

HALLGARTEN + COMPANY

Portfolio Strategy

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Model Resources Portfolio:

Pick Your Team

Performance Review – September 2023

Model Resources Portfolio

Pick Your Team

- + Uranium remains the star of the moment
- + Zinc slowly creeps out of the pit into which it had fallen
- + The spigots are opening in Washington with serious money in larger clunks flowing to projects deemed to be crucial for securing mineral supply for defence et al.
- + The Glencore bid for Teck seems to have finally been abandoned de facto
- ★ Silver and gold had a poor month in September as interest rates rises were perceived to be slowing
- ★ The Tin price took a beating at the end of the month despite the bans on production in parts of Burma still being a major preoccupation
- M&A activity remains subdued
- The slow-motion train wreck of Evergrande, and its imitators, rolls on leaving hopes of a turnaround in China's economy in doubt
- X Property prices in the West are finally starting to correct, downwards

Days of the Old School Yard

To ingratiate oneself, according to schoolyard rules, one could hand over one's pocket money, some candy or maybe some concert merch, but as anyone knows, spurious popularity can be fleeting indeed, and the "popular girls" can turn their backs on their supplicants faster than they can take the bribes that get the needy access to the Magic Circle of acceptance.

We can't help thinking of that in the increasingly polarized world where the countries that lined up to get their hands on some of the supposed largesse of the Belt & Road Initiative are less than faithful friends when the sorting process of Friends of China requires some of those in the Global South to allow their colours to be nailed to China's mast.

This antique expression has particular poignancy at the moment. It comes from the naval practice of displaying one's colours (signal flags or insignia) from the mast of a ship during battle to show loyalty. To surrender, one would strike one's colours, i.e. take down one's flag. If a ship nailed its colours to the mast, it would fight to the death and not surrender. We are not seeing too many of those that accepted Chinese blandishments over the last decade, being prepared to go down with the ship if Peking calls for solidarity in its time of relative isolation.

Ironically this process of China's isolation is entirely self-inflicted. China had an enormous "friend in court" in the US in the form of the Fortune 500 who were essentially sucking at the udder of cheap Chinese inputs for decades. They didn't want a showdown. They didn't want tariffs, bans and what have

you. It was purely an accumulation of actions by China that have proven to be the straw(s) that broke the donkey's back and made the scales fall from the eyes of Western powers (to mix two perverse metaphors). Taking the Uighurs as the first of many potential future oppressions, the sabre-rattling towards Taiwan, the sabre-rattling generally, hostile and predatory actions on the commercial front by exploiting globalization to the max and the B&RI neo-colonialist agenda (no better exemplified than Sri Lanka, but way worse in the pillaging of Burmese resources). Need we go on...

The BRICS initiative was supposed to be a circling of the wagons but most of the settlers are taking flight at the first sign of arrows flying in their direction. China seems pretty alone out there... well, there is North Korea.

The encirclement of China and its own many *faux pas* of late (Zero-Covid being the dumbest) are undoubtedly knocking on to the domestic economy and the West is revelling somewhat in *schadenfreude* at the travails of Evergrande and it clones. Base metal prices have caught a cold from this cold wind blowing through global commodity markets. But there are worse things than catching a cold and a shooting war over Taiwan would rank way up there.

The Glow You Don't Want to Have

Uranium may be back in fashion but it's never "in" with Rare Earth companies.

Below is an updated version of our radioactivity chart in REE deposits showing some major names in the space, but not meant to be definitive by any means.

Project	Jurisdiction	Owner	TREO	Cut-off	U3O8	Thorium
			%		ppm	ppm
Mountain Pass	US	JHL Capital	7.98%	5.00%	n/a	250
Browns Range	Australia	Northern Minerals	0.63%	0.15%	26	28
(Dazzler)		2.33%	1.15%			
Yangibana	Australia	Hastings Technology	0.90%	0.20%	25	450
Nolan's Bore	Australia	Arafura Resources	2.60%	1.00%	180	2700
Mount Weld	Australia	Lynas	5.40%	2.50%	20	700
Round Top	US	Texas Mineral Reources	0.06%	NSR US\$16/t	37	179
Bear Lodge	US	Rare Element Resources	3.05%	1.50%	31	134
La Paz	US	American Rare Earths	0.04%	0.03%	1.2	6
Halleck Creek	US	American Rare Earths	0.33%	0.15%	7	58
Nolan's Bore	Australia	Arafura Resources	2.60%	1.00%	22	328
Norra Karr	Sweden	Leading Edge	0.61%	0.40%	13	6
Nechalacho	Canada	Avalon	1.27%	NMR US\$320/t	28	139
Foxtrot	Canada	Search Minerals	1.13%	NSR\$205/t	31.9	153
Bokan Mountain	US	Ucore Resources	0.60%	0.40%	77	155

In many cases radioactivity, be it Uranium or Thorium, a deal killer, though, as we have made clear in the past, monazite sands are the Rare Earth mineralisation where one can have one's (yellow) cake and eat it too. Such an example is the Chemours/Energy Fuels/NeoPerformance venture.

Cheery promoters rhapsodize on their projects' potential, willfully downplaying the weighting of U & Th in their mix and declining to factor in removal in budgets and transport considerations.

Omertà on Critical Metals?

The Australian mineral sands developer, Sheffield Resources (ASX:SFX) has been a **LONG** in our Model Resources Portfolio since last year as it barrelled along, largely unnoticed, towards production. The company comes across though as, in part, a shrinking violet when it comes to the critical metals part of its operations. It must be regretting that it ever mentioned the Hafnium, Zirconium and monazite sands (i.e. REE) parts of its Thunderbird project in Western Australian. The project is in the final throes of completion and shall shortly be shipping off its concentrates to its largest shareholder (Yansteel) in China that has an exclusive offtake at this juncture.

All well and good for mineral sands are not all that scarce and WA has by no means an exclusive on them. When it comes to the more sensitive elements in the product mix, we were told that they were not committed to anyone and were off in the future. Hmmm. We took this at face value, but now we start to ask ourselves in the wake of China's aggressive Germanium/Gallium actions as to whether Sheffield is tiptoeing past the graveyard of Canberra's (and Washingston's) attention to who exactly is selling what to the Chinese. While mineral sands are a free-for-all, Zirconium and Hafnium are not. We would remind investors that we have previously written a dedicated report our Hafnium Review of August 2020.

Zirconium is a corrosion-resistant material used in construction for the chemical processing industry. It is also used to make superconducting magnets, with additional uses including surgical instruments, photographic flashbulbs and in making glass for televisions.

Hafnium is a good absorber of neutrons and is used to make control rods, such as those found in nuclear power stations and submarines. Hafnium has been alloyed with several metals including iron, titanium and niobium. It is also used for microprocessors/chips. It is combined with other elements to make compounds that can endure extreme temperatures. Hafnium oxide is used as an electrical insulator in microchips, while hafnium catalysts have been used in polymerisation reactions.

Rare Earths – a Sleeper By-Product

We noted in our <u>Sheffield initiation</u> that ilmenite sands have a monazite component, and that product is being sourced mainly from Madagascar currently (Iluka & RTZ) and potentially from new players, like Sheffield, that have sellable monazite ores.

In the last three years the Rare Earths space has gone from mild buzzing to a full furore. Despite this

there has not been a massive burgeoning of projects, as in 2009-11, nor has there been many additions to the number of viable projects in the United States

The awakening in Rare Earths has been spurred by the invective related to the almost total dependence of the US economy (and its military) upon externally-sourced Rare Earths, primarily from China.

The renewed interest of politicians and investors coincides with the on-going slide in China's own internal production (particularly in Heavy Rare Earths). This changes the dynamic from the one which has reigned for the last eight years, where China definitively had the whip hand. With Chinese supplies under a cloud and the West having added no capacity in recent years, the scenario is one of shortages and rationing, particularly for REEs most used in EVs and 5G.

In our talks with management, they noted that there is minimal monazite in the product going to Yansteel and they will not recover it. Sheffield's Zircon and paramag concentrates do however contain a monazite component, most of which they shall be paid for, and this shall be extracted by processors in China and elsewhere.

All this then raises the question as to whether the *Powers-That-Be* know that Sheffield is going to be sending material to China that contains minerals on the critical metals list of virtually every country and supranational that concoct such rankings?

We reiterate our **LONG** call on Sheffield Resources but think the company will have to "come clean" on what it intends to do to ensure critical metals do not end up being funnelled from its project to China by default.

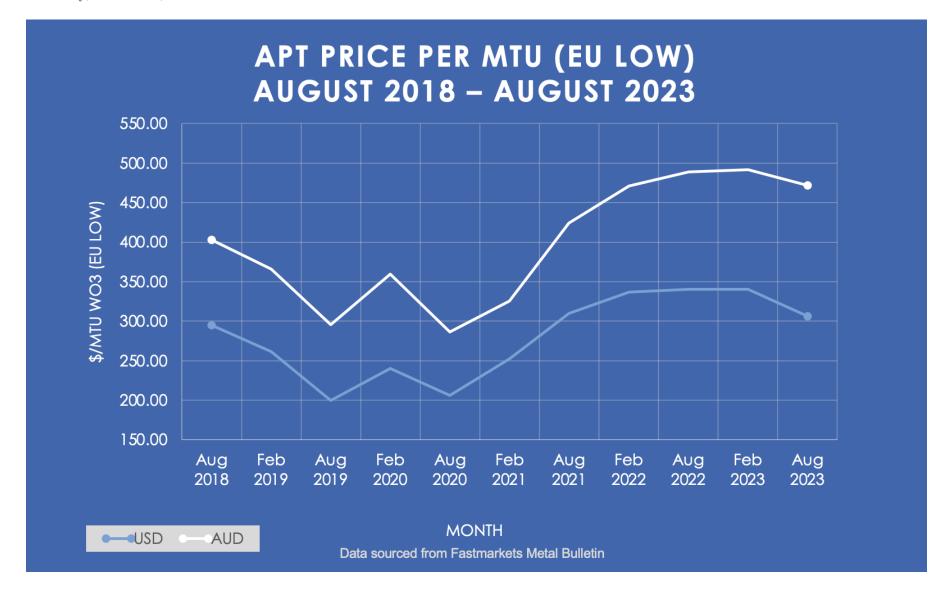
Tungsten

This quintessential example of a metal that was perceived until recently to be under Chinese dominance has been witnessing a rising tide of non-Chinese production. The threat of total domination was overturned several years ago when concerted support by German and Swedish end-users for new entrants managed to turn the tide against China's concerted putsch to grab control of the global machine tools industry.

Newbie producers like Almonty and EQ Resources (both in the Model Resources Portfolio) have brought production on stream, in Australia, Portugal, Spain and soon South Korea.

There are also several other mine revival plans cooking in the Iberian peninsula.

Price pump and dumps have been the scourge of this metal until recent years but of late the situation has been as still as a millpond, probably reflecting the fact that China has overexploited its own resources and thus cannot spare the firepower of throwing metal at the market to sabotage prices as they are wont to do.



Source: Fastmarkets

Despite whatever machinations they were doing earlier last decade, the Chinese seem to have given up on them and just go along for the ride, as least as far as Tungsten is concerned. We have a sneaking suspicion that they might actually be concerned that like Antimony and Rare Earths, they are realizing that they over-exploited and oversold finite resources and may end up being supplicants in the global markets for metals which they once totally controlled.

Is that the Death Rattle We Hear?

It's been a long time coming, but consolidations, adding (and ditching) projects and a name change can't change the fact that our longest-term **SHORT**, Golconda Gold (ex-Galane) finally seems to be giving up the ghost.... You were warned...



Parting Shot

We have likened the Rare Earth space to a horse race many times in the last 14 years. Thinking about the Lithium space, it is a lot more like a barn dance where the caller tells all the dancers to "grab their partners and dosey-doe". To a certain extent the American girls at this hoe-down thought they would always be in demand. Little did they know that the American guys at the party, Livent and Albemarle, have long been spreading their favours around to anyone who paid the price the cartel set.

We keep hearing owners of US-based Lithium projects saying that "the OEMs must buy us". Why must they? Car companies have long sourced key components from a vast army of sub-contractors and suppliers. Why should they get into mining? In fact, name us a US car company that has been involved in mining for its raw materials in the last 100 years? It is almost a case of disappointment guaranteed if the wannabe producers are coming at the OEMs from angle where they are lecturing the likes of Ford and GM on what they "must" do.

Certainly, Livent and Albemarle are US companies, but their client bases are global, indeed probably including China until recent years. Livent is somewhat soft-pedalling on expansion currently, while Albemarle is ramming its foot down on the gas-pedal, but neither have an obligation to sell product from their far-flung global sources to US end-users just because they share a domicile. Indeed, part of the US auto market is foreign-owned (Japanese, German or Korean) so why should US Lithium companies feel obliged to ramp up for them and even more poignant why should the US government subsidise US lithium production for non-US end-users?

Portfolio Changes

During the month, we dropped our **LONG** in MetalsTech as it deemphasized its Slovakian gold project and pivoted to Lithium at James Bay in Canada, a region in which we have zero interest.

Recent & Upcoming

In the last month we published our initiation of Panther Metals PLC and an update on American Rare Earths.

In coming weeks, there are scheduled Initiations of coverage on Abra Silver, Imperial Mining, Edison Lithium and Noram Lithium. We would also expect an update on the Argentine elections as we shall be shifting our base to Buenos Aires for the proceedings.

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