Overview

During a West of Shetland drilling campaign in the UK sector of the North Sea, the client drilling team observed Vortex Induced Vibration (VIV) on the riser and were concerned about the effect on the subsea well and conductor.

Pulse was engaged to install a system to provide data to determine the effect of the drilling campaign on the fatigue life of the conductor.

Benefits

- Collected data used to evaluate fatigue life of conductor and manage subsea well integrity
- Accurate and reliable data on forces (including VIV) experienced during drilling operations
- ROV retrievable loggers and magnetic holders for ease of installation and removal

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System at a glance

- 1 INTEGRipod (3DG & 2AR) at the moonpool level measuring motion and angular rate
- 7 ROV retrievable INTEGRipods (3DG) measuring motion on 7 of the riser joints (monitor VIV)
- 2 INTEGRipods linked to strain gauges installed at either end of the riser to log strain measurements
- 2 INTEGRipods (3DG & 2AR) installed on the Permanent Guide Base (PGB) to monitor motion and angular rate
- 1 INTEGRipod (3DG & 2AR) installed on the BOP to monitor motion and angular rate
- Magnetic holders to attach INTEGRipods
- Installation of strain gauges on riser

Topside
- INTEGRipod in moonpool

Riser
- 7 INTEGRipods along riser measuring VIV
- INTEGRipods linked to strain gauges

Subsea
- 1 INTEGRipod on lower flex joint
- 1 INTEGRipod on guide base
- 1 INTEGRipod on BOP

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