



## DRILLING SERVICES

### Weatherford sets a liner record

The longest 7-in. production liner in an extended reach well in the Gulf of Mexico was recently installed by **Weatherford International Inc.** The liner was run to total depth of 25,750 ft with a 22,200-ft horizontal displacement for a record GOM installation.

The job involved Weatherford's Nodeco brand liner system, which has been used exclusively in the world record extended reach drilling (ERD) in southern England. The Nodeco style tools are designed for rotation to get the liner to the desired setting depth and for rotation of the liner during cementing operations.

The liner running tools used in the job included the patented Floating Junk Bonnet (FJB) which eliminates any debris

from entering the liner top annulus and the field proven "R" running tool with retrievable cementing packoff.

The liner, with a PHS liner hanger and integral TSP liner top packer, was rotated and circulated from the 9 $\frac{5}{8}$ -in. shoe at 19,500 to 25,750 ft. Total time reaming and circulating to get the liner to depth was about 5 days. Surface rotating torque reached the 35,000 ft-lb range while rotating the liner to the setting depth.

The Nodeco "R" running tool released and the PHS liner hanger set at the design pressure of 3,200 psi, the ball seat sheared as planned, the TSP liner packer was set and tested and the float equipment performed as designed. ■

### Hill provides services

Services of its Enforcers™ quality standards management group and engineering services from its Problem Solvers™ engineering group were provided by **T H Hill** for the **ExxonMobil** DA-2 East Breaks Block 946 well in the Gulf of Mexico.

The record-setting horizontal well was drilled from a semisubmersible rig in 4,657 ft of water and reached a measured depth of 13,925 ft. True vertical depth was 10,571 ft.

While the well presented many new and unique problems dealing with the drill string, no significant drill string problems were encountered during drilling. The well established the world record for the deepest water depth horizontal well. ■

### Baker breaks record

Working for **Amerada Hess** in the North Sea, **Baker Oil Tools** recently performed a horizontal open-hole completion on a subsea well in the Fife field that is now producing at 10,000 b/d.

The completion set a world record with the successful One-Trip selective cement inflation of 9 Payzone™ external casing packers (ECPs).

The completion was carried out in a 2,200-ft horizontal section that required isolation of several zones of high permeability to protect against potential water production.

To complete this well using a conventional cemented and perforated liner would have required 8-10 coiled tubing perforating runs, according to Baker, significantly increasing time and cost.

Nine ECPs were installed in the well: the lower 7 to provide future zonal isolation and the upper 2 to provide isolation between the chalk and the producing formation. ■

### Shengli lets contract

**Weatherford International Inc** has a \$5 million contract to supply and install a range of completion products, including completion isolation valves (CIVs) for Shengli Petroleum Administration Bureau's **Ocean Development Co.**

The CIVs are being installed in 21 wells in the China's Bohai Bay over the next 2 years.

The flow control systems are expected to save the operator about \$12 million due to increased productivity and reduced fluid loss. ■

### BJ Services finishes stimulation

**BJ Services Company** recently completed a series of stimulation services onboard the Vestfonn, BJ Services (UK)'s North Sea dedicated stimulation vessel, for **Amerada Hess A/S** offshore Denmark.

The stimulation operations began in the summer of 2000 when BJ Services was awarded a contract by Amerada Hess to perform stimulation services for 3 wells in the South Arne Field the Danish sector of the North Sea.

The 3 wells are horizontal completions,

involving multizone hydraulic fracture treatments. Two of the wells were completed using acid fracturing technology; one well used hydraulic propped fracturing technology. In one well, 12.7 million lb of proppant was placed into 13 zones.

BJ Services used a premium borate, crosslinked guar fluid called SpectraFrac G. To optimize fracture conductivity, a tapered polymer loading from 40 lb/1,000 gal down to 30 lb/1,000 gal was used while placing proppant at concentrations from 1 ppa to 12 ppa. ■

### Oceaneering sets converted rig

The Mobile Offshore Production Facility Ocean Legend was successfully installed by **Oceaneering International Inc** in 150 ft of water in WA-1-P on the North West Shelf of Western Australia earlier this year. Oil production began 17 May.

Oceaneering owns the Ocean Legend and will operate it under a services agreement with **Woodside Energy Ltd** on behalf of a joint venture comprising Woodside Energy Ltd, **Apache Northwest Pty Ltd** and **Santos Ltd**. Primary term of the contract is for 3 years.

Completely refurbished and converted in

10 months last year from the former jack-up drilling rig Marine 7, the Ocean Legend was transported from the Gulf of Mexico to Australia on the heavy lift vessel Transshelf, then readied and wet-towed 100 km to the Legendre oilfields. Following jack up, the facility was accepted as ready for drilling access, at a partial day rate, on 15 Jan.

Ocean Legend can stabilize and process 50,000 bpd of oil, treat and clean 60,000 bpd of water and re-inject 40 MMscfd of gas. It also has a gas lift system rated for 20 MMscfd. ■