

PBS-SEPM NEWSLETTER



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November 2007

President's Column

Fall is upon West Texas. Companies are making plans and budgets for 2008. Many of those in the "know" say we will see \$100/bbl oil in the near future. What an incredible time to be in the petroleum industry. It is keeping all of us busy.

For some, this is the time to reap the harvest of those ideas that have been waiting for the good times again. It is the perfect opportunity to be thankful for our blessings. What are you talking about David? We have given our blood, sweat and tears since the difficult times we experienced in the mid-80s. Layoffs, company downsizings, mergers, acquisitions--- most of us have done the best to survive for this day.

Where am I going with all this gibberish? Share the good times with your fellow professionals - participate in your local geological societies, support them with your time and money, share your ideas to strengthen the society, find ways to encourage young people to consider a career in the geosciences, and most importantly educate the public about the petroleum industry.

We aren't the bad guys. The economy outside the petroleum area is struggling with the higher energy costs. We live in a global economy that is affecting the United States more than ever. The general public has not awakened to this fact. We have Al Gore in the lime light preaching global warming with the petroleum industry being the major contributor. John Stossel's comments on 20/20 the other night are right on - "Wake up America". Much of what is being provided as scientific facts are politically motivated and many times "incorrect". We no longer can be silent. Get the facts and be a crusader - **tell our story to all that will listen.**

David J. Entzminger

Fall Luncheon Schedule

Please note due to the rising costs of catering bills PBS-SEPM has been forced to raise the **luncheon cost to \$12.00.**

**November 27: CORE WORKSHOP-
San Andres Formation – Still a Prolific
Producer, Yates Field Unit, Pecos County,
TX (\$30 members; \$50 non-members)**

Fred H. Behnken

Kinder Morgan CO₂ Production

Are you a PBS-SEPM member? If not this is the perfect time to get signed up. It is only \$20. You cover the cost with the Core Workshop and the rest of the year it pays you.

Applications on the website: www.pbs-sepm.org

January 15: The New Jackson School of Geosciences: It's Scope, New Programs, and an Update on the Reservoir Characterization Research Laboratory (RCRL)

Eric J. Barron

Dean, Jackson School of Geosciences at the University of Texas at Austin

March 19: Fractured Reservoir Characterization

AAPG Distinguished Lecture,

Dr. Jon Olson

Assoc. Professor, 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

CORE WORKSHOP

Conventional Core from the Yates Field, Pecos County, TX. *by Fred H. Behnken*

Over 149 individual wells were cored in the Yates Field Unit, Pecos County, Texas of approximately 1700 wells drilled. The Permian San Andres Formation is here divided into upper and lower San Andres. The dominant production from the unit is derived from the upper San Andres that has reservoir matrix porosity ranging from 4-36% and permeability ranging from 10 – over 3000 mD. Touching vug porosity, karst process fracturing and tectonic fractures enhance the already high dolomitized reservoir deliverability.

The field is currently under CO₂ enhanced gravity production in the San Andres Formation. Injected immiscible CO₂ expands residual oil stranded in the gas cap, draining down into a managed oil column. Horizontal wells are being drilled into a stabilized 25 ft oil column maintained by re-injection of produced gas and CO₂, re-injection produced water and managed water offsite export.

We will examine cores that cross the unconformable Grayburg – San Andres contact as determined by Marathon and BEG staff. Studies by Ward, et al. [1986] have proposed that the productive interval in the Yates Field is Grayburg, not San Andres. Previous studies by Marathon's Petroleum Technology Center and Midland staff have documented that the dominant reservoir is developed in stacked, prograding, fusulinid-crinoid-peloid shoals. These shoals have undergone extensive dolomitization. The core demonstrates two dominant depositional styles; the lower San Andres is ramp-like while the upper San Andres is comprised of progradational high stand shelf edge deposition. Craig, [1988], Tinker, Ehrets and Brondos [1995] and Tinker and Mruk (1995) indicated that the exceptional well bore deliverability in the San Andres is due to intense karsting observed in the dolomitized upper San Andres. The karst developed repetitively on the stacked, prograding grain-rich packstone to grainstone shoals, which developed emergent islands. The karst developed on these emergent islands due to meteoric island margin sea cave development.

Thin section analysis of the island shoal facies in the upper San Andres which were determined as fusulinid-peloid grain stone have been re-examined and prove to be intensively dolomitized grain-rich packstones, not grainstones.

References Cited

Craig, D.H., 1988. Caves and other features of Permian karst in San Andres dolomite, Yates Field reservoir, West Texas, in James, N.P. and P.W. Choquette (eds), *Paleokarst*, Springer-Verlag, New York, p. 342-3653.

Tinker, S. W. J.R, Ehret, and M.D. Brondos., 1995. Multiple karst events related to stratigraphic cyclicity: San Andres Formation, Yates Field, West Texas, in Budd, D.A., A. H. Staller, and P. M. Harris (eds), *Unconformities and Porosity in Carbonate Strata*, AAPG Memoir 63, Tulsa, Oklahoma, p. 213-237.

_____ and D.H. Mruk, 1995, Reservoir characterization of a Permian Giant: Yates Field, West Texas, in Stoudt, E. L. and P.M. Harris (eds), *Hydrocarbon Reservoir*

Bio - Fred H. Behnken

Fred H. Behnken – Staff geologist, Yates Asset Team, Kinder Morgan CO₂ LLC, Midland, Texas 79701.

Fred Behnken received his B.A. degree from Augustana College, Rock Island, IL, and his M. Sc. and Ph.D. in 1972 from the University of Wisconsin, Madison. He has worked the Permian Basin as an exploration geologist for Union Oil of California and Mesa Petroleum, interspersed with teaching as an assistant professor in the Geosciences Department, Texas Tech University, Lubbock and Augustana College, Rock Island, IL. He left Mesa Petroleum joining ARCO Exploration Company in Denver as a Sr. Geologist-Biostratigrapher. He survived the shutdown of the Denver office in 1985 as first line supervisor of an operational mode reservoir characterization group supporting Lower 48 drilling operations, Plano, TX. He demonstrated the advantages of on-site biostratigraphy expertise for ARCO Oil and Gas, Midland and was tasked with the start up of a biostratigraphy group in Midland in 1990. In 1993, he then declined a transfer to Vastar Resources, preferring to “tear rocks apart” as FHB Stratigraphic Services, Midland for approximately 10 years. His present position as the staff geologist with Kinder Morgan CO₂ has him focused on operational geologic development of Yates Field Unit, Pecos County, TX

Tales from the Oil Patch

A **LESSON IN PERSEVERANCE** This narrative is about a Geologist near the start of his career and those lessons that are at times difficult to understand and to realize what benefit they will bring in later years. I and another Geologist were the two youngest on a staff of seven Geologists. Both of us were assigned a part of West Texas to be our "Own Territory". We were also assigned our leader to whom we could go to and ask questions and at times receive answers. We were introduced to the log files, scout tickets, seismic data and land maps. This was prior to anything like data bases and digital data, Geographies and all that is in use today. We "did geology the hard way". We learned that one really has to dig to find a prospect worthy of the name and to not be discouraged with those doubts that at times arise. This attitude of **'PERSEVERANCE'** became evident in the coming months in regard to our drilling efforts in West Texas. This staff of seven produced many prospects and among those ideas 12 projects were chosen to be in our drilling program. Leases were obtained, seismic data shot where needed and locations were identified. The drilling program was now launched with a great deal of anticipation. However, an additional prospect was added to the list to make the total 13. Here is where **"PERSEVERANCE"** paid off. The first 12 wells, all wildcats, were failures. One of those failures was authored by the writer. However, I was chosen to watch well #13 which was authored by the District Geologist. He said that I would "learn a lot". The following DST's in the Wolfcamp, Pennsylvanian, Devonian and

Ellenburger were all flowing oil tests. **PERSEVERANCE**, yes. A learning experience, **ABSOLUTELY**.

Submitted by a respected and well-seasoned Explorationist in Midland- thanks for your story.

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-life-time 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

One Day Field Trips

SEPM will be bringing back the One Day Field Trips starting this fall. *Our first trip will be to Yates Field to collect fossils.* The large ammonites are everyone's favorites. Look for upcoming details. Gilbert Barragan (432-686-6754) will be coordinating the trips. If you would like to lead a trip, or if you have an idea for a trip, please contact Gilbert.

Core Workshop

If you have a core or cores that you would like to present next spring, please contact – Steve Trudeau, luncheon chairman (687-1777).

BOARD MEMBERS

President:	David J. Entzminger	Whiting Petroleum	(432) 686-6700	entzminger@whiting.com
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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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Larry Gillette, Division Manager

The **Geology Club** with UTPB will meet on Friday, November 9th, 5:30pm at the CEED. The topic will be "Iceland – Fire and Ice" by AAPG President Will Green. No charge to attend – refreshments will be sold to support the UTPB Geology Club. See you there.

PBS-SEPM DIGITAL PUBLICATION PROJECT

PBS_SEPM plans to convert all its publications into searchable pdfs. It is a massive undertaking. **We are looking for volunteers to help.**

We especially would like to convert PBS-SEPM **"out-of-print"** publications. If you have one or more of these publications we would appreciate you allowing us to borrow the publication to convert it into a PDF. **Please, we need your help finding these publications.**

Please contact: David Entzminger 686-6741

55-1	Permian Field Conference, Guadalupe Mountains, 1957
57-3	Wolfcamp of the Glass Mountains and the Permian Basin, 1957
56-2	Symposium of the Fort Worth Basin Area, Field Study of the Hill Creek Beds of the Lower Strawn, Southwestern Parke County, TX 1956
58-4	Cretaceous Platform and Geosyncline, Culberson and Hudspeth Counties, 1958
a	Pennsylvanian correlation Charts, Kansas, Oklahoma, Texas, New Mexico
74-64	Lower Cretaceous Shelf, Platform Reef and Basinal Deposits, Southwest Texas-Northern Coahuila Guidebook

PBS-SEPM COMMITTEES

Lunch Arrangements	Cindy Bowden	Kinder Morgan CO ₂ Co	(432) 688-3785	cindy_bowden@kindermorgan.com
<i>Newsletter</i>	<i>Please Volunteer</i>			
Luncheon Program	Steve Trudeau	Fasken Oil & Gas	(432) 687-1777	stevet@forl.com
<i>Continuing Education</i>	<i>Please Volunteer</i>			
Honorary Life	TBA			
Nominating	David Farmer	Stanolind Oil & Gas Corp.	(432) 688-4250	dfarmer@stanolind.com
One Day Field Trip	Gilbert Barragan	Whiting Petroleum Inc.	(432) 686-6754	Gilbert.Barragan@whiting.com
Publications	Richard Blackwell	Consultant	(432) 683-4971	rcbgeol@nts-online.net
Publicity	Rick Doehne	University Lands	(432) 684-4404	rdoehne@utsystem.edu
Scholarship	David Farmer	Stanolind Oil & Gas Corp.	(432) 688-4250	dfarmer@stanolind.com
Stratigraphic	Bob Trentham	Director- CEED	(432) 552-2432	trentham_r@utpb.edu
Webmaster	Wendy Savage	Whiting Petroleum Inc.	(432) 686-6750	wendy.savage@whiting.com
Nominating	David Farmer	Stanolind Oil & Gas Corp.	(432) 688-4250	dfarmer@stanolind.com
One Day Field Trip	Gilbert Barragan	Whiting Petroleum Inc.	(432) 686-6754	Gilbert.Barragan@whiting.com

PBS-SEPM Book Sale

There are a number of great books for sale. Being a member has its advantages as you will save on most of the books we have on hand.

You can order online- www.pbs-sepm.org

Remember that anyone willing to pay the postage, PBS-SEPM will donate an entire set of on-hand books to your school of choice. This is a great way to provide your alma mater with some fantastic publications.



ORDER FORM

PBS-SEPM - 1ST ANNUAL CALENDAR

GREAT NEWS!!
YOU CAN START YOUR CHRISTMAS SHOPPING NOW!

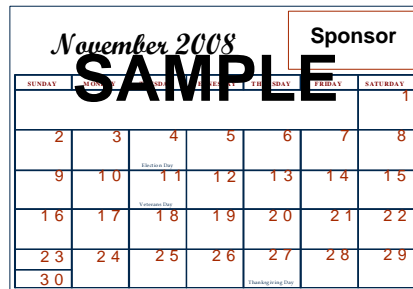
PBS-SEPM is proud to present the production of its 1st annual calendar. This first year will be an 11x17 calendar which will include an assortment of photographs displaying fossils and minerals. Production will begin soon and the calendars are to be available for pickup by mid December, 2007.



QUANTITY _____ @ \$15.00 EACH

*SHIPPING: \$ _____

TOTAL: \$ _____



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 PBS-SEPM
 PO Box 1595
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 Credit Card orders and forms may be faxed to (432) 686-7827

*Shipping and handling costs for more than five calendars, please contact the PBS-SEPM office. Also, calendars can be available for pickup at the WTGS office to avoid shipping costs.

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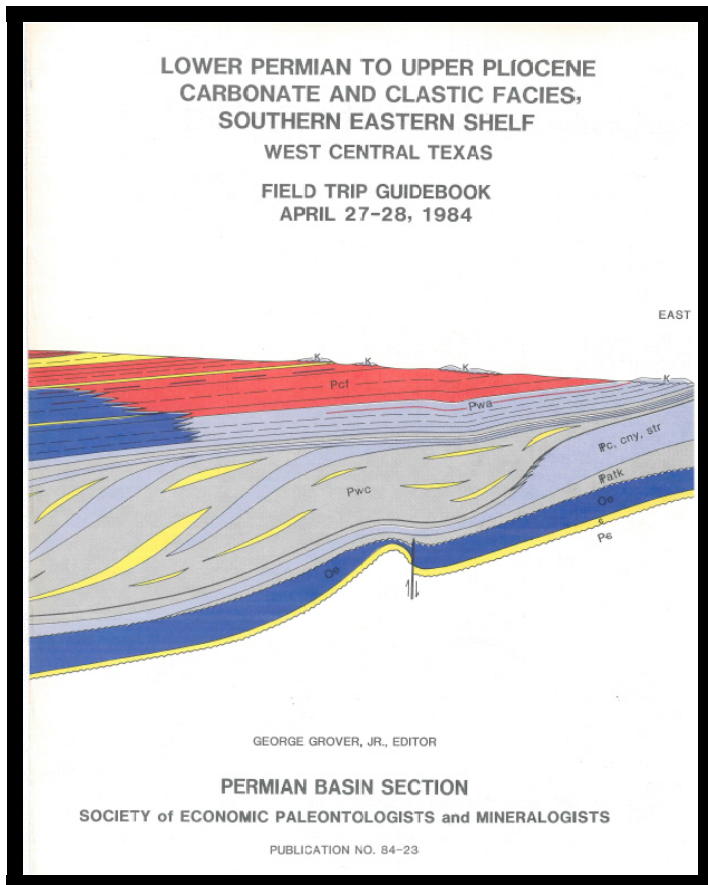
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November

Special Featured Book



Publication 84-23

"Criticism is necessary and useful; it is often indispensable; but it can never take the place of action, or be even a poor substitute for it. The function of the mere critic is of very subordinate usefulness. It is the doer of deeds who actually counts in the battle for life, and not the man who looks on and says how the fight ought to be fought, without himself sharing the stress and the danger."

From The Works of Theodore Roosevelt

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