Greetings from Cowtown!

Our last BOD meeting was held in February in Corpus Christi. It is our custom to visit the hosting chapter of the upcoming national convention - its city and its meeting - to get better acquainted and to show our appreciation of their often-epic efforts. Hosting is hard work! Fifteen representatives participated in ranging discussions doing the business of all SIPES members. Their dedication to the volunteer mission is exemplary. Several initiatives were proposed and discussed - including updates to our website, increased BOD representation among the chapters, the path forward, and the election of new officers for the 2024-2025 service year. Stay tuned as more on these subjects will be published soon.

Planning for the 2024 SIPES National Convention and 60th Annual Meeting continues with vigor. Advertising and sponsorships have reached record levels - setting a high bar for future convention organizers. Speakers for the technical sessions and special events have generously donated their time and expertise. The programs will be augmented by choices for afternoon excursions suitable for all guests. It will surely be a grand time for all members to gather in fellowship & fun - all contributing to your successful independence. Finally, a huge salute to the SIPES Corpus Christi Chapter for its unqualified support and volunteer spirit.

Register before May 17 and join us in Corpus!

It is SIPES Foundation scholarship time again. Applications were sent to universities and colleges in February, and the deadline for receipt is July 1, 2024. The core initiative of the SIPES Foundation is to provide meaningful financial support to deserving students working toward degrees in the earth sciences. The process: gather applications and sponsor letters, evaluate that data, and create a seriatim of the worthiest of the all-worthy candidates. It requires experience, judgement, and a discerning ability to match need with potential. A team effort, starting with HQ staff working in tandem with the Scholarship Committee, is a months-long process. Kudos to these operative folks!

News from the SIPES National office includes the presence of Nicole Christofilis as Operations Director. She joined the staff January 2 - in time to immediately begin planning for our quarterly board meeting; simultaneously picking up the reins assisting with the myriad details of our 2024 convention. Nicole has previous SIPES experience having served on the convention team. We are excited to have her join HQ and look forward to her leadership of the office.

We look forward to seeing you at the convention in Corpus Christi in June. Come, join fellow members in networking and new experiences - there is something for all to learn.

Thank you for being a SIPES member - it is my honor to serve as your president.

Talk soon -
Dan Earl Duggan, #3230
Fort Worth, TX
Migration of dolomite fines (dolo-trash) in Clear Fork reservoir, Goldsmith field, Permian Basin

Robert F. Lindsay, #3605, Lindsay Consulting, LLC

Summary
Dolomite fines, referred to as dolo-trash and capable of migration through porous strata, were identified in porous (Leonardian) Clear Fork Formation reservoir rocks in Goldsmith field. During Clear Fork deposition the future site of Goldsmith field was positioned within the inner shelf of the Central Basin Platform (Figure 1). Goldsmith field was discovered in 1934, with initial production from porous (Late Leonardian-Early Guadalupian) Lower San Andres strata.

While implementing a secondary recovery waterflood in Lower San Andres reservoir, deeper drilling for a source of injection water discovered an additional reservoir in porous Clear Fork strata and overlying porous Glorieta strata. Clear Fork reservoir is productive from low porosity-permeability tidal flat, shallow marine, and “deeper” shallow marine lithofacies (Figure 2). Transgressive dolomitic shale to shale lithofacies form vertical barriers to fluid flow along with storm laminae of argillaceous-rich siliciclastic strata (Figure 3).

Cores were acquired from Middle and Upper Clear Fork reservoir strata and overlying Glorieta reservoir strata for description and reservoir characterization. Surprisingly, when slabbed core was wetted for description and as the core dried a film of migrated fines appeared on the face of slabbed core (Figures 4 and 5). When the film was washed off the slabbed core two more times, each time the film of migrated fines would reappear after the core dried. Migrated fines ascended through the core by capillary action. Migrated fines were sampled by washing the film from six intervals of porous strata into vials, spinning vials in a centrifuge, draining the water, and sampling the fines. Migrated fines were studied via SEM and EDAX, which identified dolomite crystals and clumps of dolomite crystals (Figure 5).

Normally, migration of fines within a reservoir is due to kaolinite clay, so this was a unique and surprising discovery.

Theory and/or Method
Dolomite fines were produced by Late Eocene-Early Miocene meteoric recharge in the Permian Basin (Figure 6). Uplift of the west side of the Permian Basin provided by development of the Southern Rocky Mountain Epeirogene (Eaton, 2008), charged the subsurface with hot, high-pressure, high-volume meteoric water. Meteoric recharge swept through porous Clear Fork reservoir strata and dissolved anhydrite cement. Dissolution formed moldic porosity and freed individual dolomite crystals and clumps of dolomite crystals to migrate within the pore system. (Figures 4 and 5).
During Middle to Upper Miocene, down faulting formed the Rio Grande Rift and destroyed the meteoric recharge area, with limited recharge into the subsurface of cool, low-pressure, low-volume meteoric water from isolated, small mountain ranges. This allowed individual reservoirs to completely resaturate or partially resaturate with mobile oil (back-fill), while some reservoirs never resaturated with mobile oil, and one reservoir resaturated with gas.
How many remember the Arab oil embargo in 1973?

The OPEC cartel restricted the production of oil to those nations that supported Israel in the Arab-Israel War in 1973. The price of gasoline immediately went from 39 cents to 53 cents per gallon and the price of a barrel of oil went from $2.90 to $11.65 by the end of March 1974 when the conflict concluded. This was due to the cessation of military activity between Israel and Syria and Egypt as well as a commitment from Secretary of State Henry Kissinger to sell arms to Saudi Arabia - with the stipulation that they not be used against Israel. This war was a wake-up call to the vulnerability of imported oil. This led President Nixon to develop a strategy to increase domestic production. The initial push was toward energy conservation such as home insulation. This was also the beginning of the 55mph national speed limit that lasted until 1987. The ensuing years saw the development of national energy acts and policies beginning in 1978 as were discussed in my previous SIPES Newsletter article.

Does history repeat itself? Do the events of 50 years ago resemble the turmoil in the Middle East today?

With the current Israel – Hamas conflict and the indisputable fact of Iranian backing of terrorists and paramilitary organizations to the inclusion of open hostilities to U.S. bases in the region, I can think of no better effective, non-military solution than to enforce an embargo of the oil exports of Iran. Why the delay? I can only speculate that it maybe an internal administration strategy in an election year to delay. The consequences of such an action would certainly raise oil prices domestically, as well as perhaps upset China who is the largest buyer of Iranian oil. Iranian oil exports have increased annually since 2020 and in 2023 they averaged 1.4MMBOPD (see chart).

While I am discussing administration policy, there was an interesting op-ed in the Wall Street Journal (5 Feb 24): the Biden White House has requested a “freeze” approving liquefied natural gas (LNG) export projects, although the Energy Department is required by law to approve permits to export LNG to countries with which the U.S. doesn’t have free trade agreements if they are in the public interest. This Administration is redefining “public interest” to include its potential impact on climate change. The WSJ article goes on to explain that foreign investment dollars could shift to other nations such as Qatar which has large gas reserves but is a long-term risk to Middle East disruptions, or Russia which is in turmoil. This new policy of the current administration could have a deleterious impact to this country especially to the Texas and Louisiana Gulf Coast areas.

Incidentally, this same WSJ op-ed on 5 Feb 2024 reviewed a bill in the State of Washington that would ban those automobile tires that create a drag on fuel efficiency. This rolling resistance is a factor of tire weight and tread depth, such as snow and mud tires. How this would not make vehicles less safe, I don’t know. To me this proposed bill ranks right up there with the banning the use of natural gas stoves or the use of dishwashers! All in the name of saving the climate from warming. Maybe these progressives should talk to those countries that are slashing and burning the tropical forests!

Dave Cromwell  
Vice President National Energy
Many thanks to the members listed below* for their continued support of our society.

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* Donors as of April 25, 2024
CHAPTER NEWS and UPDATES

Midland Chapter Meeting - March 2023

Using Novel Technologies and AI to Understand Wells Downhole Conditions

Dr. Sebastian Mannai
CEO & Founder of Acoustic Wells, Inc.
Boston, MA

Abstract
Petroleum engineers rely upon a variety of data streams from the field to optimize production and maintain safe, environmentally responsible operations. Given the challenges of operating assets spread over vast areas and the inadequacies of workflows relying upon manual measurements and communication, automated data gathering and telemetry have long been key focuses in the industry. Today, SCADA systems along with industrial controllers are the established standard to address those issues. However, they suffer from severe drawbacks: mediocre data resolution and integrity, high implementation costs and complexity as well as siloed data streams leading most information to be lost or stranded on the field. In this presentation, we introduce state-of-the-art developments in terms of hardware and computing technologies that leverage advances in semi-conductors and AI to allow low friction, turnkey, high-resolution data collection and field automation. These are combined with novel automated processing frameworks that provide high value insights without drowning users in impractical amounts of data.

Sebastien Mannai
Dr. Sebastien Mannai is the CEO of Acoustic Wells, founded in 2019 in Boston where he currently lives. He is a PhD graduate and former researcher from the Aerospace department at MIT. Previously, Sebastien conducted research with major industrial companies such as Schlumberger and Siemens on using AI to better control and understand complex industrial systems. Specifically, he focused his PhD thesis on modelling and analyzing rod pumped wells. Today at Acoustic Wells, Sebastien is in charge of the physical modelling of the well systems and equipment manufacturing.

Midland Chapter Meeting - April 2023

Identifying Pay Zones and Understanding Petroleum Systems in Petrophysically Difficult to Interpret Plays by Analyzing Volatiles from Cuttings and Core with Rock Volatiles Stratigraphy

Christopher Smith, PhD
Senior Chemist,
Advanced Hydrocarbon Stratigraphy
Tulsa, OK

Abstract
Rock volatiles stratigraphy (RVS) has been pioneered and developed over the last ten years to provide actionable information to oil and gas operators based on detailed geochemical analysis of volatile components present in geological samples, though recently this has expanded to include helium exploration, geothermal, and carbon capture storage applications. Samples analyzed are typically cuttings and core, but muds and produced fluids are also analyzed on the same instrumentation allowing for direct comparisons.

Past work in the Permian for RVS has included examinations of the Wolfcamp and the Avalon/Leonard shales in both the Midland and Delaware basins. In the cases of these tight shales, the HC resource is retained in the rock in a relatively representative manner allowing for an X-marks-the-spot style approach to understand resource concentration and composition using cuttings samples sealed at the well site. Examples of selecting optimal landing zones based on resource content and rock properties from RVS for the Wolfcamp and identifying by-passed pay in the Avalon were discussed.

Christopher Smith
Christopher Smith has been a Senior Chemist with Advanced Hydrocarbon Stratigraphy (AHS) since 2019. He works on data analysis, instrumentation (including possible well-site instruments), client engagements, and business development. Most of his work focuses on the North Slope in Alaska, the Delaware Basin, the Anadarko and Arkoma basins in Oklahoma, and the Marcellus. He earned his PhD in analytical chemistry from the University of Arizona in 2018 with focuses on instrumentation, data analysis programming, spectroscopy, electrophysiology, surfactants, and surface modification chemistries. He completed his undergraduate work cum laude with degrees in chemistry, history, and biochemistry from the University of Tulsa.
Permian Basin Brine Mining

Stephen R. Robichaud, PG, CPG
Nicholas W. Robichaud, BS, Chem.
Echelon Exploration & Production Company, Inc.
Midland, TX & Lakewood, CO

Abstract
In 1923 when Santa Rita #1 blew in (out), the produced oil had to be collected from the draw down which it flowed before it could be sold. The co-produced brine had no value, so it was not collected.

A century later we recognize that this brine has value for the minerals which are dissolved within. Indeed, sellable minerals are today produced from brines, both within the USA and world wide, some of which are brines co-produced with crude oil. Oklahoma is the #3 producer of iodine in the world. Iodine production in Oklahoma is about 1200 metric tons per year - about 5% of the world market. All of this iodine is recovered from Anadarko Basin brine wells, completed at about 7500 feet depth in the same Early Pennsylvanian sandstones which produce natural gas.

The USA is the second largest producer of bromine in the world. Since 2007, all of that bromine was produced from facilities located in southern Arkansas where it is produced solely from oilfield brines produced from the Jurassic age Smackover Formation.

Cedar Lake in Gaines County, Texas (Permian Basin), is the site of a facility which produces sodium sulfate from the brine which is naturally present in Cedar Lake. Subsurface brines in the Permian Basin carry adequate concentrations of sodium and sulfate to yield the same.

Lithium is known to exist in Permian Basin brines, and it has been identified as a producible mineral in the Smackover Formation of southern Arkansas. A joint venture has been announced in Arkansas to process the Smackover brine from which bromine has been produced to recover lithium prior to re-injecting the brine back into the Smackover.

Other theoretically recoverable elements which are known to exist in Permian Basin brines are: barium, magnesium, potassium and strontium.

A substantial set of data exists as a starting point for understanding the extent to which elements in these brines can be mined. These data do have their limitations, but exploration strategies can be gleaned from them, e.g. the distribution of lithium in subsurface brines might be related to the bromine/iodine ratio. Such data mining methods can be useful tools for exploration.

The geographic mapping of elemental concentrations (within and across stratigraphic boundaries) and how these concentrations relate to the occurrences in the Permian Basin of Mississippi Valley Type (MVT) mineral assemblages might help identify a mineable brine location.

Steve Robichaud
Steve Robichaud is Founder, President and Geologist at Echelon Exploration & Production Company, Inc. Mr. Robichaud holds a BS in Geology from Rensselaer Polytechnic Institute in Troy, New York, and an MS in Geology from Louisiana State University in Baton Rouge. Mr. Robichaud began his oil industry experience in 1979 at Getty Oil Company in Midland, and then he worked for Coastal Oil and Gas/Border Exploration Company. Since 1984, he has been a consulting geologist and independent oil businessman, specializing in Permian Basin stratigraphy as applied to reservoir characterization, acquisition of producing properties, wastewater disposal, and the relationship between regional geologic phenomena and the habitat of hydrocarbons in the Permian Basin. His current work focuses on the economic resource value of minerals which could be recovered from the hypersaline brines associated with the oil and gas production of the Permian Basin.

SIPES Online Membership Directory Photos

If we do not have your photo on file, that space is filled with the SIPES logo. Please review your directory entry, and advise us of any updates, and email your photo, if necessary, to the SIPES office at sipes@sipes.org.
Success and Failure Factors for Cyclic Gas Injection in Unconventional Reservoirs

Tuba Firincioglu, Ph.D.
Director of Operations at NITEC LLC

Abstract

Field application of cyclic gas injection (CGI) has proven to increase rates and recovery factors in Eagle Ford. However, despite years of experience in conventional reservoirs, a comprehensive understanding of the factors that yield to a successful CGI project in unconventional plays is yet to be developed. Because a hydraulically created fracture system controls the flow while the fluid is stored in ultra-tight, nanoporous matrix, integrated understanding of the physics of the unconventional reservoir, the fluid system, exchange between matrix and fracture media, and the dynamic nature of the hydraulic fracture properties is essential for the successful design and implementation of CGI in unconventional. This presentation focused on the unconventional aspects of CGI and demonstrated utilization of modeling solutions to understand the reservoir, design a successful gas injection project, and quantify its success. The key take aways of the presentation were the success factors of CGI projects, importance of containment of gas and contact of gas with oil, and the impact of timing on the economic viability of implementation.

Tuba Firincioglu
Tuba Firincioglu is the Managing Director at NITEC LLC. Her focus is on the application of reservoir engineering technologies for the resolution of complex reservoir development programs. Firincioglu is an expert in numerical simulation of fractured reservoirs and hydrocarbon phase behavior under confinement. She has performed or managed over 100 reservoir studies involving dry gas, gas condensate, volatile oil, and black-oil fields; including modeling and design of many conventional and unconventional EOR applications. Her experience covers most geological depositional environments from fluvial sands to carbonates. Tuba currently serves on the SPE Reservoir Advisory Committee and SPE Forum Steering and Implementation Committee. She is the recipient of the 2020 Rocky Mountain Reservoir Description and Dynamics Award. She holds a B.S. degree from Istanbul Technical University, an M.S. degree from Stanford University, and a Ph.D. from Colorado School of Mines, all in Petroleum Engineering.

Where Is All of This Gas Going to Come From?
Expect a Natural Gas Price “Break-Out” in Mid-2023

Donald Muth
President of Oakmont Minerals
AAPG Certified Petroleum Geologist, MBA

Abstract

February 24, 2023, marked the one-year Russian invasion of Ukraine. Western EU countries and the U.S. administration have enacted 2,500 economic restrictions and sanctions on Russia. Globalization is all but over. Western Europe has opted for U.S. LNG and other stable sources for natural gas. A vast LNG infrastructure is under construction in Europe indicating a commitment to LNG and natural gas. LNG exports from the U.S. are expected to exceed 19 BCFGPD in 2026. LNG export totaled 9.7 BCFGPD in 2021.

A developing world food shortage needs to be avoided. A shortage of potash and phosphate will make nitrogen-based fertilizer the product of choice having natural gas as feedstock. More natural gas at a reasonable price is needed for anhydrous ammonia fertilizer to avoid famines this year and beyond.

The European Union Parliament’s Taxonomy Delegated Act, effective January 1, 2023, qualifies natural gas/nuclear projects used to replace oil and coal fuel energy sources as environmentally sustainable economic “green” activities. The EU legislative policy change allows fossil fuel natural gas projects access to low interest rate loans and national subsides.

Natural gas is the low carbon energy fuel. Economic necessity will push natural gas prices toward $5.00 in the U.S. by the third quarter of 2023.

Donald Muth
Donald Muth, Sr., is president and owner of Oakmont Minerals, Inc., since 2005 providing subsurface analytical studies, evaluations, and appraisals of petroleum assets for exploration, development and more. An Auburn University geology graduate and MBA grad from the University of New Orleans, Don has 40+ years in upstream energy across multiple basins including West Texas, Ark-La-Tex, S. Louisiana Salt basin, SW Alabama, Williston basin and more. His interests include LNG, sustainability, and writing to name a few.
An Unconventional Approach to a Difficult-to-Develop Target: Application of Geomechanics and Clay Speciated Workflow to Successfully Drill the Wolfcamp D Formation in the Midland Basin

David Brannan
CrownQuest Operating LLC Geosciences
Midland, TX

Abstract
The Wolfcamp D is a prolific target within the Midland Basin due to its lateral extent and positive economic returns. Wolfcamp D specific hazards continue to be notoriously costly for drilling operations due to increased borehole instability, bit balling, and the resulting challenges for running casing to total depth (TD). In this paper, a geomechanically validated facies model workflow in conjunction with geomodelling, DFIT (diagnostic fracture injection test), and field-based observations will be presented to avoid formation-induced drilling problems. Instituting a geomechanics facies-based tool is quantitative and repeatable for target delineation. Operator implementation of this approach is both robust and economically feasible.

David Brannan
David has more than eight years of industry experience. He is currently a geoscientist with CrownQuest Operating LLC. He has performed operations, development, exploration, and optimization modeling pertaining to drilling and reservoir engineering domains. David holds B.S and M.S. degrees in Geosciences from Missouri State University and Texas Tech University, respectively. He is a Texas Professional Geologist (#15183).

Middle East Super Giant Oil Field Discoveries: A Peak into the World’s Largest Reservoir – Ghawar Arab D Reservoir

Robert (Bob) F. Lindsay
Lindsay Consulting LLC
Affiliate Professor Brigham Young University
Adjunct Professor
University of Texas at the Permian Basin

Abstract
Discoveries of oil in the Middle East were first made in the Zagros Mountain fold belt. The first discovery was Musjid-i-Suleiman Field in Iran in 1908. The second discovery was Kirkuk Field in Iraq in 1927. The third discovery was Awaili Field in 1932 on the island of Bahrain. An oil concession was negotiated for exploration in Arabia leading to a discovery on Dammam Dome in 1938.

In 1948 Ghawar Field was discovered and produces from the Arab D reservoir. It is located in Al-Ahsa Province of Saudi Arabia. Ghawar Field is 250 km (155 mi) long and up to 30 km (18.5 mi) wide and has over 300 m (1,000 ft) of structural closure. It contains a gross pay interval of 60 m (200 ft) with an average porosity of more than 15% porosity with permeability of several Darcy’s. Arab ‘D’ oil is intermediate grade of 30-310 API.

Arab D reservoirs are composed of highly porous & permeable carbonate strata with nine lithofacies identified within it. These lithofacies were deposited in 1) inner ramp; 2) ramp crest shoal; 3) middle ramp; 4) outer ramp; and 5) basin depositional settings. The vertical seal is the Arab D evaporite. The lateral seal is the transition zone from down dip, porous, grain-rich lithofacies into up-dip, nonporous, mud-rich lithofacies. Jurassic carbonate source rocks from bottom to top are the: 1) Tuwaiq Mountain; 2) Hanifa; and the 3) Basal Jubaila Formations. These source rocks supplied vast amounts of oil to several Jurassic super giant carbonate reservoirs. Source rocks contain 1-17% TOC and contain up to 22% porosity composed of organopores.

(Continued next page)
Robert (Bob) F. Lindsay
Dr. Robert “Bob” Lindsay is a native of Utah. He received his B.Sc. in Geology from Weber State (1974) and followed it up with an M.Sc. in Geology from Brigham Young University in 1976. He worked for Gulf Oil, Chevron, ChevronTexaco, and Saudi Aramco. While at Saudi Aramco, he completed his PhD in Geology from the University of Aberdeen in 2014 and taught graduate-level carbonate sedimentology at King Faud University of Petroleum & Minerals. He is currently active as a consultant and teaches as an Affiliated Professor at Brigham Young University. He has served as editor and chairman of various industry professional organizations: SEPM, WTGS & SIPES to name a few. He is an Affiliate Professor at BYU and Adjunct Professor at the University of Texas Permian Basin. He has published more than 100 abstracts for poster sessions and papers. His interests are many and include running field trips, giving talks, teaching short courses, serving on academia boards and of course consulting. Bob and his wife Linda have five children, 20 grandchildren, and two great-grandchildren.

Midland Chapter Meeting – January 2024

Helium Exploration Workflow in the Four Corners area, Navajo Nation

Mark Andreason
Vice President Geosciences
Navajo Nation Oil and Gas Co.

Abstract
Very high concentrations of helium (5-10%) have been historically discovered and produced within the Four Corners region as a byproduct of oil and gas exploration. The purposeful exploration for helium deposits requires an understanding of the helium system and what exploratory tools best take advantage of helium’s unique system. From 2020-2021, NNOGC, funded by the U.S. Dept. of Interior, conducted a detailed study of over 1.7 million acres in the Four Corners area to better understand the mechanisms that result in the accumulation of high helium deposits and to identify new potential helium accumulations. Two aspects of the study were discussed: 1) a high-resolution aeromagnetic data over an area that contains the highest concentration of known helium deposits to better understand the source, migration, and possibly trapping aspects and 2) a high-density soil gas sampling survey over several known and prospective helium deposits to see if there is a relationship between subsurface helium deposits and helium soil gas concentrations.

The most helium prospective areas, as determined by this study, are basement highs intersected by basement lineaments and intermediate-depth intrusive bodies. Over 200 untested potential helium deposits were identified within the study area meeting these criteria. Thirty-five (35) of these basement lineament-intrusive overlap areas had been previously tested resulting in a 75% success rate for finding significant high helium-rich deposits. Helium soil gas sampling was also found to be indicative of identifying subsurface helium deposits and is a useful and cost-effective method to reduce the exploratory risks.

Mark Andreason
Mark is Vice President Geosciences, Navajo Nation Oil & Gas Company; with 38 years in the oil & gas industry working exploration and development projects both internationally and domestically. He has international experience in Southeast Asia, Brazil, China, and Russia; North American experience in East Texas, West Texas, South Texas, North Texas, Gulf Coast, GOM, Oklahoma basins, Michigan basin, Illinois basin, Appalachian basin, and Four Corners area. Mark formed and managed a small domestic oil & gas E&P company in the Michigan Basin, Northshore Petroleum LLC. Previous Companies: Unocal, SM Energy, Contango Oil & Gas, Castleton Resources. He has B.S. and M.S., Geological Sciences, University of Texas at Austin.

SIPES Speaker Gifts
The SIPES National Office has various speaker gifts available for purchase — from coffee cups to geode bookends, hats and more!
Houston Chapter

The SIPES Houston chapter is forging ahead with its mission to be the preeminent organization for furthering the professional and business interests of independent producers, prospectors and investors.

A few highlights so far in 2024:

Lunch Meeting Speakers
February – Donald Cowden – “South Freshwater Bayou Prospect Vermilion Parish, Louisiana”

March – John Dvorak – “Beyond Plate Tectonics”
April – Deborah King Sacrey – “How Machine Learning Can Help with the Interpretation of the Subsurface”

In April, SIPES Houston held its third annual Chili Cook-off at a local brewery. Teams prepared their unique chili recipes, which were enjoyed by all, along with local brews. This year’s winner was Scott Wessels. The event was sponsored by Stratagraph. Profits go towards our Maps In Schools program to spread the gospel of STEM, and oil and gas specifically.

In May, SIPES Houston will host its third invitation-only Deal-Buyers event connecting working interest buyers with high-quality conventional prospects. Please email Chapter President Jeff Allen for more information.

jeff@allenenergylc.com

CHAPTER NEWS and UPDATES continued

IN MEMORIAM

We note the passing of the following members:

Garnet W. "GW" Brock, #2516 of Midland, Texas who died on August 16, 2023

Carl D. Musgrove, #3081 of Corpus Christ, Texas who died on December 26, 2023

Arthur Trowbridge #798 of Dallas, Texas who died on August 15, 2023

Jack Cartwright #515 of Midland, Texas who died on September 30, 2023

Ed B. Picou, Jr., #2218 of Tulsa, Oklahoma who died on January 30, 2024

George D. Severson, #1922 of Bellaire, Texas who died on January 17, 2024
Corpus Christi news

The Corpus Christi SIPES Chapter ended its 2023 season with a wonderful Christmas Party at the Corpus Christi Yacht Club.

The 2024 technical season started with Scott Hines, #3532, of Aurora Resources Company, who made an excellent presentation on Groundwater Protection Requirements; Rules, Recommendations, and Responsibilities.

In February, we hosted the National Board of Directors for its quarterly meeting. Monday afternoon, we were treated to a boat tour of the inner harbor for the Port of Corpus Christi.

On Tuesday, the board joined us for our February meeting. The speaker was Dan Pedrotti, #1299, of Suemaur Nouveau Exploration. He talked about 60 Years as an Independent Geologist. Both Dan’s presentation and the inner harbor tour were glimpses into the offerings for the Diamond 60th Annual Meeting and 2024 Convention.

There is a great line up of technical talks, morning and afternoon tours. The Geomorphology and Geologic field trip with Ecological Observations will be the most exciting geology you’ve ever experienced all in 55 ft. of elevation. Given that Corpus Christi is the Birdiest City in America, an interpretive ranger with Texas Parks and Wildlife will join us to provide insight to the flora and fauna of these natural field trip stops.

Other activities planned include the boat tour of the inner harbor, a tour of Cheniere’s LNG facilities, bay tours, and visits to the Texas State Aquarium and South Texas Museum for the Arts. A cooking class, tours of historic Corpus Christi or Rockport/Fulton are also options.

Come join us for A Toast At The Coast! and celebrate SIPES’ 60th Diamond Anniversary and Annual Meeting, June 10-13, 2024!

Be sure to make your hotel reservation at the Omni Corpus Christi Hotel before May 15, and register for the convention at the early bird rates by May 17.

Links to both on the sipes web site - sipes.org
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Diamond — $4000
Magnum Producing - Rajan Ahuja, #2143 - Corpus Christi, TX

Emerald — $3,000
Hill Geophysical Consulting, LLC - Kevin B. Hill #3583 - Shreveport, LA
Icarus oil and Gas, Inc. - Barry Rava #3198 - Corpus Christi, TX
John H. Newberry, #2634 - Austin, TX

Platinum — $2,000
American Bank - John Norris - Corpus Christi, TX
Aurora Resources Corp. - B. Scott Hines, #3532 - Corpus Christi, TX
Beryl Oil and Gas LP - Mike Party, #3480 - Midland, TX
Genesis Fluids - Casey Jones - Oklahoma City, OK
Lauson Drilling & Engineering - Clayton Bubak - Alleyton, TX
Nye Oil, LLC - Patrick A. Nye, #3105 - Corpus Christi, TX
Paloma Operating, LLC - Darrell Atkins - Corpus Christi, TX
Sebring Exploration - Earl M. Sebring, #2836 - Midland, TX
Thunder Exploration, Inc. - Walter S. Light, Jr., #3265 - Houston, TX
Texegy - Rajan Ahuja, #2985 - Corpus Christi, TX

Gold — $1,000
Wendell R. Creech, #3308 - Midland, TX
Energy Advisors Group - Sara Davis - Houston, TX
Duncan Oil - Tiffany Stephens, Jr. Member - Oklahoma City, OK
Great Western Drilling, Ltd. - Russell Richards, Ltd. Member - Midland, TX
Hydrocarbon Operating - Brian S. Calhoun, #1586 - Corpus Christi, TX
Kirby & Associates - Thomas Kirby, #1615 - San Antonio, TX
Law Office of J. Reese Buchanan - Reese Buchanan - Corpus Christi, TX
M&M Exploration, Inc. - Michael N. Austin, #2366 - Westminster, CO
Maddox Oil - Marc D. Maddox, #2777 - Midland TX
Milagro Resources - David Eyler, #2314 - Midland, TX
Padre Tubular, Inc. - Tom Herrlich - Corpus Christi, TX
Panex Operating, LLC - P. Austin Nye, #3607 - Corpus Christi, TX
Riviera Exploration - H. Tony Hauglum, #2807 - Corpus Christi, TX
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Silver — $500

First Rock - Gregg Robertson - Corpus Christi, TX
James Gilbert - Iowa Park, TX
Image Resources - Frank Cornish, #3128 - Corpus Christi, TX
Paleozoic Petroleum - David Cromwell #3503 - Midland, TX
SueMaur Nouveau Exploration - Dan Pedrotti #1299 - Corpus Christi, TX

WELCOME NEW MEMBERS

In accordance with the SIPES Constitution, By-Laws and Code of Ethics, the following list includes new members who have been unanimously approved by the SIPES Membership Committee. These members have completed the 30-day waiting period and we welcome them as new members of the Society.

Dan Earl Duggan, National Membership Committee

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<th>SIPES No.</th>
<th>Name</th>
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<td>Ltd.</td>
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<td>Billy W. Harris</td>
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<td>W. Creech</td>
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<td>3636</td>
<td>Mark C. McKeehan</td>
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<td>D. Duggan</td>
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<td>3638</td>
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<td>Mark N. Varhaug</td>
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<td>Raymond M. Pierson</td>
<td>Denver</td>
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I diligently worked in the oil and gas industry from 1973 to 1990 after earning my MS degree at the University of Arizona. In 1973, I was hired as one of the first two female geologists at Denver Amoco. I loved working in the oil and gas industry, first for Amoco and later as an “independent geologist”. In 1990, during a slow period in the oil and gas industry, I cross-trained in the field of “environmental sciences and engineering” at the Colorado School of Mines. In 1991, I landed a job as the manager of the “Rocky Flats Geological Characterization Program.” (During my employment at Rocky Flats, I completed an MS degree in Hydrogeology.)

Realizing that my days were numbered at Rocky Flats, in 1995 I left my job with a “buy-out offer” when I was a single parent and sole provider for my daughter and myself. I then worked full-time on my PhD program at Mines (which focused on oil and gas exploration and development). I completed my PhD in 1999. During my educational program, I received a SIPES scholarship for $1000. To this day I feel extremely grateful for that kind gift. The SIPES gift provided financial relief, freedom for me to pursue my passion, and opportunity for personal development with reduced stress. Most importantly, receiving that scholarship increased my self confidence knowing that my long-term friends and colleagues believed in me.

Connie Knight PhD
SIPES #3089
Golden, CO

Did you or someone you know receive a scholarship from the SIPES Foundation? We would love to know about it. Send your story to the National office at sipes@sipes.org.

The SIPES Foundation cumulative contributions list for YTD 2024 will be included in the next newsletter.

The SIPES Foundation Board of Directors is grateful to all of the generous donors who make the scholarships possible.
## SIPES Chapter Information

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<td>Austin Nye</td>
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<td><strong>HOUSTON</strong></td>
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<td><strong>MIDLAND</strong></td>
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<td><strong>NEW ORLEANS</strong></td>
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<td><strong>OKLAHOMA CITY</strong></td>
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<td>Michael Bone</td>
<td>Cody Griffin</td>
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<td><strong>PITTSBURGH</strong></td>
<td>Tom Donahoe</td>
<td>Joe Smith</td>
<td>Anthony Johnson</td>
<td>TBA</td>
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<td><strong>SAN ANTONIO</strong></td>
<td>Tom Kirby</td>
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<td><strong>WICHITA</strong></td>
<td>Tom Pronold</td>
<td>TBA</td>
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<td>Time and Location TBD</td>
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**Please send updates and changes of chapter leadership to the National office, sipes@sipes.org**
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Collaborators
(The following article from the Denver Chapter is being reprinted in its entirety. Portions of the article were missing from the last newsletter).

Denver

After a summer break, the Denver Chapter resumed its monthly meeting schedule beginning on September 28th with Randi Martinsen presenting, "Recent Adventures in the Eastern South Atlantic and Antarctica". Randi shared her many photos and experiences from her travels to the Antarctic peninsula and South Georgia Island and discussed the intrinsic links between the breathtaking landscapes and their geologic and tectonic histories.

Randi is an Emeritus Lecturer in Geology and Geophysics at the University of Wyoming (UW) where she taught courses in petroleum geology, clastic depositional systems, sequence stratigraphy, reservoir characterization, field geology and physical geology. Randi is a past treasurer and past President of AAPG. She resides in Frisco, Colorado and continues to teach courses and consult for the oil & gas industry.

Our November luncheon speaker was Bruce Trudgill of the Colorado School of Mines, and his presentation was titled “Salt Tectonics in the Eagle Basin and its Implications for Laramide Deformation in Central Colorado”. Detailed field mapping, measured stratigraphic sections and structural analyses by Bruce and his recent graduate students have shown the mobilization of Atokan-Desmoinesian Eagle Valley Evaporites formed diapiric salt walls and elongate mini-basins which profoundly influenced the deposition of overlying late Pennsylvanian to Triassic aged strata. Recognizing the halokinetic origin of these structures and subsequent contractional reactivation of salt welds refutes previous interpretations which attributed these structures to the Laramide Orogeny and younger, extensional tectonism.

The speaker for our October 26th luncheon meeting was Terry W. Donze and his topic was "Climate Changes: Always Has, Always Will". The presentation summarized Terry’s skepticism of Anthropogenic Climate Change, and the societal costs and environmental harm associated with decarbonization of the global economy.

Terry has worked as a geophysicist for 50 years and is Past President of the Denver Geophysical Society and author of a related book titled Climate Realism: Alarmism Exposed.

The SIPES Denver Chapter hosted SIPES scholarship-recipient Jennifer Kinch of the Colorado School of Mines. Jennifer is pursuing a B.S. in Mining and Mineral Engineering and will graduate in May of 2025.

The Chapter added Scott Larson as member and Secretary. Scott is a Consulting Geologist with 16 years’ experience in the Rockies and Midcontinent. Scott has an M.S. degree from Colorado State.
Dallas Chapter

The Dallas Chapter had a productive 2023. January’s luncheon talk was given by Paul Lee, Operating Partner at Tailwater Capital in Dallas. Paul has extensive oil and gas finance experience dating from his early days as an energy-focused investment banker, then with Pioneer Natural Resources, Venado Oil & Gas, and Chief Oil & Gas. At Tailwater, Paul is heading a team that evaluates investments in the broad area of energy transition. The group is very focused on their own research and which new opportunities fit into their thesis.

In February, we hosted Dr. Robert Stern, Professor of Geosciences at UT Dallas. Bob gave a unique and entertaining talk about his ongoing research into mapping the deep oceans and the Mariana Trench. Over many years, UTD has sent numerous students on research vessels to pursue pure research into a number of deep-water features, including seamounts and vent communities.

Our March speaker was Bill Fairhurst, President and co-Founder of Riverford Exploration. Bill spoke on the topic of West Texas (Permian) unconventional resources: 15 years of exploration, discovery, development, and production, what we have learned and where we are headed. This very informative talk featured the work of Bill’s own long-running intensive studies of the Permian. The maps he shows are unique in their fine detail, huge scale, and pertinence to producing trends. He breaks down active drilling targets into their formative tectonic and sedimentologic context, all with an eye to remaining prospectivity. Bill also has considerable experience as a consulting expert on the Permian.

The April speaker was Peter Lauden, reservoir engineer and VP at DeGolyer and MacNaughton, principally involved with Europe-Africa-Middle East region. Peter’s talk was titled “Topics for Consideration Concerning Your Next Reserves and Resources Evaluation”. In entertaining fashion, he walked us through many details of reserves reports, highlighting the reasoning and occasional hidden traps that drive value and access to capital up or down. Peter has advanced degrees in both geology and engineering from Kansas and Missouri-Columbia/Rolla, so he brings unusually clear explanations of how value is manipulated and the many considerations in the hiring of an independent reserves consultant.

Our final talk for the spring was in May and we were treated to an excellent talk by Timothy Snyder, Economist with Matador Economics. Tim’s topic touched on the many ways that fossil fuels affect the economy, within the context of politics and how facts get manipulated. His consulting work centers on macroeconomic trends for equities, oil and gas, agriculture, health care, manufacturing, and logistics. He has a daily newsletter and recently began a podcast called “Gasonomics”.

Also in May, we co-hosted a happy hour with the Dallas SPE. In late June we had our annual SIPES Independence Day Celebration which was well attended and featured fajitas and margaritas! Spirits were high and there was terrific camaraderie and merriment.

After summer break, Dwayne Purvis of Purvis Energy Advisors discussed a common situation for independent producers – low-rate old wells with accumulated liabilities. Many of us find ourselves with cash-flowing properties that are actually a net liability if we account for plugging costs. Dwayne’s approach, called “holdback”, allows for predicting and quantifying future liabilities to help avoid this trap ahead of time.

October’s talk featured our own Stephen Zagurski with Foundation Energy. He presented a case study of a project focused on optimizing reservoir management and completions in the Woodford Shale of the Arkoma Basin in Oklahoma. Utilizing a multidisciplinary approach, Foundation Energy utilized a series of technologies including geochemical liquids analysis from cuttings, passive sensors while fracing, and tracers during stimulation. Insights were gained into reservoir characterization, landing zone selection, completion optimization, fracture-driving interactions, and subsurface hazards. Together, these had a positive economic impact on the company’s future development plans and asset strategy.

Our final talk of the year was the second featuring a Dallas SIPES members, this time by Don Muth. Don delivered an entertaining analysis of the current natural gas market. His well researched talk included historical perspectives and global macroeconomic themes to correctly predict low prices over the winter of 2023-24. Fortunately, Don’s crystal ball suggests 2024 prices approaching $4/mmbtu on the back of a massive buildout of LNG infrastructure in Europe among other forces.

December brought our annual holiday party at the new Dallas Petroleum Club (which was impeccable), and a boisterous crowd intent on having a wonderful time!

One notable chapter change is new Treasurer Gary Knapp replacing long-time board member John Stephens, currently Vice-President of SIPES National and soon-to-be-President. We appreciate John’s contributions to our chapter and congratulate him on his election to the National Board.

Michael Adams
Chair, Dallas Chapter

Dallas Chapter new member Stephen Zagurski is presented with his Certificate by Chair Michael Adams in February

Dallas Chapter members and Dallas SPE members enjoying networking and happy hour in May.

SPRING 2024
Fort Worth Chapter

January Lunch Meeting

Speakers: Matthew Cantrell and Les Robertson
Title “An Overview of nanoActiv® - A Low-Cost Solution to Increase Production from Existing Wellbores”

In January, we heard an overview of nanoActiv®, a groundbreaking nanotechnology product. This presentation discussed the product’s innovative designs, multifaceted applications and potential industry impact. Characterized by its ultra-fine nanoparticles, nanoActiv® capitalizes on the enhanced surface area and reactivity inherent to nanoscale materials. The core of the discussion revolved around the unique properties of these nanoparticles and how they translate into superior well performance. Emphasis was placed on describing the product, its current and future commercial applications, field results and the scientific underpinnings of nanoActiv®. The talk concluded with a forward-looking perspective on the future of nanoActiv®. The need for ongoing research between scientific, industrial, and regulatory communities was emphasized. This collaborative focus is moving us toward fully realizing the potential of this nanotechnology while addressing the emerging challenges and opportunities.

Matt Cantrell is head of Business Development for NitroChem Solutions, the primary U.S. distributor of nanoActiv®. Les Robertson is VP of Technology, Production Chemicals at Innospec Oilfield Services.

February Lunch Meeting

Speaker: Melvin Warren, Supervisory Staff Accountant, U.S. Securities and Exchange Commission
Title “SEC Investigations: Views from a Division of Enforcement Accountant”

This talk offered an introduction to the SEC’s investigations process from the perspective of a Division of Enforcement Accountant. Major topics that were covered were an SEC overview, investigation process, and current areas of focus. The primary takeaways were to gain an understanding of the SEC; identify the stages of an enforcement investigation; and recognize the accountant’s contribution to the process.

Melvin Warren has been an accountant in the SEC’s Division of Enforcement in the Fort Worth Regional office since 2014. His work primarily focuses on applying forensic investigative skills to conduct a broad range of investigations into possible violations of the federal securities laws.

March Lunch Meeting

Speaker: Mrinal K. Sen, Jackson School of Geosciences, University of Texas at Austin
Title “Will AI Replace Geologists?”

Geology is a multidisciplinary science that involves fieldwork, data collection, interpretation and decision-making based on a deep understanding of geological processes. A major aspect of geological decision making is the usage of large volumes of remotely sensed geophysical data. Sophisticated physics-based models are used to map geophysical data to subsurface features. The whole world is now buzz with AI, which has become a prominent and rapidly evolving field, generating considerable interest and impact across various sectors. The buzz around AI is fueled by significant advancements in machine learning, deep learning, natural language processing, and other AI-related technologies. Geology is not far behind the race. Researchers and practitioners are investigating applications of AI. While AI has the potential to enhance and streamline certain aspects of geology, it is unlikely to completely replace geologists. While AI can assist with data analysis, pattern recognition and even predictive modeling, human expertise is crucial for tasks that require contextual understanding, creativity and critical thinking. Additionally, geologists play a key role in communicating findings to stakeholders, such as policymakers, communities, and industry professionals. Human judgment, intuition, and the ability to adapt to unexpected challenges are qualities that AI currently lacks. Thus, AI can be a valuable tool for geologists, helping them analyze data more efficiently, and make more informed decisions. However, the unique skills and insights provided by human geologists are likely to remain essential for the foreseeable future.

Fort Worth SIPES is growing! In the past 12 months, we have added three new members and reinstated one member. We recently welcomed Clark Pitzer, Daniel Sevier and Mark McKeehan and we worked with Bill Fairhurst to get him re-instated. We have had recent inquiries from at least three more candidates. Josh Luig, our membership chair, is looking hard every day to find additional candidates. Our meeting attendance has been about 30, and seems to have achieved a strong, consistent level.

Fort Worth SIPES draws many of our members from Abilene, and we supported their efforts at the AAPG Southwest Section Meeting April 27 - 30 in Abilene.
SIPES Vision Statement

To be the preeminent organization for furthering the professional and business interests of independent practitioners of the earth sciences. In achieving this vision, emphasis will be placed on (1) professional competence, (2) professional business ethics, and (3) presenting a favorable, credible and effective image of the Society.

Adopted by the SIPES Board of Directors
September 21, 1996