*Note: Field-trip attendees <u>must also register for the conference</u> . Limited number of field-trip seats are available.	*Note: Field-trip attendees must also register for the con
FAX number 405-325-7069	Total Amount Enclosed\$
If you have a special disability, medical, or dietary needs, please check here. $\hfill\Box$	Workshop Registration
rant. Sorry, we are unable to accept credit cards.	Check must accompany this form. Use separate form for each registrant
	E-MAIL:
— ZIP:FAX:	CITY:STATE:
PHONE:	MAILING ADDRESS:
(Nickname for badge) ————————————————————————————————————	AFFILIATION:
(Initial)	NAME: (Last)————————————————————————————————————
PREREGISTRATION FORM-Make checks payable to " <u>University of Oklahoma</u> ." Please fill out form, detach, and return with check to: Oklahoma Geological Survey, 100 E. Boyd, Room N-131, Norman, Oklahoma 73019	PREREGISTRATION FORM—Make checks payable to " <u>University of Oklahoma</u> ." Please fill out form, detach, and return with check to: Oklahoma Geological Survey, 100 E. Boyd,

INFORMATION

Oklahoma Geological Survey 405/325-3031 or 800/330-3996; Michelle Summers 405/325-7313, <u>mjsummers@ou.edu</u>; Sue Crites 405/325-8076, <u>scrites@ou.edu</u>.

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 (MNTC) Main Campus - (405) 364-5763

4701 12th Avenue NW, Norman, Oklahoma <u>Southbound</u> 135 from Oklahoma City take Exit 113 (left exit onto South 77) and turn left on Franklin Rd, at first

exit onto South 77) and turn left on Franklin Rd. at first traffic light. Turn right at MNTC Gate 2 parking lot entrance (just past stop sign at 12th and Franklin).

Northbound 135 (south of Norman) traffic take Exit 112. Turn left on Tecumseh Road. At 2nd traffic light, turn left onto South 77/Flood Ave. Turn right at light onto Franklin Rd. Turn right at MNTC Gate 2 parking lot entrance (just past stop sign at 12th and Franklin). Nonprofit Org. U.S. Postage PAID University of Oklahoma

OKLAHOMA GEOLOGICAL SURVEY College of Earth and Energy University of Oklahoma

NAME OF STREET



Oklahoma Shale Gas and Oil Workshop

November 20, 2013

Oklahoma Geological Survey

G. Randy Keller, Director







Purpose and Scope of Meeting

A nearly decade-long search for shale gas in Oklahoma has expanded from producing gas in the Arkoma Basin to liquid hydrocarbons (condensate and oil) in the western Arkoma Basin, Anadarko Basin (Cana and South Central Oklahoma Oil Province plays), Ardmore Basin, and north-central Oklahoma. This workshop will emphasize lessons learned from operators and researchers in Oklahoma shale gas and oil exploration and development with particular emphasis on the Woodford Shale. Presentations will focus on the geologic, geochemical, petrographic, mineralogical and engineering factors that are beneficial for commercial production of liquid hydrocarbons from tight, silica-rich shale.

Field Trip Description



A one-day field trip, offered on both Tuesday, November 19, and Thursday, November 21, will visit five extended stops in the western Arbuckle Mountains and eastern Criner Hills in southern Oklahoma.

Exposures of the Woodford Shale will be viewed to compare and contrast source-rock and reservoir quality for oil and gas shales, correlate lithologies in outcrop to electric logs in the subsurface, and examine the occurrence, extent, and orientation of fractures in outcrop that are the source of permeability in the subsurface.*

*Note: Field-trip attendees <u>must also register for the workshop</u>. Limited number of field-trip seats are available — register TODAY!

Program Agenda-

- 8:45 Welcoming Address, by Randy KELLER, Oklahoma State Geologist / University of Oklahoma (OU) Mewbourne College of Earth & Energy (MCEE) ConocoPhillips School of Geology & Geophysics
- 2:00 Woodford Shale: Correlating Rock Properties in Outcrop and Core with Wireline Log Characteristics, by Jim PUCKETTE, Oklahoma State University, Stillwater, OK
- 9:30 Overview of Oklahoma Shale Resource Plays, by Brian J. CARDOTT, Oklahoma Geological Survey, Norman, OK
- 10:00 Coffee Break; Exhibits; OGS Publications Available
- 10:30 Keynote Address—Generation, Retention, Recovery: Unconventional Shale Oil from a Geochemist's Perspective, by Tim E. RUBLE, Weatherford Laboratories, Houston, TX
- 11:30 Woodford Exploration in the Anadarko Basin, by Walter J. LAMLE, Devon Energy Corporation, Oklahoma City, OK



LIMITED NUMBER OF SEATS — PLEASE REGISTER EARLY!

12:00 Lunch; Exhibits; OGS Publications Available

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- 1:00 Cana Woodford Shale Play, Anadarko Basin: The Effects of Mudrock Lithologies and Mechanical Stratigraphy on Completion and Production, by Craig D. CALDWELL, Cimarex Energy Company, Tulsa, OK
- 1:30 Data Driven Woodford Shale Risk Characterization, by Kevin MORGAN¹, Phil FOX¹, John THORKELSON¹, Madhav M. KULKARNI¹, Timothy JENSEN¹, ¹Marathon Oil Corporation, Oklahoma City, OK
- 2:00 Woodford Shale Development in the Ardmore Basin, Oklahoma: Initial Thoughts on Beginning an Infill Drilling Program, by Sam HEN-DERSON, Merit Energy Company, Dallas, TX
- 2:30 Coffee Break; Exhibits; OGS Publications Available
- Chemostratigraphy and its Applications to the Woodford Shale, Oklahoma, by Bryan TURNER and Roger M. SLATT, University of Oklahoma, School of Geology and Geophysics, Norman, OK
- 3:30 Influence of Thermal Maturity on Organic Shale Microstructure, by Mark E. CURTIS, University of Oklahoma, Mewbourne School of Petroleum and Geological Engineering, Norman, OK
- 4:00 End of Workshop

CONTINUING EDUCATION CREDITS

8 CEU's or PDH's for workshop 8 CEU's or PDH's for fieldtrip

SUGGESTIONS FOR HOUSING

Embassy Suites Norman 405/253-3539

The Montford Inn 405/321-2200

Courtyard By Marriott Norman 405/701-8900