

Agua to win from food security thematic

The gold price is doing everything we could have asked of it, rising to record highs. That is consistent with our view, espoused for several months, that gold is the best commodity to be focusing on. Whilst everything else (except uranium) has been in the doghouse, gold has gone from strength to strength. Even the suggestions that interest rates might not fall as soon as previously believed has not dampened the enthusiasm.

Last week I was in Brazil getting a better handle on Agua's phosphate and copper projects. (Recall that I was appointed to Agua's board in September last year). In summary, I have seen how the proposal to develop the valuable phosphate can be sharpened up to significantly improve the outlook and the potential earnings. Read below for a detailed assessment.

Food security is a growing concern

From time to time the food security thematic is elevated in the minds of investors, causing a focus on fertiliser companies involved in phosphate and potash. More recently the Ukraine War and the interruption of grain supplies out of that part of the world has caused a strengthening of prices of these commodities. However, there is often a disconnect between what is happening globally and share price movements of ASX companies. Too often these companies run out of puff before they are able to develop commercially viable operations. The cycle of enthusiasm and promotion, followed by non-delivery and disappointment, seems ever too regular.

So how do investors improve their odds? Logistics and transport costs tend to be the deal breakers when ASX companies try to compete globally. Agua is in a unique position sitting smack bang in the middle of its market in Brazil, with buyers all within a 300 km radius.

Brazil's position in global food supply

BTG Practual Global Research recently released a detailed research report titled "Has Brazil's time finally arrived?" It states that Brazil is the largest net food exporter in the world with US\$123bn worth of net exports in 2022. The next largest is Argentina, with US\$45bn. I was reading this whilst driving through hundreds of kilometres of highly productive farmland producing rice and soy beans in Rio Grande do Sul, the southernmost State in Brazil. I have never seen anything quite like it. The agricultural productivity seems amazing.

Only 16% of available arable land in Brazil is cultivated (vs. 60% in Russia, 70% in the US, and 100% in China and India). As demand for global food production rises, Brazil is uniquely positioned to meet these needs.

Agua is set to benefit from the food thematic

It is with this background in mind that I spent last week in Brazil, coming to grips with Agua's phosphate projects. Its 100% owned Tres Entradas Phosphate Project looks great on paper with 105 Mt at 10% P₂O₅, with an IRR of 54%, but it has been obstructed by NGOs seeking an injunction aimed at delaying the project construction, for about two and a half years. I learnt last week that the injunction hasn't actually been granted yet. It is still in the application stage. The problem has been that no-one in the Brazilian system has taken the bull by the horns and made a decision ... so it has just dragged on, much to the chagrin of shareholders.

The local advice is that injunction proceedings like this are normal in Brazil. It is as much a part of doing business as dealing with trade unions is in Australia. The Brazilian companies continue with a development regardless while the lawyers deal with the proceedings. Eventually the project gets to the point where it has happened, and there is nothing to injunct. The Public Prosecutor, something akin to an ombudsman, moves onto something else.

From what I can tell Agua has been too cautious in trying to clear the application for an injunction. It has given the applicant too much oxygen. It has tried to resolve it in the Australian way, on the belief that the opposing parties could come to some sort of reconciliation. However, the NGOs will always be disingenuous in the endeavour. All they want to do is delay a project as long as possible. Trying to negotiate with them will always be futile.

The Australian way is to resolve the matter. The Brazilian way is to proceed regardless. Australians need to think and act more like Brazilians when doing business in that country i.e. be more flexible and less rigid.

To be fair to Agua management, the spectre of litigation will always make project financing problematic. A cloud of uncertainty is not what motivates financiers or investors. So, the new management is invoking lateral (Brazilian) thinking to overcome the impasse and is currently working on Plan B.

Plan B. Smaller scale, lower cost, faster development

Rather than construct a new 300,000 tpa operation at Tres Entradas, there appears to be an opportunity to lease or purchase a processing facility within trucking distance of the orebody. The one in mind has exhausted its supply of limestone and it is ready to be repurposed. Its nominal capacity on limestone has been 100,000 tpa, but given the softer material from Agua's organic phosphate mine this capacity could be twice that of limestone. Some plant modifications will be necessary, such as the installation of a drying facility to reduce moisture content from 18% to 8%, and a bagging facility, but the cost of this could be as low as A\$3m. Compare that with the A\$26m estimate for a 300,000 tpa new facility, as estimated in the DFS 2-3 years ago. Plan B is all about reducing up-front capex and

minimising dilution for shareholders whilst simultaneously circumventing the effect of an application for an injunction.

If Agua can negotiate a repurposed processing plant it can be up and running in half the time at around 10% of the capex. Starting at 100-200,000 tpa is an easy entry level that gives time to develop market acceptance of the product.

Like any industrial mineral, you have to be able to sell your product. Agua is located in the heart of prime farming country that is mostly dependent on imported superphosphate. While this runs at grades of 30% P₂O₅, it is much more expensive at about A\$400 pt, a price that takes into account import and transport costs. It also comes with undesirable chemicals introduced in the processing stage.

Agua's natural organic rock phosphate is only around 10% P₂O₅, so the selling price is adjusted accordingly. Recently the market price has been in the range of A\$140-\$160 pt. According to the DFS, direct mining and processing costs of less than \$40 pt will lead to a very healthy gross profit margin. With Plan B at 100-200,000 tpa that suggests EBITDA of \$10-12m. More work is required to firm up these numbers, so treat them with a little caution.

The Company has been advised by local selling agents that it will be able to sell all of its intended output within a 300 km radius of the mine. Thus one of the biggest killers of phosphate projects - transport to markets - is not an issue here. Import replacement for Brazil is a big motivator. The market has enormous depth potential for a supplier like Agua.

The Tres Estradas phosphate project will be a free-dig mining operation with minimal processing of the saprolite material, generally to maximum depths of 40-50m. At 300,000 tpa the Phase 1 project will have an 18 year life. The carbonatite continues into the fresh rock horizons at depth and a lower grade but it is not necessary to consider that now.

Tres Estradas ore will need to be trucked about 105 km to the repurposed plant, at a cost of around 15¢/km tonne, but by the time that plant has been modified we could well see that the Mato Grande phosphate deposit is ready for mining. That is literally across the road from the plant, only 4.5 km distant. However, suitability is subject to drilling and further assessment.

Cash flow from the repurposed plant could be used to finance a stand-alone operation at Tres Estradas or as collateral for a prudent mix of debt. Exploration potential on other carbonatites on the licences could lead to ore being sourced from a number of mines for a multi-decade operation.

The Bottom Line

Agua looks like a great turnaround story. After being punished in the market for lack of progress with the Tres Estradas Phosphate Project, the prospects of an effective Plan B should restore the markets faith in the company. Positive cash flow and earnings suddenly look much closer. At the same time the merger with Andean Mining will deliver a high profit margin gold mine at a time when the gold price is hitting record highs. Both projects will require minimal capex and therefore minimum dilution from equity issues. In fact, the gold mine could be capable of financing the phosphate projects. Happy days lie ahead for shareholders.

NB: None of the above should be interpreted as any form of guidance. The opinions expressed are those of the analyst and do not constitute company projections or forecasts.

Disclosure: Interests associated with the author owns shares in Agua and has received capital raising fees. The author is chairman of Agua and Andean. He has accepted the takeover bid for Andean Mining.

Anteotech Update

We last covered AnteoTech (ADO) in December 2023, see <http://www.fareastcapital.com.au/imagesDB/newsletter/WeeklyComm9Dec2023.pdf> We recently had an update briefing with the CEO. Not a lot has changed since then, but the Company did record its first revenue from the AnteoX product in December. The 20,000 litres p.a. AnteoX production facility has been built in Brisbane and is now being commissioned. This will be expandable to 80,000 litre p.a.

Recall that ADO has achieved a 70% loading level of silicon in battery anodes (by weight). This is streets ahead of other silicon anode companies, most of which are down in the 10-20% range. Silicon in anodes promises to be the next generation as they can hold 10x the charge of simple graphite anodes (theoretically). However, to do so they expand up to 300% and suffer from cracking and premature destruction. The proprietary AnteoX binder seems to largely overcome this problem.

ADO is working with two German car manufactures that they refer to as EV1 and EV2, but it doesn't require much imagination to guess that these are probably Audi and BMW, though Mercedes could also be one of them.

EVI has managed a 30% performance improvement in the anode performance on 650 cycles. An 800 cycle level is generally seen as the minimum threshold, having 80% of performance capability remaining, but maybe there is some flexibility on the parameter. *(NB: Our December note said that the cycle rate was up to 750 with 90% energy retention, so there seems to be some flexibility in what the Company is saying).*

EV1 has also reduced the costs of an EV by \$500 through the significant reduction in the use of carbon nanotubes (CNTs) in the anode mix, from 0.2% to 0.015%. CNTs are very expensive and they present health and safety issues as the fibres seem to behave a bit like asbestos. Ideally, the target should be to avoid their use totally.

Use of the AnteoX enhanced anodes is not restricted to EVs. Consumer electronics will be a strong source of demand. Large scale batteries for grid storage and power plants are also being targeted but this is work in progress at the moment.

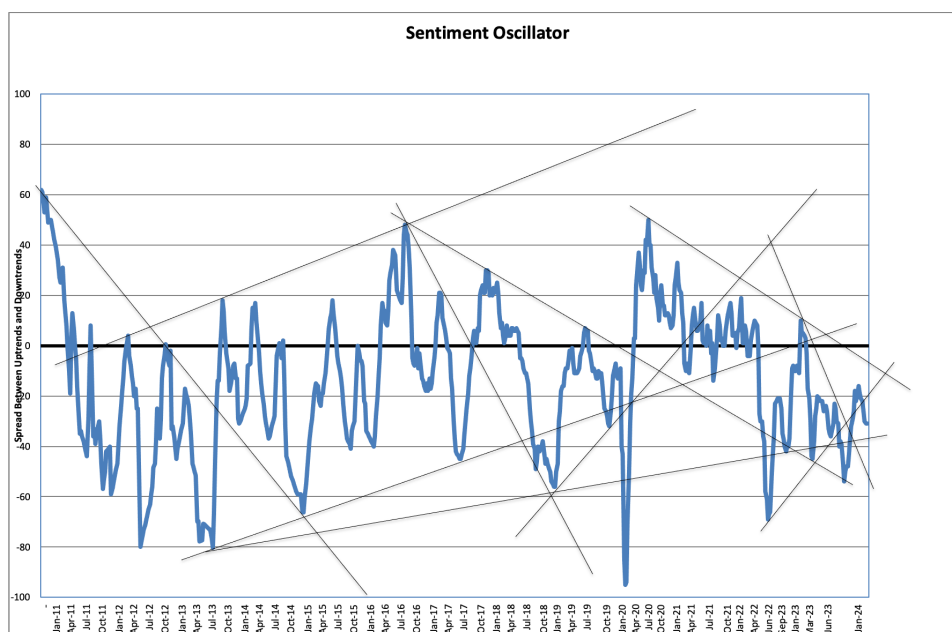
The earlier intention was to be at the design freeze stage by mid 2024, in preparation for commercial production, but it seems as this timeline has slipped by three months. The list of approximately 200 potential customers has been whittled down to the most serious twelve. Negotiations to secure sales and revenue agreements are in the process of being negotiated.

Back in December we speculated ... “Each EV could use 1-1.5 litres of AnteoX, at a price of, say \$300/litre (which is a much lower cost than the competing product, by about 60%). If you take a typical German automobile manufacturer, making six million cars p.a. with half of them being EVs, that is a potential sale of > \$900m p.a.. If the Anteotech product costs \$200/litre to make, it leaves the potential for an operating margin of \$600m p.a. There has been no revision of this guesstimate”.

AnteoTech continues to lead the pack in the race to develop a commercial silicon/graphite battery anode with reported performance figures being significantly better than its competitors. It is well-entrenched in the German automotive industry with expectations of being able to secure meaningful sales agreements.

The share price has seen a spike in January, but has since come back to lower levels. Thus the story has not ignited continued market support yet. Maybe therein lies the opportunity for serious investors as opposed to hot traders.

The Bottom Line



Sentiment Oscillator: NOT UPDATED Sentiment was steady. There were 24% (24%) of stocks in uptrend and 55% (54%) in downtrend at the close of the week.

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	new high	
Metals and Mining	XMM	heading down	
Energy	XEJ	pullback	
Information Technology	XIJ	strong uptrend	
Stocks	Code	Trend Comment (updated comments in bold)	Main Interest
5EA Advanced Materials	5EA	spiked through downtrend	boron
92 Energy	92E	rising	uranium
Adriatic Resources	ADT	new high	zinc, polymetallic
Advance Metals (was Pacific American)	AVM	back to lows	coal, gold exploration
Agua Resources	AGR	down	phosphate, copper exploration

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Alkane Resources	ALK		down	gold
Alicanto Minerals	AQI		back to lows	base metals, silver, gold
Alligator Energy	AGE		rising again	uranium
Almonty Industries	All		rising	tungsten
Alpha HPA	A4N		wedge forming	HPA
Altech Chemical	ATC		breaching downtrend	HPA, anodes
Alto Metals	AME		at lows with a placement	gold exploration
American Rare Earths	ARR		surge through downtrend line	rare earths
Anax Metals	ANX		new low	copper
Anteotech	ADO		breached uptrend	silicon anodes, biotech
Antilles Gold	AAU		new low	gold and copper expl.
Arafura Resources	ARU		new low	rare earths
Ardea Resources	ARL		breathing downtrend	nickel
Arizona Lithium	AZL		strong rally	lithium
Astral Resources	AAR		gentle downtrend	gold
Averina	AEV		breaching uptrend	phosphate
Aurora Energy Metals	1AE		breaching correction pattern in LT uptrend	uranium
Aurelia Metals	AMI		sideways	gold + base metals
Australian Rare Earths	AR3		at lows	rare earths
Australian Strategic Materials	ASM		continuing lower	rare earths
Azure Minerals	AZS		another surge higher then pullback	nickel exploration
BHP	BHP		down	diversified, iron ore
Barton Gold	BGD		sideways through support line	gold exploration
Beach Energy	BPT		rising gently	oil and gas
Bellevue Gold	BGL		off its highs	gold exploration
Besra Gold	BEZ		breached downtrend	gold
Black Cat Syndicate	BC8		steep rally	gold
BMG Resources	BMG		down	gold exploration
Boab Metals	BML		heavy fall	silver/lead
Cadoux (was FYI)	CCM		testing steepest downtrend	HPA
Calidus Resources	CAI		new uptrend	gold
Caravel Minerals	CVV		strong rally	copper
Carnaby Resources	CNB		secondary downtrend	copper
Castile Resources	CST		new uptrend	gold/copper/cobalt
Cazaly Resources	CAZ		back to downtrend	rare earths
Celsius Resources	CLA		sideways	copper
Cobalt Blue	COB		down again	cobalt
Cyprium Metals	CYM		new low	copper
Ecograf	EGR		breaching downtrend	graphite
Emerald Resources	EMR		rising, new high	gold
Empire Energy	EEG		fallen to support line	gas
EQ Resources	EQR		breaching downtrend	tungsten
Euro Manganese	EMN		new low	manganese
Evolution Energy	EV1		new low	graphite

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Evolution Mining	EVN		crashed lower	gold
First Graphene	FGR		new high	graphene
Fortescue Metals	FMG		off its high	iron ore
Galena Mining	G1A		suspended	lead
Genesis Minerals	GMD		testing uptrend	gold
Genmin	GEN		suspended	iron ore
Gold 50	G50		down again	gold exploration + gallium
Great Boulder Resources	GBR		new low	gold exploration
Group 6 Metals	G6M		down	tungsten
Hamelin Gold	HMG		new low	gold exploration
Hastings Technology Metals	HAS		back to lows	rare earths
Hazer Group	HZR		testing downtrend	hydrogen
Heavy Minerals	HVY		new low	garnet
Hillgrove Resources	HGO		rising gently	copper
Iluka Resources	ILU		heavy fall	mineral sands
ioneer (was Global Geoscience)	INR		new low	lithium
Ionic Rare Earths	IXR		breached downtrend	rare earths
Jervois Mining	JVR		new low	nickel/cobalt
Jindalee Lithium	JLL		back to lows	lithium
Kaiser Reef	KAU		new low	gold
Krakatoa Resources	KTA		new low	rare earths
Kingfisher Mining	KFM		breached downtrend	rare earths
Lepidico	LPD		new low	lithium
Lindian Resources	LIN		new low	rare earths + bauxite
Lion One Metals	LLO		heavy fall - suspension	gold
Li-S Energy	LIS		new low	Lithium sulphur battery technology
LCL Resources	LCL		new low	gold exploration
Lotus Resources	LOT		rising	uranium
Lucapa Diamond	LOM		sideways	diamonds
Lunnon Metals	LM8		new low	nickel
Lynas Corp.	LYC		still down	rare earths
Marmota	MEU		rising	gold exploration
Mayur Resources	MRL		strongly higher	renewables, cement
Meeka Gold	MEK		down	gold
MetalsX	MLX		down	tin, nickel
Meteoric Resources	MEI		down	rare earths
Metro Mining	MMI		improving	bauxite
Midas Minerals	MM1		slump	lithium
Nagambie Resources	NAG		down	gold, antimony
Neometals	NMT		new low	lithium
Newfield Resources	NWF		down	diamonds
Nexgen Energy	NXG		rising	uranium
Northern Star Res.	NST		rising	gold
Nova Minerals	NVA		off its highs	gold exploration

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Pacific Gold	PGO		new low	gold exploration
Paladin Energy	PDN		new high	uranium
Pantoro	PNR		breached short term uptrend	gold
Patriot Battery Metals	PMT		bounced off new low	lithium
Peak Resources	PEK		new low	rare earths
Peninsula Energy	PEN		breached downtrend	uranium
Perseus Mining	PRU		testing support line	gold
Poseidon Nickel	POS		new low	nickel
Provaris Energy	PV1		down	hydrogen
QMiners	QML		new low	copper
Queensland Pacific Metals	QPM		new low	nickel/cobalt/HPA
RareX	REE		new low	rare earths, phosphate
Regis Resources	RRL		turned down again	gold
Regergen	RLT		down	gas, helium
Richmond Vanadium	RVT		rising	vanadium
RIO	RIO		off its highs	diversified, iron ore
Rumble Resources	RTR		new low	gold exploration
S2 Resources	S2R		down	gold exploration
Sandfire Resources	SFR		rising again	copper
Santos	STO		weaker	oil/gas
Sarama Resources	SRR		sideways	gold exploration
Sarytogan Graphite	SGA		new low	graphite
Siren Gold	SNG		bounced from lows	gold exploration
South Harz Potash	SHP		new low	potash
Southern Cross Gold	SXG		breached support line, then rallied	gold exploration
Southern Palladium	SPD		testing downtrend	PGMs
Stanmore Coal	SMR		testing uptrend	coal
Strandline Resources	STA		suspended	mineral sands
Sunstone Metals	STM		meeting resistance line	gold/copper exploration
Suvo Strategic Minerals	SUV		rising	kaolin
Talga Resources	TLG		rallying	graphite
Tamboran Resources	TBN		rising again	gas
Technology Metals	TMT		down	vanadium
Theta Gold Mines	TGM		breached downtrend	gold
Thor Energy	THR		new uptrend	uranium
Tietto Minerals	TIE		surge on takeover approach	gold
Vanadium Resources	VR8		drifting lower	vanadium
Venture Minerals	VMS		rising	tin, tungsten
Vintage Energy	VEN		breached downtrend	gas
Voltaic Strategic Resources	VSR		new low	REO + lithium
West Cobar	WC1		new low	rare earth + lithium
Westgold Resources	WGX		breached uptrend	gold
West Wits Mining	WWI		sideways	gold
Whitehaven Coal	WHC		testing uptrend	coal

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Xantippe Resources	XTC		suspended	lithium
Zenith Minerals	ZNC		new low	gold exploration
Totals	25%	35	Uptrend	
	55%	76	Downtrend	
		138	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 Exploration	18	13.0%	
Gold	19	13.8%	
Rare Earths	14	10.1%	
Lithium	10	7.2%	
Copper	9	6.5%	
Uranium	9	6.5%	
Oil/Gas	8	5.8%	
Nickel	6	4.3%	
Iron Ore/Manganese	5	3.6%	
Graphite/graphene	5	3.6%	
Silver	4	44.4%	
Tungsten	3	2.2%	
Mineral Sands	2	1.4%	
Vanadium	3	33.3%	
Zinc/Lead	2	1.4%	

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Coal	2	1.4%	
Potash/Phosphate	3	2.2%	
Bauxite	2	1.4%	
Tin	2	1.4%	
Cobalt	1	0.7%	
Diamonds	2	1.4%	
Other	9		
Total	138		

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