LAKE RESOURCES

August 15 2023

Lake Resources Completes Intermediate Milestone to Achieve DFS with Successful Extraction and Injection Tests at its Flagship Kachi Project

- **Successful Stage 1 extraction and injection test campaign completed.**
- **Pumping tests confirm favourable hydrogeologic conditions for brine extraction.**
- **Injection trials successfully demonstrated spent brine disposal capability.**
- **33 million liters of brine injected into the reservoir.**
- **Brine chemistry samples shows improved lithium concentration.**
- **Next step includes detailed wellfield and injection design in support of the DFS**
- **First successful salar brine injection test in Catamarca.**

Clean lithium developer Lake Resources NL (ASX: LKE; OTC: LLKKF) ("LAKE" or "the Company") announces successful testing that has proved the concept of extraction and injection to support the production of high purity battery grade lithium carbonate at the Kachi lithium brine Project ("Kachi" or the "Project") in Catamarca Province, Argentina.

"The extraction and injection testing confirms highly favourable reservoir hydraulic properties and allows us to optimise the future wellfield," Lake CEO David Dickson said.

"The tests represent a significant milestone for the Project, as they provide important data and higher confidence for our modelling, which is essential for the completion of our DFS for Phase 1. The results are indicative of high-yield, production-scale, extraction wells in the core resource area."

"Partners, offtakers and future buyers will demand sustainable lithium supply and Kachi is essential to meet this need."

Lake last updated its resource with a 53 percent increase in resources at Kachi with Measured, Indicated and Inferred increasing from 5.29 Million Tons (Mt) to more than 8.1 Mt Lithium Carbonate Equivalent (LCE)[1]. The mineral resources last reported on June 15, 2023 have not materially changed since that date.

Michael Gabora, Director of Geology and Hydrogeology for Lake Resources, said "the injection tests demonstrated the suitability of the reservoir for injection and bulk brine samples indicated that exploration sampling results were conservative."

"The positive results of this testing now allow for design of scaled up production and injection wells for the next stage of testing and production wellfield design".

The Kachi Project has shown continual increases in mineral resource estimates since the maiden estimate of 4.4 Mt of contained LCE in Inferred and Indicated categories was announced in November

[1] June 15 2023 ASX announcement - Lake Resources Provides JORC Update on its Flagship Kachi Project

2018[2]. The resource was significantly upgraded in January 2023 with a Measured and Indicated resource of 2.2 Mt and 3.1 Mt of Inferred mineral resources[3]. The total resource was again increased in June of 2023 with more than 2.9 Mt LCE in Measured and Indicated and 5.3 Mt in the Inferred category for a total resource estimate of more than 8.1 Mt[1]. The testing detailed in this announcement provides positive results related to the recoverability of these extensive lithium brine resources.[4]

Completion of high-volume tests

The primary objectives of the extraction and injection tests were three-fold:

1) quantify hydraulic properties of the reservoir controlling well production / injection rates;
2) test the viability of injecting into the core resource area reservoir; and,
3) develop a robust dataset to support hydrogeologic modelling that will be used for wellfield design and reserve estimation.

Pumping and re-injection tests have successfully been completed in two test wells, KB and KC, located in the central portion of the resource area (**Figure 1**). These pumping tests provide key data for hydrogeological models which are used to model the extraction and injection wellfields for the commercial operation.

The KB and KC pumping tests resulted in high transmissivity (the hydraulic conductivity x reservoir thickness) estimates of 145 m^2/d and 156 m^2/d, respectively.

These transmissivities extrapolate to high projected flow rates in larger diameter production scale wells, with longer intervals of screens, through which brine can be extracted, or in different locations where spent brine can be injected outside the production area .

Brine extracted from KC was injected into KB. The pumping extraction and reinjection order was then reversed, as this minimised requirements for tanks and brine storage at surface when pumping from the extraction to injection wells (**Figure 1**). Minimal interaction was interpreted in the subsurface at the wells from the pumping and reinjection (i.e., minimal well interference) during the test periods.

Testing resulted in more than 14-million litres injected at KC and over 19 million litres injected at KB for a total of over 33 million litres of water successfully injected during the testing period.

The successful injection demonstrates the viability of injection in the core resource area and confidence that injection is also possible in geologically more favourable areas outside of the salar core.

The tests represent the first successful salar injection test in Catamarca known to the Company.

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[2] November 27 2018 ASX announcement - Maiden 4.4 Mt Resource Estimate – Kachi Lithum Brine Project
[3] January 11 2023 ASX announcement - Kachi M&I resource doubled to 2.2 million tonnes Lithium Carbonate Equivalent with 3.1 million tonnes Inferred resource
[4] This announcement reports testing results only. No exploration or production targets, nor new estimates of inferred mineral resources, indicated mineral resources or measured mineral resources in relation to the Kachi Project are being reported in this announcement, and the mineral resources last reported in the announcement on June 15, 2023 have not materially changed since that date.

The data collected during these tests are being used in the development of the hydrogeologic model that will be applied to simulate and optimise the extraction and injection wellfields.

Of the twenty-five samples collected from the two test wells, the average lithium concentration was 263 milligrams per litre (mg/L).

Extraction testing indicates the reservoir is highly productive.

Injecting into the core resource area provided a mechanism to evaluate brine disposal, utilising the same wells from which brine pumping tests were conducted. This provided a cost-effective way of defining hydraulic parameters related to both pumping extraction and injection and also allowed Lake to prove out the concepts around injection and provided additional data for ongoing technical design.

Subsequent injection testing will be undertaken in the primary areas targeted for injection, south of the core resource area.

Each test well platform (**Figure 1**) was equipped with a test well in the Unit B reservoir, a monitoring well in Unit B and additional monitoring wells in Units A (overlying) and Unit C (underlying) to evaluate the vertical connectivity in the hydrogeologic system.

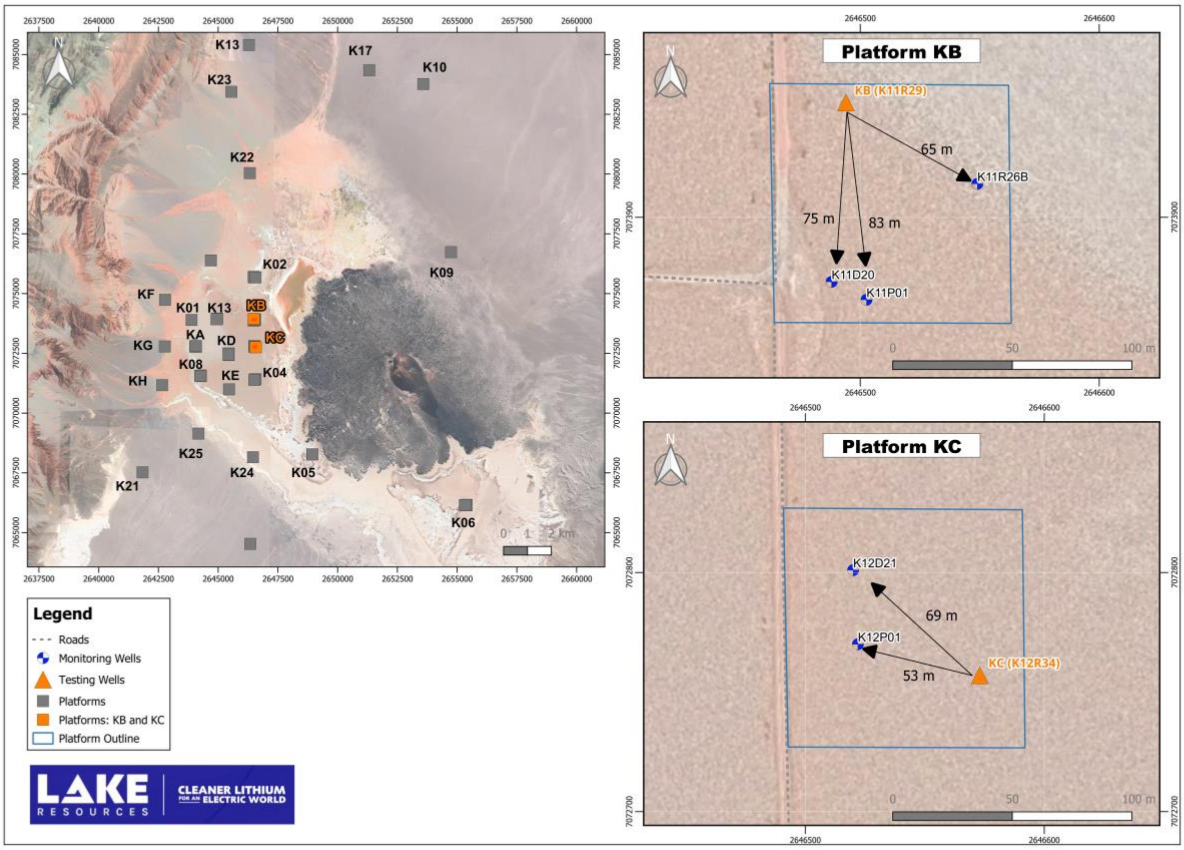

Figure 1. Location of test wells KB and KC and platform observation piezometers

Design of tests

Test wells KB and KC (see **Figure 1**) were designed to provide information on hydraulic parameters and flow rates.

The positive results of this testing now allow for design of scaled up production and injection wells for the next stage of testing and production wellfield design.

The tests significantly improve our understanding of the reservoir and provide data to support hydrogeological model development.

The tests represent a landmark achievement for the Project. The excellent results are indicative of high-yield, production-scale, extraction wells in the core resource area.

The extraction and injection testing was completed on KB and KC, with short-screened test wells that are screened from 200 to 255 m bgs and 200 to 254 m bgs, respectively (**Table 1**). These wells are completed within the fine sands of the Unit B reservoir (refer to Lake's June 15, 2023 ASX announcement for detailed lithological descriptions). To test different, locally available materials, KB was constructed of pre-pack well screen, in which a 5-inch diameter screen was enveloped with filter pack to a diameter of 7-inches. KC is a more conventionally completed 6-inch diameter screened well with a gravel pack emplaced from surface.

Prior to initiating the tests, the wells were developed by air lifting and jetting, and subsequently with a submersible pump. Both short-term step-rate tests and constant-rate tests were completed at each well, with the latter used to aid in selecting optimal rates for the longer-term constant-rate tests described in this update.

Table 1. Constant rate pumping test details

Test Well ID	Screen Interval (m bgs)	Screen Diameter (in)	Test Duration (days)	Average Pumping Rate (lps)	Maximum Drawdown in Pumping Well (m)	Average Li Concentration (mg/L)	Number of Lithium Samples Collected During the Test	Unit Tested
KB	200 - 255	5	12	16.0	65.1	263.2	20	Unit B
KC	200 - 254	6	15	24.5	32.9	262.0	5	Unit B

Well KB is less efficient than KC. This was attributed to the relatively angular gravel pack material used in the pre-pack well screen. Well KB had more groundwater-level drawdown (drawdown) as a result. The KC pumping test was completed after 15 days. The specific capacity at KC was measured as 0.85 lps/m and this extrapolates to high production rates given the short 54-m screen interval used for testing. The production wells are expected to have 150 to 200-m of screen. The KB extraction test was completed after 12 days. Both tests demonstrate that the reservoir is transmissive and permeable (**Table 2**) and are indicative of high-yielding production wells for extracting lithium brine.

Table 2 Calculated hydraulic properties of the Unit B reservoir

Test Well ID	Transmissivity (m^2/d)	Hydraulic Conductivity (m/d)	Specific Storage (1/m)	Average Specific Capacity (lps/m)	Available Drawdown[3] (m)	Observation Well / Maximum Drawdown (m)
KB	113.3	2.1	3.3×10^{-5}	0.28	154	K11R26B / 3.5
KC	190.1	3.5	4.6×10^{-6}	0.85	154	K12D21 / 7.9

Notes: [1]All tests analyzed using the Hantush Jacob method[5] and reported values are from the observation wells
[2] Results presented are based on the observation well responses for the observation well on the same platform and represent an average result from both the pumping and recovery data.
[3] Calculated as the distance between the depth to the top of the pump and the depth to brine.

Lithium Concentration in Extracted Brine

Brine chemistry samples were collected from KB and KC at the end of well development and during testing. The average lithium concentrations of these samples were 263.2 mg/L (twenty samples) and 262.0 mg/L (five samples) for KB and KC, respectively.

This has improved the Lithium concentration signature from the screened intervals (200-250 m) from the exploration drilling phase sampling of 223.5 mg/l Li for KB and 223.0 mg/l Li for KC. This will have some impact on future resource calculations within Unit B of the measured resource volume footprint of shown in **Figure 2**.

Test wells KB and KC have provided bulk geochemical sampling from the screened intervals, which indicates the results obtained from exploration drilling at these platforms were conservative.

[5] Hantush, M.S., 1961a. Drawdown around a partially penetrating well, Jour. of the Hyd. Div., Proc. of the Am. Soc. of Civil Eng., vol. 87, no. HY4, pp. 83-98. and Hantush, M.S., 1961b. Aquifer tests on partially penetrating wells, Jour. of the Hyd. Div., Proc. of the Am. Soc. of Civil Eng., vol. 87, no. HY5, pp. 171-194.

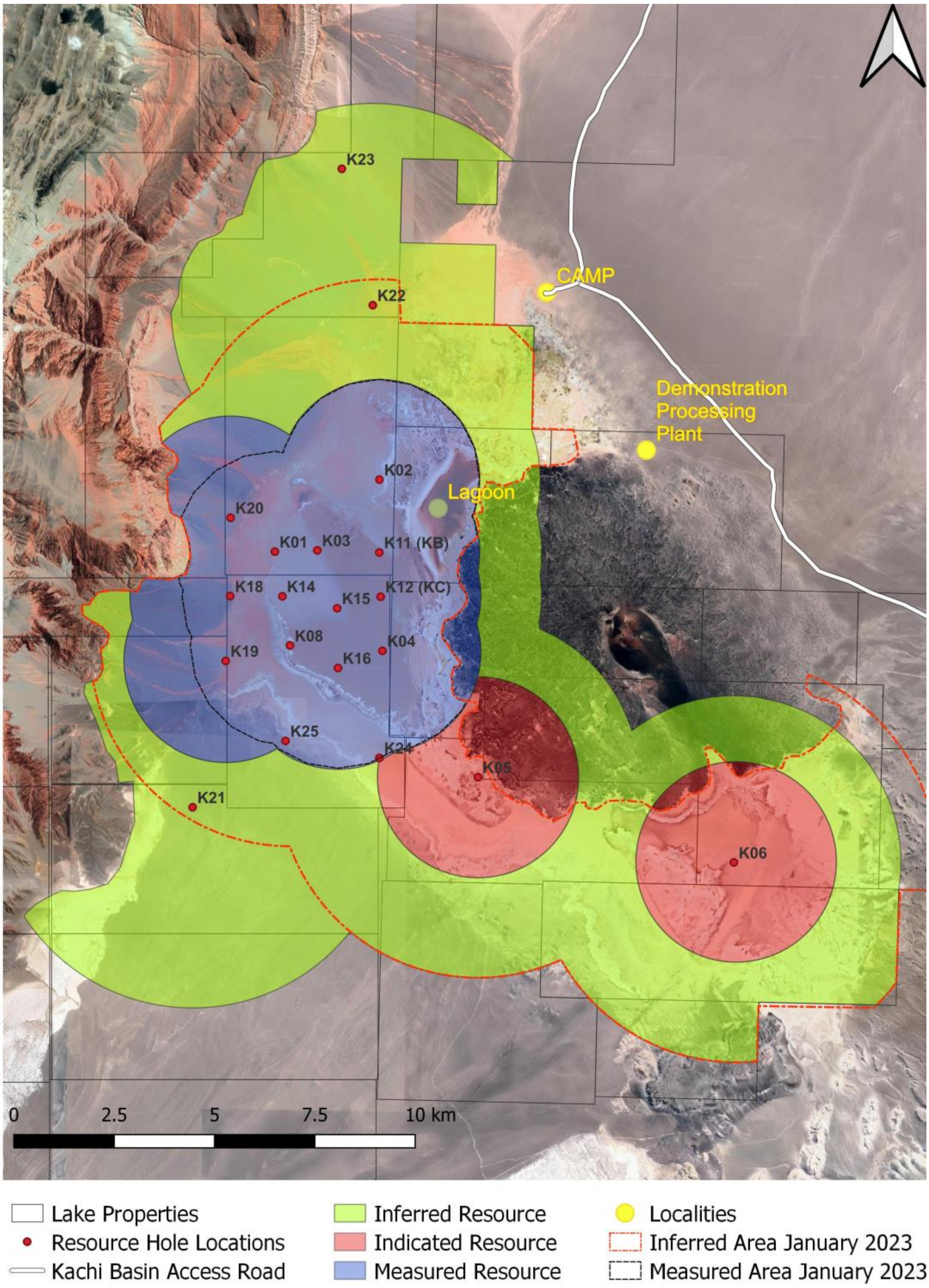

Figure 2 Lake Resources properties and drill platform locations highlighting recent and ongoing drilling operations and most recent resource delineations[6]

[6] June 15 2023 ASX announcement - Lake Resources Provides JORC Update on its Flagship Kachi Project

Successful Injection Tests

A key element of the Kachi Project is the injection of spent brine into the subsurface during operations, resulting in very limited net impact to the water balance of the Carachi Basin.

The two injection tests resulted in the successful injection of more than 33 million litres of brine into the core resource area using test wells KB and KC (**Figure 3**).

The test wells were principally designed as extraction wells but were used for the dual purpose of extraction and injection in the Stage I testing program.

Production-scale injection wells with longer well screens will have significantly higher injectivity rates.

Additionally, while there may be some injection wells in the core resource area, most injection is planned to occur outside of this area, where geologic materials are coarser and more permeable.

Completion of the Stage I injection testing program, consisting of more than 27 total days of injection, is a major milestone for the Project.

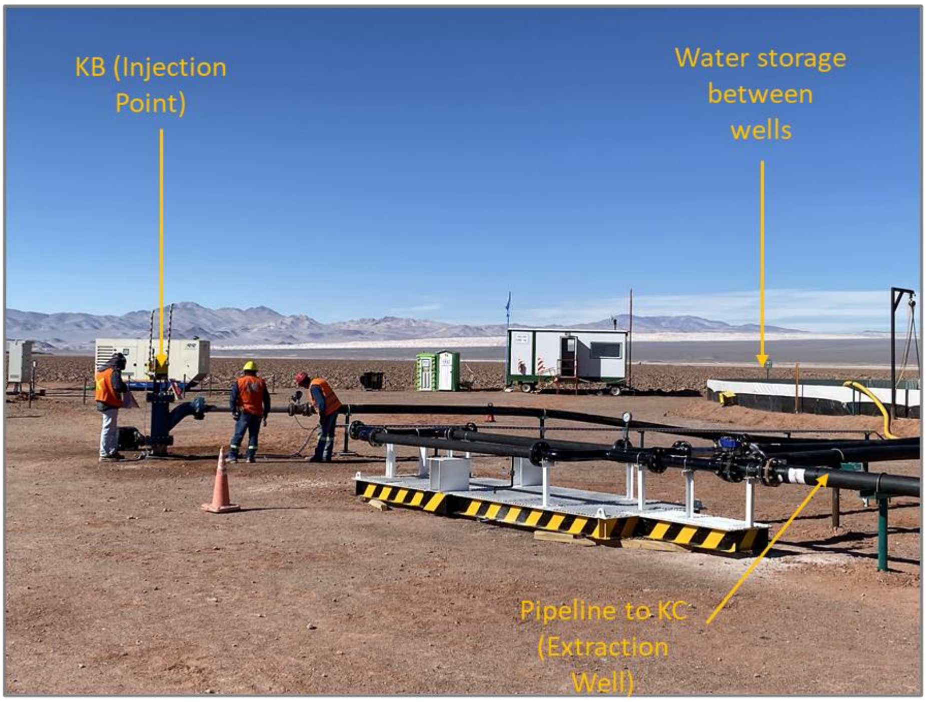

Figure 3. Photo of the injection test configuration at KB

During these tests, brine was initially discharged to an open-air storage tank and then pumped to the injection well. A portion of the KC flow was discharged to the salar, in addition to being injected at KB, for the first 12 days of the test. A summary of the test results is provided below:

Table 3 Summary of injection test results

Test Well Used for Injection	Total Volume Injected (millions of liters)	Average Injection Rate (lps)	Average Specific Injectivity (lps/psi)
KB	19.0	14.4	0.13

KC	14.1	13.6	0.19

The KB specific injectivity was reasonably constant during the test period. For the KC test, there was some decline in specific injectivity throughout the test period. This was potentially associated with the introduction of air after a brief shutdown period, and/or entrainment of halite precipitate in the open tank. Test procedures and infrastructure are being refined for future tests to evaluate different depth horizons and/or areas of the concessions.

Additional extraction and injection trials are ongoing to refine our understanding of the subsurface and brine geochemistry. Infill drilling in the southern region of the Project area is occurring now at K24 (K24D41) and at K25 (K25D42) (**Figure 2)** and has recently been completed at K23 (K23D40) northwest of the core resource area.

Subsequent additional aquifer testing is underway at Kachi. This data will be used as input for the hydrogeologic model being developed to simulate the extraction and injection wellfields as part of the Project's Definitive Feasibility Study (DFS) for Phase 1 and to support development of a reserve estimate for the Project.

Competent Person's Statement – Kachi Lithium Brine Project

The information contained in this ASX release relating to Exploration Results is based on, and fairly represents, information and supporting documentation that has been compiled by Mr Andrew Fulton. Mr Fulton is a Hydrogeologist and a Member of the Australian Institute of Geoscientists and the Association of Hydrogeologists. Mr Fulton has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a competent person as defined in the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.

Andrew Fulton is an employee of Groundwater Exploration Services Pty Ltd and an independent consultant to Lake Resources NL. Mr Fulton consents to the inclusion in this announcement of this information in the form and context in which it appears. The information in this announcement is an accurate representation of the available data from initial exploration at the Kachi project as prepared by Mr Fulton .

JORC Table 1

This appendix provides all information that is material to understanding the exploration results in relation to each of the criteria listed below.

Section 1

Sampling Techniques and Data related to Kachi drilling

(Criteria in this section apply to all succeeding sections.)

Criteria		Section 1–- Sampling Techniques and Data

Sampling techniques	• *Nature and quality of sampling (e.g., cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.*
	• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*
	• *Aspects of the determination of mineralisation that are Material to the Public Report.*
	• *In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*
		• Brine samples were taken from multiple sampling methods from diamond core and rotary drilling methods including:
		  ○ bottom of hole spear point during HQ diamond core drilling advance
		  ○ straddle packer device to obtain representative samples of the formation fluid by purging a volume of fluid from the isolated interval, to minimize the possibility of contamination by drilling fluid then taking the sample. Low pressure airlift tests are used as well. The fluid used for drilling is brine sourced from the drill hole and the return from drillhole passes back into the excavator dug pit, which is lined with black plastic to avoid leakage. Straddle packer sampling is the current standard form of sampling.
		  ○ Installed standpipes with discrete screening intervals
		  ○ Bailer sampling during advance, removing significant brine volumes to draw formation fluids into the base of the drill stem
		• The brine sample was collected in clean plastic bottles (1 litre) and filled to the top to minimize air space within the bottle. Duplicate samples were submitted at a high frequency, to allow statistical evaluation of laboratory results. These were collected at the same time as the primary samples for storage and submission of duplicates to the laboratory. Each bottle was taped and marked with the sample number.
		• Drill core in the hole was recovered in 1.5 m length core runs in core split tubes to minimize sample disturbance.
		• Drill core was undertaken to obtain representative samples of the sediments that host brine, being collected and stored in Lexan Tubes, in order to collect samples that are as little disturbed as possible.

Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• Diamond drilling with an internal (triple) tube was used for drilling. The drilling produced cores with variable core recovery, associated with unconsolidated material, in particularly sandy intervals. Recovery of these more friable sediments is more difficult with diamond drilling, as this material can be washed from the core barrel during drilling. • Rotary drilling has used 8.5" or 10" tricone bits and has produced drill chips, which have been logged and holes geophysically logged. • Brine has been used as drilling fluid for lubrication during drilling, for mixing of additives and muds.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise*	• Diamond drill core was recovered in 1.5m length intervals in the drilling triple (split) tubes. Appropriate additives were used for hole stability to maximize core recovery. The core recovered from each run was measured and compared to the

	sample recovery and ensure representative nature of the samples. • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	length of each run to calculate the recovery. Chip samples are collected for each metre drilled and stored in segmented plastic boxes for rotary drill holes. • Brine samples were collected at discrete depths during the drilling using a double packer over a 1 m interval (to isolate intervals of the sediments and obtain samples from airlifting brine from the sediment interval isolated between the packers). This equipment is from Geopro, a reputable international supplier. • Additives and muds are used to maintain hole stability and minimize sample washing away from the triple tube. • As the brine (mineralisation) samples are taken from inflows of the brine into the hole (and not from the drill core – which has variable recovery) they are largely independent of the quality (recovery) of the core samples. However, the permeability of the lithologies where samples are taken is related to the rate and potentially lithium grade of brine inflows.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• Sand, clay, silt, and minor occurrences of ignimbrite were recovered in a triple tube diamond core drill tube, or as chip samples from rotary drill holes, and examined for geologic logging by a geologist and a photo taken for reference. • Diamond holes are logged by a geologist who also supervised taking of samples for laboratory porosity analysis (with samples drilled and collected in lexan polycarbonate tubes) as well as additional physical property testing. • Logging is both qualitative and quantitative in nature. The relative proportions of different lithologies which have a direct bearing on the overall porosity, contained and potentially extractable brine are noted, as are more qualitative characteristics such as the sedimentary facies and their relationships. Cores are photographed for reference, prior to storage.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• Brine samples were collected by inflatable packer, bailer and spear sampling methods, over a variable interval. Low pressure airlift tests are used as well to purge test interval and gauge potential yields (brine flows). • The brine sample was collected in one-litre sample bottles, rinsed and filled with brine. Each bottle was taped and marked with the sample number. Duplicates were taken and submitted with standards as part of the QA/QC protocols.

Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	• The laboratory services of Alex Stewart International Argentina Jujuy, Argentina, is used as the primary laboratory to conduct the assaying of the brine samples collected as part of the sampling program. The SGS laboratory in Buenos Aires has also been used for both primary and check samples. They also analysed blind control samples and duplicates in the analysis chain. The Alex Stewart laboratory and the SGS laboratory are ISO 9001 and ISO 14001 certified, and are specialized in the chemical analysis of brines and inorganic salts, with experience in this field. This includes the oversight of the experienced Alex Stewart Argentina S.A. laboratory in Mendoza, Argentina, which has been operating for a considerable period. • The quality control and analytical procedures used at the Alex Stewart laboratory or SGS laboratory are considered to be of high quality and comparable to those employed by ISO certified laboratories specializing in analysis of brines and inorganic salts. • QA/QC samples include field duplicates, standards and blank samples.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Field duplicates, standards and blanks will be used to monitor potential contamination of samples and the repeatability of analyses. Accuracy, the closeness of measurements to the "true" or accepted value, has been monitored by the insertion of standards, or reference samples, and by check analysis at an independent (or umpire) laboratory. • Duplicate samples in the analysis chain were submitted to Alex Stewart or SGS laboratories as unique samples (blind duplicates) during the process • Stable blank samples (distilled water) were used to evaluate potential sample contamination and will be inserted in future to measure any potential cross contamination • Samples were analysed for conductivity using a hand-held Hanna pH/EC multiprobe on site, to collect field parameters. • Regular calibration of the field equipment using standards and buffers is being undertaken.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• The diamond drill hole sample sites and rotary drill hole sites were located with a hand-held GPS and later located by a surveyor, with the majority of hole collars defined by the surveyor. • The properties are located at the junction of the Argentine POSGAR grid system Zone 2 and Zone 3 (within UTM 19) and in WGS84 Zone 19 south. The Project is using Zone 2 as the reference zone, as the critical infrastructure is located on the edge of Zone 2.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• Drill holes in the central area where Measured resources have been defined have a spacing of approximately 1.5 km between drill holes, with a greater spacing in the area where Inferred resources have been defined. • Brine samples were generally collected over 1m intervals from straddle packers, with samples collected at variable intervals vertically, due to varying hole conditions and over the life of the Project different sampling techniques. The average distance between samples is approximately 28 m. • Compositing has been applied to porosity data obtained from the BMR geophysical tool, as data is collected at closer than 10 cm intervals, providing extensive data, particularly compared to the available assay data.

Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• The salt lake (*salar*) deposits that contain lithium-bearing brines generally have horizontal to sub-horizontal beds and lenses that contain sand, gravel, salt, silt and clay. The vertical diamond drill and rotary holes provide the best understanding of the stratigraphy and the nature of the sub-surface brine bearing aquifers. • Geological structures are important for the formation of salar basins, but not as a host to brine mineralization.
Sample security	• *The measures taken to ensure sample security.*	• Samples were transported to the Alex Stewart/Norlab SA or SGS laboratories for chemical analysis in sealed 1-litre rigid plastic bottles with sample numbers clearly identified. Samples were transported by a trusted member of the team to the office in Catamarca and then sent by DHL couriers to the laboratories. • The samples were moved from the drillhole sample site to secure storage at the camp on a daily basis. All brine sample bottles sent to the laboratory are marked with a unique label.
Review (and Audit)	• *The results of any audits or reviews of sampling techniques and data.*	• An audit of the database has been conducted by the CP and another Senior Consultant at different times during the Project and prior to finalization of the samples to be used in the resource estimate. The CP has been onsite periodically during the sampling program. The review included drilling practice, geological logging, sampling methodologies for brine quality analysis and, physical property testing from drill core, QA/QC control measures and data management. The practices being undertaken were ascertained to be appropriate, with constant review of the database by independent personnel recommended.

Section 2
Reporting of Exploration Results
(Criteria listed in the preceding section also apply to this section.)

Criteria		Section 2–- Reporting of Exploration Results
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The Kachi Lithium Brine Project is located approximately 100km south-southwest of Livent's Hombre Muerto lithium operation and 45km south of Antofagasta de la Sierra in Catamarca province of north-western Argentina, at an elevation of approximately 3,000m asl. • The Project comprises approximately 103,898 Ha in fifty two (52) mineral leases (minas), including two leases (4,662 Ha) which are applications pending granting. Details of the properties are provided in a table at the back of this announcement. • The tenements are believed to be in good standing, with statutory payments completed to relevant government departments.
Exploration by other parties	• *Acknowledgment and appraisal of exploration by other Parties.*	• Marifil Mines Ltd conducted sparse surface pit sampling of groundwater at depths less than 1m in 2009. • Samples were taken from each hole and analysed at Alex Stewart laboratories in Mendoza Argentina. • Results were reported in an NI 43-101 report by J. Ebisch in December 2009 for Marifil Mines Ltd.

		• NRG Metals Inc commenced exploration in adjacent leases under option. Two diamond drill holes intersected lithium bearing brines. The initial drillhole intersected brines from 172-198m and below with best results to date of 15m at 229 mg/L Lithium, reported in December 2017. The second hole, drilled to 400 metres in mid-2018, became blocked at 100 metres and could not be sampled. A VES ground geophysical survey was completed prior to drilling. A NI 43-101 report was released in February 2017. • No other exploration results were able to be located
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The known sediments within the *salar* consist of a thin (several metre thick) salt/halite surficial layer, with interbedded clay, sand and silt horizons, accumulated in the *salar* from terrestrial sedimentation and evaporation of brines. • Brines within the Salt Lake are formed by solar concentration, interpreted to be combined with warm geothermal fluids, with brines hosted within sedimentary units. • Geology was recorded during the diamond drilling and from chip samples in rotary drill holes.

Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole width and depth (length and interception depth)*
	  ○ *end of hole (hole length).*
	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*
		• Lithological data was collected from the holes as they were drilled and drill cores or chip samples were retrieved. Detailed geological logging of cores is ongoing.
		• All drill holes are vertical, (dip -90, azimuth 0 degrees).
		• Coordinates and depths of holes are provided above in the report in the Gauss Kruger Zone 2. Elevations are measured by a surveyor, except for the most recently completed holes.
		• Assay results are provided in a table above in the report.
		• Drill hole information is showing in plans included.
		• Refer to June 15, 2023 ASX announcement for detailed lithological descriptions

Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values*	• Assay averages have been provided where multiple sampling occurs in the same sampling interval. A considerable number of samples were sent to the two laboratories, and averages of these results were used for the resource estimation. • No cutting of lithium concentrations was justified nor undertaken. • Lithium samples are by nature composites of brine over intervals of metres, due to the fluid nature of brine.

	should be clearly stated.	
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	• Mineralisation is interpreted to be horizontally lying and drilling perpendicular to this, so intersections are considered true thicknesses Brine is likely to extend to the base of the Kachi basin, although this has yet to be confirmed by drilling. • Mineralisation is continuous and sampling, despite intersecting intervals of lower grade in places within the resource has not identified volumes of brine with what are likely to be sub-economic concentrations within the resource. However, the reader is advised that a reserve has yet to be defined for the Project.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• A drill hole location plan is provided showing the locations of the drill platforms. • Drill hole information is showing in plans included. • Refer to June 15, 2023 ASX announcement for detailed lithological descriptions
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• Brine assay results are available from 51 drill holes from the drilling to date, reported here. Additional information will be provided as it becomes available.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• There is no other substantive exploration data available regarding the Project. Additional surface geophysics is planned for the Project. A pilot plant is currently operating at the Project to assess extraction of lithium. • Test wells KB and KC were designed and constructed for the purpose of combined extraction and injection. • KB located of Platform K11. • KC located on Platform K12
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• The Company has drilled approximately 11,500 m of diamond and rotary drilling to date. Currently drilling is underway to continue resource classification upgrade and expansion. Drilling is also underway to test potential reinjection areas. Further injection testing is planned in these areas.

Drill-hole information

Table setting out information for material drill-holes:[9]

Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole width and depth (length and interception depth)*
	  ○ *end of hole (hole length).*
	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*
		• Lithological data was collected from the holes as they were drilled and drill cores or chip samples were retrieved. Detailed geological logging of cores is ongoing.
		• All drill holes are vertical, (dip -90, azimuth 0 degrees).
		• Coordinates and depths of holes are provided above in the report in the Gauss Kruger Zone 2. Elevations are measured by a surveyor, except for the most recently completed holes.
		• Assay results are provided in a table above in the report.
		• Drill hole information is showing in plans included.
		• Refer to June 15, 2023 ASX announcement for detailed lithological descriptions

[9] *This information is the same information contained in Section 2 above, but set out in a separate table in accordance with ASX Listing Rule 5.7.2.*

<u>Lake Investors please contact:</u>

Global IR: Karen Greene, SVP, Investor Relations, Lake Resources: karen.greene@lakeresources.com.au

IR (AU): Anthony Fensom, Republic PR, +61 (0) 407 112 623, anthony@republicpr.com.au

For media queries, please contact:

Nigel Kassulke at Teneo

M: +61407904874

E: Nigel.Kassulke@teneo.com

About Lake Resources NL (ASX:LKE OTC:LLKKF)

Lake Resources NL (ASX:LKE, OTC: LLKKF) is a responsible lithium developer utilising state-of-the-art ion exchange extraction technology for production of sustainable, high purity lithium from its flagship Kachi Project in Catamarca Province within the Lithium Triangle in Argentina. Lake also has three additional early-stage projects in this region.

This ion exchange extraction technology delivers a solution for two rising demands – high purity battery materials to avoid performance issues, and more sustainable, responsibly sourced materials with low carbon footprint and significant ESG benefits.

Forward Looking Statements:

Certain statements contained in this announcement, including information as to the future financial performance of the projects, are forward-looking statements. Such forward-looking statements are necessarily based upon a number of estimates and assumptions that, while considered reasonable by Lake Resources N.L. are inherently subject to significant technical, business, economic, competitive, political and social uncertainties and contingencies; involve known and unknown risks and uncertainties and other factors that could cause actual events or results to differ materially from estimated or anticipated events or results, expressed or implied, reflected in such forward-looking statements; and may include, among other things, statements regarding targets, estimates and assumptions in respect of production and prices, operating costs and results, capital expenditures, reserves and resources and anticipated flow rates, and are or may be based on assumptions and estimates related to future technical, economic, market, political, social and other conditions and affected by the risk of further changes in government regulations, policies or legislation and that further funding may be required, but unavailable, for the ongoing development of Lake's projects. Lake Resources N.L. disclaims any intent or obligation to update any forward-looking statements, whether as a result of new information, future events or results or otherwise. The words "believe", "expect", "anticipate", "indicate", "contemplate", "target", "plan", "intends", "continue", "budget", "estimate", "may", "will", "schedule" and similar expressions identify forward-looking statements. All forward-looking statements made in this announcement are qualified by the foregoing cautionary statements. Investors are cautioned that forward-looking statements are not guarantees of future performance and accordingly investors are cautioned not to put undue reliance on forward-looking statements due to the inherent uncertainty therein. Lake does not undertake to update any forward-looking information, except in accordance with applicable securities laws.