CASE STUDY

OPERATOR USES UNMANNED GWD SOLUTION TO ENSURE ACCURACY OF WELLBORE TRAJECTORY AND ELIMINATE MOBILIZATION COSTS IN NORTH SEA PROJECT

TECHNOLOGY

- GyroGuide GWD70™

APPLICATION

- Offshore drilling
- Remote operations
- Unmanned GWD

LOCATION

- North Sea, Norway

INDUSTRY CHALLENGE + OBJECTIVE

An operator in the North Sea needed to conduct gyro-while-drilling (GWD) operations on two offshore rigs to reduce the risk of wellbore collision, ensure precise directional control, and avoid adjacent wells on the congested platforms. Due to personnel and travel restrictions imposed during the COVID-19 pandemic, it was impossible to deploy additional resources offshore to the rigs or to the onshore operating center in Stavanger. This made it necessary to carry out this operation remotely, with the GWD survey specialists working from their home offices.

TECHNOLOGY + SERVICE SOLUTION

- GWD survey specialists used a third-party service company's data visualization and analysis application, coupled with a remote presentation from the operations center in Stavanger, to monitor all required aspects of the operation.
- Programming the GWD toolface offset was a critical point of the operation. The MWD engineer shared his screen through Skype with the remote Gyrodata survey specialist.
  - On the first rig, the programming was done via phone call and screen share and was completed under Gyrodata supervision as would be done on the rig as normal.
  - On the second rig, the MWD engineer was able to give control of his screen to the Gyrodata survey specialist, who successfully programmed the tool remotely.
- The GWD70 system was then deployed on both jobs to drill the wells and guide the motor BHA from the KOP until the switchover angle was achieved for MWD gravity toolface and the MWD became clear from interference.

RESULTS + VALUE DELIVERED

- The operator used the unmanned GWD70 solution to reduce the interval of GWD surveys (due to safety factor and anti-collision risks) and ensure directional control was achieved. Both wells were successfully kicked off in the intended direction using the GWD70 system.
- Through diligent risk analysis and effective mitigation, the remote operations were successfully executed with no lost time. The operator saved on mobilization costs through remote work and reduced the amount of necessary third-party personnel on board at a critical time to prevent COVID-19 transmission.
- Excellent communication between Gyrodata, the third-party service company, and resulted in survey procedures being followed correctly, eliminating any extra rig time associated with the retaking of surveys.

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