additional resources. So, if a company reduces its cut-off grade, resulting in a lower head grade to the mill, earnings growth will lag behind the gold price trend. Investors may think that a rising gold price is good for all producers but that is a simplification.

The third consideration is the AUD:USD exchange rate and how this affects the price received by Australian producers. We look at the US\$ gold price every morning, but remember to factor in the exchange rate as well. We saw a good example of this last Wednesday when the US\$ gold price came off a few dollars overnight, but it went up in Australian dollars because of the weaker A\$.

Brazilian Critical Minerals (BCM) looking at in-situ leaching of rare earths

The rare earths space is very crowded with so many rare earth hopefuls around that it is difficult to rank them. There are the obvious leaders such as Lindian, but what about the rest of them? More than 90% of the candidates will fail and move onto the next big thing they can raise money on,

if they can, because that is the way the junior sector works. Keep moving or die; a bit like a shark.

A low cost point of difference

BCM has managed to find a point of difference when compared to other rare earth stocks, being the ability to recover the rare earths using ISR methods (in-situ recovery) with low capex. It was with great enthusiasm that the CEO, Andrew Reid, explained how wonderful this could be and claiming it to be unique outside of China. Why? He called it "green" due to the use of eco-friendly reagents, no open pits and no tailings dams. It would use a magnesium sulphite solution (aka epsom salts) as opposed to ammonia sulphate. It will reduce the process from 10 steps to only four steps.

We have seen ISR used in the context of uranium mining but the process Andrew was talking about seems even simpler with the ability to achieve up to 60% recovery rates. The Brazilian total resource at Ema is over one billion tonnes of ionic clays at 793 ppm TREO, but BCM will be focusing on the higher grade component of 331 Mt at 997 ppm.

The methodology involves drilling through the topsoil and the saprolite profile until it reaches the 5-10m of saprock that overlies the basement rock, to depths of approximately 20m. The saprock has so far shown good permeability owing to a high percentage of silica sands in the material being leached. The leaching cycle also looks attractive at only around 30 days, after which it can recycle the majority of the reagents.

Once leached into the solution the process involves simply raising the pH from around 4.5, up to 5.5-6 at which level the impurities drop out. Then, when you add magnesium carbonate, the rare earths drop out and are recoverable as a mixed rare earth carbonate that looks a bit like talcum powder. This circumvents the need to go through a concentrating step. The buyer then refines the carbonate into separate products via solvent extraction.

So far BCM has been conducting laboratory tests with ANSTO and slug tests that test the hydraulic properties of aquifers. It is now proceeding with tracer field trials with a view to completing a Scoping Study by the end of the year.

One of the geological explanations for the uniqueness of the deposit and the metallurgy is the rhyolite basement rock with the high silica content which is similar to the large Chinese deposits.

The Bottom Line

At the moment BCM is capitalised at only \$10m with cash of \$1.5m. Back in May it sought to raise \$4m, but closed the placement off at \$2m. So, it will be looking to raise money at its earliest convenience.

ISR recovery can be much more complicated than just drilling a few holes, creating negative pressure, and

pumping out the pregnant solutions. I saw this when I was involved with the uranium ISR project developed by Peninsula. However, each location is different. BCM seems to have geology that is very permeable and possibly easier to manage. If ISR works it can be a very elegant way to mine. We will watch closely how well the test work progresses in order to see whether this really is a game changer.

It looks as if rare earth prices have bottomed and are turning upwards again. This could be perfect timing for BCM as it seeks to get its merits across to investors.

Why has the Bellevue Gold price been so weak?

For BGL, the sexy, speculative phase of share price growth is over for the time being. The mine is working successfully and profits are being earned, but now it is all about delivering to meet shareholder expectations. You have to look more closely at what is being reported.

We shouldn't be surprised that Bellevue recently raised \$150.8m at \$1.55 per share to reduce debt, with \$100m of this going to reduce the loan from Macquarie Bank. The shares were placed at 15.3% discount to the last closing price, which was rather large given the stature of the Company. The shares were hit hard, falling as low as \$1.33 when they resumed trading, being a 14% discount to the placement price.

The shares had been moving sideways between \$1.20-\$1.40 since then, but they were then crunched to a new low

last week after reporting a maiden net profit after tax of \$75m for the year to 30 June.

Forward selling is a drag

The 2024 annual report, released last week, disclosed that BGL had sold 224,250 oz at A\$2,772/oz. With the recent A\$ gold price of A\$3,700/oz, BGL is looking at a loss on paper of around \$210m or 16¢ per share. With the gold price continuing to rise, this could get worse.

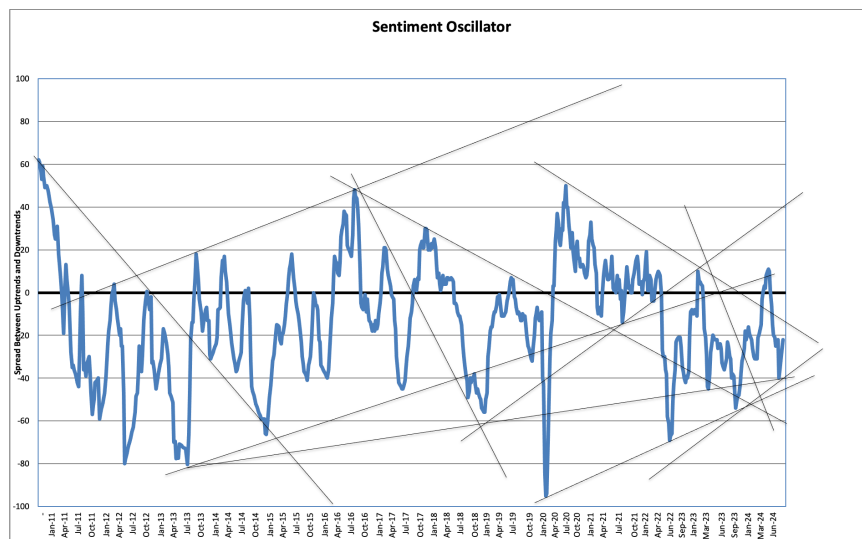
It is not only shareholders that become concerned when an out-of-the-money hedge book. Banks start to get nervous as well. Given the propensity of Macquarie Bank to act preemptively when its clients have large out-of-the-money hedge books, Bellevue probably felt that it needed to do something before the position deteriorated further. Hence the placement.

The Bottom Line

So, the weakness in the Bellevue share price can be attributed to;

- the dilution that came with the share placement,
- the discounted price at which the placement was done &
- the negative position on the forward sales.

While a rising gold price should be considered good for gold producers, those with out-of-the-money forwards will not be treated kindly by the market. Check your gold company investments to see what their positions are.



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	back to highs	
Metals and Mining	XMM	heavy fall	
Energy	XEJ	still under long term downtrend line	
Information Technology	XIJ	off its highs	
Stocks	Code	Trend Comment (updated comments in bold)	Main Interest

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Disclosure: Interests associated with the author hold shares in Felix Gold.

Sentiment Oscillator: There was a small improvement in sentiment last week as a number of stocks broke out of downtrends, but not with enough energy to justify new uptrends, yet. Sentiment improved a little. There were 25% (24%) of stocks in uptrend and 46% (50%) in downtrend at the close of the week

5EA Advanced Materials	5EA	■	new high	boron
Advance Metals	AVM	■	new low	coal, gold exploration
Agua Resources	AGR	■	new high	phosphate, gold
Alkane Resources	ALK	■	new low	gold
Alicanto Minerals	AQI	■	new low	base metals, silver, gold
Alligator Energy	AGE	■	new low	uranium
Almonty Industries	All	■	rising	tungsten
Alpha HPA	A4N	■	testing longer term uptrend	HPA
Altech Chemical	ATC	■	back in downtrend	HPA, anodes
Alto Metals	AME	■	new high	gold
American Rare Earths	ARR	■	consolidating	rare earths
Anax Metals	ANX	■	breaching downtrend	copper
Andean Silver	ASL	■	back to highs	silver
Anteotech	ADO	■	sideways at lows	silicon anodes, biotech
Arafura Resources	ARU	■	pullback	rare earths
Ardea Resources	ARL	■	down	nickel
Arizona Lithium	AZL	■	strong rally	lithium
Astral Resources	AAR	■	surge to new high	gold
Averina	AEV	■	rising	phosphate

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Aurora Energy Metals	1AE		slump to new low	uranium
Aurelia Metals	AMI		breaching uptrend	copper + base metals
Australian Gold and Copper	AGC		good rebound	base metals, silver, gold
Australian Rare Earths	AR3		new low	rare earths
Australian Strategic Materials	ASM		new low	rare earths
BHP	BHP		new low	diversified, iron ore
Barton Gold	BGD		testing downtrend	gold exploration
Beach Energy	BPT		new low	oil and gas
Bellevue Gold	BGL		breached uptrend	gold
Besra Gold	BEZ		testing downtrend	gold
Black Cat Syndicate	BC8		pullback	gold
Boab Metals	BML		new low	silver/lead
Brazil Critical Minerals	BCM		new low	rare earths
Brazilian Rare Earths	BRE		surge through downtrend	rare earths
Brightstar Resources	BTR		uptrend	gold
Caravel Minerals	CVV		back into downtrend	copper
Carnaby Resources	CNB		down	copper
Castile Resources	CST		testing downtrend	gold/copper/cobalt
Catalyst Metals	CYL		surge to new high	gold
Cazaly Resources	CAZ		breached new downtrend	rare earths
Celsius Resources	CLA		sideways	copper
Cobalt Blue	COB		new low	cobalt
Cyprium Metals	CYM		breached uptrend	copper
Emerald Resources	EMR		rising, new high	gold
Empire Energy	EEG		new high	gas
EQ Resources	EQR		breaching downtrend	tungsten
Evolution Energy	EV1		collapse to a new low	graphite
Evolution Mining	EVN		rising	gold
First Graphene	FGR		down	graphene
Fortescue Metals	FMG		new low	iron ore
Genesis Minerals	GMD		rising	gold
Globe Metals and Mining	GBE		down	niobium
Gold 50	G50		falling	gold exploration + gallium
Great Boulder Resources	GBR		new low	gold exploration
Group 6 Metals	G6M		back to lows	tungsten
Hamelin Gold	HMG		breached uptrend	gold exploration
Hastings Technology Metals	HAS		back in downtrend	rare earths
Heavy Minerals	HVY		testing brief, sharp uptrend	garnet
Hillgrove Resources	HGO		new low	copper
Iluka Resources	ILU		breached downtrend	mineral sands
ioneer (was Global Geoscience)	INR		breached downtrend	lithium
Ionic Rare Earths	IXR		new low	rare earths
Jervois Mining	JVR		back to lows	nickel/cobalt
Jindalee Lithium	JLL		new low	lithium

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Jupiter Mines	JSM	■	new low	manganese
Kaiser Reef	KAU	■	improving	gold
Krakatoa Resources	KTA	■	back to lows	rare earths
Larvotto Resources	LRV	■	steep rise	gold, antimony
Lindian Resources	LIN	■	sideways at lows	rare earths + bauxite
Li-S Energy	LIS	■	sideways	Lithium sulphur battery technology
LCL Resources	LCL	■	new low	gold/nickel exploration
Lotus Resources	LOT	■	new low	uranium
Lucapa Diamond	LOM	■	collapsing	diamonds
Lunnon Metals	LM8	■	down	nickel
Lynas Corp.	LYC	■	testing downtrend	rare earths
Marmota	MEU	■	gently lower	gold/uranium exploration
Mayur Resources	MRL	■	stronger	renewables, cement
Meeka Gold	MEK	■	uptrend	gold
MetalsX	MLX	■	rising	tin, nickel
Meteoric Resources	MEI	■	new low	rare earths
Metro Mining	MMI	■	breached uptrend	bauxite
Midas Minerals	MM1	■	testing downtrend	lithium
Nagambie Resources	NAG	■	surge on antimony spotlight	gold, antimony
Neometals	NMT	■	new low	lithium
Newfield Resources	NWF	■	rallying	diamonds
Nexgen Energy	NXG	■	breached uptrend	uranium
Northern Star Res.	NST	■	rising again	gold
Nova Minerals	NVA	■	down	gold exploration
Novo Resources	NVO	■	down	gold exploration
Pacific Gold	PGO	■	breached downtrend	gold exploration
Paladin Energy	PDN	■	down heavily on takeover bid	uranium
Pantoro	PNR	■	rising again	gold
Patriot Battery Metals	PMT	■	collapse to a new low	lithium
Peninsula Energy	PEN	■	new low	uranium
Perseus Mining	PRU	■	correcting lower	gold
Provaris Energy	PV1	■	new low	hydrogen
QMines	QML	■	rising	copper
Queensland Pacific Metals	QPM	■	new low	nickel/cobalt/HPA
RareX	REE	■	new low	phosphate, rare earths
Regis Resources	RRL	■	down	gold
Renergen	RLT	■	surge on production news	gas, helium
Richmond Vanadium	RVT	■	bounced from lows	vanadium
RIO	RIO	■	down	diversified, iron ore
RTG Mining	RTG	■	rising again	copper
Rumble Resources	RTR	■	testing downtrend	zinc exploration
S2 Resources	S2R	■	down	gold exploration
Sandfire Resources	SFR	■	down	copper
Santos	STO	■	down	oil/gas

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Sarytogan Graphite	SGA		new low on project update	graphite
Siren Gold	SNG		testing downtrend	gold exploration
South Harz Potash	SHP		new low	potash
Southern Cross Gold	SXG		surging on antimony	gold exploration
Southern Palladium	SPD		rising again	PGMs
Stanmore Coal	SMR		down	coal
St George Mining	SGQ		consolidating	rare earths, niobium
Stellar Resources	SRZ		breaching downtrend	tin
Summit Resources	SUM		heavy correction	niobium, rare earths
Sun Silver	SS1		rising	silver
Suvo Strategic Minerals	SUV		sideways through uptrend	kaolin
Talga Resources	TLG		slump	graphite
Tamboran Resources	TBN		down	gas
Theta Gold Mines	TGM		rising again	gold
Thor Energy	THR		sideways at lows	uranium
Torque Metals	TOR		back to lows	gold exploration + lithium
Vanadium Resources	VR8		down	vanadium
Venture Minerals	VMS		down	tin, tungsten
Vintage Energy	VEN		new low	gas
Voltaic Strategic Resources	VSR		at lows	REO + lithium
Vertex Minerals	VTX		breached downtrend	gold
Walkabout Resources	WKT		sideways	graphite
Warriedar Resources	WA8		testing uptrend after placement	gold exploration
West Cobar	WC1		spike on antimony news	rare earth + lithium
Westgold Resources	WGX		rising	gold
West Wits Mining	WWI		sideways	gold
Whitehaven Coal	WHC		heavy fall	coal
Totals	25%	34	Uptrend	
	46%	62	Downtrend	
		136	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	26	19.1%	
Gold Exploration	15	11.0%	
Rare Earths	14	10.3%	
Copper	10	7.4%	
Uranium	7	5.1%	
Lithium	6	4.4%	
Oil/Gas	6	4.4%	
Nickel	5	3.7%	
Graphite/graphene	5	3.7%	
Iron Ore/Manganese	4	2.9%	
Potash/Phosphate	4	2.9%	
Coal	3	2.2%	
Tungsten	3	2.2%	
Tin	3	2.2%	
Silver	4	40.0%	
Diamonds	2	1.5%	
Niobium	2	1.5%	
Vanadium	2	20.0%	
Zinc/Lead	2	1.5%	
Mineral Sands	1	0.7%	
Bauxite	1	0.7%	
Cobalt	1	0.7%	
Other	10		
Total	136		

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