



Lithium Bull, May 1, 2017

Happy Belated Earth Day!

In a recent meeting with a lithium management team, a very successful hedge fund CIO half joked to me that his best trade in recent times was covering his short of **Tesla** at \$30 when it hit \$50. Over the last 3 years Tesla hitting 52-week or all-time highs in 1H has proven good for lithium equities, but not this year.

What's going on?

I attended last week the Toronto Benchmark Minerals World Tour, a chief takeaway of which was the re-iteration that the big risk in the market is not a lack of EV demand, but a shortage of available raw materials that will result in shortage of batteries to meet the EV demand.

This continues to be reflected in lithium prices that are either rising or leveling off very high, but not falling and certainly not crashing anytime in the next 3-4 years, if then.

I sense a traditional post PDAC lull, combined with Orocobre's downward production guidance, combined with Albemarle's oligopolistic scare tactics, combined with misguided over-supply prognosticators like Macquarie, has something to do with it. As does a perception of financial overhangs as the most advanced stage companies continue to seek to secure full funding.

Outside strategics, who continue get great deals for themselves and their shareholders, the lithium junior investor base to date has largely been long on short-term speculators and short on long-term institutional investors. 2017 and 2018 will be years in which the latter start to allocate meaningful dollars to the space as part of a broader increased risk appetite from global equity investors for small cap growth stocks in hot themes. The Russell 2000 continues to outperform even explosive tech-heavy Nasdaq.

Further, the Tesla/lithium correlation is nice and all, but distorts from the reality that it is what's happening in China that is much, much more relevant to the future cash flows of lithium development stocks. After 100 days, I expect future Trump Trades resulting from the unanticipated China/USA strong-man bromance that should be good for both US and Chinese economies, stock market sentiment and supply chains throughout the electric vehicles and battery storage industry.

Orocobre rebounded last week on quarterly results in line with reduced expectations and Pilbara's free-fall abated as well ahead of a trading halt with details surfacing about a potential \$20M equity investment and 50% off-take deal with **Ganfeng**.

I anticipate a catalyst that may break this lull very dramatically will be the completion of full financings of some of these developers – especially if they are able to secure traditional institutional investor sponsorship that has been exceptionally scarce and slow in committing capital to the lithium space.

In this Issue...

Watch **Nemaska, Pilbara, Altura** and **North American Lithium**.

Bacanora too, which has been delayed a few months, but received a meaningful validation ahead of DFS later this summer in the form of a CAD17M equity check and 10% ownership stake (with option for 19.9%) and 80-100% off-take commitment at market prices from Japanese trader Hanwa. Hanwa is leading battery chemical trader seeking to enter the lithium business and is expected to help source project debt funding as well from Japan. Recall that Toyota Tsucho did just that for Orocobre with JOGMEC helping secure very high 70% debt funding at very low 4.5% interest. Speaking of Institutional Investors, Bacanora has pursued successfully a low-key, but high impact financing strategy, having concluded two single shot private placements last year with blue-chip London institutions M&G and Blackrock.

I attended **Lithium Americas'** Investor Day last Tuesday and was surprised to hear from CEO Tom Hodgson – a conservative man I've come to know as one of infrequent words, chosen very carefully – guidance that cash in the door from their financing partners was expected in “10-15 days” and a construction decision would be made “15 minutes after that”. In Bacanora's shadow, LAC began as well to outline a vision (dream?) for their clay deposit in Lithium Nevada. Focused on a daring 50K tons out of the gate in 2022 with a flow sheet from clay straight to lithium hydroxide, if the \$1.5M investment in R&D they undertake this year demonstrates this is possible economically. Stay tuned.

During PDAC in early March, I was hunted down by some ASX lithium followers suggesting I look at **Kidman Resources** as well as **Tawana Resources**. Some comments on these below as well some observations of what's going on in the Western Australian spodumene market, the emergence of Quebec as a vertically integrated lithium hotspot, and the growth strategies of ALB, SQM and FMC.

But the crux of this latest issue is a more thematic discussion for the major **Lithium Mega Trend** that have all the ingredients of reaching a **Tipping Point** in the not too distant future.



“Bull Markets are born on Pessimism, grow on Skepticism, mature on Optimism and die on Euphoria.”

-- Sir John Templeton

Stage 1: Pessimism

Stage 2: Skepticism

Stage 3: Optimism

Stage 4: Euphoria

On September 3, 2014, during deeply pessimistic resource equity markets, Tesla announced it had picked Nevada as its location for Gigafactory #1. Western Lithium (now **Lithium Americas**) jumped 35% to CAD 88 cents that day on a speculative narrative that geographic proximity was important for lithium developers, especially one with a very large resource, pilot plant and feasibility study.

Less than one month later, Saudi Arabia started a world oil price crash, exacerbating the broader resource bear for another year. During which time a few TSX-V promoters saw the potential for white gold attempting to replicate Albermarle’s Silver Peak, in Clayton Valley, Nevada¹.

Born within such pessimism – a short 18 months ago – Citi was among the first to recognize the Electric Vehicle demand side implications in the lithium markets...



16 October 2015 | 56 pages

Lithium

The Future is Electric

- **Lithium Carbonate Prices to Rise** — We see positive demand from electric vehicles further tightening the lithium market already buoyant from consumer goods and industrial applications. Lithium carbonate prices are likely to rise to ~US\$7,000/t by mid-2017 before a wave of projects enter (and reenter) the market dampening prices but we see pricing of US\$6,000/t maintained for the rest of the decade.

...but like many others, over-estimate the rapidity of the supply response and make pricing forecasts that look silly in hindsight.

On the Templeton continuum, I believe lithium developers are currently in “grow on skepticism” while the big 5 lithium producers – ALB, SQM, FMC, Tianqi, Ganfeng are “maturing on optimism”. We are very far from “euphoric”. Note sure where I’d put Tesla though.

¹ Right idea, wrong geology and climate – too low grade, water, permitting issues, reliance on unproven technology. I’m surprised that Bloomberg, which does such excellent analysis with its Bloomberg New Energy Resources division published a widely distributed Bloomberg Business Week Magazine spread getting a lot of things right about the lithium supply/demand dynamic, but highlighting the projects in this region over far more likely ones elsewhere. <https://www.bloomberg.com/news/features/2017-03-29/the-great-nevada-lithium-rush-to-fuel-the-new-economy>

“History doesn’t repeat itself, but it rhymes” – Mark Twain

Among today’s skeptics that will drive the lithium market higher are Baby Boomers and my fellow Generation X-ers who have lived through a number of equity market busts and booms. Many of these **Aging Skeptics** are currently making false parallels to – or calling too early -- the busts that followed short booms in other *iums* or *bulk materials*.

Euphoria is the window of time that witnessed a state-owned strategic, France’s Areva, pay \$2.7B for pre-production **uranium** deposits in Africa that never got built. Lithium chemicals may catch on fire occasionally, but they are not radio-active. I’m a believer in nuclear energy as clean energy. But I also observe that Fukushima rhymes with Hiroshima, which I expect will have a continued long headwind as Energy Departments in the biggest countries of the world do cost-benefit analyses on investments in nuclear vs. other non-fossil fuel alternatives that rely on ever-cheaper battery technology.

Euphoria was a time when the *iums* that make up **rare earths** brought a mine in California to the imagination of many Nasdaq investors who learned the hard way to be careful of an investment thesis based principally on the whims of the China government deciding one day to constrain supply of a “strategic raw mineral” only to change its mind the next.

The collective decisions and investments being made over the past few years by the world’s most well-known industrial brands - Volkswagen, GM, Ford, Nissan, Panasonic, Google, Apple, Amazon, Uber etc – combined with innovative, private Chinese industrial world beaters supporting Xi Jinping’s commitment to enable his citizens to breathe, are very strong demand underpinnings to a **15+ year Lithium Mega Trend** that won’t be reversed. **A Lithium Supercycle – a Secular Bull Market.**

The rapidly growing and far from mature Chinese battery ecosystem has little in common with its infinitely larger smoke-stack steel and sunset coal-power industries. Euphoria was China’s 2000’s Keynesian stimulus spurring **iron ore, met** and **thermal coal** panic buying of mines in Australia, Africa, Brazil, Canada and elsewhere from both Chinese strategic investors and large diversified miners like Anglo American. And then China took its foot off its industrial production-led gas, just as mega billion dollar investments by the iron ore oligopoly to move hundreds of millions of tons of \$50/ton dirt came on line. I see in one segment of the lithium market – hard rock mines in Western Australia that will produce only spodumene and have started to ship DSO product – a ring of truth to the Fe comparison, but I wouldn’t take it too far. More on that below.

As Aging Skeptics watch the failure each quarter of high lithium prices to decline, I expect many will give in to the temptation to join the next Elliot Wave leg up. Meanwhile, the **Millennial Elite**, the largest, maturing and most optimistic generation in history; those who have left their parents basements, repaid their student loans and are making some coin on Wall Street, the City, Silicon Alley, Silicon Valley, Perth, Toronto, Vancouver, Melbourne, Sydney, Singapore, Shanghai, Shenzhen etc, have some investable cash. And are unburdened by much experience of a down equity market.



Millennials and The Tipping Point

Inspired by, but derelict in following, **House Mountain Partners** Chris Berry's book-a-month New Year's Resolution, I read on a Mexico vacation over Easter Break a few chapters of Malcolm Gladwell's *The Tipping Point*. I was then privileged to share my 20-year business school reunion at Columbia in New York last weekend with younger classes celebrating reunions 5, 10 and 15, from which I weave the following narrative.

Tipping Point ingredients (Wikipedia):

- *Connectors* are the people in a community who know large numbers of people and who are in the habit of making introductions. They are people who "link us up with the world...people with a special gift for bringing the world together.
- *Mavens* are "information specialists", or "people we rely upon to connect us with new information". They accumulate knowledge, especially about the marketplace, and know how to share it with others. According to Gladwell, Mavens start "word-of-mouth epidemics" due to their knowledge, social skills, and ability to communicate.
- *Salesmen* are "persuaders", charismatic people with powerful negotiation skills. They tend to have an indefinable trait that goes beyond what they say, which makes others want to agree with them.

A man called Mr. Lithium and company named Global Lithium LLC, must be considered a Maven. **Simon Moores, Sam Jaffe and Chris Berry** too.

Albemarle's Luke Kissam, Galaxy's Anthony Tse and Orocobre's former Chairman James Calaway can be considered Salesmen – all have enabled their companies to trade at substantial premiums compared to their peers. But is this the best the broader lithium market can do?

A trend among lithium start-ups is the advent of the **Millennial Promoter**, and, among more advanced juniors, the **Millennial Executive**. Lithium Americas' Dr. David Deak, for example, EV-angelizing repeatedly on the Benchmark Minerals Tour an updated **THINK BIG** pitch that the world will need to produce 20X today's lithium - 62M tons of lithium over 20 years (3.1M tons/year) to feed 62 Gigafactories powering 62M EVs per year globally:

<http://lithiumamericas.com/wp-content/uploads/2017/04/DDeak-Rise-and-Fall-of-Lithium.pdf>

If Mr. Lithium is a Maven, Dr. Lithium is as much a Salesmen for the lithium industry as he is an evaluator of whether LAC's Lithium Nevada can be a 50K hydroxide producer by 2022.

I suspect it will be Millennials of many stripes that will bring lithium equities to a **Euphoric Tipping Point** over the next 5-10 years. I speculate reading tweets early next decade about a book sequel from Joe Lowry's daughter perhaps entitled "**Affluent Millennial**," recounting the killings made understanding and acting on her Dad's views on lithium markets and companies.



The **Millennial Consumer** is known to be willing to pay more for products that are socially responsible and environmentally friendly – eg, solar, electric cars. **Impact Investing, Sustainability and ESG** issues are prominent **Millennial Investment Themes**.

I suspect soon that the many more **Millennial Mutual Fund Managers** and **Millennial Hedge Fund Traders** currently crowded into ALB, will begin to pay more for lithium growth equities as they come to understand that lithium developers are not only not uranium, rare earth, iron ore or coal companies, but they are neither copper, gold nor any other tired mineral their Aging Skeptic bosses have more experience losing money with than making.

Millennials need to convince these old dogs that lithium is a new trick. Manufacturing and specialty chemicals businesses. Not cyclical commodities. Differentiated and opaque. Not hedgable on the LME. In severely tight supply for at least 4 years. Sustainably high margins. That trade on EBITDA, not NAV multiples. And tend to get acquired at 10-15X EBITDA multiples.

Announce Date	Acquiror	Target	Transaction value (\$M)	LTM Adj EBITDA Multiple
7/15/14	Albermarle Corporation	Rockwood Holdings Inc.	\$ 6,200	14.4
7/7/14	Archer-Daniels-Midland Company	WILD Flavors GmbH	\$ 3,100	16.4
4/12/14	Symrise AG	Diana Group	\$ 1,800	14.6
3/10/14	Minerals Technologies Inc	AMCOL International Corp	\$ 1,700	11.4
12/5/13	Merck KGaA	AZ Electronic Materials SA	€ 2,100	11.5
12/2/13	Rockwood Holdings Inc	Talison Lithium Pty Ltd	\$ 1,100	16.7
10/10/13	Platform Acquisition Holdings Ltd	MacDermid Incorporated	\$ 1,800	10.0
10/7/13	Solvay SA	Chemlogics Group LLC	\$ 1,300	10.7
7/28/13	Altana	Rockwood clay-based additives business	\$ 600	10.4
6/16/13	Cinven Ltd	CeramTec GmbH	\$ 2,000	10.4
2/5/13	Praxair Inc	NuCO2 Inc.	\$ 1,100	13.2
11/7/12	Gulf Oil Corp	Houghton International Inc	\$ 1,000	7.9
10/12/12	Ecolab Inc	Champion Technologies, Inc	\$ 2,200	11.0
6/21/12	Cabot Corporation	Norit NV	\$ 1,100	11.9
1/27/12	Eastman Chemical Company	Solutia Inc	\$ 4,700	9.1
7/20/11	Ecolab Inc	Nalco Holding Company	\$ 8,200	10.8
7/11/11	Lonza Group, Ltd	Arch Chemicals, Inc	\$ 1,500	10.5
6/1/11	Sealed Air Corporation	Diversey, Inc	\$ 4,300	9.7
5/31/11	Ashland	International Specialty Products Inc	\$ 3,200	8.9
2/16/11	Clariant AG	Sud-Chemie AG	\$ 2,700	10.3
1/9/11	El duPont de Nemours & Co	Danisco A/S	\$ 7,400	12.2
6/23/10	BASF SE	Cognis GmbH	€ 3,100	7.3
9/15/08	BASF SE	Ciba Holding AG	€ 3,800	7.8
7/11/08	Ashland Inc	Hercules Incorporated	\$ 3,400	8.6
7/10/08	The Dow Chemical Group	Rohm and Haas Company	\$ 19,000	12.8
8/6/07	Akzo Nobel NV	Imperial Chemicals Industries plc	£ 7,700	11.0
7/19/07	PPG Industries Inc	SigmaKalon Group BV	€ 2,200	11.8
5/31/07	The Carlyle Group LP	PQ Corporation	\$ 1,600	9.2
12/15/06	Court Square Capital, Weston Presidio	MacDermid, Incorporated	\$ 1,300	9.9
1/3/06	BASF AG	Engelhard Corporation	\$ 5,400	12.5
			Average	11.0
	Source: Citi, Lazard, Bank of America Merrill Lynch		Median	10.7
			Low	7.3
			Max	16.7



I wonder if the **Millennial Family Office Manager** or the **Millennial Private Equity Investor** will convince their Boomer or Gen X founders and Investment Committees of the super-normal 5-10X investment returns available if they do the work **NOW** and deploy \$25, \$50, \$100 or \$200M checks before chasing valuations much higher later or missing it entirely.

The **Millennial Self-Directed Investor** has an enormous volume of information at his or her fingertips to research what's real and what's not, and they increasingly absorb – and share -- information from new outlets in the social media ecosphere. An ingredient for lithium issuers to maintain a premium valuation over time will be to understand how to reach and communicate effectively with this investor audience.

The **Millennial Retail Broker** is very active in Toronto, Vancouver, Perth and Sydney, but much less so the United States, constrained by an unfamiliarity with and compliance restriction to bring foreign penny stocks to their client's attention.

I see a **Great Prize** for any pure play lithium developer or new producer that takes the effort to reach into the enormous and largely untapped U.S. investor universe with a **Nasdaq Listing**, preferably with a double digit stock price; this would also attract more traditional institutional investors who are currently loth to put their careers at risk advocating internally to add Australian, AIM or Canadian-listed stocks with hundreds of millions or billions of shares and sub \$1 share prices to their portfolios.

I see that Galaxy plans a 5 to 1 reverse split. Good idea, but why aspire to be only a \$2 stock? The Millennial Retail Broker in the U.S. requires \$5 or more to speak with his clients.

I hope to see more, and more ambitious share consolidations from lithium aspirants, which will help to separate several lithium contenders from the pretenders – and garner premium valuations – especially those bold enough to seize the **Great Prize**.



Vujà Dé

Steve Jobs popularized Pablo Picasso's line that *Good Artists Copy, Great Artists Steal*. I'm no artist, but will nonetheless steal from a Jobs Apple Orchard friend and mentor of mine, Robert Friedland, a Boomer lithium skeptic, to posit that what we are experiencing in the battery metals market is Déjà Vu in reverse:

Vujà Dé! ...That overwhelming feeling that nothing like this has ever happened before.

I agree with Robert's diagnosis that cobalt sulphate and nickel sulphate are also in substantial short supply. I marvel at how a few years after investing in **Clean TeQ** on a scandium thesis he has convinced a Chinese strategic Pengxin Mining to invest AUD 81M at lucky number 88 cents, a 17% premium to 20-day vwap and multiples of Robert's cost basis for his 19.9% interest. Who says there's an issue with Chinese investing off-shore? *Nobody Does It Better* – Carly Simon.

Robert has no exposure to lithium. But I expect that some of his wealthy mining promoter peers who have committed capital in the space should make another killing. To steal another line, it is lithium prices for which investors will continue to need telescopes to look up and see, while they look down nose through granny glasses at copper or platinum prices.

In 1999, in my earliest broker days, I was a big fan of Impala Platinum when it traded at a 5X PE and 8% dividend yield. I recalled then the great future expected from fuel cells. I've not much followed platinum of late, but saw that Toyota announced a strategic shift into electric and away from hydrogen last week, which I suspect may have some implications for the platinum investment thesis.

<https://finance.yahoo.com/news/hybrid-blues-china-policies-force-toyota-electric-u-171020677--finance.html>

The skeptics' chief misguided bear lithium thesis is that it is not rare in the earth's crust. That's true and generally widely known. Same can be said of copper. And we should all be thankful to know the resource is abundant at some price to feed all those lithium-fueled gadgets we love.

But greatly under-appreciated is that few lithium deposits have a truly economic collective balance of grade, impurities and jurisdiction, and that management talent capable to undertake the manufacturing process to make battery grade chemicals is exceptionally scarce. This is where the shortage lies.

Against a backdrop of rising EV penetration projections and LCE demand, I believe it is this scarcity thesis that will enable the Connectors, Mavens and Salesmen to win over the skeptics en route to a Euphoric Tipping Point for lithium over the next 5-10 years.

In one final theft, I wonder if the world will begin to think that it is new-age lithium, rather than old-fogie copper, that will be the mineral with a PhD.

Dr. Lithium, ubiquitous in all the products we most crave.

SQM vs. ALB – Lithium Growth Strategies

“The Lithium story is just beginning,” **Albemarle** CEO Luke Kissam said as he discussed plans for a potential re-start of lithium mining at King’s Mountain in Charlotte, North America two weeks ago.

<http://www.bizjournals.com/charlotte/news/2017/04/20/exclusive-albemarle-corp-may-reopen-king-mountain.html>

The article has a strongly positive read-through for **WCP** – Piedmont Lithium Project. WCP completed last month an over-subscribed AUD 5M placement to support an aggressive 90-hole, 10,000 meter drill campaign over the next few months.

Question - does ALB have the capabilities to re-start this mine? ALB currently doesn’t mine any hard rock lithium. Greenbushes is operated by a JV controlled by Tianqi.

SQM management from top down has a very deep bench of talent in engineering and design for processing lithium and potash from brines for the past 20 years. Albemarle, on the other hand, has only been in the lithium business for 2 years. The people running Albemarle acquired Rockwood Lithium and from my observation there is significant execution risk inherent in their ambitious \$750M-1B four-year capex program in an aggressive bid to capture 50% of lithium market growth:

- They have no experience as a lithium converter, but just bought an operation in China that they propose to grow capacity 3 times from 10,000 to 30,000 tons/year
- They plan a 40,000 ton/year greenfield processing plant (location TBD), but currently operate only a small 10,000 lithium hydroxide plant in North Carolina
- After delays with La Negra 2, they will now complete that and La Negra 3 expansions
- Their joint venture partner Tianqi, will double the capacity at Greenbushes, Western Australia despite showing an inability to use more than 60% of their existing capacity
- They will drill and evaluate King’s Mountain, NC resource potential

In their highly polished Investor Day presentation materials, ALB highlights how difficult it is to bring one mine into production. But suggest we should believe they will double capacity – a very significant 80K tons of both upstream and complex downstream industrial facilities -- from both greenfield and brownfield operations in four different geographies, on time, on budget and at current operating costs?

SQM, the world’s lowest cost, highest margin lithium producer has an ambitious, but significantly less risky growth strategy than this – and more believable in my view. SQM has chosen to focus on a single, super low cost, super long-lived brine deposit with blue-sky exploration potential for which it has the world’s greatest core competence. In JV with Lithium Americas, SQM will invest a relatively meager Stage 1 \$250M in their backyard - a very close 300km from where all its engineering talent live.

It is very believable that SQM/LAC will begin production in 2019, immediately start stage 2 planning, reach stage 1 name plate 25,000 tons capacity in 2020, stage 2 50,000 tons in 2022 and potentially thereafter growth to 70-80,000 tons – Cauchari has a very large and economic 11M tons of resource.



FMC's Lithium Divestment Strategy

On March 15, following ALB's Lithium Investor Day, I wrote:

One big M&A idea – pure speculation on my part -- is that ALB may acquire FMC's lithium business at some stage. It is known that FMC attempted to spinoff the unit in an IPO or sale a few years ago and its lithium growth strategy seems tepid in contrast to ALB, SQM, Ganfeng or Tianqi's. FMC's lithium EBITDA grew rapidly in 2016 and their guidance is for this to continue in 2017, which could present an opportunity for them to realize a much more attractive price than available last go around.

ALB has the means and interest to pay a high price. FMC's additional hydroxide processing is in ALB's backyard and Headquarters in North Carolina. An acquisition would provide ALB a powerful move into Argentina. And maintain oligopolistic market power and further assure their 50% share of lithium growth. In this scenario, an acquisition or JV with GXY's Sal da Vida could also make sense as a subsequent step.

Two weeks later, FMC demonstrated it is clearly focused on being a specialty agriculture player, which is very much a distinct business endeavor from specialty chemicals. The market loved its purchase of Dupont's Crop Protection Business and simultaneous sale of Health and Nutrition unit to DuPont.

According to Bloomberg, FMC CEO Pierre Brondeau said that the company will eventually spin off its lithium unit as publicly-traded company, but added that he doesn't expect to make an announcement on the matter prior to the end of 2018.

I suspect one more year for further dressing up for sale or spinoff. A transaction in which ALB buys it and/or spins off both companies' lithium businesses into the Great Prize - a US listed lithium pure play - should make bankers at Goldman Sachs, Deutsche and other ALB boosters salivate.

Or perhaps SQM or SQM/LAC or SQM/LAC/Ganfeng? Or maybe Nemaska's development goes so well there will be some strategic integration logic with their off-take partner. Many possibilities to speculate about in good fun.

As a rule, high profile M&A and financing activity in the lithium sector should keep producers and fully funded near producers at high valuations. And by 2018 the Lithium Bull should likely be progressing from Skepticism to Optimism, en route to Euphoria.



Australia Hard Rock

Apart from the uptick in lithium demand, the big scramble in Oz hard rock has been predicated by China's lithium converters seeking non-Greenbushes spodumene concentrate. Tianqi and Albemarle have told their lithium converter customers/competitors that they will no longer sell them Greenbushes feed.

A big question I have about the Talison JV's Greenbushes expansion announcement is that it would seem to produce more spodumene concentrate than can be processed by the downstream operations of their owners, Tianqi and Albemarle. So they should have additional available concentrate to again sell to other converters.

But will they buy from Greenbushes? These converters are also competitors. And some of the converters are not just converters, but vertically integrated converters/cathode manufacturers, like **Altura's** partner **J&R Optimum Nano**, \$4B market cap, listed on Shenzhen.

Tianqi and Albemarle have proven to be unreliable suppliers to competing Chinese converters. These converters are very interested in alternative sources of supply.

As Mt. Cattlin and Mt. Marion made their first shipments, this dynamic has created buzz around three new deposits in the past few months (Wodgina, Earl Grey, Bald Hill) drawing some attention away from former market darling Pilbara and most-advanced, low cost and permitted Altura.

Thrilla in the Pilbara

Like Ali/Frazier in the Philippines, I see a bit of a Thrilla in the Pilbara developing.

<https://www.youtube.com/watch?v=1R6WSAJGS5A>

With little fanfare in June last year, heavyweight **Mineral Resources**, the savvy, early mover into Mt. Marion, cut a deal to buy lithium deposits and infrastructure at the Wodgina tantalum mine owned by **Global Advanced Metals (GAM)**, a private company the Chairman of which is both a director of Mineral Resources and a partner of the private equity group Resource Capital Funds. The infrastructure included a 13-MW gas-fired power station a 387-bed camp and a mineral processing plant.

9 months later, Wodgina has made a maiden shipment of 114,000 tons of 98.5% Direct Shipping Waste (or, DSO with 1.5% lithium content) to China for an unspecified price to an unspecified customer, while MIN also updated Wodgina's resource to 121 Mt of 1.28% grade. MIN has real balance sheet and technical skills and is not a group to be under-estimated. The DSO angle looks to me as a short-term attempt to secure market share and curry favor as a reliable new supplier.

MIN's 100% ownership and activities at Wodgina seem to me potentially more valuable to MIN and competitive to their project ownership in Mt. Marion, and most certainly to their 10% holding in Pilbara. Recall that it was Mineral Resources that caused Pilbara a head ache over ROFR last year and Pilbara stock has not recovered since resolving this issue by making MIN their largest shareholder. MIN's 6-month lockup on selling PLS is soon expiring.



Meanwhile, some 8 months since PLS announced an off-take deal and equity investment at 50 cents with General Lithium, it's on the tape that prolific deal-maker Ganfeng, MIN's partner in Mt. Marion, may be taking a 5% stake in Pilbara at a much lower price for an ~50% off-take commitment. As of this morning, NY time, PLS had still made no public statement and remains in trading halt. Stay tuned.

Separately, Neometals has run into a bit of a hiccup with their planned sale of their remaining 13.8% stake in Mt. Marion for \$96M as neither MIN nor Ganfeng exercised their ROFR.

Not sure what's going on there, but in Ganfeng's case, weighing this additional NMT stake vs. a new investment and off-take in PLS and following through on LAC funding seems a much more strategic investment. In MIN's case, they told the market last year that they are sellers, not buyers of Mt. Marion - their business model is to enter and exit project equity quickly, but maintain the EPCM contract.

It will be interesting to see how the next 60-day notice period plays out. Might Neometals find an alternative buyer? Or perhaps Neometals will have to pair its stake with MIN's Mt. Marion stake and sell control – that could have a number of takers, but will any buyer want to give MIN the EPCM contract knowing they're advancing Wodgina?

This is a hard one to get one's head around.

Altura, on the other hand, seems a much cleaner story and sports a relatively low valuation. They own 100% of their mine, have a tight share register comprised significantly of management and insiders, no ties to Mineral Resources, but burgeoning partnerships with some credible and new and ambitious Chinese players on the scene in J&R Optimum Nano and Lionergy.

Elsewhere in Western Australia

There have been a few lithium development companies that I watched with great skepticism from early on only to be proven wrong by the attention and new equity capital the market has provided. Nemaska, for example, for which I am now a fan.

I may be wrong again, but am currently skeptical on **Tawana/AMAL** and its **Bald Hill** project and **Kidman** and its **Earl Grey** project having done some preliminary research and had a few calls.

Tawana's Bald Hill does not yet have a resource, let alone feasibility study. But for a AUD 25 M investment from Hong-Kong-listed Burwill, they have signed a definitive agreement to sell 100%-off-take from this potential mine for 5+ years with a plan to be in production by Q1 2018.

Burwill is a significantly loss-making \$133M market cap steel trader that has experienced a severe 42% decline in sales and has a very weak balance sheet as of December 2016

http://burwill.todayir.com/attachment/2017033123020100002766592_en.pdf

Burwill is in the midst of shedding assets and possibly raising equity capital and, though deeply experienced in steel markets, it is not apparent it has any experience or connections with Chinese



converters or battery producers. Admittedly, they did advance the first installment of AUD 3.75M, so we'll see how they progress with next installments on July 15 and September 15. And the headline two-year price agreed of USD 880 for 6% product is certainly exciting if it materializes.

As with Wodgina DSO, this deal seems to reflect some rushed behavior in a hot market, reminding me of Hong Kong limousine company Wah Nahm's twin stakes into Brockman and FerrAus in the iron ore space back in iron-ore's hey day a few years back. Proceed with caution.

Kidman stock may have fallen prey to the same uncertainty Pilbara experienced when presented with a lawsuit. Or simply yet another rotation from ASX speculators into new issues like Tawana? Marindi Minerals is claiming rights to Earl Grey.

Let's wait and see what happens at May 29 hearing, which according to one article I read may rest on whether oral and email exchange agreements constitute Binding Contracts.

Pilbara advised the market throughout the MIN legal proceeding that they believed they were on the right side of the argument, before settling the matter by issuing MIN \$50M worth of shares.

Kidman's Earl Grey asset gained some prominence in North America over a few day period last month when it showed up in an Albermarle slide deck and when an Australian news article made the rounds suggesting ALB was in Kidman's data room. I doubt ALB management was the source of that leak.

I have heard mixed opinions about Earl Grey and how realistic the downstream ambitions are. It certainly has some big fans in Australia and has defined a large resource with some nice grades. The pit is quite deep, however, especially where the high grades are – lot of overburden/high strip ratio - and they have a lot more metallurgical testing to do. We shall see.

Cold Quebec the Next Lithium Hot Spot?

Finally, a word about Quebec, not only Nemaska, but the re-start by **North American Lithium** of the mine and concentrator of the former RB Energy/Canada Lithium. According to a representative of minority owner Investment Quebec, substantial progress has been made in bringing spodumene production online this year and lithium carbonate next year. Not much information has been made available about this project, so most analysts do not forecast it in their supply models. But it seems real:

<https://www.linkedin.com/pulse/north-american-lithium-what-spectacular-turnaround-nothing-durocher>

Nemaska too has hit every milestone they've guided the market along their time line. With continued strong corporate and government sponsorship, I believe they have the potential to attract significant institutional investment community dollars that thus far have been sitting on the sidelines. If so, Nemaska could become a disruptive lithium force in 18-24 month time with substantial production of low cost battery grade lithium hydroxide from a proprietary technology.

Both Nemaska and North American Lithium benefit from being not just in the most friendly and financially supportive jurisdiction in the world, but one with green hydro power which make electricity costs some of the lowest in the world. This is a significant long-term competitive advantage compared to Australia miners for whom, based on current technologies, it is largely uneconomic to build downstream plants.

I believe the West Australia to China export route is a very well-worn path that should support more lithium spodumene producers for longer than it did for many Pilbara iron ore producers. But to the extent any market oversupply occurs some time 5-15 years from now, it will likely be due to the successes of lower cost, scaleable producers in Quebec and Argentina and perhaps Mexico, Nevada clay and North Carolina as well. By then, higher costs mines like Mt. Cattlin and Mt. Marion could be displaced, but not before they have provided significant dividends and return on capital invested from those mines.



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