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HALLGARTEN & COMPANY

Portfolio Strategy

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Model Resources Portfolio:
Consolidation Phase?

Performance Review – March 2021

Model Resources Portfolio

Consolidation Phase?

+ **Copper and Zinc prices holding up**
+ **Tin stabilized but maintained its gains**
+ **Antimony nearly reached $12,000 per tonne**
+ **Tungsten continued its long slow rise**
+ **Tin holding up very nicely on tight supply**
+ **Vanadium back in the spotlight after a long quiescence**
- **Mozambique has had its reputation damaged and mining projects there put under a cloud due to the upwelling of Islamist terrorism**
- **Gold went under $1700 in a real shocker moment for the bulls of the metal**
- **Silver was blasted back to levels not seen for nearly a year**

Reading the Tea Leaves on Battery Metals

Technically we have had three battery metal booms now in the space of twelve years. The boosters for this space do not seem to get it because most of them have come down in the last shower and don't know or remember (or care to remember) the previous Messianic comings of the "EV revolution". Each boom has left a legacy and calculating what these legacies are is muddied, particularly if one is/was a shareholder of dearly departed Canada Lithium, Nemaska Lithium or the many fallen in Cobalt space.

The surge of 2009-2010 only brought Lithium to the fore. The previous burnout of Cobalt, before the 2008 Crash, was still too fresh in memories to levitate that corpse. Graphite was not yet on the radar but did manage to have its day in the sun in 2013 (more reminiscent of the old puzzle as to whether a tree falling in the woods makes a sound if there is no one to hear it). In any case graphite's boomlet was overlain with the voodoo of graphene, of which we still have trouble understanding the economics.

Then in 2017 we experienced Battery Metal Mark 2 with the conjuncture of Lithium and Cobalt and a plethora of lesser battery metals (e.g. Vanadium and Manganese). Graphite scarcely managed a murmur though. This boom also faded fast. Cobalt collapsed under the sheer weight of *nevergonnabes* while most of the Lithium newbies scarcely raised enough money to sustain (begin?) their exploration campaigns. Much of the promotion was of the order of "I've got a one thirty-secondth of a *salar*, trust me". That boom died the death but left (like the first one) a residue (somewhat like a ring in a bath-tub) of projects that had moved forward just enough to survive the three years until 2020 brought Battery Metal Mark 3.

The interregnum was caused by a combination of a surfeit of jokers (particularly in Cobalt), a sheer lack of money in the mining equity markets and the poor uptake of EV/HEV/BEVs in the Western consumer markets. No-one was going to gear up mega-battery plants (excepting Panasonic disguised as Tesla) just because the Norwegians managed great EV penetration.

Anyway that phase has passed, the baton has passed to the West (in that we include Japan & Korea) while the Chinese big players in Lithium suffer indigestion from overindulgence, with Tanqi suffering serious heartburn. Western carmakers are gearing up, led by real demand whereas Chinese carmakers were gearing up based upon subsidies and severe suasion from above.

Does this mean that the Battery Boom Mark 3 will last? It will undoubtedly need to cool off. The graphite space has a number of crazy valuations amongst the largest players. The Lithium space still has maybe four times more companies than are needed.

The Grim Reaper is taking some time off for now but should start scything when the punters least expect it.

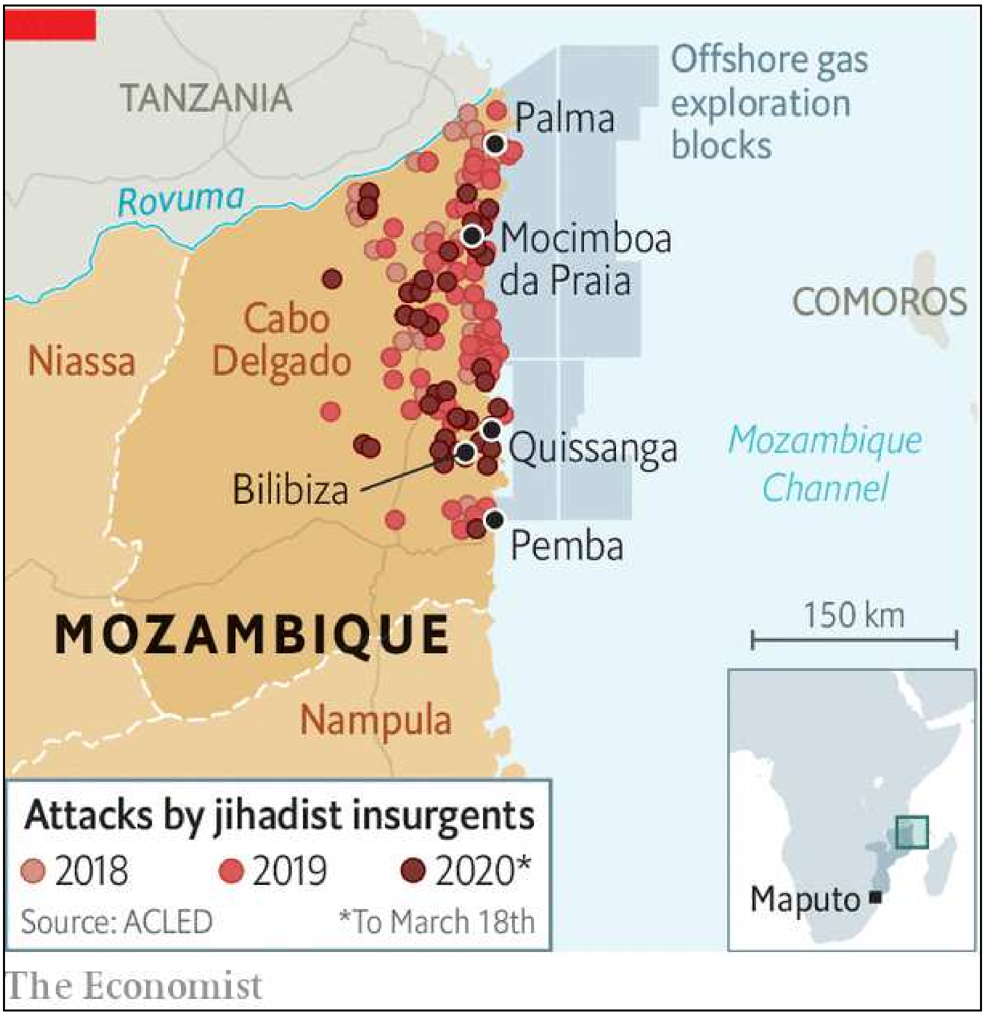
Syrah – What You Don't Know Can't Harm You?

We are somewhat bemused to note that Syrah Resources thought it not worthy of note that Cabo Delgado province of Mozambique is on fire at the moment with hundreds murdered by ISIL-acolytes and foreigners (and locals) fleeing in droves (well, those who weren't murdered).

The Islamist insurgency is mainly being fought between Islamist militants attempting to establish an Islamic state in the region, and Mozambican security forces. Civilians have been the main targets of attacks by Islamist militants. The main insurgent faction is Ansar al-Sunna, a native extremist faction with nebulous international connections. From mid-2018, the Islamic State of Iraq and the Levant (ISIL) has allegedly become active in northern Mozambique as well, and claimed its first attack against Mozambican security forces in June 2019.

Things have heated up since mid-March when the major town of Palma was besieged by insurgents via cutting off supply lines, most notably food supplies. Mozambican authorities used air transport to fly in supplies to the town. The matter started to cause international concern and the United States deployed the Green Berets special forces to train Mozambican marines.

Escalation ensued when, on the 24th of March, ISIL militants conducted a major attack on the town of Palma, following a loss of communication from the town. Militants first attacked the police station and then proceeded to rob the town's banks. A military source in Palma claimed "government forces resisted but then had to flee" as the militants were using "heavy weapons that they had not seen before".



Residential buildings were attacked too, resulting in the death of many civilians. On 27 March, the fourth day of the siege in the town, several more people were killed by the terrorists. Civilians were killed in the streets and in their houses; some of the victims were beheaded. Total's gas project was attacked too, and workers were murdered. About 200 foreign nationals fled to a local hotel to protect themselves, but the place was assaulted by the militants. A convoy conducted by Mozambican soldiers arrived at the scene to rescue the foreigners, but it came under fire. A South African man and a British civil contractor were confirmed killed in that attack, alongside 21 responding soldiers and several more people whose identity is unknown so far.

Now the Balama mine of Syrah may not have been invaded or impacted yet (hard to believe on the latter) but when will the company offer some soothing words to the market? Seemingly never, as long as their stock price is rising (or at least holding up).

Mozambique, after decades of civil war ended earlier this century, has become somewhat of a mining hotspot for gold, graphite, coal and titanium seekers. Some of these prospects are far from the troubled zone, but some are not.

It goes to show that geopolitics does count, but seemingly some investors would prefer to bury their heads in the sand and companies are happy (through their silence) to be complicit in this.

Tungsten – Last to the Party

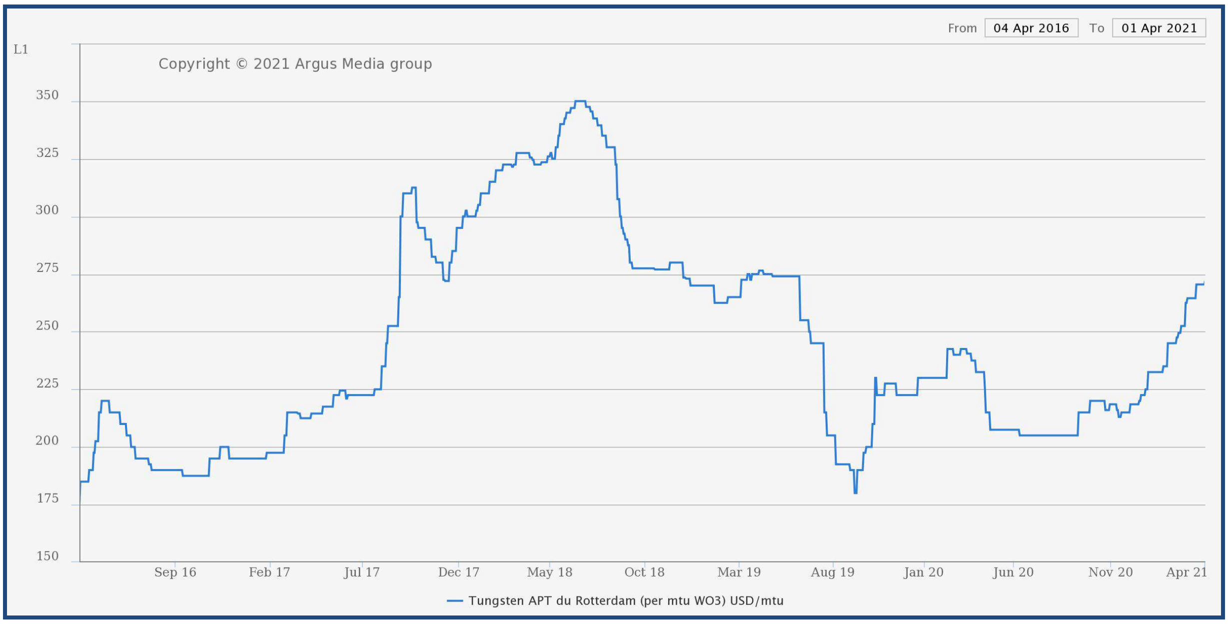
While the prices of Antimony and Tin have been the best performing metals over the last four months, Tungsten has only started the long ascent from the shallows & miseries in which it has long been becalmed. While drilling in oil & gas and mining have been off for a number of years now there was no real reason for the metal (the main usage of which is in machine tools) to have been so beaten up, unless one subscribes to nefarious reasons to the Chinese. Never let it be said that they would suppress the price of a commodity that they wish to maintain dominance in. Sorry, Peking, that boat has sailed.

The rising tide of new producers (mainly in Iberia) and, in particular, Almonty's Sangdong mine in South Korea risk toppling Chinese dominance in this metal that they had hoped to use to clobber the West German machine tool industry with.

The metal's potential sources are quite geographically diversified with Tungsten (or Wolfram) resources located in China, Canada, Russia and the United States, at least in the official versions. And yet the largest sources of production outside China are Spain/Portugal, Australia and, shortly, South Korea.

Some would have us believe that Chinese restrictions on its Tungsten industry (concerning mining, exports, foreign investment) brought changes to the global supply pattern, but instead we believe that the change is driving by Western end –users having become wary of China-dependence and thus have been paying over the odds to ensure that a non-Chinese source of supply survived to insulate them from eventual predatory pricing.

As the chart below shows prices are quite a ways from even those levels of three years ago. They are still half the levels of where they reached in 2013. The crash after that time cleaned out most of the Canadian players and clipped the wings of the Australians. A few London-listed names with Iberian targets soldiered on… and of course, Almonty, a long-term constituent of our Model Portfolio.



Source: Argus Metals

So Almonty (TSX:AII) remains our favoured play and stands as leader of the non-Chinese pack with two mines in Europe and the one in South Korea advancing rapidly. Out of the corner of our eye we also watch EQ Resources (ASX:EQR) in Queensland with its Mt Carbine mine, JVed with the German Chronimet group.

Portfolio Changes

During the month we closed our **SHORT** position in the Palladium ETF (PALL). Short-term supplies considerations drove prices higher flying in the face of poor longer term outlook as the EV revolution spells less demand for automobile exhaust catalysts. We decided to cease "fighting the tape" here.

We reinstated our **SHORT** on Galane Gold (TSX-v:GG) as this perpetual loser looks to be overpriced after a strong run in 2020 on the gold price (but not on actual performance of its business). We have a 12-

month target price of 15cts.

We added a **LONG** position Rainbow Rare Earths to the portfolio for reasons outlaid anon and we finally purged Northern Mining (ASX:NTU), one of the longest standing members of the portfolio (indeed going back 12 years). The problem here is that the enormous number of shares on issue has meant that the market cap has crept up to a fair valuation without any enhancement in the share price.

Somewhere Over the (Rare Earth) Rainbow

Rainbow Rare Earths (LSE:RBW) "appeared" on the scene mid-decade, during the long quiescence in Rare Earth markets. Being the only REE stock to list in London it was met with clamorous silence. Its plans always seemed to be somewhat *off-piste* with shipments of ore by the container-load to China sounding like a recipe for losing money… and duly money was lost.

Nevertheless, its Gakara Project in Burundi had the distinction of being the only African producer of Rare Earths. Nowadays its mine produces one of the highest-grade concentrates in the world (typically 54% TREO) and is classified as "ongoing trial mining operations". The Gakara basket is weighted heavily towards NdPr, which management claims, account for over 80% of the value of the Gakara concentrate.

A change of management has recently been excuted and the company is now intent on producing a more value-added product out of Burundi. We are all for this and it certainly moves the company into the coverage of our radar. However, it still remains small. Our interest in adding it to our Model Resources Portfolio came not from Burundi, but from its strategy in South Africa that potentially makes it one of the largest non-Chinese producers of REEs.

Phalaborwa

In early November of last year the Rare Earth world was thrown somewhat of a curveball by Rainbow when it announced its plans to exploit vast tailings and waste product piles at an old South African phosphate mine for their REE content. It terms this the Phalaborwa Project.

The two parties, Rainbow Rare Earths and Bosveld Phosphates (Pty) Ltd agreed:

- Rainbow would pay a total consideration of US$750,000, in a combination of cash and shares (priced based on the prevailing Rainbow share price on date of issue) to Bosveld in three equal tranches over twelve months, with the first tranche being payable after completion of an initial due diligence process. The due diligence process is expected to last up to 35 days and a further announcement will be made on completion of the due diligence process

- 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

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

The background to all this is that Bosveld, a South African company, acquired the Sasol Phosphoric Acid Plant (the PhosAcid Plant) in the Limpopo Province of South Africa back in 2012, following a competition ruling on Sasol's monopoly in the market. A hard rock foskorite and pyroxenite deposit was mined over a period of around 50 years by Foskor. The mined ore was concentrated in a flotation process and subsequently processed by Sasol, resulting in a total of around 35 million tonnes of gypsum being deposited in two stacks.

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. This pilot plant remains on site and is available to be recommissioned under the agreement.

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

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 c. 210,000 tonnes of contained TREOs, with Neodymium (Nd) and Praseodymium (Pr) (together "NdPr") anticipated to constitute c. 30% of the TREO basket.

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, which enables simpler onward processing.

Sasol developed a comprehensive process flowsheet to extract the Rare Earths from the gypsum, which resulted in a successful pilot plant operation, producing around three tonnes of mixed Rare Earth carbonate at around 80% recoveries. The output of this plant was being sold to the Japanese end-users of REEs.

Initial reports suggest low levels of radioactive elements, similar to those seen at Rainbow's Gakara Project, in Burundi.

An additional environmental benefit is that the re-processing of these Gypsum Stacks will redeposit clean, benign gypsum, which has the potential for further use in the building and fertiliser industries.

Strategy

Gakara remains a work in progress and we shall see over the next 12-months if it makes a meaningful contribution to global REE supplies. We are far more excited by Phalaborwa as here there is a potential game-changer with large volumes of pre-mined and pre-concentrated REEs just needing the crucial separation process. This activity is not theoretical as it was done before and found a ready market with the Japanese.

We have added a LONG position in Rainbow the Model Resources Portfolio with a twelve-month target price of GBP0.30.

Telson on the Mend

After a life-threatening financial crisis last year, Telson, the Zinc miner in our Model Resources portfolio has seemingly refound its feet with volumes and revenues on the rise.

Production and Sales		Month Ended January 2021	Month Ended February 2021	Month Ended March 2021	Quarter Ended Q4 2020	Quarter Ended Q1 2021	Quarter Ended Variation
Production							
Ore milled	(kt)	65.8	53.7	54.9	168.3	174.4	4%
Zinc Concentrate	(kt)	3.9	3.5	3.7	10.0	11.0	10%
Lead Concentrate	(kt)	0.8	0.5	0.7	1.9	1.9	0%
Average Head Grades							
Gold	(gr/t)	1.0	1.0	1.2	1.0	1.1	5%
Silver	(gr/t)	109.0	121.0	121.0	108.0	116.5	8%
Lead	(%)	1.0%	1.0%	1.1%	1.0%	1.0%	6%
Zinc	(%)	3.8%	4.0%	4.1%	3.9%	3.9%	1%
Average Recoveries							
Gold	(%)	18%	21%	22%	15%	21%	44%
Silver	(%)	30%	40%	43%	37%	41%	10%
Lead	(%)	27%	24%	28%	26%	27%	3%
Zinc	(%)	74%	73%	75%	70%	74%	6%
Average Realized Prices					Amounts in US dollars		
Gold	(troy oz)	$ 1,710	$ 1,750	$ 1,838	$ 1,843	$ 1,763	-4%
Silver	(troy oz)	$ 25	$ 24	$ 24	$ 22	$ 25	11%
Lead	(t)	$ 1,940	$ 2,010	$ 2,005	$ 1,855	$ 1,982	7%
Zinc	(t)	$ 2,550	$ 2,725	$ 2,787	$ 2,333	$ 2,679	15%
Net Revenues					Expressed in thousands of US dollars		
Zinc Concentrate		$ 3,855	$ 2,962	$ 3,221	$ 7,455	$ 10,037	35%
Lead Concentrate		$ 926	$ 446	$ 524	$ 1,416	$ 1,897	34%
Total Net Revenues		**$ 4,781**	**$ 3,408**	**$ 3,745**	**$ 8,871**	**$ 11,934**	**35%**

So the production trend is good. Zinc is holding up nicely. Now the test will be to see how margins evolve and whether economies of scale bring the company into the black at the bottom line. Telson has made a move from under 10cts a year ago to over 60cts at one point an is still more than four times its 12-month lows.

Parting Shot

The pause in the upward momentum of many mainstream metals and minerals might be the trigger for the start of a consolidation phase. Not just in prices but the long-mooted M&A boom.

The market desperately needs this to fire up as otherwise many stories are looking tired and over-valued. Quite a few companies need an offer before their over-promising morphs into under-delivery. More than a few producers are not serving up bottom-line improvements commensurate with the enhancement in the price of their underlying metals largely due to cost bloat and attendant margin shrinkage.

The big problem though is that some of the Big (Dumb) Beasts that fed the last M&A feeding frenzy have hung up their false teeth and are ravaging and pillaging no more. Kinross sticks to its knitting; First Quantum has so much debt it can scarcely move, while Barrick/Randgold and Newmont/Goldcorp are disgorging rather than feasting.

The sexiest thing around (and we are being ironic) is the royalty companies buying “any old iron” in the form of income streams on properties, many of which, might not reach production in our lifetimes. Good luck with that.

The task of being predatory now seems to fall to mid-tier companies devouring their brethren or those slightly smaller than themselves. Let the feast begin….

MODEL RESOURCES PORTFOLIO @ END MARCH

	Security	Currency	Price	Change last 12 mths	Change last mth	12-mth Target
LONG EQUITIES						
Diversified Large/Mid-Cap	Teck Resources (TECK.B)	CAD	24.35	128%	-9%	$25.00
	Hochschild (HOC.L)	GBP	1.99	81%	-5%	£3.40
Uranium	Uranium Participation Corp (U.to)	CAD	5.39	38%	8%	$6.00
	GoviEx (GXU.v)	CAD	0.27	108%	-10%	$0.30
Zinc/Lead Plays	WisdomTree Zinc ETF (Zinc.L)	USD	8.57	46%	-1%	$9.00
	Myanmar Metals (MYL.ax)	AUD	0.07	75%	0%	$0.15
	Telson Mining (TSN.V)	CAD	0.45	650%	45%	$0.50
Silver Producer	Excellon Resources (EXN.to)	CAD	3.65	564%	-5%	$5.50
Silver Explorer	Southern Silver Exploration (SSV.v)	CAD	1.51	331%	28%	$1.80
Silver ETF	IShares Silver ETF (SLV)	USD	22.85	75%	-7%	$26.00
Gold Producer	Soma Gold (SOMA.v)	CAD	0.32	60%	-30%	$1.20
Coking Coal	Colonial Coal (CAD.v)	CAD	0.70	218%	-3%	$1.10
Project Generator	Altus Strategies (ALS.L)	GBP	0.708	-97%	-17%	£4.00
Copper Explorers	Panoro Minerals (PML.v)	CAD	0.21	200%	5%	$0.30
	Phoenix Copper (PXC)	GBP	0.33	371%	-21%	£0.65
Tungsten Producer	Almonty Industries (AII.v)	CAD	1.01	166%	-11%	$1.25
Vanadium Developer	Vanadium Resources (VR8.ax)	AUD	0.07	600%	40%	$0.05
Lithium	Neometals (NMT.ax)	AUD	0.38	171%	9%	$0.45
	Lithium Power Intl (LPI.ax)	AUD	0.26	86%	4%	$0.30
Scandium Developer	Scandium International (SCY.to)	CAD	0.20	233%	-13%	$0.16
Gold Explorer	Cabral Gold (CBR.v)	CAD	0.57	613%	-7%	$0.60
	BTU Metals (BTU.v)	CAD	0.14	8%	27%	$0.42
	Gunpoint Exploration (GUN.v)	CAD	0.65	23%	12%	$0.75
	Bold Ventures (BOL.v)	CAD	0.09	-28%	0%	$0.18
Fertilizers	Verde Agritech (NPK.to)	CAD	1.51	331%	28%	$2.00
Cesium et al.	Essential Metals (ESS.ax)	AUD	0.11	10%	0%	$0.30
Rare Earths	Rainbow Rare Earths (RBW.L)	GBP	0.168	459%	-1%	£0.30
	Neo Performance Materials (NEO.to)	CAD	20.40	233%	28%	$24.00
Tin Miner	Alphamin (AFM.v)	CAD	0.59	354%	13%	$0.80
	Metals X (MLX.ax)	AUD	0.21	200%	0%	$0.30
Oil & Gas	Shell B (RDSB.L)	GBP	13.43	-10%	-4%	£14.90
Royalties	Elemental Royalties (ELE.v)	CAD	1.45	n/a	7%	$2.30
SHORT EQUITIES						
Shorts	NioCorp (NIO.to)	CAD	1.28	97%	-3%	$0.40
	Galane Gold (TSX-v:GG)	CAD	0.22	214%	-21%	$0.15
	Texas Mineral Resources (TMRC)	USD	3.19	383%	-19%	$0.30

Important disclosures

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