



# CENTRAL AR



## Simultaneous Hydraulic Fracturing of Adjacent Horizontal Wells in the Woodford Shale

**Thursday, Apr 30**

**11:30am - 1:00 pm**

**Faulkner County Natural Resource Center**

**110 S. Amity Rd. - Conway, Arkansas 72032**

**Lunch Sponsor:**



In order to most effectively stimulate ultra-low permeability reservoirs such as shales, closely spaced hydraulic fractures are required. This is because the majority of the pressure drop in the system is in the reservoir very near the fracture face for a very long time. But, hydraulic fractures are high pressure events and likewise are difficult to place in close proximity to each other.

One technique being utilized in an effort to place these fractures close to each other is Simultaneous Hydraulic Fracturing of horizontal wellbores. With this method adjacent wellbores are stimulated at the same time and the fracture systems are allowed to grow towards each other. These fractures may bypass each other at closer spacing than if they were initiated from the same borehole.

This presentation provides a theoretical overview of fracture spacing and discusses some of the operational benefits and constraints. Variations of the technique are also reviewed. Examples from the Arkoma Basin Woodford Shale that employed microseismic monitoring of the treatments are shown.

George Waters is the N American Reservoir Stimulation Domain Manager for Schlumberger Oilfield Services based in OKC, OK. He is responsible for developing & directing the technical strategy for the SLB stimulation business in N America. He joined Dowell SLB in 1985 & has held numerous completion engineering assignments since 1992, focusing primarily on low permeability hydraulic fracture optimization. Since 2000 he has concentrated on the evaluation and completion of shale reservoirs. More recently he has focused on low permeability horizontal well evaluation and completion. He has published numerous technical papers and made multiple industry presentations on the stimulation of low permeability reservoirs. George holds a BS in Petroleum Engineering from West Virginia Univ, a MS in Environmental Engineering from OK State University, & a MS in Petroleum Engineering from Institut Francais du Petrole (IFP). He is a 2009 - 2010 SPE Distinguished Lecturer on the topic of Stimulation of Shale Reservoirs.

**[www.arkansas-spe.org/central/](http://www.arkansas-spe.org/central/)**

**RSVP no later than Apr 27. Cost: TBA**

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