

**Joint Session with SPE**  
**Radisson Hotel – Greentree**  
**6 February 2007**

## **Greenbrier Limestone Reservoir Controls and Exploration Strategies – Central WV**

*presented by*

**Gregory R. Wrightstone**  
Texas Keystone, Inc.

### **Abstract**

Oolitic zones in the Greenbrier Limestone provide a prolific producing reservoir throughout much of central and southern West Virginia, eastern Kentucky and southwestern Virginia. In the central West Virginia counties of Kanawha and Jackson, structure plays a dominant role in the geographic distribution of the productive oolite reservoirs. Also noted in this area is the structural segregation of the reservoirs, with a small gas cap up-dip, large oil productive area and finally water downdip.

The Hicumbottom Oil Fields, located in northern Kanawha County, were discovered in the 1940s during drilling targeting the deeper Oriskany Sandstone. Cumulative production from the two fields exceeded 2.5 MMBO. Both oil fields were located on the crests of northward plunging anticlines and anticlinal noses. It is postulated that oil and gas migration into the positive structural highs

preserved porosity, with occlusion of porosity in the structurally lower areas.

A prospective oil productive area on trend with the existing fields was identified based on structural mapping. A soil gas survey was completed in this exploratory area in 1992 and led to the drilling of an exploratory well in 1994. This well flowed oil and water measured at 190 bbls/day and is interpreted to be on the downdip edge of a new oil field. It is likely that a significant oil field similar in size to the Hicumbottom Fields will be discovered by offsetting the exploratory well in a structurally higher location.

**For reservations to this informative and entertaining evening, please complete the attached reservation form.**

## WHAT IS THE PAPG?

PAPG is a non-profit organization founded in 1984 to provide a forum for Petroleum Geologists in the Pittsburgh Area to meet socially and discuss technical topics relative to the exploration and development of reserves in the Northern and Central Appalachian Basin. PAPG is an affiliated association with AAPG (American Association of Petroleum Geologists) and has representation in the House of Delegates. Educational opportunities are provided via field trips, seminars and AAPG Sectional meetings, sponsored solely by PAPG or in conjunction with the PTTC (Petroleum Technology Transfer Council), PGS (Pittsburgh Geologic Society) and SPE (Society of Petroleum Engineers).

Although PAPG is predominately a geologic organization, numerous industry professionals including geophysicists, engineers, lawyers and landmen are among PAPG's members and find the interaction at meetings and educational opportunities beneficial to their professions. PAPG also encourages student membership and participation.

Meetings are typically held monthly from September through May in locations within 50 miles of downtown Pittsburgh. From time to time, meetings are held in conjunction with SPE and PGS.

## NEWS AND EVENTS

### Your Delegate's Voice...

It's that time of year again, time to prepare for the upcoming House of Delegates meeting in Long Beach, CA on April 1<sup>st</sup> (really). During that meeting, the delegates will be asked to debate and approve several proposed amendments to the Association's Bylaws. Although some of them will not directly affect most members, I will nevertheless briefly summarize them below.

The first proposed amendment places restrictions on the candidacy of certain AAPG members who might want to run for certain AAPG offices. In essence, without listing all of the offices involved, it says that if you are serving as one of the officers listed in Section 1 of Article II of the Bylaws, then you cannot run for one of the other listed offices in any election that will be held during your current term of office, or in the Association's fiscal year immediately following the end of your term of service. What this means is that a member of the Executive Committee (EC) or the Advisory Council (AC), whose terms end on June 30<sup>th</sup>, cannot file a petition by October 15<sup>th</sup> and run as a petition candidate. The reason is that members of the EC and AC have been involved in selecting the candidates who will be on the ballot for the next election, and therefore should not add their names to the ballot through the petition approach.

The second proposed amendment simply adds the International Regions to the list of groups among which the Advisory Council is to review relationships. Currently the AC is charged with reviewing relationships "among the Association, Sections and Divisions, and other organizations." The word "Regions" will be added after Sections.

The third proposed amendment simply deletes language related to dates that are no longer relevant and are no longer required to be in the Bylaws.

Finally, there is one proposed amendment that could affect some of our members, especially our younger members who are just getting started. This proposed amendment would provide for a graduated dues structure for Active and Associate Members and provide that the annual change in dues for these members will not exceed 20%. To accomplish this, the proposed amendment sets up three levels of annual dues for Active and Associate members based on gross annual personal income in United States dollars. Level 1 is for members with annual income greater than \$50,000; level 2 is for annual income greater than \$25,000 but not more than \$50,000; and level 3 is for annual income of \$25,000 or less. Furthermore, the proposed amendment states that the dues of level 2 will be one half of level 1 dues, and the dues of level 3 will be one fourth of level 1, but not less than \$20. This means

that level one dues would have to be at least \$80, so level 2 would then be \$40, and level 3 would be \$20. A person in level 2 or 3 will have the option of paying dues that correspond to a higher level of annual income.

Currently, all Active and Associate Members pay the same dues, regardless of income, so dues for some could decrease if this proposal passes. The current Bylaws state that the annual change in dues for Active Members (Associates will be added) cannot exceed 20%. The proposed amendment provides an

exception to this, and that exception is to set up the new dues levels based on income. Note that the key word is “change,” not “increase.” So, “change” can mean a decrease, such as dropping from level 1 (\$80) to level 2 (\$40), a 50% change. Sorry; the proposed amendment will only give you a 20% break, not the full 50%.

Please send me any comments prior to the end of March. Remember, my vote is a reflection of how you as PAPG members feel about these proposed amendments.

**- Doug Patchen**

### ***Mark your calendar now for these upcoming events:***

**March 7<sup>TH</sup> 2007 – 5:30PM Radisson, Green Tree**

**PAPG/SPE Joint Meeting**

*“Tail-End Production, a Challenge to Sustainable Operating Strategy”*

Wofram Kleinitz

**Late February/ Early March (Date to be determined)**

**PAPG/SPE**

*“Log Interpretation School – for young professionals.”*

- More Information to come

***Have information you want to share with the organization?***

***Please contact the secretary to add the information to the next newsletter.***

## **PAPG 2006-2007 DUES**

### **PAPG dues for the 2006-2007 season are now DUE!**

*The membership form is attached to this newsletter. Please fill the form out **completely** so that we can ensure that we have your latest contact information. We are planning to publish a membership directory this year and your updated information is crucial*

# NOTICE OF JANUARY 2007 MEETING PITTSBURGH ASSOCIATION OF PETROLEUM GEOLOGISTS

**DATE:** Tuesday 6, February 2007

**PLACE:** Radisson Hotel - Greentree  
101 Radisson Drive,  
Pittsburgh, PA 15220  
412-922-8400

**TIME:** 5:00 PM – Cash Bar  
6:00 PM – Dinner  
7:00 PM – Speaker

**TOPIC:** “Greenbrier Limestone Reservoir Controls and Exploration Strategies.”

**SPEAKER:** Gregory R. Wrightstone – Texas Keystone, Inc..

**COST:** \$25.00  
\$10.00 students  
(Checks payable to PAPG)

**DINNER OPTIONS:** Roast Pork Loin  
or  
Rotisserie Style Chicken

**RESERVATIONS:** Call, email, fax, or mail this reservation form to:

**Barbara A. Purks**  
412-787-5403 (phone)  
412-787-2906 (fax)  
bpurks@pittsburgh.oilfield.slb.com

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NAME(S) \_\_\_\_\_

COMPANY  
\_\_\_\_\_  
\_\_\_\_\_

DINNER CHOICE(S)  
\_\_\_\_\_

## CONTACT THE PAPG

PAPG Officers:

- President:** **Pat Imbrogno** -- Wind City Management LLC.  
Phone: 412-269-1419  
Email: [pimbrogno@comcast.net](mailto:pimbrogno@comcast.net)
- Vice President:** **Roy Lynch** -- Dominion Exploration&Prod., Inc.  
Email: [roy\\_w\\_lynch@dom.com](mailto:roy_w_lynch@dom.com)
- Secretary:** **Dave Boyer** -- Texas Keystone, Inc.  
Phone: 412-434-5616  
Email: [dboyer@texaskeystone.com](mailto:dboyer@texaskeystone.com)
- Treasurer:** **Eric Ober** -- Texas Keystone, Inc.  
Phone: 412-388-0917  
Email: [eober@texaskeystone.com](mailto:eober@texaskeystone.com)
- AAPG Delegate:** **Doug Patchen** – Petroleum Technology Transfer Council  
Phone: 304-293-2867 ext 5443  
Email: [doug.patchen@mail.wvu.edu](mailto:doug.patchen@mail.wvu.edu)

## SPONSORS

*PAPG wishes to thank those companies and individuals who have contributed to the PAPG 2006-2007 season:*

- ABARTA Oil & Gas Co., Inc. -
- ARK Resources -
- DC Energy Consultants -
- EOG -
- GEO-COM, LLC –
- Great Lakes Energy Partners, LLC. -
- Griffin Oilfield Developers, LLC –
- Hanley & Bird, INC -
- Natural Energy Development Corp. -
- Superior Well Services, Ltd. –
- Target Energy, Inc. -
- Texas Keystone, Inc. –
- The Barron Group, Inc. –
- Universal Well Services -
- Vista Resources, Inc. -

### Sponsor Information

*If you or your company would like to sponsor the PAPG and help support the continuation of our Meetings, Field Trips, and other events, we ask that you send a donation to the PAPG. Any contribution of \$100.00 or more by any group or individual will be recognized in the monthly newsletter, and at scheduled monthly meetings.*

*We ask that you show your support for the PAPG by a contribution and your continuing attendance at the monthly meetings.*

*We appreciate your continued support.*

Contributions may be sent to:

PAPG  
PO BOX 16352  
GREENTREE PA 15242-0352

# APPLICATION FOR MEMBERSHIP AND MEMBERSHIP RENEWAL

PLEASE INDICATE YOUR MEMBERSHIP STATUS BY CHECKING THE APPROPRIATE BOX:

PROFESSIONAL - RENEWAL

STUDENT - RENEWAL

PROFESSIONAL – NEW MEMBERSHIP

STUDENT - NEW MEMBERSHIP

The **PITTSBURGH ASSOCIATION OF PETROLEUM GEOLOGISTS** membership year runs from JUNE 1 through MAY 31. Monthly meetings are usually held the second Thursday of the month from September through November and January through May.

**Professional Dues are \$25.00 per year**

**Student Dues are \$10.00 per year**

**NEW APPLICATION:** If you have never been a member of PAPG, please fill out the remainder of the form, obtain the signatures of two members to sponsor you, and mail check, payable to PAPG, to the address below.

**RENEWAL:** Please fill out the mailing address/directory information below if your contact information has changed and submit dues, payable to PAPG, to the address below.

**Mail completed form and dues payment (checks only) to:**

Dave Boyer  
Texas Keystone, Inc.  
560 Epsilon Drive  
Pittsburgh, PA 15238

## MAILING ADDRESS / DIRECTORY INFORMATION – PLEASE COMPLETE ALL INFORMATION

NAME \_\_\_\_\_ DATE \_\_\_\_\_

COMPANY / UNIVERSITY \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

JOB TITLE: \_\_\_\_\_

EMAIL: \_\_\_\_\_ **Please fill this in – help us save those mailing costs!**

PHONE: (        ) \_\_\_\_\_ - \_\_\_\_\_

FAX: (        ) \_\_\_\_\_ - \_\_\_\_\_

**WOULD YOU BE INTERESTED IN PAPG PARTICIPATION?:**                      Officer              Speaker

**WOULD YOU LIKE YOUR CONTACT INFORMATION PLACED  
IN THE MEMBERSHIP DIRECTORY (available to members only?)**      Yes              No

## TWO SPONSORS REQUIRED for NEW MEMBERS

Name \_\_\_\_\_ Date \_\_\_\_\_

Name \_\_\_\_\_ Date \_\_\_\_\_