

HALLGARTEN & COMPANY

Site Visit Note

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Lithium Power (ASX: LPI)

Strategy: LONG

Key Metrics	
Price (AUD)	\$0.475
12-Month Target Price (AUD)	\$1.100
Upside to Target	132%
12mth hi-low	\$0.23495
Market Cap (AUD mn)	\$93.053
Shares Outstanding (millions)	195.9
Fully Diluted (millions)	301.5

Lithium Power

The Power of Persistence

- + The Salar de Maricunga looks like being the "next cab off the rank" in the Chilean Lithium space
- + First mover advantage at Maricunga goes to Lithium Power as the other two stakeholders in the *salar* are essentially inactive
- + Infrastructure is exceptional for such an "isolated" location with power to site (courtesy of Kinross) and road access to ports being upgraded at government expense
- + Site visit makes clear that this project is likely to be the "next big thing" in the Lithium space where problematical mineralogy and fractured ownership bedevil so many players
- + Partnership with the Borda economic grouping plugs the project into the very highest echelons of the Chilean oligarchy
- + SQM's travails with the government mean that a potential spoiler may no longer be a threat
- Capex estimated (awaiting PFS confirmation) at nearly US\$500mn is not bite-sized
- * Chile, perversely, is off the beaten track for Lithium-watchers as it has traditionally been seem as the exclusive preserve of the now fast-fading "cartel"

The Power of Persistence

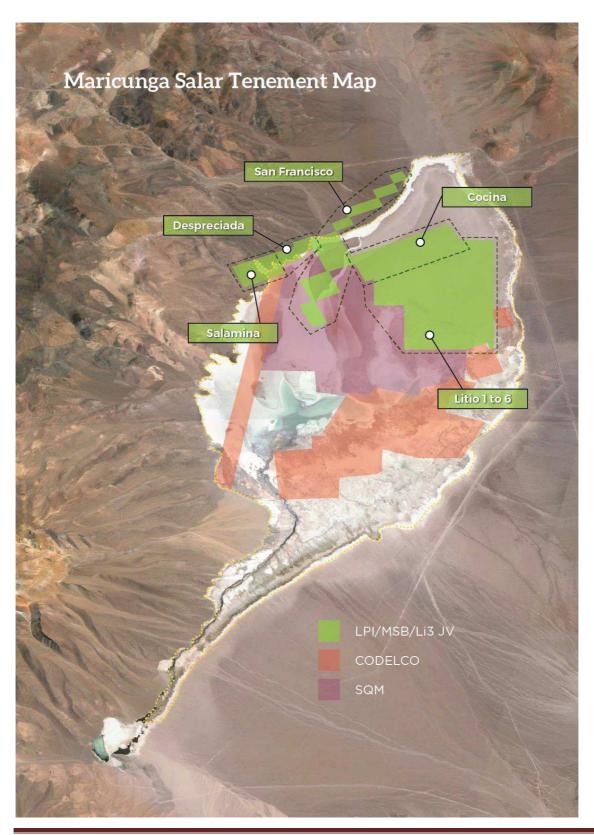
In mid-October the management of the company took a group of analysts, investors and brokers from Australia and London on a site visit trip that commenced in Santiago and with the final destination being the Salar de Maricunga (via Copiapó). The *salar* that Lithium Power International intends to exploit lies at over 4,000 metres near to the Argentine border in the high Atacama desert one of the driest places on the planet.

This note does not intend to analyse the project (that being left for a potential future full research piece) but rather to relate observations arising from the site visit.

Maricunga JV

LPI entered in September 2016 into a 50% JV with Minera Salar Blanco (holder of 33.3%) and Li3 Energy (17.7% - now absorbed by Bearing Resources) to explore and develop the Maricunga lithium brine project. Maricunga is the most advanced lithium project in Chile. Its direct comparable is the famous Atacama lithium brine deposit (exploited by SQM and Albemarle).

The Maricunga project lies to the south of the Atacama Salar. The Maricunga *salar* is located 170km north-east of the mining town of Copiapó and 250km from the Chilean coast. In addition, it is adjacent to International Highway 31, which connects northern Chile and Argentina. The surface area is covered by concessions held by SQM and Codelco, as can be noted on the map on the following page.



Itinerary

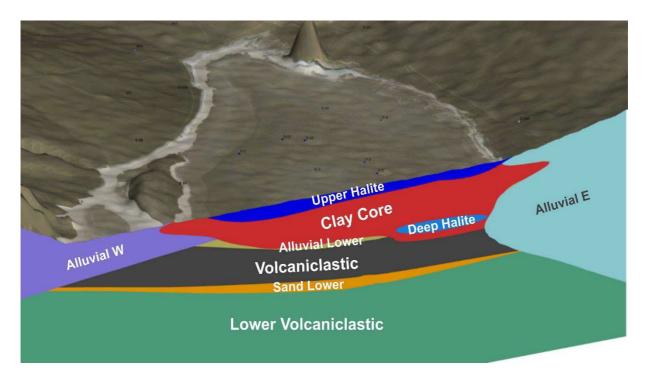
The proceedings began at a dinner on the Monday evening at which the group was (briefly) addressed by the management and with a contribution by the Australian ambassador to Chile. The dinner was primarily an opportunity to meet Martin Borda, the local partner. Hallgarten managed to monopolise him for the evening.

The Tuesday morning was dedicated to briefings by various of the company's management (both Australian- and Chile-based) on the technical aspects of project, infrastructure, the political dynamics of Chile and the current ownership structure. After a lunch the group flew to Copiapó, which sits at the bottom of the valley at the head of which is the *salar* complex.



Upon arrival there was a session with an array of core boxes that had been shipped to the hotel. This was novel (unlike more core viewings) in that this core had been obtained by sonic drilling rather than the more humdrum methods used elsewhere. The reason for this was to maintain as much of the liquid in the core to gauge the porosity of the material and to minimize the contamination that arises from the use of drilling mud and fluids in other drilling techniques. The sonic drilling involves the lifting of core in short sections (3 metres) after it's been drilled with plastic tubing being inserted around the core to keep the essentially crumbly material intact for analysis. This is then capped at the ends to keep the liquid component within the sample and preserve it from the desiccating environment at the high altitudes of the project site.

The session was also illuminating in that it highlighted, in a tangible form, the various layers of the deposit that have accumulated through paleohistory and the way the different layers help (or hinder) extraction due to their differing porosities.



Above can be seen the various deposit horizons. The wide variance in porosity between the different layers is evidenced in the table below.

Geological Model	Drainable Porosity
Upper Halite	6.5%
Clay Core	2.2%
Deep Halite	5.3%
Alluvial NW	14.8%
Lower Alluvial	6.3%
Lower Sand	6.0%
Upper Volcaniclastic	10.3%
Lower Volcaniclastic	10.3%

The next day the expedition set out early for the site. The map that flows shows the route to Maricunga. Despite what Google Maps claims the trip took 3.5 hrs max and that was with three obligatory "acclimatization stops" as the height difference between Copiapó and the project site is over 3,000 metres.

The road was in excellent condition most of the way and the convoy consisted of three pick-ups/4*4s and one mini-bus. The few parts where the going was rocky was due to recent flash floods having swept away parts of the road and culverts along it. While rain is infrequent when it comes it can be devastating as there is no vegetative cover to speak off and the run-off is almost total and very swift.



Settlement to the east of Copiapó was virtually non-existent, after the first few kilometres, as economically there is nothing to do there and nothing grows. In the last 150 kms there two shacks to be seen and a small area with some underground springs feeding a tiny stream that supported a population of donkeys. We witnessed only one bird on the whole journey and no fish in whatever stream we stopped at. This area is the epitome of desolation.

However, the scenery is also spectacular (see pictured at right) particularly as the geology has largely been formed without recent action of hydrological forces.

Along the road (for most but not all the route) runs



the high-tension power supply to Kinross' mine which will be at the disposal of Lithium Power International. The following two photos show the high tension line to La Coipa and then the smaller

voltage extension beyond La Coipa which runs to a pumping station beyond Maricunga. It is the smaller scale line which will be at LPI's disposal. The economic savings and details of the costs of uage will be discussed if we initiate coverage.





Below is one of the rest zones. It admonishes travelers to "Take a breath". Note the name Vecchiola in the top left hand corner.



One of the rest stops was located at Kinross's La Coipa open cut mine. This has been shuttered for several years now but is planned to reopen as an underground operation (known as Phase &) which is expected to have a 5.5 yr LoM.

Despite it being well past the snow season there was some snow cover still on the peaks. During the winter there are intermittent blizzards that can close the roads for several days but it is not constant coverage.

Just before arriving at the salar the road passes over a ridge (another rest-point) which represented the highest point of the journey. From here one can look down towards the salar. The rather vertiginous and, literally, breath-taking view can be seen at right.

The road descends from this point down to the salar on the "shore" of which stands the very substantial customs checkpoint for the Chile/Argentine border, despite the fact that the point at which the road crosses the border is still some 70 kms away. The border though is quite close to the salar.



The image below shows the *salar* (not when we visited) with the shallow coverage of water during the snow-melt period.



The first stop at the *salar* was the work camp for morning tea and a bathroom break. We then went to inspect the trial evaporation pools (pictured below) of which there were eleven, with ten containing liquids at the current time in various stages of concentration. Brine to be processed by a conventional evaporation pond methodology, concentrating brine before extraction of lithium carbonate in a dedicated production plant



In the far top right of the previous photo can be seen a pile of solids that had been scraped out of pools. Some of these were merely piles of salt, but another was KCl and others were precipitates extracted at different stages. It was evident that the reduction process will be driven not only by solar evaporation but also by wind evaporation as winds were quite gusty at times on site.

From this point we travelled out onto the salar to see where the brines are pumped to surface. The crunchy layer of halites was evident across the surface on the salar being 6 to 8 inches deep encrustations of crystallised mineralized.

At the wellhead from which brines are currently being extracted for test evaporation we witnessed a trial run.





Maricunga has a moderate Mg/Li ratio of 6.5 brine (comparable to the Atacama *salar*) with a low SO_4 /Li ratio of 0.8, and a relatively high Ca/Li ratio of ~1.2. Ergo calcium removal will be necessary for lithium production.

Potassium chloride (KCl) fertilizer production will be a secondary product, commencing three years lithium carbonate production.

Hallgarten's analyst wielding the lithium brine hose. The "brine" did not even taste particularly salty compared to, say, seawater.



After the pumping exercise the expedition then headed to the site of the eventual full scale evaporation ponds and processing plant. The ponds should cover an area of around 17 sq kilometres in total. Unlike other projects that locate the ponds on the *salar*, LPI and partners have decided to locate them on the alluvial fans above the *salar*. These are almost flat, though not quite, however minimal grading should be required and the material is easily gradable. Brines will need to be pumped up into the ponds but that will not be more than a few metres in elevation above the salar. The processing plant will be at the farthest distance from the salar effectively at the top-end of the pond complex.

While we were there it was announced that the Chilean government has resolved to pave the existing good, but unpaved, road which heads north and will be the main access road to the ports for the export product.

The group then returned to the workcamp for a late lunch. After this the return to Copiapó began which was somewhat swifter being downhill without as lengthy "breathing breaks". From there we flew back to Santiago and the tour essentially ended.

Minera Salar Blanco

This company which holds of 33% of the Maricunga project is owned by Martin Borda Mingo. He is Executive Director & Founding Partner at Multiexport Foods SA, Chairman at Salmones Multiexport SA, and Chairman at Multiexport Pacific Farms S.A. He is regarded as the "king" of Chilean salmon farmers and seaweed/algae processors.

He is on the Board of Directors at Multiexport Foods SA, Cia Molinera San Cristobal SA, and Alimentos Multiexport Ltda. He also served on the board at Scotiabank Chile, which is the latest incarnation of

Banco Sudamericano that his family sold to Bank of Nova Scotia. The family, of Basque origins, were also the largest bread bakers in the country until they sold those interests over to Grupo Bimbo of Mexico.

He received his undergraduate degree from Roosevelt University.

Bearing Resources (BRZ.v)

This TSX-V listed entity is the final resting place (well, for now) of the remnant of the Li3 stake in the Maricunga project. It currently has a market capitalization of around CAD\$37mn. In September of 2017 it received approval to acquire via a stock issuance all the shares of Li3 Energy Inc. Assuming completion of the transactions contemplated by the Li3 Definitive Agreement, Bearing will hold an undivided 17.7% interest in the project, with Lithium Power International is earning into the project by funding US\$22 million in project expenditures to through to the delivery of a Definitive Feasibility Study. The talks to cement the Li3 takeover dragged on for around a year with the stock of BRZ peaking at over \$1.50 per share in February and now standing at around half that level. While Bearing has a free carry until LPI's expenditure commitment is fulfilled (around \$9mn is still required to be spent) after that point Bearing will have to invest pro-rata in all works, or face dilution.

This stock is clearly over-valued in comparison to LPI. If one puts an enterprise value of \$50mn (market cap plus cash plus residual share of LPI earn-in) on BRZ for a 17.7% stake then LPI with 50% of the project should have an enterprise value of \$140mn, which is 50% higher than its current valuation

Chile

Chile is a known quantity in mining circles but has shown some signs of tarnishing in recent times with the many and various travails of Pascua-Lama and the tussles between SQM and the government. On the 19th of November the first round of the Chilean presidential elections will take place which shall determine the government for the next four years. Due to the economic lassitude in recent times the current Left-wing government looks to be on thin ice with many viewing an oscillation to the Right as the most likely outcome of what will certainly be a contest that goes to a second round (there are two candidates from the Left and one from the Right). The candidate of the Right is Sebastian Piñera, a billionaire businessman with an affinity for the mining sector who was president from 2010-14.

Other Projects

The company has, and had, several other projects in the Lithium space in Argentina and Australia. There have been corporate actions related to these recently which will be elaborated upon in the event that we publish a full Initiation of Coverage.

Our Thesis

As we have noted recently our thesis on the Lithium space is that we are in the middle of what we call the Lithium 2.0 phase. The first phase was the Lithium 1.0 beginning in 2009 which saw most players

vaporize and less than a handful survive. Indeed it is these survivors (e.g. Neometals, Galaxy, Orocobre) who are making up the producers of the first part of the Lithium 2.0 cycle.

The current cycle might be said to have moved to Lithium 2.1, in which the mere promoters have been weeded out by the brutal retreat in prices and investor interest in late 2016. Interestingly Lithium Power is built out of the work done by one of those that did not survive the post-2011 burn-out, namely Li3 Energy. This cycle looks to be one in which a slightly greater of number of survivors will make it through to production and from what we have seen Lithium Power will be one of this hardy band.

Risks

We would note the following risks:

- **x** Lithium prices retreat
- Financing of Lithium project's capex proves to be problematical
- Spoiling action by SQM

Prices retreated somewhat in late 2016 and then recovered in 2017 despite several projects moving into production. Supply is unlikely to suppress prices at this point as demand is expanding with significant vigour and, as in Lithium 1.0, many of the "likely" projects will not be built as they are in the hands of pure promoters.

Financing is not coming from markets but from end-users or processors. In the case of Lithium Power we would see the offtaker being Japanese as the Chinese have seriously wrong-footed the Japanese (witness the Galaxy "bait and switch" with Mitsubishi).

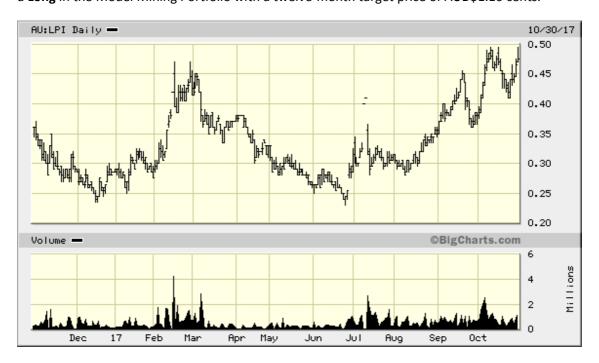
SQM would have been a definite risk two years ago but it has become a rooster converted to a feather-duster these days due to its *macho* posturing to an unimpressed Chilean government. A change of government should lower the tone of the shoving match but the "national champion" has definitely been taken down a peg (or two) and the arrival of more players, like Lithium Power, enhances Chile's chances of maintaining its status in the Lithium space against Argentina.

Conclusion

In a Lithium market where some still believe that the largest market capitalisations indicate the greatest chance of success, few seem to recall the fallacy of this doctrine in the Rare Earth "boom". While the Canadian market is still in somewhat of a swoon, the surfeit of investable cash in the Australian market has resulted in a severe disconnect in valuations where mediocre "advanced" spodumene projects are given ludicrous valuations, while cashed-up producers like Neometals have retreated and serious contenders in the *salar* space like Lithium Power are not (yet) rendered their due.

The outlier in the Canadian market is the fetishisation of Lithium Americas which we have now classified as a **Short**.

In light of the potential of Salar de Maricunga to "revivify" the Chilean *salar* exploitation space, the highly positive outlook for the lithium price, the lack of seriousness of many competing players and the seriousness of the management intent at Lithium Power we have added Lithium Power International as a **Long** in the Model Mining Portfolio with a twelve-month target price of AUD\$1.10 cents.



Hallgarten's analyst, below, with the company's CEO at the Salar de Maricunga.



Important disclosures

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