

PAPG Meeting
Radisson - Green Tree
17 September 2009

**IMPROVING THE IMAGING
CAPABILITY AND
INTERPRETABILITY OF SEISMIC
DATA THROUGH PROPER
PARAMETER SELECTION**

presented by

Bill Pramik

Vice president PGS – Onshore Division

Abstract:

There have been many recent advances with respect to seismic acquisition technology and each of these, in their own right, has contributed to the continual improvement we see in seismic data quality. There is, however, one technology area that if properly applied can have a greater impact on seismic data quality than almost anything else we do. That technology is seismic acquisition parameter selection.

The seismic wavefield that we record during acquisition contains a large number of events. Events that have traveled down into the earth, reflected one time from a lithologic interface and returned to the surface are called signal. Everything else we put into a category called noise. The problem with much of this noise is that it can often overwhelm the signal, generally does not decay in amplitude as fast as the signal, and travels with a significantly slower velocity. To be able to address the noise in data processing, acquisition parameters designed for the noise, rather than the signal, need to be considered.

Seismic noise generally travels with a slower velocity than our desired seismic signals and, because of this, requires more stringent acquisition parameters. Smaller bins, higher fold, and improved distribution of offsets and azimuths are usually the results of a noise based survey design. Fortunately, the same types of parameter modifications required to address the noise issues also result in improved sampling and imaging of our desired signal events.

These principals have been applied to a number of 3D surveys with excellent results. Data examples from the Wichita Mountain front in Oklahoma and the deep Bossier trend in East Texas demonstrate significant improvements in data quality, both in the reduction of noise, and the imaging of complex structure. The results are data sets that are significantly more interpretable.

Biography:

Bill Pramik was appointed Vice President – Geophysics & Quality of PGS' Onshore Division in January 2007. Since joining PGS in January, 1995, he has held various positions within PGS' Research Division as a founding member of the Geophysical Support Team. Pramik's duties at PGS have included being designated Team Leader – Geophysical Support which lead to Global Team Leader – Geophysical Support.

Pramik is a graduate of Virginia Polytechnic Institute and State University. Pramik received his degrees in Geophysics with a special emphasis in Mathematics in 1979.

Prior to joining PGS, Pramik worked for Amoco Production Company from 1979 to 1995. During this tenure, he gained experience in data processing, seismic interpretation, seismic field operations, VSP acquisition and specialized processing. In 1989, Pramik was assigned to Amoco's Tulsa Research Center where his focus was on developing job specific Seismic Acquisition Methods along with directing the Problems and Solutions group. Pramik was selected to the official position of chairman of the Seismic Acquisition Technology Team, responsible for quality control of seismic survey design.

[For reservations to this informative and entertaining evening, please see the attached reservation form or Pay in advance using PayPal by visiting \[PAPGocks.org\]\(http://PAPGocks.org\).](#)

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

PAPG Website: Visit the website at <http://www.PAPGrocks.org>.

Mark your calendar now for these upcoming events (more details on PAPGrocks.org) -

September 1st – 3rd 2009, Columbus, OH

PTTC Workshop – Reservoir Engineering for Petroleum Geologists

See website for more details

September 10th 2009, Blairsville, PA

SPE/PAPG Annual Golf Tournament

See website for more details

September 20th – 22nd 2009, Evansville, IN

AAPG East Section meeting

See website for more details

September 23rd – 25th 2009, Charleston, WV

SPE East Region meeting

See website for more details

Visit PAPGrocks.org for all upcoming events and newly posted classifieds

Have information you want to share with the organization?

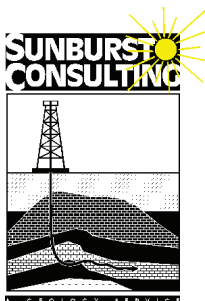
Please contact the secretary to add the information to the next newsletter.

SPONSORS

The PAPG wishes to thank the companies who have contributed to the PAPG 2009-10 season.

+

TENASKA[®] MIDSTREAM SERVICES, LLC



Moody
and Associates, Inc.
Since 1891



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 on our website, 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:
Eric Ober - Texas Keystone
560 Epsilon Drive
Pittsburgh, PA
15238-2837 USA

Or use the link on the webpage: <http://papgrocks.org/sponsors.htm>

CONTACT THE PAPG

PAPG Officers:

President: **Eric Ober** -- Texas Keystone, Inc.
Phone: 412-388-0917
Email: eober@texaskeystone.com

Vice President: **Connie Jump** – Marathon Oil Co.
Phone: 724-873-8810
Email: cjjump@marathonoil.com

Secretary: **Katie Schmid** – EQT Corp.
Phone: 412-395-2080
Email: kschmid@eqt.com

Treasurer: **Tracee Imai--**

Email: tracee.imai@gmail.com

AAPG Delegate: **Bob Trevail** – Dallas Energy, LLC.
Phone: 724-709-6862
Email: bob@dallas-morris.com

PAPG 2009-2010 DUES

PAPG dues for the 2009-2010 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 SEPTEMBER 2009 MEETING PITTSBURGH ASSOCIATION OF PETROLEUM GEOLOGISTS

DATE: Thursday 17, September 2009

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

TIME: 5:00 PM – Social Hour
6:00 PM – Dinner
7:00 PM – Speaker

TOPIC: “IMPROVING THE IMAGING CAPABILITY AND INTERPRETABILITY OF SEISMIC DATA THROUGH PROPER PARAMETER SELECTION.”

SPEAKER: Bill Pramik - Vice president PGS – Onshore Division

COST: \$30.00 Paid in advance
\$35.00 Pay at the door
\$10.00 Students
(Checks payable to PAPG)

DINNER OPTIONS: Sesame Crusted Atlantic Salmon
or
Roast Pork Loin

RESERVATIONS: **NEW Pay in advance using PayPal** – Visit PAPGrocks.org to reserve your spot or call, email, fax, or mail this reservation form by September 14, 2009 to:

Katie Schmid
412-395-2080 (phone)
412-395-3932 (fax)
kschmid@eqt.com

NAME(S) _____

COMPANY

DINNER CHOICE(S)



P·A·P·G

Pittsburgh Association of
Petroleum Geologists

An AAPG Affiliated Society

www.papgrocks.org

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 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 - Payable to PAPG*) to:

Katherine Schmid
EQT Production
EQT Plaza
625 Liberty Ave
Suite 1700
Pittsburgh, PA 15222

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