

# **NOV Expands Completion Tool Technology Product Offering**

June 1, 2017

HOUSTON--(BUSINESS WIRE)--Jun. 1, 2017-- National Oilwell Varco, Inc. (NYSE: NOV) announced today the introduction of several new proprietary technologies to its completion tools portfolio:

- Bulldog Frac<sup>™</sup> a sliding-sleeve annular fracturing system that provides pinpoint accuracy, zonal isolation, and improved reliability:
- Bullmastiff<sup>™</sup> a ball-drop openhole sliding-sleeve sand control fracturing system;
- Rottweiler™ a product family of compact, high-performance frac plugs for the plug-and-perf market;
- ReAct<sup>TM</sup> an intelligent completion tool technology that offers remote signaling capabilities for valves and sleeves for a variety of applications and completion designs; and
- German Oil Tools a line of advanced liner hanger systems and other completion tool technologies, products, and accessories.

"We are proud to unveil this meaningful expansion to our portfolio of leading-edge completion tool technologies," commented Clay Williams, NOV Chairman, President, and CEO. "NOV now offers a comprehensive set of differentiated completion tool products and solutions that we believe address the most pressing needs within the global marketplace."

"We acquired a small completion tool company in mid-2016 that had limited scale and geographical reach but offered a high-quality sliding sleeve product line, strong portfolio of intellectual property, and solid team. Over the past year, this team organically developed several complementary products and supplemented that development with acquisitions of what we believe are best-in-class liner hanger and intelligent completion tool technologies. Today our completion tool business operates in 10 countries, has approximately 100 patents issued or pending, and we continue to expand our operations."

## **Bulldog Frac Pinpoint Annular Fracturing System**

The Bulldog Frac annular fracturing system enables operators to precisely control the placement of proppant in each stage by pumping down the coiled tubing annulus through Multiple Open/Close (MOC) sliding sleeves, providing for an unlimited number of stages and leaving no restrictions in the wellbore. The Bulldog Frac system addresses the operational challenges of most MOC systems with a "shift up to open" design, performed with NOV's proprietary hydraulic shifting tool, which ensures no sleeves are accidentally closed on the trip out. Unlike competitors' products, Bulldog frac sleeves are compact, lightweight, and do not require handling pup joints, allowing for safer and more efficient installation. Additionally, the Bulldog incorporates NOV's patented and field-proven sealing system, which offers full pressure testing of previously manipulated sleeves even after several years in service.

### **Bullmastiff Openhole Sand Control Ball-Drop Fracturing System**

The Bullmastiff fracturing system is a proprietary openhole sliding-sleeve system that incorporates sand screens to eliminate costly sand-production issues while maximizing hydrocarbon production. The ball-drop frac sleeve component is the first to allow for proppant stimulation with integral sand control, segregating the stimulation port from the production port. The Bullmastiff incorporates NOV's patented flex sleeve and sealing technology to allow for maximum stage-count flexibility.

### **Rottweiler Frac Plugs**

Compact, large-bore Rottweiler frac plugs are the shortest on the market but still offer optimum performance during fracturing operations. Rottweiler frac plugs can be pumped in at high displacement rates, hold high differential pressure, and are easily milled. Additionally, Rottweiler frac plugs are the only products to offer a built-in chemical tracer that provides real-time data on reservoir characteristics during frac jobs to enhance production. Rottweiler frac plugs are currently available in cast-iron, with a composite version expected to be released in the near future.

### **ReAct Remote Activation Technology**

The ReAct product family, which was acquired from Omega Completion Technology, offers remote signaling capabilities to downhole valves and sleeves. The technology can be utilized for a number of applications including programmable sleeves, which respond to a particular pressure or flow signal and require no hydraulic or umbilical lines to surface. The ReAct technology currently has applications for inflow control (for water shutoff or zonal isolation), liner hanger deployment, production packer setting, and wellbore cleanup in preparation for flow-through sand screen completions. These interventionless solutions provide the lowest-cost intelligent completion technologies on the market.

## **German Oil Tools Liner Hanger Technologies**

German Oil Tools offers a proven portfolio of well-construction and completion products that are highly regarded for quality and reliability and are currently sold in Europe, the Middle East, and Africa. The operation, which includes GPS Oil Tools, will continue to develop and manufacture products in Germany to retain high standards of quality, craftsmanship, and innovation, but will benefit from NOV's global sales organization and supply chain to accelerate its ability to meet customers' growing demand for reliable, cost-efficient completions solutions around the world.

### **About NOV**

National Oilwell Varco (NYSE: NOV) is a leading provider of technology, equipment, and services to the global oil and gas industry that supports customers' full-field drilling, completion, and production needs. Since 1862, NOV has pioneered innovations that improve the cost-effectiveness, efficiency, safety, and environmental impact of oil and gas operations. NOV powers the industry that powers the world.

Visit www.nov.com for more information.

## Cautionary Statement for the Purpose of the "Safe Harbor" Provisions of the Private Securities Litigation Reform Act of 1995

Statements made in this press release that are forward-looking in nature are intended to be "forward-looking statements" within the meaning of Section 21E of the Securities Exchange Act of 1934 and may involve risks and uncertainties. These statements may differ materially from the actual future events or results. Readers are referred to documents filed by National Oilwell Varco with the Securities and Exchange Commission, including the Annual Report on Form 10-K, which identify significant risk factors which could cause actual results to differ from those contained in the forward-looking statements.

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