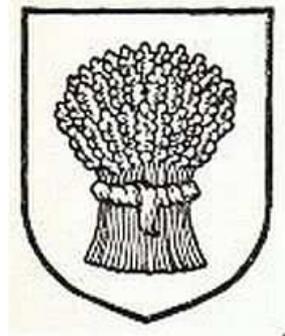


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HALLGARTEN & COMPANY

Portfolio Strategy

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Model Mining Portfolio: Base Metals Regain Their Mojo

Performance Review – March 2019

Model Mining Portfolio

Base Metals Regain Their Mojo

- + Zinc continues to look very propitious having reached \$1.35 per lb
- + The ill-starred merger of Newmont and Barrick Gold has fortunately come to grief
- + Chinese are reducing Rare Earth quotas so the long-awaited renaissance in this space draws nigh, with the Lynas takeover offer and Northern Minerals financing being the first two swallows of a REE summer
- + Problems with so many of the Lithium producers, both new and established, put the lie to the over-ambitious Wall Street prognostications about excessive future supply in this space. Prices seem destined to rise
- ✗ Silver looks very weak, undeservedly so
- ✗ Palladium has lost its upward momentum as we signaled was inevitable. It's not rocket science, just gravity.
- ✗ Copper fails to join in at Zinc's party, even though fundamentals look almost as good
- ✗ Gold has returned to flaccid mode

Junior Royalty Players – Going Precious

It's well-known that the majors of the streaming/royalty business don't get out of bed for anything but the biggest of the mid-tier projects. This largely left the smaller mine developers at the mercy of the equity markets or sharkish "hedge funds", until around two years ago. At that time a new breed of smaller royalty companies started to appear. Much as they would like to persuade us that they are superlative project pickers they have in fact largely bought or inherited job lots of projects with the categorization being the good, the bad and the indifferent. For more on this see our review of junior royalty players from last year.

Now though we have noticed a new trend. This is the "faking it" that they are excellent deal-doers has been overwhelmed by them actually believing their own propaganda. The players could be viewed as dividend plays (or potential dividend plays) with some upside if some of the sleepers in their portfolios came to life. However valuations have risen to levels which no longer make these interesting yield plays. Moreover, now we hear that the companies are rejecting the type of bread-and-butter projects under development which are like the earners they currently have in their portfolios and the managements are subject to imaginings that with their "widow's mite" of capital they can slug it out with the majors, or

even the bigger juniors, in the royalty space. The underpinning to this overweening confidence is the belief that while they may only have \$2mn in the bank, they can rally \$15mn *tout de suite* just by fluttering their eyelids at the denizens of the equity markets. A rude shock is coming down the pike for those royalty companies that are currently suffering a rush of blood to the head and fancying that they are more special than they really are.

Cabral Gold (CBR.v) – Revisiting Familiar Territory

It was way back in 2010 that we first came across Magellan Minerals and its exploration efforts in the Tapajos fields of northern Brazil. This was an area that had long been exploited (and eventually abandoned) by artisanal miners, the famed or infamous *garimpeiros*. The Tocantzinho Trend hosted the largest gold rush, in terms of number of people involved, in the history from the 1970s to 1990s. It was estimated to have produced 20-30 million ounces of gold from placer mining. Magellan was eventually taken over by Anfield Nickel in 2016.

The CEO of the former came back to our attention at Mines & Money last year in his new guise as CEO of Cabral Gold, a TSX-V listed explorer in the same neck of the woods as Magellan. Indeed Cabral has two assets in northern Brazil which were demerged into a newco when Magellan was taken over. The key asset is Cuiu Cuiu, which covers a sizeable area of 360 square kilometers and was explored by Cabral's current management when it was owned by Magellan.

Cuiu Cuiu itself was estimated to have yielded two million ounces of gold from streams, but the source for much of that gold is yet to be identified. The project has a historic Au resource, prepared by Magellan back in 2011, of 0.1 million ounces in the Indicated category and 1.2 million ounces Inferred.

In terms of closeology, there is the Tocantzinho deposit, owned by Eldorado Gold, which is adjacent to Cuiu Cuiu. The Tocantzinho deposit currently has a resource estimate of 2.1 million ounces indicated and 0.1 million inferred. It is estimated that 200,000 ounces of gold were taken from streams at Tocantzinho during the Tapajos gold rush. Under Eldorado, it is expected to produce 170,000 opa Au for 10 years, at sustaining cash costs of US\$615/oz.

It's still early days at Cuiu Cuiu but it has a resource in hand and now just needs the work to transform it into the categories to underpin a PEA. Historical experience has shown that the artisans quite literally only scratched the surface, with bedrock and source rock left untouched. At the current market capitalization of CAD\$6.1mn and with a competent team that know this patch like the back of their hand we feel confident that this will repeat or exceed the Magellan experience. The current price of 20.5cts is lower than last November when the gold price was lower and the company hadn't announced various new results of great promise. The twelve-month high-low range is 43cts to 18cts. Such is the perverse nature of the TSX these days.

To that end we added a Long position in Cabral to the Model Mining Portfolio during the month with a target price of CAD\$0.42.

Scandium – Platina Lente

It's interesting that the supply and the demand picture for Scandium has changed little to nothing in years and yet the metal punches well above its weight in terms of being talked about in the mining space. Never have there been so many mentions of something with so little resulting.

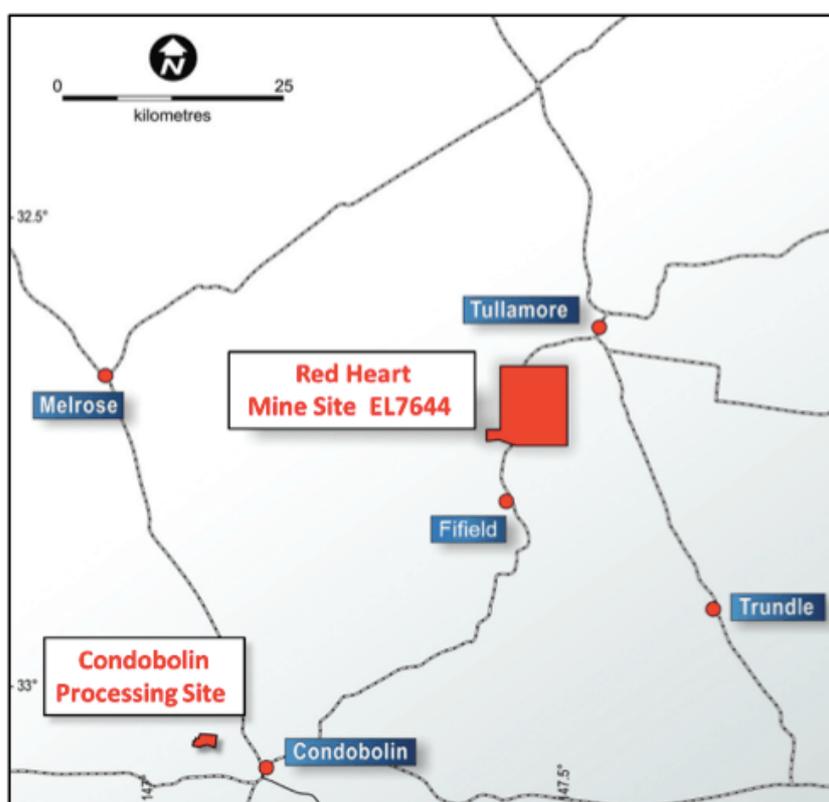
All cynicism apart the potential for Scandium is enormous and the realization of some of that potential is within the grasp of industry but.....

In October of last year we added a position to the Model Mining Portfolio in Platina Resources (ASX:PGM), a Scandium developer, that we had met during the LME Week festivities. We had not seen the company since late last decade when it was firmly wedded to a PGM strategy (hence its name and ticker). The company's original project was based on its 100% ownership of the Skaergaard gold and platinum group metals project in Greenland which, the company claims, hosts one of the world's largest resources of Palladium outside of South Africa and Russia.

The Main Project

Platina's main focus now is its 100%-owned Owendale Project in central New South Wales. To confuse matters slightly it also refers to it as the Red Heart Mine. In the management's view, the project has the potential to be an important source of Scandium, with a shallow depth allowing open-pit mining, high Scandium grades and appreciable cobalt, platinum and nickel credits.

It is located in the Scandium triangle in New South Wales in close proximity to CleanTeq and Australian Mines, without those two companies dependence upon Nickel to underpin the economics.



The Reserve

In December of 2018 Platina announced a 5% increase in the Ore Reserve estimate for the project. This Ore Reserve update, prepared by Measured Group Pty Ltd, follows from the Mineral Resource upgrade announced in August 2018, which included the results of the 2018 drilling program and completion of the Definitive Feasibility Study.

JORC Ore Reserve (400 ppm Sc cut-off)							
	Dry Mt	Sc ppm	Co %	Ni %	Sc ₂ O ₃ t*	Co t	Ni t
Proven	3.05	575	0.10	0.13	2,696	2,945	4,054
Probable	0.97	550	0.07	0.08	816	654	767
Total	4.02	570	0.09	0.12	3,512	3,599	4,821

The Feasibility Study

In December of 2018 the company released the details of its DFS on Owendale. This confirmed the technical and financial viability of constructing a simple, low-strip ratio, open-cut mining operation and processing facility producing Scandium oxide.

	\$US	\$AU
Stage 1 Annual Production		20 tonnes
Stage 2 Annual Production (from Year 5)		40 tonnes
Life-of-mine for financial model		30 years
Net Present Value (8%), real, after-tax	166 million	234 million
Internal Rate of Return, post-tax		29%
Payback Period (undiscounted)		5.3 years
Stage 1 Capital Expenditure	48.1 million	67.8 million
Stage 2 Capital Expenditure	11.1 million	15.6 million
Total Life-of-Project Capital Expenditure*	104.1 million	146.5 million
Life-of-Mine Average Cash Operating Costs#	525/kg	739/kg
Life-of-Mine Scandium Oxide Price	1,550/kg	2,183/kg
USD to AUD Exchange Rate		0.71

Key metrics of that DFS included:

- a mine life of 30- years
- an after-tax net present value in real terms (8% discount rate) of US\$166mn (AUD\$234mn)
- post-tax IRR of 29%
- payback period of 5.3 years.

The financial model utilised an average scandium oxide price of USD 1550 /kg over the life of the project. The company chose that price as it believes such a price to be necessary to drive wider-scale adoption of scandium in alloys;

The DFS is based on a processing plant designed to initially produce 20 tpa of scandium oxide at a capital cost of US\$48.1mn (AUD\$67.8mn), expandable to 40 tpa of scandium oxide, This doubling of capacity comes at a very low incremental capital cost of US\$11.7mn (AUD\$15.6mn).

The deposit is amenable to open-cut mining at a relatively low strip ratio of 1.9:1. The DFS assumed that 33% of the available Ore Reserves are mined over 30 years, and additional Ore Reserves and Mineral Resources could provide for further production expansion.

Processing

Ore mined at Red Heart will be processed through a conventional HPAL (high pressure acid leach) circuit to produce 99.99% high-purity scandium oxide. The processing facility will utilise an existing industrial site in Condobolin. This site provides access to existing infrastructure – labour, water, power, rail, and sealed roads.

On top of the Scandium there is potential for other revenue streams. In common with other laterite projects, once all the minerals are in solution from the HPAL process, recovery is achievable at low incremental cost, thus providing a potential future opportunity to generate cobalt, nickel, platinum and aluminium products (to make high purity alumina) and generate additional by-product revenues.

	Ticker	Location	Project	Mineralisation	ScGrade ppm	Sc Contained Tonnes
Australian Mines	AUZ.ax	Australia	Flemington	Co/Sc/Ni	404	1,091
CleanTeq	CLQ.ax	Australia	Syerston	Ni/Co/Sc	421	19,240
Imperial Mining	IPG.v	Canada	Crater Lake	Sc/Ti/Zr		
Niocorp	NB.to	USA	Elk Creek	Nb/REE/Sc	72	2,266
Platina Resources	PGM.ax	Australia	Owendale	PGMs/Sc	395	13,312
Scandium Intl	SCY.to	Australia	Nyngan	Sc	235	3,976

With most of the Scandium projects out there tied to the fortunes of other metals, the fate of the development of the metal could almost be said to be in the hands of others. Then again those that have mainly pure Scandium deposits (like Platina and Scandium International) can march to their own beat but require greater adoption of the metal by existing and new (aerospace) users to guarantee placement of significantly larger amounts of metal than has been available before. It is a veritable chicken-and-egg scenario.

We have a **Long** position in Platina in the Model Mining Portfolio with a 12-month target price of \$0.18.

Portfolio Changes

There were three portfolio changes in March.

- Closed a Long position in EuroManganese. Sold 700,000 shares in EMN.ax at AUD 28 cts per share on March 1st
- Added a Long position in Aspermont Ltd. Bought 2,000,000 shares in ASP.ax at AUD 0.9 cts per share on March 1st
- Added a Long position in Cabral Gold, the Brazilian gold explorer. Acquired 500,000 shares in CBR.v at CAD\$0.205 on March 27th

The Portfolio Move

The cash balance shrank to a new low of \$137,000 at month end. The Model Mining Portfolio showed a strong gain rising from \$4.44mn at the end of February to \$4.63mn at the end of March.

Aspermont – Betting on the Shovel Sellers

The old adage of the California goldrush (and most artisanal goldrushes) is that those who sell the shovels to the miners make way more than the miners ever do. In an information-driven investment marketplace the investors are now the modern-day artisanals and the information providers are the shovel sellers.

The modern paradigm though is that “media companies can’t make money”, which is now patently untrue, but which was true for a good ten to fifteen years when there was massive shrinkage of value in the media markets as the internet cannibalized the bottom lines and asset values of the media print titles, and as media companies delivered themselves a massive own goal via the “cult of free” (essentially where online content was given away). Rupert Murdoch (WSJ, The Times) was one of the first to spit the dummy on free content and has long been an advocate of paywalls, he was followed by much of the financial press (FT etc) and more recently the mainstream press has grappled with the issue.

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The more that a media company was selling a unique product (investment information or ideas or political intelligence) the easier it was to paywall than selling something that didn't make money (stories on wars in Syria, tsunamis in Thailand). Still the paywall model is not like falling off a log. The East Germans put up a wall but it didn't do them much good!

The model must be nuanced for each readership base and it's not as simple as taking the same approach one did in 1993 and then just ring-fencing it with a log-in name and password. The "cult of free" still exists and other aspects, particularly of the finance and mining world, have moved on and the media content must do so as well. Parts of the old model are gone for good. Readers have new demands and needs. Content has to be different and, moreover, better than what is available for free. Artificial Intelligence (AI) and algorithm-driven marketing systems, based off continual digital data capture and behavioral analysis, are revolutionizing the way media businesses attract, retain, upsell and cross monetize their audiences.

Having long-known The Mining Journal we were less cognizant of the media group to which it belonged until 2018. Certain changes in the world of mining conferencing had intrigued (and indeed effected) us so in the process of learning more we dug down into the ownership of the multifarious media outlets that claim to service the mining space. It turned out that the owners of Mining Journal and some other assets was an Australian group called Aspermont. Despite the Australian aspect, Aspermont is UK headquartered, listed on the Australian Stock Exchange (ASX: ASP) and with offices in London, Perth, Sydney, Denver and Belo Horizonte. Its coverage is across the mining, energy and agricultural industries.

Old Model/New Model

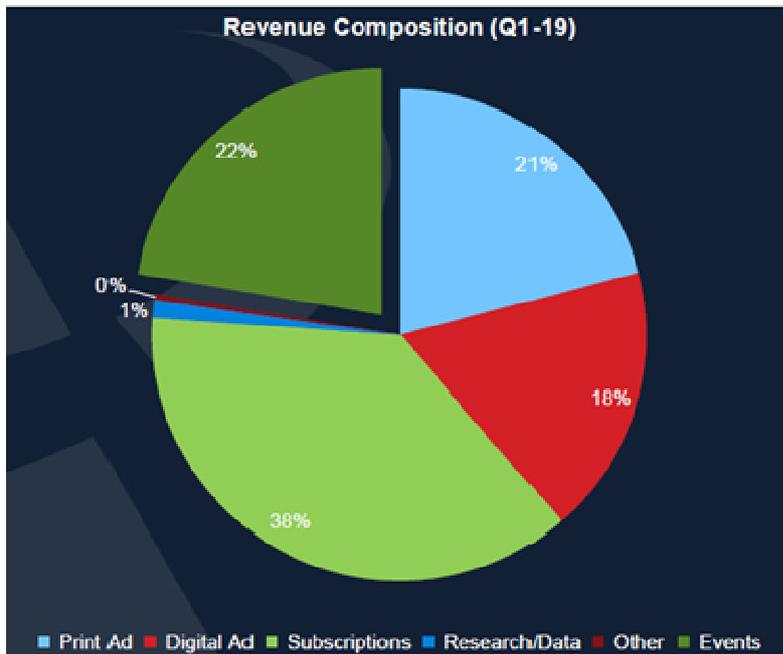
Aspermont delivers subscription-based content through digital, print, conferencing and events channels. Its aim is to deliver Business to Business (B2B) information services across the sectors that it serves, supplemented with additional online resources.

The company's recent digital transformation (codename: Project Horizon) has completed its primary phase and is now focused significantly on marketing automation.

The company is now debt-free having, over the past two years paid down over \$10mn in debt. The problematic Mines & Money events business was sold (with \$5.5mn received and balance of about \$6mn due mid 2019) and the company launched a new brand (with dare we say it, a competing) conference product.

ASP has been reweighted towards being a digital distributor (print is below 22% of revenues) as the Project Horizon media technology platform needed for a B2B model is now fully operational.

The current breakdown of revenues between the different categories is shown below:

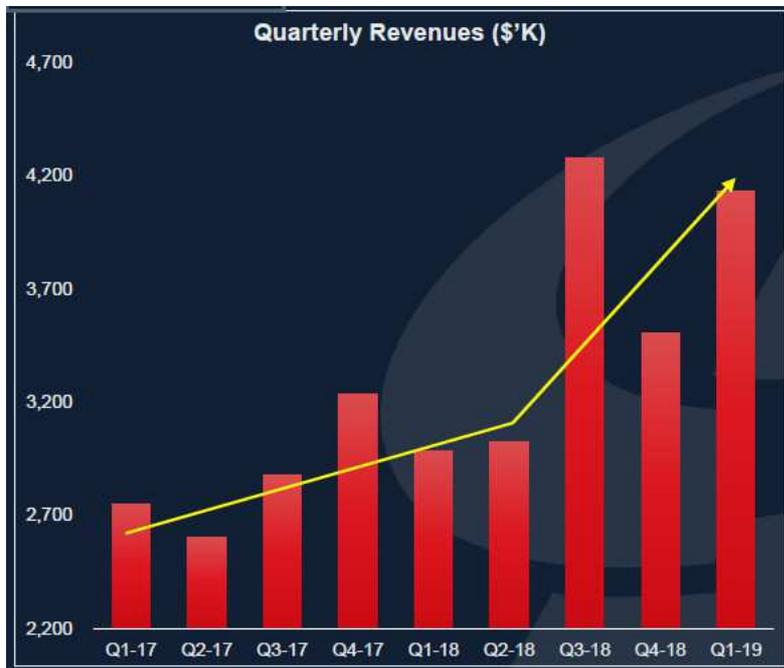


Events are likely to be climbing again from here on out. The research/data business (including the newly launched Mining Journal Intelligence) is obviously also a growth area and can exploit the “back book” of material that such a long-established media group has at its disposal.

Some of the performance metrics over recent years can be seen below:

Subscriptions	June'16	Dec'18
No. of Subscriptions	7,158	8,208
ARPU	\$623	\$833
Renewal Rate (%)	73%	84%
Annual Contract Value	\$4.5m	\$6.8m
Lifetime Value (LTV)	\$16.5m	\$44.3m
Year End Financials	June'16	Sept'18*
Group Revenue	\$12.6m	\$14.0m
GP Margin	48%	54%
EBITDA	(\$1.1m)	\$0.2m
Cash Flow from Ops	(\$0.3m)	\$0.6m
Net Debt	\$8.2m	\$0.0m

Subscriptions have clearly been gaining strongly. ARPU is up nearly a third. The renewal rate, an



overridingly key metric, is very strong.

Now the focus is swinging towards strengthening of the bottom line.

Revenues in absolute terms have been progressing well as can be seen on the bar graph at the left:

With its traditional bases being the UK and Australia (with an important title in Brazil), the group still has a glaring lack of presence in North America and on the ground in South Africa. Covering African oriented stocks listed in London and reaching

London investors interested in Africa (two of MJ's strengths) is a different thing to having a serious presence in South Africa, where there is still a sizeable mining community and mining finance presence.

The North American presence has been hard won but the efforts paying off as the chart shows with North American digital subscriptions soaring.

Issues Still to Address

We are not entirely sanguine though. The company has been mighty slow in resolving the issue of its low-denomination stock. The company has had enough good news to do a massive consolidation and move itself into the realm of serious media stocks.

Then there is the issue of the listing location. An ASX-listing is clearly not doing this company any favours and it should list pronto in the UK where its headquarters is and where its main title is best



known.

One needs to also focus on the issue of industry rationalization (or bulking up). The company is seemingly waiting for some of its competitors to expire. Certainly that is the cheapest path, but we would note that South Africa and Canada are weak spots for Aspermont and they may not go away and indeed may actually get their own champions that find their mojo back, which might make entry (or gaining a better foothold) a more difficult task in the future.

Despite these few reservations we have a **Long** call on this stock with a 12-mnth target price of 40 cents.

Parting Shot

Our last Monthly railed against the mega-merger of Barrick and Newmont which has fortunately since come to grief. Unfortunately the mere fact that dumb deals of such size still are posited shows that many in the mining space still have not learnt the lessons of 2005-8 and 2009-12. This leaves us wondering what part of the old adage that “those who do not remember history are destined to repeat it” do these managers not get? Of all people we would have expected the crew at the top of Randgold to have been smarter and better than this... hey ho...

So this is seen by some as being the best of times and the worst of times. Very Dickensian. As we noted above with Cabral Gold, the gold price is up, it already has a substantial resource in the bag, it's discovered some excellent upside over the last six months and yet it, like so many other gold exploration juniors, is actually lower. The base metals have rallied but this has scarcely moved many names, including producers. The new paradigm is that metals prices go up, stocks go down, metals prices go down, stocks go down even more. While cannabis still has its *aficionados*, we cannot go on eternally blaming the demonic weed for what ails the mining space.

Despite all this, we fundamentally feel bullish about the metals and mining space... even the EV metals are dogs that will live to fight another day. We cannot help wondering though whether the tumbling property markets in Vancouver and Melbourne and Sydney aren't colouring some perceptions in the market places of Canada and Australia, just as Brexit is making eyes swivel in the London space. But the nexus between mining and property prices is a theme we have touched on before and shall do again soon.....

Mining Model Portfolio as at: 31-Mar-19

Security	Initiated	Currency	Avg. Price Current	Portfolio Weighting	Increase in Value	12-mth		
Long Equities								
Various Large/Mid-Cap	Teck Resources (TECK.B)	5/29/2009	CAD	22.46	30.92	7.10%	37.70%	\$38.00
	Sherritt International (S.to)	7/11/2013	CAD	1.28	0.42	2.50%	-67.10%	\$1.00
	Metals X (MLX.ax)	5/29/2014	AUD	0.67	0.24	1.70%	-64.20%	\$0.80
Uranium	Uranium Participation Corp (U.to)	10/20/2010	CAD	5.36	4.46	5.90%	-16.80%	\$6.00
	GoviEx (GXU.v)	6/29/2015	CAD	0.08	0.16	3.40%	94.70%	\$0.50
Zinc/Lead Plays	Zinc ETF (Zinc.L)	6/2/2010	USD	7.63	8.78	7.00%	15.10%	\$11.00
	NorZinc (NZC.to)	12/9/2011	CAD	0.82	0.085	0.20%	-89.60%	\$0.22
	Myanmar Metals (MYL.ax)	11/29/2018	AUD	0.06	0.08	2.70%	33.30%	\$0.13
	Ascendant Resources (ASND.v)	10/31/2016	CAD	0.49	1.00	5.00%	104.50%	\$1.70
	Telson Mining (TSN.V)	3/19/2018	CAD	0.79	0.36	2.20%	-54.40%	\$2.00
Silver	Excellon Resources (EXN.to)	11/8/2018	CAD	0.74	0.85	3.00%	14.90%	\$1.35
	Southern Silver Exploration (SSV.v)	8/25/2016	CAD	0.49	0.19	0.80%	-60.80%	\$0.35
Gold Producers	Para Resources (PBR.v)	2/17/2017	CAD	0.23	0.2	1.80%	-13.00%	\$0.58
	Westgold (WGX.ax)	12/6/2016	AUD	2.01	1.26	2.00%	-37.30%	\$1.50
Copper Producer	Coro Mining (COP.to)	2/23/2015	CAD	0.03	0.11	1.90%	266.70%	\$0.15
Coking Coal	Colonial Coal (CAD.v)	6/4/2018	CAD	0.35	0.49	3.50%	40.00%	\$1.10
Beryllium	IBC Advanced Alloys (IB.v)	4/29/2016	CAD	0.3	0.26	0.50%	-13.30%	\$0.35
Tungsten Producer	Almonty Industries (AIL.v)	7/31/2015	CAD	0.36	0.8	7.10%	120.70%	\$1.00
Copper Explorer	Asiamet Resources (ARS.v)	4/28/2016	CAD	0.05	0.07	1.90%	41.00%	\$0.12
	Phoenix Global Mining (PGM.L)	9/28/2018	GBP	0.35	0.15	1.10%	-57.10%	\$0.74
	Panoro Minerals (PML.v)	1/22/2018	CAD	0.37	0.21	1.10%	-42.50%	\$0.65
	Argonaut Resources (ARE.ax)	11/22/2018	AUD	0.02	0.02	1.70%	11.10%	\$0.45
	Western Copper & Gold (WRN.to)	4/25/2017	CAD	1.57	0.76	1.30%	-51.60%	\$2.74
Vanadium Developer	Tando Resources (TNO.ax)	11/23/2018	AUD	0.11	0.11	2.40%	0.00%	\$0.50
Lithium	Neometals (NMT.ax)	7/31/2014	AUD	0.3	0.23	3.70%	-24.10%	\$0.45
	Lithium Power Intl (LPI.ax)	10/25/2017	AUD	0.44	0.21	1.10%	-52.30%	\$1.38
Scandium Explorer	Scandium International (SCY.to)	8/23/2016	CAD	0.14	0.16	1.70%	14.30%	\$0.50
	Platina Resources (PGM.ax)	10/25/2018	AUD	0.07	0.07	2.30%	7.70%	\$0.18
Gold Explorer	Banyan Gold (BYN.v)	11/14/2017	CAD	0.06	0.04	1.60%	-35.50%	\$0.15
	Cabral Gold (CBR.v)	3/27/2019	CAD	0.21	0.21	8.60%	2.40%	\$0.45
	Gunpoint Exploration (GUN.v)	11/9/2018	CAD	0.5	0.42	1.50%	-15.20%	\$0.75
Graphite Developer	Talga Resources (TLG.ax)	8/25/2016	AUD	0.27	0.61	2.50%	130.20%	\$0.90
Rare Earths	Northern Minerals (NTU.ax)	6/9/2011	AUD	0.14	0.08	2.20%	-43.30%	\$0.28
	Neomaterials (NEO.to)	10/25/2018	CAD	17.32	11.76	3.10%	-32.10%	\$23.00
Mining Media/Events	Aspermont (ASP.ax)	3/1/2019	AUD	0.009	0.01	3.30%	11.10%	\$0.02
Unlisted	New Noble Group	15/11/2017	SGD	0.2	n/a	n/a	n/a	
Suspended/RTO	Cabo Drilling (CBE.v)	9/28/2016	CAD	0.025	0.015	n/a	-40.00%	
NET CASH						137,538		
Short Equities								
Shorts	NioCorp (NIO.to)	9/28/2018	CAD	0.61	0.6	62.20%	1.60%	\$0.40
	Lithium Americas (LAC.to)	10/25/2017	CAD	10.1	5.06	21.30%	49.90%	\$5.00
	Galane Gold (GG.v)	4/28/2016	CAD	0.06	0.05	16.50%	16.70%	\$0.03

Current Cash Position	137,538
Current Liability on Shorts Not Covered	250,461
Net Cash	387,999
Current Value of Bonds	0
Current Value of Long Equities	4,243,309
TOTAL VALUE OF PORTFOLIO	4,631,307

Short Equities	-6%
Long Equities	106%

Important disclosures

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