

### Technical Program Highlights

- Focused geologic studies on the Delaware Basin, Midland Basin, Eagle Ford and the Austin Chalk in Texas
- Integrated core characterization methods tying rock and fluid attributes to wireline
- Hydrocarbon geochemistry, expulsion, migration and oil saturation studies
- Understanding fluid transport, permeability and porosity in mudrock systems

#### Day 1: Monday, April 5<sup>th</sup>, 8:00 AM – 12:00 PM Technical session

(Web-based viewing using Zoom video conferencing)

#### Reservoir Architecture and Attributes I: Eagle Ford Group and Austin Chalk Formation

- 8:00–8:30 Eagle Ford Group: Maturity effects on geological measurements (palynofacies, nanofossil assemblages, and organic petrography – *Lucy Ko, Xun Sun, and Toti Larson*)
- 8:30–9:00 Spatial and stratigraphic heterogeneities in lithofacies in the Lower Eagle Ford member - Dimmit, La Salle, and Webb county – *Lucy Ko*
- 9:00–9:30 Initial results of core-based wireline log training datasets for the Eagle Ford Group and Austin Chalk - *Toti Larson, Niranjana Aryal (Schlumberger), and Lucy Ko*
- 9:30–10:00 Produced fluids time lapse geochemistry for the Eagle Ford Group – *Tongwei Zhang and Xun Sun*
- 10:00–10:30 Permeability modeling results for Eagle Ford Group marls – *Farzam Javadpour*
- 10:30–11:00 Overview and characterization of total organic carbon in the Austin Chalk Group along the Onshore northern GOM– *Bob Loucks and Lucy Ko*
- 11:00–12:00 Discussion, new research directions, questions, collaboration potential

#### Day 2: Tuesday, April 6<sup>th</sup>, 8:00 AM – 12:00 PM Technical session

(Web-based viewing using Zoom video conferencing)

#### Fluid Flow and Modeling

- 8:00–8:45 Water-oil displacement and wettability in shale (comparison between Wolfcamp and Eagle Ford Group pore type and size) – *Sheng Peng*
- 8:45–9:15 Gas relative permeability and hysteresis. Impact on production for the Wolfcamp, Eagle Ford Group and Austin Chalk – *Sheng Peng*
- 9:15–9:45 Pressure dependent gas- and relative-permeability (Austin Chalk and Eagle Ford Group) – *Sheng Peng*
- 9:45 – 10:15 Water flow in nanopores with different wettability – *Farzam Javadpour*
- 10:15 –10:45 Pore scale perspective of gas/water two-phase flow in shale – *Farzam Javadpour*
- 10:45 – 11:45 Discussion, new research directions, questions, collaboration potential

**Day 3: Wednesday, April 7<sup>th</sup>, 8:00 AM – 12:00 PM Technical session**  
(Web-based viewing using Zoom video conferencing)

**Reservoir Architecture and Attributes II: Bone Spring Formation, Delaware Basin**

- 8:00–8:30 Stratigraphic framework and implications of chemofacies distribution in 3<sup>rd</sup> Bone Spring and Wolfcamp XY sands – *Toti Larson*
- 8:30–9:00 Lithofacies, diagenesis and pore systems of 2<sup>nd</sup> Bone Spring Lime, Reeves and Pecos County – *Lucy Ko*
- 9:00–9:30 SEM lithologies and pore systems of a basinal 3<sup>rd</sup> Bone Spring core – *Rob Reed*
- 9:30–10:00 Applying biomarkers in organic source of the 3<sup>rd</sup> Bone Spring sand and 2<sup>nd</sup> Bone Spring Lime – *Xun Sun*
- 10:00–10:30 Controls to oil saturation and storage in the 3<sup>rd</sup> Bone Spring Sand and 2<sup>nd</sup> Bone Spring Lime - *Tongwei Zhang*
- 10:30-11:30 Discussion, new research directions, questions, collaboration potential

**Day 4: Thursday, April 8<sup>th</sup>, 8:00 AM – 12:00 PM Technical session**  
(Web-based viewing using Zoom video conferencing)

**Reservoir Architecture and Attributes III: Wolfcamp Formation across the Midland and Delaware Basins**

- 8:00–8:30 Wolfcamp A: Integrating chemofacies stacking patterns with oil saturation and petrophysical data – *Toti Larson and Tongwei Zhang*
- 8:30–9:00 Basinal fine grain carbonate lithologies of the Permian Wolfcamp Formation, Delaware Basin, West Texas – *Rob Reed and Sheng Peng*
- 9:00–9:45 Comparison of sources and depositional character of Wolfcamp A&B Midland and Delaware basin biomarkers, trace metals, isotopes – *Xun Sun and Toti Larson*
- 9:45–10:30 Results of oil storage and pore size distribution studies of Wolfcamp B in the Delaware basins – *Tongwei Zhang*
- 10:30-11:30 Discussion, new research directions, questions, collaboration potential