President's Column

Spring is in the Air

Companies are enjoying record earnings and geologists are again in demand. Are we moving too fast? The CEOs and Presidents are demanding we drill-drill-drill. Can we keep this up and spend wisely? There will be those that will stumble into some great production and some that will go bust. We have been down this road several times in the past. Those that have done their homework, looked at the rocks, made their maps, and worked with their engineers will have the odds stacked in their favor. All the “planets have to align” to ultimately be successful and find that next Bakken or Barnett look-alike. Last year folks wanted to have a Barnett gas project; this year it is a Bakken oil project. Ultimately, we all need to figure out what we do well, and do it. We can chase a lot of rabbits.

I recently talked to some geologists that have been successful drilling some of these plays. They will tell you what they think is the “secret” but when you look at the data, there is no silver bullet. Having the acreage in the right place at the right time helps.

It becomes apparent to me that the understanding of petroleum systems is important. For many years in the Permian Basin managers ignore the source/migration component of locating new fields. We have plenty of sources they would say. I am convinced those folks that start understanding the source rocks, the kitchen areas and how they are distributed will start to piece together these new opportunities. We have to start thinking out-of-the-box. What was traditionally thought to be uneconomic or “trash” rocks could be the next big field.

Using multiple working hypotheses and models can help us focus our attention on what makes a play or field productive. The upcoming PBS-SEPM Field Trip (led by Dr. Charlie Kerans, Dr. Xavier Janson, and Dr. Ted Playton) will provide some wonderful visual models of these slope-to-basin settings. See our website or registration form on page 5 in this newsletter for more information. If you cannot make the trip, you might consider purchasing the PBS-SEPM library that will soon be digital. Put this great wealth of knowledge at your fingertips.

David J. Entzminger

Luncheon Schedule

March 19: (Wednesday)
Fractured Reservoir Characterization

Dr. Jon Olson, AAPG Distinguished Lecture, Assoc. Professor, University of Texas at Austin

April 15: FutureGen's Aftermath, the Opportunities Ahead
Hoxie Smith, Director of PPDC

May 20: Karsting or Hydrothermal-Dolomites: What is the Reservoir Development in the Ellenburger

Dr. Robert (Bob) G. Loucks
Sr. Research Scientist, Bureau of Economic Geology, University of Texas at Austin

Updates can be found online at: www.pbs-sepm.org

Please contact Paula with your reservation at (432)683-1573 or wtgs@basinlink.com
Abstract

JON OLSON
University of Texas, Austin
Funded by the AAPG Foundation

Fractured Reservoir Characterization: From Diagenesis and Fracture Mechanics to Reservoir Permeability

This talk describes how core-based diagenetic observations and mechanical properties measurements can be used to constrain natural fracture network geometry and flow properties in clastic rocks. A methodology is described that starts with optical microscopy and SEM-based cathode luminescence, relating pore-space diagenesis to fracture-filling cements. Geomechanical modeling of fracture pattern development and opening rate is constrained by anisotropic strain boundary conditions, mechanical layer thickness, and core-based fracture mechanics property measurements. Permeability calculations are made on a wide variety of fracture pattern geometries, including the effects of fracture pattern connectivity, heterogeneous aperture distributions, and the degree of aperture occlusion by mineralization. It is demonstrated that fractured rock permeability assessment can be improved with quantifiable geologic fracture attributes.

Jon Olson

Education:
1991 Ph.D., Applied Earth Sciences, Stanford University
1984 B.S., Civil Engineering, B.S., Earth Sciences, University of Notre Dame

Experience:
2002-Present Associate Professor, Department of Petroleum and Geosystems Engineering, The University of Texas at Austin
1995-2002 Assistant Professor, Department of Petroleum and Geosystems Engineering, The University of Texas at Austin
1989-95 Research Engineer, Mobil Research and Development Corporation, Dallas, TX

Publications and Awards:
2005 Michel T. Halbouty ’30 Visiting Chair in Geology and Geophysics, Texas A&M University

Authored or co-authored over 40 journal and conference proceeding papers.

Five publications relevant to the lecture:


Professional Memberships
Society of Petroleum Engineers
American Geophysical Union

Professional Interests:
Involved in a wide range of petroleum and geoscience related research and education, including interdisciplinary geology and engineering efforts and K-12 outreach.

Research interests focus on two primary topics: 1) the characterization of naturally fractured reservoirs, incorporating geomechanics, diagenesis, structural geology and spatial scaling, and 2) the application of geomechanics to solving drilling, completion and production related problems. Co-Dir, Fracture Research and Application Consortium (FRAC) at UT-Austin.
Mark your Calendars

MARCH

March 6: (DATE CHANGE from regular day) - 2007-08 AAPG Distinguished Lecturer, Mike Blum - "Subsidence and Sea-Level Change along the Northern Gulf of Mexico, Response of Mississippi River to the Last Glacial Cycle, and the Flexural Ups and Downs of Mississippi Delta"

March 19: (Wednesday)
Dr. Jon Olson, AAPG Distinguished Lecture, Assoc. Professor, University of Texas at Austin
“Fractured Reservoir Characterization”

APRIL

April 4-6 PBS-SEPM Annual Field Trip- "Leonardian Slope Transition Facies of the Guadalupe Mountains"

April 8: Richard G. (Dick) Boyce - "Pinon Field Study with Implications for Texas Overthrust Natural Gas Exploration"

April 15: Hoxie Smith, Director of PPDC -- "FutureGen's Aftermath, the Opportunities Ahead"

April 20-24: National AAPG Convention- San Antonio, Texas

MAY

May 20: Dr. Robert (Bob) G. Loucks
Sr. Research Scientist, Bureau of Economic Geology, University of Texas at Austin; “Karsting or Hydrothermal-Dolomites: What is the Reservoir Development in the Ellenburger”

Let us tell your story of the Permian Basin History

We are featuring a new item in the newsletter which includes a story from our “well-seasoned” geoscientists. These may be their favorite plays, that once-in-a-lifetime project or well, or stories about their fellow workers (the pictures could be very interesting). If you would like to write a story or know of someone that would like to contribute, please contact David Entzminger, 686-6741.

Are you a PBS-SEPM member?
Applications on the website: www.pbs-sepm.org

PBS-SEPM—upcoming elections

In the next few weeks you should be receiving a ballot for the 2008-09 slate of officers. I would encourage you to get involved by voting. The society only gets stronger with your participation.

If you would be interested in a position on a committee or the board, please contact any of the current board members found on page 8 of this newsletter.

“When you do not know a thing, to allow that you do not know it--this is knowledge.
--Confucius

Success is not final, failure is not fatal; it is the courage to continue that counts”—Winston Churchill
2007-08 Corporate Sponsorships

If you are interested in a sponsorship opportunity, please call Paula Mitchell for more details at (432) 683-1573

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We would like to THANK our Corporate Sponsors for their support
Leonardian Slope Transition Facies of the Guadalupe Mountains

The Permian Basin Section of SEPM will be conducting their annual field trip this April. Here is your opportunity to register for what promises to be an exciting and fun trip. This year’s trip leaders will be Dr. Charlie Kerans, University of Texas/Bureau of Economic Geology, Austin, Dr. Xavier Janson, BEG, Austin, and Ted Playton, University of Texas.

Participants will leave Midland at 12:00 noon on Friday, April 4th, in vans and personal vehicles. Please note, there will be a limitation on personal vehicles in the field on the second day, so plan on sharing the ride and good conversation in one of the vans. En route to Carlsbad, NM, the trip leaders will discuss geology and facies relationships in Walnut and Dark Canyons. An early evening icebreaker will be followed by dinner and a field trip overview at the Stevens Motel in Carlsbad. On Saturday, April 5th, we will spend the day in Shumard Canyon examining shelf to basin transition facies in the Victorio Peak margin, Bone Spring slope and basinal Cutoff formation. That night we will be back in Carlsbad at the Stevens Motel. The trip will conclude on Sunday, April 6th, with an opportunity to examine slope transition geometries in Pine Canyon before a late afternoon return to Midland. The trip is designed to investigate lateral and vertical facies patterns in the slope transition, and help derive reservoir models for exploration and development in these complexly interrelated environments.

Field trip cost includes: roundtrip transportation, icebreaker and dinner, two nights lodging, two lunches, two breakfasts, refreshments in the field, and a field trip guidebook. **Due to logistical constraints in the field, the trip will be limited to 35 people, so sign up early!**

Cost (please mark appropriately)

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Guidebook(s) only: $30.00 each ( )

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Make checks payable to PBS-SEPM. Please send registration and payment information to: PBS-SEPM, P.O. Box 1595, Midland, Texas 79702
For additional information contact: PBS-SEPM office (432) 683-1595 or Mike Semich (432) 688-3047
Publications or Core Workshops (Figure 3, p. 7). By simply clicking on any of these categories, going to the next page(s), you will be able to view all the articles in that publication. You can also click on the desired publication and you will be taken to the publication list. Since this file has been OCR, one can use word searches to find a publication, article, subject or author. On the Toolbar, you will find a binocular “search”, click on it and you will get the search menu (Figure 1, p. 7). By simply typing in the information you would like to find, and clicking the search key, you will be shown to all the places that have that word or words (Figure 2, p. 7).

All publications have been Bookmarked and put into three categories: Publications, Special Publications or Core Workshops (Figure 3, p. 7). By simply clicking on any of these categories, they will expand to the publication list. “Click” on the desired publication and you will be taken directly to that page. All publications have a “Table of Contents” associated with them and by going to the next page(s), you will be able to view all the articles in that publication. You can also get to any of the “Tables of Contents” from the bookmarks by expanding any of the individual publications and “clicking” on the Table of Contents below the publication of choice.
Figure 1: Search menu

Figure 2: Search retrieval
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<td>Whiting Petroleum</td>
<td>(432) 686-6700</td>
<td><a href="mailto:entzminger@whiting.com">entzminger@whiting.com</a></td>
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<td>(432) 688-1782</td>
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<td>(432) 688-3047</td>
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<td>Independent</td>
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<td>PBS-SEPM</td>
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<td>Whiting Petroleum Inc.</td>
<td>(432) 686-6750</td>
<td><a href="mailto:Gilbert.Barragan@whiting.com">Gilbert.Barragan@whiting.com</a></td>
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<tr>
<td>Honorary Life</td>
<td>Emily Stoudt</td>
<td>UTPB</td>
<td>(432) 552-2244</td>
<td><a href="mailto:stoudt_e@utpb.edu">stoudt_e@utpb.edu</a></td>
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<tr>
<td>Nominating</td>
<td>David Farmer</td>
<td>Stanolind Oil &amp; Gas Corp.</td>
<td>(432) 688-4250</td>
<td><a href="mailto:dfarmer@stanolind.com">dfarmer@stanolind.com</a></td>
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<tr>
<td>One Day Field Trip</td>
<td>Gilbert Barragan</td>
<td>Whiting Petroleum Inc.</td>
<td>(432) 686-6754</td>
<td><a href="mailto:Gilbert.Barragan@whiting.com">Gilbert.Barragan@whiting.com</a></td>
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<tr>
<td>Publications</td>
<td>Richard Blackwell</td>
<td>Consultant</td>
<td>(432) 683-4971</td>
<td><a href="mailto:rchgeol@nts-online.net">rchgeol@nts-online.net</a></td>
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<tr>
<td>Publicity</td>
<td>Rick Doehne</td>
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<td>(432) 684-4404</td>
<td><a href="mailto:rdoehne@utsystem.edu">rdoehne@utsystem.edu</a></td>
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<tr>
<td>Scholarship</td>
<td>David Farmer</td>
<td>Stanolind Oil &amp; Gas Corp.</td>
<td>(432) 688-4250</td>
<td><a href="mailto:dfarmer@stanolind.com">dfarmer@stanolind.com</a></td>
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<tr>
<td>Stratigraphic</td>
<td>Bob Trentham</td>
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<td>(432) 552-2432</td>
<td><a href="mailto:trentham_r@utpb.edu">trentham_r@utpb.edu</a></td>
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<tr>
<td>Webmaster</td>
<td>Wendy Savage</td>
<td>Whiting Petroleum Inc.</td>
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This includes all publications, even the special publications and coveted core workshops. Can you imagine the hidden treasures you have missed? Here is your chance to uncover them.

Library (47 publications) $100.00 plus 8.25% tax and $5.00 shipping and handling
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PBS-SEPM is proud to present the production of its 1st annual calendar. This first year will be an 11x17 calendar which will include an assortment of photographs displaying fossils and minerals. Available for immediate pick up.

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March - Special Featured Book - $5

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