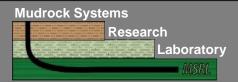
MSRL - 2023 Annual Technical Meeting April 13th-14th, 2023 – in person Bureau of Economic Geology, Austin Texas



Meeting Highlights

- Permian Basin Delaware and Midland Basin pore systems, organic matter characterization, biomarker studies, and facies architecture
- Eagle Ford and Austin Chalk basin modeling and facies architecture
- Gas, water, and oil permeabilities, liquid slip flow and wettability
- Haynesville shale gas studies

Meeting Agenda

Breakfast and Introductions 7:30 - 8:00am

Day 1: Thursday, April 13th, 8:00 AM - 2:30 PM Technical Session

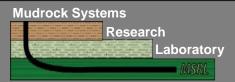
VR room - Bureau of Economic Geology

Technical presentations I - Reservoir Architecture and Attributes in the Permian Basin

- 8:00 8:30 Upscaling high-resolution core-based facies to subsurface basin-scale stratigraphic models for Wolfcamp A and B, and Third Bone Spring Sand, Delaware Basin *Toti Larson* 8:45 9:15 Comparison of Wolfcamp A and B and Third Bone Spring Sand facies from northern Reeves to Pecos Counties, Delaware Basin *Lucy Ko, Toti Larson*
- 9:30 10:00 Implication of pore size distributions measured from N₂ adsorption on fluid saturation in Wolfcamp A and B from Eddy, Reeves, and Pecos Counties, Delaware Basin – *Tongwei Zhang*
- 10:15 10:45 Pore system characterization including SEM imaging and MICP measurements from laminated siltstones in the Third Bone Spring Sand, Delaware Basin *Rob Reed, Toti Larson, and James Greene*
- 11:00 11:45 Applying biomarkers in organic source and depositional condition of Wolfcamp A and B, Delaware Basin *Xun Sun*
- 11:45 12:00 Recap and discussion of the Delaware basin project
- 12:00-1:00pm Lunch
- 1:00 1:30 Facies characterization of Wolfcamp D along a transect from the Eastern Shelf to the Midland Basin *Toti Larson and Rob Reed*
- 1:30 2:00 Thermal maturity and organic-rich net and gross thickness of the Wolfcamp D (Cline Shale) across the Midland Basin *Lucy Ko and Toti Larson*
- 2:00 2:30 Organic matter source type and thermal maturity in the Spraberry Formation, Midland Basin *Tongwei Zhang*

RSVP Here

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Core workshop - Permian Basin cores that include Woodford, Barnett, and Wolfcamp D intervals. Eagle Ford Group core from Dewitt County highlighting East Texas Eagle Ford Facies.			
2:45 – 4:30 Core workshop - Bevo Viewing Room, BE3 PRC206			
Core 1: Reliance Triple Crown (RTC), API: 42371377900000, Pecos County			
Woodford and Barnett Shale (Depths 12,345' – 12,622' and 12,730' – 13,100')			
Core 2: Pan Am Paul Walker #1, API: 420792002200, Cochran County			
Woodford (Depths: 11,650' -11,685')			
Core 3: Adoue 1H, API: 42335357390000, Mitchel County			
Wolfcamp D (Depths 7135' – 7423')			
Core 4: Powell EL 1, API: 42173102040000, Glasscock County			
Wolfcamp D (Depths 9600' – 9725')			
Core 5: Medina, API: 42123338730000, Dewitt County			
Eagle Ford Group (Depths 12,453 – 12,694')			
Happy Hour and Posters			

4:30 – 6:30pm - Stoneburner Family Rock Garden

Poster 1: Pore systems and SEM lithology of the Wolfcamp D (Cline) from the Midland Basin – *Rob Reed*

Poster 2: Shale wettability and implications on EOR – Sheng Peng

Poster 3: Revisiting the Haynesville Formation. Geologic controls on shale gas production

Poster 4: Pore imaging with Atomic Force Microscopy - Priyanka Periwal

Poster 5: Midland basin produced oil geochemistry - Tongwei Zhang, Xun Sun

Poster 6: New high pressure and high temperature gas adsorption system - Tongwei Zhang, Xiaoqiang Li

Day 2: Friday, April 14th, 8:00 AM – 2:30 PM Technical Session

VR room – Bureau of Economic Geology

Technical presentations II - Fluid flow and permeability in mudrock systems

- 8:00 8:30 Liquid slip flow and nanoconfinement effect on viscosity in shale *Sheng Peng*
- 8:45 9:15 Liquid permeability in shale and comparison with gas permeability *Sheng Peng*
- 9:30 10:15 Water and oil flow and CO₂ EOR in shale *Sheng Peng*
- 10:15 10:45 Revisiting the Barnett Shale in the Fort Worth Basin, Wise and Denton Co., Texas: lithofacies, porosity, and permeability variation from condensate to dry gas window – *Lucy Ko and Sheng Peng*

Technical presentations III – Eagle Ford and Austin Chalk Reservoir Architecture and Attributes



11:00 - 11:30	Austin Chalk – Rock facies distributions modeled from core to wireline integrations across the Maverick Basin to Webb County – <i>Toti Larson</i>
11:30 - 12:00	Eagle Ford Group – Dewitt County. East Texas influence on Lower Eagle Ford Group facies – <i>Evan Sivil</i>
12:00 - 1:00pm	Lunch and Discussion
1:00 - 1:30	Organic geochemistry parameter-refined basin modeling of Eagle Ford Group, South Texas – <i>Xun Sun</i>
1:30 – 2:00pm	Revisiting the Haynesville Formation. Geologic controls on shale gas production – <i>MSRL</i> research team
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2:00 – 2:30pm Gas geochemistry and thermal maturity of the Haynesville Formation – *Tongwei Zhang*

2:30 – Meeting adjourns

Field Trip - Saturday, April 15th, 8am – 1pm Eagle Ford Group field trip. Outcrops in Austin, TX