



DRILLING SERVICES

First composite riser gets tested

The world's first composite riser, developed by **Kvaerner Oilfield Products AS** and **Norske Conoco AS**, has successfully been tested in a live drilling operation on the Statoil-operated Heidrun TLP in the Norwegian Sea. The composite riser's weight is approximately half that of a steel riser. It has been developed for production and drilling operations in deep waters.

The CompRiser™ is made of carbon fibers and epoxy resin. It replaced an equivalent high-pressure 22-in. titanium riser joint in the drillstring at Heidrun.

After the first drilling cycle on a well on Heidrun, the CompRiser was thoroughly inspected and pressure tested by **Det**

Norske Veritas (DNV). The riser will remain on Heidrun TLP for further testing and operation.

Kvaerner and Conoco formed a Composite Alliance in 1995 and have since been involved with the development of both composite production and drilling risers and composite tethers (CompTether™) to reach deeper waters.

Carbon fiber composite materials provide many desired properties such as high specific strength and stiffness, light weight, corrosion resistance, high thermal insulation and excellent fatigue performance.

The Conoco/Kvaerner Composite Alliance is now marketing the products globally. ■

Horizontal gravel pack record set

Halliburton Energy Services' Brazilian affiliate, **Halliburton Serviços Ltda**, recently participated in the successful completion of the longest deepwater horizontal gravel pack (HZGP), placing 75,000 lb of gravel for an operator offshore Brazil. The horizontal gravel pack was completed in an 832 m (2,730 ft) open hole section in 799 m (2,621 ft) of water.

Despite the long slant section (2,000 m at 60 degrees) and open hole length, installation of the completion was smooth, never reaching more than 10,000 lb of drag.

The job was completed using Versa-Trieve™ packer technology, multi-position

weight down tool with HZGP pressure maintenance assembly, and Poroplus™ sand control screens. The proprietary pressure maintenance assembly provided a continuous flow path through the packer assembly to maintain a constant hydrostatic pressure on the wellbore.

Spiral centralizers were used to reduce drag and lift the long horizontal screen section off the low side of the hole. After the gravel packing was completed, the lower end screen section was isolated by a proprietary screen plug assembly, which prevents sand production from exposing the lower section of the open hole. ■

Intelligent well system installed

Baker Oil Tools has successfully installed the world's first all-electronic, multizone Intelligent Well System™ for Brazilian operator **Petrobras**.

The InCharge™ system was deployed in an onshore well in preparation for a subsequent subsea installation.

It is remotely monitored through a satellite link from Petrobras' operation base in Natal, 200 miles from the well site. The InCharge system is ultimately intended for Campos Basin deepwater installations.

The system monitors pressure, temperature and flow conditions at the sand face in real time. This capability enables centrally located oil company staff to selectively control individual zonal flow rates, thereby continuously optimizing production in response to changing downhole conditions.

One key advantage of the system is that a single control line penetrates packers and wellhead. From this control line, the operator can monitor and control up to 12 zones in a single well and up to 12 wells from a single surface control system. ■

New bulk plant is set

BJ Services Company's Well Services Division for Europe and Africa has designed and completed a custom bulk plant for use during drilling and cementing operations. The new bulk plant is installed on **Esso Norge's** Ringhorne Field platform deck offshore Norway.

The bulk plant incorporates specially designed aeration systems and manways to limit in-vessel man hours and achieve the health, safety and environmental performance that NORSOK standards demand.

It consists of 5 silos, each with a capacity of 83.5 cu m, and 2 dust control cyclones designed to eliminate dust particles down to 5 microns. Each cyclone delivers dust to a collector and return vessel. All vessels are designed to meet significant earthquake loading which, when combined with the integral weigh scale function, required meticulous care in design.

The vessels comply with NORSOK, BS5500: 1997, and EN PD 5500 standards and are CE marked.

The bulk plant for Ringhorne platform was designed and built in just 18 weeks, said **Alasdair Buchanan**, Region Manager-Europe and Africa for BJ Services. "The industry standard for design and production of a custom bulk plant of this type would normally be an average of six months." ■

Reentry is successful

Schlumberger Oilfield Services has announced success with its Discovery MLT multilateral reentry technology that provides first-attempt access to all levels of multilateral wells. It can successfully reenter even the two most difficult levels, TAML Levels 1 and 2, said Schlumberger.

An increase in production of almost 600% was reported in a Level 1 multilateral well in which the Discovery MLT system was deployed for stimulation of both boreholes. Both the upper and lower laterals were reentered on the first attempt, and an acid resistant bottomhole assembly, selected to optimize the treatment, enabled highly successful stimulation.

Prior to treatment, the well produced 5 million scfd of gas; after treatment, production stabilized at 29 million scfd.

The Discovery MLT systems are considered cost effective and operationally simple because they operate solely on pressure and flow without the complexities of logging or data cables. ■