

OTC award applauds innovative technologies

9 of 13 recognitions go to IADC member companies

THIRTEEN INNOVATIVE technologies were selected for the Spotlight on Technology awards during the 2006 Offshore Technology Conference (OTC), held 1-4 May in Houston. Nine of the 13 technologies came from current IADC member companies.

AKER KVAERNER

The **MultiBooster Subsea Multi-Phase Pump System** improves oil recovery and enables longer step-out distances between subsea assets and host facilities by lowering pressure at the reservoir and increasing pressure in the production line.



The system has been installed and is operational at the Lyell

Field in Scotland, with 2 more systems scheduled for start-up in the Gulf of Mexico early next year.

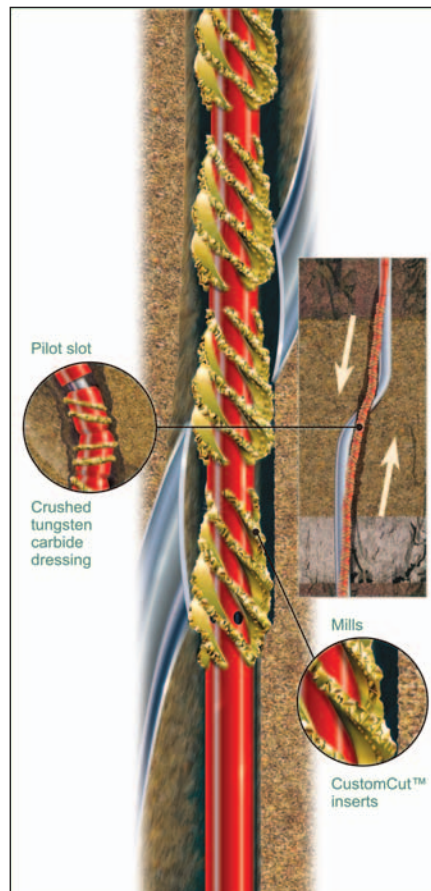
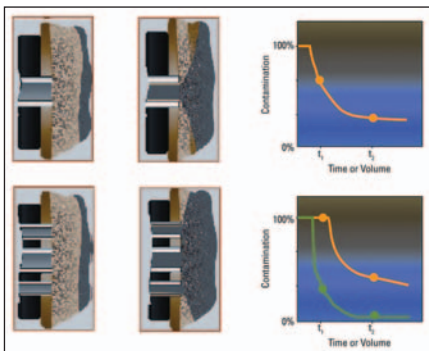
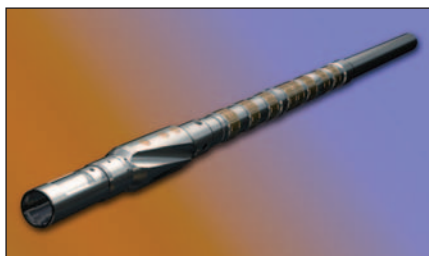
BAKER OIL TOOLS

The **Z-Seal** is a high-expansion, metal-to-metal sealing device that uses expanding metals in place of traditional elastomers to form a high-integrity pressure seal on the tubular well. It enables well suspensions and interventions possible in hostile HPHT environments.

The **Smart Intervention System** gathers measurements of weight on tool, torque, RPM, bending moment, vibration and pressure downhole, then transmits the information to surface using mud pulse telemetry and displays it on a rig floor monitor.

DRAKA MARINE

The **Flex-Flame HC 1100/30 Hydrocarbon Fire Resistant Cable** fortifies one of the weakest links in the emergency system – the wire and cable and its ability to withstand extreme temperatures. Draka's cable passed the 1100°C test, with an energy of more than 200 kW/m², which is above the melting point of



Clockwise from top left: Baker Oil Tools' Z-Seal, Weatherford's PowerStroke milling system, Powerwell Services' PowerAMPS Automated Managed Pressure System, Schlumberger's Quicksilver Probe, Schlumberger's EcoScope multifunction LWD, and Baker Oil Tools' Smart Intervention System.

the copper found in wires. This means it can keep emergency power, emergency pumping systems, emergency seawater/fire pumping systems and other critical applications in hazardous areas.

HALLIBURTON

Sperry's **Slimhole Reservoir Drilling and Evaluation Solution** gives compre-

hensive slimhole drilling and formation evaluation solution. The GeoTap provides accurate formation pressure-testing while drilling, eliminating the need for pipe-conveyed wireline logging operations in high-angle wells. The service can conduct multiple tests at any point in the open hole interval, utilizing a multi-stage extending probe with a filter cake-penetrating snorkel feature. Real-time

transmission of the pressure profile to the surface allows operators to instantly validate the test. Pressures can be transmitted back to the reservoir engineer to verify the accuracy of the reservoir model and assist in real-time reservoir exploitation decisions such as sidetracking or extending horizontal section length.

POWERWELL SERVICES

The **PowerAMPS Automated Managed Pressure System**, developed by the Power Chokes division of PowerWell Services and a continuous circulation variation of MPD technology, is fed data by a hydraulics well-modeling program that reads and processes data, including RPM of the drillstring, ROP, drilling fluid viscosity, density and temperature and predicts the annular pressure profile.

Once the desired pressure profile has been determined, PowerAMPS automatically modulates the choke, making micro-adjustments as necessary to compensate for changes in the annular friction pressure as annular flow rates increase or decrease.

The PowerAMPS System provides better control of the well and achieves more precise well-bore pressure management, containment and diversion of mud returns with fewer interruptions to the drilling process.

SCHLUMBERGER

The **EcoScope multifunction LWD** service features pulsed-neutron technology, enabling simultaneous formation evaluation and drilling-related measurements without chemical sources such as americium-beryllium. Tool design includes a single, short collar that delivers formation evaluation measurements taken at the same depth at the same time.

The collected data is used for drilling optimization, formation evaluation and well placement. Unique LWD measurements available with this service include neutron-induced capture gamma ray spectroscopy data, formation sigma as a salinity indicator and neutron gamma density (a measure of gamma

Halliburton's Slimhole Reservoir Drilling and Evaluation Solution



John Cohen (from left), Tom Williams and Greg Deskins, all of Noble Corp's Technology Services Division, exhibit the Aluminum Alloy Riser during the 2006 OTC in Houston. The riser won ASME's prestigious Woelfel Best Mechanical Engineering Achievement Award.

Noble Aluminum Alloy Riser recognized

Noble Technology Services Division has won the 23rd annual Woelfel Best Mechanical Engineering Achievement Award from the American Society of Mechanical Engineers' International Petroleum Technology Institute (ASME-IPTI) for innovative mechanical engineering design excellence. Noble was selected among a field of Offshore Technology Conference exhibitors.

Noble's Aluminum Alloy Riser allows for offshore drilling rigs to work in significantly deeper water without modification. The riser joint weighs approximately 17,000 lbs, 30% less than a steel riser, so it can reduce rig weight and still withstand the rigors of the offshore environment.

The Woelfel Award recognizes a product, device or system displayed at OTC that best reflects innovation in and/or practical use of mechanical engineering in energy industry-related problem-solving, design improvement or performance maximization. It is named for Albert Woelfel, a past chairman of the ASME Petroleum Division and former member of the OTC board of directors.

rays generated from neutron-formation interaction).

The **Quicksilver Probe** captures samples rapidly. The focused sampling method separates drilling mud filtrate at an early stage of the sampling process. The probe design effectively separates pure reservoir fluid (moving down the center of the tool) from the contaminated fluid (entering the perimeter of the probe). The fluids remain isolated from each other and are pumped into separate flowlines. Both lines are monitored in real time to control the focused sampling operation using 2 independent pumping systems. The result: a drastic reduction in station times (up to 60%) due to faster cleanup

and samples with zero-to-low contamination (10 times cleaner than with conventional sampling techniques).

WEATHERFORD

The Weatherford **PowerStroke** milling system is the only system of its kind in the market. Formation subsidence, combined with shifting, causes severe deformation in casing wellbores. Mechanical failures created by extreme dogleg offsets in short distances cause casing to shift so severely that production is restricted or lost altogether. This unique milling system offers an innovative, cost-saving solution for straightening or aligning shifted casing sections in a single run. ■