GeoTHERM
expo & congress

Donnerstag, 26. Februar 2026, 12.10 Uhr
Ortenauhalle Kongress 1
Tiefe Geothermie

Thursday, 26 February 2026, 12.10 pm
Ortenauhalle Congress 1
Deep geothermal energy

Optimizing the Lifecycle Performance of Geothermal Wells while reducing Operational Risks and Environmental Impact

Optimierung der Lebenszyklusleistung von Geothermiebohrungen bei gleichzeitiger Reduzierung von Betriebsrisiken und Umweltauswirkungen

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SLB

The growing global demand for clean, sustainable energy has positioned geothermal energy as a vital component of the energy transition. However, the development of geothermal wells presents unique challenges, including high temperatures, corrosive environments, complex subsurface conditions, and the need for cost-effective drilling and completion solutions. To address these challenges, an integrated solution is required, tailored to optimize the lifecycle performance of geothermal wells while reducing operational risks and environmental impact.

SLB offers such an integrated solution, leveraging advanced technologies, expertise, and workflows across the geothermal value chain. From subsurface evaluation to well construction and production optimization, the solution includes high-temperature-resistant drilling systems, corrosion-resistant materials, advanced cementing techniques, and robust well integrity management practices. With state-of-the-art subsurface imaging and modelling tools, SLB enables accurate resource characterization and efficient well planning, ensuring precise targeting of geothermal reservoirs.

SLB's proprietary drilling systems, such as high-performance drill bits, rotary steerable systems, and drilling fluids engineered for extreme geothermal environments, have demonstrated the capacity to deliver improved drilling efficiency, reduce non-productive time, and enhance safety, including in projects such as the Eavor-Link™ Active Magnetic Ranging (AMR) system at its first-of-a-kind project in Geretsried, Germany.

For well completion, SLB offers high-temperature packers, expandable tubular systems, and advanced production logging technologies, ensuring long-term well integrity and optimal energy extraction. Furthermore, we have several wellbore stability optimization studies run for sub-horizontal and horizontal geothermal doublets in the Paris Basin. Rounding off our digital offering

we have real-time data acquisition and digital well planning tools to enable continuous monitoring and adaptive decision-making, driving operational excellence.

By integrating these cutting-edge technologies and workflows, SLB provides a comprehensive approach to geothermal well development, enabling operators to maximize resource recovery, minimize costs, and accelerate project timelines. In alignment with global sustainability goals, SLB's integrated solution supports the development of geothermal energy as a reliable, low-carbon energy source for the future.