Lake Resources NL: Further Drilling at Flagship Kachi Project

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Sydney, Australia - Clean lithium developer Lake Resources NL (ASX:LKE) (FRA:LK1) (OTCMKTS:LLKKF) reports that deeper drilling at the Kachi Lithium Brine Project ("Kachi" or the "Project") in Catamarca Province, Argentina indicates higher lithium grades and significantly deeper vertical extents of the lithium bearing brine in the central resource area.

- Drilling program continues to confirm the large scale and quality of lithium-bearing brine for the Kachi Lithium Brine Project.

- K24D41 Results show brines returning grades of 180-348 mg/L lithium over 445 m (166 - 610 m) with an average of 267mg/L.

- Deeper drilling at K24D41, located in the southern sector of the central resource area, reveals lithium-bearing brine continues between 400 and 610 meters.

- K24D41 is the second hole advanced to 610 meters, and both K24D41 and K23D40 have proven the presence of lithium bearing brine significantly deeper than the defined resource.

- Best results from 242-250 m bgs averaging grades of 348 mg/L lithium. This represents some of the best lithium grade results drilled to-date at the project.

"The K24D41 hole has important implications for the vertical extent of the lithium brine resource in the central resource area. The lithium grades are some of the best we have measured averaging 267 mg/L over 445 m," Mr Michael Gabora, Director of Geology and Hydrogeology of Lake Resources, said.

"With this second hole intercepting brine between the current bottom of the measured and indicated resource at 400 m to more than 600 m, it is becoming clear that there remains significant upside for the deposit," said David Dickson, CEO of Lake Resources. "These results will positively impact any future resource updates in support of the completion of our Phase 1 DFS."

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 400 m bgs.

A subsequent update on August 22, 2023 provided highlights from drillhole K23D40, the first hole at the Project drilled beyond 430 m bgs to a total depth of 610 m bgs, which measured lithium brines over 322 m, returning grades of 209-254 mg/L.

Borehole K24D41, which forms the basis of most of this update, is the second hole advanced to more than 600 m and similarly demonstrates lithium brine to depths of over 600 m (Table 1*).

The data from both these drillholes will be used to support future 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 the lithium brine extends to at least 610 m at both the drillhole location in the central resource area and the drillhole in the alluvial fan northwest of the central resource area," Mr Gabora said.

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:

- 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.

- The total resource was again increased in June 2023 with more than 2.9 Mt of LCE in Measured and Indicated and approximately 5.2 Mt of LCE in the Inferred category for a total resource estimate of more than

8.1 Mt of LCE.

- As reported in the Company's June 15, 2023 ASX announcement, the lithium grade of the Measured Resource (0-400 m) 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 200 mg/L lithium.

Mr Gabora said recent extraction and injection testing had 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.

He also noted that the additional drilling and testing results from K23D40 on August 22, 2023, and from K24D41 provided in this announcement, demonstrate that the lithium resource is present significantly further northwest and south of the core resource area and extends to more than 610 m at the drilled locations, which is significantly deeper than previously defined.

Upgrade of the Lithium Resource in the Southern Sector

The principal objective of the K24D41 (K24 Platform) drillhole is to expand the Measured and Indicated Resource to the south (Figure 1*). K24D41 (was drilled about 2.5 kilometres southeast of K16D28 (K16 Platform; Figure 1*), has an average lithium grade of 267 mg/L from eighteen (18) samples collected between 166 and 610 m bgs. All samples were collected with single packer configurations generally with a test interval of about 10 m, although this varied slightly depending on hole conditions. Standard operating procedures are followed with significant development of the test interval, at least three (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. At drilling completion, a standpipe piezometer was installed and screened between 395 to 410 m bgs and was developed and sampled via airlifting. Results from the piezometer sample are still pending.

Significant Brine Intercepts Below 400 meters

K24D41 has intercepted some of the highest lithium grades at site with three samples between 215 m bgs and 277 m bgs above 300 mg/L (see Figure 3*) and eleven sample intervals above 250 mg/L.

Samples collected from the previously defined vertical resource extent, 400m, to 610 m (eight samples from 415 m to 610 m) averaged 238 mg/L. These deep samples are well above the current design basis of 205 mg/L for the project. This same interval was comprised principally of fine grained well-sorted sand intervals (Figure 3*). When combined with the K23D40 results, the discovery of lithium at these depths represents a large expansion of the Inferred Resource in the vertical dimension.

Additional Drilling

Additional infill drilling in the southern region of the Project area is ongoing at K25D42 (K25 Platform), located about 2.4 km west of K24 and 2.4 km south of K08 (Figure 1*). Drilling and testing at this location is to upgrade the resource in the south, towards K21, to a Measured Resource and improve our understanding of the hydrogeologic system in the southern portion of the central resource area (Figure 1 and Table 2*).

Since the August 22, 2023 ASX announcement detailing the results from K23D40, additional laboratory data has been received, and an updated lithology log with lithium concentrations for K23D40 is presented in Figure 4, and an updated table of results for K23D40 (Table 2*) includes laboratory data for all samples collected from that drillhole.

The final updated average lithium concentration now that all laboratory samples have been received from K23D40 is 229 mg/L versus the 232 mg/L from samples available at the time of the August 22 ASX announcement. The updates do not have a material impact to the conclusion that the outcomes of results from K23D40 are highly positive, intersecting permeable materials with lithium concentrations well above the design basis for the project for all samples.

*To view tables and figures, please visit:
https://abnnewswire.net/lnk/T53J1IV2

About Lake Resources NL:

Lake Resources NL (ASX:LKE) (OTCMKTS:LLKKF) is a clean 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 among three other projects covering 220,000 ha.

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.

Source:
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