

Technical Program

Overview of Technical Program

	Monday June 14 th	Tuesday June 15 ^h	Wednesday June 16 ^h
AM Room 1	Paradox Basin	Shale Plays of the Rockies	San Juan Basin
AM Room 2	Geothermal Energy	Structure of Rocky Mtn. Basins	Tight Sands
AM Room 3	CO ₂ Sequestration	Remote Sensing	
	All-Convention Luncheon	Lunch Break	Meeting Over
PM Room 1	Paradox Basin, ctd. ----- Stratigraphy of RM Basins	Shale Plays of the Rockies, ctd. ----- Sed / Strat of RM Basins, ctd.	
PM Room 2	CO ₂ Sequestration, ctd.	Rocky Mtn. Overthrust Belt	
PM Room 3		Uranium Geology	
Posters	All-Day	All-Day	

NOTE: We thank sponsors D.J. Simmons, GeoX Consulting, Questar Exploration and Production, and Coleman Oil and Gas for supporting our Technical Sessions.

June 14 – Monday Morning Oral: 8:30-11:40

New Insights into the Paradox Basin

Chair: Gary Gianniny

Location: Room 1

- 8:30 D. Powers, G.L. Gianniny:** Stromatolitic Carbonate Buildups of the Basal Akah Salt Interval, Western Paradox Basin
- 8:50 K.J. Miskell-Gerhardt, G.L. Gianniny, S.M. Ritter:** New Correlation from SW Colorado Outcrop to Eastern Paradox Basin Based on Outcrop Gamma Ray and Conodont Biostratigraphy
- 9:10 J.P. Van Sickle, G. Gianniny:** Facies Heterogeneity and Petrography of the downdip Evaporitic Wedges in the Akah Interval of the Pennsylvanian Paradox Basin
- 9:30 D.J. Todaro, G.L. Gianniny, K. Miskell-Gerhardt:** Sequence Stratigraphic Interpretation of the Pennsylvanian Hermosa Group in Rico, Colorado
- 9:50 BREAK**
- 10:20 E. Coalson, H. DuChene:** Desmoinesian Ismay-Hovenweep-Gothic Petroleum System, Blanding Sub-basin of the Paradox Basin and Surrounds, Utah and Colorado
- 10:40 S. Schamel:** Revisiting the Shale-Gas and Shale-Oil Resources of the Paradox Basin, Colorado and Utah

- 11:00 C.F. Kluth, D.L. Rasmussen, H. DuChene:** Post-Leadville Limestone, Pre-Organ Rock Sandstone Faulting in the Paradox Basin, Colorado and Utah
- 11:20 D.L. Rasmussen:** Halokinesis features related to flowage and dissolution of Pennsylvanian Hermosa salt in the Paradox Basin, Colorado and Utah

Geothermal Energy – From Hot Springs to Produced Water

Chair: Paul Morgan

Location: Room 2

- 8:30 T.C. Anderson:** Geothermal in the Oilfield: Using Hot Produced Water for Power Generation
- 8:50 H.H. Macartney, C.R. O'Farrell:** A Raton Basin Geothermal Prospect
- 9:10 P. Morgan:** Origins of Thermal Waters in Colorado
- 9:30 J. Walker, T. Spampinato, A. Bailey, W. Ehni:** Overview of the Deep Geothermal Production at the Peppermill Resort, Reno, Nevada
- 9:50 BREAK**
- 10:20 M. Swan, S. Keith:** Geochemical Vectoring of Geothermal Systems

CO₂ Sequestration – What Have We Learned So Far?

Chairs: Charlotte Sullivan and Michael Jacobs

Location: Room 3

- 8:30 T.C. Chidsey, Jr., S. Carney, C.D. Morgan:** Geological Site Characterization of the Aneth Unit, Greater Aneth Field, Southeastern Utah, for Sequestration of Carbon Dioxide: A Project Summary
- 8:50 G.V. Last, C.J. Murray, M.L. Rockhold, C. Sullivan, G.D. Black:** A Wiki-Based Tool for Comparing Conceptual Models of Deep Geologic Carbon Sequestration
- 9:10 J. Talbott:** State Regulatory Approaches to Geologic Carbon Sequestration in the Big Sky Region
- 9:30 E.N. Steadman, J. Harju, D.J. Daly, C. Gorecki, M.D. Jensen, W.D. Peck, S.A. Smith, J. Sorensen:** The Plains CO₂ Reduction (PCOR) Partnership: Carbon Capture and Storage Demonstration Activities
- 9:50 BREAK**
- 10:20 T. Rodosta, J. Litynski, and S. Plasynski:** Capturing Lessons Learned in DOE's Best Practice Manuals
- 10:40 G. Schnaar:** Federal UIC Regulations for Geologic Sequestration: An Integrated Approach of Site Characterization, Modeling, and Monitoring
- 11:00 B. Trentham, S. Melzer:** Residual Oil Zones: From Science to Commercial Exploitation
- 11:20 C. Sullivan, P. McGrail, B. Hardage:** Breakthroughs in Seismic and Borehole Characterization of Continental Flood Basalt Sequestration Targets

June 14 – Monday Afternoon Oral: 1:30-4:40

New Insights into the Paradox Basin (Cont.)

Chair: Gary Gianniny

Location: Room 1

- 1:30 D. Seneshen, T.C. Chidsey, Jr., C.D. Morgan, M.D. Vanden Berg:** Organic and Inorganic Surface Expressions of the Lisbon and Lightning Draw Southeast Oil and Gas Fields, Paradox Basin, Utah, USA
- 1:50 Break to Change Sessions**

Stratigraphy of Rocky Mountain Basins

Chair: Donna Anderson

Location: Room 1

- 2:00 O.L. Skinner, K. Canter, M.D. Sonnenfeld, M.R. Williams:** Anatomy of a 2nd-Order Unconformity: Stratigraphy and Facies of the Bakken Formation during Basin Realignment
- 2:20 E.R. Gustason:** Sedimentology and Facies Architecture of a Mixed-energy Strand Plain Deposit, Upper Member Dakota Formation, Southern Kaiparowits Plateau, Southern Utah
- 2:40 M. Longman:** Innovations in Carbonate Geology: 50 Years of Change
- 3:00 B. Macurda, J. Brame:** The Menefee Formation of Southwestern Colorado: World Class Exposures of Non-Marine Progradational and Retrogradational Systems Tracts
- 3:20 BREAK**
- 3:50 C.R. Nelson:** Geologic Controls on the Stratigraphic Architecture of the Denver Formation, Denver Basin, Colorado
- 4:10 J.A. May, D.S. Anderson:** Mudrock Reservoir Deposition and Stratigraphy: Not Homogeneous, Not Boring

CO₂ Sequestration – What Have We Learned So Far? (Cont.)

Chairs: Charlotte Sullivan and Michael Jacobs

Location: Room 2

- 2:00 F. Rock, D. Barnes:** Spatial Variability of Injectivity and Storage Capacity in a Geologically Complex Sequestration Target: The Devonian Sylvania Sandstone, Michigan Basin USA
- 2:20 H.W. Smith:** From “FutureGen” to the “Texas Clean Energy Project”, Building the World’s first 90% Carbon Capture Clean Coal Plant with CCS/EOR

June 14 – Monday All-Day Poster

- D.P. Stilwell, A.M. Elser, A.L. Robbins:** Assessment of Potential for Oil, Gas, and Coalbed Natural Gas Development in the Northeast Paradox Basin, Uncompahgre Plateau and Southeast Piceance Basin, Colorado
- D.L. Rasmussen:** Cyclic Hermosa prograding deltas and fan deltas during the Pennsylvanian and Early Permian in the Paradox Basin, Colorado and Utah
- M.D. Laine, T.C. Chidsey, Jr.:** The Utah Core Research Center Collection: A Valuable Resource for Paradox Basin Exploration and Production

- T.C. Hicks, T.H. Morris, M.D. Fairbanks:** Facies and Thickness Analysis of the Late Middle Jurassic Entrada Sandstone, South-central Utah: Implications for Depocenter Variation
- D.C. Noe:** New Mapping of Mancos Shale in Western Colorado
- T. Wilson, A. Wells, L. Nutt, R. Smith, M. Coueslan, D. Peters, C. Hartline, B. Akwari, G. Kopperna:** Pre- and Post-injection Vertical Seismic Profiling over the Southwest Regional Partnership's Phase II Fruitland Coal CO2 Pilot
- A.M. Elser, A.L. Robbins, D.P. Stilwell:** Assessment of Potential Geothermal Energy Development in the Tomichi Dome Area, Colorado
- S. Newbury, M.J. Kraus:** Avulsion Deposits and Incipient Paleosols: The Nature of Alluvial Deposits from PETM Sections in the Bighorn Basin, WY
- M. Brunhart-Lupo:** Climatic Influences on Basinal Infill in the Great Sand Dunes, San Luis Valley, Colorado

June 15 – Tuesday Morning Oral: 8:30-11:40

Shale Gas and Fractured Shale Plays of the Rockies

Chairs: Bob Bereskin and Tom Chidsey

Location: Room 1

- 8:30 D.S. Anderson:** Depositional Controls on the Organic-Rich Juana Lopez Member of the Mancos Shale, Southeastern Uinta basin, Utah
- 8:50 R. Bereskin T.C. Chidsey, Jr., J.D. McLennan:** Pennsylvanian Organic Mudstone Reservoir Characteristics from the Paradox Basin, Southeastern Utah
- 9:10 P.G. Moreland:** The Pennsylvanian Gothic Shale, Possibly the New Gas Shale Resource Play from the Paradox Basin
- 9:30 S. Trammel:** Recovery is Under Way: Implications for Rockies Unconventional Plays in 2010
- 9:50 BREAK**
- 10:20 R. Sterling, M. Silverman, G. Stewart:** The Mowry Shale, Review of Potential in the Big Horn Basin
- 10:40 D.L. Hall:** Analysis of Borehole Gas with Direct Quadrupole Mass Spectrometry
- 11:00 M.K. Milner, S. Bereskin:** The Mancos Shale: Lithotyping and Play Characterization in a Cretaceous Mixed Sandstone-Mudstone System
- 11:20 C. O'Farrell, S. Hawkins, W. Drake, H. Soetrisno, T. Peters:** Spatial variability of fracture-enhanced shale gas production: insights from the Raton Basin, CO

Structure of Rocky Mountain Basins

Chairs: Chuck Kluth and Kim Parsons

Location: Room 2

- 8:30 J.W. Bader:** Structural and Tectonic Evolution of the Douglas Creek Arch and Environs, Northwestern Colorado and Northeastern Utah
- 8:50 D.S. Stone:** kINEMAtic analysis using profile and time-slice animations of 3D seismic volumes: examples from the Rocky mountain foreland province

- 9:10 John Horne, Monte Swan, Stan Keith, Rick Livaccari:** Strato-Tectonic Analysis: A Tectonic Integration Tool Used to Link Complex Orogenic Development of the Western U.S. Cordillera to Hydrocarbon Events
- 9:30 M. Swan, S. Keith, J. Horne:** Mapping Structure of Hydrocarbon Reservoirs Using Geochemical Vectoring

Multi-scale Observations and the Application of Remote Sensing and Lidar to Rocky Mountain Petroleum Exploration

Chairs: Tim Wawrzyniec and Gary Weissmann

Location: Room 3

- 8:30 D. Burton, L.J. Wood:** Lidar Intensity as a Remote Sensor of Rock Properties: An Investigation of the Sego Sandstone, Book Cliffs, Utah
- 8:50 J. Frechette:** Terrestrial Lidar Scanner data quality: Considerations for collection and analysis
- 9:10 G. Boyd, R. Stage:** Utilizing LiDAR and Hyperspectral Imagery in Oil Exploration
- 9:30 M. Tomasso, B.M. Reyes, R.S. Martinsen, L.F. Krystinik, A.R. Van Holland:** Using Lidar to Characterize and Model Outcrop Analogs: Application to Aeolian and Shallow Marine Exposures, Wyoming
- 9:50 BREAK**
- 10:20 E.M. Nichols, G.S. Weissmann, T.F. Wawrzyniec:** Aquifer analog heterogeneity for groundwater modeling from lidar imaging of outcrops
- 10:40 W. Harris:** Seismic attribute analysis for coalbed methane detection in the Fort Union Formation, Sweet Water County, Wyoming
- 11:00 T.F. Wawrzyniec, R.M. Slatt:** The Application of Ground-based Lidar to Conduct Multi-scale, Outcrop Structural Evaluation with examples from the Anadarko Basin and the Colorado Plateau

June 15 – Tuesday Afternoon Oral: 1:30-4:40

Shale Gas and Fractured Shale Plays of the Rockies (Cont.)

Chairs: Bob Bereskin and Tom Chidsey

Location: Room 1

- 1:30 S. Tedesco:** The Petroleum Potential of the Pennsylvanian Age Atoka and Cherokee Age Carbonaceous Shales in the Denver Basin
- 1:50 S. Schamel, J. Quick:** Manning Canyon Shale: An Emerging Shale Gas Resource
- 2:10 J.M. Bremer, B. Mibeck, J. Sorensen, J. Harju:** Mechanical and Geochemical Assessment of Hydraulic Fracturing Proppants Exposed to Carbon Dioxide and Hydrogen Sulfide
- 2:30 Break to Change Sessions**

Stratigraphy of Rocky Mountain Basins (Cont.)

Chair: Donna Anderson

Location: Room 1

- 2:50 R.C. Johnson, T.J. Mercier, M.E. Brownfield:** Variations in organic matter productivity and preservation through time, Eocene Lake Uinta, western Colorado and eastern Utah
- 3:10 R. Broadhead:** Oil and Natural Gas Potential of the pre-Cretaceous Section in the New Mexico Part of the Raton Basin
- 3:30 L.C. Bortz, S.M. Goolsby:** Reservoir Geology and Secondary Recovery at Kleinholz Field, Kimball County, Nebraska
- 3:50 Break**
- 4:10 R.A. Ashmore, D.E. Owen:** Documenting Channel Deposits in the White Rock Mesa Member, Dakota Sandstone at Red Wash, NM: Using Advanced Equipment and Methods to Produce a High-Resolution, Large-Scale Panoramic Photograph for Field Documentation, Publication, and Presentation
- 4:30 D. Anderson:** Turbidites in the Western Interior Cretaceous Seaway: The Known and the Possible

New Concepts and New Discoveries in the Rocky Mountain Overthrust Belt

Chair: Doug Sprinkle

Location: Room 2

- 1:30 E.E. Hartwick:** Eolian Architecture of Sandstone Reservoirs in the Covenant Field, Sevier County, Utah
- 1:50 D.A. Wavrek, D.D. Schelling, R. Sbarra, J. Vrona, K. Johnson:** Central Utah Thrust Belt Discoveries – A Tale of Two Hydrocarbon Charges
- 2:10 T.L. Perkes, T.H. Morris, T. Hair, A. Boles, S. Phillips:** Terrestrial Sequence Stratigraphy and Paleogeographic Analysis of the Twist Gulch Formation Using the First Radiometric Zircon (U/Pb) Age Dates, Central-Utah Overthrust Belt
- 2:30 D.A. Sprinkel, H.H. Doelling, J. Vrona, E.E. Hartwick, B.J. Kowallis, M. Lester, C. Toland, R. Sbarra, G. Waanders:** Recognition and Distribution of the Middle Jurassic Temple Cap Formation in the Central Utah thrust belt
- 2:50 BREAK**
- 3:10 S. Peyton, P.G. DeCelles, K.N. Constenius:** Evidence for Early Eastward Translation of Shortening in the Sevier Thrust Belt, Northeast Utah and Southwest Wyoming, U.S.A
- 3:30 S. Fang, Y. Song, Z. Guo, Z. Zhang:** Mesozoic-Cenozoic Basin & Orogeny Evolution of Northern Tianshan: Different from Classic Foreland Thrust Belt

Uranium Geology in the Rockies

Chairs: Sam Romberger and Virginia McLemore

Location: Room 3

- 1:30 V.T. McLemore:** The Grants Uranium District, New Mexico: Update on Source, Deposition, and Exploration
- 1:50 W.R. Berglof, V.T. McLemore:** Uranium Mineralization in the Todilto Formation, New Mexico: Resource Potential and Uranium Sources
- 2:10 S.B. Romberger:** Uranium Exploration in the Rocky Mountain Region
- 2:30 S. Sibray:** Revised White River Group Stratigraphy and Uranium Mineralization in the Nebraska Panhandle

2:50 BREAK

3:10 K. Wenrich: Arizona Uranium Breccia-pipe District – One of America’s most Strategic Mineral Resources: Fact or Myth

3:30 S. Hancock: In Situ Recovery: Hydrologic aspects of producing a deposit with a fault system

June 15 – Tuesday All-Day Poster

R. Ressetar: Burial Histories of Mississippian Potential Source and Shale-Gas Reservoir Rocks, Central and Western Utah

F.J. Anderson: Evidence for Potential Methane Sourcing and Methanogenesis in Late Cretaceous Shales along the Eastern Flank of the Williston Basin in North Dakota

C.N. Smith: Handheld X-ray Fluorescence (HHXRF) Analysis of Geochemical Proxies for Productivity in Gas Shales

S.A. Sonnenberg, J. Stroud, J. Sarg: Source and Reservoir Characteristics of the Bakken Petroleum System in the Billings Nose Area, Williston Basin

L. Rasmussen: Analysis of a long Cane Creek horizontal: New insight into an unconventional tight oil resource play, Paradox Basin, Utah

M. Tomasso, G. Murrell, B.M. Reyes, G. Thyne, G.G. Forney, D.E. Shier: The Permian Upper Minnelusa Formation, Powder River Basin, Wyoming: Regional Analysis and Application to Exploration and Development

M.D. Vanden Berg, S.M. Carney, C.D. Morgan, M.D. Laine: Stratigraphic Characterization of the Birds Nest Aquifer in the Uinta Basin, Utah: Implications for Saline Water Disposal from Natural Gas Production

S.M. Goolsby: Depositional Environments and Stratigraphy of Valley-Fill Deposits in the Lower Cretaceous D Sandstone (Cenomanian), Denver Basin, Colorado

G. Ford, M. Duchesne: Fluvial Architecture of the Middle Wasatch Formation in Three Canyon, Utah (Outcrop Study): Implication for Reservoir Down-spacing and Drainage

J.C. Lorenz, S.P. Cooper: Thrust faults in the Alcova Limestone at Beer Mug Anticline, Wyoming

S.M. Carney, C.D. Morgan, T.C. Chidsey, Jr., M.D. Laine: Well Core Description and Natural Fractures of the Segoe and Castlegate Sandstones of the Cretaceous Mesaverde Group, Greater Natural Buttes Field, Uinta Basin, Utah

E. Davis, R. Koepsell: Do natural fractures significantly influence production on the northern end of the Pinedale Anticline?

R.C. Sonntag, M. DeRaps, K. Schade, P. LaPointe, H. Sisley: Fracture analysis in the tight gas Cretaceous Mesaverde Group, Uinta Basin, Utah

June 16 – Wednesday Morning Oral: 8:30-11:40

San Juan Basin – Mature Basin?

Chairs: James E. Fassett and Donald E. Owen

Location: Room 1

8:30 J.E. Fassett: The Oil and Gas Resources of the San Juan Basin – An Overview

- 8:50 D.E. Owen, C.F. Head:** K1, K2, and K3 unconformities and A and X bentonites are keys to deciphering Burro Canyon-Dakota stratigraphy in the San Juan Basin, New Mexico and Colorado
- 9:10 B.A. Black:** Dakota Bar and Channel Sandstones on the Southern Flank of the San Juan Basin, New Mexico
- 9:30 J.C. Lorenz, S.P. Cooper:** Fractures and Faults within the Cretaceous Section of the San Juan Basin
- 9:50 BREAK**
- 10:20 J.V. Fontana, D. Seneshen, A. Gorody:** Customized Geographic Information Systems Used to Acquire Baseline & Monitoring Data, Identify Gas Seeps, Protect Unconventional Resource Assets and Comply with the New Colorado Oil & Gas Conservation Commission Rules
- 10:40 J. Peterson:** Methane Seepage: Measuring the Flux, Recovering Lost Resources, and Protecting the Environment
- 11:00 C.E. Shephard, K.L. Spray:** Converting Fugitive Methane Gas Emissions Into a Viable Resource, Fruitland Formation Outcrop, San Juan Basin Colorado
- 11:20 P. Oldaker:** The Story of Moving Mountain: an Historic Gas Seepage and Mass Wasting Event

Tight Gas Sands and Fractured Sandstone Reservoirs

Chairs: John Robinson and Ira Pasternack

Location: Room 2

- 8:30 I. Pasternack:** Optimizing the Development of the Giant Tight Gas Sandstone Reservoir at Jonah Field, Sublette County, Wyoming
- 8:50 C.E. Bartberger, I. Pasternack:** Spontaneous Potential: Key to Understanding Continuous and Conventional Gas in Upper Cretaceous Sandstones, Deep Eastern Greater Green River Basin, Southwest Wyoming
- 9:10 L. Billingsley:** Influence of Natural Fractures from Second-Order Faults on Low-Permeability Oil Reservoir (Turner Sandstone), Powder River Basin, Wyoming, USA
- 9:30 R.J. Michelena, P.E. Rodrigues, K. Godbey, M.J. Uland:** Joint Use of AVO and Multicomponent Seismic Attributes to Estimate Tight Gas Sand Probability in Mamm Creek Field, Piceance Basin, Colorado
- 9:50 BREAK**
- 10:20 S.H. Nordeng, F.J. Anderson, E.H. Johnson, J.A. Lefever:** Oil Generation Rates and Subtle Structural Flexure: Keys to Forming the Bakken Sweetspot in the Parshall Field of Mountrail County, North Dakota
- 10:40 C.H. Smith, J. Bray, K. Huggins, S. Ramakrishna, S. Thibodeaux:** Comparison of Magnetic Resonance Bin Distribution Permeability to Observed Production