

SBO's Drilling Technology Successfully Completes Four Geothermal Wells With PBL[®], BICO Motor, and D-Tech RSS Solutions in The Netherlands

CHALLENGE

- ✓ A customer was drilling four wells as part of a Geothermal project in the Southern region of The Netherlands.
- ✓ They needed to batch-drill the 12 ¼-in. sections back-to-back.
- ✓ The different trajectories and downhole conditions meant that different BHA configurations were needed for each well.

SOLUTION

Working closely with the customer, the team recommended several SBO drilling technologies—DSI PBL, D-Tech Rotary Steerable tool, BICO Beast motor, and SBO non-magnetic drill collars—be included in the various BHAs.

EXECUTION

Well 1

The section started at 1,207m, with inclination of 13° and built to 43° at 2,714m before dropping down to 28° for well TD at 3,288m.

Well 2

Section started at 1,169m, maintaining the 19° tangent section before dropping slightly into the reservoir to 16° at TD of 2,920m.

Well 3

Drilling started at 1,246m at 42° and built angle to 56°. At 2,601m, a formation fault zone was encountered with total drilling fluid losses. The PBL was activated but losses could not be cured using LCM. A cement plug was set, and a sidetrack initiated at 2,045m at 42°, building again to 56° at 2,684m then dropping down to 17° to TD the well at 3,700m.

Well 4

The longest of the four wells, the section started at 1,305m at 32° and built to 64°, before dropping back to TD the well at 18° at 4,100m.

- ✓ Over the course of the four wells, the ROP was 30 to 35m/h (limited by rig constraints) and the mud weight was 1.1SG.

CONCLUSION & RECOMMENDATION

- ✓ By combining the responsiveness and operational expertise of the customer with close onsite support by the SBO teams and market leading technology, this challenging four well project was completed ahead of schedule.
- ✓ The customer was extremely satisfied with the overall performance and unique capabilities of the SBO tools and is planning to use them again on the next sequence of wells



GEOTHERMAL WELL



WELL 1



WELL 2



WELL 3



WELL 4

