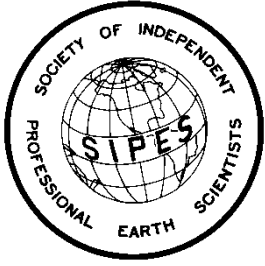


SOCIETY OF INDEPENDENT PROFESSIONAL EARTH SCIENTISTS



DALLAS CHAPTER

P.O. Box 793721

Dallas, TX 75379

MAY 19, 2026 LUNCHEON MEETING

Date: Tuesday May 19, 2026

Place: Prestonwood Country Club – 15909 Preston Road, Dallas, TX 75248

Time: 11:30 A.M. (dining at 11:45 A.M.)

2026 OFFICERS

CHAIRMAN

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214-384-0119

michael@weatheredrockllc.com

VICE-CHAIRMAN

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ACTIVITIES

NATIONAL DIRECTORS

John Stephens

Don Muth

CONTINUING EDUCATION

TEC REPRESENTATIVE

James Henderson

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Topic: CAPILLARY SEAL TRAP RESERVOIRS...OFTEN UNRECOGNIZED AND MAY BE LARGE.

Reservoir rock is initially “water wet”- the original wetting fluid-water occupies pore space. Oil (non-wetting fluid) will only enter and displace pore water if the buoyancy pressure of the entering oil exceeds the capillary pressure of the water. Capillary pressure is dependent upon permeability, water density, interfacial tension and contact angle. A “capillary seal trap” is an oil reservoir having a “weak” reservoir seal which fractures and leaks. The oil column has a restricted height based upon buoyancy pressure not exceeding the reservoir seal strength. Once the oil column buoyancy pressure exceeds the capillary seal strength, the trap seal leaks but does not empty, much like a bathtub overflowing. The updip or overlying reservoir seal breaks with noted fractures creating a pressure drop. Gas leaves the saturated oil column and moves upward through fractures into the overlying / updip rock column. Cores may note fractures with oil lining. A “gas column” will form in the same stratigraphic reservoir rock if appropriate porosity and permeability is present. Such gas columns may have significant column height. If porosity/perm is insufficient, the fractured rock will not produce even with “oil lining fractures”. Upward gas migration with residual gas liquids may be noted at the surface with geo-chemical soil analysis. This talk will discuss fluid pressure gradient from DST data, core data, oil/gas column heights and other to indicate an oil column may be present below a low perm zone which tested water.

Speaker: Donald P. Muth, Sr. is an active independent AAPG Certified petroleum geologist and consultant. He has over 45 years of diverse industry experience in petroleum exploration, development, exploitation, expert witness, reserve evaluation, unitization and other in multiple basins using integrated data analysis. Don is a 1979 geology graduate from Auburn University and 1989 MBA grad from University of New Orleans. East Texas natural gas and Jurassic Smackover lithium development are his current interests. He enjoys learning and writing.



Donald P. Muth, Sr., AAPG Certified Petroleum Geologist

Please RSVP by 12:00 Noon on Wednesday, May 13, 2026 to

**Gary Knapp, SIPES-Dallas Chapter Secretary,
at gsonofbud@comcast.net or by phone 713-376-0855.**

Guests are welcome. Their lunch expense is \$40.

Dallas Chapter invites potential new members by paying for their meal.

Upcoming Events

Independents Day Dinner June-July 2026