

signum
BOX 

Signals for decision makers



1

Exceed the expectations of our clients, delivering more value than expected.

2

Maintain the confidentiality of our clients, we don't disclose any sensitive information.

Our Values

SignumBOX is a Chilean based company founded in mid 2009. Our goal is to offer market intelligence in industries related with natural resources, with a strong focus in industrial minerals, in both national and international markets.

3

Always keep the independent industry vision, we remain independent of any pressure or commitment, always looking to deliver the best recommendation.

4

Deliver the best of us, in the most cost effective way, always looking for ways to better optimize resources of our clients and those of our company.

About us

We are a Chilean based company founded in mid 2009 by Daniela Desormeaux.

On early 2010 we launched the first edition of the signumBOX At the Moment report and five months later the signumBOX Analysis report. Within a year, we consolidated ourselves as a reference in the lithium industry.

In 2011 we started to develop the consultancy area with a strong focus on lithium, and over time we began to cover other minerals that allowed us to have a wider broad of clients around the world.

On early 2012 we started to develop a new business segment, more related with local mining in Chile, and late that year we launched the first edition of the Ambito Mineral series that cover the mining industry from an economic, legal and environmental aspect.

On late 2012 we launched the signumBOX Li-Stats report that presents the lithium international trade from producer countries.

On mid 2016 we launched the signumBOX Lithium Monthly Outlook: Stocks, News and Market Prices, that helps our clients to be up to date about the industry's developments.

Minerals we cover: copper, iron ore, lithium, iodine, potassium, graphite, phosphates, among others.

Leader in the mining industry

We have positioned ourselves as a leader in the mining industry through an independent and objective vision. Participating in national and international conferences as key speakers and publishing in different media as columnists and panelists.

We help our clients
in their decision
making process
through research,
analysis and
recommendations,
we add value to
our customers in
an ongoing and
permanent way.

Business Segments

Lithium Reports



Since we launched the first signumBOX At the Moment report in late 2009 many and diverse customers have chosen our lithium reports as a reliable source of information and analysis. Our lithium reports are intended to meet the need for reliable information, appropriate analysis, accurate forecasts and periodicity to keep our customers informed of the major industry developments.

We are continuously evolving accordingly our customers' needs, incorporating innovations to our reports such as the ranking of lithium projects, the balance between future production capacity and demand, and the pricing model that allow us to forecast future lithium chemicals prices under different scenarios.

Consulting



Project and Companies Evaluations

Financial and economic evaluation of companies, projects, deposits.

Cost Analysis

Cost modeling, cost estimations, marginal cost curve estimation.

Market Studies

Estimation and forecast of supply, demand and market balance, assessing business opportunities.

Industries covered

We cover the following industries: lithium, potash, graphite, phosphates, iodine, copper, petroleum and iron ore.

Lithium Reports



At the Moment

BI-WEEKLY REPORT

Main news and announcements of the lithium, batteries and automotive industry.

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Launched:
Jan 2010



Li Stats

QUARTERLY REPORT

Exports statistics from major lithium producer countries, including volumes and FOB prices for lithium carbonate, lithium hydroxide, lithium chloride, lithium brine and lithium concentrate.

.....
Launched:
November 2012



Analysis Report

SEMIANNUAL REPORT

Deep analysis of lithium, batteries and automotive industries, including our ranking of lithium projects and our price model forecast for lithium carbonate and lithium hydroxide (battery and technical grade), for the next 15 years

.....
Launched
May 2010

Lithium Monthly Outlook: News, Stocks and

SAMPLE

January, 2017



Lithium Monthly Outlook

MONTHLY REPORT

Forecast of lithium carbonate and lithium hydroxide market prices, export information for major lithium producers and producer countries for the last month available, monthly stock price information for major producer and developers companies, and all major news in the market for that month.

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Launched
January 2017

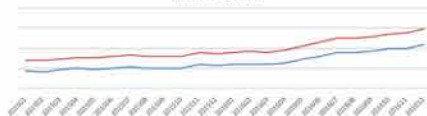
Lithium Monthly Outlook

Sample, January 2017

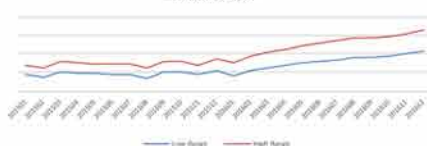
Lithium Monthly Outlook: News, Stocks and Market Prices

SAMPLE
January, 2017

Lithium Carbonate Prices - Monthly Estimate
Jan 2015 - Dec 2016



Lithium Hydroxide Prices - Monthly Estimate
Jan 2015 - Dec 2016



Source: signumBOX estimates.
Important Note: Both prices correspond to an average between technical and battery grades, long-term contracts.

- Lithium carbonate price for long term contracts was stable during September and October 2016, and rose again on November-December to end the year at US\$ XXX (in the upper part of the range). The average price for 2016 was Y% higher than 2015.

- The increase in lithium hydroxide prices have been consistent during the year, with a brief halt in October, prices ended the year with increases. It is important to note that the estimated range for lithium hydroxide prices have been increasing, meaning the higher range now is higher. We have more uncertainty in the estimation margin given a bigger dispersion in prices, this as the ratio between spot sales and contract sales have increased.

Lithium Exports Stats

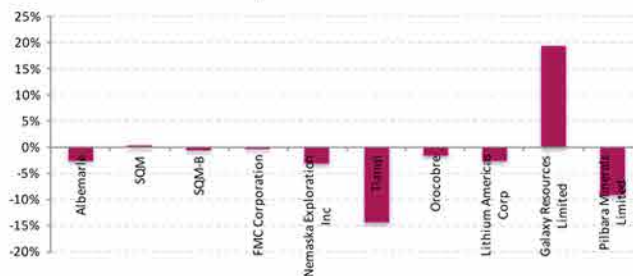
Country	Company	Product	Tons*		Average FOB Price (US\$/ton)		Tons	
			1MA**	Jan - 1MA 2016	1MA**	Jan - 1MA 2016	2016	2016 ***
Chile	SQM	Li2CO3	1,150	18,368	15,000	7,148	26,444	41,000
		LiOH	562	6,701	24,532	5,844	1,946	5,000
		Other	12,777	21,738	2,861	2,809	18,345	24,000
Argentina	Albemarle	Li2CO3	1,298	24,803	7,452	6,219	24,315	26,000
		LiOH	792	1,441	5,899	3,882	2,288	1,600
Argentina	FMC	Li2CO3	1,206	11,444	4,082	5,805	11,018	11,444
		LiOH	144	4,202	4,708	5,261	5,201	4,201
US	Orocobre	Li2CO3	896	11,428	4,742	3,734	11,154	11,421
US	AI	LiOH	614	7,701	9,857	8,221	9,418	8,500
Australia	AI	Lithium concentrate	41,751	426,324	450	500	413,519	550,000
China	AI	Li2CO3	114	1,174	21,019	31,261	2,899	3,800
China	AI	LiOH	721	8,271	18,829	19,771	8,111	5,200

Notes:
*Tons expressed as LCE with the exception of lithium concentrate.
** LMA: Last month available: Chile, US and China Nov-16, Argentina Dec-16, Australia Sept-16.
*** 2016 forecast, signumBOX estimates according to shipments' evolution and growth rate with the information available as of LMA. Numbers are rounded

Lithium Monthly Outlook: News, Stocks and Market Prices

SAMPLE
January, 2017

Monthly Lithium Stocks Performance



Source: Stock Exchange Information

December was not a very good month for lithium stocks. Most companies presented a decrease in the stock price by the end of the month if compared with opening prices. Galax Resources Limited presented an increase of 19% in the Australian Securities Exchange due to the announcement of the sale of 120,000 tons of lithium concentrate at US\$ 830 per tone.

Among those stocks who fell the most we have Pilbara Minerals with a 9% drop and Tianqi Lithium with 14%.

Stock, Commodities and Index Performance

	Price	1 Mo	3 Mos	6 Mos	12 Mos
Li Producer		0%	14.2%	3.5%	100.4%
Li Developer		-5%	-2.2%	-18.8%	55.6%
TSX	15,288	1.0%	3.8%	7.7%	18.3%
S&P 500	2,239	5.2%	3.4%	6.6%	9.8%
IPSA	4,151.4	-1.0%	3.4%	3.9%	12.9%
S&P ASX	5,666	6.5%	4.2%	8.3%	7.0%
Petroleum (US\$/barrel)	52.01	14%	4%	16%	40%
Potassium (US\$/ton)	215.00	0.0%	-0.5%	-16.0%	-25.9%

Sources: World Bank, Energy Information Administration and stock exchange information.

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Monthly Recap Lithium, Batteries and Automobile sector

Toyota teams up with power companies to obtain information from PHV vehicles. In order to encourage the use of the car's EV-mode for longer driving distances, Toyota announced that it would work in conjunction with five Japanese power companies to offer the new PHV Connected Power Service for customers of the new Prius PHV, which would leverage information obtained from their vehicles.

Posco ICT announced that it entered into the smart energy market including the electric vehicle in Costa Rica in cooperation with the government. Posco ICT signed a Memorandum of Understanding for the smart energy business with the Instituto Costarricense de Electricidad (ICE) in order to provide the charging platform and the overall infrastructure to support the EV expansion project carried forward by the Costa Rican government.

General Motors selects AeroVironment's home charging station for new Bolt EV. General Motors Company has selected the company's EVSE-RS as the official charging station accessory for its new, all-electric 2017 Chevrolet Bolt EV. According to the information, the AeroVironment's charging station can charge up to five times faster than standard cordsets.

SIGNUMBOX COMMENT:

These three news are very relevant for the electric transportation market. For the development of the electric grill for electric transportation economies of scale are a key component. These alliances are a great starting point for these companies that had a leadership in this market.

Renault Pro+ announced that it will present the new KangooZ.E. on January, at the 2017 European Motor Show in Brussels. The vehicle will be equipped with a new motor/battery package that will increase the model's driving range by more than 50% (from 170km to 270km).

SIGNUMBOX COMMENT:

This news indicates that the automotive industry is targeting batteries with higher energy capacity in order to have bigger autonomy, this implies higher lithium consumption.

Cypress Development has received samples results at Dean lithium Project. has received additional results from a Phase 2 sampling program executed at the company's Dean Lithium Brine/Claystone project located in Clayton Valley, Esmeralda County, Nevada highlighting that the maximum value was 3,730 ppm lithium (0.82% Li₂O equivalent), 8 samples assayed greater than 2000 ppm lithium and 29 samples assayed greater than 1000 ppm lithium.

Pilbara Minerals completes Lithium project acquisition. The company announced that it has acquired the Lynas Find Lithium Project that directly adjoins its Pilgangoora Lithium-Tantalum Project. According to the information, the project's maiden JOR Indicated and Inferred Minerals Resource is 7.3Mt @ 1.25% Li₂O, 85ppm Ta₂O₅ and 0.99% Fe₂O₃.

In addition, the company announced that it has reached an agreement on the Native Title Agreement with representatives of the Njmal people, the traditional owners of the land at Pilgangoora, which is a major milestone to receive the grant of the Mining Lease.

SIGNUMBOX COMMENT:

With this acquisition Pilbara Minerals is increasing the resources of the project Pilgangoora, and with this the lifespan of the project. Pilgangoora is a project that has had a quick development, we think that in the short run it will start production, and it will become part of lithium supply.

Continue...

Disclaimer

All the information that SignumBOX inteligencia de mercado uses for the elaboration of the reports is publicly available and SignumBOX inteligencia de mercados is not responsible neither for the financial nor economical decisions that anyone may take with the use of this information.

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