SIKA AT WORK

WELL INTEGRITY CAMPAIGN – PHASE I INSPECTION, NORTH FIELD,DOHA, QATAR

OFFSHORE & MARINE CONSTRUCTION
CONVENTIONAL ENERGY

BUILDING TRUST

WELL INTEGRITY CAMPAIGN – PHASE I INSPECTION, NORTH FIELD, DOHA, QATAR

PROJECT DESCRIPTION

In August 2014, Sika conducted a detailed visual inspection of 24 offshore wells for Occidental Oil and Gas as part of the first phase of a broader well integrity campaign commissioned by Dolphin Energy Ltd. The project was carried out in the North Field near Ras Laffan, offshore Qatar.

The inspection phase focused on assessing the condition of conductors and surface casings to inform the strengthening and corrosion protection strategy that would follow. This proactive approach aimed to ensure the structural integrity and safe continued operation of the wells for the remainder of their design life and beyond.

Project name:	Well Integrity Campaign – Phase I Inspection
Client:	Occidental Oil and Gas / Dolphin Energy Ltd.
Location:	North Field, Ras Laffan, Offshore Qatar
Year:	2014
Application:	Well integrity

PROJECT REQUIREMENTS

The client required a detailed visual and internal annulus inspection to identify candidate wells for structural remediation. The goal was to detect corrosion, surface damage, and potential voids in the surface casing that could compromise future grouting operations or structural performance.

A methodical and non-intrusive approach was needed to gather reliable data while minimizing disruption to ongoing offshore activities.

SIKA SOLUTIONS

Sika began with a General Visual Inspection (GVI) of all 24 wells to identify those requiring intervention. Following this, a downhole camera was deployed to examine the annular space between each conductor and surface casing.

Sika's inspection process focused on several critical parameters. First, the team assessed the condition of both the conductor and the surface casing to visually verify their integrity. They then identified and measured any holes or damage in the surface casing that could compromise grout retention. The depth and clearance of the annular space were also evaluated to determine the correct grout hose sizing.

Finally, the inspection allowed for accurate estimation of the grout volume required for each well, ensuring precise material preparation and minimizing waste.

These insights formed the basis for planning the subsequent repair (Phase II) and enabled the engineering team to pre-select the appropriate equipment, materials, and grouting strategy.

CUSTOMER BENEFITS

By conducting a thorough inspection campaign before any physical repairs were undertaken, the client was able to prioritize intervention works, reduce material waste, and improve the effectiveness of annular grouting operations. The use of high-resolution downhole inspection techniques enabled precise planning and ensured that grouting efforts in Phase II would be safe, targeted and long-lasting.

Sika's approach reduced operational risk, improved long-term well integrity and delivered a scalable model for ongoing asset integrity programs in offshore environments.

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