

FINAL ANNOUNCEMENT

Exploration Discovery Success

56TH ANNUAL ROCKY MOUNTAIN RENDEZVOUS

**AAPG-ROCKY MOUNTAIN SECTION
OCTOBER 7-9, 2007
SNOWBIRD, UTAH**



**HOSTED BY
UTAH GEOLOGICAL ASSOCIATION**

TCF Level

Shell Exploration & Production Co.



BCF Level

Questar Exploration & Production Co.



MMCF Level

EnCana Oil & Gas (USA) Inc.
 Sinclair Oil & Gas Co.
 Flying J Inc.
 John C. Osmond
 Petrobank Energy & Resources Ltd
 PGS Onshore
 WellDog, Inc.
 Anadarko Petroleum Corporation
 Bill Barrett Corporation
 Titan Energy Resources
 Williams Production Co.
 Wyoming Geological Association



MCF Level

Berry Petroleum Co.
 Cabot Oil & Gas Co.
 Core Laboratories
 EOG Resources, Inc.
 GeoX Consulting Inc
 Lario Oil & Gas Co.
 Nance Petroleum Corporation
 Pason Systems Inc.
 Petroleum Systems International



Convention Committee Chairs

General Chair	Paul B. Anderson
Finance	Roger Bon
Technical Program Co-Chair	David Lambert
Technical Program Co-Chair	Richard Newhart
Short Courses	Michael Laine
Field Trips	Brad Hill
Exhibit Hall	Craig Morgan
Publicity	Stephanie Carney
Registration	Greg Wood
Awards	Forrest Terrell
Judging	Carl Kendell
Guest Activities	Tina Blake
Social Events	Jason Blake
Volunteers	Jessica Allen
Sponsorship	Kurt Reisser
Convention Signs	Michael Vanden Berg
“Rocks in Your Head” Coordinator	Sandy Eldredge
Advisor	Thomas C. Chidsey, Jr.

Rocky Mountain Section Officers

President	Steven Schamel
President-Elect	John Robinson
Secretary/Treasurer	Kim Parsons
Secretary/Treasurer-Elect	Tom Ann Casey

Host Society Officers

Utah Geological Association Officers, 2006-2007

President	Thomas M. Morris
President-Elect	N. Brett Mustoe
Program Chair	Richard Giraud
Secretary	Gregory Wood
Treasurer	Michael Vanden Berg

Program Design: Cheryl Gustin
Cover photo: Little Cottonwood Canyon by Michael Vanden Berg



Welcome to Snowbird and the 2007 Rocky Mountain Section Meeting

The front of the Wasatch Mountains has been the rendezvous for trappers in the early 1800's and this is the place to be for a vibrant exchange of information, ideas, and inspiration to fuel your important work of exploration, development, and success in the Rockies for the coming years. The Rocky Mountain Section of AAPG invites you to experience the intriguing lure of a venue outside Denver by attending this year's annual meeting at the Cliff Lodge at Snowbird, Utah hosted by the Utah Geological Association.

The organizing committee for the 2007 RMS meeting has prepared an excellent combination of short courses, field trips, oral-poster-core technical presentations to feed your intellectual appetite. Chuck Stanley of Questar will be our all convention luncheon speaker - don't miss this! Hang on to the end, because we have some great talks, rocks, and posters offered on Tuesday afternoon. A closing reception will be held in the exhibits/poster/core area late Tuesday to entice you to stick around!

The committee wants you to enjoy your stay in the mountains with the addition of some German Oompah bands, food and beer at the Oktoberfest social evening on Monday. Tuesday we invite you to break for lunch and to "hop to the top" of an 11,000 foot-peak via a tram ride for a spectacular look at the Wasatch Range and a short explanation of the local geology that surrounds you.

Snowbird is nestled in the bottom of Little Cottonwood Canyon at about 8,000 feet and less than an hour's drive from the airport or city center. The fall colors should be warm and rich and offer a wonderful setting to "feed the spirit" as well as the mind.

Bring a friend! Besides the outdoor adventures at the door steps of the Cliff Lodge, a full-service spa, pool, and gym are available. In the spirit of our mountain rendezvous, guests can participate in a tour of Park City, home to many 2002 Winter Olympic venues, and tour some very impressive real estate. The guest hospitality suite is to die for! ... on the top floor of the Cliff Lodge with great views and good company.

I look forward to rendezvousing with you at Snowbird, October 7-9, 2007!

Paul B. Anderson
General Chair

Schedule of Events

All events will be held at the Snowbird Resort unless otherwise noted. Transportation for all tours and field trips will depart from the Cliff Lodge at Snowbird Resort unless otherwise noted.

Friday, October 5

7:30 a.m. Field Trip #1: Structural Geology of the Central Utah Thrust Belt. Departs from Utah Department of Natural Resources building. Returns to Cliff Lodge at Snowbird Sunday afternoon.

Saturday, October 6

8:30 a.m. – 4:00 p.m. “Rocks in Your Head”. Teacher workshop held at the Utah Geological Survey
 10:00 a.m. – 3:00 p.m. Short Course #1: Depositional Environments, Diagenesis, and Hydrothermal Alteration of the Mississippian Leadville Limestone Reservoir, Paradox Basin, Utah: A Core Workshop. Held at Utah Geological Survey Core Research Center.

Sunday, October 7

8:30 a.m. – 3:00 p.m. Field Trip #2: Uplift and Evolution of the Central Wasatch Range Utah
 10:00 a.m. – 3:00 p.m. Short Course #2: Geological Aspects of Shale Gas Exploration, Exploitation, and Development
 12:00 p.m. – 8:00 p.m. Registration
 1:00 p.m. – 3:00 p.m. Public Forum: Energy Development on Public Lands: Finding Common Ground; Keynote Speaker: Dr. Charles G. Groat.
 2:30 p.m. – 4:30 p.m. Guest Hospitality Room
 4:30 p.m. – 5:30 p.m. Opening Session: Welcome and Awards
 5:30 p.m. – 7:30 p.m. Icebreaker and Opening of Exhibit Hall

Monday, October 8

6:30 a.m. – 8:00 a.m. Speakers Breakfast
 6:45 a.m. – 8:00 a.m. AAPG House of Delegates Breakfast
 6:45 a.m. – 8:00 a.m. Judges Breakfast
 7:00 a.m. – 6:00 p.m. Registration
 7:30 a.m. – 5:00 p.m. Guest Hospitality Room
 8:00 a.m. – 5:00 p.m. Exhibit Hall
 8:00 a.m. – 5:00 p.m. Core Poster Session: Signature Core from the Rocky Mountain Region
 8:00 a.m. – 12:00 p.m. Poster Session: Rocky Mountain Structural Analysis
 8:00 a.m. – 11:30 a.m. Technical Session: Emerging Shale Gas Resources of the Rockies
 8:00 a.m. – 11:30 a.m. Technical Session: Uinta Basin – Expanding Oil and Gas Opportunities
 8:00 a.m. – 11:30 a.m. Technical Session: Sevier and Cordilleran Thrust Belt Revisited
 8:30 a.m. – 5:00 p.m. Guest Activity: Park City Luxury Home Tour
 9:30 a.m. – 10:00 a.m. Morning Break
 11:30 a.m. – 1:00 p.m. All Convention Luncheon; Keynote Speaker: Charles B. Stanley, Questar Corporation.
 1:30 p.m. – 5:00 p.m. Poster Session: Rocky Mountain Investigations
 1:30 p.m. – 5:00 p.m. Technical Session: Resource Play Technologies
 1:30 p.m. – 5:00 p.m. Technical Session: Petrophysical Case Studies in Unconventional Reservoirs
 2:30 p.m. – 3:00 p.m. Afternoon Break
 5:45 p.m. – 8:45 p.m. Oktoberfest Celebration

Schedule of Events — continued

Tuesday, October 9

- 6:00 a.m. – 8:30 a.m. RMS-AAPG Executive Committee Breakfast
 6:30 a.m. – 8:00 a.m. Speakers Breakfast
 7:00 a.m. – 12:00 a.m. Registration
 8:00 a.m. – 5:00 a.m. Exhibit Hall
 8:00 a.m. – 5:00 p.m. Core Poster Session: Signature Core from the Rocky Mountain Region
 8:00 a.m. – 11:30 p.m. Poster Session: Sedimentation and Depositional Systems
 8:00 a.m. – 11:30 a.m. Technical Session: Shale Gas Secrets – Lessons from other North American Shale Gas Plays
 8:00 a.m. – 11:30 a.m. Technical Session: Geophysical and Structural Advances in the Rockies
 8:00 a.m. – 11:30 a.m. Technical Session: Advances in Rock Mechanics and Hydraulic Fracturing – Case Studies (SPE)
 8:00 a.m. – 5:00 p.m. Guest Hospitality Room
 9:30 a.m. – 10:00 a.m. Morning Break
 11:30 a.m. – 1:30 p.m. View From the Top: Snowbird Geology Lunch via the Tram
 2:00 p.m. – 5:00 p.m. Poster Session: Stratigraphic Studies of Utah and Colorado
 2:00 p.m. – 4:00 p.m. Technical Session: Uinta Basin – Stratigraphic Studies
 2:00 p.m. – 4:00 p.m. Technical Session: Studies in Stratigraphy and Sedimentation
 4:00 p.m. – 5:00 p.m. Closing Reception

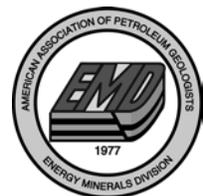
Wednesday, October 10

- 7:30 a.m. Field Trip #3: Classic Geology and Reservoir Characterization Studies of Central Utah. Returns 6:00 p.m. Friday, October 12.

Opening Session and Awards

Sunday October 7, 4:30 p.m. – 5:30 p.m.

The Opening Session will include remarks from AAPG leaders and candidates (DPA, DEG, EMD), the Rocky Mountain Section President, and the President of our host organization - the Utah Geological Association. Please join us in recognizing the contributions of last years technical program with the presentation of the A.I. Levenson Award for best oral paper, the Steve Champlin Memorial Award for best poster session and the Runge Award for best student paper.



Public Forum

Sunday, 1:00 p.m. – 3:00 p.m.

Energy Development on Public Lands: Finding Common Ground

Clearly, responsible development of the fossil energy resources on public lands in the West is in the public interest. But in many instances energy development is seen as being in conflict with other vital natural resources and land values. Presently, too much time, effort and money is being spent fighting the "opponents", be they the petroleum industry, environmentalists, or the BLM, rather than working to identify common areas of agreement and ultimate cooperation. The objective of the forum is to foster better mutual appreciation of the concerns and problems of the various stakeholders, not create a venue for finger-pointing. A greater degree of cooperation in settling disputes related to energy development on public lands is in the interest of the stakeholders and the public.

The forum will have four speakers, a neutral observer defining the issues from various perspectives and one person representing each of the principal stakeholders - the Federal land managers, the gas and oil operators, and the land protectionists. A 90 minute period is scheduled for a brief introduction and the four 20 minute presentations. This is followed by 20-30 minutes of general comments and questions to the panelists from the audience. Refreshments will be available at the close of the forum to allow all participants, speakers and audience, to converse informally.

Dr. Charles G. Groat, Director of the Center for International Energy and Environmental Policy at the Jackson School of Geosciences, University of Texas, and President of the AAPG Division of Environmental Geosciences, will be the keynote speaker. Other presenters will be announced in the convention program.

The Forum is open to all interested persons; convention registration is not required. This event is a public outreach activity sponsored by the AAPG Rocky Mountain Section.

Prospect Booths and Interview Rooms

On Monday and Tuesday semi-private cubicles will be available for showing prospects and interviewing job candidates. The cubicles in the Prospect Room will have hardboard backs suitable for hanging displays, curtained sides, a table and three chairs. The Interview Room cubicles will be curtained and have a table and two chairs. Both rooms will have a person onsite during times of operation to assist with scheduling and other matters. Poster boards at the entrance to the rooms and elsewhere in the meeting area will announce the schedule of companies showing prospects and interviewing.

Space in the rooms may be booked in advance in half-day increments (8:30 a.m.-noon and 1:00-4:30 p.m.) at a cost of \$150 for the prospect room and \$100 for the interview room. Booking will be on a "first-come, first-served" basis, as space may be limited. It is recommended that space be booked by mid-September by contacting Julie Sibthorp at julies@westernleisure.com or 801 643-9398.

Exhibits

**Open: Sunday October 7, 5:30 p.m. – 7:30 pm; Monday, October 8, 8:00 a.m. – 5:00 p.m.;
Tuesday, October 9, 8:00 a.m. – 5:00 p.m.**

Vendors in service to the petroleum industry are looking forward to the 2007 AAPG Rocky Mountain Section meeting in Snowbird Utah. You will have the opportunity to investigate and see demonstrated the latest in a wide range of products and services that are available in every area of interest in the industry.

Sunday's Icebreaker, as well as Tuesday's Closing Reception, will be held in and near the Exhibitors Hall. Food and drinks will be available during these times while you learn about the latest in products and services, purchase the most current geological publications, see core posters from many of the Rocky Mountain reservoirs, and network with friends and colleagues.

Note: A trade exhibition is not a safe place for children, so please be advised that no one under the age 13 will be allowed to spend time in the exhibition areas.

Luncheons

All Convention Luncheon

"Natural gas in the Rockies- the Challenges and Opportunities of Resource Development on Pubic Lands"

Speaker:**Charles B. (Chuck) Stanley, Questar Corporation**

Date:**Monday, October 8, 2007, 11:30 a.m. – 1:00 p.m.**

Fee:**\$25.00 per person**



Operations in the Rockies are problematic for a number of reasons. Please join us for an informative presentation from the corporate leader of one of the more active companies working the Cretaceous Basins of the Rockies. Mr. Stanley will be addressing a number of issues such as BLM restrictions, access issues, reserve analyses in tight gas sands, governmental affairs, etc. For any company working in the Rocky Mountains, this is a presentation not to be missed. Mr. Stanley is Executive Vice President of Questar Corporation and has served as a Director since 2002. He has responsibility for the company's Market Resources business segment and is President and Chief Executive Officer of each entity within that group -- Questar Market Resources, Inc., Questar Exploration and Production Company, Wexpro Company, Questar Gas Management Company (gas gathering and processing) and Questar Energy Trading Company (wholesale marketing and storage). Mr. Stanley began his career in 1981 as a research and field geologist for the Virginia Geological Survey, and then worked in oil and gas exploration and development for British Petroleum Co. He held positions with Maxus Energy Corp. and Coastal Gas International Co., and then went on to serve as President and CEO of El Paso Oil & Gas Canada, Inc., prior to joining Questar in 2002. He is a graduate of Virginia Polytechnic Institute and State University.

Snowbird Geology Luncheon via the Tram

"View From the Top"

Date:**Tuesday, October 9, 2007: 11:30 a.m. – 1:30 p.m.**

Location: ...**At the top of the Tram on Hidden Peak, Wasatch Range**

Fee:**\$15.00 per person**

Please join us for a tram ride to the top of the Hidden Peak and a geologic talk by local geologist Joe Gates. The tram will whisk you from the base at Snowbird Plaza (8100-foot elevation) to the top of Hidden Peak at over 11,000 feet in a matter of minutes. The views from the tram are spectacular so bring your camera. At the top, participants will enjoy a hearty mountain sack lunch while enjoying the geo talk and scenic splendor of the Wasatch Range. Participants will have the opportunity to take a couple of short hikes for a closer look at the stratigraphy and thrust faulting at the top of Hidden Peak or to just poke around on their own. Afterwards, catch the tram back down for the afternoon technical sessions. The tram ride and short hikes will not be overly strenuous, but sturdier footgear and outerwear appropriate for the weather are recommended. Price of the event includes lunch, tram ride and geo talk. In the event of inclement weather, the presentation will be at the base, with the option for those willing to brave the elements to ride the tram to the top.



Hidden Peak Tram, Snowbird, Utah

Sevier and Cordilleran Thrustbelt Revisited

Co-Chairs: Thomas C. Chidsey, Jr, and Douglas A. Sprinkel

- J. C. Coogan:** Extensional Inversion of the Central Utah Thrust Belt: More than Just the Sevier Desert Detachment
- D. A. Wavrek, J. Ali-Adeeb, J. C. Chao, L. E. Santon, E. A. Hardwick, D. K. Strickland, D. D. Schelling:** Paleozoic Source Rocks in the Central Utah Thrust Belt: Organic Facies Response to Tectonic and Paleoclimatic Variables
- G. J. Hunt, T. F. Lawton, G. E. Gehrels:** Detrital Zircon Geochronology of Lower Cretaceous Conglomerates, San Rafael Swell—Wasatch Plateau, Central Utah
- W. W. Little:** Using Alluvial Architecture to Define Stratigraphic Sequences in Foreland Basins, Upper Cretaceous Strata of the Kaiparowits Basin, Utah
- G. B. Nielsen, M. Chan:** A Reinterpretation of Diagenetic Coloration Patterns in the Jurassic Navajo Sandstone, Zion National Park, Utah
- D. Keele, J. P. Evans, W. D. Liddel:** The Marriage of Eolian Rock Properties and Deformation of the Nugget Formation; Anschutz Ranch East Field: Northeast Utah and Southwest Wyoming
- T. H. Morris, A. Hansen, S. Carney, C. D. Morgan, T. C. Chidsey, Jr:** The Jurassic Navajo Sandstone as a Partitioned(?) Subsurface Reservoir: Comparing Reservoir Characteristics and Facies Between San Rafael Swell Outcrop and Covenant Field Core, Utah
- D. Bate, M. Davies:** An Improved Understanding of the Utah Hingeline with the Application of BlueQube™ Technology
- F. C. Moulton, M. L. Pinnell:** Central Utah Thrust Belt-Hingeline: This New Oil and Gas Province Has Enormous Potential

October 8 – Monday Morning Poster

Rocky Mountain Structural Analysis

Chair: James P. Evans

- E. A. Helmke, D. R. Lageson:** Structural Analysis of Pressure Solution Cleavage in the McCartney Mountain Fold-Thrust Salient, Southwest Montana
- M. Dropkin, K. Campbell, R. Ehrlich:** Detailed Analysis of the Nesson Antiform Williston Basin, North Dakota
- R. W. Clayton, W. W. Little:** Thrust Belt Structures and Paleozoic Stratigraphy of the Scott Butte and Snaky Canyon Quadrangles, Southern Beaverhead Mountains, Idaho
- S. Roemer, W. W. Little, R. W. Clayton:** Complex Deformation of Paleozoic Strata due to Folding and Faulting in the Southern Beaverhead Mountains, Clark County, Idaho
- W. H. Hokanson, R. W. Clayton:** Geologic Map of Snaky Canyon Quadrangle, Clark County, Idaho

October 8 – Monday Core Poster

Signature Cores of the Rocky Mountain Region

Chair: Richard Newhart

- K. Kaiser, E. Davis, R. Newhart, M. Longman, R. Koepsell:** Characteristics of the Upper Cretaceous Baxter Shale in the Vermillion Basin, Northwestern Colorado
- M. D. Laine, T. C. Chidsey, Jr, D. A. Sprinkel, J. P. Vrona, D. K. Strickland:** Covenant Oil Field, Central Utah Thrust Belt: Possible Harbinger of Future Discoveries
- L. A. Mauro, M. W. Longman:** Anatomy of a Tight Gas Sand: Upper Lance Core from Pinedale Field, Green River Basin, Sublette County, Wyoming
- M. D. Vanden Berg, D. E. Tabet:** Utah's Oil Shale Deposits: Stratigraphy and Resource Evaluation

October 8 – Monday Afternoon Oral

Resource Play Technologies*Co-Chairs: G. Earl Norris and Brad Thompson*

- T. Bowman, D. Burch, E. J. Nelson, D. E. Roberts:** Increasing the Odds: Data Analysis of the Barnett Shale in the Fort Worth Basin
- T. R. Albrecht, G. D. Thyne:** Distinguishing Impacts of Natural Gas Production on Water Quality, Piceance Basin, Colorado
- S. P. Cumella:** Stratigraphic Trapping in the Rollins Sandstone of the Mesaverde Group, Mamm Creek Field, Piceance Basin, Northwest Colorado
- P. Nandi:** Lost Circulation and Fractures in Wamsutter, Wyoming
- S. Mark, M. Stoner:** Geo-Steering Horizontal Wells: Case Studies Demonstrate the Value of Fuzzy Logic Directional Steering Guidance
- K. Oren:** Collaboration Across all Domains for Optimized Unconventional Resource Development Programs
- A. Karpov, C. Morris, C. Segondy, R. Naimi-Tajdar, J. Hebert, E. Boratko:** Gathering and Analyzing Vertical Permeability Data to Evaluate Horizontal Wells in North San Juan CBM
- D. Handwerger, R. Suarez-Rivera, T. Sodergren, M. Milner, K. Greaves:** Application of n-dimensional Log Analysis in Predicting Reservoir Properties from Core Data in both Cored and Un-cored Wells in Tight Gas Reservoirs

Petrophysical Case Studies in Unconventional Reservoirs*Co-Chairs: Terri Olson and Randolph J. Koepsell*

- L. E. Soto:** Study of Almond Reservoir Connectivity in Wamsutter Field
- K. W. Shanley, R. M. Cluff, J. W. Robinson:** What's The Matter With The Ericson? Gas Shows, Calculated Pay, and Water!
- M. Holmes, A. Holmes, D. Holmes:** A Method to Quantify Gas Saturation in Gas/Water Systems, Using Density and Neutron Logs – Interpretation of Reservoir Properties When Compared With Gas Saturations from Resistivity Analysis
- P. H. Nelson:** Pore Throats and Pore Pressure: Pushing Gas into Small Spaces
- G. Tracy, K. Kaiser, R. Newhart:** Petrophysical Evaluation of the Hiawatha Deep Unit #5 Well in the Vermillion Basin, Northwestern Colorado
- A. P. Byrnes, J. C. Webb, R. M. Cluff:** Regional Petrophysical Properties of Mesaverde Low-Permeability Sandstones
- D. Merkel:** Using Core Data to Develop and Calibrate Petrophysical Models in Tight Gas Sands
- M. Miller, R. Lieber, E. Piekenbrock, T. McGinness:** Core Analysis Issues in Tight Gas Reservoirs

October 8 – Monday Afternoon Poster

Rocky Mountain Investigations*Co-Chairs: Russell Griffin and Scott Ritter*

- C. N. Stroup, P. K. Link, S. U. Janecke, C. M. Fanning:** Eocene to Oligocene Paleodrainage of Southwest Montana: Evidence from Detrital Zircon Populations
- D. M. Seneshen, T. C. Chidsey, Jr, C. D. Morgan, M. D. Vanden Berg:** New Techniques for New Discoveries – Results from the Lisbon Field Area, Paradox Basin, Utah
- P. H. Nelson, P. K. Trainor, T. M. Finn:** Gas and Water Production in the Wind River Basin, Wyoming
- T. L. Perkes, W. W. Little:** Petrographic Analysis of Campanian Sandstones, Kaiparowits Formation, South-Central Utah
- M. Holmes, A. Holmes, D. Holmes:** Comparison of Total and Effective Water Saturations as a Way to Verify the Validity of Effective Porosity Calculations

October 9 – Tuesday Morning Oral

Geophysical & Structural Advances in the Rockies*Co-Chairs: Kenneth Grubbs and R. William (Bill) Keach*

- W. R. Roux:** West Tavaputs, Uinta Basin - A Story of Persistence
- V. G. Rigatti, T. LeFevre, R. Newhart, K. Kaiser, S. Goodwin, R. Parney:** The Vermillion Basin of SW Wyoming/NW Colorado: Structural Styles and Seismic Pore Pressure Prediction Through Over-Pressure
- S. P. Gay, Jr:** Basement Fault Control of Offshore Cretaceous Sandbars in the Powder River Basin, Wyoming
- B. J. Black, M. Milliken:** Understanding The Complex Geometry of Extensional Faulting in a Compressional Laramide Structure: Teapot Dome, Wyoming
- S. Carney, C. Morgan, M. Vanden Berg:** Structural Analysis of Aneth Field, Paradox Basin, Southeastern Utah: A Carbon Storage Study Site of the Southwest Regional Partnership for Carbon Sequestration
- J. C. Lorenz, P. Yin:** Fracture Distributions in the Tensleep-Equivalent Casper Sandstone at Flat Top Anticline, Wyoming: Implications for Reservoirs
- J. E. Tully, D. R. Lageson, J. C. Coogan:** New Structural Interpretation of the Elk Range Thrust System, Southwest Colorado
- W. Pearson, R. Inden:** Sweet Spot Localization of Production from Fractured Shales
- D. Bate, M. Davies:** The Application of BlueQube™ Technology to Exploration in the Rocky Mountain Foothills

Advances in Rock Mechanics and Hydraulic Fracturing-Case Studies (SPE)*Co-Chairs: John McLennan and Rex Hansen*

- I. Palmer:** Effectiveness of Horizontal Wells in Coalbed Methane Plays
- D. Cramer:** Lessons Learned in Vintage Bakken Vertical-Well Completions Provide Answers to Pay Location & Quality and Stimulation Optimization
- T. Olsen, T. Bratton, R. Koepsell, A. Donald:** Natural Fracture Quantification for Optimized Completion Decisions
- T. Bratton:** Anisotropic Earth Models Improve Completion Design
- M. C. Vincent:** Understanding Waterfracs
- I. Gil, M. Sanchez, P. Young, S. Kleiner:** Discrete Element Modeling (DEM) Improves Fundamental Understanding of Microseismicity Data and Provides Capabilities for Predicting Events
- R. Suarez-Rivera, C. Deenadayalu, D. Handwerger, S. Green:** Laboratory Experiments of Hydraulic Fracturing Help Investigating Conditions for Fracture Branching and Fracture Containment
- D. Magill, M. Ramurthy, P. D. Nguyen:** Preventing Proppant Flowback from Stimulated Zones

Shale Gas Secrets - Lessons From Other North American Shale Gas Plays (EMD)*Co-Chairs: Creties Jenkins, Bob Bereskin and David Tabet*

- C. Miller, R. Lewis, K. Bartenhagen:** Design and Execution of Horizontal Wells in Gas Shales Using Borehole Images and Geochemically-Enhanced Formation Evaluation
- B. Coffey:** Gas Resource Potential of the Woodford Shale, Arkoma Basin, Oklahoma
- J. F. W. Gale, J. Holder, R. M. Reed:** Natural Fractures in the Barnett Shale: Why They Are Important
- D. J.K. Ross, R. M. Bustin:** Evaluating the Shale Gas Resource Potential in Western Canada
- J. M. Forgotson:** Caney Shale, Arkoma Basin, Oklahoma
- M. Milner, B. Marin, D. Handwerger:** Characterizing Unconventional Reservoirs: an Informal Mudstone and Shale Classification Based on Core
- M. H. Tobey, T. M. Smagala, D.E. Schmude:** Elements of Successful Thermogenic Shale Gas Plays
- R. F. LaFollette:** The Barnett Shale Play of North Texas - Points to Ponder in 2007

October 9 – Tuesday Morning Poster

Sedimentation and Depositional Systems*Chair: William W. Little*

- G. S. Billman, W. W. Little:** Correlation of Mississippian and Pennsylvanian Strata in the Southern Beaverhead Mountain Range, Idaho
- C. S. Painter, R. S. Martinsen:** Another Look at Hartzog Draw Stratigraphy, Powder River Basin, Wyoming
- S. Jiang:** Stratigraphic Reservoir Exploration in Liaozhong Strike-Slip Depression, Bohai Bay, China
- D. S. Anderson, M. M. Carr:** 3-D Architecture of Crevasse Splay and Point-Bar Bodies: From Outcrop to Geologic Model

October 9 – Tuesday Core Poster

Signature Cores of the Rocky Mountain Region*Chair: Richard Newhart*

- T. C. Chidsey, Jr, D. E. Eby, M. D. Laine, J. T. Dempster:** Why Modelers Need to Look at the Rocks! - Examples from Greater Aneth Field, Paradox Basin, Utah
- M.W. Longman, R. Koepsell, S. Sturm:** Use of Cores and Image Logs to Interpret Depositional Environments of Sandstones in the Dakota Group at South Baxter Field, Sweetwater County, Wyoming
- E. R. Gustason, S. Schamel:** River Gas of Utah No. 1 Core: Window into the Mancos Shale Gas Reservoir

October 9 – Tuesday Afternoon Oral

Studies in Stratigraphy and Sedimentation*Co-Chairs: Richard Newhart and David Lambert*

- M. D. Milliken, B. Black:** Core Interpretation Allows a New Perspective on Tensleep Sandstone Correlations at Teapot Dome Field, Natrona County, Wyoming
- R. Sacerdoti, P. Plink-Bjorklund:** Rangely Turbidites and Their Linkage to Coeval Shallow-Water Succession, Rangely, Colorado
- J. P. Skinner, P. Plink-Bjorklund:** Wave- and River-Influenced Deltaic Clinofolds of the Chimney Rock Sandstone, Flaming Gorge Reservoir, Utah
- B. A. Black, B. Dirks:** The Rio Grande Rift - A New Oil and Gas Province in New Mexico
- C. Myer, C. Dehler:** Paleogeography, Climate and the Carbon Cycle of the Mid-Neoproterozoic Red Pine Shale, Uinta Mountains, Northeastern Utah
- A. Chamberlain:** Hunting Great Basin Elephants with Serial Transect Mapping

Uinta Basin-Stratigraphic Studies*Co-Chairs: Edmund R. Gustason, and Jim Borer*

- E. M. Kingsbury, P. K. Link, C. M. Dehler, C. M. Fanning:** Neoproterozoic Uinta Mountain Group of Kings Peak Quadrangle, Utah: A Marine-Fluvial Interface?
- J. L. Aschoff, R.J. Steel:** Anatomy of an Extensive, Low-accommodation Clastic Wedge: Insights from Isopach Maps and Regional Correlation in the Uinta-Piceance Basins
- B. J. Willis:** Stratigraphy of Tide-Influenced River Deltas in the Sego Sandstone
- R. Steel:** Fluvio-Lacustrine Facies and Sequence Stratigraphy, Eocene Uinta Basin
- R. C. Johnson:** The Outflow of Eocene Lake Gosiute Into Lake Uinta and its Affects on Sedimentation in Lake Uinta in the Piceance Basin of Western Colorado
- N. Harcourt, D. Keighley:** Origin of the Deformed Basal Uinta Formation in Eastern Utah (Uinta Basin): Progradational Delta Clinofolds of a Lake Highstand or Ephemeral Fluvial Sheetfloods of a Lake Lowstand?

October 9 – Tuesday Afternoon Poster

Stratigraphic Studies of Utah and Colorado*Chair: Russell Griffin*

- S. P. Cumella:** Stratigraphy and Petrophysics of Gas-Producing Parasequences in the Rollins Sandstone of the Mesaverde Group, Mamm Creek Field, Piceance Basin, Northwest Colorado
- P. La Pointe, R. D. Benson, C. Rebne:** Multivariate Modeling of 3D9C Data for Constructing a Static Reservoir Model of Algal Mounds in the Paradox Basin, Colorado
- M. L. Pinnell, F. Moulton:** Central Utah: A Photographic Essay and Update on Geology and Drilling in America's Most Exciting New Oil and Gas Exploration Province
- D. Rybczynski, C. Dehler, A. Brehm:** Subdividing the Undifferentiated Eastern Uinta Mountain Group, Northeastern Utah
- K. Duncan, R. Langford:** Stratigraphic and Depositional Controls on Fluid Migration Through Eolian Sandstones - Comparing Outcrop with Reservoir

**Little Cottonwood Canyon, Utah**

Short Courses

Short Course # 1: Depositional Environments, Diagenesis, and Hydrothermal Alteration of the Mississippian Leadville Limestone Reservoir, Paradox Basin, Utah: A Core Workshop

Date:Saturday, October 6, 2007, 10:00 a.m. – 3:00 p.m.
 Instructors:David E. Eby (Eby Petrography & Consulting, Inc.) and Thomas C. Chidsey, Jr. (Utah Geological Survey)
 Location:Utah Geological Survey Core Research Center
 Fee:\$60.00 (includes lunch, refreshments, and course notes)
 Limit:20 persons
 Sponsors:Utah Geological Survey/U.S. Department of Energy-National Energy Technology Laboratory/Eby Petrography & Consulting, Inc.

Who Should Attend

Geoscientists with interests in exploration and development of shallow-shelf carbonate reservoirs. This course is designed for geoscientists who wish to examine a large collection of carbonate core (both limestone and dolomite) presented within lithofacies, diagenetic, and petrophysical context.

Objectives and Content



Utah Geological Survey Core Research Center

The Mississippian Leadville Limestone has produced over 53 million barrels of oil and 845 BCF of gas in the Paradox fold and fault belt of the Paradox Basin, Utah and Colorado. The Leadville was deposited as an open-marine, carbonate-shelf system highlighted with crinoid banks, peloid/oolitic shoals, and small Waulsortian mounds. Various lithofacies changes and extensive diagenesis have created complex reservoir heterogeneity. Predating or concomitant with late dolomite formation are pervasive leaching episodes that produced vugs and extensive microporosity. Solution-enlarged fractures and autobreccias are also common. Late-replacement and saddle dolomites, as well as brecciation and sulfide mineralization, developed from hydrothermal alteration that greatly improved reservoir quality. The result can be the formation

of large, diagenetic-type hydrocarbon traps. The reservoir characteristics, particularly diagenetic overprinting and history, can be applied regionally to other fields and exploration trends in the Paradox Basin and shallow-shelf carbonate reservoirs elsewhere.

Representative core from Utah's Lisbon field will be examined. All core displayed will be presented within the context of the regional paleogeographic setting. The core workshop will be organized into topical modules with participants performing a series of exercises using core, geophysical well logs, and photomicrographs from thin sections. These modules include describing reservoir vs. non-reservoir lithofacies; determining diagenesis, hydrothermal alteration, and porosity from core; recognizing barriers and baffles to fluid flow; correlating core to geophysical well logs; and identifying potential completion zones.

Short Course # 2: Geological Aspects of Shale Gas Exploration, Exploitation, and Development

Date: **Sunday, October 7, 2007, 10:00 a.m. – 3:00 p.m.**
Instructors: **Robert Bereskin (Bereskin and Associates, Inc.)**
Location: **Snowbird**
Fee: **\$100.00 (includes lunch, refreshments, and course notes)**
Limit: **30 persons**

Who Should Attend

Geoscientists with interests in the exploration and development of shale gas reservoirs of western North America. The course is designed for geoscientists who wish to examine the basic lithofacies of shale gas reservoirs recognized in various Rocky Mountain region exploration plays and compare how they are expressed in well core and in the context of open hole geophysical logs.

Objectives and Content

Because shale gas drilling ventures represent a significant percentage of recent exploration endeavors, conclusions regarding shale producibility and formation evaluation are commonly tied to characteristic lithofacies. To date, four basic lithofacies have been recognized, and while intergradations of various rock types are common, these end-member lithofacies encompass domination by (1) siliclastic material, (2) argillaceous content, (3) authigenic silica, or (4) various carbonate constituents. This core workshop is intended to highlight the various lithofacies from various shale plays, located principally in



Upper Cretaceous Mancos Shale. Photo by Steven Schamel

Western North America. For the most part, all examples will originate from the Rocky Mountain region (including Utah specifically) and generally involve thermogenic generation of shale gas. It is the intent of the workshop to not only exhibit the slabbed core samples, but also to demonstrate the open hole log characteristics that can result from the diagnostic assemblage of minerals and pore types. While micropores are most logically characteristic of shale reservoirs, the abundance and arrangement of voids can result in shales becoming either good or poor producers with varying intrinsic permeabilities. Both thin section petrography and scanning electron microscopy are obviously important in any geologic dissection of shales, and such microscopic examples will accompany the slabbed core material during the session.

Field Trips

Field Trip #1: Structural Geology of the Central Utah Thrust Belt

Date: **October 5-6, 2007**
 Trip Leaders: **Daniel Schelling (Structural Geology International, LLC) and John Vrona (Wolverine Gas and Oil Corporation)**
 Departure/Return: **Depart 7:00 a.m. from the Department of Natural Resources Building, Salt Lake City; Return 7:00 p.m. to Snowbird.**
 Fee: **\$250.00 (includes transportation, 2 box lunches, and lodging)**
 Limit: **24 participants**
 Sponsor: **Utah Geological Association**



Complexly deformed mudstones and evaporites of the Arapien Shale exposed along the Rainbow Hills of central Utah

Since the discovery of the Covenant oil field by Wolverine Gas and Oil Corporation in December, 2003, there has been renewed interest in the structural geology and evolution of the central Utah thrust belt, within which the Covenant field is located. During this two day geological field excursion participants will have a chance to examine and discuss the Cretaceous through Paleocene contractional structural systems of the central Utah (Sevier) thrust belt, the Oligocene through Recent structural systems of the Basin and Range tectonic province, and possible “diapiric” deformational systems related to mobilisation of the Jurassic Arapien Shale. Structural reactivation, structural overprinting, and the role of the Arapien Shale in the development of both contractional and extensional

structures will be discussed, along with the structural evolution of the Jurassic Arapien Basin, the Cretaceous thrust belt, and the eastern margin of the Tertiary Basin and Range province of central Utah. Discussions will be centered around exposed geologic features that provide clues to the structural architecture and evolution of central Utah, and balanced structural cross sections constructed across the deformation front of the thrust belt. Where possible and appropriate, seismic data will be shown to support structural interpretations. During the second day of the field excursion we will stop at the Covenant oil field to discuss the structural setting and geologic characteristics of the field, and their implications for hydrocarbon exploration in central Utah.

Field Trip # 2: Uplift and Evolution of the Central Wasatch Range, Utah

Date: **October 7, 2007**
 Trip Leaders: **William Dinklage, Michael Bunds, and Daniel Horns (Department of Earth Science, Utah Valley State College)**
 Departure/Return: **Depart from Snowbird at 8:30 a.m. and return to Snowbird 3:00 p.m..**
 Fee: **\$50.00 (includes transportation and box lunch/drink/snack)**
 Limit: **47 people**
 Sponsor: **Utah Geological Association**



Scarp of the Wasatch fault (in shadows on the near ridge) cut Pleistocene glacial moraines at the foot of the Wasatch Range

The Wasatch Range provides a dramatic and scenic backdrop to Utah's urban corridor, with peaks rising to heights of over 11,000 feet. This close juxtaposition of high mountains and metropolitan centers is almost unique in the U.S. The Wasatch is an eastward-tilted fault block range, bound on the west by the Holocene Wasatch fault. As a result of the tilting, the west side of the range has been uplifted about 10,000 meters (6 miles) relative to the east side over the past 17 to 30 million years. Because of this uplift, deep canyons have been carved into the west side of the range. These canyons provide a window into the Earth's crust and the geologic past. We will explore many aspects of the geology of the Wasatch Range, including an early Paleozoic transgressive sequence, Tertiary

granitic rocks of the Alta and Little Cottonwood stocks (and the metamorphic aureoles associated with them), spectacular Alpine glacial landforms, and the world-class scarps associated with the Wasatch fault zone along the dramatic western escarpment of the range.

Field Trip # 3: Classic Geology and Reservoir Characterization Studies of Central Utah

Date: **October 10-12, 2007**
 Trip Leaders: **Thomas H. Morris (Brigham Young University), Craig Morgan (Utah Geological Survey), Marc T. Eckels (The Wind River Companies), and Scott M. Ritter (Brigham Young University)**
 Departure/Return: **Depart from Snowbird at 7:30 a.m. and return to Snowbird 6:00 p.m.**
 Fee: **\$350.00 (includes lodging, lunches, refreshments, 2007 UGA Guidebook "Geology of Central Utah", and a short "core workshop" in the field)**
 Limit: **45 people**
 Sponsor: **Utah Geological Association**

The classic geology of central Utah including the San Rafael Swell, the Waterpocket Fold at Capitol Reef National Park, and the Central Utah Thrust Belt will be overviewed on this field trip. The trip will emphasize four recent reservoir characterization studies including the Sinbad Limestone Member of the Triassic Moenkopi Formation, and the classic Jurassic erg systems of the Wingate, Entrada, and Navajo sandstones. The Jurassic erg systems have again demonstrated their potential to serve as quality subsurface hydrocarbon reservoirs with the recent development of the Covenant Oil Field in central Utah and the new high BTU gas production from both the Entrada and Wingate sandstones within the Uinta basin. Details of potential flow units, baffles, and barriers will be discussed in light of current facies analysis and structural complexities. At Capitol Reef we plan to do an optional two mile round trip hike to Hickman Bridge and from there discuss the landscape evolution of the Fremont River gorge in light of recent studies. Our final afternoon will feature two items: 1- a miniature core workshop examining core from the Covenant field and 2- field stops and discussion of the Central Utah Thrust Belt play by Doug Sprinkel for whom the 2007 UGA Guidebook is dedicated.

Social Events

Icebreaker

Date:**Sunday, October 7, 2007: 5:30 pm to 7:30 pm**

Location:**Exhibits Hall**

Admission:**By badge only**

The traditional Icebreaker will be held in the Exhibits Hall after the Opening Session on Sunday evening. Enjoy refreshments, mingle with friends and colleagues, and peruse the wares and services offered by exhibitors.

Oktoberfest Celebration

Date:**Monday, October 8, 2007: 5:45 p.m. – 8:45 p.m.**

Location:**In the crisp mountain air at Snowbird Center Plaza**

Fee:.....**\$40.00 per person**



Please join us for a fun and relaxing evening of music, food, dancing and visiting with friends, old and new, in the Oktoberfest tent at Snowbird during the 2007 RMS Section Meeting. Bring the entire family to this casual event. The evening will kick off with a social hour with local micro-brews, wine and cocktails. Dinner will follow with Snowbird's traditional German Oktoberfest Buffet featuring grilled bratwurst, Bavarian style sauerkraut, beef rouladen, potato pancakes, green salad and all the other fixings along with Apple

Strudel for dessert. The evening will continue with a rousing performance by the local Bavarian band Salzburger Echo. Their performance in authentic costume is not only musically enjoyable and upbeat, but visually exciting as well!

Price includes dinner, beverages and entertainment. The location for this event is a short walk from the Cliff Lodge convention center. Evenings in October high in the Wasatch Range can get a bit chilly, so dress accordingly.

Closing Reception

Date**Tuesday, October 9, 2007: 4:00 p.m. – 5:00 p.m.**

Location.....**Exhibits Hall**

Admission:.....**By badge only**

This year we're closing the meeting with a mini party. Join us for refreshments in the Exhibitors Hall and the Poster and Poster/Core Sessions starting at 4:00 Tuesday afternoon. Be sure to purchase those last minute items from vendors, check out the posters and **real** rocks (core), and say farewell to friends, old and new.

Guest Activities

Hospitality Suite

Sunday, Oct 7..... 2:30 p.m. – 4:30 p.m.

Monday, Oct 8 7:30 a.m. – 5 p.m.

Tuesday, Oct 9 8 a.m. – 5 p.m.

The Hospitality Suite is located on the 10th floor of the Cliff Lodge, next door to The Cliff Spa. Breakfast will be available in the morning and snack bags for guest registrants will be available each day.

Park City Luxury Home Tour

Date: **Monday, October 8, 2007, 8:30 a.m. – 5 p.m.**

Fee: **\$25.00 (includes transportation and homes tour guide fee)**

Join us for a tour of beautiful homes in the Park City area followed by lunch and sightseeing / shopping / gallery stroll on Park City's historic Main Street. Main Street is home to historic buildings that have been converted to art galleries, restaurants and unique shops. Take time to visit the Museum and read the historic plaques on the buildings during your walk. Lunch is on your own, a perfect opportunity to meet old friends and make new ones.



Historical downtown Park City, Utah

View From the Top: Snowbird Geology Lunch via the Tram

Date: **Tuesday, October 9, 2007, 11:30 a.m. – 1:30 p.m.**

Fee: **\$15.00 (includes lunch, tram ride, and geo talk)**

Please join us for a tram ride to the top of the Hidden Peak and an informative talk by local geologist Joe Gates. The tram will whisk you from the base at Snowbird Plaza to the top of Hidden Peak (11,000 feet) in a matter of minutes. The views from the tram are spectacular so bring your camera. At the top, you will enjoy a hearty mountain sack lunch while enjoying the talk and scenic splendor of the Wasatch Range. You may also choose to go on a couple of guided, short hikes at the top of Hidden Peak before catching the tram back. Sturdy footgear and outerwear appropriate for the weather are recommended, the hikes are over rocky ground. In the event of inclement weather, the presentation will be at the base, with the option for those willing to brave the elements to ride the tram to the top.



Hidden Peak Tram, Snowbird, Utah

This event is open to all convention attendees so meet your spouse for lunch!

Snowbird Information

Welcome to Snowbird ! It's Oktoberfest and the leaves are donning their fall colors. Snowbird covers 2500 acres and is located only 45 minutes from Salt Lake City International Airport. Open year round, Snowbird's 125 passenger aerial tramway moves guests from the 8,200 ft Snowbird Village to the top of 11,000 ft Hidden Peak. The trip provides breathtaking views of the Wasatch Mountains and Salt Lake City.



Horseback riding in Albion Basin,
Little Cottonwood Canyon, Utah

Snowbird is home to The Cliff Spa, a 28,000 sq ft facility with 24 individualized treatment areas, work-out facilities featuring cardiovascular Kaiser pneumatic equipment, free weights, a 15 meter roof top swimming pool and hot tub, sun deck, co-ed eucalyptus steam room, movement/yoga studio and solarium. Each locker room provides a dry sauna, lockers, showers, grooming amenities and towels. Spa treatments include 11 varieties of massage, 3 varieties of scrubs/body wraps, baths, facials, manicures, pedicures and salon services.

Snowbird's pedestrian village contains 7 restaurants, 5 lounges, a full service pharmacy, post office, grocery deli, internet café, liquor store, other concessions and several unique gift shops.

Bring your hiking boots! There are multiple trails for all levels including the Barrier Free Trail, a stunning one mile round-trip, wheelchair accessible, nature walk that begins at the Skier's bridge and ends up at a beautiful observation deck overlooking the Gad Valley.

The new Alpine Slide and ZipRider are a mountain favorite along with Horseback Riding and ATV tours in mineral basin. Please view the Events & Activities page on the Snowbird Web Site (www.snowbird.com) for more detailed activities.

Accommodations

The 2007 Salt Lake City meeting will be held in Cliff Lodge Conference Center located at the beautiful Snowbird Resort & Conference Center. Snowbird is the most accessible world-renowned four season mountain resort in North America: only 29 miles from Salt Lake City International Airport, with over 600 daily non-stop flights from most major U.S. cities. The Cliff Lodge is the flagship of the four lodging properties at the resort.

Individuals are responsible for making their own room reservations.

Reservations can be made directly with the resort by calling Special the Snowbird Central Reservation Office (800-882-4766) and mention the booking code "2AG8ZA" To reserve online go to lodging@snowbird.com and use the same booking code "2AG8ZA." The meeting rate is \$99/room. Room blocks will be released September 1, 2007, so please reserve before that date.



Cliff Lodge, Snowbird, Utah

Airport Shuttle Service

Airport shuttle service is provided by Canyon Transportation. Transportation must be booked and prepaid along with your lodging reservations. If shuttle service is not secured prior to arrival, the rate may vary depending on the transportation company. Current price is \$58.00 round trip. (Prices are subject to change.) Shuttles depart airport every 20-30 minutes between 8:00 am and 11:00 pm. After hour shuttle service can be arranged at an additional cost. Reservations are required for the best service available. Purchase of a trip ticket is recommended unless you are on a field trip which begins or ends in a place other than Snowbird.

Arrivals:

After claiming your luggage, proceed to the Ground Transportation desk, located adjacent to the baggage claim. If you have pre-paid your transportation, Canyon Transportation will have your name on file. It is recommended you keep your Snowbird confirmation with you as proof of prepayment. If you have not prepaid for your transportation, you can at this time. It is recommended that you purchase a round trip ticket. Tickets can be purchased with cash or major credit card.

Departures:

Pick up time for the return trip should be set up when round trip ticket is purchased. **Return reservations need to be confirmed at least 24 hours in advance.** If a return ticket is not purchased in advance, a reservation must be placed 24 hours prior to departure with the concierge or by calling Snowbird Central Reservations at 1-800-453-3000.



REGISTRATION INFORMATION

Early registration deadline: September 14, 2007.

By mail: Use the registration form in the back of the announcement.

Online: www.utahgeology.org/rms-aapg.htm

*Register for 'full meeting professional' before August 17, 2007 and receive a free CD of the new UGA guidebook on Central Utah!

REGISTRATION FORM

2007 AAPG-RMS Salt Lake City, Utah October 7 – 9, 2007

PLEASE USE OUR ONLINE REGISTRATION: www.utahgeology.org/rms-aapg.htm

Name _____ Name for Badge _____
 Affiliation _____ Email _____
 Mailing Address _____ Phone _____
 City _____ State _____ Zip _____
 AAPG ___ (No. _____) Exhibitor ___ Speaker ___ Poster Presenter ___

Would you help judge oral or poster presentations? YES ___ NO ___

REGISTRATION FEES	BY SEP. 14	AFTER SEP. 14	ENTER AMOUNT
<i>REGISTER ONLY ONE PROFESSIONAL OR STUDENT PER FORM</i>			
*Professional member of AAPG – Full Meeting	\$175	\$ 250	
*Professional Nonmember – Full Meeting	\$ 225	\$ 275	
Professional Member – One Day: Monday () Tuesday ()	\$ 120	\$ 175	
Professional Nonmember – One Day: Monday () Tuesday ()	\$ 120	\$ 175	
*Full meeting professional registration by Aug 17 - receive a free CD of the new UGA guidebook on Central Utah!			
Student Registration – Full Meeting	\$ 25	\$ 25	
Spouse or Guest Registration – (Name) _____	\$ 50	\$ 50	
Field Trip #1 – Structural Geology of Central Utah Thrust Belt	\$ 250	\$ 250	
Field Trip #2 – Uplift and Evolution of Wasatch Front	\$ 50	\$ 50	
Field Trip #3 – Geology and Reservoir Character of Central Utah	\$ 350	\$ 350	
Short Course #1 – Core Workshop: Leadville Limestone	\$ 60	\$ 60	
Short Course #2 – Shale Gas Exploration and Development	\$ 100	\$ 100	
Luncheons, Social Events and Guest Events	Each Person	Number of Tickets	
All Convention Luncheon – Speaker Charles B. Stanley	\$25	x	=
Oktoberfest Celebration – Snowbird Center Plaza	\$40	x	=
Snowbird Geology Lunch – via Tram	\$15	x	=
Guest Trip – Park City	\$25	x	=
TOTAL ENCLOSED			=

(Activities may be cancelled if required sign-up quotas are not reached)

Method of Payment () Check () Visa () MasterCard
 Name on Card (Print) _____
 Card Number _____ Expiration Date _____
 Signature _____ Zip Code of Billing Address _____

Please use our Online registration: www.utahgeology.org/rms-aapg.htm
 Otherwise, MAIL THIS FORM WITH PAYMENT TO:
**VISION EVENT PRODUCTION REGISTRATION (AAPG) 16955 VIA DEL CAMPO,
 SUITE 110, SAN DIEGO, CA 92127**

Questions? Call the Julie Sibthorp, Conference Planner at 801-643-9398

Special Diet or Accessibility Needs? Check box and include details with this form

Register Online: www.utahgeology.org/rms-aapg.htm