PBS-SEPM NEWSLETTER

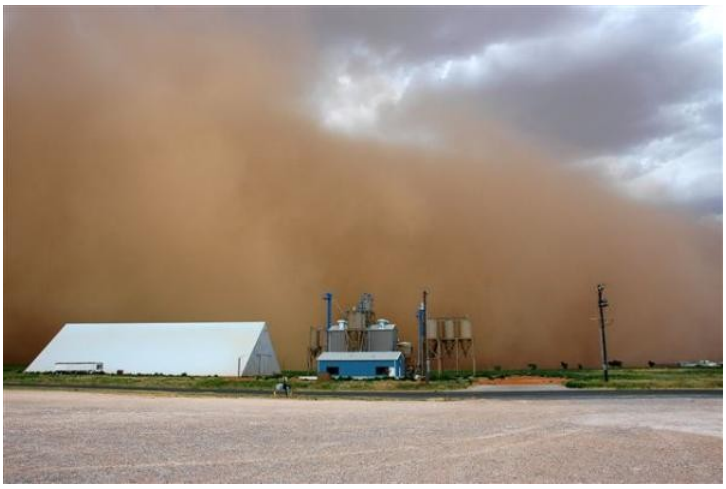
March , 2010

President's Column:

Fred H. Behnken

Spring is coming. Spring is coming.....but when ? This morning on the drive to work, the temperature is in the mid-30's. I am keeping my eyes and ears peeled for news and signs of impending Spring to sweep across West Texas in the Northern Hemisphere. Those of us who live in the Northern Hemisphere think of March as Spring. [Yes, Texas is part of the "north" , but only after being pushed north of the equator by plate tectonics.] March 20, 2010 is the first day of Spring or the March Equinox, but it is the end of Summer-start of Fall in the Southern Hemisphere. But I meander here.

Spring is coming because: 1) the seed and garden catalogues have been scoured and are dog-eared with the items we ordered; 2) the daffodils and ornamental pear trees have been blooming this last week; 3) the official astronomical season of Spring is less than ten days, not weeks, away; 4) the WTGS Youth Education Committee has geared up and is recruiting volunteers to make presentations to the 5th grade science classes in Midland Independent School District; 6) MISD Spring break is next week, March 15-19; and 7) the 2010 PBS-SEPM Spring Field Trip is barely 45 days away!



The picture to the right is from the Weather Channel. It is the leading edge of a dust storm sweeping over cotton fields, ready to engulf and swallow the local cotton gin in Brownfield, TX in 2008.

Having lived in Lubbock, Texas from 1972 until 1977 while an Assistant Professor in the Geosciences Department, I have experienced several Spring dust storms that are nearly always characterized by this dramatic, seemingly impenetrable wildly surging, billowing, energetic wall of reddish brown to reddish yellow, fine silt and dust. I've also seen our share of dust storms, including autumnal "Blue Norther-generated" dust storms over the 24 years that we've lived in here in Midland, Texas [Three times—typical oil company geologist saga].

The Sahara region of Africa is renowned for dangerous, spectacular dust storms called Haboobs, which loosely translated from Arabic means "phenomena." The special effects of the dust storm in movie, *The Mummy*, are taken from real life and "jazzed" up just a 'tad. If you have never experienced a dust storm in West Texas or Panhandle of Texas, you should add it to your "bucket list." -***FHB***

PBS-SEPM Executive Board (2009-2010)

President:	Fred H. Behnken	fred_behnken@kindermorgan.com	688-2344
President Elect:	Teri McGuigan	tmcguigan1@suddenlink.net	770-7099
First Vice President	David M. Thomas	dthomas@treyresources.net	570-6898
Second Vice President:	Robert Nail	rnail@stmaryland.com	688-1708
Treasurer:	James L. Hawkins	jhawkins@midland.oilfield.slb.com	571-4626
Secretary:	Cindy E. Bowden	cindy_bowden@kindermorgan.com	688-3785
Executive Director:	Paula Mitchell	wtgs@wtgs.org	683-1573

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!

"Science is facts; just as houses are made of stone, so is science made of facts; but a pile of stones is not a house, and a collection of facts is not necessarily science."
-Jules Henri Poincaré (1854-1912)
French mathematician

Corporate Sponsorships (2009-2010)

ST. MARY LAND & EXPLORATION COMPANY

SUTTLES LOGGING, INC.
HYDROCARBON WELL LOGGING
GEOLOGICAL CONSULTING

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

Wagner & Brown, Ltd.

OMNI Laboratories, Inc.

WHITING

Schlumberger

Your Corporate Logo could be here.
Your logo will be on the website, in every newsletter, on the Power Point shown prior to every luncheon and in the calendar credits for one year June to May.

PBS-SEPM is grateful for the generosity of these corporate sponsors .

Please remember to thank them for their support!

PBS-SEPM Calendars now on Sale $10 each

PBS-SEPM Luncheon Talk: Tuesday, March 16, 2010

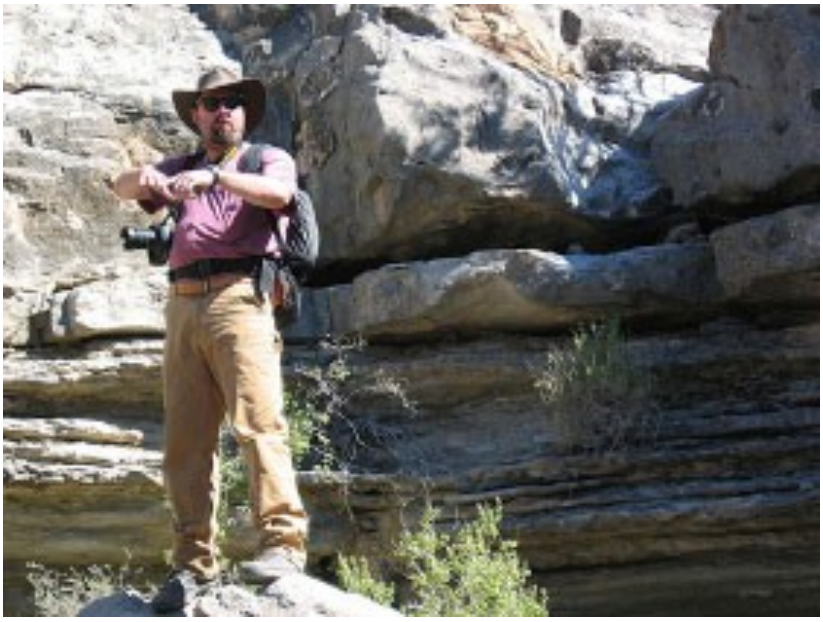
TITLE: **Sequence Stratigraphy and Depositional Systems of the Eastern Shelf, Lower Permian, Central Texas: Examining the Tropical Record of Late Paleozoic Climate Change**

SPEAKER: Pete Holterhoff, Ph.D, Department of Geosciences, TTU, Lubbock, TX

ABSTRACT: See the following pages 4 and 5 for a description of the PBS-SEPM Spring field trip and abstract.

BIO: Pete Holterhoff, Ph. D

Dr. Pete Holterhoff received his B.S. in Geology from Ohio University, M.S. in Geology from the University of Nebraska and Ph.D. in Geology, University of Cincinnati. He accepted a postdoctoral fellowship with the Research Training Group in the Analysis of Biological Diversification at the University of Arizona. He then joined Exxon Exploration Company, working as a petroleum geologist and researching petroleum reservoirs with the Upstream Research Company. Pete joined the Texas Tech Geosciences faculty in 2006 as an Assistant Professor. His current research interests involve integrating elements of paleontology, stratigraphy and sedimentology to better understand the sedimentary rock record and to describe and model the distribution and character of hydrocarbon and aquifer reservoirs.



"In reply, I can only plead that a discovery which seems to contradict the general tenor of previous investigations is naturally received with much hesitation."
Charles Lyell,

British Lawyer, Geologist
(1797 - 1875)

"In questions of science, the authority of a thousand is not worth the humble reasoning of a single individual."

– Galileo Galilei

PBS-SEPM Continuing Education Opportunity—

PBS-SEPM UPCOMING EVENT

2010 Spring Fieldtrip – Central Texas
Led by Dr. Peter Holterhoff, Texas Tech University
April 30 thru May 2

Sequence Stratigraphy and Depositional Systems of the Eastern Shelf Lower Permian, Central Texas:

Examining the Tropical Record of Late Paleozoic

The goal of this field trip is to examine the Wolfcampian and Leonardian units exposed on the Eastern Shelf of the Midland Basin in order to compare and contrast the evolving depositional systems and sequence stratigraphic motifs through this critical interval of Earth history. Specifically, the Early Permian marks the transition from the acme of the Late Paleozoic global icehouse in the earliest Permian to an essentially ice – free middle Early Permian world. In the tropics, this global climate change is manifest by significant changes in lithofacies types and sequence stratigraphic architecture, which is clearly seen on the Eastern Shelf outcrop belt.

Focus intervals/stops on this trip include: 1) the lower Wolfcampian upper Cisco Group between Coleman and Breckenridge to examine the high – amplitude/ high – frequency sequences characteristic of the Lower Permian icehouse. These sequences are characterized by abrupt vertical facies transitions, thin but well – developed open marine carbonates during maximum transgression, and well – developed lowstand incised valley fills, 2) the upper Wolfcampian lower Albany Group (Admiral Formation) between Coleman and Albany to examine the transition interval between the Cisco icehouse type sequences and the overlying "greenhouse" sequences architectures of the middle and upper Albany Group, 3) the upper Wolfcampian – lower Leonardian Belle Plains, Clyde, and Lueders formations of the Albany Group between Coleman and Albany to examine the thick carbonate – dominated sequences characteristic of ice – free global climates. These sequences are characterized by stepped vertical facies transitions, thick packages of marginal to open marine carbonate – clastic facies couplets/rhythmites, and poorly developed lowstand lithofacies packages, 4) if time permits, examination of the late Leonardian upper Clear Fork and San Angelo interval around Bronte, representing the late highstand and lowstand transition from the Early to Middle Permian super sequence.

Participants will leave Midland at 3:00 PM on Friday April 30, where we will take vans or personal vehicles to Abilene, where the trip will begin with a dinner and opening presentation Friday, April 30. Stops for Saturday, May 1 will be centered around Cisco, Breckenridge, and Albany, with the day ending back in Abilene. The stops for Sunday, May 2 will be centered around Coleman with a return to Midland Sunday afternoon.

CHECK OUR WEBSITE AT www.pbs-sepm.org FOR UPDATES ON THE 2010 SPRING FIELD TRIP

Contact Information: Paula Mitchell, Executive Director
PBS-SEPM, P. O. Box 1595, Midland, Texas 79702
Phone: (432) 683-1573 Fax (432) 686-7827 e-mail: wtgs@wtgs.org

PBS-SEPM Continuing Education Opportunity—

PBS-SEPM UPCOMING EVENT

2010 Spring Fieldtrip – Central Texas
Led by Dr. Peter Holterhoff, Texas Tech University
April 30 thru May 2

HAD ENOUGH OF WINTER....?

Step back in TIME to the Permian Basin when we were in the Tropics

- That is the tropics of the Late Paleozoic, Central Texas -

Register NOW for the 2010 PBS-SEPM Field Trip

"…when times get tough there is a lower margin for error, therefore, we should be putting more geoscience into understanding plays, not less, i.e., if you're going to develop a play in tough economic times, it's best to know as much as possible about it in order to minimize the amount of money spent unproductively…. " Attributed to Kirt Campion by John Lorenz, *AAPG Explorer*, December, 2009, p. 3.

2010 PBS-SEPM FIELD TRIP

REGISTRATION FORM

April 30 thru May 2, 2010

Sequence Stratigraphy and Depositional Systems of the Eastern Shelf, Lower Permian, Central Texas:

Examining the Tropical Record of Late Paleozoic Climate Change

The Permian Basin Section of SEPM is conducting their annual field trip. The event will be lead by Dr. Peter Holterhoff, Texas Tech University.

The participants will leave Midland at 3:00pm on Friday, April 30th where we will take vans or personal vehicles to Abilene, TX. Please note, there will be a limitation on the number of vehicles. We will have an icebreaker starting at 5:30pm CST at the Residence Inn on I-20, Abilene, TX, with dinner at 6:30pm and an overview of the field trip at 7:00pm. On Saturday, May 1st, the stops will be centered around Cisco, Breckenridge and Albany. We will return to Abilene for Saturday night. The stops Sunday will be centered around Coleman with the return to Midland late Sunday afternoon. The goal of this field trip is to examine the Wolfcampian and Leonardian units exposed on the Eastern Shelf of the Midland Basin in order to compare and contrast the evolving depositional systems and sequence stratigraphic motifs through this critical interval of Earth history.

The field trip costs include: round trip transportation in the van(s), Friday night's icebreaker & dinner, two nights lodging, two breakfasts, two lunches, beverages in the field and field trip guidebook. The trip will begin and end in Midland, Texas. All rooms have one bed. A "double" would entail one person sleeping on a queen foldaway couch. Mark you calendars for a fantastic field trip to visit what may provide insights to the next big play. If you are unable to attend but would like a copy of the field guide, PBS-SEPM will make a guidebook available for sale on CD.

Cost (Please check your choice)

PBS-SEPM Member:	**$450.00 single ( )**	**Non-Member:**	**$475.00 single ( )**
	$375.00 double ( )	**Non-Member:**	**$400.00 double ( )**
Guidebook CD (only):	**$30.00 ( )**		

Name: _____

Company/Affiliation: _____

Mailing Address: _____

Business Telephone: _____ Fax Telephone: _____

Email address: _____ Roommate: _____

Rooms are nonsmoking Special Dietary Needs: _____

Payment check, cash or credit card:

( ) I authorize you to charge the above to my: (Please note there is an additional $7.50 handling charge for Credit cards)

( ) MasterCard ( ) Am. Express ( ) VISA Exp. Date: _____

Card Number: _____ Signature: _____

Make checks payable to PBS-SEPM. Please send your registration information and payment to:
PBS-SEPM P.O. Box 1595, Midland, TX 79702
For additional information please contact: PBS-SEPM Office- 432) 683-1573 or David M. Thomas (432) 570-6898

PBS-SEPM Luncheon Talk: Tuesday, April 20, 2010

TITLE: **Mixed Carbonate-Evaporite Systems — Stratigraphy and Economic Importance in Marine and Lacustrine Settings.**

SPEAKER: J. F., "Rick" Sarg, Department of Geology and Geological Engineering, Colorado School of Mines

ABSTRACT; World class hydrocarbon accumulations occur in many ancient evaporite-related marine and lacustrine basins. Significant oil-rich carbonate source rocks occur in high-salinity basins. Seals and traps are, in many cases, controlled by the stratigraphic distribution of carbonate-evaporite facies transitions. Thick, basin-center evaporite successions are best developed during evaporative drawdown and sea level lowstands in marine basins, and during times of low lake level in lacustrine systems. Marine saline giants represent the lowstand systems of 2nd-order supersequence sets (20-50 my), cap sedimentary fill in many basins, and provide the regional seal for the hydrocarbons contained within these basins.

Large-scale marine evaporites have been deposited in the Phanerozoic when tectonic-eustatic-climatic conditions provide basin restriction and net evaporative conditions. These halite-dominated saline giants generally occur in low-latitude regions at distinct times in earth history that are characterized by widespread aridity, withdrawal of marine waters from continental shelves, and where basin architecture and the surrounding landmasses provided restriction of marine waters. The saline giants have occurred under both greenhouse and icehouse conditions. They are not sudden events, but are often preceded by cyclic carbonate-evaporite sequences that reflect progressive climatic deterioration and basin restriction. Reservoirs are developed during transgressive and highstand carbonates. Seals are provided by lateral and vertical facies changes to more evaporite-rich facies. Condensed sections deposited during 2nd-order .

Restricted lacustrine basins can develop oil-rich source facies during times of aridity, in enclosed lake basins. One of the best known examples of this occurs in the Green River Formation (Early Eocene) that occupies three lacustrine basins in the western United States, the Greater Green River Basin, Wyoming, the Uinta Basin, Utah, and the Piceance Basin, Colorado. These basins contain the richest oil shale deposits in the world. The depositional history and facies of these three basins are controlled by evolving regional drainage patterns that reflect the downstream record of weathering patterns controlled by tectonics and climate. Evaporative phases are present in these lake systems, and are associated with rich oil shale units. In the Piceance Basin which appears to be the richest, the lake margin sequences are composed of basal siliciclastic sandstone units deposited during periods of base-level fall. During a number of these low lake level times, evaporates were deposited in the lake center. Rising lake level was characterized by deposits of mixed limestone and oil shale. High lake levels are represented by lean marlstone units that often become organic-rich upward.

Dr. Rick Sarg received his Ph.D. (1976) in Geology from the University of Wisconsin-Madison. Rick also holds an M.S. (1971) and a B.S. (1969) in Geology from the University of Pittsburgh. He has extensive petroleum exploration and production experience in research, supervisory, and operational assignments with Mobil (1976), Exxon (1976-90), as an Independent Consultant (1990-92), with Mobil Technology Company (1992-99) where he attained the position of Research Scientist, and with ExxonMobil Exploration (2000-05). Rick was a member of the exploration research group at Exxon that developed sequence stratigraphy, where his emphasis was on carbonate sequence concepts. He has worldwide exploration and production experience in integrated seismic-well-outcrop interpretation of siliciclastic and carbonate sequences, and has authored or co-authored 31 papers on carbonate sedimentology and stratigraphy. Rick achieved the position of Stratigraphy Coordinator at ExxonMobil Exploration Company, and in August of 2006, Rick joined the Colorado School of Mines as a Research Professor in the Department of Geology and Geological Engineering. Rick recently completed a term as President of the Society for Sedimentary Geology (SEPM) (2004-05).

*"Science can only ascertain what **is**, but not what **should be**, and outside of its domain value judgments of all kinds remain necessary"*

Albert Einstein
(1879-1955)

U.S. Physicist,
born in Germany

"Truth in science can be defined as the working hypothesis best suited to open the way to the next better one"

– Konrad (Zacharias) Lorenz
(1903-1989)
Austrian ethologist
Nobel Prize for Medicine in 1973

PBS-SEPM Digital Publication Project

*PBS-SEPM *DIGITAL* PUBLICATIONS ORDER FORM*

This is your opportunity to have the entire PBS-SEPM publication library (1955 – 2007) at your finger tips. There is a fully searchable Table of Contents—find a topic or author just by typing in the word(s). All publications are in Adobe PDF with all major articles being bookmarked, and all the figures are linked in the text for quick reference. Those areas that are off limits to geologists like the Glass Mountains or Sierra Diablos have been written up in these publications. Numerous out-of-print publications and figures and/or plates not published in the original guidebooks are now available in this library.

This includes all publications, even the special publications and coveted core workshops. Can you imagine the hidden treasures you might find? Here is your chance to uncover them in this special three (3) DVD set. ***Buy one or all.***

DVD I - Symposiums & Guidebooks (1955-1989)
Member- **$75.00** plus 8.25% tax and $5.00 shipping and handling
Non-Member- **$100.00** plus 8.25% tax and $5.00 shipping and handling

DVD II - Symposiums & Guidebooks (1990-2007)
Member- **$75.00** plus 8.25% tax and $5.00 shipping and handling
Non-Member- **$100.00** plus 8.25% tax and $5.00 shipping and handling

DVD III - Core Workshops *(82, 83, 85, 98)* **& Special Publications** *(A, 88-28, 96-39, 84)*
Member- **$75.00** plus 8.25% tax and $5.00 shipping and handling
Non-Member- **$100.00** plus 8.25% tax and $5.00 shipping and handling

Entire Set of three DVDs
Member Price $200.00 plus 8.25% tax and $5.00 shipping and handling
Non-Member Price $250.00 plus 8.25% tax and $5.00 shipping and handling

Name: _____ **Company/Affiliation:** _____

Mailing Address: _____

Business Phone: _____ **Fax:** _____ **Email:** _____

Payment: check, cash or credit card
( ) I authorize you to charge the above to my:
( ) MasterCard ( ) VISA ( ) American Express Exp. Date: _____

Card number: _____ **Signature:** _____

Make checks payable to **PBS-SEPM**.
Please send registration and payment information: PBS-SEPM, P.O. Box 1595, Midland, **Texas** 79702
For additional information **contact:** PBS-SEPM **office** (432) 683-1573.

Print | More options ▾

2010 Southwest Section AAPG Annual Convention

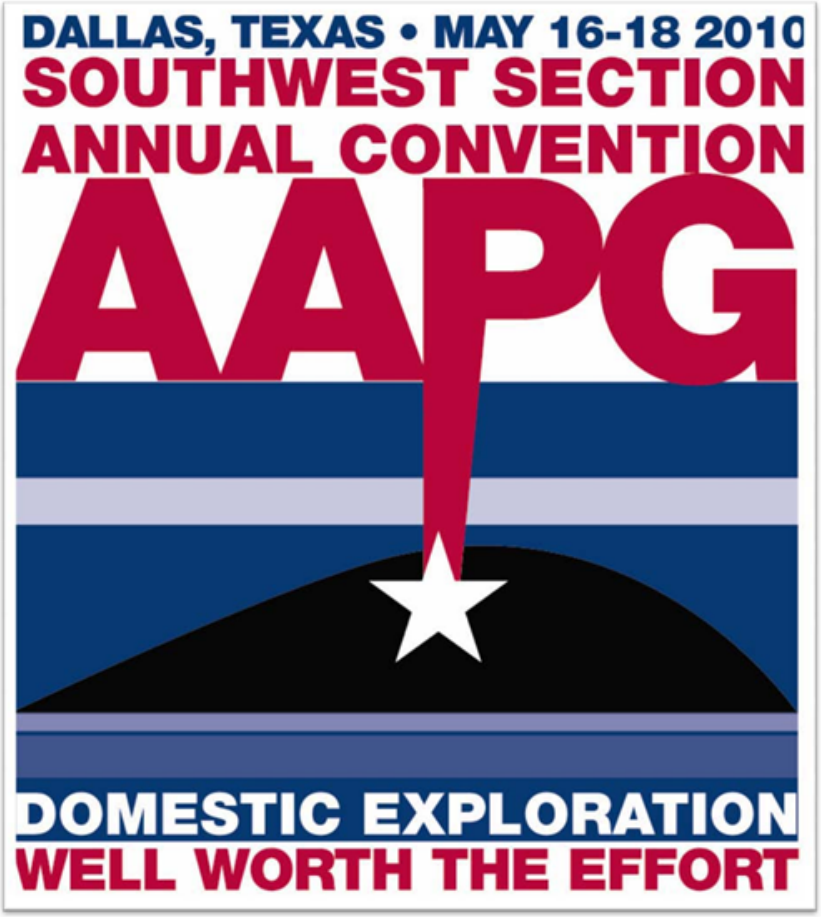
Sunday 16-May-10 8:30 AM to Tuesday 18-May-10 5:30 PM CDT

Register Now! Registration deadline is Thursday 13-May-10 5:00 PM
Embassy Suites Hotel- Click to reserve a room!!
7600 John Q. Hammons Drive
Frisco TX 75034
Google Maps | Hotels Near | Yahoo! Maps | Weather Forecast

Phone: (972) 712-7200
Details for "2010 Southwest Section AAPG Annual Convention"

SW Section AAPG In Frisco, TX

Go to www.dgs.org/en/cev/17 for more information and details on registration.



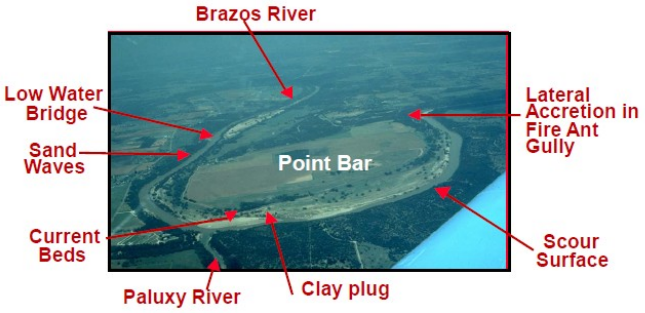
Tuesday, May 18, 8:30-5:00
Embassy Suites Hotel
Limit: 50 attendees

Short Course—$ 15.00 includes lunch

Understanding heterogeneity in shale plays across the US and enhancing resource exploitation through the use of multi-disciplinary data from seismic, core and logs.

Instructors:
Richard Salter and Rick Lewis
both of Schlumberger

BRAZOS RIVER FLUVIAL SEMINAR
Saturday, May 15, 2010
Leaders: Mike Grace and Mark Larsen



Cost: $90 per person. Reserve through your AAPG Southwest Section Registration. Space is limited to 30 attendees.

The field trip will examine common sedimentary features, discuss implications for facies identification and reservoir architecture using the classic point bar on the Brazos River south of Granbury, TX .

ASSEMBLY POINT: Frisco, TX, Saturday, May 15, 2010 on the north side of the Frisco Convention Center. The bus leaves at 8:00 am sharp and will return to Frisco at 6:00 pm. Wear clothing that you don't mind getting wet and or muddy. You will be in an "inherently unstable canoe" for approximately 4.5 miles of the river.

Pastries, refreshments, sunscreen, lunch and life jackets will be provided, but you need to bring a brimmed hat and sunglasses, preferably cheap so that you won't cry when they are lost in the river. Cameras should be waterproof or sealed in a waterproof bag. Email: dgs.firstvicepreseident@gmail.com

PBS-SEPM
P.O. Box 1595
Midland, TX 79702

Phone: 432-683-1573
Fax: 432-686-7827
E-mail: wtgs@wtgs.org

We're on the Web!
www.pbs-sepm.org

" Innocence about Science is the worst crime today"

Sir Charles Percy Snow
(1905-1980)
English novelist
and
scientist

" The strongest arguments prove nothing so long as the conclusions are not verified by experience. Experimental science is the queen of sciences and the goal of all speculation "

Roger Bacon
(1214:?- 1294)
English Scientist,

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 download a membership form.

Individual Sponsors of PBS-SEPM (2009-2010)

Individual sponsors are advertised on the PBS-SEPM website and each Newsletter. Cost is $85/year. If you are interested in an individual sponsorship opportunity, please call Paula Mitchell for more details at (432) 683-1573.

Your Business Card Could be here

Your card will be in every newsletter for one year June to May, on the Website, the Power Point shown prior to every luncheon and in the calendar credits.

PBS-SEPM Core Repository Location Project

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, andrew.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.