



Eastern Section AAPG Annual Meeting

Kalamazoo, 2010 September 25 – 29, 2010

2010 Eastern Section Annual Meeting

Technical Program

MONDAY, SEPTEMBER 27

Oral Technical Session 1 - Shale Petroleum Systems in Onshore Basins of Eastern North America - Framework and Geochemistry

- 8:00 - **Shallow-water origin of Ordovician and Devonian organic-rich shales, New York State**
Langhorne (Taury) B. Smith
- 8:30 - **Characteristics of the Utica black shale in NY and PA: Black shale blanket or complex facies mosaic?**
Charles E., Mitchell, Robert D. Jacobi, Melissa Roloson, and Stacey Hansen
- 9:00 - **Sequence stratigraphy and its bearing on reservoir characteristics of shale successions – examples from the Appalachian Basin**
Gary G. Lash and Randy Blood
- 9:30 - **Black shale Diagenesis: Preliminary Insights from Integrated High-Definition analyses of Post-Mature Marcellus Formation Rocks, northeastern Pennsylvania**
Christopher D. Laughrey, Herman Lemmens, Tim E. Ruble, Alan R. Butcher, Greg Walker, Jaime Kostelnik and Wayne Knowles
- 10:00 - **BREAK**
- 10:30 - **Regional Sequence Stratigraphic Interpretation of the Marcellus Shale**
Ashley S. B. Douds, David R. Blood, and Christopher G. Willan
- 11:00 - **Preliminary Results of a Shale Gas Assessment Project in Ontario, Canada**
Catherine Béland Otis, Terry R. Carter, and Lee Fortner
- 11:30 - **Bloomin' Algae! How paleogeography and algal blooms may have significantly impacted deposition and preservation of the Marcellus Shale**
Gregory R. Wrightstone

Oral Technical Session 2 - Reservoir Characterization

- 8:00 - **Hydrocarbon Potential of the Silurian and Lower Devonian Biohermal Dolomite in East-Central Illinois**
Zakaria Lasemi, Zohreh Askari Khorasgani, and Donald G. Mikulic
- 8:30 - **Evaluating the Controls on Reservoir Quality and Heterogeneity of Silurian Pinnacle Reefs, Michigan Basin**
Audrey L. (Ritter) Varga and G. Michael Grammer

- 9:00 - Quantifying Pore Architecture by Facies for Enhanced Prediction of Reservoir Distribution in Silurian Pinnacle Reefs of the Michigan Basin**
Amy K. Noack and G. Michael Grammer
- 9:30 - 3-D Interpretation of the Sequence Stratigraphy and Reservoir Property Distribution in the Belle River Mills Silurian (Niagaran) Reef, St. Clair County, MI**
Heather Qualman, G. Michael Grammer, William B. Harrison III, and Matthew Pranter
- 10:00 – BREAK**
- 10:30 - Sea Level and Diagenetic Controls on Dolomite Reservoir Compartmentalization: Evidence from the Niagaran Racine Formation of the Sangamon Arch, West-Central Illinois**
Yaghoob Lasemi
- 11:00 - Making Holes in Carbonate by Microbial Acid and Gas: A Case Study in the Bahamas**
Stephanie J. Schwabe
- 11:30 - Stratigraphy and Reservoir Characterization of the Blue Monday Sandstone, Central West Virginia**
Megan E. Ganak and Donald W. Neal

Oral Technical Session 3 - Shale Petroleum Systems in Onshore Basins of Eastern North America - Framework and Geochemistry

- 1:30 - Applying 3-D Seismic in Marcellus Shale Development, Greene County Pennsylvania**
Pete Sullivan, Chad Cunningham and Doug Parker
- 2:00 - The Origin of Natural Fractures in the Antrim Shale, Michigan**
Murray M. Matson
- 2:30 - Porosity Variation Detection using Seismic Velocity in Unconventional Shale Reservoirs: Antrim, Marcellus and Collingwood Shales**
Jerome B. Blaxton
- 3:00 - Structural Anomalies in Black Shales of the Northern Appalachian Basin of New York State**
Robert D. Jacobi, Al Leaver, Stu Loewenstein, Jodi Fisher, and Gerald Smith
- 3:30 – BREAK**
- 3:45 - Structure and Geochemistry of a Cambro-Ordovician 360m Core from Saratoga Springs Region, New York State: Implications for Tectonics, Gas Exploration, and CO₂ Sequestration**
Stacey L. Hanson, Robert D. Jacobi, and Charles E. Mitchell
- 4:15 - “Seeing is Believing”...Optical Televiewer Geologic Applications**
Brad Posner
- 4:45 - Organic Geochemical Analysis of the Paleozoic Rocks, of the Suwanee Basin, North Florida**
Ramsay A. Barrett and Tim Ruble
- 5:15 - Dispersed Macerals and Extracted Bitumen from Immature to Low Thermal Maturity Devonian Shales in the Appalachian Basin: Can they Identify the Updip Extent of Thermogenic Gas and Vitrinite Suppression?**
Robert T. Ryder, Paul C. Hackley, Hossein Alimi, and Michael H. Trippi

Oral Technical Session 4 - Trenton and Black River Exploration and Production

- 1:30 - The Relationship between Sulfide and Carbonate Mineralization and Cavernous Porosity Development in the Ordovician Galena Group Limestone (Trenton), Kane County, NE Illinois, USA**
Jared T. Freiburg, Bruce W. Fouke, and Zakaria Lasemi

- 2:00 - Facies Control on Reservoir Quality in Hydrothermal Dolomite, Black River Group, Michigan Basin**
Jennifer Schulz, G. Michael Grammer and William B. Harrison III
- 2:30 - Depositional Sequences and Reservoir Development in the Sub Trenton Black River Group of East Central Indiana**
Dennis R. Prezbindowski, Greg H. Chitty and Timothy S. Brown
- 3:00 - Evaluation of the Effectiveness of Using Gravity and Magnetic Data to Define 3-D Seismic Survey Areas for Fault Related Hydrothermal Dolomite Reservoir Identification**
Alan W. Hinks, Robert L. Schulz, and Eric R. Johnson
- 3:30 – BREAK**
- 3:45 - Reservoir Definition of the Northern Portion of Albion Scipio Field, Michigan**
Murray M. Matson
- 4:15 - Rice Creek Pool, Albion-Scipio Field -- A New Discovery in the Trenton and Black River of southern Michigan**
John H. Fowler, Murray Matson, Matt Johnston, Bill Van Sickel and Ron Budros
- 4:45 - Northern Indiana and Vicinity Jointing, Fracturing, Faulting and Structural Patterns: Implications for Regional and Local Fractured Reservoirs and Tectonics in the Southern Michigan Basin and Adjacent Arches**
Kevin L. Strunk
- 5:15 - A Model for Single-Phase Migration of Trenton-Black River Hydrocarbon in the Southern Michigan Basin**
Ron DeHaas and Timothy Brock

Poster Technical Session 1 - Geological Sequestration of CO₂ and CO₂/EOR

- 1 – A Pore structure analysis of Eau Claire Formation (Cambrian) and its potential for CO₂ storage seal**
Ling Gao, John A. Rupp, Maria Mastalerz, and Richard W. Lahann
- 1 – B Characterization of Compartmentalized Reservoirs for EOR Pilots within the Illinois Basin**
John Grube, James R. Damico, Beverly Seyler, Scott M. Frailey, Vineeth Madhavan and Nathan Webb
- 1 – C Geologic Evaluation of the Newburg Sandstone as a CO₂ Sequestration Target**
J. Eric Lewis and Timothy R. Carr
- 1 – D Reservoir Characterization and Lithostratigraphic Division of the Mount Simon Sandstone: Implications for Estimations of Geologic Sequestration Storage Capacity**
Cristian R. Medina and John A. Rupp
- 1 – E Modeling of CO₂-Water-Rock Interactions in Mississippian Sandstone Reservoirs of Kentucky**
Anne M. Schumacher, T. M. Parris, A. E. Fryar, E. G. Beck and K. G. Takacs
- 1 – F A Comprehensive Overview of Onshore Geologic Carbon Sequestration in New York State**
Alexa M. Stolorow, Brian Slater, Langhorne Smith, and Kathryn Tamulonis

Poster Technical Session 2 - Responsible Development of Energy Resources in an Environment of Climate Change

- 2 – A Solar Irradiance**
Kandiah Balachandran

Poster Technical Session 3 - GIS and Computer Applications

- 3 – A Mapping the Michigan Natural Storage Gypsum Mine using a Geological Information System (GIS).**
Neal A. Ringerwol, Kent A. Walters, and Peter J. Wampler

Poster Technical Session 4 - Reservoir Characterization of Sandstones

- 4 – A Reservoir potential of calcarenaceous sandstones in a carbonate and evaporitic tidal flat sequence: Silurian Tonoloway Formation, Highland County, Virginia**
John T. Haynes, Sharon E. Porter, Philip C. Lucas, Richard A. Lambert, Tim Rose, Stephen A. Leslie, and Steven J. Whitmeyer
- 4 – B Characterization of Pennsylvanian Bridgeport Sandstones in the Illinois Basin, Lawrence Field**
Curt S. Blakley, John P. Grube, Philip Johaneck, Vineeth Madhavan, Nathan Webb, and Beverly Seyler

TUESDAY, SEPTEMBER 28

Oral Technical Session 5 - Shale Petroleum Systems in Onshore Basins of Eastern North America - New Plays and Updates

- 8:00 - History of Oil Shale in the eastern and central United States**
Sandra G. Neuzil and Frank T. Dulong
- 8:30 - Michigan Basin Utica / Collingwood Shales – A New Resource Play**
Paul A. Daniels and Diana Morton-Thompson
- 9:00 - Shale Gas in Quebec’s Sedimentary Basins**
Jean-Sebastien Marcil, Peter K. Dorrins, Jeremie Lavoie, and Jean-Yves Lavoie
- 9:30 - Collingwood Shale – Source Rock to Resource to Reserves**
Duszynski J. R., Esch J. M. and Organeck L.
- 10:00 – BREAK**
- 10:30 - North Carolina Shale Gas – A Progress Report: Sanford Sub-basin, Deep River Basin – Lee, Chatham, and Moore Counties**
Jeffrey C. Reid, Kenneth B. Taylor, and James D. Simons
- 11:00 - What’s new with the New Albany play in Illinois in 2010?**
Joan Crockett and David Morse
- 11:30 - Innovation and Regulation can Coexist: New York’s Approach to Regulating Shale Gas Development**
John P. Martin and Kathleen F. Sanford

Oral Technical Session 6 - Geological Sequestration of CO₂ and CO₂/EOR

- 8:00 - Stratigraphic Controls on Diagenesis and Reservoir Quality in a Saline Reservoir Geological Carbon Sequestration Target: the Middle Ordovician St. Peter Sandstone, Michigan Basin, USA.**
Dave Barnes
- 8:30 - Regional Geological Sequestration Potential of the Middle Devonian Sylvania Sandstone, Michigan Basin, USA**
Farsheed Rock and David A. Barnes
- 9:00 - Numerical Simulation of Carbon Sequestration in the Sylvania Sandstone**
Anthony Clark, Farsheed Rock, David Barnes and Duane Hampton

9:30 - Integrating Mt. Simon Injection Data with CO₂ Storage Reservoir Simulations for the Arches Province of the Midwest United States
Joel Sminchak, Evan Zeller, and Neeraj Gupta

10:00 – BREAK

10:30 - Distribution and Abundance of Potentially Reactive Minerals With Geologic CO₂ Sequestration in the Mount Simon - Eau Claire Sedimentary System
Brenda B. Bowen, Raul Ochoa, Nathan Wilkens, Ryan Neufelder, Richard Lahann, James Brophy, Cristian Medina, and John Rupp

11:00 - Selective Feldspar Dissolution in Response to Elevated CO₂ Pressure
James G. Brophy, Richard W. Lahann, and John A. Rupp

11:30 - Carbon Sequestration Project Workflows to Reduce Geologic Risk
Hannes E. Leetaru

Oral Technical Session 7 - Geological Sequestration of CO₂ and CO₂/EOR

1:30 - Designing a Pilot Project to Test CO₂ Sequestration and Enhanced Gas Recovery in Organic-Rich Shales
Brandon C. Nuttall

2:00 - Carbon Dioxide Enhanced Oil Recovery Potential of the Central Devonian Michigan Basin
Craig R. Johnson, David A. Barnes, and William B. Harrison III

2:30 - Application of Seismic Visualization to Carbon Sequestration Planning in the Illinois Basin
John H. McBride, Hannes E. Leetaru, and R. William Keach, II

3:00 - CO₂ Enhanced Oil Recovery (EOR) and Sequestration: Advances in Seismic Acquisition
Phil Van Hollebeke and Nils Sandin

3:30 – BREAK

3:45 - Potential for Supercritical Carbon Sequestration in the Offshore Bedrock Formations of the Baltimore Canyon Trough
Brian Slater, Taury Smith, Alexa Stolorow, and John P. Martin

4:15 - Old wells, potable water, and carbon dioxide-enhanced oil recovery and sequestration projects in the Appalachian and Illinois Basins of Kentucky
Kathryn G. Takacs, Thomas M. (Marty) Parris, and Brandon C. Nuttall

4:45 - Cementing Solutions for CCS Environments
Ashok Santra and Ronald Sweatman

Oral Technical Session 8 - Structural Analysis and Basin Modeling

1:30 - Michigan Basin Structural Lineaments Map
John M. Esch

2:00 - Tectonic Thermal Effects on Basin Evolution in Hawke's Bay, New Zealand
Matthew J. Legg, Kevin P. Furlong, and Peter J.J. Kamp

Oral Technical Session 9 - Quantitative Applications for Reservoir Characterization and Production

2:30 - Challenges to Geostatistical Mapping of Porosity and Permeability for Oil and Gas Development and Geologic Carbon Sequestration
Erik R. Venteris, K. M. Carter, S. R. Kelley, C. R. Medina, C. Perry, and R. R. Riley

3:00 - Shear Wave Conversion in Reservoir Rocks
Kandiah Balachandran

3:30 – BREAK

3:45 - Economic Analysis of Gas Production from the Silurian “Clinton” Formation in Ohio
Martin R. Shumway and Pete MacKenzie

4:15 - Fully Miscible Micellar Acidizing Solvents vs. Xylene, The Better Paraffin Solution
Kristopher A. Kreh and David W. Boswood

Poster Technical Session 5 - Shale Petroleum Systems in Onshore Basins of Eastern North America

5 –A Thermal Maturity Map of the Devonian Shales of the Appalachian, Michigan, and Illinois Basins

Joseph A. East, Christopher S. Swezey, John E. Repetski, and Daniel O. Hayba,

5 – B An in-depth Study of the Beaver Meadow and 74-NY-5 Cores from the Ordovician Utica and Devonian Marcellus Shales, New York State

James R. Leone and Langhorne (Taury) Smith

5 – C Constraints on the origin and volume of gas in the New Albany Shale (Devonian – Mississippian), eastern Illinois basin

Maria Mastalerz, Agnieszka Drobniak, John A. Rup, Dariusz Strapoć, Arndt Schimmelmann, and Nancy R. Hasenmueller

5 – D Anatomy of the Marcellus Shale in the Appalachian Basin

Thomas H. Mroz, Dustin Crandall, and Daniel J. Soeder

5 – E Optimization of Completions in Unconventional Reservoirs for Ultimate Recovery

Rocky Seale and DJ Snyder

5 – F Lithostratigraphy and Depositional Systems of the Bakken Formation in the Williston Basin, North Dakota

Anne Pendleton Steptoe and Timothy R. Carr

5 – G Outcrop Lithostratigraphy of the Middle Devonian Marcellus Interval in West Virginia, Pennsylvania and Virginia

Margaret Walker-Milani and Matt Boyce

5 – H Lithostratigraphy and Petrophysics of the Middle Devonian Marcellus Interval in Northwestern Pennsylvania

Anne Yanni, Matthew Boyce, and Timothy Carr

Poster Technical Session 6 - Structure, Basin Analysis

6 – A Structural and Stratigraphic Framework of the Appalachian Basin from North-Central Kentucky to Southwestern Virginia: Evidence from a New Regional Cross Section

Robert T. Ryder, Michael H. Trippi, and Christopher S. Swezey

6 –B Michigan Basin Structural Lineaments Map

John M. Esch

Poster Technical Session 7 - Sequence Stratigraphy and Reservoir Characterization of Carbonates

7 – A Facies, Sequence Stratigraphy and Evolution of the Late Barremian-Turonian Platforms in North Egypt

Yasser Salama, G. Michael Grammer, Gouda Abdel-Gawad, Shaban Saber and Soheir El-Shazly

- 7 – B Sequence Stratigraphy and 3-D Reservoir Characterization of the South Buckeye Field, Dundee Formation (Devonian), Michigan Basin, USA**
Shawn M. McCloskey and G. Michael Grammer
- 7 – C Prediction of Petrophysical Properties of Trenton-Black River (Ordovician) Reservoirs by Comparing Pore Architecture and Permeability to Sonic Velocity, Michigan Basin, USA**
John E. Thornton and G. Michael Grammer
- 7 – D Chemostratigraphy and Oceanic Anoxic Event of the Cenomanian-Turonian Succession, West Sinai Peninsula, Egypt**
Tarek I. Anan, G. Michael Grammer, Adam El Shahat, Adel M. Genedi, and Essam F. Sharaf