

DEMONSTRATION OF HYDROSLOTTER TECHNOLOGY ON NEW YORK STRIPPER WELLS

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This project is submitted by Hydroslotter Corporation (“HSC”), which owns an innovative, patented technology named abrasive hydrojet perforation or “hydroslotting”. Hydroslotting is a two-step completion process that exponentially increases permeability around a wellbore by transferring near-wellbore compressive stresses away from the wellbore and out into the formation. The first step is to cut two 180°-phased slots through the casing, cement, and deep into the formation, to gain access to the targeted undepleted pay zone. The second step is to cycle proprietary remedial chemical reagents throughout the near-wellbore zone via the newly created slots. It should be noted that only hydroslotting (and no other technology) transfers near-wellbore damage to the distant tips of slots as a method of maximizing productivity and extending a well’s life.

It needs to be emphasized that HSC’s slot-cutting process has been documented as excavating deeper into formations (reaching out 10 feet deep and over 1 inch wide, compared with 3 feet deep and 1/2 inch wide) and using different petro-chemistries than previous or conventional technologies, which may or may not have been used in the past or are currently available. It should be clarified in advance that hydroslotting is either far more advanced than or not related to “notching”. Hydroslotting is the opposite of hydraulic fracturing.

This project will demonstrate the precision, efficacy, and performance of hydroslotting on five different well environments in three New York geological zones: Onondaga, Medina, and Theresa. At least one demonstration will be so close to a gas-water contact that completion using hydraulic fracturing would be perilous or bound to failure. The project will cover field orientation, program configuration, and evaluation and monitoring. The project will produce a good understanding of the performance capability of hydroslotting as a method of enhanced recovery in various types of wells and formations for future deployment.

The successful demonstration of hydroslotting will solve one of the perennial problems that inhibits oil and gas productivity, namely, the impact of unnatural compressive stresses (usually caused by drilling and completion damage) on well productivity. When widely applied, hydroslotting will provide independent operators with a cost-effective and environmentally benign alternative to conventional completion technologies and help achieve the inflow improvement and breakthrough economics needed to maximize production from and extend the life of their wells. This will eventually add significant reserves to the nation’s energy resources.

The proposed technical approach consists of carefully planned analysis and field-tests in three different formations and five well environments, which achieves the research objectives of reservoir remediation and satisfies the overall program goals set forth by the Stripper Well Consortium (SWC). Bulletins and details of the project will be transferred to interested parties through regular progress reports, publications, and informal contacts, as well as SWC meetings. Letters of in-kind support from New York Gas and Oil Company and Quest Energy Inc., both of Buffalo, New York, are attached for reference.