Launching a Summer of Learning!

The Museum announces the 2019 Summer Science Programs!

Join us as we kick off the summer with STEAM Sprouts Mini Science Camps. STEAM Sprouts Learn to Code Mini Camp will be held on Wednesday, May 29, and Thursday, May 30. STEAM Sprouts Go Camping will be held on Wednesday, June 5, and Thursday, June 6. Each camp will have two identical sessions offered, one from 9:30 to 11 a.m. and the second from 12:30 to 2 p.m. and will feature hands-on STEAM (Science, Technology, Engineering, Art, and Math) based programming for 4- and 5-year-olds. The camps will highlight interactive experiments and creative activities designed to get tinkering young minds excited about science. The cost is $40 for Petroleum Museum members and $50 for non-members. We extend a special thank you to Occidental Petroleum Corporation for sponsoring our STEAM Sprouts program.

Movie Maker Mondays, sponsored by Apache Corporation, are back this summer! Movie Maker Mondays will be held on the first and third Mondays of June and July. Each Movie Maker Monday will feature a movie, popcorn, hands-on experiments, engineering challenges, innovative projects and games. Our Movie Maker Monday lineup features “Hotel Transylvania 3,” “Incredibles 2,” “Ralph Breaks the Internet,” and “How the Grinch Stole Christmas.” Movie Maker Mondays will be held 1 to 5 p.m. for children ages 6 to 12. Cost is $10 per child for Petroleum Museum members and $15 per child for non-members. Pre-registration is required.

We will also be offering several different Summer Science Camps this summer, also sponsored by Apache Corporation. For students ages 6 to 8, we will offer three three-day Science Camps in June. The cost is $60 for Petroleum Museum members and $75 for non-members. Topics will include Robotics, STEM Art, and Tinkering. For ages 8-12, we offer two four-day Science Camps in July. The cost is $80 for Petroleum Museum members and $100 for non-members. Topics include Robotics and The Science Behind Sports. In all camps, students will engage in age appropriate experiments, fun activities and robotic design that are designed to engage young minds in science. All summer programs require pre-registration. Go online to www.pbpetro.org to register your inventive young scientist today!

Don’t Wait! Sign Up Early for These Exciting Classes! Pre-registration is required. Go to: www.pbpetro.org
Welcome to New Board Members!

In January the Petroleum Museum welcomed two new Board of Trustees members, Wes Perry and Susan Spratlen. Wes Perry served as President of EGL Resources, Inc., an oil and gas operations company based in Texas and New Mexico, from January 1994 until July 2008, before becoming the Chief Executive Officer. He has also served as manager of PBEX, LLC since July 2012. Perry was elected to the Midland City Council as an at-large councilperson from 2002 to 2008 and then was elected Mayor from January 2008 through January 2014.

Susan Spratlen has served as a vice president of Pioneer Natural Resources in various capacities since 1999. In 2014, she was named Vice President, Permian Affairs, a new position created in response to the strategic significance of Permian Basin operations to Pioneer and its commitment to Permian communities and employees. Spratlen joined the company's predecessor, Parker & Parsley Petroleum Company, in 1990.

We believe that the addition of both Wes’ and Susan’s talents to the Museum’s Board of Trustees will help us continue the Museum’s commitment to its community and the industry.

Requests sometimes take on a life of their own. That is what happened when Brian Yates with RWA Architects stopped by the Museum on a search for old pictures of Midland. He had been asked by the Basin PBS Board to help furnish its new headquarters in the former Ritz Theatre. Photographs of the original theatre and downtown Midland would be the perfect finishing touch for the lobby, and the Rubin Collection, donated to the Petroleum Museum in 1993, was definitely the place to begin.

Randolph, “Randy” Rubin moved to Midland from Wink in 1941 to open a camera shop. After World War II, his twin brother Rudy took over operation of the camera shop and Randy opened his first Midland photography studio. In 1957, Rubin moved his studio to the corner of Ohio and Colorado Street. From the 1940s to the 1980s, Rubin’s subjects included weddings, family gatherings, children, servicemen, fashions and business establishments. He documented the colorful history of the lives, events and people of Midland in hundreds of photographs. With over 50 years of photography experience, Rubin was considered a photographer extraordinaire by his peers.

What could be more fitting to complete the renovation of PBS than Rubin’s photographs of the old theatre? Built in 1927, the Ritz served as a movie theatre until the late 1980s. It was then purchased from the City of Midland, and after many needed repairs, was leased to several nightclub operators. In September of 2014 Basin PBS bought the theater to renovate it for their new headquarters and television studio. Four years later, the Ritz re-opened after a complete renovation and will proudly serve as the headquarters for PBS, with the stunning Rubin photographs reminding us of the proud and lengthy history of downtown Midland.

‘Orchard’ Opens

“The Iron Orchard,” a film based on a book about the life of an early wildcatter, opened in late February. Numerous scenes were filmed at the Petroleum Museum. Shown with film principles are Executive Director Kathy Shannon, second from left, and Luanne Thornton, third from left, Director of Development.
Volunteer 

Price Gets Hands on Chaparrals

The Chaparral racecars thrilled hundreds of thousands of people during their racing years. Bob Price remembered his excitement watching them, and when he learned a place for the cars was being added to the Petroleum Museum, he signed up as a volunteer.

A resident of Midland since 1964, the Pennsylvania native had been volunteering at the Midland Chamber of Commerce. “A friend was volunteering at the Museum and she told me they were getting the racecars. I asked if I could volunteer there,” Price said. He first worked as a docent for tours and in the Museum Store. But his real love is working with the racecars.

“I work as a backup to Keith Doucet. Whenever I get a call from him, we prepare a car to go out on tour or to be cycled off to a race event,” he said. “In the Museum, everything has to be clean and dry. We drain all the fluids and make repairs. With cars of that age and vintage, anything can happen.”

Price admits to being a lifelong fan of racecars and enjoying the hobby of restoring vintage classic cars. “I’ve always been around them and doing odd jobs. It’s a real honor and a privilege to work with Mr. (Jim) Hall and with Keith.”

In his spare time, Price works with the Downtown Lions Club, stirring up pancake mix one weekend a year and assisting with eye screenings for young children. And he sometimes can be found staining woodwork at home.

Primarily, he focuses his extra time on the Petroleum Museum and the Chaparrals. “They are always putting on parties for the volunteers. It’s a lot of fun.”

Lecturer to Focus on Role of Minerals

Don’t miss our April 9 Distinguished Lecture featuring noted researcher and teacher Dr. Robert Hazen, author of 400 scientific articles and 25 books, including *The Story of Earth*. His book topics range from astrobiology to scientific literacy. This is part of the Arlen Edgar Distinguished Lecture Series and will start at 7 p.m. at the Museum.

Hazen, based at the Carnegie Institution’s Geophysical Laboratory and George Mason University, will talk about the role minerals play in the origin of life and in our lives today. In 2011, he was named executive director of the Deep Carbon Observatory, a 10-year effort to achieve fundamental advances in understanding the chemical and biological roles of carbon in Earth.

Admission is free, but reservations are required. For reservations, call 432-683-4403 or reserve online at pbpetro.org. Special thanks to our sponsor, Abell-Hanger Foundation, for their continued commitment to bringing renowned speakers to our community.
Adding Programs, Growing Minds

The Education staff at the Petroleum Museum is pleased to announce new additions to our current Robotics programs. Through a generous grant from the Permian Basin Area Foundation, the Museum purchased laptop computers to further enhance our robotics curriculum.

The Museum was also able to purchase two classroom sets of TETRIX PRIME Dual-Control Robotics equipment. Each set serves 24 students and encourages them to work collaboratively to engineer and control both remote- and autonomous-controlled robots.

With these new laptop computers and new equipment, students will be able to further explore the world of STEM (Science, Technology, Engineering, and Math) as they build skills in data collection and analysis, coding, problem-solving, teamwork, accuracy, measurements, and more. The equipment is compatible with the Museum’s existing robotics program featuring LEGO Mindstorm EV3s. The Museum will utilize the laptops and TETRIX PRIME equipment in classes and camps at the Museum and plans to allow teachers in the surrounding communities to check out the equipment to use in their own classrooms. This programming encourages students to dive into the world of coding and to create autonomous robots that can complete simple tasks. This new equipment will also help the Museum expand its influence into the surrounding junior highs.

Volunteer Thank You!

The Museum extends a special thank you to our docents who have helped engage all ages of learners at the Museum this past year. We especially thank those who have helped with our annual MISD Fourth Grade Tours that feature a special focus on Texas History. Our docents create a meaningful experience for visitors that they will remember for years to come. We wouldn’t be able to do what we do without you!
When a well produces through natural reservoir pressure or artificial lift methods, it is using what is referred to as “primary recovery.” Thousands of wells that have produced in the past are now closed leaving behind major amounts of crude. Much of this remaining oil can be obtained using expensive, complicated technology. These are referred to as “secondary recovery” and “tertiary recovery.”

Secondary recovery requires injection of substances into the ground near a well which replaces and forces out more oil. Secondary recovery includes waterflooding and chemical flooding. Waterflooding consists of injecting water into one well to displace and recover oil from the reservoir rock through another nearby well. Chemical flooding utilizes soap-like chemicals to “wash” the oil out of the rock. Other elements (polymers) are applied with water to push the soap-like chemicals forward to another well. But over half the oil is still likely to remain when secondary recovery is finished.

Tertiary recovery includes a variety of complex methods such as solvent flooding, high-pressure gas, carbon dioxide, polymer flooding, and thermal recovery which can result in additional recovery of oil after other methods have been used. Solvent flooding involves injection of a thin liquid petroleum product which mixes with the reservoir oil and helps move the oil to a producing well. Water and natural gas are used to push this solvent forward. High-pressure gas, often methane, is injected to displace oil with the gas and increase recovery. Carbon dioxide has proven to be a strong attraction to oil and, when injected into a reservoir, it increases recovery by mixing with oil and pushes it to a producing well. Water is also used to move the carbon dioxide gas forward. Polymer flooding utilizes a chemical which increases water viscosity so that waterflooding can displace oil more effectively. Thermal recovery involves heating the reservoir and its oil by injecting hot water or steam to reduce viscosity and increase oil recovery.
Honor: Hall of Fame Inductees

We invite you to join us in honoring the 2019 Petroleum Hall of Fame inductees Robert C. Bledsoe, Arlen L. Edgar, George P. Mitchell, and L. D. “Buddy” Sipes, Jr. The induction ceremony and dinner will be held Thursday, May 2, at the Petroleum Club in Midland. The Permian Basin Petroleum Museum’s Board of Trustees and staff will also host a brunch to honor the inductees and their guests on Friday, May 3, at the Permian Basin Petroleum Museum.

It will be a memorable evening celebrating the historic accomplishments of these individuals who have distinguished themselves as leaders in their community and in the petroleum industry. As members of this elite group, each inductee has upheld the tradition of achievements in the petroleum industry that will be remembered and beliefs that will serve to inspire. The Petroleum Hall of Fame is dedicated to those who cherished the freedom to dare, and whose work and service helped develop the Permian Basin.

If you are interested in attending or acknowledging these great men with a monetary gift to the Museum, please call or email Luann Thornton at 432-683-4403 or lthornton@petroleummuseum.org.

Enjoy Benefits Throughout the Year

No time like the present to join or renew Museum 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 or contact Luann Thornton at 432-683-4403.

Welcome to our newest and renewed members of the Museum from November 7, 2018, through February 20, 2019!

Contributing

Family
Holly & Jaime Aguilla
Janice N. Archer
Ronnie Arispe
Mr. & Mrs. Robert Basom
Mr. & Mrs. Robert Brito
Mr. & Mrs. Gordon Buescher
Mr. & Mrs. Ray del Llano
Jean C. Donnelly
Keith Doucet
Carlyn Finley
Mr. & Mrs. Doug Fiske
Stephanie & Matthew Fitzpatrick
Jennifer & Nathan Garcia
Mr. & Mrs. Chase Gardaphe
Blanca Garrido
Katarina & Michael Graves
Channon Gregg
Mr. & Mrs. Dennis Hopkins
Robert Johnson
Carolyn King
Mr. & Mrs. Gary King
Jade B. Krug
W. A. Landreth
Mr. & Mrs. Russ Mathis
Marian Musset
Dr. & Mrs. Cory Naiman
Eric Newton
Bob Pullampally
Alexandria L. Rose
Letty & Armin Rubio
Suzanne Saenz
Laura & Jared Shannon
Taryn & Christopher Snider
Mr. & Mrs. Randy Stevens
Debra & Dale Strauss
Entee Sublett
Mr. & Mrs. Nicholas Taylor
Rachel Tippetts
Debbie Urbanczyk
Jaedeen & Bruce Walden
James White
Leslie Williamson
Mr. & Mrs. Geoff Browne
Julie Cole
Larry Hill
Christina Howell
Belinda Jackson
Jennifer Jackson
Mr. & Mrs. William G. Kern
Chuck Riblett
Mr. & Mrs. Kevin Ryan
Tim C. Thompson
Schatzie Tighe

Associate
Jan & Roger Artley
Mr. & Mrs. Leo Carr
Bobbie Cupell
Currier Abstract Company
Mr. & Mrs. William F. Dingus
Mr. & Mrs. Dave Entzminger
Mr. & Mrs. Bert Johnson
Kristin & Josh Moose
Ramsey Petroleum, Lp
Luann & Randy Thornton
Lisa & Matt Worden

Supporter
The Eastland Oil Company
Mr. & Mrs. Edward Garza
James C. Henderson
University Lands

Friend
Mr. & Mrs. Carey Behrends
Deb Bohac
Mr. & Mrs. Michael P. Brady

Energy Circle
Patron
Jim Alsup
Dynasty Wireline
Elevation Resources, LLC
Encana Services Company Ltd.
FirstCapital Bank
Grand Banks Energy Company
Billy Harris
Allen Harvey
Mr. & Mrs. Tom E. Johnson
Robert Landreth
Mr. & Mrs. Cadell Liedtke
Marshall & Winston, Inc.
Permian Basin Landmen’s Association
Petrarits Oil & Gas, Inc.
Plains Marketing, L.P.
Mr. & Mrs. Jack Rathbone
REXtac, LLC
The Swallow Group
Texas Tech University School of Law

Sustainer
Kathy Shannon
XTO Energy

Benefactor
Pioneer Natural Resources

Director
Chevron
**March**

March 18  
STEAM Sprouts  
9:30 to 10:30 a.m. **OR** 11:30 a.m. to 12:30 p.m.  
Ages 4-5  
Pre-registration is required. For more information or to register online, visit [www.pbpetro.org](http://www.pbpetro.org).  
Sponsor: Occidental Petroleum Corporation

March 19  
Brown Bag Lunch & Lecture Series  
Speaker: Tumbleweed Smith  
Renovation of Big Spring’s Namesake  
11:30 a.m. to 12:30 p.m  
Free Admission. Drinks & dessert provided.  

March 25  
STEAM Sprouts  
9:30 to 10:30 a.m. **OR** 11:30 a.m. to 12:30 p.m.  
Ages 4-5  
Pre-registration is required. For more information or to register online, visit [www.pbpetro.org](http://www.pbpetro.org).  
Sponsor: Occidental Petroleum Corporation

**April**

April 1, 8, 15, 22  
STEAM Sprouts  
9:30 to 10:30 a.m. **OR** 11:30 a.m. to 12:30 p.m.  
Ages 4-5  
Pre-registration is required. For more information or to register online, visit [www.pbpetro.org](http://www.pbpetro.org).  
Sponsor: Occidental Petroleum Corporation

April 2  
Building Bots  
Robotics & Engineering FunLab  
5:30 to 7:30 p.m.; Grades 3-6  
Pre-registration required. Register at [www.pbpetro.org](http://www.pbpetro.org).  
Sponsor: Anadarko Petroleum Corp.

April 9  
Arlen Edgar Distinguished Lecture Series  
Speaker: Dr. Robert Hazen  
Where Minerals and Biology Collide  
7 p.m.  
Free ticketed event. Call for reservations or go online to [www.pbpetro.org](http://www.pbpetro.org).  
Sponsor: Abell-Hanger Foundation

April 16  
Brown Bag Lunch & Lecture Series  
Speaker: Aron Marquez, Wildcat Oil Tools  
Gone Fishing  
11:30 a.m. to 12:30 p.m  
Free Admission. Drinks & dessert provided.  

April 21  
Happy Easter!  
Museum will be closed Easter Sunday.

May 2  
Petroleum Hall of Fame Induction Ceremony and Dinner  
Ticketed Event; Sponsorship & Underwriting Opportunities  
Contact LuAnne Thornton at 432-683-4403 or lthornton@petroleummuseum.org

May 7  
Building Bots  
Robotics & Engineering FunLab  
5:30 to 7:30 p.m.; Grades K-2  
Pre-registration required. Register at [www.pbpetro.org](http://www.pbpetro.org).  
Sponsor: Anadarko Petroleum Corp.

May 21  
Brown Bag Lunch & Lecture Series  
Speaker: Mark Lancaster  
Lower Emissions Through Cost-cutting Technology  
11:30 a.m. to 12:30 p.m  
Free Admission. Drinks & dessert provided.  

May 29-30  
STEAM Sprouts Mini Camp: Learn to Code  
9:30 to 10:30 a.m. **OR** 11:30 a.m. to 12:30 p.m.  
Ages 4-5  
Pre-registration is required. For more information or to register online, visit [www.pbpetro.org](http://www.pbpetro.org).  
Sponsor: Occidental Petroleum Corporation

**June**

June 1  
Party on the Patio  
Chaparral Fan Club Members Only  
Live Drive: Dinner with Jim Hall  
To become Chaparral Fan Club member, contact LuAnne Thornton at 432-683-4403.

June 3  
Movie Maker Monday: "Incredibles 2"  
1:00 to 5:00 p.m.  
Museum members, $10; Non-members, $15  
Ages 6-12  
Pre-registration required. Go to [www.pbpetro.org](http://www.pbpetro.org).  
Sponsor: Apache Corporation

For more information about any of these programs or events, contact the Petroleum Museum at 432-683-4403 or [www.pbpetro.org](http://www.pbpetro.org).
**The Museum Store**

**MOMS ARE LOVED**

**REMEmBER MOM** this Mother’s Day and every day with beautiful gifts from the Petroleum Museum Store. We are open from 10 a.m. to 5 p.m. Monday through Saturday and 2 to 5 p.m. Sunday, or shop online at pbpetro.org/shop anytime. **Shop with purpose** by supporting the Museum through purchases made in the Museum Store.

**Our Mission:** We will share the petroleum and energy story and its impact on our lives.