



Appalachian Geological Society
P.O. Box 2605
Charleston, WV 25329

AGS Northern West Virginia March 2010 Meeting

SPEAKER: Boyce, Matt L, West Virginia University, Department of Geology of Geography, Morgantown, WV, 26505, mboyce5@mix.wvu.edu

ABSTRACT: *Petrophysics, Stratigraphy, and Depositional Dynamics of the Middle Devonian, Marcellus Interval in West Virginia and Southwest Pennsylvania.*

In the Central Appalachian basin, the Middle Devonian Marcellus interval has become a major target for natural gas exploration and production. This interval is an extensive and complex resource play in which its productivity is controlled by depositional patterns and stratigraphic distribution. Using log and core data, the lithostratigraphic boundaries were established and correlated throughout West Virginia and southwestern Pennsylvania. From these boundaries previous established relationships between natural radioactivity (as measured by the spectral gamma-ray log) and bulk density were incorporated to identify potential gas rich intervals. The comparison between the Uranium content and the measured bulk density identified intervals in the Marcellus with high gas saturations. In the study area, the spatial distribution of the Uranium content correlated to areas of higher TOC (as measured from core samples) content. These enriched areas of TOC appear to be controlled by small local, micro-anoxic environments that result in significant variations in black shale deposition and limestone intervals from well-to-well. Spatial distribution and its relation to the overlying and underlying units (e.g. Harrell Shale, Mahantango Shale, Onondaga Limestone), is a complex process that must account for sediment input and development of micro anoxic environments. Within a regional subsurface stratigraphic framework of the Middle Devonian in the Appalachian basin, an improved understanding of depositional dynamics can provide a better focus on exploration and development targets.

WHEN: Tuesday, March 16th 2010
Seating /Registration/ Mingle - 11:00 AM
Lunch - 11:45 PM Buffet
Talk - 12:30 PM

WHERE: Bridgeport Holiday Inn
100 Lodgeville Road
Bridgeport, WV 26330

Directions from Interstates 79 North and South:

Take Exit 119: Junction with Route 50. Travel a half mile on Rt 50 East towards Bridgeport to light, intersection with Lodgeville Rd. Turn Left onto Lodgeville Rd and travel 300ft to entrance of Holiday Inn on right.

COST: \$30.00 - MEMBERS; \$35.00 NON-MEMBERS; \$10.00 - STUDENTS
“See there are benefits to being a member”

RESERVATIONS: For this meeting we ask for **pre-registration by March 2nd** in order to get an accurate head count to size the room accordingly. Beyond this date we may have to unfortunately turn people away. If you register please make every effort to attend. Also, if you know any people that may have changed companies

please forward this invitation along. Please call with reservations by March 2nd to Bill Carpenter @ 304- 884-2083, or email William.o.carpenter@dom.com

MENU:

Two Entrée Luncheon Buffet
Herbed Pasta Salad
Tossed Salad with Assorted Dressings
Boneless Breast of Chicken Supreme
Pepper Steak over Rice
Chef's Choice of Fresh Vegetable, Mashed Potato
Fresh Baked Rolls with Butter