

CNOOC International Collects Single-Phase Fluid Samples on Command

Wireless sampling system in Symphony testing string provides real-time feedback to activate samplers in optimal location

China National Offshore Oil Corporation (CNOOC) International achieves drillstem test (DST) objectives, obtaining single-phase, representative reservoir fluid samples on command.

Wireless real-time DST for a safer, more efficient operation

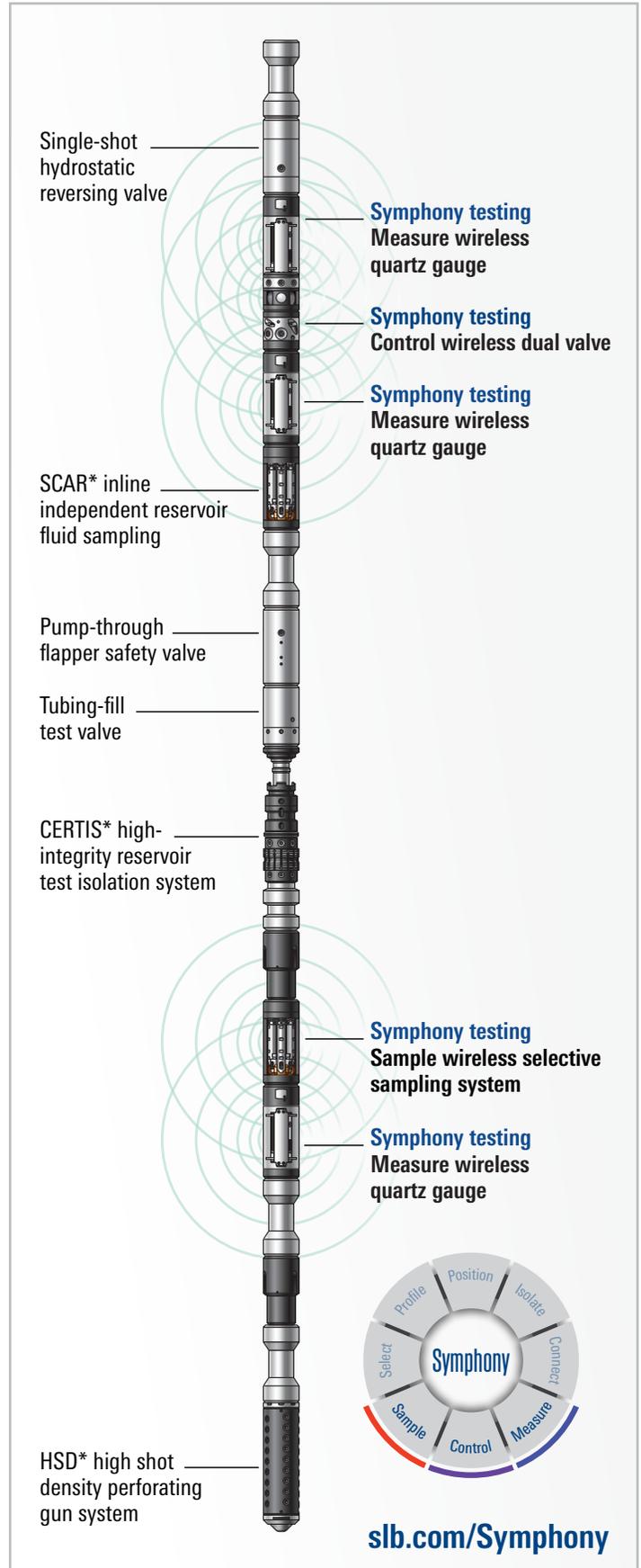
CNOOC International wanted to assess reservoir quality and deliverability and collect single-phase downhole samples through a DST in a deepwater appraisal well in an offshore Atlantic field in the UK. Because of the operational challenges of flowing live hydrocarbon to the surface, a wireless real-time DST was the desired solution for a safer, more efficient operation. CNOOC International also wanted to better manage subsequent casing pressure limits without compromising DST flexibility and control.

Digital downhole control to activate testing on command

United with Muzic* wireless telemetry, Symphony* live downhole reservoir testing provides the digital downhole control that is critical for complex operations. Real-time downhole pressure and temperature measurement, wireless dual-valve control, and wireless selective downhole sampling would enable CNOOC International to activate the testing program on command. Accommodating up to eight INCONEL® samplers, Symphony testing Sample wireless selective sampling system was placed below the packer to obtain single-phase reservoir samples.

Flawless testing with selective downhole samples

The flexibility and control of Symphony testing Sample system enabled CNOOC International to orchestrate the DST with confidence. During cleanup flow, four wireless samplers were activated from below the packer as a contingency, confirming activation in real time. Afterward, during the main flow, the remaining four wireless samplers were activated, also providing real-time confirmation. Enabled by real-time feedback of bidirectional communication, the eight samplers successfully collected single-phase fluid on command, ensuring that samples were taken in an optimal location and achieving the test program objectives. Schlumberger technical and domain experts also monitored the test in real time to assist operations as needed.



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