Petroleum Hall of Fame 2021
Three Selected for Induction

The Petroleum Museum is excited to announce the 2021 inductees to the Petroleum Hall of Fame. Frank M. Late, Paul L. Morris, and Fred M. Newman will be honored on April 29, 2021, at the Hall of Fame Induction and Dinner to be held at the Bush Convention Center. These individuals have all made significant impacts on the petroleum industry in the Permian Basin and on their communities. We look forward to honoring each of these men.

Frank M. Late was born in Johnson, Arkansas in 1908. He was a businessman with interests in oil field services, both domestic and international, as well as automobile dealerships, manufacturing, soft drink bottling, banking, oil and gas exploration and ranching.

He began his business career by acquiring a Chevrolet dealership in Claremore, Oklahoma. In 1939 General Motors offered him the opportunity to establish a dealership in San Angelo, Texas. From 1936 through 1999, Late became one of the largest automobile dealers in the southwest.

Late’s involvement in the drilling business began in 1944 when he formed Cactus Drilling with George Baker in Hobbs, New Mexico. When the Spraberry Trend began, he moved to Midland/Odessa. Late joined forces with Frank Garrett and the men formed sister company Cactus Drilling Corporation. Both companies prospered with Cactus Drilling focusing on shallow drilling in the Permian Basin while Cactus Drilling Corporation acquired rigs to drill deeper and operated on a wider geologic footprint. He acquired Garrett’s interest in 1958 and Baker’s in 1967.

Cactus Drilling expanded internationally, drilling in Canada and Argentina. Cactus International owned and operated a fleet of 60 rigs, including eight platform rigs, and was the third largest drilling company in the United States. Onshore Cactus operated in the Permian Basin, New Mexico, Michigan, Oklahoma and South Texas. When Late sold Cactus in 1980, it was the largest U.S. land-based contract drilling company.

In the early 1960’s, Late entered the service company arena with Baron Ulmer Kidd, forming Cardinal Chemical which sold a full array of oilfield chemicals to operators and drilling contractors. The company flourished and was sold to Dowell Chemical in the late 1970’s. In 1985, he bought all assets of Republic Supply from LTV Energy Products Company and grew the company to 25 locations in eight states. Republic Supply was sold to National Oilwell in 2000 but today one of the Republic subsidiaries, Howard Supply Company, continues to operate in eight states.

Paul L. Morris grew up in West Virginia where energy deposits have been identified since the late 1700’s. He attended school in Charleston where, following high school graduation, he accepted a Hope Natural Gas Company scholarship to study engineering at the University of Cincinnati. As part of Hope’s cooperative engineering initiative, the company employed Morris throughout college from 1960 – 1964. After graduation, he moved to Columbus, Ohio to work for Columbia Gas System Service Corporation. In 1970, Columbia moved Morris to Wilmington, Delaware where he worked at the corporation’s headquarters.

In 1973, Morris became manager of Energy Supply for Colum-

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Bush Convention Center

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bienia LNG Corporation. Natural gas was in short supply and Columbia began acquiring foreign and domestic coal and petroleum supplies to fuel major new projects involving LNG, SNG and coal gasification. After the 1973 oil crisis, companies turned to increasing oil and gas discoveries to meet market demand. Columbia named Morris Vice President of Exploration and Production in 1976 and moved him to Houston.

Morris arrived in Midland during the boom of 1981 when he became President and CEO of Banner Energy, Inc. He was responsible for directing exploration and production staffs in Denver and Houston. During his time at Banner, three major discoveries were made in Louisiana, Wyoming and North Dakota. In 1988, Morris became Manager of Oil and Gas at Wagner and Brown, Ltd. and then CEO in 1994. He managed 200 employees in domestic and international exploration and production, natural gas gathering and marketing, crude oil purchasing and reselling, gas pipeline development and a compressed natural gas refueling business. Under his leadership, Wagner and Brown completed nearly 600 wells across Oklahoma, Texas and the UK and Australia.

In 2013, Morris launched Elk River Resources with partner Ed Jones successfully drilling 25 horizontal wells in the Spraberry and Wolfcamp formations. He was part-owner, Chairman and CEO until 2019, when he stepped down to become a Senior Advisor to the Board.

Fred M. Newman attended high school in a small north Louisiana paper mill town. His quest to find a better way started in high school when he designed and built a robot, winning the National Science Fair in Louisiana and earning the opportunity to go on a Navy cruise as a young scientist. He graduated from the University of Northwest Louisiana in 1965 with a BS in Physics and Math.

In 1965, Newman went to work with Schlumberger as a field engineer in Magnolia, Arkansas. He was transferred to Shreveport in 1969 and then to Saskatchewan in 1971 as a District Manager, the youngest district manager in the history of the company. In 1974, Schlumberger transferred Fred and his family to Midland. Upon learning of another transfer, Newman decided it was time to strike out on his own.

Newman purchased a few shallow oil and gas wells in New Mexico and participated in workovers, re-entries and new drilling. He lectured for RIKE Engineering throughout the world during his early days as an independent operator. Through his love of aviation, he met his future business partner Jim Pruett and together they formed Aztec Drilling. Fred still operates a few shallow gas wells because of his association with Aztec.

During the 1970’s boom, Newman purchased five small drilling rigs and formed Fred M. Newman, Inc., a shallow vertical drilling contractor. With the downturn of 1982, he saw an opportunity in plugging and abandoning wells and formed Total Abandonment Plugging Service, Inc. which grew to five wells and over 60 employees. In 1986 he formed Triple N Services with three of his four children, and it became one of the leading P & A contractors in the Permian Basin. When that company became profitable, he turned back to his true passion, innovations. He has successfully patented over 80 petroleum industry innovations improving the safety and efficiency of the oil and gas industry.

Museum Adds ‘The Oil Patch’ to Collection

The Museum is thrilled to add this beautiful addition to its collections. The painting of “The Oil Patch,” by Midland artist Don Parks, was generously gifted to the Petroleum Museum by Paula and Jim Henry. The painting depicts a drilling rig southwest of Midland with the skyline of Midland in the background. The Museum owns one other Parks painting, “Boomtown,” which was painted to serve as the backdrop in our Boomtown. We are pleased to have another magnificent painting by Don Parks in our collection.
**Ask Dr. Petro** Explain ‘Fracking’s’ History

**Question:** How long has “fracking” been around?

**Answer:** More than 150 years! The idea for fracturing — or “shooting the well,” as the practice was once referred to — dates to 1862 and has been credited to a Colonel Edward A.L. Roberts. Amid fighting during the Civil War’s Battle of Fredericksburg, Roberts noted the impact that artillery had on narrow, water-filled channels. In 1865, he applied his battlefield observations to the design of an “exploding torpedo” that could be lowered into an oil well and detonated, shattering surrounding rock. When water was then pumped into the borehole, oil flows increased — in some cases by as much as 1,200 percent — and fracturing was established to increase a well’s production potential.

In the late 1940s, explosives began to be replaced with high-pressure blasts of liquids, and so “hydraulic” fracturing became the new innovation in the oil and gas industry. Hydraulic fracturing became more widespread throughout the following 30 years and even garnered the attention of President Gerald Ford in his 1975 state of the union address. In the late 1990s and early 2000s, two key changes helped spark fracturing’s latest boom. One was the use of a certain type of fracturing fluid: slickwater, a mixture of 90 percent water, 9.5 percent sand, and 0.5 percent chemicals, used to increase the fluid flow. The other innovation was the pairing of hydraulic fracturing with horizontal drilling. These advances, combined with an increase in investment amid high fossil fuel prices, sent fracturing into overdrive. Of the roughly one million U.S. wells that were fractured between 1940 and 2014, about one-third of those were fractured after 2000.

**We’re Open For You!**

Looking for something different to do during the holidays? Come visit the Museum! Our hours are 10 a.m. to 5 p.m. Monday through Saturday and 2 to 5 p.m. on Sunday. With over 60,000 square feet on 34 acres, the Museum provides the perfect place for visitors to get out and enjoy our exhibits. We invite you and your family to visit the Museum to safely experience science, history, and art in the Permian Basin this holiday season.

**Mineral Gallery** Minerals Donated to Museum

The zinc mines around Carthage, Tennessee have been famous for decades for producing superb examples of calcite, fluorite, sphalerite and barite. Very large, exceptionally sharp and gemmy calcite crystals and clusters could be found in these mines. These specimens often featured sharp single and multiple terminations and came in colors ranging from gold to orange. Well-formed fluorite crystals like this one are less common, and range in color from transparent to translucent blues and purples and all shades in between. Plates of black to brown sphalerite crystals are also prominent, sometimes tinted red, often with brilliant luster. Additionally, large hemispheres of ivory colored barite can often be perched on the sphalerite matrix pieces. The quality of these specimens long ago established these zinc mines as an American classic locality, and amazing specimens were often featured in displays at large mineral shows. Unfortunately, the mines closed in 2004 and specimens like these are now difficult to find.

This holiday season, the Petroleum Museum is grateful for the many donors that help make this Museum such a special place. Betty Lou and Steve Neely are a wonderful example of our generous donors. The Neelys have gifted a number of beautiful specimens from mines in Tennessee. This fluorite, with barite on sphalerite comes from the Gordonsville Mine in Smith County, Tennessee. Come enjoy the Mineral Gallery at the Petroleum Museum this holiday season and enjoy the miracles of nature.
Responding to safety concerns and Covid-19 was the name of the game for the Petroleum Museum as the staff created ways to remain in touch with the community and to provide quality programming for visitors.

The Museum reopened on June 1 after being closed for almost 2 1/2 months. During the closure, the Education Staff adjusted programming to ensure the safety of participants and their families. Plans included limiting the number of students in larger programs as well as the number of adults allowed inside the Education Hall. Regular temperature screenings and enhanced sanitizing procedures were initiated for all programs. Supplies were prepared individually for each student. With these adjustments, the Museum recorded a safe and successful summer with students attending STEAM Sprouts Mini Camps, Summer Science Camps, and Movie Maker Mondays.

The Education Department then moved forward with Fall STEAM programming. One STEAM Sprouts six-week session was held for children ages 4-5 in which they engaged in hands-on engineering challenges and art projects centered around LEGO Simple Machines. Robotics & Engineering Funlabs were held for students in kindergarten through sixth grade.

One of the biggest adjustments the Education Department made during the fall concerned Family Science Nights at the Museum. The Museum hosts four Family Science Nights throughout the school year with each event averaging from 500 to 1,100 people.

With concerns of social distancing as well as sanitizing, the Museum designed Family Science Night 2GO in which families could reserve a Family Science Night 2GO box that comes equipped with all the materials and information needed to conduct 12 science activities. Families could also join staff on the Museum’s Facebook page for a demonstration of some activities from each box. Thanks to Chevron, the Museum provided these boxes free to the public. The fall featured two Family Science Night 2GO events: “Out of This World” that included astronomy-themed activities, and “Grossology” that featured spooky Halloween-type activities. For both events, the Education Department assembled 400 boxes. “Science Does a Body Good” Family Science Night 2GO event is scheduled for January 2021.

With the coronavirus making travel for schools virtually impossible this fall, and possibly this spring, the Museum adjusted tours and outreach programs for schools in the surrounding communities. The Education Department is creating virtual outreach programs to be offered through Connect2Texas for students across Texas and other parts of the country. The Museum has worked hard to increase the number and variety of teacher trunks that can be checked out by teachers across the Permian Basin. Additionally, virtual tours of Museum galleries are being created. Tours and programs for groups are still being scheduled at the Museum.

Thanks to the Education staff’s hard work and creativity, we are striving to stay connected to the communities we serve.

**Thanks To Our Sponsors**

We want to take the time to thank the generous sponsors that make our educational programs possible. Thank you to Occidental for sponsoring our 2021 Building Bots Robotics & Engineering Funlabs. We also extend a thank you to Ovintiv for sponsoring our 2021 STEM Gems program. This program engages junior high girls in hands-on STEM programming that directly ties to what they are learning in the classroom while also providing real world connections through female STEM role models. We also recognize and thank Chevron for their continued support of Family Science Nights over the years.

**DON’T GO EXTINCT** like these dinosaurs by texting and driving. That’s the message the Texas Department of Transportation made in this exhibit on the grounds of the Petroleum Museum. Rex and Willie resided at the Museum from July to November in their push to not go extinct by texting and driving. Thank you, TxDOT, for partnering with the Museum to help get the message out.
Family Science Night 2GO: Science and Your Body

We are bringing Family Science Night to the comfort of your home! Your FREE Family Science Night 2GO box will be equipped with all the materials and information you will need to conduct 10 hands-on science experiments and inventive projects with your family. Curbside pickup will be available at the Museum’s main entrance. Activities will include making your own pumping heart, heat sensitive color changing slime, creating your own blood model, and more!! Join us for a special Facebook demonstration on Thursday, January 21, at 6:30 p.m!

Registration for the Family Science Night 2GO Boxes will open on Monday, January 6. Please note that each box comes equipped with enough materials for a family to do each activity together. They are not designed to be one per child. Register early on the Museum’s website, www.pbpetro.org – our boxes tend to disappear quickly!

We give a special thank you to Chevron for making this free, educational experience possible.

MATERIALS:
* Baby Oil
* White paint
* Alka-Seltzer tablets
* Clear glass jar or cup
* Glitter (optional)
* Food coloring (optional)

PROCEDURES:
1. Fill 1/4 of jar with water.
2. Add a teaspoon of white paint in the water and stir to mix. The mixture should look like milk. If necessary, add more paint.
3. Fill rest of the jar with baby oil. Let the water and paint settle to the bottom.
4. Add glitter in the mixture if desired.
5. Add a few drops of food coloring if desired (simulates color of the sky.)
6. Let the water/paint mixture settle on the bottom.
7. Break up an Alka-Seltzer tablet and drop the broken pieces one at a time into the jar.
8. Watch the magic happen!

SCIENCE BEHIND THE MAGIC
Oil and water don’t mix. The water molecules are polar, which means they have a small positive charge at one end and a small negative charge at the other end. They are attracted to each other like a magnet and form strong bonds. Oil molecules are non-polar and therefore are more attracted to each other than water molecules. Oil is less dense than water. The water-mixed paint sinks to the bottom, while the water remains on top. When you drop Alka-Seltzer tablets, which contain baking soda, into the water, the reaction between the baking soda and citric acid and hydrogen oxide (water) creates carbon dioxide gas. The bubbles push the water and paint mixture upward, but the oil exerts pressure downward and pushes the mixture back down, creating the snow effect.
**Development**

**Membership Gives Perks All Year Long**

No time like the present to join or renew your membership! Museum membership has many perks beginning with free admission and store discounts. To become a member, log on to our secure website at [www.pbpetro.org](http://www.pbpetro.org) or contact Luanne Thornton at 432-683-4403.

Welcome to our newest and renewed members as of November 30, 2020:

**Contributing Family**
- Michelle & Nathan Anderson
- Mr. & Mrs. Tom Brahaney
- Andrea & Robert Brito
- Patrizia & Justin Clark
- Susannah & Briggs Donaldson
- Charlotte & Keith Doucet
- Sherrie & Robert Green
- Catarina & Michael Graves
- Tracey & Tim Hammond
- James C. Henderson
- Stephanie Hill
- Mr. & Mrs. Steven Hofer
- Ellen & Dennis Hopkins
- Vicki Keck
- Christy & Clint Lannom
- Nicola & Dale Lookabaugh
- Wendy & Russ Mathis
- Mr. & Mrs. Gregory Protz
- Larinda Rabus
- Stacy Smith
- Mr. & Mrs. Nicholas Taylor
- Donald Warr
- Jane M. Wolf
- Ralph Worthington

**Friend**
- Mr. & Mrs. Geoff Browne
- Donna & Jim Byerlotzer
- Larry Hill
- Sarah Mitchell

**Associate**
- Jenny Goble
- Mr. & Mrs. Bert Johnson
- Susan Spratlen

**Supporter**
- Linda & Edward Garza

**Energy Circle**

- Patron
  - Boyd & McWilliams Energy Group
  - Concho Resources
  - EOG Resources, Inc.
  - Five States Energy Company
  - Mr. & Mrs. Billy Kelley
  - Robert Landreth
  - Norma J. McGrew
  - Republic Oil & Gas Company
  - Sharon & John Webb
  - West Texas National Bank

- Sustainer
  - Deborah & Earl Baldridge
  - Mr. & Mrs. Cadel S. Liedtke
  - Tracy Turner

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- Five States Energy Company
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- Robert Landreth
- Norma J. McGrew
- Republic Oil & Gas Company
- Sharon & John Webb
- West Texas National Bank

**Memorials**

Memorial contributions to the Petroleum Museum are deposited in the permanent endowment fund, unless donor advised, to provide ongoing tribute to the individuals recognized in bold. Donors are listed below the honoree. Contributors from August 27 through November 30, 2020, were:

**IN MEMORY OF...**
- Johnny Glidewell
  - Arlen Edgar

- James B. Henry
  - Arlen Edgar
- Thelma E. McDonald
  - Lesley & Sal Pagano
- William C. “Bill” Porter
  - Mary Beth Anton & Jeff Hewett
  - Mr. & Mrs. Tom Brahaney
  - Mr. & Mrs. Steve Daniels
  - Mr. & Mrs. David L. Davis
  - Jo & Alan Douglas
  - Julie & Larry Edgerton
  - Linda Foster-Smith
  - Sarah C. Hardwick
  - Mike Ketter

- Robert Landreth
  - Lee Miller
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  - Ellen & Scott Ramsey
  - Patricia Stanley
  - Julie & Brad Swendig
  - Frances J. Tuttle
  - Jane M. Wold
  - E.E. Reigle
  - Richmond Drilling Company

**IN HONOR OF...**
- Stacie Hanna
- Kristi Culbert
- Elizabeth Hanna
- Martha & Ronnie Low
- Samantha Moore
- Kathy Shannon
- Gail & Jim Spann

**You Can Make 2021 A Brighter Year**

2020 — wow!

It has been a year of challenges with constantly changing highs and lows but more importantly, it has been a year for opportunity, growth, and ingenuity. After a two-and-half month closure due to COVID-19, education programs resumed with extra safety measures and Museum visitors are slowly returning with a new masked look. Through all the twist and turns the year has brought we have worked to create new and exciting ways to share the petroleum and energy story and its impact on our lives.

YOU can help us look to a brighter and healthier 2021. Please consider a donation to the Petroleum Museum. Your contribution may be designated as a year-end gift to the annual fund which allows us to meet our most pressing needs or to the permanent endowment fund for our long-term security.

YOUR generosity and belief in the Museum’s mission make it possible for us to preserve our cultural history, promote science education and serve as an advocate for the petroleum industry. Please join us in this unique and important mission. Happy holidays to you and your family!

To donate online, go to [www.pbpetro.org](http://www.pbpetro.org). Contact Luanne Thornton at lthornton@petroleummuseum.org or 432-683-4403 with your inquiries.
**Notable Dates**

**DECEMBER**

December 24 & 25
Merry Christmas!
Museum closed on Christmas Eve & Christmas Day.

**JANUARY 2021**

January 1
Happy New Year!
Museum closed on New Year’s Day.

January 14
Brown Bag Lunch & Lecture Series
Speaker: Hon. Elizabeth N. Rainey
“Midland County Drug Court”
11:30 a.m. to 12:30 p.m.
Free admission. Drinks & dessert provided.
Sponsors: Norma J. McGrew & Hahl Proctor Charitable Trust, Bank of America, P.A. Trustee

January 21
Family Science Night 2GO
“Science Does a Body Good”
FREE Family Science Experiment & Activity Boxes: All materials and information needed for experiments included.
Pre-registration and pick-up signups required.
Go to www.pbpetro.org for more information.
Sponsor: Chevron

**FEBRUARY**

February 2
Building Bots: Robotics & Engineering FunLab
5:30 to 7:30 p.m.
Grades K-2nd
Pre-registration required. For more information or to register online, visit www.pbpetro.org.
Sponsor: Occidental

February 11
Brown Bag Lunch & Lecture Series
Speaker: John Scharbauer
“Ranching Heritage and Midland Meat Company”
11:30 a.m. to 12:30 p.m.
Free admission. Drinks & dessert provided.
Sponsors: Norma J. McGrew & Hahl Proctor Charitable Trust, Bank of America, P.A. Trustee

**MARCH**

March 2
Building Bots: Robotics & Engineering FunLab
5:30 to 7:30 p.m.
Grades K-2nd
Pre-registration required. For more information or to register online, visit www.pbpetro.org.
Sponsor: Occidental

March 11
Brown Bag Lunch & Lecture Series
Speaker: TBD
11:30 a.m. to 12:30 p.m.
Free admission. Drinks & dessert provided.
Sponsors: Norma J. McGrew & Hahl Proctor Charitable Trust, Bank of America, P.A. Trustee

For more information about any of these programs or events, contact the Petroleum Museum at 432-683-4403 or www.pbpetro.org.

**APPLAUSE, APPLAUSE**

We want to give a round of applause to the following friends, companies and businesses. Their in-kind contributions of time, assistance or services are appreciated:

4D Excavating, Inc.
Cook’s Engine Services
Expert Pumping Services
Helmerich & Payne, Inc.
Lamar Signs
Rig Works, Inc.
TRC Services of Texas, Inc.

Help bring joy this season
Buy your gifts at smile.amazon.com
or with AmazonSmile ON in the app
and Amazon donates
GIVE WITH PURPOSE THIS CHRISTMAS! Shop the Petroleum Museum Store for incredible finds for everyone on your list. Plus, know that your purchase supports the Museum! Museum Members always receive 15 percent off purchases. We are open from 10 a.m. to 5 p.m. Monday through Saturday and 2 to 5 p.m. on Sunday. Or, shop online at pbpetro.org/shop anytime.