

MGs Luncheon Meeting

Wednesday, November 15th

11:45 am – Billings Petroleum Club

Please join us for lunch (\$10) and the talk (no charge)

RSVP – montanageologicalsociety@gmail.com
An email reminder will be sent 3 days prior to the talk

JOHN A. MOREL, PH.D.

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The Johnson County Hydrocarbon Generation Cell, Powder River Basin, Wyoming

A case history of Black Hills Exploration & Production's exploration program in the western Powder River Basin

Between 2012 and 2016 Black Hills Exploration & Production (BHEP) drilled 7 wells to evaluate conventional and unconventional reservoirs in an active hydrocarbon generation cell in Johnson County, Wyoming. The program included 2 pilot wells with cores and full logging suites plus 6 lateral boreholes in 4 different formations. There are currently 5 horizontal wells producing from 4 formations.

The presence of an active hydrocarbon generation cell in Johnson County, Wyoming was proposed from several lines of evidence by various investigators including the USGS. BHEP's concept was to verify the active generation cell and target conventional and unconventional reservoirs within the over-pressured and hydrocarbon-saturated interval.

BHEP logged the entire Cretaceous section and cored 4 formations. Mud logs, open hole logs, and core analyses confirmed the presence of hydrocarbons in a 4000' thick active generation cell with at least 6 conventional and unconventional reservoir targets. Four of them were drilled horizontally and all four are producing hydrocarbons. Other targets within and above the generation cell remain to be tested.

This talk presents log, core, and production data demonstrating the presence of the generation cell and multiple reservoirs.

Biography

John has forty-three years of exploration and development in the Rocky Mountain region incorporating geology, geophysics, engineering, economics, and creative deal structures. He is also experienced in project evaluation, partner acquisition, acquisition/divestiture, and management. Currently generating conventional, tight gas, and horizontal resource plays.

Companies: Black Hills Corp, Davis Petroleum Corp, Gustavson Assoc, Ventero Expl, Lexam Expl, Basin Expl, Timberline Energy, Independent Deal Generator, Foxpark Oil & Gas, Gary-Williams Oil Prod, Davis Oil Co, and Amoco Production Co

Education: Ph.D. Geology, Univ Wyo; M.S. Physics, Univ Wyo; B.S. Physics, Ill Inst of Tech
Amoco's research and training center; DAPL lease, contract, and deal program.