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Lake plans to build its \$1 billion facility 45km from this town, population 667, high in the South American Andes without existing infrastructure.

Remote Chance

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Lake Resources (LKE ASX) “Lake” is one of several lithium explorers planning to use an unproven direct lithium extraction (DLE) technology to remove lithium from brine. If Lake can get the DLE technology to work then it plans to build a \$1 bln processing facility in a remote location in the Andes. Lake is claiming to produce “cleaner lithium”. We believe, however, DLE will still use large

amounts of water and produce toxic waste. Lake has failed to get an operational pilot plant on site three years after promising it would. Lake insiders have successfully sold \$8.1 mln in stock in the last year. Lake granted 41.5 mln options to financial institutions that published favourable research on the company. Insider share sales have followed a pattern of Lake announcement, followed by fa-

Lake Resources (LKE ASX)

July 11, 2022

JCAP

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vourable research, stock price rise and then insider sales. Investors had been expecting the delivery of the pilot plant to site and a definitive feasibility study (DFS) by the end of June, instead they got the resignation of the CEO and Managing Director Steven Promnitz without a replacement.¹

Most explorers are working with multiple DLE technology suppliers to discover which may be the best at working at scale. Based on our research into cooperation partners, we are sceptical that the DLE technology developed by Lilac Solutions “Lilac” works. We have discovered that Warren Buffet’s Berkshire Hathaway Energy Renewables (BHE) has “parted ways” with Lilac.

Investors still have no evidence that the Lilac DLE technology works at scale and if so at what cost. If the DLE technology works then the number of “cycles” for which the extraction medium can be used will be a key cost driver. If the medium can only be used for a few hundred cycles then the costs may be prohibitively high.

Lake has hitched its cart to Lilac’s yet to be proven technology to develop its Kachi brine project in Argentina. Lilac, in return for providing its proprietary DLE technology to the project, and US\$50 million in capital, will earn 25% of Lake’s equity in three performance-based stages.² More than a dozen companies are working on DLE technology but few, if any, have made it work commercially.³ Lilac has yet to commercialise its technology. Every brine is chemically different and not all emerging DLE technologies will work for all brines.

Lake has a track record of failing to deliver on promises. For example, Lake promised a Lilac DLE pilot plant would be delivered in 2019 to the site.⁴ It is yet to be delivered, and it is yet to be proven that it will work when it gets there. The definitive feasibility study, first promised to be produced in 2020, is yet to be published, and in March this year

Lake was still saying that it would be in production in 2024.⁵ Lake has yet to raise capital to start the project. Lake’s positive news announcements leave more questions than answers. They recently announced two agreements, one with Ford and another with Hanwa. Lake claimed that the agreement with Ford would be “de-risking the project for financiers and investors”.⁶ We do not agree. What they actually had was a non-binding MOU to “negotiate” an offtake agreement. It is like saying I might meet someone for a coffee to discuss buying their car. Lake has announced an “expression of interest” from UK Export Finance and a “letter of interest” from Export Development Canada to “potentially” work with Lake on finance. Lake has said this “considerably de-risks the project”. We do not agree.

Lake has granted various financial services companies, who produce research in respect to Lake, with 41.5 mln in options (which, converted at today’s share price, would equal stock to the value of \$62 mln).⁷ These research companies have published favourable research on Lake, some without disclosing any conflict of interest at the time of publication. Lake put out a Pre-Feasibility Study in 2020 for a plant capable of producing 25,500 tons of Lithium Carbonate a year. The following year, when lithium prices increased by 40%, Lake put out an updated PFS with only one change, the price. The project NPV more than doubled, without any significant new information being made available to investors. Since then Lake has produced a stream of announcements about expressions of interest in financing the project and non-binding MOUs to discuss off-take agreements.⁸ Following each of these announcements the financial services companies holding options produced favourable research.

Lake is presenting itself as an environmentally friendly exploration project, using the tag line “Cleaner Lithium for an Electric World” and stating that they have “cleaner technology” that is “sus-

1 https://lakeresources.com.au/wp-content/uploads/2022/06/lke_exec-chair_20-jun-22.pdf, https://lakeresources.com.au/wp-content/uploads/2022/04/lke_investor-presentation_26-apr-22.pdf Lake’s most recent update, on June 26, stated the pilot plant was in Argentina but did not say it was at the mine site https://lakeresources.com.au/wp-content/uploads/2022/06/lke_update_23-jun-22.pdf.

2 https://lakeresources.com.au/wp-content/uploads/2021/09/lke_lilac-partnership_22-sep-21.pdf

3 <https://www.wsj.com/articles/lithium-extraction-technology-attacks-investors-viable-11650392733>

4 <https://lakeresources.com.au/wp-content/uploads/2019/09/02052991.pdf>

5 <https://lakeresources.com.au/wp-content/uploads/2019/09/02124399.pdf>

6 https://lakeresources.com.au/wp-content/uploads/2022/04/lke_ford_11-apr-22.pdf & https://lakeresources.com.au/wp-content/uploads/2022/03/lke_hanwa-mou_29-mar-22.pdf

7 https://lakeresources.com.au/wp-content/uploads/2021/12/lke_notice-of-agm_24-dec-21.pdf Note value of shares does not include the cost of exercising the options nor does it consider the price at the time when the stock has or will be sold.

8 https://lakeresources.com.au/wp-content/uploads/2022/04/lke_ford_11-apr-22.pdf & https://lakeresources.com.au/wp-content/uploads/2021/08/lke_kachi-project-finance_11-aug-21.pdf & https://lakeresources.com.au/wp-content/uploads/2021/09/lke_kachi-finance_28-sep-21.pdf

tainable – low water/land impact”⁹. The reality is DLE technology may only halve the water requirement, compared with evaporation, and many reports indicate that it will likely produce significant toxic waste. Lake has not disclosed the amount of water required in the PFS, updated PFS or any other announcements.

Even if the technology works, Lake will have to build the processing plant at 3,000 metres above sea level in a desert in the Andes 45 km from the town of Antofagasta de la Sierra with a population 667 in Argentina, a harsh and remote location. There are no utilities in this remote area and Lake will need to build roads, a power plant and a pipeline for water. The Province of Catamarca, where the exploration site is located, requires that all mining projects in the province use 70-80% of local people for labour.¹⁰ Analysts estimate the capital cost of the project now planned for 50,000 tonnes per annum of Lithium will be \$1 billion.¹¹ This does not include the potential capital cost of building a refractory on site to produce the ceramic beads that Lilac will provide in large quantities to supply the project.¹² Lake claims that it will be in production

in 2024. Lawyers in Argentina that we spoke to, who are familiar with mining projects in the area, said it would take at least 3 years for the project to be up and running. They considered this project to be in early-stage development.

Lilac technology: Does it work?

Lilac, has raised \$200 million from flashy backers like Breakthrough Energy Ventures which includes Bill Gates, Jack Ma and Jeff Bezos as investors, but they have not achieved a lot to date. We think they are poorly executing their strategy of producing a commercially viable DLE process. Lake is wedded to Lilac’s DLE technology to produce lithium in Argentina, despite it being unproven. Lake has not reported cooperation with any other DLE technology suppliers. We reviewed the 9 companies that have disclosed they were partnering to use Lilac's DLE technology. Of those 9 only two, Lake and Controlled Thermal Resources are clearly continuing to work with Lilac. 3 are clearly no longer working with Lilac. Of the remaining four, we believe three are no longer working with Lilac. Another is, but not for their project in Argentina.

Current Status of Lithium Explorers That Cooperated with Lilac Solutions

| Partner | Ticker | Project | Cooperation Announced | Current Status |
|-------------------------------------|-------------|---------------------|-----------------------|--|
| Lake Resources | LKE-ASX | Kachi | May-18 | Continuing to use |
| Anson Resources | ASN-ASX | Paradox | Nov-18 | Ended by Sept 2021. Using alternative technology |
| Lithium South | LIS-TSX | Hombre Muerto North | May-19 | Using multiple DLE suppliers including Eon Minerals and Chengdu Chemphys. Announced testing Lilac. No test results released. |
| Cypress Development | CYP-TSX | Clayton Valley | Jul-19 | Ended by May 2020 using Chemionex technology |
| Berkshire Hathaway Energy Renewable | BRK-US | Salton Sea | Mar-20 | Ended by Feb 2022 |
| Controlled Thermal Resources | Private | Salton Sea | Mar-20 | Continuing to use |
| HeliosX Lithium | HX-TSX | Alkali Lake | Mar-20 | Using multiple DLE suppliers. Using Lilac in Nevada as it has an earn in agreement with Lone Mountain Resources, an affiliate of Lilac. In Argentina they have announced they are using Chemionex and not Lilac technology. Alkali Lake brine has yet to be tested by Lilac. |
| Enami | State owned | Aguilar | May-20 | Announced they would test before the end of June 2020. No test results released. |
| Alpha Lithium | ALLI-TSX | Tolillar Salar | April-21 | Using multiple DLE suppliers. Announced brine was sent to Lilac in April 2021 for testing. No test result released. |

Source: See Appendix 1 for references

9 https://lakeresources.com.au/wp-content/uploads/2022/04/lke_investor-presentation_26-apr-22.pdf

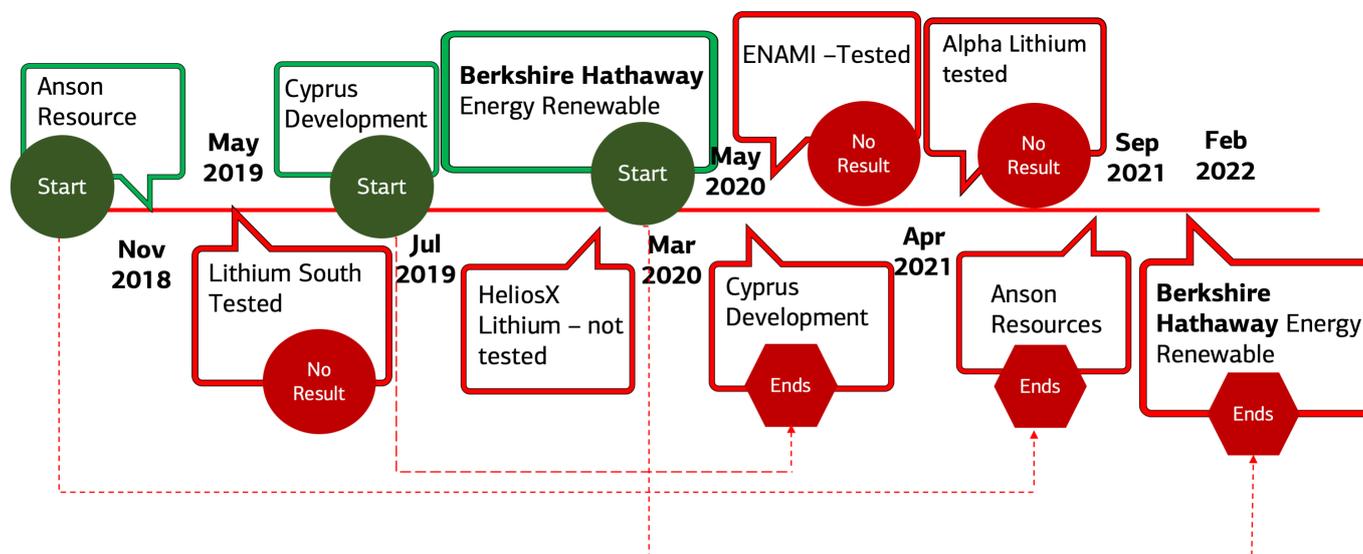
10 From Mining Argentina 2021 by Cassels Brock and Blackwell LB and Argentine lawyer

11 See page 4 https://lakeresources.com.au/wp-content/uploads/2022/04/lke-11042022_bp.pdf and Page 19 https://lakeresources.com.au/wp-content/uploads/2021/10/canaccord_lke_22-oct-21.pdf

12 Two interviews with industry experts said Lilac and Lake were considering producing the beads on site at Kachi.

We charted out the long history of companies that announced they were working with Lilac only to end co-operation or announce they were having their brine tested by Lilac and not releasing the test results from the table above.

Timeline and status of lithium explorers cooperation with Lilac



Source: See table "Current Status of Lithium Explorers that Cooperated with Lilac Solutions". "No result" means that no results from the testing by Lilac have been released.

The most high-profile partner that no longer works with Lilac is Berkshire Hathaway Energy Renewable (BHE). They were cooperating on the California Energy Commission pilot DLE plant at the BHE Salton Sea geothermal power plants. The cooperation was launched to much fanfare, the failure of the partnership was only quietly mentioned in the local media in February this year.¹³

Lilac feted in LA Times as "Bill Gates" backed and working with a Warren Buffet Company in March 2020

One year later and Buffet's BHE have unceremoniously dumped Lilac

Source: LA Times and Calexico Chronicle¹¹

13 <https://www.latimes.com/environment/story/2020-03-16/lithium-startup-lilac-solutions-bill-gates-salton-sea>, <https://calexicochronicle.com/2022/02/17/the-tech-behind-salton-seas-white-gold-rush/>

14 <https://www.latimes.com/environment/story/2020-03-16/lithium-startup-lilac-solutions-bill-gates-salton-sea>, <https://calexicochronicle.com/2022/02/17/the-tech-behind-salton-seas-white-gold-rush/>

Anson Resources tested Lilac technology. We understand from experts familiar with the testing, that due to poor performance and high-cost Anson dumped Lilac for an undisclosed alternative supplier. The poor performance was the medium used to extract the lithium, which only lasted around 40 cycles - far short of the 8,000 to 10,000 cycles expected. Medium is expensive and is uneconomic if it is only used 40 times. Neither Lilac or a partner has announced the number of cycles its medium can be used for from any testing completed to date.¹⁵

Every project's brine is very different and not every DLE solution will work for every brine. Some brines have more contaminants like silica and iron that must be removed before extraction. What is clear is Lilac's technology has had and may well still have some major problems.

An expert we spoke with, who has built DLE pilots, said any lithium brine exploration project should have 3 suppliers and use 2 different technologies to be sure to find the fastest path to a successful process for extraction. What may be a problem for

Lake is they have locked into one supplier and one technology. This is a view shared by one of Lake's competitors, HeliosX that made this statement in a recent release:

*"It is Management's opinion, that there is no singular DLE technology that will deliver a "one process fits all" for lithium extraction. There are numerous companies globally developing proprietary patent pending lithium extraction techniques, but none that will apply universally. Each technology has its benefits and limitations, so the HeliosX management team has determined that its three distinct global reservoirs require site specific solutions."*¹⁶

HeliosX has not ruled out using Lilac's technology in Argentina, however, they have announced they are using Chemionex technology there. Lithium explorers like Lithium South, Alpha Lithium, Anson Resources, EnergyX and Cyprus Development have the same strategy of using multiple DLE suppliers.

As do majors like Albemarle.¹⁷

15 The April 2020 PFS for Lake's Kachi Project states in Appendix 1. JORC (2012) Table 1 Report in the section "Metallurgical factors or assumptions" it is stated that "The longevity of the ion exchange media has been tested over 1000 cycles, or six months." This is describing the number of test cycles not the longevity of the media. Lake made this clear in its Interim Report for the Period Ending 31 December 2019 "While lab testing has shown that lithium concentrations of 30-60,000 mg/L lithium can be produced from brines of ~300 mg/L lithium in a few hours using the Lilac process, the design is based on more than 6 months (1,000 cycles) of testwork on Kachi brines which have shown excellent performance with high selectivity and durability. This includes high recoveries (80 to 90%) compared to conventional brine operations in South America with typical lithium recoveries below 50% over 9 to 18 months. Results from lab testing have been incorporated into the PFS." https://lakeresources.com.au/wp-content/uploads/2020/04/lke_compelling-pfs-for-kachi-project_30-apr-20.pdf , https://lakeresources.com.au/wp-content/uploads/2020/03/lke_half_yearly_report_and_accounts_17-mar-2020.pdf

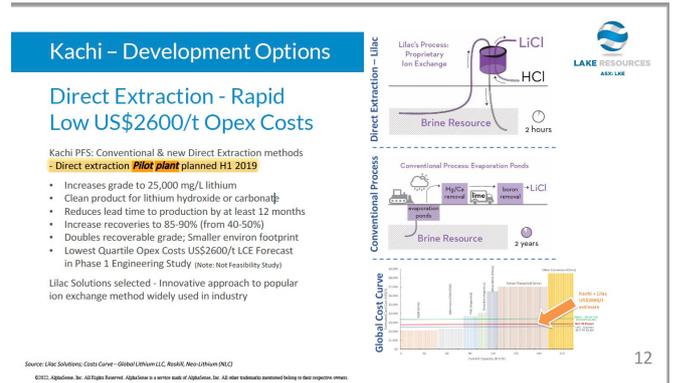
16 <https://backend.heliosx.net/files/news/165HeliosX%20Corporate%20Update%20-%20February%209%202022.pdf>

17 <https://www.mining.com/web/new-lithium-technology-can-help-the-world-go-green-if-it-works/> & <https://www.wsj.com/articles/lithium-extraction-technology-attacks-investors-viable-11650392733>

Pilot Plant 3 Years Behind Schedule

A working pilot plant is critical for the Kachi project to progress. A Definitive Feasibility Study cannot be produced until there is confidence in the cost of production that only the pilot plant can demonstrate. Sample lithium from a pilot plant is typically necessary for offtake partners to test before signing an offtake agreement. We believe Lilac and Lake are building pilot plants before there is a technical solution in place for the efficient extraction of lithium using Lilac's DLE technology. Essentially, they are doing R&D on the run. An engineer familiar with the technology told us it would take 3 months to build a pilot plant. Lake also announced it would only take 3 months to build a pilot plant.¹⁸ First promised to be delivered in H1 2019 the pilot plant is yet to be delivered to the Kachi site in Argentina 3 years later. No adequate explanation has been given for the long delay in having the pilot plant built.

Pilot Plant Promised since H1 2019



Source: Company presentation Jan 17, 2019¹⁵

Lake states only takes 3 months to construct a pilot plant



LAKE RESOURCES N.L. (ASX:LKE)

ASX Market Announcements Office

7 May 2019

PILOT PLANT ENGINEERING UNDERWAY AT KACHI LITHIUM PROJECT

Lilac Solutions Direct Extraction Plant On-Track to be Operational at Kachi Project Late 2019 Targeting Rapid, Low-Cost Lithium Production With High Recoveries And Minimal Environmental Impact

- First steps towards pilot plant testing with design and engineering underway at Lake's Kachi Lithium Project, Argentina based on high-productivity, high-purity Lilac Solutions direct extraction technology.
- Design and engineering phase expected to take three months. This will then lead to an **estimated 3 months of construction**, with delivery of the pilot plant on-site at Kachi and commissioning expected in late 2019.

Source: Company announcement May 7, 2019¹⁶

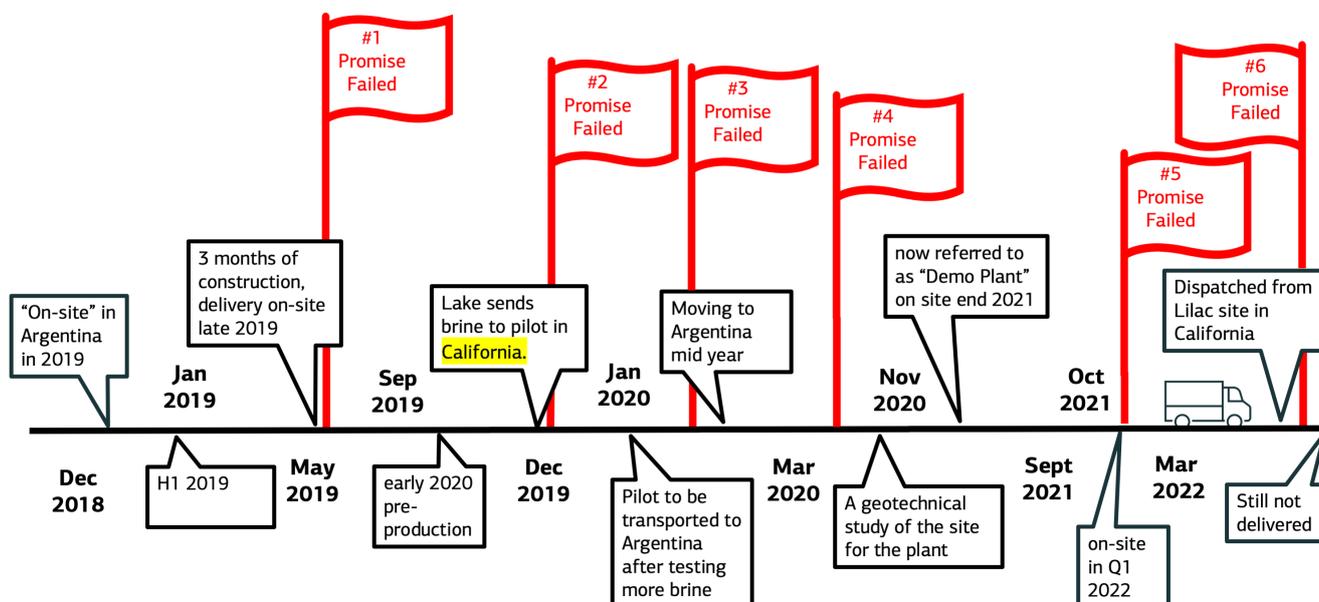
18 Lake Resources May 7, 2019

19 <https://lakeresources.com.au/wp-content/uploads/2019/09/02067357.pdf>

20 <https://lakeresources.com.au/wp-content/uploads/2019/09/02067357.pdf>

Lake has now dispatched a pilot plant which has yet to arrive and which has yet to be demonstrated that it works on-site. Given the delays over the past three years we expect the pilot plant will also take time to be commissioned and may take longer to work if it will at all. The crucial question will remain how many cycles Lake will be able to get from its medium operating the pilot plant on site.

Pilot Plant: Promised 3 year ago and still not delivered



Source: Company announcements

Lilac technology cost problems

Experts familiar with Lilac technology told us that the life cycle of the medium for extracting lithium is problematically short. That matters as the medium is very expensive and you need to use it many times to make the economics work.

To extract lithium from brine, it is first treated to remove trace elements like iron, nickel, boron and calcium that will impede the extraction. To this "polished" brine is added a "medium" that will act as the sponge to absorb the lithium. The medium could be a polymer, a ceramic or a mix of the two. Lilac is proposing to use a ceramic medium for Lake's Kachi project. The lithium is then de-absorbed from the medium by washing with an acid. One cycle of a medium means one cycle of absorbing and de-absorbing lithium.

The life of a medium may be as short as 1 hour or as long as 6 months, or 1 to 1,000 cycles. Our discussions with chemists, engineers and explorers is that typically, ceramic beads, like the Lilac me-

diu, lasts for 100 – 150 cycles or about 1 week of use. We understand that the technical limit of the ceramic beads to extract lithium is about 1 kg of ceramic beads to produce around 100 grams of lithium. However, to operate at that limit reduces the cycle life of the beads. To achieve cycle life of 100 it is likely the amount of lithium would be more like 1kg for 5 grams of lithium. We have been told by two scientists that ceramic beads would cost between \$15 and \$50 per kilo. It depends on the composition of the brine. If that is the cost and you need 1 kg of beads to produce 5 grams of lithium, that can be used for 100 cycles, then the bead costs per ton of lithium carbonate would be between \$30,000 and \$100,000 per ton of lithium carbonate. That is not economic to produce. We do not know if this is the case for Lake resources as they have released no information on the achieved cycles of the medium.

Controlled Thermal Resources CEO has said this about their partner Lilac: "A lot of companies use aluminum beads. Lilac has a ceramic bead, or me-

dia, which has a long-life cycle. We expect long thousands of cycles vs. hundreds for aluminum.”²¹ Key here is thousands of cycles is an “expectation”. Thousands of cycles have yet to be achieved.

Cleaner Lithium? Toxic waste and high-water usage.

An engineer familiar with DLE processes told us lithium explorers planning to use DLE talk a lot about sustainability compared to hard rock mining and brine evaporation, however, they cautioned that there is still a lot of toxic waste and high-water usage.²² The de-absorption process or the rinse cycle will use significant amounts of water. Some of that water will be reprocessed but some will just be wastewater that cannot be recycled. We understand that traditional brine evaporation methods use 400 litres of fresh water for every kilogram of lithium chloride produced.²³ We believe DLE will use around 190 litres of fresh water for every kilogram of lithium chloride produced.²⁴ When you polish brine as a pre-treatment to make the brine ready for lithium extraction there are a lot of contaminants such as heavy metals that are removed and are a toxic waste that must be disposed. Lake makes no mention of toxic waste in the PFS or the updated PFS.

Albemarle, the second largest producer of lithium in the world with a market cap of \$29 bln is also experimenting with DLE technology. Eric Norris, Head of the Lithium Division of Albemarle compared DLE to their evaporation method in Chile and said: “[DLE is] more capital intensive and actually consumes a lot more water and energy, so it has some drawbacks.”²⁵

Nobody buying what you are selling

Brits are famously formal and likely fond of letter writing, so we question what an “expression of interest” means. At least the Canadians could write a “Letter of Interest”. We contacted the UK export finance to verify the expression of interest and they have not replied. At least they could convince Hanwa and Ford to sign MOU’s.

Lake has entered into two non-binding MOUs to

negotiate offtake agreements with Ford and Hanwa. In Lake's ASX announcement concerning the Ford MOU, it describes the non-binding MOU as an "Offtake proposal for approximately 25,000 tonnes per annum (tpa) of lithium from the Kachi Project in a non-binding agreement with Ford Motor Company". In Lake's ASX announcement concerning the Hanwa MOU, it describes the non-binding MOU as an "Offtake proposal for up to 25,000 tonnes per annum (tpa) lithium carbonate (+/- hydroxide) at market prices from the Kachi Project in a non-binding agreement with the major Japanese partner". It is important to note that the MOUs are not offtake agreements each for 25,000 tons of lithium carbonate. They are non-binding MOU's to negotiate offtake agreements. Lake also describes the MOU with Ford as "further de-risking the project for financiers and investors". This is a stretch and Lake is in peak promotional speak when it makes this claim. Arguably, the MOU does nothing to derisk the project. Lake plans to produce lithium hydroxide and lithium chloride to be used for battery production. People familiar with lithium offtake agreements told us that you need thousands of kilograms of sample lithium hydroxide or lithium chloride for the purchaser to test to see if the lithium is appropriate for their particular battery technology. Lake has not produced that much lithium and is yet to get an operational pilot to produce anything like that quantity. Real off take agreements can only follow successful continuous operation of a pilot plant at the site. Lake has stated they expect the on-site pilot plant will produce first samples of 50 kg in late Q2 2022 and that the testing in Lilac's California production site “continues to produce data for DFS and 1kg product samples.” and that it will then “Operate 3-4 months to produce lithium chloride for 2.5 tonnes of lithium carbonate.”²⁶ That could be years away. Financing without offtake agreements will be very difficult.

21 <https://calexicochronicle.com/2022/02/17/the-tech-behind-salton-seas-white-gold-rush/>

22 <https://jpt.spe.org/direct-lithium-extraction-a-21st-century-dot-com-boom-or-bust>

23 Based on Albemarle (ALB US) reported usage see <https://danwatch.dk/en/undersoegelse/how-much-water-is-used-to-make-the-worlds-batteries/>

24 The California Energy Commission set the parameter of using less than 190 litres of fresh water per kilogram of lithium produced when providing a \$6 million grant to Berkshire Hathaway Energy to develop a DLE process for geothermal brines. <https://www.energy.ca.gov/filebrowser/download/293>

25 <http://www.magnoliareporter.com/news-and-business/lafayette-county/article-534461de-fb58-11eb-a213-0313f6619662.html>

26 <https://lakeresources.com.au/wp-content/uploads/2022/04/lke-investor-presentation-26-apr-22.pdf>

Ford Non-Binding MOU to Negotiate Something

ASX & OTC
ANNOUNCEMENT



11 April 2022

Lake Resources and Ford Motor Company sign **non-binding MoU to negotiate for lithium offtake** from the Kachi Project

- Offtake proposal for approximately 25,000 tonnes per annum (tpa) of lithium from the Kachi Project in a non-binding agreement with Ford Motor Company.
- Strategic collaboration between Ford and Lake to sit alongside the collaboration with Hanwa (ASX release 29 March 2022) to fully develop a Clean Lithium Supply Chain to meet the global environmental demands for Electric Vehicles.
- Second non-binding MoU offtake collaborator, **further de-risking the project for financiers and investors.**

Source: Company announcement April 11, 2022²³

Hanwa Non-Binding MOU to Negotiate Something

ASX & OTC
ANNOUNCEMENT



29 March 2022

The Japan-based trading company “Hanwa Co., Ltd.” in **non-binding MoU to negotiate for offtake** up to 25,000tpa and a long-term partnership with Lake Resources.

- Offtake proposal for up to 25,000 tonnes per annum (tpa) lithium carbonate (+/- hydroxide) at market prices from the Kachi Project in a non-binding agreement with the major Japanese partner.

Source: Company announcement March 29, 2022²⁴

Lake has made similar promotional statements about debt financing from the UK Export Finance in August and September 2021. Lake received an expression of interest and claimed this “derisked” the project despite it being non-binding and subject to the outcome of the DFS, the EISA and binding off-take agreements.²⁹

Lake claims a EOI as “de-risking” project

ASX ANNOUNCEMENT



11 August 2021

Kachi Project Finance – **Strong Expression of Interest to Fund Project to approximately 70% of total Kachi Project funding requirements**

- UK Export Finance, the Export Credit Agency of the United Kingdom, has provided a strong Expression of Interest to support approximately 70% of the total finance required for Lake's flagship Kachi Lithium Project, subject to standard project finance terms.

The EOI is not a binding commitment and is subject to a series of standard project finance terms and due diligence, including, among others, suitable structured offtake contracts, the successful completion of Kachi's Definitive Feasibility Study (DFS), an Environmental and Social Impact Assessment (ESIA) to Equator Principles.

Source: Company announcement August 11, 2021²⁶

ASX ANNOUNCEMENT



28 September 2021

Kachi Project Finance – **Additional Export Credit Agency Support via Export Development Canada (“EDC”)**

- Canada's Export Credit Agency, EDC, has provided a **Letter of Interest to potentially work alongside UK Export Finance (UKEF) to support approximately 70% of the total finance required for Lake's flagship Kachi Lithium Project, subject to standard project finance terms.**

Lake's Managing Director, Steve Promnitz commented: “Having Canada's direct sovereign lending alongside the UK's sovereign support **considerably de-risks the project** for the investors and the international banks who continue to express strong interest to be part of Kachi's development”.

Source: Company Announcement September 28, 2021²⁷

27 https://lakeresources.com.au/wp-content/uploads/2022/04/lke_ford_11-apr-22.pdf

28 https://lakeresources.com.au/wp-content/uploads/2022/03/lke_hanwa-mou_29-mar-22.pdf

29 https://lakeresources.com.au/wp-content/uploads/2021/09/lke_kachi-finance_28-sep-21.pdf

30 https://lakeresources.com.au/wp-content/uploads/2021/08/lke_kachi-project-finance_11-aug-21.pdf

31 https://lakeresources.com.au/wp-content/uploads/2021/09/lke_kachi-finance_28-sep-21.pdf

The announcement by Lake of the UK Export Finance and Canada Export Credit Agency EOIs for financing that “derisked” the project, lit the fire for the share price rise. That fire was then fanned by research undertaken and published by parties that held an interest in Lake. Then the ersatz off-take agreements were the accelerant that turned it into a blazing fire.³²

Research by parties that held an interest in Lake

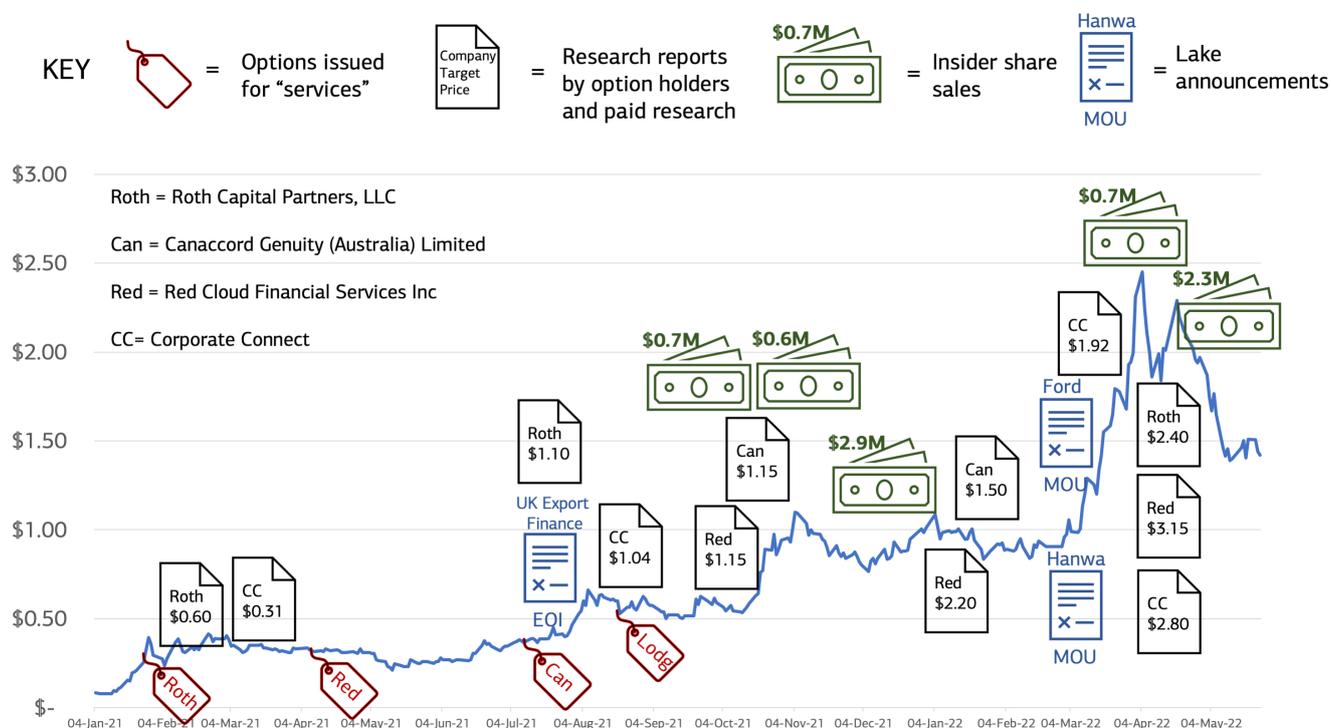
Financial Institutions Covering Lake Received Options and Payments

| Financial Institution | Services | Date Awarded Options | Option Exercise Price | Options Amount |
|---------------------------------------|---|----------------------|-----------------------|----------------|
| Roth Capital Partners, LLC | Exclusive financial advisor, sole placement agent and lead underwriter debt and equity issues | 27-Jan-21 | \$ 0.17 | 1,000,000 |
| Canaccord Genuity (Australia) Limited | Corporate advisor. Options vest based on target share price. | 28-Jul-21 | \$ 0.55 | 35,000,000 |
| Red Cloud Financial Services Inc | Various marketing and similar advisory services. | 24-Apr-21 | \$ 0.30 | 1,500,000 |
| Lodge Partners Pty Ltd | Receiving bonus options for sale and redistribution | 30-Aug-21 | \$ 0.75 | 4,000,000 |
| Corporate Connect | Commissioned by Lake to publish research | | | |

Source: Company AGM Notice 24 December 2021²⁷

We have identified four financial services companies, which produced research in respect to Lake, that received shares and options in Lake, with only partial and delayed disclosure. Others, like Corporate Connect, were paid to produce reports. Lake granted 4 financial services companies with 41.5 mln in options, which converted at today’s share price would equal stock to the value of \$62 mln.³³

Favourable research by parties that held an interest in Lake followed by insiders who sold stock



Source: See tables below and company announcements

32 https://lakeresources.com.au/wp-content/uploads/2021/12/lke_notice-of-agm_24-dec-21.pdf

33 https://lakeresources.com.au/wp-content/uploads/2021/12/lke_notice-of-agm_24-dec-21.pdf Note value of shares does not include the cost of exercising the options nor does it consider the price at the time when the stock has or will be sold.

Lake entered into a stock agreement with Red Cloud on 24 April 2021 giving the company 1,500,000 options in Lake. Lake did not fully disclose the relationship until Christmas Eve in an announcement for the AGM notice to ratify the options agreement on the 24 December 2021, by which time the options had already been converted to shares by Red Cloud.³⁴ Red Cloud initiated coverage of Lake on 12 October 2021 with no disclosure of the relationship.³⁵ There was no disclosure of the relation-

ship when Red Cloud published an update three months later on 19 January 2022 and increased the target price by 76%.³⁶ The first disclosure by Red Cloud was in the update on 11 April 2022 when the target price increased again this time by 43% after Lake had disclosed the options agreement on Christmas Eve.³⁷ The April update to the target price was based on the MOU's to negotiate offtake agreements announced by the company.³⁸

Canaccord Option Grants Based on Target Share Price Appreciation

9.1 Introduction

On 28 July 2021, the Company issued to Canaccord Genuity (Australia) Limited (**Canaccord**) 35,000,000 options to subscribe for fully paid ordinary shares in the Company exercisable at \$0.55 each, expiring on 31 December 2024 and otherwise on the terms and conditions set out in Schedule 2 (**Canaccord Options**).

Pursuant to a mandate letter dated 16 July 2021 (**Canaccord Agreement**), the Company issued, or agreed to issue, the Canaccord Options to Canaccord as a fee for acting as the Company's corporate advisor in connection with its ongoing capital markets strategy requirements, for a minimum of 12 months commencing on execution of the agreement by the Company (being 19 July 2021).

The Canaccord Agreement provides that upon closing of any transaction the Company will issue to Canaccord 35,000,000 options as a fee for providing the corporate advisory services. The Canaccord Options will vest and be exercisable in tranches, as follows:

- (a) Tranche 1 – 10 million options which vest on the date the Company achieves a 5-day VWAP prior to the Expiry Date of A\$0.55 or above.
- (b) Tranche 2 – 10 million options which vest on the date the Company achieves a 5-day VWAP prior to the Expiry Date of A\$0.70 or above.
- (c) Tranche 3 – 10 million options which vest on the date the Company achieves a 5-day VWAP prior to the Expiry Date of A\$0.85 or above.

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- (d) Tranche 4 – 5 million options which vest on the date the Company achieves a 5-day VWAP prior to the Expiry Date of A\$1.25 or above.

This issue was undertaken within the Company's Listing Rule 7.1 capacity.

Source: Company Announcement December 24, 2021³⁵

34 https://lakeresources.com.au/wp-content/uploads/2021/12/lke_notice-of-agm_24-dec-21.pdf & https://lakeresources.com.au/wp-content/uploads/2021/11/lke_application_2-nov-21.pdf & https://lakeresources.com.au/wp-content/uploads/2021/11/lke_application_1-nov-21_2.pdf

35 <https://lakeresources.com.au/wp-content/uploads/2021/10/2021xxx-lke-initiation-2.pdf>

36 <https://lakeresources.com.au/wp-content/uploads/2022/01/20220119-lke-update.pdf>

37 <https://lakeresources.com.au/wp-content/uploads/2022/04/20220410-lke-update-2.pdf>

38 https://lakeresources.com.au/wp-content/uploads/2021/12/lke_notice-of-agm_24-dec-21.pdf

Canaccord Genuity received significant option grants, even by Australian standards, and they did not accurately disclose the relationship in their research. Canaccord Genuity's option grants were based on share price appreciation for acting as Lake's "corporate advisor". The higher the price of the stock went the more options they received.

Canaccord was eligible to receive 35,000,000 options and most likely did get granted those options. Canaccord published research on Lake during this period made inaccurate company specific disclosures.³⁹

Financial Institutions Publishing Dates and Target Price

| Financial Institution | Research Initiation Date | Target Price | Update | Target Price | Update | TP | Lake Disclosed | Disclosed on Research |
|--|--------------------------|--------------|-----------|--------------|-----------|--------|----------------|--------------------------------|
| Roth Capital Partners, LLC | 17-Feb-21 | \$0.60 | 16-Aug-21 | \$1.10 | 13-Apr-21 | \$2.40 | 24-Dec-21 | 17-Feb-21 |
| Canaccord Genuity (Australia) Limited | 22-Oct-21 | \$1.15 | 24-Jan-22 | \$1.50 | | | 24-Dec-21 | No company specific disclosure |
| Red Cloud Financial Services Inc | 12-Oct-21 | \$1.25 | 19-Jan-22 | \$2.20 | 11-Apr-22 | \$3.15 | 24-Dec-21 | 11-Apr-22 |
| Lodge Partners Pty Ltd | 16-Aug-21 | \$0.98 | 19-Nov-21 | \$1.77 | | | 24-Dec-21 | 16-Aug-21 |
| Corporate Connect | 29-Mar-21 | \$0.31 | 9-Sep-21 | \$1.04 | 23-Sep-21 | \$1.05 | Undisclosed | 9-Sep-21 |
| | 2-Mar-22 | \$1.92 | 31-Mar-22 | \$2.56 | 12-Apr-22 | \$2.80 | | |

Source: Research as posted on Lake website³⁸

39 https://lakeresources.com.au/wp-content/uploads/2021/10/canaccord_lke_22-oct-21.pdf & https://lakeresources.com.au/wp-content/uploads/2021/09/lke_unquoted_28-sep-21.pdf

40 <https://lakeresources.com.au/investors/research>

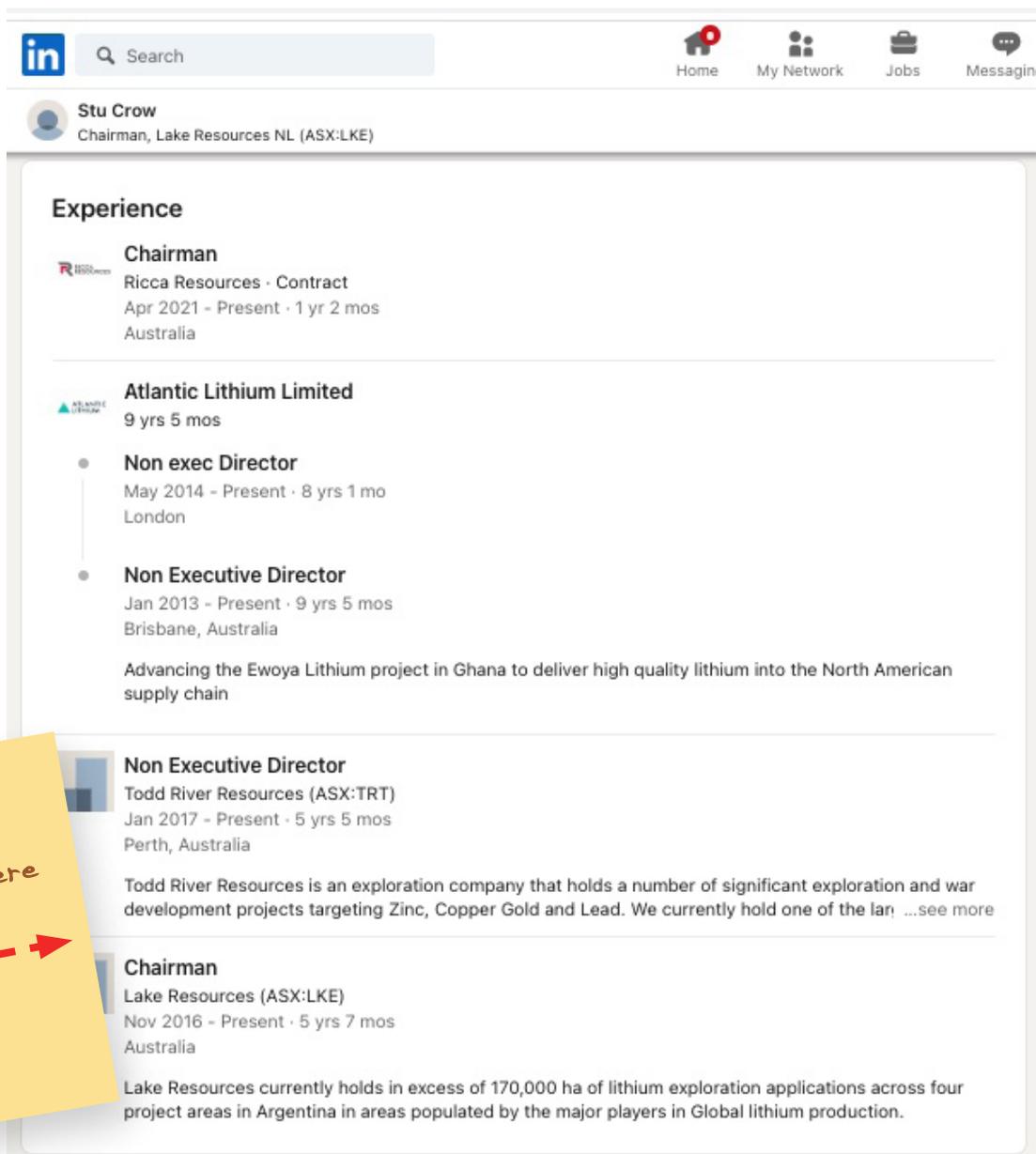
Directors Selling Shares

In the past year the Chairman and CEO have exercised option grants and sold down shares in Lake.

Stuart Crow, was the Chairman of Bryah Resources (BYH ASX), a copper/gold explorer, before becoming the Chairman of Lake. His tenure was brief. He joined the board in January 2017 to help list the company. The company was listed at \$0.20 per share on October 17, 2017. Crow resigned as Chair-

man less than one month after listing when the stock had fallen around 35% on November 15, 2017. The stock price continued to fall to less than \$0.05, a 75% decline, and has never recovered. It seems like an oversight that Crow has not listed his time at Bryah on his LinkedIn page.⁴¹ Bryah still has not gone into production.

Since December last year Crow has sold \$3.8 mln in shares.

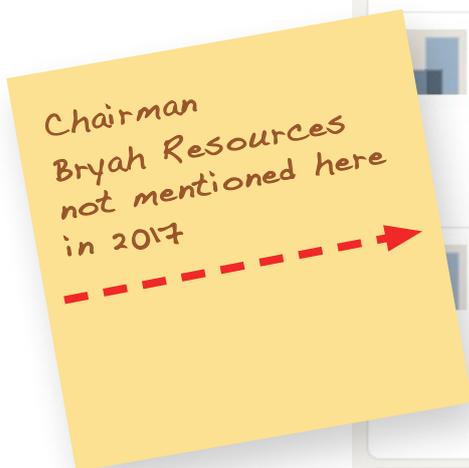


The screenshot shows the LinkedIn profile of Stuart Crow, Chairman of Lake Resources NL (ASX:LKE). The profile lists his experience at three companies:

- Chairman** at Ricca Resources (Contract), Apr 2021 - Present (1 yr 2 mos), Australia.
- Non exec Director** at Atlantic Lithium Limited, May 2014 - Present (8 yrs 1 mo), London.
- Non Executive Director** at Todd River Resources (ASX:TRT), Jan 2017 - Present (5 yrs 5 mos), Perth, Australia. Description: "Todd River Resources is an exploration company that holds a number of significant exploration and war development projects targeting Zinc, Copper Gold and Lead. We currently hold one of the lan ...see more".

Below the Todd River Resources entry, the profile lists his current role as **Chairman** at Lake Resources (ASX:LKE), Nov 2016 - Present (5 yrs 7 mos), Australia. Description: "Lake Resources currently holds in excess of 170,000 ha of lithium exploration applications across four project areas in Argentina in areas populated by the major players in Global lithium production."

Chairman
Bryah Resources
not mentioned here
in 2017



Source: <https://www.linkedin.com/in/stu-crow-98b2185/>

41 <https://www.linkedin.com/in/stu-crow-98b2185/?originalSubdomain=au>

Stephen Promnitz abruptly resigned as CEO on 20 June 2022 without a replacement. Stephen Promnitz's last management role in the mining industry, before becoming the CEO of Lake, was CEO at Indochine Mining Limited (IDC ASX) which has a gold mine in PNG. According to an article in the Sydney Morning Herald he was forced out by investors, along with two other directors, impatient for performance in June 2014.⁴² Indochine went into voluntary administration early the following year.⁴³

Promnitz has sold \$3 mln in shares over the last 12 months.

Promnitz's latest sale of \$2.3 mln was completed in a closed period, when management are prohibited from trading without written permission from the Board as required by the company trading policy.⁴⁴ He sold shares at a near all time high of \$2.20 on

April 20, 21 and 22 and the company published its Quarterly Report on April 21. Trading is prohibited 3 days before and three days after the Quarterly Report is published unless prior written permission has been given for "severe financial difficulty or there are other exceptional circumstances" and the restricted person is not in possession of inside information. The trading policy had only been updated in October 2022. No explanation was provided to the market in accordance with the ASX Guideline 10.5. Promnitz sold shares while the price was at near all-time highs. The stock price is now around 40% lower than it was at that time.

Lake has failed to comply with its own and ASX rules of disclosure. In February this year Lake's shares went into a trading halt for 5 days as the company was subject to a Federal Court hearing for failing to disclose the issuing of new shares.⁴⁵

Appendix 3Y

Change of Director's Interest

Information or documents not available now must be given to ASX as soon as documents given to ASX become ASX's property and may be made public.
Introduced 30/09/01 Amended 01/01/11

| | |
|----------------|---------------------|
| Name of entity | LAKE RESOURCES N.L. |
| ABN | 49 079 471 980 |

We (the entity) give ASX the following information under listing rule 10.1 for a director for the purposes of section 205G of the Corporations Act.

| | |
|---------------------|------------------|
| Name of Director | Steve Promnitz |
| Date of last notice | 11 November 2021 |

Part 1 - Change of director's relevant interests in securities
In the case of a trust, this includes interests in the trust made available by the trustee.

Note: In the case of a company, interests which come within paragraph (i) of the definition of "relevant interest" are not disclosed in this part.

| Direct or indirect interest | Direct |
|---|--|
| Nature of indirect interest (including registered holder) Note: Provide details of the circumstances giving rise to the relevant interest. | |
| Date of change | 1) 20 April 2022 2) 21 April 2022 3) 22 April 2022 |
| Number disposed | 1) 602,525 ordinary shares 2) 227,475 ordinary shares 3) 170,000 ordinary shares |
| Value/Consideration Note: If consideration is non-cash, provide details and estimated valuation | 1) \$1,400,948.07 2) \$523,445.23 3) \$367,238.43 |

CEO sells share in closed period without written approval as required by trading policy. No explanation to market as required by ASX

Quarterly Report released on 21 April - trading prohibited 3 days before and after. Share price at near record high \$2.20

Appendix 3Y Change of Director's Interest Notice

Part 3 - Closed period

| | |
|--|--|
| Were the interests in the securities or contracts detailed above traded during a "closed period" where prior written clearance was required? | Yes |
| If so, was prior written clearance provided to allow the trade to proceed during this period? | No due to an administrative oversight |
| If prior written clearance was provided, on what date was this provided? | N/A - written clearance provided subsequent to trade |

Lake Resources Trading Policy ↓

1.6 Dealing in exceptional circumstances

- (a) A Restricted Person, who is not in possession of Inside Information in relation to the Company, may be given clearance to Deal during a Prohibited Period if that person is in severe financial difficulty or there are other exceptional circumstances. Clearance may be given for such a person to sell (but not purchase) Securities of the Company when that person would otherwise be prohibited by this Policy from doing so. The determination of whether the person in question is in severe financial difficulty or whether there are other exceptional circumstances can only be made by the Clearance Officer.

ASX Guidelines ↓

10.5. Directors trading in closed periods without prior clearance

Where a director of an entity breaches its trading policy by trading in securities during a closed period without prior written clearance, that breach will generally be a matter of public record because of the disclosures in the Appendix 3Y (Change of Director's Interest Notice) required to be lodged with ASX in relation to that trading.⁴⁶ In this situation, to meet the standards of good governance expected of listed entities and their directors, an entity should give careful consideration to whether it ought to make an announcement to the market explaining the circumstances of the breach and what (if any) disciplinary or remedial action the entity has taken, or proposes to take, in relation to the breach.

Source: Company announcement⁴⁴

42 <https://www.smh.com.au/business/companies/indochine-mining-investors-lose-patience-and-force-out-board-20140731-zzy8l.html>

43 <https://home.kpmg/au/en/home/creditors/indochine-mining.html>

44 The term "closed period" is defined in ASX Listing Rule 19.12 to mean: "fixed periods specified in the [entity's] trading policy when [its] key management personnel are prohibited from trading in [its] securities." <https://www.listcorp.com/asx/lake/lake-resources/news/change-of-directors-interest-notice-sp-2700599.html> and ASX Listing Rules Guidance note 27 https://www.asx.com.au/documents/rules/gn27_trading_policies.pdf and https://lakeresources.com.au/wp-content/uploads/2021/10/lake_securities_trading_policy_1-oct-21.pdf

45 https://lakeresources.com.au/wp-content/uploads/2022/02/lake_court-application_28-feb-22.pdf

46 <https://www.listcorp.com/asx/lake/lake-resources/news/change-of-directors-interest-notice-sp-2700599.html>

Insider Share Sales in the last 12 months

| | |
|--|---------------------|
| Stuart Crow (Non-Executive Chairman) | \$-3,756,669 |
| Stephen Promnitz (MD, CEO & Executive Director until 20 June 2022) | \$-3,008,662 |
| Nick Lindsay (Technical Director & Executive Director) | \$-1,296,353 |
| Total | \$-8,061,684 |

Source: Company announcements.

Appendix 1: References for table “Current Status of Lithium Explorers That Cooperated with Lilac Solutions”

<https://www.latimes.com/environment/story/2020-03-16/lithium-startup-lilac-solutions-bill-gates-salton-sea>

<http://lilacsolutions.com/2018/09/lake-resources-and-lilac-solutions-partner-to-advance-kachi-lithium-brine-project-argentina/>

<http://lilacsolutions.com/2021/09/lake-resources-partners-with-lilac-solutions-for-technology-and-funding-to-develop-the-kachi-lithium-brine-project-in-argentina/>

<http://lilacsolutions.com/2019/07/cypress-development-and-lilac-solutions-demonstrate-high-lithium-recoveries-from-clayton-valley-clay-project-in-nevada/>

<https://www.latimes.com/environment/story/2020-03-16/lithium-startup-lilac-solutions-bill-gates-salton-sea>

<https://www.americaeconomia.com/negocios-industrias/chilena-enami-se-asocia-con-firma-de-eeuu-para-desarrollar-tecnologia-de>

<https://www.bnamericas.com/en/news/snapshot-us-lilac-solutions-moving-into-latam-lithium-business>

<https://wcsecure.weblink.com.au/pdf/ASN/02047505.pdf>

<https://www.thenewswire.com/press-releases/1kVGFyEeY-dajin-lithium-signs-earn-in-agreement-with-lone-mountain-resources.html>

<https://alphalithium.com/alpha-lithium-produces-lithium-hydroxide-and-lithium-chloride-from-to-lillar-salar-argentina/>

<https://www.sedar.com/GetFile.do?lang=EN&docClass=8&issuerNo=00029374&issuerType=03&projectNo=03200344&docId=4925771>

<https://sedar.com/GetFile.do?lang=EN&docClass=8&issuerNo=00008879&issuerType=03&projectNo=02919262&docId=4526738>

<https://calexicochronicle.com/2022/02/17/the-tech-behind-salton-seas-white-gold-rush/>

<https://cypressdevelopmentcorp.com/news/2021/cypress-development-update-on-lithium-extraction-pilot-plant/>

<https://wcsecure.weblink.com.au/pdf/ASN/02416198.pdf>

<https://backend.heliosx.net/files/news/165HeliosX%20Corporate%20Update%20-%20February%209%202022.pdf>

<https://www.latimes.com/environment/story/2020-03-16/lithium-startup-lilac-solutions-bill-gates-salton-sea>, <https://calexicochronicle.com/2022/02/17/the-tech-behind-salton-seas-white-gold-rush/>

<https://corporateconnect.com.au/wp-content/uploads/2022/03/LKE-Report-2322-FINAL.pdf>

Lithium South did announce the results of Lilac solutions own test on synthetic sample of Hombre Muerto North (HMN) brine that was described as “identical in chemical composition”. These results were “provided by Lilac Solutions and were not conducted in an ISO Certified Laboratory under the supervision of a Qualified Person, and the results presented have not been verified by a Qualified Person.” Lithium South stated in the same release “The next phase of test work will involve Lilac expanding test work with a natural brine sample sourced from the HMN project. The results will be analyzed under the supervision of a Qualified Person along with third party ISO Certified laboratory verification. This will provide confirmation of the results on synthetic brine as well as an indication of expected costs for a commercial scale process.”

The results of the testing of actual HMN under the supervision of a Qualified Person has not been announced.⁴⁷

⁴⁷ <https://www.prnewswire.com/news-releases/lilac-solutions-achieves-99-lithium-recovery-with-ion-exchange-process-301267282.html>

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