



# DAV MX™ CircSub

**DAV MX optimizes drilling operations on the world's deepest and hottest geothermal well.**

## PROBLEM

The 15,288ft deep well was to be an integral part of major long term geothermal development project, carried out on the Reykjanes Peninsula onshore Iceland. The aim was to drill deeper than ever before and reach formations saturated with fluids at supercritical conditions. Rock samples were to be taken in the process in order to assess the formations' permeability properties.

Prior to drilling the 8-1/2" section where the DAV MX™ CircSub was to be utilised, the Operator experienced significant problems with the drill string packing-off and significantly increasing the risk of overheating the downhole tools due to loss of circulation. Additionally, due to incurable losses past the 10,433ft mark, the well was drilled to TD without returns to surface.

## RESULTS

The 7.00" OD (NC50) DAV MX™ Circulating Sub was placed in a simple motor assembly just above the stabiliser and the MWD sub, in case circulation was obstructed or lost completely either due to a plugged bit or packed-off string. The CircSub provides a contingency activation method through its Emergency Opening Ball (EOB). The EOB can gravitate to valve's seat and be pressured upon in order to open up the subs ports in a full pack-off scenario. Regaining circulation is critical in geothermal wells for reducing downhole temperatures and protecting the BHA components.

## CUSTOMER COMMENTS

"The project has been a learning experience where it was demonstrated that it is possible to drill a long deep well in a high temperature geothermal field. We have gained valuable knowledge that will be useful in other projects, and other wells can surely be deepened."

