Downhole Waterjet Cutting System Dramatically Increases Well Productivity

Centura Oil provides green solution for well stimulation using waterjets, eliminates near well bore damage.

July 13, 2009 - PRLog -- Centura Oil Inc. of Minnetonka, Minn., is dramatically increasing oil and gas well productivity with its CenJet 90® 90º downhole waterjet cutting system.

Powered by a portable Jet Edge diesel-powered waterjet intensifier pump, the CenJet 90® uses a 55,000psi waterjet cutter to quickly pierce through the well casing and cut multiple 8’ to 10’ long lateral perforations up to 10” in diameter into the surrounding coalseam. This unique waterjetting process can increase a coalbed methane well’s production up to 300% by expanding its area of influence by 16’ to 20’ in diameter at multiple depths, said Centura Oil President Michael Uthe, who noted that the process typically pays for itself within a year.

According to Uthe, the CenJet 90® has successfully stimulated coalbed methane wells more than 3,400’ deep in the San Juan Basin, New Mexico. The system is capable of cutting at depths greater than 4,000’. Centura Oil’s CenJet 90® waterjet system can be used to stimulate any type of cased or uncased well, including coalbed methane, natural gas and oil. It works especially well in coalbed methane wells because it can cut through the coal seam much more effectively than traditional well stimulation methods. The process typically requires less than two days of site work.

The CenJet 90® consists of a modified Jet Edge Permalign II® abrasivejet cutting head that is coupled to coiled steel tubing and lowered down the wellbore. The cutting head is oriented at 90 degrees to the well casing and is brought up to pressure at precise depths to perforate the casing and surrounding formation. The powerful abrasive waterjet, which is capable of cutting 15” titanium, cuts a single perforation in San Juan Basin coal in about 15 minutes at 55,000 psi. During operation, the tool never leaves the wellbore.

Uthe said he decided to equip the CenJet 90® with a Jet Edge intensifier pump and to use a modified version of Jet Edge’s waterjet cutting head because he needed dependable equipment that could stand up to a harsh remote environment.

“If I have 3,000 feet of hose downhole, and something breaks, I stand to lose a lot of money. I bought the Jet Edge waterjet intensifier pump after meeting [then Jet Edge President] Jerry Lague and getting several referrals from people who told me that Jet Edge was the most reliable pump on the market. The Jet Edge waterjet pump has been extremely dependable and Jet Edge’s support has been excellent. I know that when I need to call Jet Edge, someone will answer. Even on Saturdays, I can get through to someone on Jet Edge’s 24-hour emergency cell phone.”

Centura Oil’s waterjet well stimulation process is far more cost effective and environmentally friendly than conventional coalbed methane well completion and rehabilitation methods, Uthe noted.

“Conventional perforation operations are typically performed using a shaped charge,” he explained. “The formation can experience damage due to the violent nature of the explosive charge. The CenJet 90®, on the other hand, washes and cleans as it is cutting, eliminating near well bore damage and increasing perforation depth by as much as three times that of conventional perforations.

"Conventional well completion and rehabilitation projects also typically require costly hydraulic fracturing to keep fractures open. The hydraulic fracturing process involves pumping chemical fluids and proppants, such as sand or ceramic beads, into the formation. To date, none of the coalbed methane wells stimulated
Centura Oil’s waterjet well stimulation process has numerous environmental benefits.

Stimulating existing wells extends their lives and increases their productivity, reducing the need for energy companies to drill new wells. Since wells stimulated by the CenJet 90® have not required hydraulic fracturing, their owners have avoided those costs and potential damage to the formation. The CenJet 90® uses only four gallons of water and one pound of garnet abrasive per minute. Garnet is a natural stone that can be disposed of in a landfill. The effluent created by the waterjet cutting process consists of coal cuttings, garnet and water. It is flushed out of the well and discharged into a lined holding pond.

Centura Oil offers its waterjet well recompletion and production enhancement services worldwide and plans to expand into new well completions. In addition to providing well stimulation service, Centura Oil also sells its CenJet 90® waterjetting systems under a licensing agreement.

For more information about Centura Oil and the CenJet 90® downhole 90º waterjet cutting process, visit http://www.centuraoil.com, e-mail info@centuraoil.com or call 952-545-6431.

For more information about Jet Edge waterjets and ultra-high pressure waterjet intensifier pumps, visit http://www.jetedge.com, e-mail sales@jetedge.com or call 1-800-JET-EDGE.

--- End ---

Jet Edge manufactures water jet cutting machines and UHP surface preparation and coatings removal equipment.

--- End ---

Source
Jet Edge
City/Town
St. Michael
State/Province
Minnesota
Zip
55376
Country
United States
Industry
Energy, Industrial, Manufacturing
Tags
Link
https://prlog.org/10281463

Scan this QR Code with your SmartPhone to-
* Read this news online
* Contact author
* Bookmark or share online