



## SLB achieves breakthrough results in sustainable lithium production

September 10, 2024

- Nevada demonstration plant integrates direct lithium extraction (DLE), concentration and conversion technologies to sustainably produce lithium at scale
- Integrated technology solution produces lithium from brine 500 times faster than conventional methods while using significantly less land, water and chemical reagents
- Verified results confirm recovery rate of 96% lithium from brine at operational rates



September 10, 2024 06:56 AM Eastern Daylight Time

HOUSTON--([BUSINESS WIRE](#))--SLB today announced it has proven its solution for sustainable lithium production at scale at its demonstration plant in Clayton Valley, Nevada, to accelerate responsibly-sourced lithium products to market.

The proprietary integrated solution combines SLB's subsurface expertise with surface engineering of advanced technologies that include direct lithium extraction (DLE). It produces lithium 500 times faster than conventional methods while using only 10 percent of the land. Operating at approximately one tenth the size of a commercial-scale facility, the plant reached a verified recovery rate<sup>1</sup> of 96% lithium from brine.

SLB's integrated solution is a complete, end-to-end process that includes advanced impurity treatment and concentration technologies to produce high-purity lithium carbonate or hydroxide. The solution also uses significantly less water, energy and fewer chemical reagents in comparison to other DLE-based offerings.

"Lithium is a key enabler of electrification, so we must find ways to accelerate its production without adversely affecting the environment," said Gavin Rennick, president of SLB's New Energy business. "SLB's demonstration plant in Clayton Valley proves our unique integrated approach to produce scalable quantities of lithium in the fastest, most economical and sustainable way for today's market. This accelerates deployment of viable commercial-scale facilities for high-quality lithium products that are the backbone of our electrification economy."

The conventional alternative for producing lithium from brine at scale is evaporation. This process not only requires a significant amount of land but also results in massive water loss. Salt, underground minerals and used chemicals are then left at the surface, creating impact on biodiversity and the environment. SLB's sustainable lithium production solution enhances sustainability by reducing water use. The proprietary process also returns the spent brine, or the brine with a reduced lithium concentration, back to its source after the lithium is processed and separated.

The entire SLB solution, from extracting lithium from brine to converting it to technical-grade lithium carbonate, takes just hours. By comparison, evaporation methods can take up to 18 months and have a much lower recovery rate of 50 percent or less.

Lithium is sold commercially as lithium chloride, used as a feedstock for producing lithium metal; lithium carbonate, used in smartphones and short-range EVs; and lithium hydroxide, used in long-range EV batteries. SLB's solution is highly flexible and can be adjusted to produce any of these products.

In proving this solution at its pilot plant, SLB completed specific technical milestones allowing it to fully qualify under the earn-in agreement with Pure Energy Minerals Ltd. and, at its option, may acquire 100% ownership interest in the Clayton Valley Project.

1. Recovery rate independently verified by WETLAB-Western Environmental Testing Laboratory of Nevada.

## **About SLB**

SLB (NYSE: SLB) is a global technology company that drives energy innovation for a balanced planet. With a global footprint in more than 100 countries and employees representing almost twice as many nationalities, we work each day on innovating oil and gas, delivering digital at scale, decarbonizing industries, and developing and scaling new energy systems that accelerate the energy transition. Find out more at [slb.com](https://slb.com).

## **Cautionary Statement Regarding Forward-Looking Statements:**

This press release contains “forward-looking statements” within the meaning of the U.S. federal securities laws — that is, statements about the future, not about past events. Such statements often contain words such as “expect,” “may,” “can,” “estimate,” “intend,” “anticipate,” “will,” “potential,” “projected” and other similar words. Forward-looking statements address matters that are, to varying degrees, uncertain, such as forecasts or expectations regarding the deployment of, or anticipated benefits of, SLB’s new technologies and partnerships; statements about goals, plans and projections with respect to sustainability and environmental matters; forecasts or expectations regarding energy transition and global climate change; and improvements in operating procedures and technology. These statements are subject to risks and uncertainties, including, but not limited to, the inability to achieve net-negative carbon emissions goals; the inability to recognize intended benefits of SLB’s strategies, initiatives or partnerships; legislative and regulatory initiatives addressing environmental concerns, including initiatives addressing the impact of global climate change; the timing or receipt of regulatory approvals and permits; and other risks and uncertainties detailed in SLB’s most recent Forms 10-K, 10-Q and 8-K filed with or furnished to the U.S. Securities and Exchange Commission. If one or more of these or other risks or uncertainties materialize (or the consequences of such a development changes), or should underlying assumptions prove incorrect, actual outcomes may vary materially from those reflected in our forward-looking statements. The forward-looking statements speak only as of the date of this press release, and SLB disclaims any intention or obligation to update publicly or revise such statements, whether as a result of new information, future events or otherwise.

## **Contacts**

### **Media**

Moira Duff – Director of External Communications

SLB

Tel: +1 (713) 375-3407

[media@slb.com](mailto:media@slb.com)

### **Investors**

James R. McDonald – SVP of Investor Relations & Industry Affairs

Joy V. Domingo – Director of Investor Relations

SLB

Tel: +1 (713) 375-3535

[investor-relations@slb.com](mailto:investor-relations@slb.com)