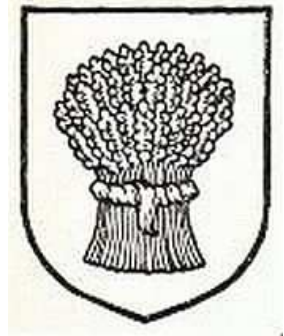


Monday, February 4, 2019



HALLGARTEN & COMPANY

Portfolio Strategy

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Model Mining Portfolio: New Year Off to a Promising Start

Performance Review – January 2019

Model Mining Portfolio

Promising Start to 2019

- + Gold holding up well despite stability returning to the markets
- + Zinc looking more robust than Copper in the last month
- + If economies are slowing one would not know it from base metals which either held their ground or moved higher in the first month of the new year
- + Palladium keeps hitting the highs in a stunning run bringing good news for financing new developers in the metal
- + Vanadium prices appear to be upticking after its 4Q18 surge and plunge
- ✗ Dumb deals by dumb miners proved not to be a thing of the past with the Newmont/Goldcorp merger
- ✗ Cobalt and Lithium sentiment remains in the dumpster with negative effects for a swathe of stocks trying to advance projects
- ✗ Silver is relatively becalmed and directionless despite gold's improvement

The Great FANYA Unwind

The FANYA Exchange collapse in 2015 is probably one of the best examples of how NOT to make your mark in the commodities space, ranking up there with the Hunt Brothers' silver corner in the 1980s. Any pretenses that China might have had to be the go-to place for metals trading was shot down by this fiasco (and the copper warehouse scandals). It was a truly epic own goal.

We have spoken of this in the past and investors probably think "here we go again" but indeed here we go again because in recent days stories have started to circulate that the great inventory unwind is about to begin. The mystery inventories of critical and strategic metals are about to be poured back into the market. This threat has loomed over the market for three years now since the exchange was shuttered. This has been a Damoclean Sword dangling over the prices of number of metals and fortunes of their producers.

The metals most effected by the FANYA debacle include a number known to us, but not exactly household names, and certainly not the type of thing that Chinese housewives should have been stashing their savings in. Largest of the holdings was in Indium, a silvery metal used in flat-panel displays and semi-conductors, with other sizeable holdings of Bismuth, Antimony, Germanium and Tungsten. We have always had the suspicion that FANYA was a means by which the Chinese state mobilized idle savings to create a *de facto* strategic stockpile in key specialty metals. That was a vision that has now

gone horribly wrong.

The table below shows the approximate holdings of these metals at the time (in 2015) that the FANYA went pear-shaped. APT is Tungsten. These of course were official numbers and the reality at FANYA was that the crisis was created by numbers being bogus (par for the course in China) so these numbers are probably an exaggeration of the holdings.

Fanya stock values (21 July)					
Metal	Fanya settlement price Yn/kg	Argus spot assessment Yn/kg	Fanya stocks t	Value at Fanya prices Yn mn	Value at spot prices Yn mn
Bismuth	165	78	19,228	3,165	1,500
Gallium	978	1,085	197	193	214
Germanium	19,880	11,600	92	1,835	1,071
Indium	7,400	2,050	3,629	26,858	7,440
APT	258	110	29,651	7,638	3,276
Cobalt	149	218	23	3.4	5
Tellurium	858	390	170	146	66
Selenium	100	215	338	34	73
Antimony	83	43	18,661	1,549	802
Vanadium pentoxide	46	53	35	1.6	1.9
Total			72,024.59	41,423	14,450

– Fanya data, Argus prices

Reuters reported in late January that the court liquidators at the Kunming Intermediate People’s Court would begin to sell off its stockpiles of Indium in order to pay off FANYA’s creditors, though the court

had not disclosed the information publicly on its website. However, according to a listing on the website of Taobao, a Chinese e-commerce platform, the metal sales were scheduled to take place on the Kunming court's official account on the auction section of Taobao from January 28 to January 29.

Reuters quoted a London-based metals trader with knowledge of the Indium market who said "A move like this would have made much more sense when prices were nearing \$350/kilogram at points in 2018," she said. The price was around \$217.74 in recent weeks, having fallen by 7.2% since early December. Thus the decision to sell the material through a public auction was surprising, with indium prices close to historical lows. In the process the creditors of FANYA get screwed over yet again. Ever was it thus in China. Maybe the state will buy the metals at the low price point and move it into the official strategic stockpiles. Investors should regard themselves as "taking one for the team" Over and over again.

With creditors owed nearly 40 billion yuan (US\$5.9bn) after the exchange's collapse it is hard to see how fire sales of the exotica in the portfolio is going to repay more than a tiny fraction of what was lost by the hapless investors.

China's amateurish approach to commodity pricing and trading means they deserve the low opinion which is currently held of them in Western trading circles.

Graphite – Big is Certainly Not Better

Let's start with the reality that the flake graphite market, at least for the moment, is 750,000 tpa. Syrah Resources (SYR:ASX) has built and is currently commissioning a mine in Mozambique with a nameplate production capacity of 350,000tpa. This was a dumb idea from the start and it is not going well. Capital costs are more than double original estimates, the project is well behind schedule and after a more than a year of commissioning, it has only achieved 50% of throughput and up to 70% of recoveries. Syrah would have gone bust in September, 2017 and again in 2018 but was bailed out both times by equity financings in Australia. So far it has raised over US\$400 million. The project is cash flow negative and has to increase production (if that is even technically feasible) to lower unit costs but higher production will depress prices and it is unlikely the market can absorb the volume. It is a no-win situation for them. In the interim, Syrah's production has further depressed prices and uncertainty over its future has put a chill on the financing and development of other projects. Anyone thinking of investing in graphite has to have an opinion on Syrah.

Zenyatta – A Lesson to Us All

The decline and fall of Zenyatta (recently renamed Zen Graphene Solutions) is quite poignant. We met the company back in the heady days of the graphite boomlet in 2012-13 and the company had a \$300mn market cap when most of its "competitors" were under \$100mn and the majority under \$20mn. In their inimitable way institutional investors gravitated towards the same taking comfort in size. The rest is history with the rule being "the bigger they are, the harder they fall".

The thing that struck us at our first encounter was that the company's Albany project was oversized, not only slightly, but massively. Conventional wisdom on Bay Street is that size does matter and you can never be too big. In specialty metals this becomes counterintuitive because if a metal was produced and supplied in such enormous quantities then neither the metal nor its applications would be "special". Indeed they would verge or merge into base metals.

So as the rest of the graphite players scrambled to downsize their projects, Zenyatta stood its ground claiming it had the biggest graphite project on Bay Street. Verily, it seemed to be determined that this should be carved on its corporate gravestone.



The lack of responsiveness to the market trend ultimately resulted in an investor-led agitation for change which resulted in the long-time CEO being defenestrated and Don Bubar, a figure we have long known in the specialty metals space being employed in the role, at least for the interim. The name change to Zen was the signal of the new strategy. Investors from the early years, having lost almost all their investment, will not be feeling very Zen.

Pulling Zenyatta out of its dive though is going to be a harder task than just swapping CEOs and applying the lipstick of a "cool" name. The "others" in the graphite space have spent five years resizing and have relatively "oven-ready" projects on offer for offtakers while Albany is a turkey that doesn't fit in the kitchen let alone the oven.

Gargantuanism has been the curse of the mining industry this century. Something relatively simple like graphite should have escaped the curse but in the case of the two companies cited, they embraced the philosophy with both hands and made it their strategy. The results have not been pretty. If Syrah “succeeds” it will screw up pricing in the graphite space for the short to medium term (i.e. up until 2025. Failure will be a blessing not in disguise.

Portfolio Changes

There were no portfolio changes in December after the wave of purchases and sales in the prior two months.

The Portfolio Move

The cash balance remained unchanged at \$202,000 at month end. Things improved coming into the new year with the portfolio rising from the \$3.92mn at year end to \$4.176mn one month later (essentially back where the fund was at the end of November). This latest valuation though does not include the Noble holding which has been converted into New Noble (and gone into unquoted limbo) on a one for ten basis.

Neo Performance Materials (NEO.to) – Risen from Molycorp’s Ashes

In the beginning there was Molycorp and it was not good. A defunct Rare Earths mine with a not particularly propitious mix of metals for the magnet revolution. Not to let that stand in the way of a good promote it was duly promoted. While the vast hordes of REE juniors were spawned on Bay Street, Howe Street and in West Perth, the one that Wall Street took to its heart was one of the least worthy (and there was much competition in the Least Worthy Category). Newly minted with an IPO, a gushing management and big backers, Molycorp went on to merge with Neo Material Technologies Inc (then ticker NEM.TO), a long established REE and specialty metals processor listed on the TSX. A real business. The cash-and-stock deal was worth roughly CAD\$1.2bn (US\$1.17bn at the time).

The rest is history with Molycorp imploding under its own fecklessness and leaving big investors with massive losses, indeed one might even speculate that as much “real money” was lost on this one company than on all the rest of the REE universe.

Out of the smouldering ruins of the wrecked company came a few survivors. The mine is by some reports working again and exporting REE concentrates to China (don’t tell Donald Trump or he’ll have a coronary) and the rest of the assets ended up in a reanimated (and relisted) Neo Performance Materials under the aegis of the same management as before the Molycorp intervention. Indeed, the new Neomaterials added to its asset pool the Silmet refinery in Estonia and the Magnaquench magnets business, both of which Molycorp owned from before its Neomaterials deal. So while it may be said that almost everyone came out of the Molycorp experience poorer, the Neomaterials team came out with more strategic assets than they went in with.

The main business division of the company these days is called Neo Chemicals & Oxides, and it manufactures and distributes a broad range of light and heavy rare earth engineered products. The major rare earth elements produced and sold by the division are Cerium (Ce), Lanthanum (La), Praseodymium (Pr), Neodymium (Nd), Dysprosium (Dy), and Yttrium (Y). The company processes semi-finished light rare earth concentrate and heavy rare earth concentrate into standard- and highly-engineered rare earth oxides and salts.

The main production facilities are in Zibo, Shandong Province, China, and Sillamäe, Estonia, where the company processes light REE concentrates into Ce, La, Nd, and Pr oxides and salts, and produce value-added, engineered mixed oxide products for use in automotive emission-control catalysts, petroleum refining and other chemical catalysts, hybrid and electric vehicles, water purification, and a number of other applications. The Sillamäe plant also manufactures Tantalum (Ta) and Niobium (Nb), among other rare metals.

The Jiangyin production facility in Jiangsu Province, China, processes heavy REE concentrates into constituent elements for use in a multitude of industrial applications, including high efficiency lighting and displays, high-end optical lenses and consumer electronics.

The initial takeover was undertaken when the Rare Earth boom was past its prime but still with some sizzle. The current market cap of the reincarnated company is around half the level it was when the original deal was done. We added the company to the Model Mining Portfolio in the second half of last year. As the chart below shows it had a rocky time from November through to the end of 2018. Then it gapped up in a very curious way.



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The on the 18th of December 2018 Luxfer Holdings PLC (NYSE: LXFR) announced the signing of a definitive agreement under which Luxfer would acquire Neo Performance Materials for US\$612 million in cash and stock. Upon completion of the transaction, shareholders of Neo Performance Materials will receive US\$5.98 in cash and 0.395 Luxfer shares for each common share of Neo Performance Materials. Post-transaction, current Luxfer shareholders will own approximately 63% of the combined company on a pro-forma basis. The largest of the Neo Performance shareholders is Oaktree Capital and it will end up with 24% of Luxfer ordinary shares outstanding.

Luxfer is a UK based company despite its NYSE listing and it's businesses are Luxfer Gas Cylinders, Luxfer Graphic Arts, Luxfer Magtech, Luxfer MEL Technologies and Luxfer Superform, have pioneered the use of aluminum, magnesium, zirconium and carbon for over 100 years. Luxfer is a leading producer of highly engineered advanced materials. The high-pressure gas containment devices are used in defense and emergency response, healthcare, transportation, and general industrial settings.

The price for this deal look pretty low (at around ten time times EBITDA). Revenues in the nine months to the end of September 2018 were US\$344mn while the EBITDA was US\$58.332mn. It would seem here that the company is almost being gifted to Luxfer with no premium. The company had nearly US\$70mn in cash at the end of September.

With the current price around \$16.70 the offer is around \$11 in Luxfer shares. Frankly with such a low priced offer we would prefer to take up offer in Luxfer shares only. Despite the fact that Luxfer shareholders are ending up with a majority of the merged entity, it is actually Neo that has the higher market cap currently. Curiously Luxfer has a P/E of 98 times but it also has a dividend yield of 2.5%. However the company had a tough 2017 and the P/E on the trailing twelve months is only 12.5 times.

We shall be adding to our Luxfer holdings using the cash that we receive from that component of the takeover deal.

Parting Shot

We heard a great neologism during the month, *promoterati*, and shall put it to good use in the future. This term, at least in our definition, goes beyond the mere denizens of Howe Street and West Perth and encompasses all those who feed at the trough of promotion. They include the bloggers, who have replaced the newsletter writers in these modern times that eschew snail mail (and paying for "stuff"). A new addition to this tribe are the Twitter crowd who get so attached to a certain story that when someone has the temerity to question the worth of their darling they turn like a pack of rabid Rottweilers on ye of so little faith.

It prompted us also to revisit the whole issue of the tribulations of the mining space at the moment. We hear the moans of "these are the best of times, these are the worst of times" with those out in the cold with their noses pressed against the warm glass bemoaning the unfair distribution of worldly benefits in the mining space.

But what ails them? We suspect it is that certain parts of the mining space spent 2012-17 awaiting the turn and thought it would be business as usual when the turn came, and it hasn't been. To them we would quote the Pottery Barn adage.. "you broke it, you own it" and yet they turn around and say "don't look at me, I never touched it"... then why are your fingerprints all over it?!

What are the mantras of the *promoterati* these days?

- Drill it and they will come
- Study it and they will come
- Permit/Plan it and they will come
- Make noises about building it and they will come

The first one of these strategies is the lazy promoter's strategy. A few drill holes and the suckers will want to sign on as strategic investors, ramp the stock or buy the company outright. This strategy has been pretty much dead in the water since 2012 but still has its adherents.

The second strategy relies on the belief that a report (the whole gamut from resource through PEA to FS) on the project represents a quantum leap that adds value. However, some reports go over like a lead balloon and end up being company killers when the market does not like what it sees. A resource statement that comes in under par can be beefed up by more exploration providing you can convince the punters that "open at depth along strike" is actually true. Generally that just means that we ran out of money so didn't drill any more. This promise of more to come is common and in some cases hucksterish if the "open" is increasing feeble grades. We know of some PE funds that want to buy on the reports (into the projects, not the public companies) with one of our acquaintance only wanting projects post-resource but pre-FS. The problem these days is that reports are expensive and there is little change left from \$5mn for an FS, on top of the exploration work done to get to the initial (or revised) resource.

The temptation to carry on touting the virtues of a report from 2013, 2011 or even 2009 is tempting at these prices rather than commissioning an update. We find it bizarre in this age of spreadsheets (which have been around for decades) that dynamic resource calculations and economics metrics are now not a standard. Instead consultants get away (via their collusion with exchanges and regulators) with demanding that they go back to the drawing board to give the company an "updated" report when really they are just plugging new numbers (currency, metals prices etc) into a pre-existing model which any monkey could do at a fraction of the price.

The third strategy overlaps with the second one to the extent that plans and studies are one and the same thing, though many companies have the consultant's report for public consumption and trust their own desktop (or back of the envelope) studies to know what the project really might (or might not) be able to achieve or cost.

For the true *promoterati* the last strategy is a living nightmare. This is what you are forced to do when your project has been around the traps so long that you can no longer get away with telling investors “*mañana, mañana*” and actually have to deliver something beyond reams of paper. The secret hope here is that actually starting the process might tease an acquirer out of the woodwork. The problem with this stage is that the management really need to exit stage left and allow skilled mine builders into the picture. However this would imply current management departing, which might negate the value of options, cease the flow of new options or remove the possibilities of windfalls (e.g. a newco of secondary assets) taking place.

For hundreds of years the mining industry was two tiered. There were the crusty explorers who found things and then the company, consortia or capitalists that moved them forward. The second half of the Twentieth Century saw the arrival of the intermediate breed, who took it from the old fly-blown prospector, added their “value” and then passed it on to the actual producers. This was more a product of the laziness of the big miners rather than a quantum leap in efficiency in capital markets. It is in this “promoter” phase that most capital is destroyed in the mining industry whether on wasted exploration or the pursuit and sale of turkey projects to Big Dumb Miners.

Clearly the “.... and they will come” model has not been retired after the battering it sustained in the recent extended downturn. A certain breed of mining industry type, the *promoterati*, are hothouse flowers that cannot survive outside the industry and “only just” survive within it. There seems to be nothing new under the sun, but in mining there needs to be if the sector wants to regain the attention of serious investors. New investors are the Shoeless Joe Jackson that the *promoterati* want to attract, in which case we would advise them to get serious and “build it and they will come”.

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Mining Model Portfolio as at: 01-Feb-19

Security	Initiated	Currency	Avg. Price	Current	Portfolio Weighting	Increase in Value	Target	
Long Equities								
Various Large/Mid-Cap	Teck Resources (TECK.B)	5/29/2009	CAD	22.46	30.76	8.20%	37.00%	\$38.00
	Sherritt International (S.to)	7/11/2013	CAD	1.28	0.43	2.90%	-66.30%	\$1.00
	Metals X (MLX.ax)	5/29/2014	AUD	0.67	0.37	3.10%	-44.90%	\$0.80
Uranium	Uranium Participation Corp (U.to)	10/20/2010	CAD	5.36	4.70	7.20%	-12.40%	\$6.00
	GoviEx (GXU.v)	6/29/2015	CAD	0.08	0.13	3.20%	58.20%	\$0.50
Zinc/Lead Plays	Zinc ETF (Zinc.L)	6/2/2010	USD	7.63	8.30	7.60%	8.80%	\$11.00
	NorZinc (NZC.to)	12/9/2011	CAD	0.82	0.10	0.20%	-88.40%	\$0.22
	Myanmar Metals (MYL.ax)	11/29/2018	AUD	0.06	0.07	2.70%	16.70%	\$0.13
	Ascendant Resources (ASND.v)	10/31/2016	CAD	0.49	1.00	5.80%	104.50%	\$1.70
	Telson Mining (TSN.V)	3/19/2018	CAD	0.79	0.38	2.70%	-51.90%	\$2.00
Silver Producer	Excellon Resources (EXN.to)	11/8/2018	CAD	0.74	0.94	3.90%	27.00%	\$1.35
	Southern Silver Exploration (SSV.v)	8/25/2016	CAD	0.49	0.19	1.00%	-60.80%	\$0.35
Gold Producers	Para Resources (PBR.v)	2/17/2017	CAD	0.23	0.19	2.00%	-17.40%	\$0.58
	Westgold (WGX.ax)	12/6/2016	AUD	2.01	0.96	1.70%	-52.20%	\$1.50
Copper Producer	Coro Mining (COP.to)	2/23/2015	CAD	0.03	0.06	1.20%	100.00%	\$0.15
Coking Coal	Colonial Coal (CAD.v)	6/4/2018	CAD	0.35	0.46	3.80%	31.40%	\$1.10
Beryllium	IBC Advanced Alloys (IB.v)	4/29/2016	CAD	0.3	0.26	0.50%	-13.30%	\$0.35
Driller	Cabo Drilling (CBE.v)	9/28/2016	CAD	0.025	0.02	0.80%	-20.00%	\$0.02
Tungsten Producer	Almonty Industries (AIL.v)	7/31/2015	CAD	0.36	0.63	6.50%	73.80%	\$1.00
Copper Explorer	Asiamet Resources (ARS.v)	4/28/2016	CAD	0.05	0.04	1.40%	-11.00%	\$0.12
	Phoenix Global Mining (PGM.L)	9/28/2018	GBP	0.35	0.19	1.50%	-45.70%	\$0.74
	Panoro Minerals (PML.v)	1/22/2018	CAD	0.37	0.24	1.50%	-34.20%	\$0.65
	Argonaut Resources (ARE.ax)	11/22/2018	AUD	0.02	0.03	2.90%	66.70%	\$0.45
	Western Copper & Gold (WRN.to)	4/25/2017	CAD	1.57	1.01	2.10%	-35.70%	\$2.74
Vanadium Developer	Tando Resources (TNO.ax)	11/23/2018	AUD	0.11	0.12	3.00%	9.10%	\$0.50
Lithium	Neometals (NMT.ax)	7/31/2014	AUD	0.3	0.22	4.10%	-27.40%	\$0.45
	Lithium Power Intl (LPI.ax)	10/25/2017	AUD	0.44	0.24	1.40%	-45.50%	\$1.38
Manganese Developer	EuroManganese (EMN.ax/EMN.v)	11/9/2018	AUD	0.2	0.31	4.20%	55.00%	\$0.60
Scandium Explorer	Scandium International (SCY.to)	8/23/2016	CAD	0.14	0.18	2.20%	28.60%	\$0.50
	Platina Resources (PGM.ax)	10/25/2018	AUD	0.07	0.07	2.70%	7.70%	\$0.18
Gold Explorer	Banyan Gold (BYN.v)	11/14/2017	CAD	0.06	0.06	2.80%	-3.20%	\$0.15
	Gunpoint Exploration (GUN.v)	11/9/2018	CAD	0.5	0.41	1.70%	-17.20%	\$0.15
Graphite Developer	Talga Resources (TLG.ax)	8/25/2016	AUD	0.27	0.34	1.70%	28.30%	\$0.90
Rare Earths	Northern Minerals (NTU.ax)	6/9/2011	AUD	0.14	0.05	1.60%	-64.60%	\$0.28
	Neomaterials (NEO.to)	10/25/2018	CAD	17.32	16.65	5.10%	-3.90%	\$23.00
Unlisted	New Noble Group	15/11/2017	SGD	0.2	n/a	n/a	n/a	
NET CASH					202,602			
Short Equities								
Shorts	NioCorp (NIO.to)	9/28/2018	CAD	0.61	0.64	65.90%	-4.90%	\$0.40
	Lithium Americas (LAC.to)	10/25/2017	CAD	10.1	4.23	17.70%	58.10%	\$5.00
	Galane Gold (GG.v)	4/28/2016	CAD	0.06	0.05	16.40%	16.70%	\$0.03

Current Cash Position	202,602
Current Liability on Shorts Not Covered	255,612
Net Cash	458,214
Current Value of Bonds	0
Current Value of Long Equities	3,718,235
TOTAL VALUE OF PORTFOLIO	4,176,449

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