



PBS-SEPM

NEWSLETTER



Society for Sedimentary

October 2009

Highlights in this Newsletter

- Nov 3rd from 8:30—11:30 "Introduction to Seismic Fundamentals". **A Continuing Education opportunity—**
- Where is that Core! **Help with the Permian Basin Core location project.**

2008-09 PBS-SEPM Executive Board & Spon-

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Oct. 20: PBS-SEPM Luncheon Talk (G. B. Asquith, Texas Tech Univ.)

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Nov. 3: PBS-SEPM Continuing Education Opportunity: Jay May — Introduction to Seismic Fundamentals

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Nov 17: PBS-SEPM Luncheon presentation (Robert Trentham, CEED, UTPB)

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Core Location Project— Where is that core— what I am going to do with this core?

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President's Column:

Fred Behnken

The unremitting reality in geology is CHANGE.

CHANGE is a constant, in our selves, our families, the market place, and observed earth processes. You and I, as geoscientists, realize that the earth and its climate are components within a dynamic system, with interacting variables being summed, resulting in change, disrupting present and perceived equilibrium.

As scientists we know that the earth's climate is actually warming. I shake my head when I hear and read that since the climate is getting warmer, human activity must be the sole contributing factor. We caused it, so we can slow or stop global warming. Imagine such hubris!

Scientifically replicable research demonstrates that significant global climate shifts are common throughout earth history,

but especially within the last 2,300 years. From approximately 250 BCE to 600 ACE, the Roman Warm Period, global temperatures were 2-3 degrees warmer than the warmest temperatures today. The Roman Empire dramatically expanded during this warm period. Studies indicate that global temperatures dropped from 600 to 900 ACE, resulting in shorter, cooler growing seasons, poorly adapted crops, meager harvests, and longer winters. Written records corroborate the climate changes and the resulting collapse of major cities during this time known as the Dark Ages.

From about 900 to 1200 ACE, crop harvests reached epoch levels due to a warming climate with longer growing seasons. This period is the Medieval Warm Period, coinciding

with expansive European building—grand cathedrals and public works. Greenland was colonized by Vikings, yet later in the 1300's these same colonies collapsed to ruin due solely to global cooling [Little Ice Age]. The Little Ice Age impacted human history from 1300 to approximately 1850. European colonists and the Puritans landed in New England during the coolest part of the Little Ice Age. Today we live in an overall warming period that started in the 1850's. Observed temperatures are warming from the Little Ice Age, but are still below the highs of the Roman and Medieval warm periods.

Global warming is fact, but as part of a cyclic alteration of climate. We are not the prime causative agents of global warming; however, we can be better stewards. See "www.CO2science.org"

Mark Your Calendars!

October

- **9-11: WTGS Fall Field Trip** – Pennsylvanian Section of North - Central Texas
- **20: PBS-SEPM Luncheon Mtg:** George B. Asquith, Ph.D. Title "Well Logs and

Log Interpretation" Texas Tech University.

- **28 - 30: WTGS Fall Symposium** - Midland Center.

November

- **3: PBS-SEPM Continuing Ed Opportunity**-8:30-11:30 am, Introduction to Seismic

Fundamentals. Midland Cntr

- **10: WTGS Luncheon:** Speaker TBA
- **17: PBS-SEPM Luncheon Mtg**—Robert Trentham, Speaking on the Topic of Residual Oil Zones [ROZ] in the Permian Basin, CEED,

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Do you have an idea for an interesting luncheon talk? Have a core workshop you'd like to present? Have some suggestions on how PBS-SEPM can better serve the geologic community? Just click on the e-mail above and drop us a note—your PBS-SEPM Executive Board would love to hear from you!

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PBS-SEPM Luncheon Talk: October 20**TITLE:** Well Logs and Log Interpretations**SPEAKERS:** Dr. George B. Asquith, Texas Tech University, Lubbock**ABSTRACT:** The talk is designed to illustrate the importance of knowing the rock and pore type of a zone when doing log analysis. Two examples of Pennsylvanian ooid grainstones reservoirs one from the Oklahoma Panhandle and the other from southeast New Mexico used in the log analysis.

The Pennsylvanian Virgilian ooid grainstone from the Oklahoma Panhandle using conventional log analysis appears to be a straight forward example of a thick (33') ooid reservoir with a thin oil column (10'; Sw = 16% - 26%) above water (Sw = 100%). This interpretation is based on the assumption that the entire 33 feet is an ooid grainstone with intergranular porosity. A more detailed log analysis reveals that the lower 23 feet does have intergranular porosity, however the upper 10 feet is oomoldic and WET. The sample description from the mud log is as follows: Ooid grainstone with abundant oomoldic porosity decreasing oomoldic porosity with depth. No shows of oil or gas NO fluorescence or cut. The water saturations calculated in the upper 10 feet are wrong because the assumption of the pore type was incorrect.

The second example is a Pennsylvanian Canyon ooid grainstone from southeast New Mexico. In this example there are two wells one which had a water-free completion [918mcfgpd + 3bopd NO WATER] and the other well IP'D WATER No shows of oil or gas. Like our first example the pore type in the well that IP'D WATER was assumed to be intergranular when the Canyon is oomoldic. During the presentation all the method used in the log analysis of these two examples will be outlined in detail.

BIO: George B. Asquith, Ph. D

George B. Asquith is the former Pevehouse Chair of Petroleum Geology and Emeritus Professor of Geosciences and Center for Applied Petrophysical and Reservoir Studies Director at Texas Tech University. He received his B.S. in geology from Texas Tech and his M.S. and Ph.D. from the University of Wisconsin-Madison. His 25 years of petroleum industry experience include work as research geologist, Atlantic-Richfield Co.; staff geologist, ALPAR Resources; chief geologist, Search Drilling Co.; district geologist, Pioneer Production Corp.; and project leader, Mesa Limited Partnership. His industry projects have included the determination of the reservoir architecture and remaining gas reserves in the Hugoton and West Panhandle fields and exploration and reservoir characterization of selected reservoirs from the Gulf Coast (onshore and offshore), Permian, Alberta, San Juan, Williston, Arkoma, Cooper (Australia), Neiva (Colombia), Maracaibo (Venezuela), and Anadarko basins. He has authored 123 publications including 5 books in the fields of petrophysics, computer geology, and carbonate and clastic sedimentation and petrology. His book, *Basic Well Log Analysis for Geologists* won the AAPG best book award in 1984 and is the top selling book in the history of AAPG. During 1991-1992, *Log Evaluation of Shaly Sandstones: A Practical Guide* was one of the top 3 selling AAPG publications. His numerous awards include the Distinguished Service and Best Paper Awards from the Society of Professional Well Log Analysts (1994); Levenson Award for best paper at the AAPG Southwest Section meeting (1996); AAPG Distinguished Educator Award (1997); Educator of the Year Award presented by the AAPG Southwest Section (1999); West Texas Geological Society Distinguished Service Award (1999); and the Monroe Cheney Science Award from the Southwest Section of AAPG and Dallas Geological Society (2001).

***“Life is
ambiguous;
there are many
right answers—
all depending
on what you
are looking for.
But if you
think there is
only one
answer, you
will stop when
you find one.”
Roger von Oech
A Whack on
the Side of the
Head
(March 2002)***

PBS-SEPM Continuing Education Opportunity—



Registration Form

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2009 PBS-SEPM Continuing Education
Introduction to Seismic Fundamentals

Midland Center, Midland TX
 November 3, 2009 : 8:30—11:30 am

“Introduction to Seismic Fundamentals” facilitated by Jay May will provide a basis for understanding and using seismic data for the non geophysicist. The course begins with an introduction into seismic data acquisition, processing and interpretation and progresses into a hands—on—example demonstrating consequences of seismic resolution using the relationship of frequency and velocity measurement, tying of seismic data with sonic-log derived synthetics and implications of polarity and signal to noise to prospect development.

The goal is to provide the participant with simple tools to quickly get a handle on seismic data and recognize its potential and limitations. Attendees need to bring a calculator and a pencil with an eraser. **Enrollment is limited to 30-35 attendees so register now.**

Cost (check one): Professional nonmbr of PBS **\$50** Professional mbr of PBS **\$40** Student **\$20**

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PBS-SEPM Luncheon Talk: November 17th

TITLE: Topic: Evaluation of the Economic Potential of Residual Oil Zones {ROZ} Beneath Mature Fields, West Texas.

SPEAKERS: Bob Trentham, Ph.D., Director, Center for Energy and Economic Diversification, UTPB

ABSTRACT: Not received at “press” time. Look for it in the November Newsletter



***“A discovery
is said to be
an accident
meeting a
prepared
mind.”***

*Albert Szent-
Gyorgyi
1937 Nobel
Prize for
Medicine*

BIO: Bob Trentham, Ph.D.

Dr. Bob Trentham is the Director of the Center for Energy and Economic Diversification, and a Senior Lecturer in the Geology at the University of Texas of the Permian Basin, teaching classes in Petroleum Geology, Sedimentation Stratigraphy, Geology of the Permian Basin, and Hydrology. He received his BS and MA at City College of New York and his Doctor of Geological Sciences at UT El Paso, all in geology. He has been a production and exploration geologist, working the Permian Basin for over 20 years for Gulf, Chevron, and as a consultant. Carbonate and clastic reservoirs are his interests and he is responsible for both new field and new pool discoveries. He teaches geology modules for the Applied Petroleum Technology Academy’s “CO₂ Flooding School” and Petroleum Technology Transfer Council’s “How to Start a Small Waterflood” and numerous other Industry Courses, including training for foreign companies interested in the Permian Basin. He is on the board of APTA, the Annual CO₂ Conference, the Midland Water Resources Committee and the Midland Energy Library. He was also on the Permian Basin FutureGen Committee.

We Need Your Assistance !

Now we need your help. What do you do when you need to find a core? Do you know of any repositories that aren't in the list below ? Do you know what your employer or other operators have done or plan to do with their core? Please contribute any such information to this effort by contacting the committee: David M. Orchard, Chair, david.m.orchard@conocophillips.com, 832-486-2314; Dr. Emily Stoudt, stoudt_e@utpb.edu, 432-552-2244; and Andrew Parker, drew.parker@whiting.com, 432-686-6784 office.

The following lists of portals and core repository facilities represent our first compilation

PORTALS TO INFORMATION

PTTC has a portal to the holdings of several public repositories. You can sort by repository and display their holdings in map view. <http://inside.mines.edu/Research/PTTC/Core%20Locator/>

AGI has a list of repositories of various geologic data, including cores. It provides contact information and accesses data through a map interface. <http://www.agiweb.org/ngdrs/overview/datadirectory.html>

Tony Troutman's website <http://www.carbonates.us/cores.htm> has a list of storage sites, including several state repositories.

PUBLIC AND COMMERCIAL STORAGE FACILITIES

The **USGS** has a storage facility in Denver that has Permian Basin material. Their collection can be searched online at <http://geology.cr.usgs.gov/crc/>. 303-202-4851.

The **Bureau of Economic Geology (BEG)** holds Permian Basin cores in their Midland, Houston, and Austin facilities. See <http://www.beg.utexas.edu/facilities.php> for information and contacts. Their catalog is called **IGOR** which has a link on above address. IGOR will be replaced soon by a more advanced database.

New Mexico Bureau of Geology and Mineral Resources has Permian Basin cores in Socorro. Request a list of the collection at <http://geoinfo.nmt.edu/libraries/subsurface/home.html>

CEED (Center for Energy and Economic Diversification) at **UT Permian Basin** (<http://ceed.utpb.edu/>) has Texas and New Mexico cores. 432-552-2020.

The **International Sample Library at Midland** has cores and core chips. Their collection is not in a database and must be searched through index cards. 707 Connell St, Midland, TX , 79701. 432-682-2682.

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“ We usually find oil in new places with new ideas. When we go to a new area, we can find oil with an old idea. Sometimes, also, we find oil in an old place with a new idea, but we seldom find much oil in an old place with an old idea.”

Parke Dickey, 1958, in
Dickey, 2002, p. 36.

PBS-SEPM is the Permian Basin Section of SEPM—the Society for Sedimentary Geology. However, you do not need to be a SEPM member or a geologist to join PBS-SEPM.

Our non-profit society relies upon the efforts of dedicated volunteers to serve the geological community—primarily through educational events. These events include monthly luncheon talks, core workshops, annual field trips, and special geological publications. Thanks to our Education Committee we are involved in MISD 5th grade geology presentations to interest elementary students in pursuing a career in geosciences. We would like to increase our exposure on college campuses—reaching out to future earth scientists through scholarships, discounted memberships, and offering full-time geology students the ability to participate in professional-grade field trips at little to no cost.

If you would like to join PBS-SEPM, you may visit our website (www.pbs-sepm.org) to learn more about us, discover how to get involved and

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