

Joint Session with SPE
Radisson Hotel – Greentree
17 April 2007

Global Petroleum Evaluation - The Role of Integrated Regional Analysis

presented by

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AAPG Distinguished Lecturer

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Abstract

The evaluation of petroleum systems for new opportunities requires a fully integrated approach to Geoscience often on a broad regional scale. Over the last two decades our ability to execute such studies has been significantly improved by a combination of Geoscience advances and the massive increase in the data handling capability of computer systems.

Modern regional studies incorporate an understanding of geodynamics and structural development with an integrated understanding of sediment accumulation and distribution. The occurrence of source rocks and the timing of load generally control the subsequent evolution of petroleum systems. We refer to the study of this integrated process of basins forming, filling and maturing as Genetic Basin Analysis. As an example the geological evolution of Russia through time provides a good illustration of crustal scale (India collision with Asia), far field processes (transmission of compressional folding and faulting through accretionary crust) impacting the development of petroleum systems (maturation, trap formation and migration) in some of the most productive basins on Earth. In contrast the load-driven processes associated with recent deposition in the Gulf of Mexico provide an end-member example of a basin which is filling and charging today.

The advent of Geographic Information Systems has provided a computing platform perfectly suited to storing and manipulating regional scale, map-based data. By treating maps as data and interacting mapped datasets we can handle very large datasets, observe broad trends in geologic parameters etc.

This presentation will describe the concept of Genetic Basin Analysis and how it results from fully integrated geologic analysis combined with

petroleum systems analysis. It will also describe how Geographic Information Systems are used in regional analysis to facilitate this integration as well as provide the platform for spatial analysis of geologic data.

Author Biography

Education:

- 1977 University of Newcastle, PhD – Paleogeothermometry of the Northern Pennine Orefield.
- 1975 University of Newcastle, MSc – Organic Geochemistry and Coal Petrology.
- 1974 University of Durham, BSc (Hons) – Geology



Experience:

- 1977-79 Geological Survey of Canada; Organic Petrographer
- 1979-84 Imperial Oil (Exxon affiliate in Canada); Geochemist
- 1984-86 Exxon Production Research Co; Research Geologist
- 1986-92 Imperial Oil; HC Systems Analyst
- 1992-94 Esso Production Malaysia Inc; HC Systems Analyst
- 1994-Present ExxonMobil Exploration Co; Regional Geologist, Supervisor of Regional Studies Team in Business Development.

Professional Interests:

The analysis of all aspects of natural systems, at all scales to develop new oil and gas opportunities. I'm particularly interested in the interplay of geologic processes in a 'genetic' sense that allow petroleum systems to develop and to remain preserved. This naturally involves the study of many basins and I have had the good fortune to have worked with the geology of many of the world's oil and gas basins.

Publications and Awards:

Authored and Co-Authored numerous publications internal to Imperial Oil and ExxonMobil and externally in many publications including AAPG, CSPG, EAOG etc.

- 1986 CSPG Link Award (best lunchtime talk of year)
- 1987 CSPG Service Award (for Chairing the Geochemistry Division)
- 1989 CSPG Link Award (best lunchtime talk of year)
- 1990 Imperial Oil Significant Innovation Award
- 1992 CSPG Medal of Merit (best paper of year on Petroleum Geoscience)
- 2002 CSPG Diamond Jubilee Convention – Best Speaker
- 2005 PESA Distinguished Lecturer

Memberships:

American Association of Petroleum Geologists
Canadian Society of Petroleum Geologists
Association of Professional Engineers, Geologists and Geophysicists of Alberta

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

Mark your calendar now for these upcoming events:

May 1st & 2nd - Hilton Garden Inn, Pittsburgh/Southpointe

The North American Coalbed Methane Forum, Inc. - Spring Session

- For more information please contact:

Ihor Havryluk - (412)445-5803

or

Dr. Kashi Aminian - (304)293-7682 ext 3406

Spring 2007 Field Trip (Dates to be determined)

PAPG

- More Information to come

2008 AAPG Eastern Regional Meeting

- Scheduled for Pittsburgh

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 APRIL 2007 MEETING PITTSBURGH ASSOCIATION OF PETROLEUM GEOLOGISTS

DATE: Tuesday 17, April 2007

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

TIME: 5:00 PM – Social Hour (w/ Cash Bar)
6:00 PM – Dinner
7:00 PM – Speaker

TOPIC: “Global Petroleum Evaluation - The Role of Integrated Regional Analysis.”

SPEAKER: Stephen Creaney

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

DINNER OPTIONS: Chicken
or
Pork

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

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
- Vice President:** **Roy Lynch** -- Dominion Exploration&Prod., Inc.
Email: roy_w_lynch@dom.com
- Secretary:** **Dave Boyer** -- Texas Keystone, Inc.
Phone: 412-434-5616
Email: dboyer@texaskeystone.com
- Treasurer:** **Eric Ober** -- Texas Keystone, Inc.
Phone: 412-388-0917
Email: eober@texaskeystone.com
- AAPG Delegate:** **Doug Patchen** – Petroleum Technology Transfer Council
Phone: 304-293-2867 ext 5443
Email: 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. -
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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 _____

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

PHONE: () _____ - _____

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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 _____