

Expro Excellence

CBI tool enhances hole cleaning and ECD management in North Sea

Well Construction | Drilling Technologies



Objectives and background

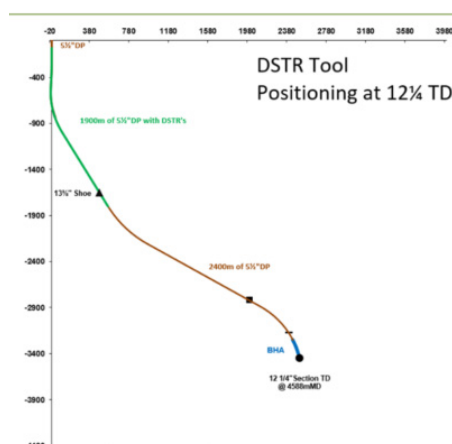
- The initial build up was to be performed in the 24" section in the Nordland Group where the angle was to be built up to over 35° and the 20" casing was to be set at 759m MD. Along the consecutive 17 1/2" section, the build up was to be continued to a sail angle of 67.8° over the Utsira and Skade formations. Section TD was planned at 2050m MD in the Undifferentiated Hordaland
- Offset wells have posed serious problems with wellbore instability and consequential hole cleaning issues

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- Based on the unstable formations in the area and high hole angle requirement of over 35°, we recommended to install the 5 7/8" series CBI™ Cutting Bed Impellers in the 17 1/2" section
- The CBI™ tool is a downhole drill string tool used in deviated wells where excessive build-up of cuttings causes drilling issues, typically in hole angles greater than 30°
- The solution included spacing of one tool per two stands made up to the 5 7/8" drill pipe, covering a total length of 1,351 meters

Value to the client

- The hydraulic and mechanical dual acting mechanism in the CBI™ tool removed cutting beds efficiently inside the casing and in the open hole without distressing the unstable formation
- Its specialized design allows for easy removal of cuttings that tend to settle out of the mud in high-angle sections of the wellbore
- Drilling the 17 1/2" section using Expro's CBI™ tool showed a trend on both pick-up and slack-off weights, which followed a friction factor of 0.16—nearly matching the predicted factor of 0.15
- The application of the CBI™ tool in this case also improved ECD control and helped ease tripping and the subsequent 13 3/8" casing run, resulting in reduced non-productive time (NPT)



Contact

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