



Case Study

Lithium Brine Extraction company significantly improves reserve estimation accuracy



A major Lithium Brine Extraction operator approached Zelandez upon hearing about the new array of advanced logging tools Zelandez had to offer for lithium reserve estimation as conventional methods were lacking the right resolution to properly define the underground picture.

Objectives

Zelandez employed advanced geophysical technologies, expert data processing and interpretation from the latest methodologies in aquifer characterization. Applying the impressive detail of our Porosity and Permeability Insights to the client's existing exploration model, enabled the client to considerably advance the delimiting of their aquifer units and in turn refine the size of their lithium reserve.

Challenges

The exploration wells were situated in almost 100% pure halite rock, creating tough hyper-saline conditions for the equipment. The Salar de Atacama provides a harsh working environment with freezing temperatures and high altitude in one of the driest places on the planet.

Results

The crew and wireline setup worked extremely well despite the environmental challenges.

The state-of-the-art logging technology was successfully deployed and checked against pre-existing physical borehole samples and traditional permeability tests. Unparalleled 8cm vertical resolution porosity and permeability values were generated in real time, interpreted, and delivered to the client within 24 hours.

This information enabled the client to considerably delimit their aquifer units and provide certainty to their future production expansion plans. The client was so impressed with the initial 37-well PorPerSight campaign that they are planning a second campaign.

Location

Salar de Atacama, Chile

Application

Lithium reserve quantification

Product/services

PorPerSight

Well type

Aquifer monitoring wells

Actionable Insights delivered in

24 hours

Customer can **confidently** move forward with production expansion plans

25% improvement to the delimitation of aquifer units