

# Mississippian Play Workshop

## May 18, 2011



**Oklahoma Geological Survey**

G. Randy Keller, Director

The University of Oklahoma  
MEWBOURNE COLLEGE OF EARTH & ENERGY

### INFORMATION

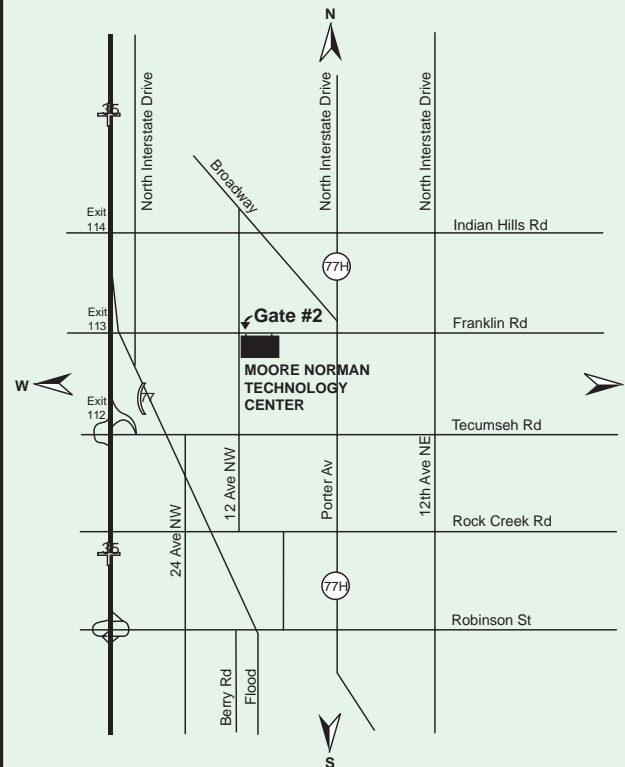
Oklahoma Geological Survey 405/325-3031 or 800/330-3996; Michelle Summers 405/325-7313, [mjsummers@ou.edu](mailto:mjsummers@ou.edu); Tammie Creel 405/325-3034, [tcreel@ou.edu](mailto:tcreel@ou.edu).

### 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.

### HOUSING

Embassy Suites Norman 405/364-8040 (code: MPW)  
Residence Inn By Marriott 405/366-0900 (code: UNOG)



**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) \_\_\_\_\_ (Initial) \_\_\_\_\_  
AFFILIATION: \_\_\_\_\_ (Nickname for badge) \_\_\_\_\_  
MAILING ADDRESS: \_\_\_\_\_  
CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_ PHONE: \_\_\_\_\_  
E-MAIL: \_\_\_\_\_ FAX: \_\_\_\_\_

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

Workshop Registration ..... \$150.00

Sorry, we are unable to accept credit cards.

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

The Mississippian Osage of northern Oklahoma has long been an important producing horizon. This zone has been one of the primary reservoirs almost from the beginning of the Petroleum Industry in Oklahoma. However, in its development, geologists were often confronted by many problems when attempting to correlate and develop this reservoir. The early operators learned that the major part of the production seemed to generally occur at the top of the reservoir, in a residual or detrital chert facies, while the bulk of the reservoir appeared to consist of alternating porous and impermeable strata that was often barren, erratic, and random. This set of assumptions lead to a general misunderstanding of the reservoir's potential which has lead to bypassed reserves.

In the 1960's the Mississippian Osage became the major focus for exploration with the discovery of commercial production in north-central Oklahoma. With this development came the discovery that major reserves could be obtained from almost any stratigraphic interval within the Mississippian Osage. But the problems that faced the early explorationist were also encountered by these operators. Correlation of the strata seemed to suggest a random and erratic depositional pattern, and a lack of understanding of the depositional geometry can lead directly to bypassed reserves.

Today, operators have brought a new life into this reservoir's development. Horizontal drilling

has demonstrated the ability to produce prolific reserves. However, these wells are expensive and the need to understand the targeted reservoirs depositional and producing characteristics couldn't be more important.

The Oklahoma Geological Survey recognizes the need to understand the various complexities inherent with the exploration, development and production of the Mississippian Osage. One of the Survey's primary responsibilities is to disseminate the information needed to assist operators who wish to successfully exploit this reservoir.

This OGS workshop will therefore consist of subjects that operators should find necessary in their search for reserves from this reservoir. These subjects will include papers on the stratigraphy and depositional environments of the Mississippian Osage, exploration concepts for discovering its reservoirs, electric log evaluation, horizontal drilling techniques, and completion procedures.

Field studies will be devoted to understanding the various types of porosities within the Mississippian Osage and to the importance of understanding fracturing, reservoir drainage and in-fill drilling potential. Cores of the Mississippian Osage will be available that have been chosen to provide lithologic examples for many of the concepts presented by the papers.

—Kurt Rottman, Consultant

## Program Agenda

- 9:00 *Welcome and Introduction*, by Larry **GRILLOT**, University of Oklahoma (OU) Mewbourne College of Earth & Energy (MCEE)
- 9:15 *Mississippian Regional Setting and Overview*, by Kurt **ROTTMAN**, Consultant
- 9:30 *Stratigraphic Architecture of the Kinderhookian to Meramecian Series*, by Kurt **ROTTMAN**, Consultant
- 10:30 **Break; Poster Session; OGS Publications Available**
- 11:00 *Seismic Expression of Mississippian Plays*, by Kurt **MARFURT**, OU MCEE ConocoPhillips School of Geology & Geophysics
- 11:30 *Initial results of a Six Horizontal Well Drilling Program targeting Mississippi (Osagean) Reservoirs in NE Oklahoma*, by Shane **MATSON**, Spyglass Energy Group, LLC
- 12:00 **Lunch; Poster Session; OGS Publications Available**
- 1:00 *Petrophysical Evaluation & Identifying Natural Fractures from Conventional Wireline Logs*, by Cody **KNEPPER**, NuTech Energy Alliance
- 1:30 *Borehole Image Interpretation Techniques and Examples: Mississippian of Northeast Oklahoma*, Greg **FLOURNOY**, Schlumberger
- 2:00 *Historical Overview of Mississippian Production in NE Oklahoma*, by Charles **WICKSTROM**, Spyglass Energy Group, LLC
- 2:30 **Break; Poster Session; OGS Publications Available**
- 3:00 *Field Examples of Osagean/Meramecian Reservoir Systems*, by Kurt **ROTTMAN**, Consultant
- 3:45 *Field Examples of Fracturing and Drainage*, by Kurt **ROTTMAN**, Consultant


*Please note: Discussion of presentations may cause minor shifts in scheduling.*

**May 18, 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)



Eight to ten Technical Posters and Exhibitors featuring the Mississippian Play will be on display...