



March 2013

LOS ANGELES BASIN GEOLOGICAL SOCIETY MEETING ANNOUNCEMENT

March 28th (Thursday) Jean B. Kulla, Ph.D., PG., Consultant, K2 Energy & Environment (K2 E&E).

will speak on: **The Application of Source Rock Geology and Petrophysics to Unconventional Shale Reservoirs**

Abstract

The US, according to some sources, now produces more oil and gas than Saudi Arabia and has resources to last another hundred years. The discovery of and economical production from organic-rich shale reservoirs is in large part the game changer.

Successful hydrocarbon (HC) production from the Barnett Shale unconventional reservoir in Texas and the Bakken Shale in North Dakota has raised significant interest in similar shale plays in the U.S., Canada, and other parts of the world.

Technological advances have enhanced the economic attractiveness of these unconventional plays. Recent studies have addressed our need for experience and knowledge about shale reservoirs, which many see as a relatively new area of study. However, if one recognizes that the shale source rock of yesterday is the shale reservoir of today, there is abundant knowledge concerning the subject.

Numerous studies have revealed some key factors for success in shale reservoirs, including (1) organic richness, (2) organic matter type, (3) mineralogy, (4) level of maturation, and (5) formation thickness. The technique we developed at Exxon Mobil (Delta Log R) to evaluate the thermal maturity and richness of source rocks using well logs (Kulla and Moretti 1981; Passey et al. 1990; Creaney and Passey 1993, Passey et al. 2012) proved very successful, and can be used, with some modifications, to evaluate shale reservoirs. In this

presentation geology, geochemistry, petrophysics, and well log interpretation of shale are examined to evaluate maturation and generation of HC; porosity; and the amount and type of HC that could be expected to be generated.

Speaker's Biography

Jean B. Kulla is a principal consultant with K2 E&E in California. Having expertise in geochemistry, geology, and petrophysics, she has consulted on oil and gas exploration and production projects and on projects involving environmental impacts to water resources.

While at Exxon Mobil, Dr. Kulla was instrumental in the development of geochemical, petrophysical, and log interpretation techniques for the assessment of shale source rock and shale reservoirs. She has applied those techniques to a variety of shales around the world including in the US, the North Sea, France, and Australia.

Dr. Kulla has also been a special consultant to the US Department of Energy for the assessment of geochemical impacts to groundwater at DOE and USDA facilities. Additionally, she has consulted with numerous energy companies for: interpretation of high-resolution seismic and down-hole data to reconstruct preferred subsurface fluid migration pathways; re-evaluation of steam flood in the LA oil field for well casing and abandoned well leakage into groundwater aquifers; migration of crude oil and refined products from pipeline

breaks; chemical impacts in a refinery upset; and expert testimony.

She received her BS from the University of Maryland and her MS and Ph.D. from the University of Illinois in Champaign-Urbana, IL.

Meeting Time, Place, Cost and Reservations

Time:

Thursday, March 28th, 2013

Typical Meeting Agenda

Lunch Served: 11:30 AM to 12:00 PM
Announcements: 11:45 AM to 12:00 PM
Guest Speaker: 12:00 PM to 12:30 PM
Questions/Close: 12:30 PM to 12:45 PM

Place:

The Grand at Willow Street Conference Center located at 4101 East Willow Street, Long Beach, CA. (562-426-0555). Take Lakewood Boulevard south from the San Diego Freeway (405), turn west onto Willow Street and turn right onto Grand Avenue at the sign for the Center. Park free in the garage structure.

Cost:

Lunch and Speaker: \$20.00 with reservations
\$25.00 without reservations
Student: \$5.00 (Lunch and Speaker)

Meeting Reservations:

Make your reservations using our web site at www.labgs.org, or by calling Graham Wilson (562)-326-5278, or emailing gwilson@shpi.net. Reservations must be made by 10:00 AM Tuesday morning prior to Thursday meeting to receive discount price noted above. As always walk-ins are welcome.

Contact Us – The LABGS Board

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Student Scholarships

In the last couple of years, LABGS has established a scholarship program in conjunction with the PSAAPG Educational Foundation. This scholarship program is to assist undergraduate and graduate students in the geological and earth sciences within our regional area with their educational needs.

This year, our scholarship program plans to award up to 10 scholarships ranging in amounts from \$500 to \$1500. The awarded money must be used to advance the student's education in geology and the related earth sciences. It may be used for tuition at a 4-year degree-granting (BS, BA, or graduate) California college or university. Scholarship funds may also be used for tuition at Summer Geology field camp, text books, related supplies. Funds cannot be used

directly for travel, to pay clerical help, or room and board.

Eligibility:

Current student in good standing in the California college or university in LABGS sphere of influence ie. CSU-LB, LA, SD; UCLA, UCI, USC, etc. The sphere of influence of LABGS is Los Angeles County, Orange County, and San Diego County.

Some of the scholarships (4) will be awarded to students attending schools that have an AAPG student chapter and/or participate in the Imperial Barrel competition.

Applications are Due to LABGS by April 20, 2013

An Application for the LABGS/PSAAPG scholarships can be found on our website!

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