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Halliburton Installs 150th VersaFlex(TM) Expandable Liner Hanger System; Adoption of Reliably Designed Technology Spans the Globe

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HOUSTON--(BUSINESS WIRE)--Dec. 15, 2005--Halliburton's (NYSE:HAL) Energy Services Group recently installed its 150th VersaFlex(TM) expandable liner hanger system. Since its recent introduction, the VersaFlex system has been deployed worldwide, to include deepwater Gulf of Mexico, the North Sea, South America, Middle East, and North America land. All of the hangers set to date have achieved 100 percent sealing integrity.

The VersaFlex liner hanger has been designed with no movable components, allowing it to function with a drill string and retain integrity even when rotation and torque is necessary during deployment. The streamlined design withstands aggressive reaming or even drilling liners into place, practices that would prematurely set or damage conventional liner hanger systems. The VersaFlex system develops a gas-tight seal at the liner lap because, instead of relying on cement to provide the seal, there are multiple sealing elastomers.

"For our North Sea Gryphon Asset, we were looking for a 9 5/8-inch production liner system to give a liner top seal qualified to V0 standards. There were potential wellbore stability issues, so we were also looking for one that was as simple as possible and less susceptible to well debris," stated Jim Manson, senior drilling engineer, Maersk Oil and Gas. "The VersaFlex system was evaluated to be less complex with no moving parts, slips or cages. We selected it because it would allow us to work the liner harder to the bottom, at full circulation rate without the risk of the well packing off at the hanger area or pre-setting."

"Eldfisk Bravo successfully installed the first expandable liner hanger in the North Sea," said Jason Hilder, senior drilling engineer, ConocoPhillips. "The technology was tested by the Eldfisk drilling team as part of the continuous technology improvement/testing initiative, and the team believes this new expandable liner hanger technology is one of the potential enablers for future well advances."

While running conventional liner hangers, if hole problems such as ledges, sloughing and heaving shale beds, or weak formations, are encountered, the entire liner may have to be pulled out. And if the tools are not preconfigured for rotation, the rig operator will have to pick up a drill assembly to clean up the hole and then run back in with the liner. All this activity increases rig time and costs and presents risks to crew safety and well integrity, along with environmental hazards.

Less than two years after bringing this technology to the market, Halliburton successfully installed the 100th system at a depth of 11,002 feet for Petrobras in Ecuador. "We experienced running and sticking problems with conventional liner hangers," said Rodolfo Landivar, operations technician, Petrobras. "Facing both the installation and cementing phases of the project, we turned to Halliburton to supply a complete solution and help us overcome recent difficulties. The job was performed as designed, however; upon releasing the tool debris lodged on top of the tool, circulation was established, the debris was removed and the tool was free to pull from the well."

Conventional liner hangers incorporate a liner top packer. While this can allow installation in a single trip, it does not reduce any of the inherent risks that come with multiple moving parts and having to cement around those parts. The VersaFlex system is designed to facilitate continuous operations with improvements such as multiple sealing areas, elimination of tortuous fluid flow paths, improved tensile strength, no need to dress the liner, and shorter overlap for better sealing.

"Halliburton took a serious look at the root cause of failure with conventional liner hanger systems," said Jim Renfroe, senior vice president, Halliburton's Production Optimization Division. "The VersaFlex system was designed for reliability and built to compensate for the consequences of these issues. We achieved this through a simple design, in which all liner hanger moving parts are eliminated."

Halliburton, founded in 1919, is one of the world's largest providers of products and services to the petroleum and energy industries. The company serves its customers with a broad range of products and services through its Energy Services Group and KBR. Visit the company's World Wide Web site at www.halliburton.com.

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