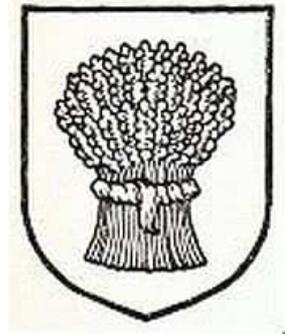


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HALLGARTEN & COMPANY

Portfolio Strategy

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Model Mining Portfolio: She Sells (Sea) Shells....

Performance Review – August 2020

Model Mining Portfolio

She Sells (Sea) Shells....

- + Base metals picked up the slack where precious metals left off
- + Copper broke through the key resistance at \$3 per lb on several occasions
- + Once Zinc was through the psychological barrier of \$1 per lb it rapidly moved up to above \$1.15
- + Silver/gold ratio improved markedly as investors pushed the clearly lagging Silver into a more prominent position
- + Tin moved further above its previous 12 months high
- + Antimony came back to life and moved towards the \$6,000 per ton mark while Tungsten perked up after long bouncing along the bottom
- ✗ Gold is beginning to look range-bound which is impacting upon the former ebullience that was evident in the Canadian markets, in particular
- ✗ Bought deals by companies that don't need the money are sucking the oxygen out of the financing market in Canada
- ✗ The London market is clearly miles behind in grasping the revival in mining sentiment

Shells, Shells Everywhere and Not Much Happening

The shell merchants are out in force these days particularly in Vancouver. After waiting nearly a decade for their day in the sun they are determined not to be robbed of their moment. However, the old adage of “knowing the price of everything and the value of nothing” seems to pertain, as this crew feel that their shell is general worth more than the assets that are being proffered to fill and repurpose said shells.

In reality shells are a product of the time value of money. They have no intrinsic attraction (and many have “hair” on them that effectively should make them a discounted proposition) except for



the fact that they save the mining promoter time in bringing to market a project in what is (was?) a “hot” market for precious metals.

The problem is that there are very few gold projects of merit lying around unhoused these days. Some of the projects that are having their tyres kicked are the type of third-tier projects that even junior explorers don’t show on their websites.

Meanwhile the shell-vendors think that their goods are worth fortunes. Call us rustic, but a shell is worth whatever it costs to list a *de novo* company, with the premium being for the fact that one can pull off the RTO in a the space of a month or two, whereas the *de novo* or CPC options via the TSX-V’s of CSE’s normal channels might take a good six months. Hence the promoter’s urgency. However when the shell merchant puts a valuation of \$500,000 to \$1mn on their “*Precious*” and the cash on board is scarcely enough to cover the costs of the shareholder’s meetings, the bargain ceases to look attractive.

The result of all this is a Mexican stand-off. The shell merchants are selling overpriced goods, few deals are being done and the gold price has retreated from its white-hot phase and is merely doodling about well below the magic \$2,000 per oz threshold. With time no longer being so much “of the essence” the promoters can return to their fallback option of *de novo* listings or CPCs and the shell-floggers can sit on the beach weeping over their unloved bivalves.

The thing the vendors of RTO structures failed to realize was that their merchandise was generic, while a good gold project is a good gold project. The latter do not grow on trees while the shells (at least in Vancouver) are mere flotsam and jetsam. Once again greed is the downfall of the Howe Street gang.

Portfolio Changes

We reactivated our LONG position in Phoenix Copper (PXC) in the first days of September, so it does not show in the attached table of the Model Portfolio.

Northern Minerals – Peace Breaks Out with the Taxman

In all the furore about Rare Earths and their supposed reawakening, scarce focus is given to Northern Minerals. Its attempt to get into the running for the elusive (and puny) DoD grants came to nought. To us that was no surprise as the optics of a company with a majority of Chinese shareholders (and a bunch of them on the board) would not have gone down well in Washington. The company also lost its long-time CEO, which ostensibly meant a break in continuity in talks with advancing things with German automobile oftakers (however the long-time CFO took up the reins, so effectively it was business as usual). Then there was the perennial Damoclean Sword of the Australian Tax Office’s (ATO) capricious treatment of past R&D.

However late in August the ATO issue finally was resolved as Northern Minerals had entered into a settlement agreement covering all matters relating to the refundable R&D tax offset claims for the financial years ended 30 June 2017 and 2018. The agreement also documents an agreed refundable R&D

tax offset for the financial year ended 30 June 2019 and a framework for reviewing the refundable R&D tax offset claim for the financial year ended 30 June 2020.

In what looks like some posterior-covering by the ATO, it asked that the company adopt recommendations for improving its internal policies and procedures with the aim of streamlining future R&D claims. The settlement agreement reduces the original refundable R&D tax offsets claimed for the financial years ended 30 June 2017 and 2018 by \$21,309,237. Noting that only half the original refundable R&D tax offset for the financial year ended 30 June 2018 was previously refunded by the ATO, the net cashflow effect of the settlement agreement for the financial years ended 30 June 2017, 2018 and 2019 is a net refund of \$9,921,638 payable to NTU, on or about 18 September 2020. As a result, Northern no longer has any amounts owing to the ATO in respect of the financial years ended 30 June 2017 and 2018.

A welcome end to an eternal saga that has battered the stock price, forced the company even further into the arms of the Chinese (the comfort of strangers, indeed) and helped the company miss several boats that might have put it in a more advanced position in the Rare Earth “race”.

The company is planning to spend AUD\$5 million to explore and, hopefully, find more reserves. Having restarted production in July, the big issue, as always, is can Browns Range operate at a profit and, if so, when? Commissioning of the ore sorter is now delayed until the March quarter, which likely means March, given the rainy season in January/February.

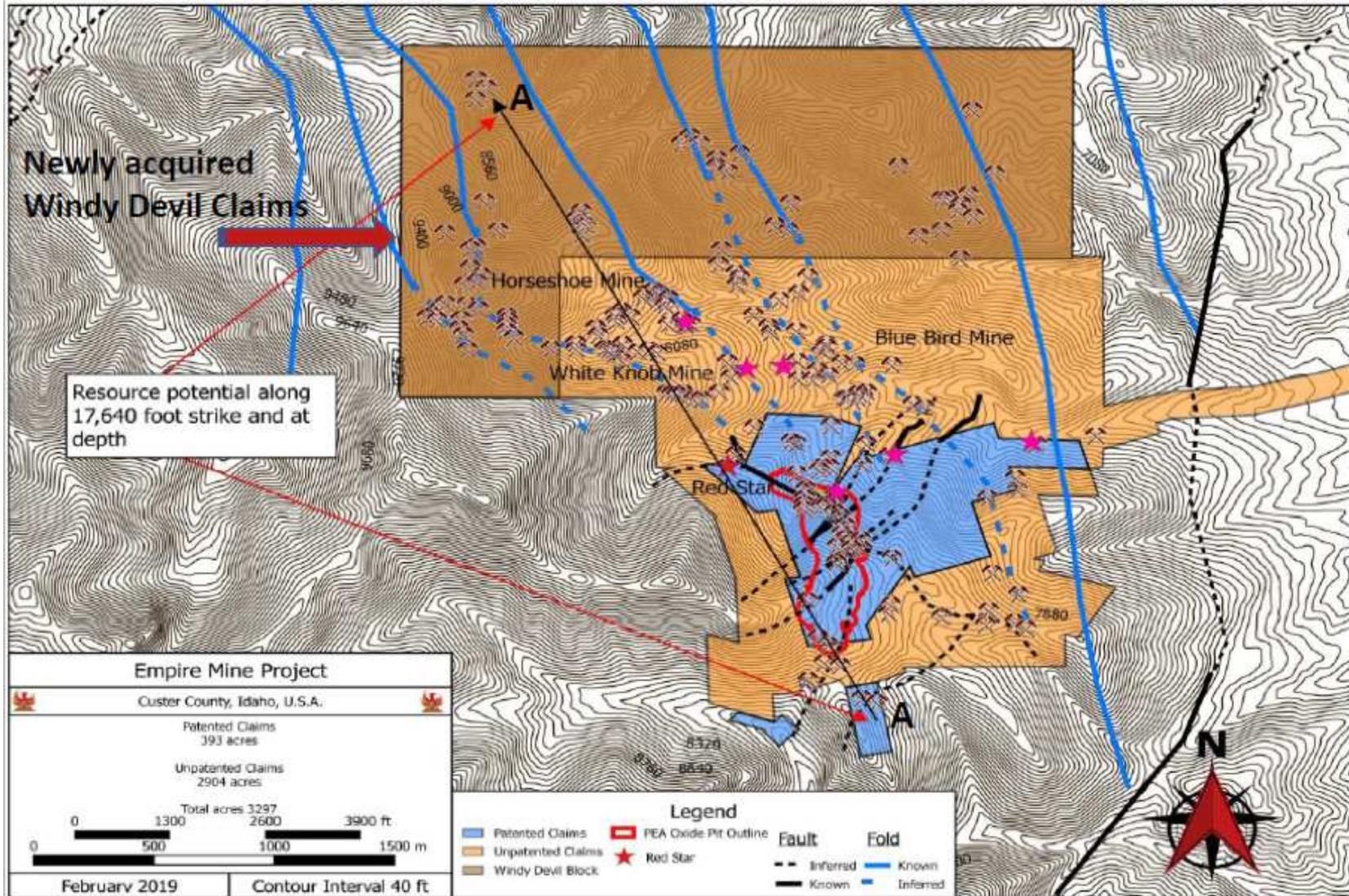
Northern still needs to deliver on our mantra for success – production, production, production. We reiterate our **LONG** call on the stock with a 12-month target price of 8 cents.

Phoenix Copper – Red Star Rising

With copper passing the \$3 per lb mark it seemed appropriate to revisit some of our old copper favorites. The natural name to circle back to was Phoenix Copper (AIM: PXC, OTCQX: PXCLF) that we had shed from the Model Mining Portfolio last year when its PEA (predicated on just the old Empire Mine and seeking just Copper & Zinc) had left us (and many others) underwhelmed.

Discounting the company’s Cobalt prospects (as the price of that metal fell into the dumpster) the company’s focus has become almost exclusively aimed at its concessions in the Alder Creek Mining District in Custer County, central Idaho. The property is approximately 5.5 km southwest of Mackay, Idaho in the Big Lost River Valley between Arco, Idaho and Challis, Idaho. Fortunately for Phoenix it had never devoted anything more than minimal effort to the cobalt prospects (also in Idaho) so it has at least not wasted the money that others did on that quixotic pursuit.

The Empire Mine is a former copper/gold/silver producer that, at the time that Phoenix acquired it, consisted of 23 patented (private) claims, 21 unpatented claims and six unpatented mill-site claims covering a contiguous 301 hectares (743.7 acres). Since then it has been added to, in November 2017, with the Horseshoe claims to the north consisting of 564 acres in 33 claims.



There have been several resource estimates since that time. In May 2020, a new NI 43-101 compliant resource reported at the Empire Mine oxide open pit increased Measured & Indicated resources by 27%. The estimate used a combined metal cut-off grade of 0.36% copper equivalent, compared with the previously reported May 2019 resource using a copper-only cut-off of 0.184%.

Metal	Measured & Indicated resource		Increase	Including Inferred resources
	May 2020	May 2019		
Copper (tonnes)	81,948	73,872	11%	129,932
Zinc (tonnes)	37,650	29,813	26%	50,549
Silver (ounces)	6,824,460	6,038,000	13%	9,502,495
Gold (ounces)	217,500	139,000	56%	342,249
Measured & Indicated Tonnes	19,302,000	15,169,000	27%	

The Empire Mine was, until last year, the company's main focus. However, balancing the wild gyrations of base metals and precious metals meant that Phoenix was on a wild emotional ride not knowing which of its metals was likely to be its greater revenue source when it eventually reached production. Different processing techniques (e.g. SX-EW, heap leach) would also have resulted in widely varying recoveries for precious vis-a-vis copper and so the dilemma was which way to move things forward.

North by NorthWest

As the claims started to expand to the north and northwest the nature of the deposit and the targets started to change. Chief amongst these was the newly discovered sulphide occurrence named Red Star, (shown at the top left of the blue block in the preceding page's concession map), located 330 metres northwest of the oxide pit. This prospect was drilled for the first time in October 2018. Three drill holes plus surface sampling were completed in a short campaign. These showed a transition to a high-grade silver and lead system.

Management sustains that drill results confirm its hypothesis that the Empire Mine's mineralisation zone is part of a considerably larger mineralised system which includes the Red Star Zone and the Horseshoe Block.

The Red Star Zone and the Horseshoe Block, to the north appear to be the "upper" portion of the whole mineralised system, with an underlying zone of Empire Mine style copper, zinc, gold and silver

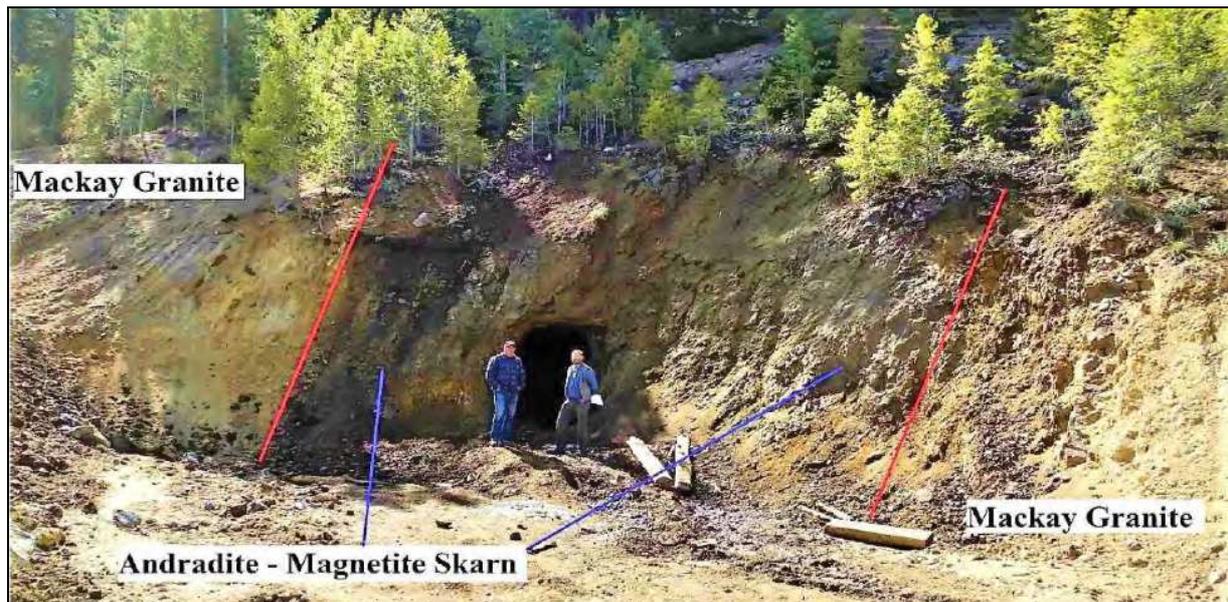
mineralisation. The company has managed to come up with an Inferred Resource, but this is based on only three holes.

Red Star NI 43-101 Inferred Resources - Hard Rock Consulting – From 3 Holes

Class	Tonnes	Average Grade				
		Ag g/t	Au g/t	Cu %	Pb %	Zn %
Inferred	103,500	173.42	0.85	0.33	3.85	0.92

Inferred Resources Contained Metal Value US\$/tonne ore						Ag Equ ozs/tonne
Ag	Au	Pb	Zn	Cu	Total	
97.90	40.72	83.47	22.37	18.93	263.38	15.5

Ten more holes have been drilled over the summer, with the results of three still due in.



Interestingly this exploration adit was discovered when the company attacked an outcrop. It had been hidden and forgotten and maybe dates from the 1940s.

Beyond these the company has recently added the Windy Devil claims to the north & north-west.

Clearly PXC has now risen from its near-death experience at the worst of the virus crisis when its already battered stock price took another leg down on the crumbling Copper price.

In the last few months the stock price has managed nearly a 1000% improvement, which must be one of

the best moves by any company perceived to be largely Copper-driven. Truly the Phoenix has arisen from its own ashes, at the risk of pushing a bad pun.



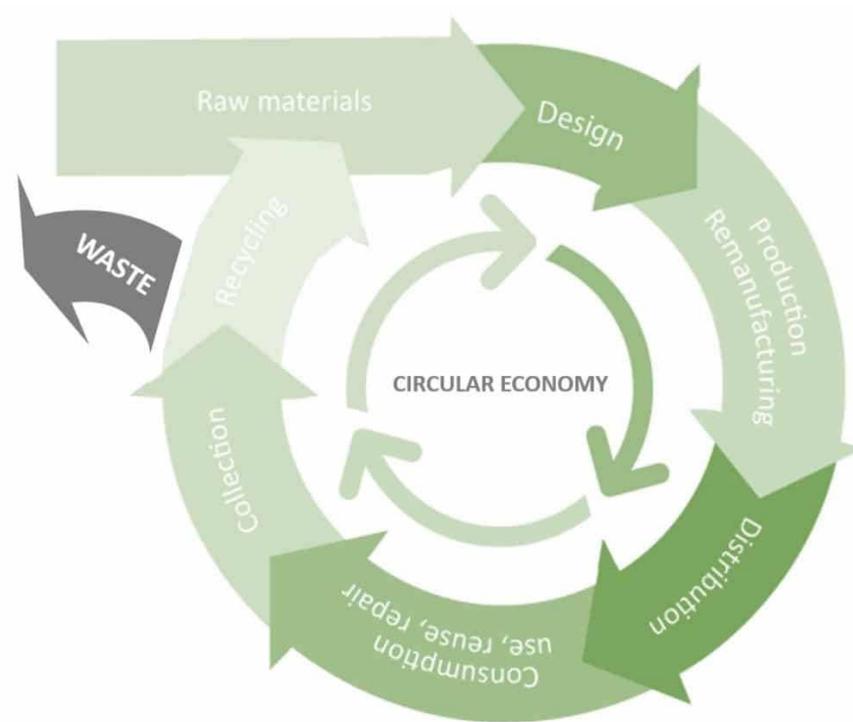
However, the company has been highlighting the precious metals potential of RedStar (et al.) and we would posit that this is the driver behind the stock's resurrection. After all the PEA used \$3.25 Copper and the metal is not even near that level and the stock's biggest rise occurred while gold/silver were raging and Copper was struggling to get above \$2.90 per lb.

With precious metals moving to the fore the potential at Phoenix is quite transformed. The task now is to make clearer to the markets what the changed production scenario might be with RedStar as the prime focus for discovery news while quiet work goes on in the background burnishing the Empire economics into a more profitable form.

With that in mind we are restoring a **LONG** position in Phoenix Copper to the Model Mining Portfolio with a 12-month target price of 74 pence.

Parting Shot

We are rapidly tiring of the hype of the Circular Economy. This EU buzzword has started to get a life of its own and becomes more annoying as it is touted by more and more *apparatchiks* who have zero knowledge of how the metals and minerals industries actually work. Beyond industry-specific knowledge (i.e. mining) that they lack, they are totally divorced from the reality that many metals/minerals are not recyclable in whole or part from many of their applications. An example of this is Antimony which when used in plastic masterbatches or in textiles (as a fire retardant) it cannot be recovered.



Another example is Tungsten, this is used for cutting edges on machine tools. However, when the cutting edge needs replacing it is because the Tungsten is worn out, ergo, not available for recycling (at least not in its totality).

And beyond those practical considerations, there is the reality that the EU as a major exporter of industrial goods is actually sending out to the wider world many of the metals it imports in the form of capital goods. Thus they are not available for recycling in Europe.

One of the more curious ideas of recent times was that the recycling of batteries in EVs should be made the responsibility of the auto-maker after the batteries end of life has been reached. This begs various questions:

- As automakers are not battery makers (despite what Elon Musk might have you believe) then why isn't it the battery makers that are made responsible?
- How can Renault be responsible for the battery disposal of a vehicle it sold for export to Kenya?
- How can Audi be responsible for the battery of a vehicle that is stolen from a street in Marburg and whisked off to Russia?
- If the hype of Musk and others is true on further reuse of EV batteries as battery farms or do it yourself "Powerwalls" then how can auto-makers be held responsible *ad infinitum* for what fate

befalls the batteries they sell in cars (including cars that are totaled)?

- It is highly possible that individual EVs will outlast their batteries (if not mistaken, Tesla battery guarantees only run for 8 years) so battery lives and EV lives will be on different timeframes
- If most lead-acid batteries are recycled without draconian “return to source” requirements then why should Lithium-ion batteries be any different?

Brussels *nomenklatura* are again wallowing in fanciful buzzwords and high-minded yet impractical theorizing.

The circular economy leaks... and requires constant replenishment. It is not a metals/minerals autarky. Far from it, with the resistance in many parts of Europe to mining by NIMBY forces. The raw materials for European industry will continue to come (in the overwhelmingly majority) from faraway places with the attendant carbon footprint from, say, bringing Niobium from Brazil to a European alloy-maker. Not to mention that “incremental” demand means using more and more of a product (i.e. metal) so there needs to be a net increase of that metal available.

At best the “circular” economy looks more like three quarters, or half, of a pie rather than the glib graphics currently being touted about in a plethora of “feel-good” presentations.

MODEL MINING PORTFOLIO @ END AUGUST						
Security	Currency	Price	Change		12-mth Target	
			last 12 mths	last mth		
Long Equities						
Diversified Large/Mid-Cap	Teck Resources (TECK.B)	CAD	15.04	-34%	11%	\$18.00
	Metals X (MLX.ax)	AUD	0.08	-50%	-11%	\$0.14
Uranium	Uranium Participation Corp (U.to)	CAD	4.64	9%	-5%	\$6.00
	GoviEx (GXU.v)	CAD	0.14	-18%	-7%	\$0.17
Zinc/Lead Plays	WisdomTree Zinc ETF (Zinc.L)	USD	8.1	12%	12%	\$8.10
	Myanmar Metals (MYL.ax)	AUD	0.11	120%	38%	\$0.15
	Ascendant Resources (ASND.v)	CAD	0.11	-89%	-8%	\$0.30
	Telson Mining (TSN.V)	CAD	0.2	-9%	5%	\$0.25
Silver Producer	Excellon Resources (EXN.to)	CAD	0.97	-13%	-2%	\$1.10
Silver Explorer	Southern Silver Exploration (SSV.v)	CAD	0.66	288%	2%	\$0.80
Silver ETF	iShares Silver ETF (SLV)	USD	26.23	53%	16%	\$24.00
Gold Producer	Soma Gold (SOMA.v)	CAD	0.63	-48%	-3%	\$1.20
Coking Coal	Colonial Coal (CAD.v)	CAD	0.69	123%	5%	\$1.10
Project Generator	Altus Strategies (ALS.L)	GBP	66.55	180%	51%	£40.00
Copper Explorers	Panoro Minerals (PML.v)	CAD	0.14	8%	-13%	\$0.30
Tungsten Producer	Almonty Industries (AII.v)	CAD	0.66	-16%	3%	\$0.80
Vanadium Developer	Vanadium Resources (VR8.ax)	AUD	0.03	-50%	50%	\$0.04
Lithium	Neometals (NMT.ax)	AUD	0.18	0%	13%	\$0.45
	Lithium Power Intl (LPI.ax)	AUD	0.16	-54%	-11%	\$0.30
Scandium Developer	Scandium International (SCY.to)	CAD	0.12	-14%	0%	\$0.18
Gold Explorer	Cabral Gold (CBR.v)	CAD	0.48	243%	85%	\$0.30
	BTU Metals (BTU.v)	CAD	0.22	22%	10%	\$0.42
	Gunpoint Exploration (GUN.v)	CAD	0.90	64%	29%	\$0.75
Fertilizers	Verde Agritech (NPK.to)	CAD	0.66	2%	2%	\$0.90
Cesium et al.	Essential Metals (ESS.ax)	AUD	0.09	-55%	-10%	\$0.30
Rare Earths	Northern Minerals (NTU.ax)	AUD	0.03	-50%	50%	\$0.08
	Neo Performance Materials (NEO.to)	CAD	10.65	5%	7%	\$14.00
Tin Miner	Alphamin (AFM.v)	CAD	0.28	40%	47%	\$0.48
Mining Media/Events	Aspermont (ASP.ax)	AUD	0.01	0%	0%	\$0.03
Short Equities						
Shorts	NioCorp (NIO.to)	CAD	0.85	63%	-10%	\$0.40
	Texas Mineral Resources (TMRC)	USD	1.57	249%	-17%	\$0.30
	Abdn Standard Palladium Trust (PALL)	USD	211.86	49%	7%	\$180.00

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