realize this design concept, the world's first annular safety valve for dual concentric water injection was designed, manufactured, fully tested, and qualified. The WIDD1_AWIG1 well was successfully drilled and completed, allowing dual injection as envisioned in the original well proposal.

Technical Session 18: Deepwater Drilling II

SPE/IADC 105661

Development of a Subsea TTRD Capability West of Shetland. R. Johansen, BP; A. MacLeod, LEAding Edge Advantage.

This paper describes BP's project to develop a subsea through tubing rotary drilling (TTRD) capability in the Schiehallion and Foinaven fields west of Shetland by 2009. The hostile deepwaters were a significant challenge to the application of TTRD in subsea wells. This paper will outline the work carried out during the Front End Engineering Design (FEED) phase, and key conclusions from FEED are explained.

SPE/IADC 105198

Real-Time Digital Interpretation of Subsea Blowout Preventer Tests. W.J. Winters and T.A. Burns, BP; R.B. Livesay, Hecate Software.

A computer-based method expedites interpretation of pressure data during subsea BOP tests. Individual tests can require more than 1 hr of shut-in time, and a complete series of subsea BOP tests may comprise at least 12 individual tests. The digital method employs computer software to produce an accurate model of the pressure behavior relatively early in each test. The model can thus predict if future pressures will stabilize at an acceptable level. With regulatory approval and a reliable method to forecast pressure, the duration of subsea BOP tests can be significantly reduced. If implemented, the new method would be able to save hours of valuable critical-path rig time. Working in concert with regulatory authorities to gain endorsement of this method is integral to the project.

SPE/IADC 104747: Three major projects have been performed with a new rigless intervention system.

SPE/IADC 105035

Design, Development and Qualification of a Threaded and Coupled Connector for a Sour Service Compatible Completion and Workover Riser. G. Craig, G. Bailey and R. Ethridge, Grant Prideco; W. Byrne, Baker Oil Tools.

This paper will discuss the design, development, qualification and intended field application of a threaded and coupled connector for a sour service compatible T 95 deepwater completion and workover riser.

This paper will detail intended field application of the connector; key aspects of the design and development processes (customer-defined design specifications/requirements, concept development, extensive use of finite element analysis, final design selection); and connector qualification program and results focusing on high-volume make-and-break performance, static loading and sealability, dynamic loading and sealability, and effects of dynamic loading on static loading performance.

SPE/IADC 104747

New Offshore Rigless Intervention System. D. Harris and P.G. Adams, BJ Tubular Services.

This paper will discuss the successful use of a new "rigless intervention system" (RIS) for the abandonment of conductors, pre-installation of conductors, sidetrack and whipstock operations and as an alternative to an offshore workover rig. The RIS has a mast that is 76 ft high that can be installed in modular sections and is capable of cutting and laying out 50 ft sections of conductor with all the inner strings securely held inside. Three major projects have been performed in the Gulf of Mexico, and the RIS has been used for the pre-installation of 12 conductors on a platform in West Africa.