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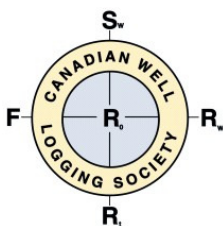
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Notes: Please forward this notice
to any potentially interested co-
workers. Thank you.



CANADIAN WELL LOGGING SOCIETY

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Wednesday, June 10th, 2009 CWLS TECHNICAL LUNCHEON PRESENTATION FAIRMONT PALLISER HOTEL 133, 9TH AVE. S.W. CALGARY

TIME: 12:00 PM (COCKTAILS AT 11:30 AM)

RESERVATIONS BY: Friday, June 5th, 2009 (NOON) - CALL 269-9366 TO CONFIRM A SEAT

COST:

MEMBERS RESERVED MEAL: \$35.00; NON-MEMBERS RESERVED MEAL: \$40.00
(SPECIAL NEEDS MEALS AVAILABLE WITH ADVANCED BOOKING ONLY; PLEASE
REQUEST WHEN ORDERING TICKET)

TOPIC:

**Development of a Predictive Tool for Estimating Well Performance in
Horizontal Shale Gas Wells in the Barnett Shale, North Texas, USA**

SPEAKER:

Russell W. Spears, Petrophysicist, ExxonMobil

ABSTRACT:

Production from “unconventional” shale gas reservoirs has seen increased attention and economic viability in recent years through the use of horizontal development wells. Maximizing horizontal permeability in such wells has been found to be one of the largest keys to unlocking shale gas reservoirs and producing them at economic rates. Currently, a world-class shale gas accumulation is being developed in and around the Dallas-Fort Worth, Texas area using horizontal well applications.

A multi-component approach to derive reliable and accurate predictions of horizontal shale gas well performance is presented here, using open hole well log data from several vertical pilot boreholes that have been drilled targeting the Barnett Shale. Fundamentally, this approach is founded upon four key elements: a thorough probabilistic volume estimation of lithology, calculation of total porosity, estimation of free gas present using a modified dual water saturation model and prediction of kerogen and total-organic-carbon (TOC) of the interval.

From the primary evaluation from open hole logs, net kerogen-feet, TOC-ft and adsorbed gas-feet have all been identified as meaningful measures of shale “quality” that are useful as a vehicle to obtain accurate predictions of horizontal well ultimate recovery gas volumes (EUR). These factors have been weighted as a function of drilled lateral length for the horizontal production hole that has been subsequently drilled from each pilot. Varying the values calculated at the pilot well according to horizontal length is a key aspect of this evaluation technique and the weighting of these parameters found to correlate to decline-curve based EUR volumes for the study wells. The net product has been a reliable indicator for visualizing and quantifying well performance in five existing Barnett Shale horizontal wells, using standard open hole well log data acquired in the vertical pilot holes.

BIOGRAPHY

Russell W. Spears is currently a Petrophysicist working in ExxonMobil Production Company’s North American Production Division and part-time in ExxonMobil Upstream Research Company. Russell’s direct responsibility involves primarily production and open-hole log evaluation and research in tight and unconventional gas projects in the Piceance Basin, Colorado and the Barnett Shale, east Texas. Russell holds a BS in Geology from the University of Georgia, attended Oxford University, and holds a MS in Geology from Louisiana State University. Russell has worked in a few affiliates both domestic (New Orleans, Houston) and internationally (Nigeria), with experience in deep- and shallow water clastics, tight clastics, shale gas and carbonates. Russell currently serves as the 2008-2010 VP of Education for the SPWLA, has served twice as a Regional Director for the SPWLA, serves on the SPWLA Long-Range Steering Committee and the SPWLA Foundation Scholarships committee. He is also a co-chairman of the SPWLA Depth Control SIG and a former secretary of the New Orleans chapter of the SPWLA.