Overview

An operator was embarking on a drilling campaign in the GoM using a semi-submersible vessel in 6000ft water depth.

Analysis carried out before the project had given the conductor a fatigue life of just eight days, identifying the conductor top weld as the fatigue critical location.

This led the client to install a standalone monitoring system to measure BOP and conductor movements as well as the overall global response of the riser.

Benefits

- Monitoring data was used to determine actual conductor and wellhead fatigue incurred during the drilling operation
- The data showed that the acceleration threshold for the conductor top weld was not exceeded during the campaign
- For the riser it was shown that none of the screened VIV events had resulted in above-threshold fatigue damage
- This resulted in the client not having to undertake a detailed fatigue analysis of the drilling campaign
**System at a glance**

- Topside interface unit to gather and process measured data using DrillASSURE software
- 1 x EExd-rated INTEGRIpod SM on vessel to measure vessel motion
- 10 x INTEGRIpod SM motion data loggers installed along riser to measure riser motion
- 2 x INTEGRIpod SM motion data loggers installed on BOP to measure motion and angular rate of the BOP/LMRP

**Topside**
INTEGRIpod measuring vessel motion

**Riser**
10 INTEGRIpods measuring riser motion

**Subsea**
2 INTEGRIpods on BOP measuring motion and angular rate