



November 2003

Los Angeles Basin Geological Society Newsletter

November Meeting:

Linda Bonnell - AAPG Distinguished Lecturer

Will speak on Reservoir Quality Prediction in Deep Water Sandstones

Speaker Synopsis / Abstract

Reservoir Quality Prediction in Deep Water to Tight Gas Sandstones Using a Process/Stochastic Modeling Approach*

Linda Bonnell received her PhD in Geology from the University of Illinois in 1990. After doing postdoctoral research at Washington University and Rice University, she took a position at Rogaland Research in Stavanger, Norway. From 1996 until 2000, she worked where she worked as a senior staff geologist for Geologica in Stavanger, Norway. In 2000, she co-founded Geocosm in Austin, Texas, where she specializes in reservoir quality prediction and characterization.

Sandstones properties such as porosity and permeability are controlled by textural and compositional characteristics. The two diagenetic processes that have the greatest effect on these characteristics in most reservoir sandstones are quartz cementation and compaction. Advances in diagenesis over the past ten years have made it possible for the first time to accurately predict these sandstone properties away from well or outcrop control data. These advances are based on a breakthrough in the classic diagenetic problem of quartz cementation coupled with important new models for sandstone compaction and permeability. When integrated with depositional and burial history models, these diagenetic models can be used to predict porosity and permeability through both time and space.

The diagenetic models incorporate process models that are calibrated to analog sandstone samples. Diagenetic alteration of sandstone properties is modeled from the time of deposition to the present day as a function of the sandstone's temperature and effective stress histories. By

coupling diagenetic models with stochastic techniques, probability distributions can be derived for reservoir quality that account for measured variabilities in texture and composition within the sandstone population. Sensitivity analysis is used to identify the input parameter uncertainties and variabilities that have the greatest control on the uncertainty in the reservoir quality prediction.

This approach to reservoir quality prediction has been successfully applied in a variety of geologic settings from around the world. In this presentation, I will give a brief summary of the conceptual foundation behind this approach to reservoir quality prediction and demonstrate its applicability using case study examples from a tight gas sandstone and a deepwater prospect.

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Time & Place

Time:

November 20, 2003

Typical Meeting Agenda

Lunch Served: 11:30 AM to 12:00PM

Announcements: 11:50 AM to 12:15 PM

Guest Speaker: 12:15 PM to 12:45 PM

Place:

The Grand at Willow Street Conference Center located at 4101 East Willow Street, Long Beach, CA. (562-426-0555). Take Lakewood Boulevard south from the San Diego Freeway (405), turn west onto Willow Street and turn right onto Grand Avenue at the sign for the Center. Park free in the garage structure.

Cost

Cost:

Lunch and Speaker: **\$17.00 with reservations**
 \$20.00 without reservations
Student: **\$ 5.00 (Lunch and Speaker)**

Reservations:

Make your reservations using our web site at www.labgs.org, emailing iaburto@breitburn.com or phoning Ivan Aburto at (213) 225-5900 ext. 234. **Reservations must be made prior to Tuesday** before the meeting.

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LABGS Future Meetings

Lunch meetings are held at *The Grand at Willow Street Conference Center*. Lunch starts at 11:30 AM

2003 Fall / Winter Speaker Schedule

November 20, 2003 Linda Bonnell AAPG
Distinguished Lecture (3rd Thursday of Month)
Reservoir Quality Prediction in Deep Water to Tight Gas Sandstones Using a Process / Stochastic Modeling Approach

December 25, 2003
No Meeting – Merry Christmas

January 22, 2004 – Ed Marks
Bio-Steering into the Monterey Formation

February 26, 2004 – TBD
TBA

Announcements / Information

See Photos from the 2003 LABGS and Dibblee Sponsored Field Trips on our website

The field trips run during the 2003 PSAAPG / WR SPE meeting at Long Beach are now posted on the LABGS web site at www.labgs.org (see the link on the home page). If you attended you may see yourself on one of the pictures. If you didn't, it's a great chance to see what you missed.



LABGS Board Member Vacancy

Status: 100% Full.

As mentioned at the October meeting, we have had several inquiries about the positions and are pleased to announce that **Steve Zigan**, of Environmental Resolutions, Inc. has taken the treasurers position while **Javed Azam**, of LKR GROUP, Inc, has volunteered to be our Program Chair for the remainder of the year. The requirement to be a board member is that you have integrity and are committed to serving the members of the LABGS and are a current member of the PSAAPG (LABGS affiliation).

Field Trip Being Planned to Examine the Catalina Schist and the Palos Verdes Peninsula

Dick Brown has organized a planning committee for a trip to the Palos Verdes peninsula. The trip is tentatively planned for the spring of 2004. If you are interested in helping out contact Dick at (562) 598-0595.

Call For Papers

The PSAAPG/PSEPM/PSSEG are planning for their annual meeting in 2004, which will be held in Bakersfield, May 8 – 12. The theme will be “More Energy from Proven Basins: Looking for More in 2004”. Consider documenting and sharing some of your geologic work in the form a poster or oral presentation. The deadline for submitting abstracts is December 31, 2003. For more information and a copy of the abstract submittal form, go to the www.PSAAPG.org web site and visit the “convention” tab.

LABGS Web Site

Use it to Keep Track of Earthquakes

If you didn't know our web site has link set up to access other sites you may want to visit on a semi or occasional basis such as recent earthquake data. Just click on Geology 101 and recent earthquakes to get up to the minute earthquake information. Our web site may be

accessed at www.labgs.org. It is also a great place to keep informed over what is going on in the LABGS. We recently placed some additional information about the LABGS it more useful to you our members and perspective members. If you have any suggestions for improvement, please contact any of our board members.

Contact Us – The LABGS board

President: Dalton Lockman (323) 298-2242
dlockman@plainsxp.com

Program Chair: Javed Azam (310) 320-4982
javada@lkrgroup.com

Secretary: Ivan Aburto (213) 225-5900, ext. 234
iaburto@breitburn.com

Treasurer: Steve Zigan, (949) 457-8952
szigan@eri-us.com

LABGS Membership / Mailing List

Become a member of the LABGS and enjoy the benefits of membership. Our goal is to provide a value added service to the geologic community of the LA area at a reasonable cost. If you join the LABGS you also become a member of the PSAAPG and vice versa. The purpose of this is to reduce waste and duplicated effort. Check out the membership form for a list of the dual membership benefits. Membership is our primary source of income so I urge you all to join or renew. **To join or renew**, fill out the attached membership form and mail it in to PSAAPG or better yet bring it to the next meeting. This will ensure you are on our lists and the only way you can request a hard copy through the mail. The use of E-mail is our preferred method of distribution so please make sure we have your address.

Your Name Here!

*Advertising in this newsletter is now available!
Advertising rates for a business card size add
are \$60.00 for six issues. These fees help offset
our publishing costs. If interested, please
contact Dalton Lockman*



Los Angeles Basin Geological Society Membership Form

Join the LABGS and become a member of the Pacific Section AAPG all for one low price of \$12.00 per year - 2 West Coast Geoscience Organizations for the price of one



Membership Benefits

- LABGS Membership
- Monthly Luncheon Meetings with Strong Technical Programs
- Pacific Section AAPG Membership
- Pacific Section AAPG Bi-Monthly Newsletter
- Discounts for PSAAPG Bookstore Publications
- Bi-Annual West Coast Geoscience Directory - *next edition 6/03*
- Networking and Social Opportunities with Fellow Geoscientists

Current Annual LABGS/PSAAPG Dues

1 Year Option = \$12.00 \$ _____
 3 Year Option = \$36.00 \$ _____

Extended E-Mail Announcement List Fees

To receive meeting notices from SJGS and CGS
 1 Year Option = \$12.00 \$ _____
 3 Year Option = \$36.00 \$ _____

PSAAPG Foundation Contributions

B. Hacker Publication Fund \$ _____
 Martin Van Couvering Fund \$ _____
 Dibble Map Foundation \$ _____
 California Well Sample Repository \$ _____
 John Kilkenny Scholarship Fund \$ _____
 PSAAPG Foundation Trust Fund \$ _____

TOTAL PAYMENT

Total Amount Enclosed \$ _____

Essential Member Information

Last Name _____
 First Name _____
 Middle Initial _____
 E-Mail Address _____
 Mail Address _____
 Res or Bus ? _____

Additional Directory Information

Employer _____
 Position / Title _____
 Bus Phone # _____
 Res Phone # _____
 Fax Phone # _____
 Spouse's Name _____
 Education *Highest Degree* *Year*
 School _____

Signature _____

Annual membership is handled through PSAAPG and runs from July 1, through June 30. If you are already a current member of PSAAPG and you selected LABGS affiliation you are already a member of the LABGS.

**Please Make Checks out to PSAAPG and mail along with member form to:
 PSAAPG P.O. Box 1072, Bakersfield, CA 93302**