



2017 Christmas/New Year's Special Rockin' Eve Lithium-ion Bull

2018-19: Lithium Nirvana

This is the 21st installment of Lithium-ion Bull and the last for 2017.

The overarching message throughout each of 20 issues available at www.libull.com was:

Lithium Heaven.

Victory Lap: *"I've seen all good people turn their heads each day so satisfied, I'm on my way."*

YES! <https://www.youtube.com/watch?v=xR4nUPviMQM>

Grunge was not very happy music. But as I struggled through the words and music of he who became the Jim Morrison of my time, Kurt Cobain, I found the following which conveys my high degree of confidence that 2018 -2019 and probably longer will be **Lithium Nirvana**:

"I'm so happy 'cause today I found my friends. They're in my head..."

...I like it (lithium), I'm not gonna crack."



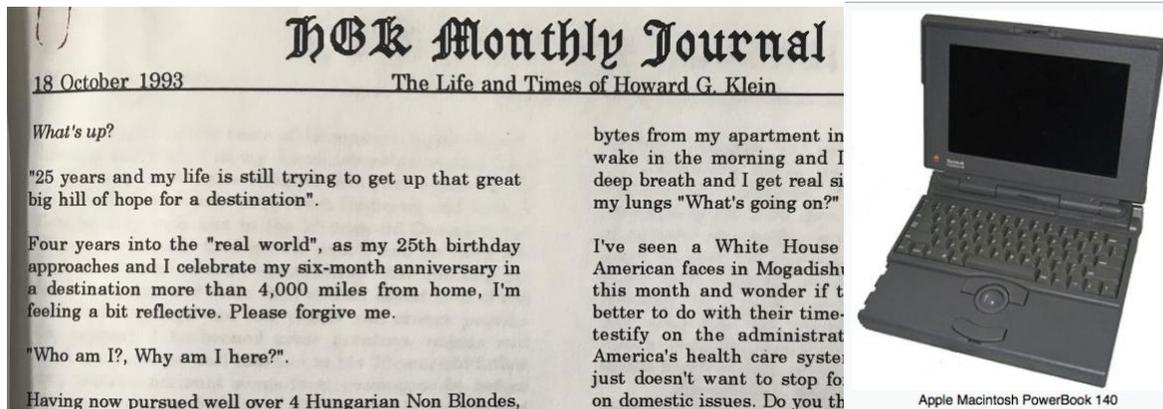
Nirvana – "Lithium": <https://www.youtube.com/watch?v=pkcJEvMcnEg>



Tales from Eastern Europe

I just arrived in Hungary with my wife and two boys, which brings me back to 1993-95 when Lithium-ion Bull lived in Budapest and worked as an analyst/salesman at a boutique advisory firm seeking to bring European and US investors into microcap public equities in the region. So much, and so little, has changed in what I do. And how I communicate.

I wrote the HGK Monthly Journal then on a Mac laptop. And mailed it to 50+ family and friends.



Four Non Blondes "What's Up?": <https://www.youtube.com/watch?v=6NXnxTNIWkc>

Reprise: *49 years and my life is still, trying to get up that great big hill of hope, for a destination...*

My wife was the office manager and 10th employee at the time for a US-venture-backed start-up payments processor called Bank Access 24 that sought to blanket Eastern Europe with ATMs – “Cash Machines”. Around 1997, with 133 ATMs installed, renamed Euronet Worldwide went public at ~\$150M – equivalent to \$1M per installed machine!

Euronet chose to list, not on the Budapest Stock Exchange, but on NASDAQ, the premier growth equity exchange in the world. EEFT was a scarce stock in the world of Emerging Markets investors – one of only a few US-listed opportunities to play this emerging region in a microcap growth equity story.

ING Barings led the IPO, which flopped – sloppily placed in hot money hands. Kind of like **Altura's** \$20M placement in mid 2016 at 20 cents which collapsed immediately to 13 cents casting an unjustified pall that hurt AJM's cost of capital throughout a critical full financing period this year.

Having returned to New York as a student at Columbia Business School, I wasn't offered EEFT's IPO shares, but in 1998 as I began work at a French bank as an institutional equity broker, introducing equities listed in Budapest, Warsaw, Prague, Russia, Israel, South Africa to mutual and hedge funds, I bought my first batch of EEFT for the first time near the bottom in 1998.

Euronet was an orphaned sub \$100M market cap stock that I couldn't help telling everyone about. Almost all the mutual funds and hedge funds who benchmark hug the MSCI Emerging Markets Free



Index politely showed me the door bringing in a not-yet-profitable non-index bet, traded on a Developed Markets exchange. But I found a few takers, in their p/a.

I persisted because I understood the business and identified it early. I got to know and trust the management. CEO was a proven jockey. Midwestern USA values. High integrity. Lots of skin in the game.

Euronet tapped the equity and debt markets a number of times to finance growth and acquisitions – and sacrificed profitability for longer than early investors like me would have liked. Over 20 years there were many opportunities to buy dips.

20-year Stairway to Heaven: ~\$5B market cap.



Euronet has been in the press a lot of this year trying to fend off Ant Financial, an affiliate of China's Alibaba who bid more than Euronet did for Money Gram. The deal is under CFIUS review. China & non-China. **Us & Them.**

Reminder. Roger Waters Us & Them Australia Tour Dates!

- Sydney: Feb 2 and 3
- Brisbane: Feb 6 and 7
- Melbourne: Feb 10 and 11
- Adelaide: Feb 16
- Perth: Feb 20



Perfect time for US investors to visit the different flavors of West Australia Hard Rock.

See Roger Waters.

And see “**WHO’s Next,**” Tier One, Best in Class Mt. Holland. “**Bargain**” Kidman “**Long Live Rock**”

And **R-E-S-P-E-C-T Altura** and compare construction progress and first production expectation to their neighbors at Pilbara. The AJM/PLS discount has widened again to 60%+ after having narrowed to 40% in October, when AJM’s weighting in ETF Dim LIT was increased.

#relativevalue

And perhaps **Cash Machine** Mt Marion, **Neometals** and Mineral Resources.

Wodgina and Mt. Cattlin too.

FWIW - Roger’s going to Europe in the Spring and Summer: <http://rogerwaters.com/tour.php>

Back to Euronet, we don’t see today many companies like theirs going public this early anymore. It’s a shame. They stay private for much longer so institutional venture capital reap all the early gains, not Joe Six-Packs who seized opportunities to make fortunes on Amazon and Starbucks and perhaps lost them as well on Pets.com.

Bitcoin Sidebar: at a holiday Christmas Party in my neighborhood last week my friend who works a mid-level job at Utility Con Edison told me how he did very well trading bitcoin this year, but was lamenting selling too early, while his NYPD police officer friend “who reads a lot about this shit” held and has made more than \$1M this year.

Americans love to gamble at casinos. Its Commander in Chief, among other things, is a Casino Magnate.

Americans love to speculate and see if they can get rich with microcap equities too. Especially in Risk On bull market times like these.

With some buying and selling along the way around a core holding, I still held some EEFT 18 years later in 2016, when I sold the remainder along with a hodge-podge of capital preservation mutual funds I picked 5 years ago, and went all-in lithium equities.

All Joe Battery Packs reading this should consider themselves privileged to have a few handfuls of truly high quality public venture capital-backed lithium equities to choose from, that have demonstrated paths from \$25M to \$100M to \$250M to \$500M to \$1B and, like Euronet, some will turn into \$5B market caps one day.

Like everything these days, though, time frames will likely be condensed - 3-5 years - not 20.



Modern Portfolio Theory Meets Lithium Thematic Investing

A successful private equity friend of mine helped turn around North American Lithium into a spodumene producer that has attracted CATL, one of the most important battery players in the world. He tends to look at the world through a prism of distress – glass half empty, plugs \$6K, maybe \$8K LCE into a financial model to say no to every project, uses 6X EBITDA multiples when comps trade at 2-3X that. Wet blanket. One of his mantras: “reality is the square root of expectations”.

Even he’s on board that the 10-15-year lithium equity bull market expectation has at least a strong 3-5 year market reality. And we are concluding Year Two. I see this as the bear case.

He and I agree that there are some comparisons of relevance to the 10-year 2002-2012 iron ore period. And we are in 2006, 5 years before 2011 peak. More on that in a moment.

What became clear in 2016 and 2017 is that, after a long **Moody Blues** period in the lithium industry, which paralleled the long-armed broader resource bear market, lithium public venture capital equity markets have begun functioning more receptively – I would say “properly”.

Moody Blues – Tuesday Afternoon: <https://www.youtube.com/watch?v=j7MY1rtPL5Q>

Tuesday Afternoon.

*I’m just beginning to see, now I’m on my way.
It doesn’t matter to me, chasing the clouds away.*

*Something calls to me.
The trees are drawing me near.
I’ve got to find out why.
Those gentle voices I hear, explain it all with a sigh.*



Top Down Lithium Nirvana

Government Policy in the World's Biggest Economies: USA & China

Risk-On Animal Spirits have returned, led by in part by Stock Market Promoter, Tax Cutter and De-regulator-in Chief, Donald Trump. Money Honey Maria Bartiromo (is it still OK to call her that in #MeToo America?) summed it up well last week in a WSJ Editorial and on Fox News:

<https://www.wsj.com/articles/dow-24000-and-the-trump-boom-1513294061>

<http://video.foxbusiness.com/v/5681870090001/?#sp=show-clips>

Echoes of Bill Clinton - "The Era of Big Government is Over"

The Era of Big Government in the Middle Kingdom is alive and well.

Xi Jinping let certain billionaires know who's boss with some high-profile shakedowns earlier this year. Capital controls largely on trophy real estate, Hollywood and sports teams nevertheless trickled down to certain companies like Ganfeng and General Lithium who were delayed or failed to fund their lithium investments in LAC and PLS.

Post China Congress and President Xi's further consolidation of power, this uncertainty has largely disappeared and been replaced with the certainty that China has made EV and Batteries a super high government priority to achieve twin goals of global leadership in the sector while getting very serious about combating pollution. I suspect the "Western World" will one day come to appreciate Chinese auto brands in the same way we do Toyota and Hyundai. Will BYD usurp BMW as the Ultimate Driving Machine?

Simon Moores at Benchmark Minerals has been right for 3 years telegraphing this Battery Arms Race, which is accelerating. I see parallels from an EV/Battery supercycle similar to China's industrial production-led super-cycle in the first years of this century. Go long what China is short – eg, low cost lithium.

Will we start to see the re-emergence of **ZERO COST OF CAPITAL CHINA?**

3 deals announced in the past month – Billionaire investor and largest solar manufacturer GCL \$30M into **Millennial Lithium**, \$100B investment fund NextView's \$50M into **Bacanora** and then full acquisition with Tibet Summit Resources of **Lithium X** for CAD 265M – is a telling sign of more to come in 2018/2019.

Sidebar: Lithium X was among the first of the Lithium 2.0 wave of Vancouver promotes.

Hats off to Brian Paes Braga, who I had earmarked a few months ago for, and it is now appropriate to present to him and his founder/partners Frank Giustra and Paul Matysek, this narrative from Canada's own Neil Young:



...Old Man look at my life, 24 and there's so much more...

...Old Man take a look at my life, I'm a lot like you...

Neil Young & Jimmy Fallon: "Old Man": <https://www.youtube.com/watch?v=H6otmy3DAK8>

While Nobody Does it Better than Vancouver-headquartered **Clean TeQ** Chairman James Bond Friedland, this exchange from Caddyshack came to mind reflecting on the repeat success of Paul Matysek, which included the sale of Lithium One (Sal da Vida) to Galaxy for about \$200M in 2010.

Caddyshack: <https://www.youtube.com/watch?v=cLkmYkEpxA>

Farhad Abasov, CEO of Millennial, worked under Paul in the uranium and potash space and has developed a good track record himself of advancing and then selling resource assets. ML's *Pastos Grandes* has a better resource than LIX flagship *Salar de Los Angeles*.



Asset Allocation

I see a great rotation underway favoring equities generally vs. fixed income and real estate. A number of the US tax changes move to favoring equities. Both commodities and small caps tend to outperform late in economic cycles as we find ourselves today.

- **Equity Trumps Debt**
- **Public Equity Trumps Private Equity**
- **Growth Trumps Value**
- **Micro/Small Cap Trumps Big Cap**
- **Love Trumps Hate**

Thematic Investing and ETFs

As demonstrated by the Leonardo DiCaprio lobby ensuring our \$7,500 Model S subsidies are safe, there is a large, influential and exceptionally wealthy segment of the US investing public – the Tesla driver and TSLA investor -- who implicitly “gets” the EV/Battery theme. The merely Mass Affluent do as well – across Boomers, Gen X-ers and Millennials. Disruptive, futuristic ETFs themes like “Robotics,” “Artificial Intelligence” “Internet of Things” “Self-Driving Cars” are hot.

- Dim LIT's up 60% YTD and grew AUM 5X in 3 months. Surely they will see asset allocation inflows in January and throughout next year.
- **Green is Good:** *“Impact Investing is growing exponentially worldwide as more funds focus on this niche,”* says Vanguard's John Bogle, the world's largest investor.

<https://www.cnbc.com/2017/11/20/jack-bogles-5-bold-investment-predictions-for-2018-and-beyond.html>



Lithium Equities Thematic

To the “over-supply” fear-mongers:

You can't have over-supply of lithium without over-investment in lithium.

- Capital Intensity per ton: \$15,000
 - 800,000 tons/y additional LCE needed by 2025-30. From 200K/y to 1,000K/y
 - = MINIMUM \$10-12B investment needed
 - Galaxy's Anthony Tse calculated only ~\$2B invested in last two years.
- Slower than expected supply + faster than expected demand = HIGHER PRICES
 - Price inelasticity by cathodes buyers of lithium = SUSTAINABLY HIGH PRICES
 - Commodity Investing 101: Commodity Equities follow Commodity Prices
 - Battery Arms Race Demand
 - Capital investment in lithium projects to remain buoyant and will likely accelerate.
 - More pure-play opportunities listed on US markets: **FMC spinout, Lithium Americas, Piedmont Lithium**
 - M&A will only get stronger:
 - After hearing from WEALTH managers in London to “Pay dividends, buy back shares, cut costs,” strong balance sheet Rio, Glencore and others will seek and be asked to provide GROWTH.
 - They, Albemarle and Chinese desperation may lead to panic buying of lithium assets.
 - ALB and SQM themselves are potential take-over targets.

Expected a lot more whispers throughout 2018 – 19:



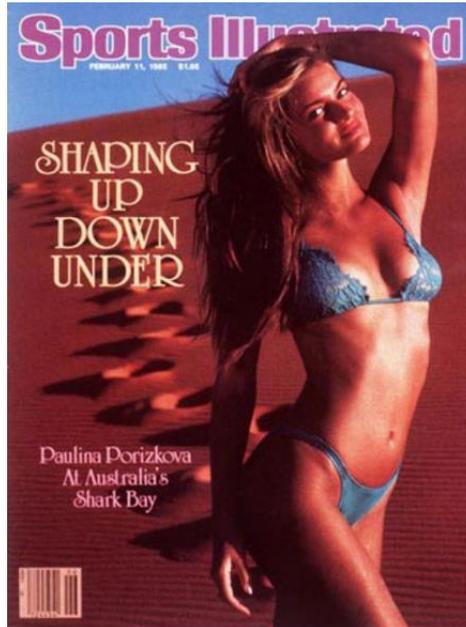
“Psst. I hear Rio is taking its lithium business very seriously.”

Watch closely: SQM/CORFO/PONCE



Back to Eastern Europe for a second. I think the attraction that led me at 25 to ask Euronet's office manager to join me in New York while I went through a full-time MBA, stemmed at least in part from another photo that adorned my high school bedroom wall.

Paulina Porzikova. Eastern European, like Jadar:



Paulina was famously married to "Let the Good Times Roll" Ric Ocasek of The Cars.

After 2012-2016's Moody Blues, Lithium Nirvana 2017-2020+ is:

Just What I Needed: <https://www.youtube.com/watch?v=naOzftxOKig>



Hedge Fund Crowdfunding?

I had a good year-end catch up with my friend Chris Berry last week. We had a bit of a laugh about uranium enthusiasts who seem every year in November to delude themselves into thinking prices will be sustainably higher because another mine is shutting down which will then make room for their greenfield. Until I see Germany sweeping its dirty little coal secret aside in return for switching back to clean and green nuclear, I'm not a big believer in U308.

We then went through all the energy metals he covers and the conclusion – asked from the perspective of an equity investor trying to play the battery theme – was that everything other than lithium - cobalt, nickel, graphite - is not blatantly obvious, while lithium, certainly into 2018, continues to be substantially obvious - it will be an even better than 2017. Joe Lowry is saying the same.

The cost of capital for lithium projects has been way too high in 2017 – strategic investors have got the best deals - **SQM, Ganfeng, J&R Optimum Nano, General Lithium, Great Wall** – though it is true their deals are win-win with their partners. I sense **Nemaska** may be a beneficiary of good timing by not having closed a full-funding last summer.

I've said it before and I'll say it again. We are now in growth equity mindset – **Maturing on Optimism**. The best opportunities lie in recognizing value in what will become a GARP and Aggressive Growth world, before reaching a **Euphoric Tipping Point**.

Over the past two years, the low-barriers-to-entry lithium commentary space has grown to include the “obnoxious and likeable” -- as someone who describes himself as obnoxious and unlikeable flattered me earlier this year. US and European “smart” Institutional sell and buy-side, with few exceptions, have largely got it wrong with big megaphones. Or sat it out, while Chinese funds bid up Tianqi and Ganfeng and strategic investors secured super-normal investment returns and long-term supply from best assets.

It's been a good time for niche boutique advisors in a cottage industry. I expect it will be followed by new active managers with battery-themed resource funds in 2018. Which brings me again to:

#seedmyfund
#notkidding
#readdisclaimer



Blondie: <https://www.youtube.com/watch?v=StKVS0eI85I>

#callme



Bottom Up KISS Principles:

The remainder of this marathon Dick Clark-like New Year's Rock & Eve Special Lithium-ion Bull will describe the logic for some of my favorite ways to play Lithium Nirvana. But please remember, I am not an investment adviser, so none of the below or above or anything I ever write in the Lithium-ion Bull should be considered investment advice. Please read my disclaimer and do your own research.

1996 - KISS Dick Clark: <https://www.youtube.com/watch?v=sb1nZREI7yk>

Augmenting an October Bull, the below is my checklist in evaluating any lithium equity.

- ✓ Assets: Size, Grade, Capex, Opex
- ✓ Management: Technical, Financial, Skin in the Game
- ✓ Jurisdiction: Developed Market or Emerging Market
- ✓ End-Product: Spodumene or Refined LCE
- ✓ Ownership: % owned, Control vs. non-control
- ✓ Off-take: contracted or not contracted, credibility of partner, duration, pricing mechanism
- ✓ Visibility: transparent or opaque
- ✓ Debt: level and terms
- ✓ Attractiveness as a takeover candidate

KISS - Rock and Roll All Nite: https://www.youtube.com/watch?v=WW2O9c_-4bo

The "Euronet Portfolio": Emerging Lithium Cash Machines

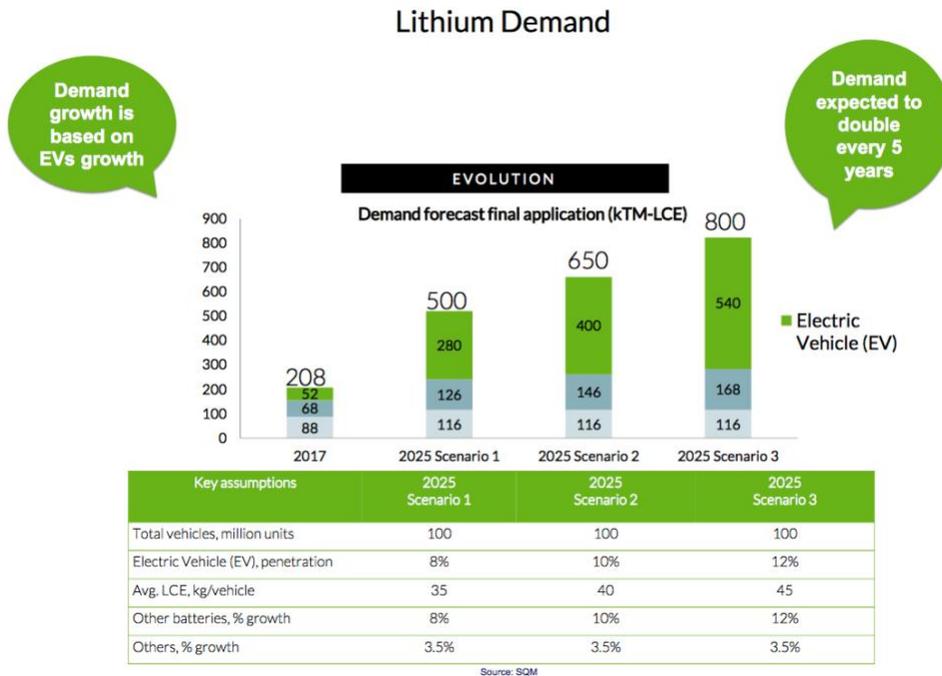
Highlights of my current thinking, some of which I elaborate on today, the rest will be for 2018:

- Big 5 Top Pick: **SQM**. Best Operators. Best Greenfield Growth projects. Political tailwind. M&A Speculation.
- **Ganfeng** for anyone who can buy Chinese A shares.
- **Free-riders with Free-birds: Neometals; Lithium Americas; Kidman**
- Fine Argentine Brines: **Cauchari Olaroz, Pastos Grandes, Tres Q, Hombre Muerto, Sal da Vida.**
- Li₂CO₃ and LiOH are NOT "just like" 62.5% Fe. But is SC6? The DSO/spodumene Pilbara vs. the Integrated Model
- Make America Great Again Stock Listings: **PLLY, LAC, FMC** spin-off
- Make America Great Again in NC and NV: **Piedmont, Rhyolite Ridge, Lithium Nevada**
- NAFTA plays: Quebec, Sonora



Smooth Operator SQM

Given the news flow lately from Toyota, Toyota/Panasonic, BMW, Bosch and much else, I suspect we will see upgrades to this traditionally conservative SQM forecast from September’s Investor Day. True Believers and EV-angelizers like Tony Seba, have much higher and sooner expectations. If Mr. Seba ever applies his mind to upstream lithium, I think he’d surely see a one-way bet.



Consider. SQM’s market value is ~\$15B. 60% of its gross margin is its lithium business and when blue-chip investment banks do their Sum of the Parts valuation, they use this metric to affix a \$9B valuation to SQM’s lithium business.

SQM’s shares have risen a lot this year mainly due to higher lithium pricing, volumes and cash flows. Unlike their peers, they demonstrated they could execute immediately in producing at 48K theoretical capacity, up from 36K production only 2 years ago. They’ve exceeded that level to 50K much of this year.

SQM stock has NOT risen, in my view, to price in to any meaningful degree SQM’s growth projects in Argentina and Australia.

In other words, the \$9B is SQM’s 50,000 tons production from Atacama and perhaps their expansion underway in Atacama to 63,000.

Sidebar: this 15K expansion is costing an astonishingly low \$50M or \$3,333 capital intensity/t compared to \$15,000 industry benchmark. This low capital intensity is not repeatable – it is a



result of de-bottlenecking existing ponds – it would require new plant and higher capex to expand further.

Cauchari should be 50,000 tons from around 2021/2022 – only 3 to 4 years from now – at which point I would be surprised if an expansion to 60-75K+ tons is not announced.

Over the next 1-2 years, I expect SQM shareholders will begin to truly price in Cauchari and use the same SQM multiple to value Cauchari's cash flows.

By 2021/2022, Cauchari at 50K tons (with expected expansion) may be worth \$9B. And LAC's 50% share, \$4.5B. Compared to USD800M LAC market cap today. 5-6X upside in 3-4 years.

Likewise, SQM's JV with Kidman at Mt. Holland, which by 2021/2022 should be churning out 40K low cost refined hydroxide and/or carbonate tons. And again, I would be surprised if an expansion to 60-80K tons is not announced by then. KDR is trading today at only ~USD 500M.

SQM's half share in LAC and KDR growth would also be \$4.5B, or, 50% more than it's its \$9B lithium business.

I expect ALB-only investors will begin to switch to SQM. While SQM and smarter investors will see in LAC and KDR an SQM de-risked pure play ex-Chile; an opportunity to deploy \$1, 5 or \$10 or 25M to potentially quintuple their money -- lucky souls unburdened by oversized AUM which constrain many to put \$100-200M to work per name and therefore crowd into lower quality ALB.

A portfolio that includes **LAC** and **KDR** – combined market cap \$1.5B today could grow collectively to SQM's \$9B in 4-5 years.

I would consider both of these core positions alongside SQM in any lithium portfolio.



Should SQM Trade at a Discount or Premium to Albemarle?

It currently trades at a discount. I believe it should trade at a premium.

I believe the **Albemarle** premium is largely due to trading liquidity, which is substantially higher than SQM's. This is a function of several factors:

- SQM is more tightly held, ALB has much more free-float.
- Perceived country risk - ALB is American company with top management based in the USA; SQM is a Chilean company with top management in Chile.
- SQM has not solved its CORFO arbitration
- ALB is only listed on NYSE and fully registered as a regular US company. SQM trades on the Chilean exchange and its USA stock is an ADR. SEC registration vs. Chilean stock regulations would lead one to think ALB has a higher degree of transparency, but any smart money investor knows SQM is says far more with fewer words in 15 minute conference calls than loquacious ALB does over 60 minutes.
- SQM has far fewer sell-side analysts covering them and many of them are based in Chile – Goldman, for example covers ALB but, surprisingly not SQM for a bank so prominent.
- ALB is in more indexes than SQM as a mid-cap American Industrial/specialty chemical company

My preferred scenario for the POT 32% stake would be a massive \$5B widely marketed secondary offering to traditional institutions, rather than to a strategic – once CORFO issue is resolved of course, which seems on its way as Julio Ponce met with CORFO one day after Pinera's election. My second preferred scenario is **RIO** takes it.

I would argue that within ALB lies substantially more Emerging Markets risk than investors appreciate – on par with SQM's EM risk.

Consider:

- **Chile:** Both SQM and ALB operate. ALB already bit the excess profit tax bullet – let's see what SQM/Ponce negotiates
- **Argentina:** SQM far more significant
- **China:** ALB far more significant
- **Middle East:** ALB in Arab Potash
- **USA:** ALB more significant
- **Australia:** ALB has large investment in Greenbushes; SQM making big investment in Kidman

To the extent Sustainability, ESG and Impact matter – and they do, increasingly, I prefer SQM's to ALB's non-lithium assets -- SQM's iodine and specialty plant nutrition is helping heal and feed the world, while ALB's oil derivatives business helps pollute it. I believe **SQM is greener than ALB**.



Final Notes on SQM

I jotted down the following at an October group presentation by SQM:

- LAC - Opex \$2,500 vs. \$13K revenue – 2-year payback on \$650M investment. **OFF THE CHARTS**
- They are operating above 48K theoretical capacity and are Sold Out.
- Salar da Atacama – enough for 50 years, Chile won't allow ownership of the strategic mineral, only rights to the ore
- POT sale:
 - The Brittan/Ponce posturing is a bit of a circus
 - Not clear that they must divest SQM – only 2% market share in Potash
 - Chinese can't influence as this 32% doesn't give much voting rights (two classes of shares)
 - If Chinese buy Ponce block would struggle to influence because severe conflicts with existing Japanese relationships.
- License: Expect an extension, no Nationalization, but similarly high tariff to ALB – excess profits tax – so Chile lower margin than Argentina and Australia at \$10K+ lithium prices; hence, full steam ahead on those and also seek fourth and possibly fifth locations.
- New Technologies – always must be weighed on risk-adjusted basis.
 - Eg, Clay in Nevada is interesting. But technical risk = higher discount rate => is it lowest capex/lowest opex?
- DRC, Bolivia – no way. Very difficult to operate in. Bolivia – magnesium a big problem. **AVZ –** logistics, infrastructure, skills a big problem. Argentina is difficult enough for them. Australia? Thumbs up. USA, Canada – ditto. Mexico, sure.
- BYD – Trucks and barges not factored in by the market



Li Fe in Western Australia – Li₂CO₃ and LiOH is not “just like” 62.5% Fe. But is SC6?

You can't have oversupply, without over-investment.

Flashback to 2013 Table below which shows \$245B of “viable” iron ore projects

We are very far from lithium over-investment.

March 19, 2013

GS Iron Ore 50

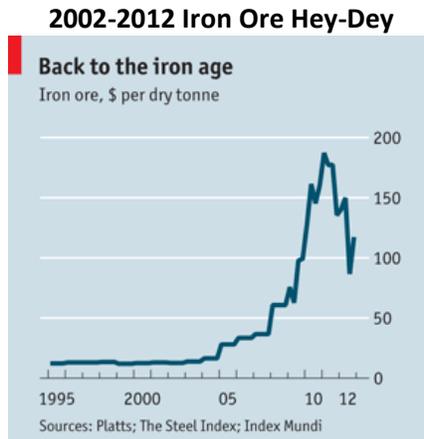
Exhibit 19: GS Iron Ore 50 covers a peak of c.1,400 mtpa of potential new iron ore production on an unrisks basis

Project	Owner 1	Country	Status	Project type	Start date	GS Capex (US\$ mn)	Unit capex (US\$/t)	Unit capex (US\$/t) 62% equ.	NPV @ 11% (incl. sunk) (US\$ mn)	NPV @ 11% (2013+) (US\$ mn)	IRR	IRR (2013+)	Iron ore price required @ 15% IRR	Planned iron ore output	Unit cost 62% equ. CFR (\$/t)	EBITDA margin
Tonkolili 1	African Minerals	Sierra Leone	Producing	Greenfield	2011	\$1,900	\$95/t	\$102/t	-\$224	\$1,329	4.2%	--	\$106/t	20.0 mtpa	\$60/t	36%
Tonkolili 2	African Minerals	Sierra Leone	Feasibility	Brownfield	2016	\$2,400	\$69/t	\$66/t	\$1,225	\$1,225	21.3%	21.3%	\$69/t	35.0 mtpa	\$55/t	37%
Tonkolili 3	African Minerals	Sierra Leone	Scoping	Brownfield	2021	\$9,308	\$207/t	\$183/t	\$401	\$401	12.2%	12.2%	\$80/t	45.0 mtpa	\$54/t	39%
Minas Rio	Anglo American	Brazil	Construction	Greenfield	2015	\$9,000	\$304/t	\$279/t	-\$3,864	\$142	6.7%	11.3%	\$121/t	29.6 mtpa	\$50/t	45%
Mont-Wright 24mtpa	Arcelor Mittal	Canada	Construction	Brownfield	2013	\$1,400	\$175/t	\$164/t	\$115	\$1,160	11.8%	80.3%	\$89/t	8.0 mtpa	\$54/t	37%
Mont-Wright 30mtpa	Arcelor Mittal	Canada	Pre-feasibility	Brownfield	2016	\$984	\$164/t	\$154/t	\$63	\$63	11.9%	11.9%	\$81/t	6.0 mtpa	\$54/t	36%
Liberia Phase 2	Arcelor Mittal	Liberia	Feasibility	Brownfield	2015	\$1,736	\$116/t	\$109/t	\$283	\$283	13.2%	13.2%	\$78/t	15.0 mtpa	\$50/t	39%
Mary River ERP	Arcelor Mittal	Canada	Permitting	Greenfield	2015	\$772	\$221/t	\$207/t	-\$138	-\$138	9.0%	9.0%	\$94/t	3.5 mtpa	\$55/t	40%
Horizon 1 exp.	Atlas Iron	Australia	Permitting	Greenfield	2012	\$810	\$90/t	\$97/t	-\$286	-\$24	-6.3%	7.9%	\$100/t	9.0 mtpa	\$59/t	28%
McPhee Creek	Atlas Iron	Australia	Pre-feasibility	Greenfield	2015	\$840	\$70/t	\$75/t	-\$522	-\$522	--	--	\$95/t	12.0 mtpa	\$64/t	6%
Forecariah	Bellzone	Guinea	Producing	Greenfield	2012	\$350	\$88/t	\$94/t	-\$74	\$140	7.1%	148.7%	\$90/t	4.0 mtpa	\$67/t	17%
Kaila - oxide	Bellzone	Guinea	Permitting	Greenfield	2016	\$2,140	\$81/t	\$85/t	\$133	\$133	12.2%	12.2%	\$78/t	26.5 mtpa	\$57/t	29%
Kaila - magnetite	Bellzone	Guinea	Permitting	Greenfield	2017	\$2,230	\$112/t	\$102/t	\$62	\$62	11.4%	11.4%	\$81/t	20.0 mtpa	\$64/t	25%
Inner Harbour	BHP Billiton	Australia	Construction	Brownfield	2013	\$15,000	\$175/t	\$176/t	\$1,411	\$8,804	11.7%	29.0%	\$89/t	85.0 mtpa	\$46/t	42%
Outer Harbour	BHP Billiton	Australia	Feasibility	Brownfield	2017	\$19,500	\$195/t	\$195/t	-\$1,611	-\$838	9.9%	10.4%	\$93/t	100.0 mtpa	\$47/t	39%
Shymanskie	Black Iron	Ukraine	Permitting	Greenfield	2016	\$1,266	\$138/t	\$126/t	-\$63	-\$63	10.1%	10.1%	\$82/t	9.2 mtpa	\$55/t	30%
Marillana	Brockman Resources	Australia	Feasibility	Greenfield	2016	\$3,373	\$182/t	\$185/t	-\$839	-\$839	7.1%	7.1%	\$96/t	18.5 mtpa	\$51/t	31%
Extension Hill	Chongqing Chonggang	Australia	Feasibility	Greenfield	2015	\$3,308	\$331/t	\$304/t	-\$2,026	-\$2,026	1.9%	1.9%	\$129/t	10.0 mtpa	\$61/t	16%
Sino Iron	Citic Pacific	Australia	Construction	Greenfield	2013	\$9,250	\$330/t	\$306/t	-\$4,005	\$723	5.3%	13.1%	\$118/t	28.0 mtpa	\$52/t	40%
Bloom Lake Phase 2	Cliffs	Canada	Construction	Brownfield	2014	\$1,365	\$195/t	\$183/t	-\$1,797	-\$1,385	--	--	\$130/t	7.0 mtpa	\$68/t	-23%
Casa De Pedra	CSN	Brazil	Construction	Brownfield	2015	\$4,500	\$161/t	\$153/t	-\$3,342	-\$2,186	--	-2.3%	\$105/t	28.0 mtpa	\$68/t	10%
Namisa	CSN	Brazil	Feasibility	Brownfield	2018	\$5,469	\$210/t	\$216/t	-\$2,768	-\$2,768	--	--	\$114/t	26.0 mtpa	\$63/t	17%
SSGPO	ENRC	Kazakhstan	Construction	Brownfield	2017	\$1,290	\$184/t	\$166/t	-\$100	-\$100	9.9%	9.9%	\$84/t	7.0 mtpa	\$54/t	32%
Pedra de Ferro (BMSA)	ENRC	Brazil	Feasibility	Greenfield	2016	\$2,553	\$131/t	\$120/t	-\$323	-\$323	9.5%	9.5%	\$86/t	19.5 mtpa	\$59/t	26%
Miba	ENRC	Brazil	Pre-feasibility	Greenfield	2018	\$3,484	\$139/t	\$139/t	-\$521	-\$521	8.6%	8.6%	\$87/t	25.0 mtpa	\$59/t	24%
Mayoko	Exaro	Republic of Congo	Permitting	Greenfield	2013	\$336	\$168/t	\$189/t	-\$165	-\$116	4.4%	5.4%	\$102/t	2.0 mtpa	\$67/t	17%
Yeristovo	Ferrexpo	Ukraine	Construction	Greenfield	2012	\$1,650	\$165/t	\$157/t	\$367	\$773	13.6%	20.9%	\$77/t	10.0 mtpa	\$77/t	30%
Chichester Hub exp.	Fortescue	Australia	Producing	Brownfield	2012	\$4,100	\$117/t	\$126/t	-\$1,711	\$2,522	1.7%	--	\$104/t	35.0 mtpa	\$60/t	19%
Solomon	Fortescue	Australia	Producing	Greenfield	2012	\$8,450	\$141/t	\$152/t	-\$1,522	\$5,294	7.7%	99.6%	\$97/t	60.0 mtpa	\$41/t	49%
Karara Stage 1	Gindalbie Metals	Australia	Producing	Greenfield	2012	\$2,800	\$280/t	\$255/t	-\$2,062	-\$75	--	9.0%	\$126/t	10.0 mtpa	\$66/t	13%
Karara Stage 2	Gindalbie Metals	Australia	Feasibility	Brownfield	2016	\$1,389	\$174/t	\$158/t	-\$433	-\$433	5.7%	5.7%	\$92/t	8.0 mtpa	\$61/t	17%
Southdown Magnetite	Grange Resources	Australia	Permitting	Greenfield	2016	\$3,340	\$334/t	\$302/t	-\$1,657	-\$1,657	-1.2%	-1.2%	\$125/t	10.0 mtpa	\$55/t	26%
Roy Hill	Hancock Prospecting	Australia	Permitting	Greenfield	2016	\$10,419	\$189/t	\$193/t	-\$4,794	-\$4,794	0.6%	0.6%	\$110/t	55.0 mtpa	\$56/t	24%
K&S	IRC	Russia	Construction	Greenfield	2014	\$940	\$148/t	\$142/t	\$120	\$457	12.2%	18.6%	\$82/t	6.3 mtpa	\$48/t	34%
Gairnskoye	IRC	Russia	Permitting	Greenfield	2015	\$579	\$126/t	\$119/t	\$93	\$93	13.0%	13.0%	\$78/t	4.6 mtpa	\$55/t	27%
Kolomela	Kumba Iron Ore	South Africa	Producing	Greenfield	2011	\$1,350	\$150/t	\$142/t	\$839	\$1,840	18.4%	--	\$80/t	9.0 mtpa	\$50/t	34%
Marampa 1a	London Mining	Sierra Leone	Producing	Brownfield	2011	\$585	\$117/t	\$112/t	\$306	\$489	30.0%	--	\$79/t	5.0 mtpa	\$64/t	23%
Marampa 1b	London Mining	Sierra Leone	Feasibility	Brownfield	2016	\$860	\$215/t	\$205/t	-\$246	-\$246	6.3%	6.3%	\$94/t	4.0 mtpa	\$60/t	30%
Marampa 2	London Mining	Sierra Leone	Feasibility	Brownfield	2018	\$1,325	\$166/t	\$158/t	-\$147	-\$147	9.4%	9.4%	\$87/t	8.0 mtpa	\$60/t	31%
Isua	London Mining	Greenland	Permitting	Greenfield	2016	\$2,600	\$173/t	\$154/t	-\$270	-\$270	9.6%	9.6%	\$87/t	15.0 mtpa	\$65/t	31%
Kaunisvaara	Northland Resources	Sweden	Producing	Greenfield	2012	\$1,275	\$255/t	\$226/t	-\$627	\$88	2.6%	14.0%	\$106/t	5.0 mtpa	\$73/t	22%
Hannukainen	Northland Resources	Finland	Feasibility	Brownfield	2015	\$500	\$250/t	\$221/t	\$142	\$142	14.9%	14.9%	\$75/t	2.0 mtpa	\$74/t	40%
Hopes Advance Phase 1	Oceanic Iron Ore	Canada	Feasibility	Greenfield	2017	\$3,000	\$300/t	\$279/t	-\$1,147	-\$1,147	5.1%	5.1%	\$114/t	10.0 mtpa	\$57/t	33%
Hopes Advance Phase 2	Oceanic Iron Ore	Canada	Scoping	Greenfield	2027	\$2,000	\$200/t	\$186/t	-\$120	-\$120	8.2%	8.2%	\$89/t	10.0 mtpa	\$57/t	33%
Hope Downs 4	Rio Tinto	Australia	Construction	Brownfield	2013	\$2,205	\$147/t	\$145/t	-\$271	-\$1,135	8.1%	57.8%	\$95/t	15.0 mtpa	\$44/t	48%
Pilbara 290	Rio Tinto	Australia	Construction	Brownfield	2013	\$10,000	\$189/t	\$189/t	-\$627	\$3,540	9.8%	26.0%	\$92/t	50.0 mtpa	\$43/t	49%
Pilbara 360	Rio Tinto	Australia	Construction	Brownfield	2015	\$11,466	\$164/t	\$164/t	\$62	\$62	11.1%	11.1%	\$84/t	70.0 mtpa	\$43/t	46%
Simandou	Rio Tinto	Guinea	Permitting	Greenfield	2015	\$16,000	\$178/t	\$170/t	-\$4,147	-\$3,426	4.8%	5.4%	\$97/t	90.0 mtpa	\$55/t	33%
IOC CEP	Rio Tinto	Canada	Construction	Brownfield	2013	\$850	\$160/t	\$153/t	\$69	\$682	11.9%	166.3%	\$85/t	5.3 mtpa	\$87/t	22%
Mbalam Phase 1	Sundance Resources	Cameroon	Permitting	Greenfield	2016	\$5,422	\$155/t	\$153/t	-\$1,727	-\$1,727	2.5%	2.5%	\$101/t	35.0 mtpa	\$52/t	40%
Mbalam Phase 2	Sundance Resources	Cameroon	Permitting	Brownfield	2025	\$4,000	\$114/t	\$106/t	-\$294	-\$294	8.5%	8.5%	\$84/t	35.0 mtpa	\$63/t	20%
Carajas +40	Vale	Brazil	Construction	Brownfield	2013	\$7,266	\$182/t	\$171/t	\$4,167	\$9,261	15.3%	82.9%	\$87/t	40.0 mtpa	\$44/t	61%
Serra Sul S11D	Vale	Brazil	Construction	Greenfield	2017	\$19,439	\$216/t	\$201/t	\$4,146	\$7,084	13.0%	15.4%	\$97/t	90.0 mtpa	\$41/t	65%
Zogota	Vale	Guinea	Feasibility	Greenfield	2015	\$9,261	\$185/t	\$177/t	-\$2,483	-\$1,144	7.3%	8.9%	\$99/t	50.0 mtpa	\$55/t	34%
Zanaga	Zanaga Iron Ore Compa	Republic of Congo	Feasibility	Greenfield	2017	\$8,000	\$267/t	\$243/t	-\$1,583	-\$1,583	8.3%	8.3%	\$102/t	30.0 mtpa	\$49/t	46%
Total						\$245,635	\$178/t	\$173/t	-\$41,550	\$10,709	8.5%	12.0%	\$95/t	1759 mtpa	\$55/t	39%

Source: Company data, Wood Mackenzie, Goldman Sachs Research estimates.



The 10-year iron ore boom was exciting! A lot of money was made for a long period of time – a lot from risk capital in New York, awash in hedge-fund hey-dey 2007, writing \$500M checks with limited diligence to fantastic promoters, some more charismatic than others. Think Eike Batista. Twiggy Forest. Gordon Toll.



I feel like today is 2006 iron ore in some respects. Iron ore price was up 2.5 times from 2004 to 2006, but rose more than 2X from that point over the ensuing 5 years.

Year	Tons Produced	Tons Growth	Growth	Fe Price	Mkt Size: Revenue	Growth		
2000	969							
2001	937		-3%					
2002	982		5%					
2003	1,080	98	10%	\$ 30	\$ 32,400			
2004	1,200	120	11%	\$ 36	\$ 43,200	33%		
2005	1,320	120	10%	\$ 62	\$ 81,840	89%		
2006	1,470	150	11%	\$ 73	\$ 107,310	31%	Lithium today?!	
2007	1,680	210	14%	\$ 80	\$ 134,400	25%		
2008	1,730	50	3%	\$ 145	\$ 250,850	87%	GFC	
2009	1,710	(20)	-1%	\$ 97	\$ 165,870	-34%	China/US Stimulus	
2010	1,870	160	9%	\$ 146	\$ 273,020	65%	China/US Stimulus	
2011	2,030	160	9%	\$ 168	\$ 341,040	25%	Peak Iron Ore	
2012	2,070	40	2%	\$ 128	\$ 264,960	-22%		
2013	2,230	160	8%	\$ 135	\$ 301,050	14%		
2014	2,330	100	4%	\$ 97	\$ 226,010	-25%		
2015	2,280	(50)	-2%	\$ 55	\$ 125,400	-45%		
	Total Growth	1,298	132%					

This is when I truly came to understand:

Commodity Investing 101: Commodity Equities Follow Commodity Prices.

Lithium is experiencing a far bigger demand shock with a similar if not substantially longer supply response than iron ore. From 2002-2012 - 10 years - iron ore production doubled. The lithium market is expected to grow much faster – 4-5X over next 10 years.



Is Pilbara an Atlas Iron of Lithium? A Fortescue?

Might Fortescue Enter the Lithium Business Beyond Just Exploration?

Will the Entire Pilbara Region be Consolidated into a New Force in Lithium?

Would ALB Buy a Pilbara Spodumene Producer Outright? – They Could Use the Mining Expertise.

Will a NextView or other Chinese Make a Full Takeover Bid for PLS, MIN, AJM as they did LIX?

Is China Consciously Keeping Spod Prices High for a Short Period to Incentivize Spod Over-capacity?

...While China Builds Converters Who Will Then Have the Pricing Power in a Few Years?

Might SC6 Fall to \$500 or \$600, While LCE Goes to \$20,000?

I plan to address these questions in the near future. Meantime:

Flashback: Atlas Iron - \$3.4B Enterprise value, July 22, 2011. 15X EV/Cashflow

Atlas Iron	2011	
Revenue (M)	\$ 585	
Gross Profit (M)	\$ 269	
GP Margin	46%	
EBIT	\$ 189	
EBIT Margin	32%	
After Tax Profit (M)	\$ 174	
After Tax Margin	30%	
Cash Flow	\$ 221	
CF Margin	38%	
Shares	900	
Price	\$ 4.2	July 22 2011 - Peak
Mkt Cap (M)	\$ 3,780	
Debt	0	
Cash (M)	\$ 365	
EV	\$ 3,415	
EV/EBIT	18	

From 2005 to 2011 Peak: 6-year Bull Run to \$3.5B market cap, \$200M EBITDA



Re: **AJM vs. PLS**, I disagree with Mr. Market that now double AUD Unicorn PLS should be worth today nearly three times what AJM is, when considering the probability of meeting project execution guidance and likely 2019 cash flows.



Somebody to Love

Argentina's **President Macri** covers Queen: <https://www.youtube.com/watch?v=myBai9fNjrM>

Argentina Fine Wine: Malbec

Argentina Fine Brines:

A bottle of white (Olaroz)

A bottle of red (Cauchari)

Perhaps a bottle of rose instead (Pastos Grandes)

A bottle of red (Hombre Muerto)

A bottle of white (Sal da Vida)

It all depends upon your appetite (Tres Q)

Billy Joel - Scenes from an Argentina (Italian) Restaurant:

<https://www.youtube.com/watch?v=okyl2MAe6Sc>

\$ORE \$LAC \$ML \$NLC \$GXY \$FMC (spinoff)

I've said more about some of the above fine brines than others, but, having evaluated and channel checked amongst the nearly two dozen new "lithium triangle brine plays," I find myself, other than SQM, a supporter today only of the above.

The beauty about really good brines is how exceptionally long lived they are. 40, 50+ years

The LIX acquisition notwithstanding, I'm certain that by 2022/23 time-frame – if not sooner - some will be singing about a large number of lithium juniors a different song from Queen:

Another One Bites the Dust: <https://www.youtube.com/watch?v=rYOWxgSXdEE>

I'm confident that those about which I write are the wheat, not that chaff.

In the case of both LAC and ORE, the Cauchari-Olaroz basin they share enables better cash flow and value extraction for equity shareholders than that available from the People's Lithium in Salar da Atacama. The exploration and production expansion potential at both companies is huge. These salars could potentially produce 200K tons with a Euronet-Cash-Machine-10-20-year time horizon. I suspect ORE and LAC might be bought out well before then. Point is, I'm not sure how many different brine salars will actually be needed.

I argued earlier this year and re-iterate my view that on absolute and relative value terms I'd prefer ORE's mix of assets and know-how, at prevailing stock prices, to GXY's. I still feel that way.



Compare current production: Mt Cattlin is among the highest cost producing asset in the lithium space and is short lived; Olaroz is one of the lower cost producing assets and is very long lived.

Compare expansion: I prefer ORE's brownfield expansion case at Olaroz to GXY unfunded SDV greenfield case.

The LIX data point at CAD 265M makes me think Sal da Vida is now worth ~ USD 500M, perhaps more. This is USD 250M more than I used in March when LAC fully funded its equity with Ganfeng/Bangchak at USD 250M valuation. I don't much value James Bay – a Free Bird worth maybe \$100M today.

I also talked earlier this year about ORE's deal making prowess. Their capital structure – 4.5% interest, 70/30 debt equity – in Argentina! while retaining 66.5% project ownership is unmatched. Further, in their six equity raises in very difficult Argentina through 2016 their average market cap was ~\$250M, minimizing dilution.

ORE has 10 years' operating IP. And more than 5% of the global lithium chemicals market share. ORE's 25%+ price uplift over the next six months equates to ~\$13,500 per ton. Conservatively assume ~\$4,500 cost and they will generate ~\$9K EBITDA per ton times ~13,000 tons = ~\$120M cash flow. ~10X 2018 EBITDA look un-demanding to me, considering potential upside to pricing and production as well as cost reduction on those numbers. I would expect a Final Investment Decision on expansion to be announced some time in 2018, so Mr. Market should price Stage 2 growth in the same aggressive manner they are currently doing with PLS.

On Galaxy, the catalyst is progress on Sal da Vida via strategic partner. Big China Wallet? Panasonic? The Germans? Tesla?



Isuru Seneviratne of **Radiant Value Fund** in New York shared with me his analysis in September on GXY. He had never invested up to that point, but over the summer when it dropped to \$1.60 a nearly 50% discount to the \$60M equity raise GXY completed at the start of the year, he did a thorough valuation analysis and saw an easy double:

Profile and Valuation

At \$1.76/sh, the market values GXY at \$705 mn (US\$557 mn). Exhibit 1 has the base-case production and cost profile while Exhibit 2 provides valuation at various lithium prices. Company insiders are buying shares.

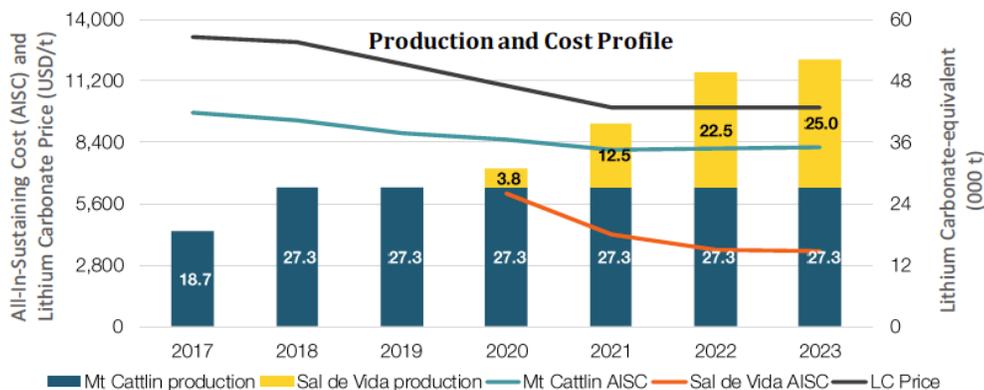


Exhibit 1: While GXY's Australian asset produces the intermediate product spodumene concentrate, all numbers have been normalized to lithium carbonate-equivalent (LCE). All-In-Sustaining Cost (AISC) includes royalties, on-site and off-site operating expenses, corporate G&A and development costs needed to maintain production, but excludes financing costs and taxes.

Price / t		Discounted Cash Flow/sh			P/NAV			Shares Out
Lithium Carbonate	6% Spodumene	Discount Rate			Discount Rate			
		8%	10%	12%	8%	10%	12%	
\$ 8,000	\$ 450	\$ 1.56	\$ 1.16	\$ 0.89	113%	152%	198%	450
\$ 10,000	\$ 550	\$ 2.53	\$ 1.91	\$ 1.48	70%	92%	119%	431
\$ 12,000	\$ 650	\$ 3.62	\$ 2.74	\$ 2.14	49%	64%	82%	409
\$ 14,000	\$ 800	\$ 4.68	\$ 3.56	\$ 2.78	38%	50%	63%	400

Exhibit 2: Net asset value sensitivity and valuation table. Assumes Sal de Vida will be 50% debt funded @ 10% interest rate. Equity dilution when spodumene prices are below \$700/t at the present price. Ascribes \$50 mn value to the James Bay project. Spodumene prices for 2018 are based on 2017 sales formula and the various scenario prices apply from 2020 onwards. For 2019, I average 2018 and 2020 prices. An Australian spodumene offtake contract signed in July 2017 established a floor price of \$550/t for 3 years. Just as \$14,000/t LP prices are unlikely for 40 years, so too are spodumene prices below \$650/t for the next few years.

He sold when it reached a "fair value target" around \$3.50.

Watching the astonishing rise of non-producer PLS and the LIX M&A valuation, I wonder if GXY might not experience similar joy that I suggest as well above for ORE.

Finally, a quick comment on **Millennial Lithium** and **NeoLithium**. I assess both to have higher quality resources at Pastos Grandes and Tres Q then LIX's Salar do Los Angeles. Ergo, the ~CAD 265M valuation paid for LIX I believe should be a rock bottom floor to ML and NLC's valuations.

Millennial's new Chinese partner GCL seems cut from similar cloth as NextView, who is buying LIX and invested in **Bacanora**. GCL is the biggest solar panel manufacturer in China and have bigger ambitions to get into battery and EV manufacturing. They recognize security of supply is critical. ML's deal with GCL is notable in that ML did not give up any off-take.



Make America Great Again

"Trump order on 'critical minerals' set to boost US mining groups"

– Dec 21, FT Headline, Henry Sanderson

<https://www.ft.com/content/c8859c62-e647-11e7-97e2-916d4fbac0da>

*"This dependency of the United States on foreign sources creates a **strategic vulnerability** for both its economy and military to adverse foreign government action, natural disaster and other events that can disrupt supply of these key minerals," Mr Trump said.*

...The US will identify new sources of critical minerals and increase activity "at all levels of the supply chain," from mining to reprocessing. Junior mining companies are exploring for lithium in Nevada and North Carolina...

A list of critical minerals will be published in the US Federal Register within 60 days, the executive order said...highlighted 23 critical minerals, including cobalt, lithium, graphite, rare earth elements, vanadium and manganese.... The minerals were chosen based on "risks to their supply" and the impact of potential supply restrictions, the USGS said. They were all critical to a "broad range of existing and emerging technologies, renewable energy, and national security," it said.

The executive order does not mention **China** by name, but the country is dominant in producing and processing rare earths, a group of 17 elements used in smartphones and some weapons systems.

A move by **China** to **cut rare earth exports** in 2010 led to widespread fears about US vulnerability. China also dominates the refining of cobalt, more than half of which comes from the Democratic Republic of Congo. *"As both a former **military commander** and **geologist**, I know the very real national security risk of relying on foreign nations for the military's needs to keep our soldiers and our homeland safe," **US Secretary of the Interior Ryan Zinke** said.*

...The executive order could be used as a pretext to scrap environmental regulations that have held back mining projects, said David Abraham, author of The Elements of Power, a book about critical minerals. "It will invigorate mining companies," he said. "**The big problem** is not finding the financing but the **slow pace of permitting**..."

U.S. & Them



Piedmont Lithium, The World's Best Located Lithium Project

Plain Vanilla Spodumene Pegmatite
40 Years Historic Production in Region
Home of ALB and FMC Lithium

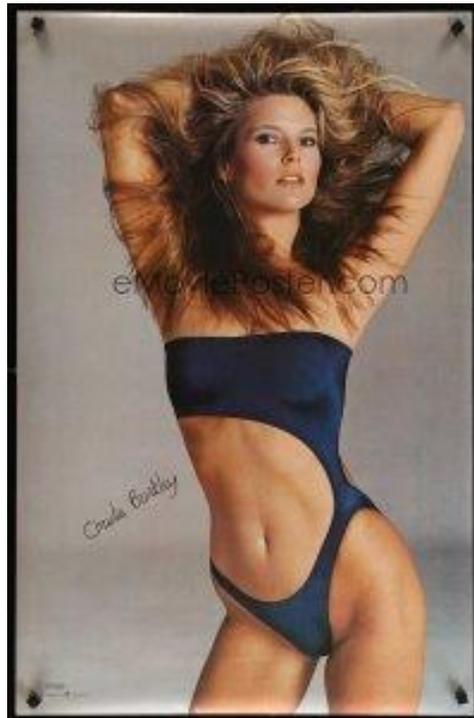
As Piedmont is now more actively trading at USD 15 per share on the Nasdaq International and has increasingly become a USA, USA, USA story, I will have to raise my politically correct antenna.

North Carolina's been in the news over the past few years as the epicenter for the transgender culture war. To date, I have suggested that when you think about Piedmont you should imagine:



American Girl Charlotte, our favorite from Sex and the City

And **Uptown Girl** Christie Brinkley who married a not too handsome Long Island schnook like me.





It worked!

*Australia's largest Institutional Investor, **Australian Super** gives notice of 5.64% stake.*

Form 603
Corporations Act 2001
Section 671B
Notice of initial substantial holder

To: Company Name/Scheme Piedmont Lithium Ltd

ACN/ARSN 002 664 495

1. Details of substantial holder (1)
Name AustralianSuper Pty Ltd
ACN/ARSN (if applicable) 006 457 987

The holder became a substantial holder on 01 / 11 / 2017

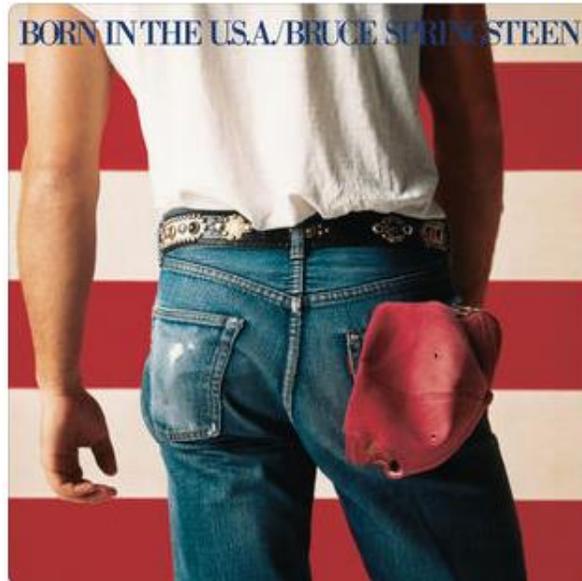
2. Details of voting power
The total number of votes attached to all the voting shares in the company or voting interests in the scheme that the substantial holder or an associate (2) had a relevant interest (3) in on the date the substantial holder became a substantial holder are as follows:

Class of securities (4)	Number of securities	Person's votes (5)	Voting power (6)
ORDINARY	31,250,000	31,250,000	5.64%

3. Details of relevant interests
The nature of the relevant interest the substantial holder or an associate had in the following voting securities on the date the substantial holder became a substantial holder are as follows:

Holder of relevant interest	Nature of relevant interest (7)	Class and number of securities
AustralianSuper Pty Ltd	SHAREHOLDER	ORD 31,250,000

I have since appealed to **Women in Mining** by introducing The BOSS:



Born in the USA
Born to Run



Some London fund managers have already had first dates with CEO **Keith Phillips**. Others, like lithium and podcast guru Emily Hersh or even Broke Millennial should put him on their radar.

Today, in the year-end spirit of all-inclusive political correctness, I seek to excite the minds of the **Transgender Investor**. **Two choices**: *Walk on the Wild Side* with Hitch-hiking Holly from Miami, FLA.

Lou Reed: <https://www.youtube.com/watch?v=RsVLlil8Vfo>

Or, Lola:

The Kinks: <https://www.youtube.com/watch?v=rw6qMk9phqU&t=187s>

Speaking of Miami. 2017 is just about to end:

Billy Joel Performs *Miami 2017 (Seen The Lights Go Out On Broadway)*:

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

En Route to visiting Charlotte, make sure to catch Billy Joel at Madison Square Garden, New York!!

Jan 11, Feb 21, Mar 28, April 13, May 23

<https://www.ticketmaster.com/billy-joel-madison-square-garden-new-york-ny/venueartist/483329/735392>

Significant Valuation Upside

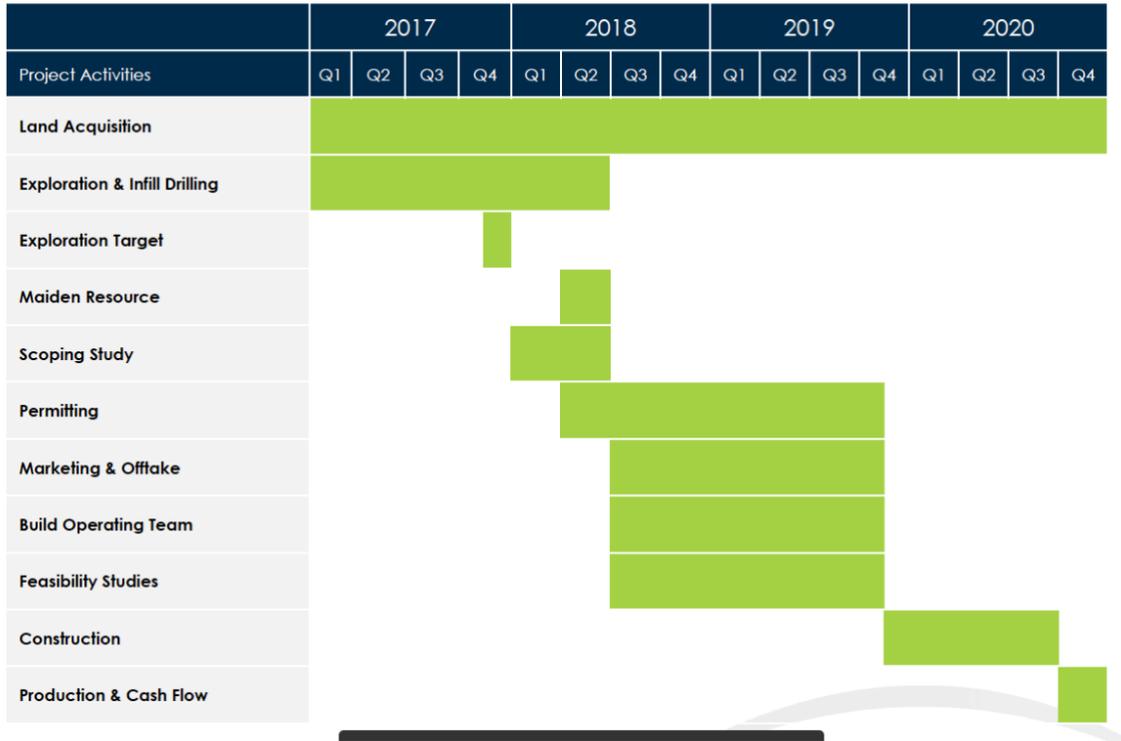
Key milestones for re-rating

- Phase 2 assay results
- Exploration target
- Nasdaq listing
- Maiden Resource
- Metallurgical testing
- PEA, PFS and DFS
- Operating permits



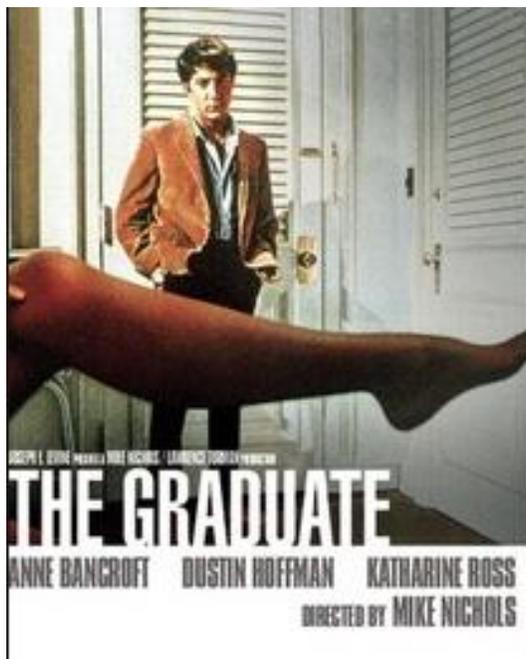


Illustrative Project Timeline





Mrs. Robinson



I called myself a moron about boron a few months ago. A bit like recent graduate Ben Braddock seduced by Anne Bancroft in The Graduate.

The heap-leach breakthrough that **Global Geosciences** announced earlier this month looks interesting.

I promise to do more work on this one in 1H 2018 and share something more than the:

Sounds of Silence: <https://www.youtube.com/watch?v=mHf7ezgwryk>

Meantime, I'm open to being seduced by Rhyolite Ridge, and have set aside the following nickname:

Mrs. Robinson: <https://www.youtube.com/watch?v=kDIAMjM-77Y>

Ahh, the versatility of Paul Simon. His music can adorn at least two Soft Rocks.

ATTENTION ALL RECENT MILLENNIAL GRADUATES! As you think about your future...

Just one word for you: <https://www.youtube.com/watch?v=eaCHH5D74Fs>

#lithiumisthenewplastics



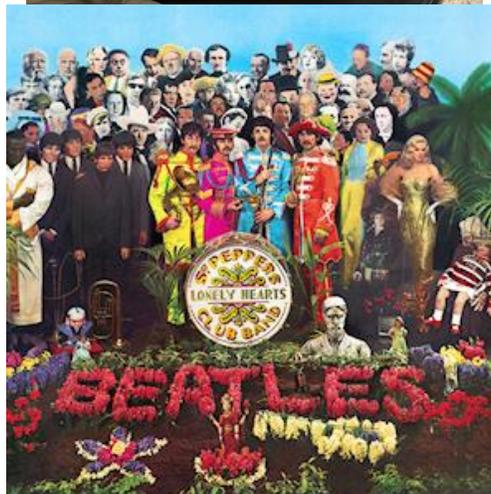
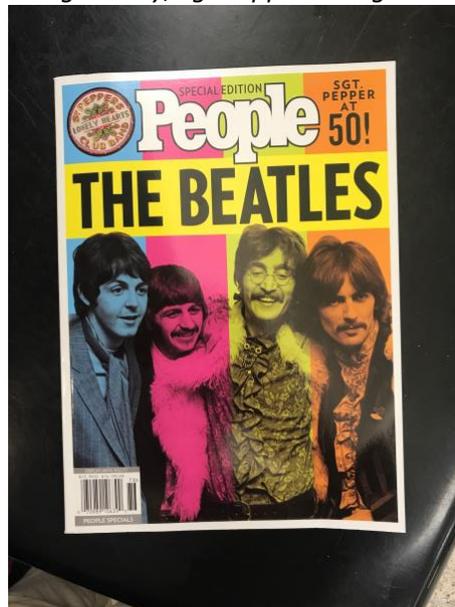
Tales from the Counter Culture & India

2017 was the 50th Anniversary for all things that happened in 1967. Which means 2018 and 2019 will be the 50th Anniversary of all things 1968 and 1969, the peak two-year Classic Vinyl period that gave rise to the Woodstock Generation. Look forward to future Lucy-in-the-Sky-with-Diamond-like narratives along the ascent to Lithium Nirvana.

Prediction: The Burning Man will attract some recently minted Millennial lithium multimillionaires.

Speaking of LSD, an important milestone passed this year in Rock and Roll History, as yet uncommented by the Lithium-ion Bull.

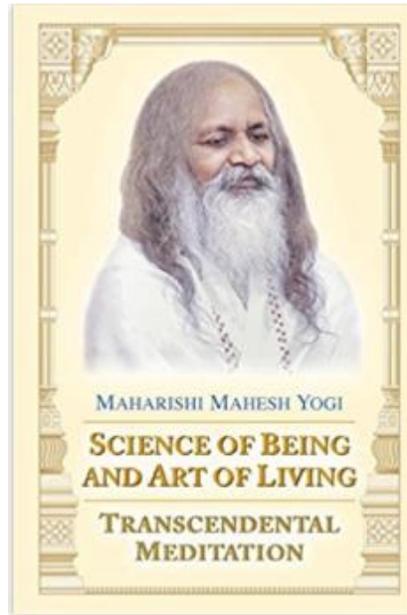
"It was 50 years ago today, Sgt Pepper's taught the band to play"



As we enter the time of year where most everywhere in the world they think and speak about Peace...



...I recall when my now 87-year-old Dad, when he was in his late forties like I am now came home with this book, got hooked, and taught me, then 10 years old. He's been practicing TM ever since. I took a 36-year gap and have been an adherent and strong proponent since 2014.





The Beatles in India



Celebrating and exploring the Beatles' most creative and transformative period — in Rishikesh with Maharishi

Paul McCartney: <https://www.youtube.com/watch?v=h9CzJkxKKd0>

Ray Dalio calls TM 'the single biggest influence' on his life. TM taking over Wall Street:
<http://www.businessinsider.com/wall-street-trend-transcendental-meditation-2016-10>

Star Trader talks TM: CNBC: <https://www.youtube.com/watch?v=xVmqQb-kNs0>

Larry King: <https://www.youtube.com/watch?v=0icNZnUxYo0>

Ellen DeGeneres: <https://www.youtube.com/watch?v=UO5L6d61Pg0>

Howard Stern & Jerry Seinfeld (Two schnooks like me from Long Island):
https://www.youtube.com/watch?v=nL_m5X-YaHM

Howard Stern Interviews Maharishi 1985:
<https://www.youtube.com/watch?v=GJQweEsgupM>

Maharishi, the 7 States of Consciousness: <https://www.youtube.com/watch?v=ScwYJ7GHixw>



Yoga! Yoga! Yoga!

Animal House: <https://www.youtube.com/watch?v=y1Mk7idVfcA>

Since early October, I have added a relation to TM 3 times weekly to my mental and physical well-being:

Maharishi: Yoga & TM: <https://www.youtube.com/watch?v=aPXGgrlt9VM>

Like my father 40 years ago, I've become instantly hooked to the point I Tweet about it.

After Christmas in Budapest, I'm going to Israel over New Year's with my wife and eldest son, who just became a Man. As we embark upon this discovery of my side of the family's heritage, I'm finding it a bit of a ritual, while a significant part of my enjoyment of TM and yoga has been a connection with the spiritual. No issue if my Man chooses to be Buddhist or Hindu one day.

My Yoga Instructor ends each class with after a final cross-legged position **Aaaaah - (Lithi)- Uuum.**

Peace.

Peace to the Universe.

Peace to our World.

Peace to all who suffer.

Peace to your family and all people in your life.

Infinite amounts of Peace.





As you meditate on all that, think about January 2018 Asset Allocation and recall:

2018 USA TAX REFORM STIMULUS = RISK ON

OPEN CHINA WALLET COULD = ZERO COST OF CAPITAL CHINA

Commodities and small caps tend to outperform late in economic cycles as we find ourselves today.

- Equity Trumps Debt
- Public Equity Trumps Private Equity
- Growth Trumps Value
- Micro/Small Cap Trumps Big Cap

**Disruptive Lithium-Fueled Electrification
Make An Impact**

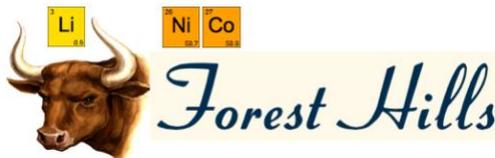
Or, if you prefer...

Give Peace a Chance - John Lennon: <https://www.youtube.com/watch?v=0yU0JuE1jTk>

Happy Holidays and New Year!

www.libull.com

Twitter: @HowardKlein10



Li = Lithium

Bull = Animal

TM & Yoga = Spirits

Final homage to Tom Petty, Gregg Allman and Roger Moore:

Knocking on Heaven's Door - Tom Petty: <https://www.youtube.com/watch?v=dTYaN4cK1H8>



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