

SHALES MOVING FORWARD...

July 21, 2011



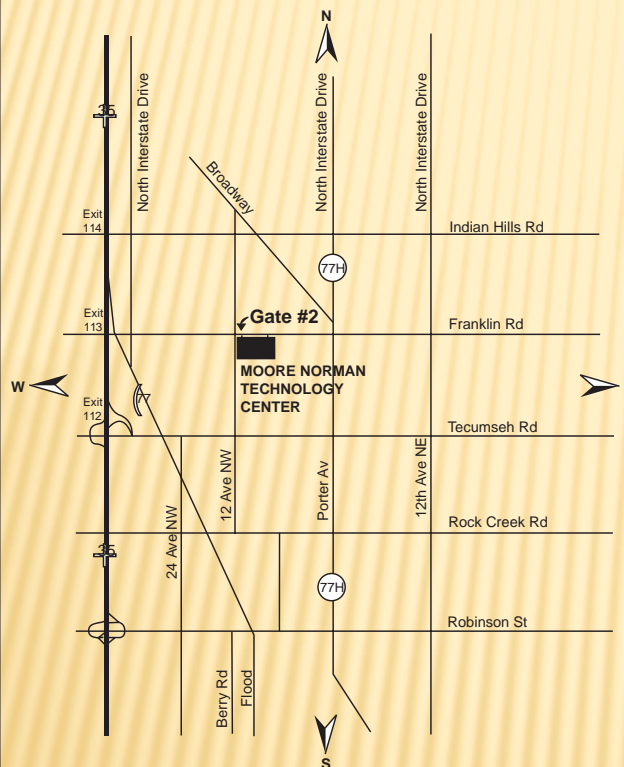
Oklahoma Geological Survey

G. Randy Keller, Director

The University of Oklahoma
MEWBOURNE COLLEGE OF EARTH & ENERGY

TRANSPORTATION

Will Rogers World Airport is 25 minutes from the Moore Norman Technology Center in Norman. Ground transportation (taxis, rental cars, and airport shuttle for hire) is available in the baggage claim area. Parking at the Moore Norman Technology Center is free.



Moore Norman Technology Center
Main Campus - (405) 364-5763
4701 12th Avenue NW, Norman, Oklahoma

Southbound from Oklahoma City take Exit 113 and turn left on Franklin Rd. Turn right at Gate 2 entrance.

Northbound traffic take Exit 112. Turn left (east) on Tecumseh Rd. Turn left (north) on 12th Ave NW. Turn right (east) on Franklin Rd. Turn right at Gate 2 entrance.

PREREGISTRATION FORM—Make checks payable to "University of Oklahoma."

Please fill out form, detach, and return with check to: Oklahoma Geological Survey, 100 E. Boyd, Room N-131, Norman, Oklahoma 73019

NAME: (Last) _____ (First) _____ (Nickname for badge) _____ (Initial) _____

AFFILIATION: _____

MAILING ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____ PHONE: _____ FAX: _____

E-MAIL: _____

Check must accompany this form. Use separate form for each registrant. CEU credit, check here. ☐ PDH credit, check here. ☐

Workshop Registration \$150.00 ☐

Special Workshop rate for

University Students ONLY \$ 15.00 ☐

Total Amount Enclosed..... \$ _____

If you have a special disability, medical, or dietary needs, please check here. ☐

FAX number 405-325-7069

Purpose and Scope of Workshop

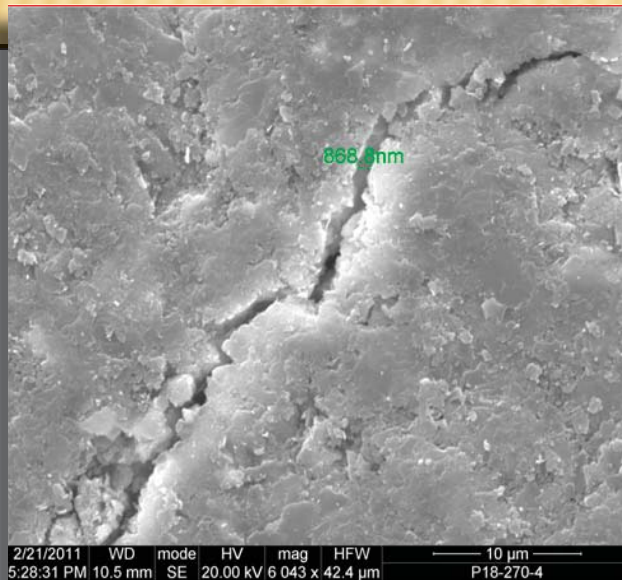
Thursday, July 21

Shale gas has evolved into shale liquids because of the disparity in pricing between gas and liquid hydrocarbons. Issues of organic maturity, multiphase flows, wettability, etc., now figure more prominently into the exploitation picture. We will broaden the scope of our discussions and include topics specific to these new interests.

Hydraulic fracturing remains key to exploiting these resources and will continue to be a topic of vital scientific, economic and legal interest. Zipper fracs, simulfracs and multistages numbering as high as 40 are pushing frac technologies to new limits. Each of these field experiments costs millions of dollars; also, we don't know if

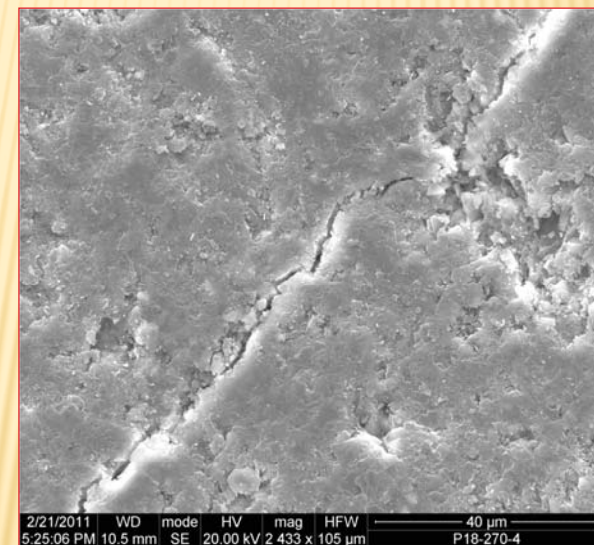
they are inducing damage or stimulating gas production.

The measurement of fundamental physical properties of shales continues to be of great concern, especially now that we are actively pursuing more viscous hydrocarbons. Service companies have basically agreed to disagree regarding the standardization of their measurement procedures, leaving the user to develop their own scaling relationships. Of even more interest is how the microstructure, especially of the organics, changes with maturity and how this influences hydrocarbon storage and deliverability. We will have a mix of presentations based on field and experimental studies.



POSTERS

The Poster Session will include studies ranging from the micro to the microseismic scale. Laboratory hydraulic fracture and NMR, geological, and seismic studies of gas shale will be available for detailed examination and discussion.



July 21, 2011

REGISTRATION AND INFORMATION
Moore Norman Technology Center
7:30 a.m. - 4:30 p.m.

TECHNICAL PROGRAM
9 a.m. - 4:30 p.m.

POSTER SESSION
9:00 a.m. - 4:30 p.m.
(during breaks and lunch)

FURTHER INFORMATION

Technical questions: Carl Sondergeld, Mewbourne School of Petroleum and Geologic Engineering, 405/325-6870, csondergeld@ou.edu. Registration and other information: Oklahoma Geological Survey 405/325-3031 or 800/330-3996; Michelle Summers 405/325-7313, mjsummers@ou.edu; Tammie Creel 405/325-3034, tcreel@ou.edu.