Real-time monitoring of conductor response to drilling in high current

DRILLASSURE™ Case Study: Faroe Islands

Overview

A VIV fatigue assessment of exploration drilling using a sixth generation semi-sub off the Faroe Islands showed base case fatigue life for the conductor system was low.

The client was especially concerned about fatigue damage to the conductor as a result of severe sea currents in the area, combined with the effect of using the large sixth generation BOP in relatively shallow water.

A riser monitoring system was requested to allow actual motion response of the system to be recorded in real time.

Benefits

- DrillASSURE system allowed the client to continue with drilling operations in harsh conditions where disconnect would previously have been required
- Monitored and recorded BOP/LMRP and wellhead motions/angles in real time
- Data used to calculate actual fatigue loading on conductor
- Real-time data sent back to HQ for high-level decision making regarding emergency disconnect
- Six-day lead time to get initial system installed

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System at a glance

- DrillASSURE software to gather and process data and calculate real-time fatigue damage to conductor
- 1 x INTEGRipod HM installed on LMRP to record BOP/LMRP motions in real time
- INTEGRipod connected to topside computer via subsea cable
- Robust cable deployment using clump weight and guide wire

Subsea
1 INTEGRipod HM installed on LMRP

Topside
DrillASSURE software showing real-time motion response of system

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