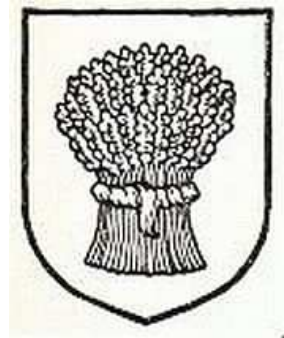


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# HALLGARTEN & COMPANY

Portfolio Strategy

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## Model Resources Portfolio: The Revolution will be Delayed?

Performance Review – August 2022

Tuesday, September 6<sup>th</sup>, 2022

# Model Resources Portfolio

## The Revolution will be Delayed

- + **Battery metals continue to be the only game in town**
- + **Antimony continues to hold up as all crumbles around it**
- + **We have the sneaking suspicion that the US DoD or the Pentagon are creating a shadow strategic reserve in critical metals. Are we mistaken?**
- + **Oil sustained its rally**
- ✗ **Western economies are viewing the winter of 2022-23 with all the relish of the Black Plague**
- ✗ **Net Zero is coming into question and starting to be seen as a “long con”**
- ✗ **Baltic Dry Index hit its lowest level since 2020. It doesn’t stop shipping looking very attractive for the next five years**
- ✗ **“Higher” interest rates are nothing like what is needed to kill the beast but Central Banks in thrall to residential property markets cannot break out of the spell**
- ✗ **Chinese property is now in freefall**

### Net Zero as a Zero-Sum Game

When even the left-wing press is asking rhetorically if Net Zero is to blame for the energy crisis in the West (particularly Europe) then you know things are going badly for the concept. They are wanting to get in front of the issue before the Great Unwashed start asking whether Net Zero is directly responsible for the upcoming crisis in the northern hemisphere winter.

We are in the days of “do as I say, not as I do”. The French are firing up all their nuclear reactor fleet, the Japanese are dusting off theirs and the Germans are burning coal like its going out of fashion. The particularly stupid UK (that actually believed the others until it found it was first lemming over the cliff) is desperately trying to turn around the closure schedules of the few remaining coal plants. The “cut off your nose to spite your face” Net Zero policies are particularly coming home to roost in the sceptered isle.

We are not prone to citing China Daily as an authoritative source but quite frequently it reflects the thought processes of the Middle Kingdom. In an article on the 1<sup>st</sup> of September the publication nailed to its mast the principle that “Since climate change also affects the economy, research, analysis and decision-making must be objective, based on respect for facts and science, and free of the influence of the Western theory that global warming will lead to immediate catastrophes”.

It will be very interesting to see if Net Zero is a train that has been temporarily shunted onto the slow track or whether it has been sent into a dead-end siding for good.

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This crisis of credibility for Net Zero (always a bogus mathematical construct anyway) has thrown its advocates into an existential crisis. The One-Percenters may be getting away with depriving a goodly chunk of the other 99% of their automobiles, but they will find it much harder to sell freezing to death as a lifestyle choice.

Maybe a new low in the credibility of the press on a Left was reached by The Guardian when it published a story this week that, due to Lithium batteries taking thousands of years to break down, instead batteries should be made out of the shells of lobsters and crabs.... Clearly no-one has consulted the crustacean community as to whether they want to make the ultimate sacrifice *en masse* for the cause of Net Zero. Taking a more practical tack we wonder how many crabs are needed for each EV? And to paraphrase Marie Antoinette, well might the One-Percenters, foisting Net Zero on everyone else, say "Let them eat lobster!". It's for a good cause.....

### **Portfolio Changes**

We closed out our **SHORT** position in Aya Gold & Silver during the month which had well exceeded our target price (to the downside) of \$8. The stock had rallied from a (deserved) low of \$4.98 in July.

With share approval for the Elemental Royalties/Altus Strategies merger the latter disappears from our Model Resources Portfolio, leaving Elemental as a **LONG**. La Mancha published a release on the merger commenting that, as a result of the completion of the merger, their fund now owns, through its wholly-owned subsidiary LMH Explorers S.à.r.l., 31,721,881 common shares of Elemental, representing approximately 21.4% of the issued and outstanding common shares of Elemental.

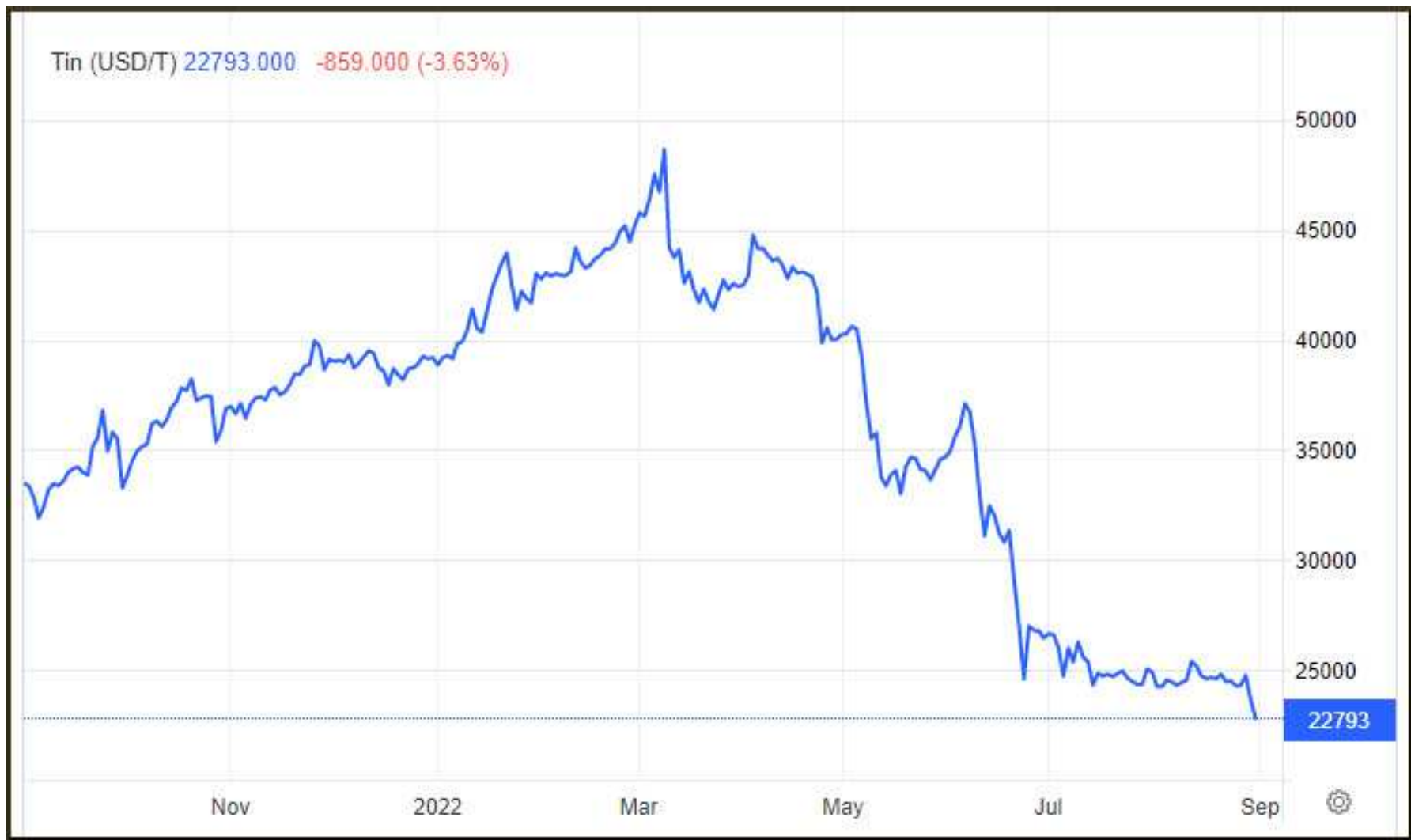
### **Tin & the Hidden Hand**

This metal is widely as the pivotal technology metal. RTZ published a ranking of metals by the use in key applications and Tin was noted as, by far, the most ubiquitous and vital in making the technologies that make the modern world work.

Since the collapse of the Tin Cartel in the early 1980s the metal has struggled to regain its position in the top tier of industrial metals (along with the big base metals). All attempts at price rallies failed

The price move in Tin over the past two years has finally exorcised the ghost of the Tin Cartel which has haunted the Tin market for so many decades.

Despite the last decade showing a potential emerging supply crisis for tin, the price largely went sideways, or down. The chart below shows the metal has faded significantly since its highs reached in March of this year. We had thought it had bottomed around the \$24,000 level but now its made another leg lower.



Source: Trading Economics

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The supply dynamic is the prime motor of the space. Future demand was incorrectly estimated by parties such as the Tin Association and the USGS at the beginning of the decade. Their premise was that a massive shift to Tin solders would fuel a shortage. This created false expectations. The decline in traditional sources and their non-replacement is tangible though. Now is a good time to be bringing on new projects, but the only projects on the horizon (and accessible in the public markets) are Mpama South, tailings reprocessing in Namibia and the two developments in Spain.

After peaking at \$32,500 per tonne in 2011, the price sagged again but then spent the period between 2016 and 2019 locked in a range between US\$21,000 & US\$23,000. This is where it sits, once again, despite the supply dynamics being immeasurably worse than before.

Until mid-2021 we were musing as to whether the price surge had its roots in the pandemic/shipping crises but since that time it has become clearer that it is a crisis of supply. Not that supply has declined (after all Alphamin added to global supply) but rather that the sheer lack of other new supply sources combined with organic growth in tin demand has tipped the balance. This has given all tin suppliers traction again in pricing but so few have the latitude to increase production that most are just sitting back and enjoying the ride, trying to enhance their margins rather than making big expenditures in production.

There is more than a whiff of Chinese manipulation about the current pullback in Tin pricing. Chinese growth may be off-target, but its consumption should not be any lower than, say, one year ago and this goes for Western economies as well. There has been no surge in production. This leads us to suspect that an order has come from somewhere to reset the price lower and this can be done (for a while) by selective dumping of stocks onto a soft market to achieve an inordinate downward price move.

We would expect prices to be closer to US\$25k by the end of 2022 and closer to \$30k by the end of 2023.

#### **Rainbow Rare Earths – REE Production Downunder**

It is somewhat ironic that the frontrunning REE project back in 2009 was the now largely forgotten Steenkampskraal mine in South Africa, which was owned by Great Western (or RareCo depending upon who you spoke to). Now it seems that the potential for South Africa to (re)enter the Rare Earth picture has increased immeasurably with Rainbow Rare Earths' Phalaborwa gypsum tailings project.

In early November of 2020, Rainbow announced its plans to exploit vast tailings and waste product piles at an old South African phosphate mine for their REE content. A hard rock foskorite and pyroxenite deposit was mined over a period of around 50 years by Foskor.

These gypsum stacks are enriched in REEs from the historic concentration of these elements during Foskor's flotation process, followed by further upgrading in Sasol's PhosAcid Plant, leading to REE concentration in chemical (rather than mineral) form. Due to the Rare Earths being contained in chemical form this, in the company's opinion, allows separated Rare Earth oxides to be produced with

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lower operating costs than a typical Rare Earth project. A total of around 35 million tonnes of gypsum was deposited in two stacks.

### **The Deal**

The two parties, Rainbow Rare Earths and Bosveld Phosphates (Pty) Ltd agreed (besides total consideration of US\$750,000, in a combination of cash and shares) that, on completion of the pre-feasibility study (PFS), 70% of the project will held by Rainbow and 30% by Bosveld, with a mechanism included to allow for Rainbow's Joint Venture ownership to vary from 60% to 85%, dependent on results of the PFS.

We wrote on this asset at the time of original deal and added Rainbow as a **LONG** to the Model Resources Portfolio on the back of its refocus from Burundi to points south. We had long been underwhelmed by the Gakara "trial mine" in Burundi and our scepticism has been borne out.

### **Resource**

Phosphate rock, the raw material of phosphoric acid production, is known as a secondary source of low-grade REE. Low *in-situ* concentrations of REEs were contained within the original Foskor orebody. Initial grab sample assays from the c. 35 million tonnes Gypsum Stacks indicate 0.6% TREO, indicating ~210,000 tonnes of contained TREOs, with Neodymium (Nd) and Praseodymium (Pr) (together "NdPr") anticipated to constitute c. 30% of the TREO basket.

The Phalaborwa Rare Earths Project is comprised of an Inferred Mineral Resource Estimate of 38.3mn tonnes at 0.43% TREO contained within gypsum tailings stacked in unconsolidated stacks derived from historic phosphate hard rock mining. High value NdPr oxide represents 29.1% of the total contained Rare Earth oxides, with economic Dysprosium and Terbium oxide credits enhancing the overall value of the Rare Earth basket in the stacks.

Various stages in the processing upgraded these concentrations to potentially economic levels of REEs, as a result of: initial concentration by flotation at the Foskor plant further concentration during the sulphuric acid leaching process (cracking) at Sasol's PhosAcid plant to produce phosphoric acid, at which stage, the REEs were solubilized gypsum was formed during the phosphoric acid production, which was discharged to the stacks with the REEs.

The pilot plant (shown on the following page) was developed by Sasol and successfully produced three tonnes of mixed Rare Earth carbonate (achieving 80% recoveries) and an associated Cerium-depleted oxide from the gypsum. The output of this plant was being sold to the Japanese end-users of REEs. This pilot plant remains on site and is available to be recommissioned.

As can be seen in the following photos the REE separation plant is in an excellent state of preservation.

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Below can be seen the REE separation plant (in an excellent state of preservation) at the Phalaborwa site.



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### **The Moroccan Technology Deal**

In late August the company announced that it had entered into a Master Agreement with OCP S.A., the Moroccan world leading producer of phosphate products, and Mohammed VI Polytechnic University, a Moroccan university with a strong focus on science & technology, to further investigate and develop the optimal technique for the extraction of rare earth elements from phosphogypsum.

Phosphogypsum contains Rare Earths as a by-product of phosphoric acid production. OCP together with the research carried out by UM6P, have built up know-how and expertise in the field of phosphogypsum processing. Rainbow claims that this gives them both a synergistic opportunity for joint development, given Rainbow's expertise and intellectual property on Rare Earths extraction and processing gained from work carried out to date at Phalaborwa completed with the separation technology licensed from K-Technologies, Inc., the process technologies company based in Florida, USA. OCP and UM6P will contribute with their respective expertise, including adapted complementary separation technologies.

The parties intend to develop the optimal route for the extraction of Rare Earths from phosphogypsum, and the subsequent processing of these Rare Earths into separated elements. They intend to work together on the development of pilot and industrial-scale extraction of REEs from phosphogypsum.

The project is fully permitted, with an Environmental Impact Assessment completed.

We reiterate our **LONG** position in the model portfolio with a twelve-month target price of AUD 65 cents.

### **Neo Performance – In Play?**

The term “Holy Moley” is seldom, if ever, used by us but our powers of speech are severely hampered by trying to digest the implications of the latest deal in the Rare Earth space. Neo Performance Materials (TSX:NEO) has now succeeded in flooring us twice in the last month.

First there was its announcement that it was acquiring a REE mining project in Greenland (from Hudson Resources – ASX:HUD) and making all the right noises as if it was going to move that forward (and if anyone can, it would be them). And then we had the shock announcement that Hastings Technology Metals (ASX:HAS), the sometime REE developer in Australia, is to acquire a 22.1% strategic shareholding in Neo Performance Materials. We need not remind investors that Neo is not only A leading global Rare Earth processing and advanced permanent magnets producer, but it is THE leading global Rare Earth processing and advanced permanent magnets producer outside China with a string of plants around the world and most particularly its Silmet plant in Estonia, which is a cornerstone of the monazite sands processing strategy of Energy Fuels (TSX:EFR).

However, as subsequently has become clear it was not Neo surprising us, because Neo itself was surprised by the sale of the stake without as much as a by your leave.



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The market cap of Neo, of the eve of this announcement was CAD\$605mn. The acquisition has been agreed at a price of CAD\$15 per Neo share, representing a total consideration of CAD\$135mn. Bargain basement, indeed, in our view, and in light of our target price.

According to the release the acquisition is intended to be funded by an AUD\$150mn strategic investment in Hastings by Wyloo Metals (a vehicle of the much-vaunted Twiggy Forrester), through the issuance of secured, redeemable, exchangeable notes.

Interestingly the stake is not a *de novo* investment by Hastings but rather the purchase of a stake from an affiliate of Oaktree Capital Management, L.P.. For those with long memories will recall that this stake dates back to the ancient history of when Molycorp went spectacularly bust just under ten years ago and Neo was reconstituted bigger and better out of the ruins. The stake being vended by Oaktree consists of 8,974,127 common shares in Neo, representing a 22.1% shareholding.

The proposed acquisition provides Hastings (and Wyloo) with a strategic stake in Neo and exposure to the global downstream processing of Rare Earth materials into magnets. It also begs the question as to why Wyloo (pardon the alliteration) needs an intermediary to hold its hand in undertaking a move into specialty metals.

We have written about Hastings' Yangibana deposit so long ago that we must fight through a veil of cobwebs to find what we wrote. The company claims that the project remains the key priority for Hastings, "with good progress being made on funding initiatives and other key milestones". But they would say that wouldn't they?!

The acquisition of the Neo stake, and in particular the Wyloo investment, are subject to shareholder approval (50% voting threshold).

### **Constantine's Revenge?**

Later on the same day as the Hastings bombshell, Neo Performance announced that it had entered into an agreement with Paradigm Capital, on behalf of a syndicate of underwriters to purchase, on a bought deal basis, 4.5 million common shares at CAD\$15 per share, for gross proceeds of approximately \$67.5mn.

The company has granted the underwriters an option, exercisable, in whole or in part, at any time until and including 30 days following the closing of the offering, to purchase up to 675,000 additional shares, (equal to 15% of the shares issued in the offering), at \$15 per share, to cover over-allotments, if any.

All this begs the question as to whether the Canada (or indirectly the US) will allow the crown-jewel (indeed the Queen on the REE chessboard) to pass into the hands of Wyloo Metals.

We reiterate our **LONG** stance on NEO and our 12-month target price of \$24.

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### Parting Shot

The two infernal acronym inventions of the 21<sup>st</sup> century, in the mining space, have been AISC and ESG. Neither have been imposed by above and both have been traps that mining's mid- and lower-tier have blithely walked into. The ridiculous of the former as a calculation and its invention by industry majors and adoption by the "lower-downs" to make their projects look even less viable is a subject we have written on before.

ESG has a murkier provenance, and we suspect it has "consultant" written all over the parent's section of its birth certificate. Miners, if they had their head screwed on, have long been interacting with their local communities funding community facilities and lifestyle improvements for their workers and neighbours. Frequently this task has been made more difficult by local administrations seeing the expenditure removing funds that could be more generously (for them) applied to baksheesh. In other cases, like Peru the companies pay taxes/royalties up the totem pole and yet see no return to local communities of the revenues generated and so have to "pay twice".

As for the environmental aspect of the ESG, we have to laugh that companies can still get away with open pit mines with 14 to 1 strip ratios and the massive destruction ("holes that can be seen from space") occasioned just as long as the strap on their ESG figleaf and parade themselves in front of conferences and industry gatherings as virtuous, unofficial "friends of the earth".

In reality, ESG used to be called good corporate citizenship and that terminology better sums up what they should be doing than any three-lettered acronym might do.

MODEL RESOURCES PORTFOLIO @ END AUGUST							
Security	Ticker	Currency	Price	Change		12-mth Target	
				last 12 mths	last mth		
<b>LONG EQUITIES</b>							
<b>Diversified Large/Mid-Cap</b>	Hochschild	HOC.L	GBP	0.6309	-58%	-22%	£3.40
	Sherritt International	S.to	CAD	0.39	-13%	-7%	\$0.95
<b>Uranium</b>	Sprott Physical Uranium	U.UN.to	CAD	16.49	37%	10%	\$15.00
	GoviEx	GXU.v	CAD	0.31	11%	3%	\$0.45
<b>Zinc/Lead Plays</b>	WisdomTree Zinc ETF	ZINC.L	USD	10.94	21%	19%	\$14.00
	Altaley Mining	ATLY.v	CAD	0.15	-76%	-12%	\$0.90
<b>Silver Explorer</b>	Southern Silver Exploration	SSV.v	CAD	0.18	-53%	-22%	\$0.75
<b>Silver ETF</b>	IShares Silver ETF	SLV	USD	16.58	-26%	-11%	\$26.00
<b>Gold Producer</b>	Soma Gold	SOMA.v	CAD	0.34	13%	-8%	\$1.20
	Orvana Minerals	ORV.to	CAD	0.25	-17%	-24%	\$0.60
<b>Gold/Antimony Developer</b>	Perpetua Resources	PPTA.v	CAD	3.39	-47%	-3%	\$16.00
<b>Metallurgical Coal</b>	Colonial Coal	CAD.v	CAD	1.77	106%	-20%	\$2.45
<b>Royalties</b>	Elemental Royalties	ELE.v	CAD	1.19	-14%	-1%	\$2.30
<b>Copper Explorers</b>	Panoro Minerals	PML.v	CAD	0.11	-21%	-21%	\$0.30
	Phoenix Copper	PXC.L	GBP	0.2305	-66%	-21%	£0.90
	C3 Metals	CCCM.v	CAD	0.05	-71%	-17%	\$0.44
<b>Tungsten Producer</b>	Almonty Industries	AII.v	CAD	0.8	-14%	-11%	\$1.25
<b>Graphite Developer</b>	Blencowe Resources	BRES.L	GBP	0.0313	-42%	-8%	£0.22
<b>Cobalt</b>	Jervois Global	JRV.ax	AUD	0.51	2%	28%	\$0.65
<b>Vanadium Developer</b>	Vanadium Resources	VRB.ax	AUD	0.07	17%	-13%	\$0.08

MODEL RESOURCES PORTFOLIO @ END AUGUST							
Security	Ticker	Currency	Price	Change		12-mth Target	
				last 12 mths	last mth		
<b>LONG EQUITIES</b>							
<b>Lithium</b>	Neometals	NMT.ax	AUD	1.34	89%	21%	\$1.50
	Lithium Power Intl	LPI.ax	AUD	0.61	118%	13%	\$0.80
<b>Cesium/Lithium</b>	Essential Metals	EXX.ax	AUD	0.44	144%	-10%	\$0.30
<b>Scandium Developer</b>	Scandium International	SCY.to	CAD	0.09	-53%	13%	\$0.25
<b>Gold Explorer</b>	Cabral Gold	CBR.v	CAD	0.34	-29%	21%	\$0.60
	BTU Metals	BTU.v	CAD	0.03	-67%	-25%	\$0.12
	Gunpoint Exploration	GUN.v	CAD	0.62	9%	-2%	\$0.75
	Bold Ventures	BOL.v	CAD	0.12	9%	20%	\$0.18
	Desert Gold	DAU.v	CAD	0.09	-44%	13%	\$0.35
	MetalsTech	MTC.ax	AUD	0.28	12%	-24%	\$0.68
<b>Rare Earths</b>	Rainbow Rare Earths	RBW.L	GBP	0.105	-2%	-11%	£0.30
	Neo Performance Materials	NEO.to	CAD	14.47	-24%	-1%	\$24.00
	Aclara	ARA.to	CAD	0.37	n/a	32%	n/a
<b>Tin Miners</b>	Alphamin	AFM.v	CAD	0.67	-15%	-11%	\$2.00
	Metals X	MLX.ax	AUD	0.28	-13%	-13%	\$0.45
<b>Oil &amp; Gas</b>	Shell	SHEL.L	EURO	22.7	58%	-99%	£24.00
<b>SHORT EQUITIES</b>							
<b>Shorts</b>	NioCorp	NB.to	CAD	0.99	-20%	16%	\$0.40
	Galane Gold	GG.v	CAD	0.08	-50%	0%	\$0.06
	Texas Mineral Resources	TMRC	USD	1.99	44%	3%	\$0.30

## Important disclosures

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