Agenda for Annual Meeting of MSRL
March 19-22, 2018
Austin, Texas

Core Workshop: Held at Bureau of Economic Geology, Core Research Center
Monday, March 19, 8:30 AM – 3:30 PM
Wolfcamp (upper), Delaware Basin: Ruppel, Zhang
Two Fingers (upper Mississippian), Permian Basin: Mauck
Marcellus Fm (upper Devonian), Pennsylvanian: Ko
Austin Gp. (upper Cretaceous), Texas: Loucks, et al
Avalon Fm. (Leonard), Permian Basin: Loucks, et al
Smackover Fm (Jurassic), Texas: Schemper

Main Meeting: Held in ROC (adjacent to Bureau of Economic Geology main building)
Tuesday, March 20, 8:00 AM – 7:00 PM

Oral Presentations
8:00 – 8:20AM Welcome by the Bureau of Economic Geology’s Associate Director for Energy: Shuster
8:20 – 8:40AM Introduction and overview: Ruppel et al

Reservoir Architecture and Attributes
8:40 – 9:10AM Marcellus Formation facies and reservoir quality: Ko
9:10– 9:40AM Stratigraphy, depositional systems, and facies; Barnett Two-Finger Sand: Mauck
9:40 – 10:10AM Wolfcamp Facies and Stacking Patterns in the Delaware Basin: Ruppel
10:10– 10:25AM BREAK
10:25 -10:55AM 3D stratigraphic modeling of Lower Permian plays in the Permian Basin: Dommisse
10:55 – 11:25AM New insights on the geology of the Eagle Ford from hyperspectral imaging: Alnahwi

Pores and Porosity
11:25 –11:55AM New observations on the formation of organic-matter pores: Reed
11:55 –1:00PM LUNCH
1:00 – 1:30PM Organic matter-rich facies and pore networks in the lower Austin Chalk: Loucks
1:30 – 2:00PM Avalon Shale petrography and pore networks; Delaware Basin: Loucks
2:00 – 2:30PM Cyclic variations in pore size distributions; Wolfcamp A, Midland basin: Zhang
2:30 – 3:00PM Wolfcamp pore systems and lithology; Delaware Basin: Reed
3:00 – 3:15PM BREAK
3:15 –3:45PM Advances in NMR-based characterization of mudrocks: Duncan
3:45 – 4:00PM Group Discussion: All
4:00 – 4:15PM Introduction to poster session
4:15 – 7:00PM Evening Poster Session. Hors d’oevres and drinks provided

Poster Presentations
• Lateral variability of lithology and pore systems in an Eagle Ford horizontal core: Reed
• Pore development in sub-mature Eagle Ford rocks: Loucks
• Vertical oil migration and charging in the Wolfcamp; Midland basin: Zhang,
• Oil generation and retention in the Wolfcamp A unit, Midland basin: Sun
• Pore systems of the high-maturity Marcellus Formation: Ko
• Lateral variability of lithology and pore systems in an Eagle Ford horizontal core: Reed
• Characterizing Fracture Spacing and Porosity/Permeability Distribution in Fractured Reservoirs: Sheng
• Hydrocarbon diffusion through mudrock nanopores: Wang,
• Using fractal geometries to evaluate reservoir volume: Sheng
• Effects of microscale compressibility on mudrock porosity and permeability: Sheng
• Measuring mudrock matrix permeability with pressure decay: Peng
Main Meeting: Held in ROC (adjacent to Bureau of Economic Geology main building)
Wednesday, March 21, 8:30 AM – 5:00 PM

Oral Presentations (continued)

Pores and Porosity (continued)
8:00 – 8:30AM  Advances in NMR-based characterization of mudrocks: Duncan

Hydrocarbon chemistry, migration, saturation and organic matter
8:30 –9:00AM  Re-evaluation of TOC and Rock-Eval data using programmed HAWK pyrolysis: Ko
9:00 –9:30AM  Organic petrography and diagenesis of Wolfcamp facies, Midland Basin: Hackley
9:30 –10:00AM Geochemical characterization of organic matter: Wolfcamp A, Midland Basin: Sun
10:00 –10:15AM BREAK
10:15 –10:45AM Controls on variations in oil saturation; Wolfcamp A Delaware Basin: Zhang
10:45 –11:15AM Tracing the sulfur cycle with $\delta^{34}$S measurements: Dolomite associated sulfate: Larson
11:15 –11:45AM Geochemical and biomarker characterization of the Lower Cretaceous OAE1b: Sun

Permeability and Fluid Flow
11:45-12:15PM Object-based mudrock geomechanical permeability modeling: Naraghi
12:15 –1:15PM LUNCH
1:15 –1:45PM Multiscale mudrock permeability based on molecular dynamics and pore networks: Javadpour
1:45 –2:15PM 3D model of mineral distribution in Eagle Ford mudrocks: Tahmasebi

Two Phase Fluid Flow
2:15 –2:45M Mudrock pore network modeling using mercury capillary pressure curves: Javadpour
2:45 –3:15PM Multiphase imbibition in mudrocks using dynamic micro-CT imaging: Peng
3:15 –3:30PM BREAK

New Methodologies and Advances
3:30- 4:00PM  High resolution hyperspectral and dual energy CT: Relationships to log data: Duncan
4:00 –4:30PM Carbon isotopes, trace elements and box models for understanding OAEs: Larson
4:30 – 5:00PM  Group Discussion of Present and Future Research Focus: All
Mudrocks Short Course: Held at Bureau of Economic Geology, Main Building
Thursday, March 22, 8:00 AM – 5:00 PM

Title: Introduction to Mudrock Systems: Origin, Distribution, Fluid flow, and Reservoir Characterization

Classroom: VR room at the Bureau of Economic Geology (Bldg 130) on the Pickle Research Campus.

Instructors:
Dr. Steve Ruppel – Stephen.Ruppel@beg.utexas.edu – (512) 471-2965
Dr. Bob Loucks – Bob.Loucks@beg.utexas.edu – (512) 471-0366
Dr. Farzam Javadpour – Farzam.javadpour@beg.utexas.edu – (512) 232-8068

Agenda:
7:45 – 8:00AM  Meet and greet, coffee and breakfast items provided,  All
8:00 – 9:30AM  Introduction to mudrock systems  Ruppel
9:30 – 10:45AM Introduction to diagenesis of mudrocks  Loucks
10:45 – 12:00PM Pore types and pore networks in mudrock  Loucks
12:00 – 1:00PM  Lunch (catered)  Ruppel
1:00 – 2:30PM  Defining and characterizing mudrock reservoirs  Ruppel
2:30 – 3:45PM  Advances in gas-in-place analysis and methods  Javadpour
3:45 – 5:00PM  Advances in fluid flow in shale  Javadpour