ASX ANNOUNCEMENT

August 22 2023

Further Drilling at Flagship Kachi Project Reveals Large Lateral and Vertical Expansion of Lithium-Bearing Brine

- **Drilling program continues to confirm the large scale and quality of lithium-bearing brine for the Kachi Lithium Brine Project.**
- **Deeper drilling at K23D40 reveals lithium-bearing brine continues between 400 and 610 meters below ground surface at K23D40**
- **Step out drilling reveals lithium-bearing brines are more extensive than previously understood.**
- **Results show brines returning grades of 209-254 mg/L lithium over 322 metres (288 – 610 m) in drillhole K23D40 with best results from 288 to 322 meters below ground surface (m bgs) averaging grades of 254 mg/L lithium.**
- **Higher permeability sands and gravels intercepted.**
- **Drilling continues in the Southern sector of the project area with diamond drillholes at Platforms K24 and K25.**

Clean lithium developer Lake Resources NL (ASX: LKE; OTC: LLKKF) ("LAKE" or "the Company") reports that deeper drilling at the Kachi lithium brine Project ("Kachi" or the "Project") in Catamarca Province, Argentina indicates significantly larger horizontal and vertical extents of the lithium-bearing brine than previously understood.

In Lake's resource update on June 15, 2023, the Company reported that future drilling was targeting additional step out holes and exploring the deeper resource beyond 400m bgs. This update provides highlights from drillhole K23D40 which is the first hole at the Project drilled beyond 430 m bgs to a total depth of 610 m bgs.[1] The data from this drillhole will be used to support planned resource updates and the hydrogeologic models being developed to simulate the extraction and injection wellfields as part of the Project's Definitive Feasibility Study (DFS) for Phase 1.

"The latest drilling intercept results indicate that this resource is much larger than initially anticipated as the known lithium brine extent continues to expand laterally and vertically ," commented Michael Gabora, Director of Geology and Hydrogeology of Lake Resources.

" The K23D40 hole represents the first time Lake has drilled significantly beyond 400 m to over 600 m. Even more exciting is that average lithium grades in all brine samples collected between 400 and 600 m are above 209 mg/L, proving that the brine extends at depth to over 600 m at K23. This has big

[1] 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.

implications for what may be present in the central resource area at these depths."

Lake CEO David Dickson commented, "In drilling 180 m deeper than we have before, we are excited to find lithium-bearing brine the whole way down, increasing the extent of known brine in the vertical dimension by 30%."

"These findings could have a major impact on the resource if it is also present at these depths in the remainder of the brine footprint. This work will contribute to further resource updates, which we expect to provide in September, in support of the completion of our Phase 1 DFS."

The Kachi Project has shown continual increases in mineral resource estimates since the maiden estimate of 4.4 Mt of contained battery grade Lithium Carbonate Equivalent (LCE) in Inferred and Indicated categories was announced in November 2018[2]. The resource was significantly upgraded in January 2023 with a Measured and Indicated resource of 2.2 Mt of LCE and approximately 3.1 Mt of LCE of Inferred mineral resources[3]. The total resource was again increased in June of 2023[4] with more than 2.9 Mt LCE in Measured and Indicated and approximately 5.3 Mt of LCE in the Inferred category for a total resource estimate of more than 8.1 Mt of LCE[5]. As reported in the the Company's June 15, 2023 ASX announcement, the lithium grade of the Measured Resource (0-400m) across the salar is 210 mg/L lithium, the Indicated Resource immediately southeast is 174 mg/L lithium, and the surrounding Inferred Resource (0-400m) has a concentration of 199 mg/L lithium.[6] Recent extraction and injection testing[7] has built on the existing knowledge around the large lithium brine resource and demonstrated that the reservoir in the resource area is permeable and that productive wells can be drilled and constructed. The additional drilling and testing results from K23D40 provided in this announcement demonstrate that the resource is present significantly further west and north of the core resource area and extends to more than 600m, which is significantly deeper than previously defined.

[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] See Table 2 for details of the individual categories of 'Inferred', 'Indicated' and 'Measured' regarding the JORC Mineral Resource estimate, which was first reported in the announcement on June 15, 2023 and has not changed since that date.
[5] June 15 2023 ASX announcement - - Lake Resources Provides JORC Update on its Flagship Kachi Project
[6] June 15 2023 ASX announcement - - Lake Resources Provides JORC Update on its Flagship Kachi Project.
[7] August 15 2023 ASX announcement - Lake Resources Completes Intermediate Milestone to Achieve DFS with Successful Extraction and Injection Tests at its Flagship Kachi Project

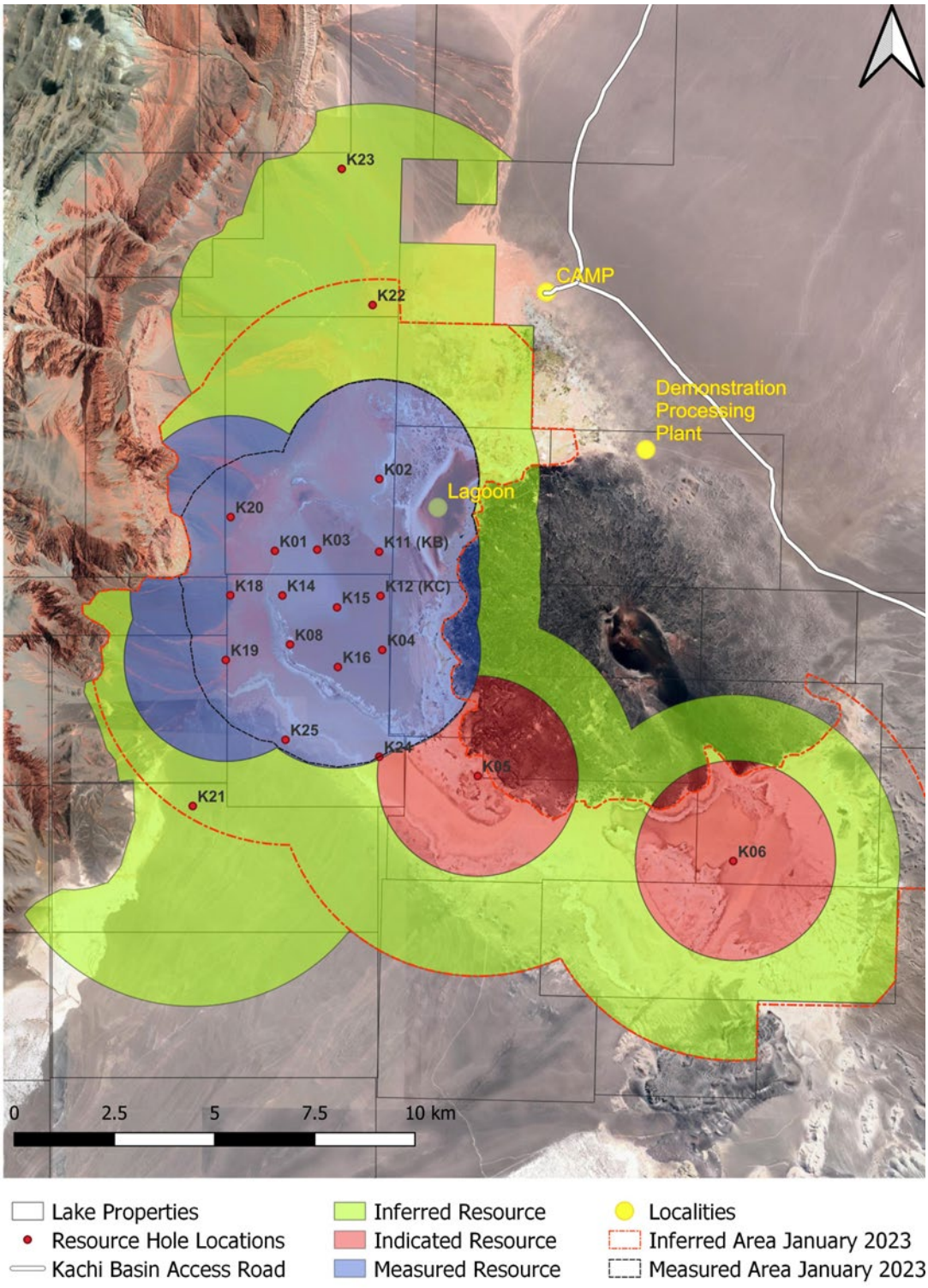

Figure 1: Lake Resources properties and drill platform locations highlighting recent and ongoing drilling operations and most recent resource delineations[8]

Step Out Drilling

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

Step out hole K23D40 (K23 Platform), drilled about 3.5 kilometres northwest of K22D39 (K22 Platform; **Figure 1**), has an average lithium grade of 232 mg/L from twelve (12) samples collected between 288 and 610 meters below ground surface (m bgs). All samples were collected with single packer configurations generally with a test interval of about 10 m, although this varied depending on hole conditions. Standard operating procedures are followed with significant development of the test interval, at least 3 borehole volumes (measured from surface to hole bottom), and sampling only occurs once brine is clear and field chemistry parameters are stable and indicative of reservoir fluids. A standpipe piezometer was installed and screened between 372 to 384 m bgs and was developed and sampled via airlifting and a measured lithium concentration of 224 mg/L (Alex Stewart Laboratory, Jujuy, Argentina), which is consistent with the packer test sample from 360 m to 390 m bgs which measured 230 mg/L (**Table 1**).

Multiple exploration targets for injection of spent brine, locations north and south of the Project (K21, K22, and K23; **Figure 1**), have all encountered lithium-bearing brine above 200 mg/L. The results for K21 and K22 have been reported previously by Lake Resources[9] with average lithium grades of 219 and 283 mg/L lithium, respectively[10]. Results from K23, approximately 3.5 km northwest of K22, indicate that brine is also present beneath the present-day surface expression of the alluvial fan west of the salar (**Table 1, Figure 1**). Results reaffirm Lake's conceptual model of the presence of lithium brine within the alluvial fan deposits west of the central resource area. A highlight from the results is that the lithium brine occurs within coarser grained materials such as gravelly sands, sandy gravels, and clean sands (**Figure 2** and **Figure 3**) Additional laboratory results from the SGS .

[9] June 15 2023 ASX announcement - Lake Resources Provides JORC Update on its Flagship Kachi Project, and have not materially changed since that date.
[10] As above.

Table 1. Lithium Intercepts at planned injection location K23D40

Test Well ID	Sample Interval (m bgs)		Lithium Concentration (mg/L)	
K23	288	322	254	[3]SGS / AS
	350	360	228	[2]AS
	360	390	230	[2]AS
	409	420	228	[3]SGS / AS
	436	445	243	[3]SGS / AS
	461	475.5	240	[3]SGS / AS
	485	496	241	[3]SGS / AS
	521	530.5	222	[2]AS
	538	550	235	[3]SGS / AS
	566	575.5	229	[3]SGS / AS
	587	601	224	[3]SGS / AS
	602	610	209	[3]SGS / AS
Average			251	

Notes: [1]SGS laboratory in Buenos Aires, Argentina; [2]Alex Steward laboratory in Salta, Argentina; [3]Average of both SGS laboratory in Buenos Aires, Argentina; 2 Alex Steward laboratory in Jujuy, Argentina.

Figure 2. Diamond drilling rig at platform K23 and a representative gravelly sand from K23D40 at 348 m bgs

As a result of the significant spatial expansion of the known lithium-bearing brine intercepted to both the north and south of the central resource area, additional exploration drilling and testing for suitable injection locations will be necessary. As injection targets are located further outside the central resource area, coarser-grained, more permeable sediments have been encountered (e.g., K22 and K23). Permeable coarse-grained stratigraphy would provide conditions even more favorable for injection than that demonstrated with the positive results from the injection trials at KB and KC (*see Lake's 16 August 2023 ASX announcement - Lake Resources Completes Intermediate Milestone to Achieve DFS with Successful Extraction and Injection Tests at its Flagship Kachi Project*). Results from K23D40 confirm that the basin consists of coarse-grained sediments west and northwest of the central resource area.

Additional infill drilling in the southern region of the Project area is ongoing at K24D41 (K24 Platform) and K25D42 (K25 Platform) (**Figure 1**). The objective of drilling and testing at these locations is to improve understanding of the hydrogeologic system in addition to collecting brine samples, which could potentially allow for the upgrade of resource areas from inferred to indicated and indicated to measured, subject to additional testing(**Figure 1 and Table 2**).

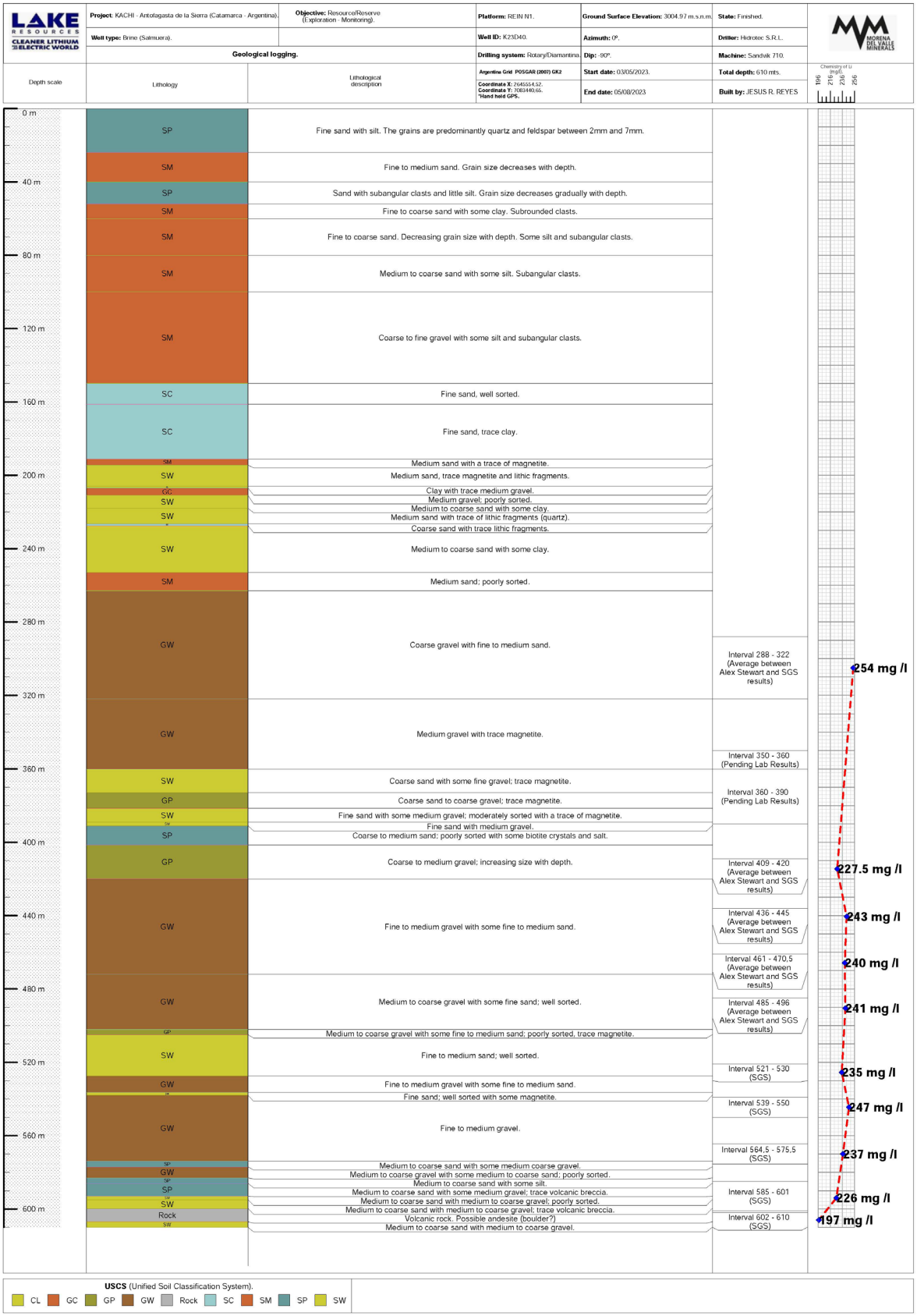

Figure 3. Lithology log from K23D40

Table 2 Updated resource estimate of contained lithium (June 2023[11])

Measured June 2023								
Unit	Sediment Volume m^3	Specific Yield %	Brine volume m^3	Litres	Li mg/l	Li grams	Li Tonnes	Tonnes LCE
A	14,620,000,000	0.07	1,073,675,256	1,073,675,256,000	200	214,735,051,200	214,735	1,142,390
B	4,594,900,000	0.08	358,054,366	358,054,366,070	222	79,488,069,268	79,488	422,877
C	8,487,400,000	0.06	543,960,861	543,960,860,960	223	121,303,271,994	121,303	645,333
Total	27,702,300,000		1,975,690,483	1,975,690,483,030	210	415,526,392,462	415,526	2,210,600
Indicated June 2023								
Unit	Sediment Volume m^3	Specific Yield %	Brine volume m^3	Litres	Li mg/l	Li grams	Li Tonnes	Tonnes LCE
A	5,559,400,000	0.07	401,416,477	401,416,477,000	172	69,043,634,044	69,044	367,312
B	1,968,900,000	0.07	144,809,839	144,809,838,540	176	25,486,531,583	25,487	135,588
C	3,528,700,000	0.06	225,883,379	225,883,378,840	177	39,981,358,055	39,981	212,701
Total	11,057,000,000		772,109,694	772,109,694,380	174	134,511,523,682	134,512	715,601
Combined Measured + Indicated								
	38,759,300,000	-	2,747,800,177	2,747,800,177,410		550,037,916,143	550,038	2,926,202
Inferred June 2023								
Unit	Sediment Volume m^3	Specific Yield %	Brine volume m^3	Litres	Li mg/l	Li grams	Li Tonnes	Tonnes LCE
A	35,100,000,000	0.08	2,695,188,600	2,695,188,600,000	188	506,695,456,800	506,695	2,695,620
B	8,982,700,000	0.07	661,907,317	661,907,316,630	201	133,043,370,643	133,043	707,791
C	20,794,000,000	0.07	1,534,617,994	1,534,617,994,000	218	334,546,722,692	334,547	1,779,789
Total	64,876,700,000		4,891,713,911	4,891,713,910,630	199	974,285,550,135	974,286	5,183,199

- JORC definitions were followed for mineral resources.
- The Competent Person for this Mineral Resource estimate is Andrew Fulton, MAIG.
- No internal cut-off concentration has been applied to the resource estimate. The resource is reported at a zero mg/l cut-off, given the consistent grade of the deposit.
- Numbers may not add due to rounding.
- Specific Yield (Sy) = Drainable Porosity
- Lithium is converted to lithium carbonate (Li2CO3) with a conversion factor of 5.32.For details on the lithology units please refer to the June 15 2023 ASX annoucement

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

[11] June 15 2023 ASX announcement - Lake Resources Provides JORC Update on its Flagship Kachi Project, and this information has not changed since that date.

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.*	• 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

	• *Measures taken to maximise 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.*	recovered from each run was measured and compared to the 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:* o *easting and northing of the drill hole collar* o *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* o *dip and azimuth of the hole* o *down hole width and depth (length and interception depth)* o *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.*

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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.