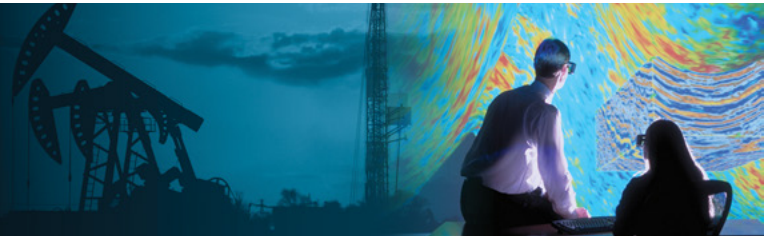




IPAA/PESA
Energy Education
Center

SUMMER 2017



INDEPENDENT PETROLEUM ASSOCIATION OF AMERICA

PETROLEUM EQUIPMENT & SERVICES ASSOCIATION

The 2016-2017 school year closed with many activities having been provided for the students in the five **IPAA/PESA Petroleum Academies**. These would not have been possible without the tremendous support of the many companies, organizations and individuals who have helped sustain the work of the **IPAA/PESA Energy Education Center**.

This year marked an outstanding year of academic success for the students in the petroleum academies, with there being three valedictorians, two salutatorians and numerous top 10 students in the 2017 graduating class. Congratulations to all students, parents and campus personnel.

We are very thankful for the involvement of the following organizations that provide industry field trips, camps and support for our students, many on multiple occasions: **Bureau of Economic Geology, Comanche Peak Nuclear Power Plant, Consumer Energy Alliance's Houston Energy Day, Dallas Perot Museum, Fort Worth Museum of Science and History, Gearhart Industries, Gulf Publishing's Women's Global Leadership Conference, High Island beach trenching, Houston Geological Society, Houston Museum of Natural Science, the Offshore Energy Center, Perot Museum, Dallas, Physics Day at Six Flags, Schlumberger Surfside Beach Cleanup, Texas A&M University, Texas Christian University Energy Institute and Fossil Dig, Weir Oil & Gas, and the University of Texas at Arlington.**



Barry Russell
President & CEO, IPAA

This year we continued our major competitions: the **Shell STEM Showdown** at the **University of Houston** with involvement by **Rice University, University of Houston, University of St. Thomas, and University of Texas, Austin**, with 840 students participating by this September. **PetroChallenge 2017** took place with sponsorship by **Occidental Petroleum, Schlumberger** and the Schlumberger company, **NExT**, with 1,500 students participating to date. In Fort Worth, the **Southwest High School Professional Speaking Competition** was supported by **American Association of Drilling Engineers** companies: **Creighton Drilling Services, Integrity Directional, Reef Oil and Gas, and Weatherford International.**

continued on page 2

TRAINING COURSE FUNDRAISERS

Benefiting the IPAA/PESA Energy Education Center

The oil and natural gas industry is broad and complicated, so **IPAA** has partnered with **Energy Training Resources, LLC** and developed an information-packed **Oil & Gas Overview Course** that connects the functional and commercial aspects of the industry.

UPCOMING COURSES:

- ▶ Tuesday, August 15, 2017
George R. Brown Convention Center
- ▶ Monday, October 2, 2017
Petroleum Museum, Midland, Texas
- ▶ Monday, February 5, 2018
George R. Brown Convention Center

REGISTER | www.ipaa.org/events



We also are grateful for the support of the North American Prospect Expo and the Society of Petroleum Engineers



Teacher of the Year

Mrs. Jennifer Northern, lead teacher in the **Petroleum Academy at Southwest High School** in Fort Worth, was selected as the **2017 IPAA/PESA Teacher of the Year**. The purpose of the award is to recognize outstanding **Academy** campus personnel who demonstrate excellence and a commitment to the **Academy** program. **Mrs. Northern** has taught mathematics for 14 years, received numerous awards during her teaching career and she was part of the founding team of teachers at **Southwest High School** in 2009. **Southwest** and the **IPAA/PESA Energy Education Center** are truly fortunate to have such an outstanding

Petroleum Academy lead teacher. We congratulate **Mrs. Northern** and thank all the amazing educators that we are honored to have involved in our program.



To further support the IPAA Educational Foundation's educational outreach efforts, IPAA, through its partnership with Energy Training Resources, is excited to launch the next of its

elearning courses:

Mineral Rights and Leasing

Also Available Now

Geology for Non-Geologists

Coming Soon!

Joint Operations

VISIT

www.ipaa.org/elearning

Earn valuable continuing education credits.

Barry Russell *continued from page 1*

The **Guest Speaker Lecture Series Conference** in **Houston Academies** continued to model how students should prepare for and conduct professional presentations. These conferences were made possible through the support of **Core Laboratories, Marathon Oil, National Ocean Industries Association, Schlumberger, Southwestern Energy**. Additionally, guest speakers from the following organizations presented to academy students, many on multiple occasions at multiple academies: **Apache, Barnett Shale Energy Education Council, EOG Resources, Halliburton JRC, INEOS, Limerock, Lockheed, Magnolia Global Engineering, Occidental Petroleum, Railroad Commission of Texas, Texland Petroleum, Weir Oil & Gas, and XTO Energy**.

Also this year, we were again invited by **Shell** to join the **INROADS** program where support is given to students throughout their college careers, and 30 of our top academy students and alumni were invited to participate. The second annual **Bureau of Safety and Environmental Enforcement (BSEE) Technology Challenge** was held at the **University of Houston**. Ninety academy students participated in the outstanding event and we are thankful to **BSEE, the Ocean Energy Safety Institute (OESI)** and the **University of Houston** for the invitation to participate. **EOG Resources** provided valuable advice from their college recruiters in the **EOG Resources 'Transition to College' luncheons** and qualifying seniors received their **Anadarko-sponsored Academy medals** and the **Newfield Exploration 'Life After School Explained'** books.

To date 559 students, who meet the rigorous selection criteria, have participated in an externship. In summer 2017, we conducted our **8th annual Externship program** in which 83 students experienced the real world of work in 18 different oil and gas companies: **Cameron, Core Laboratories, Distribution NOW, Halliburton, Harbison-Fischer, Marathon Oil, Newfield Exploration, Occidental Petroleum, Schlumberger, Shell, Southwestern Energy, TechnipFMC, Texland Petroleum, Weatherford, Weir Oil & Gas Houston and Fort Worth, W&T Offshore, and XTO Energy**. Externs received college scholarships provided by their host company. Senior scholarships were generously provided by **IPAA/PESA Education Advisory Board** member, **Alicia Elias, Apache Corporation** and **EOG Resources**.

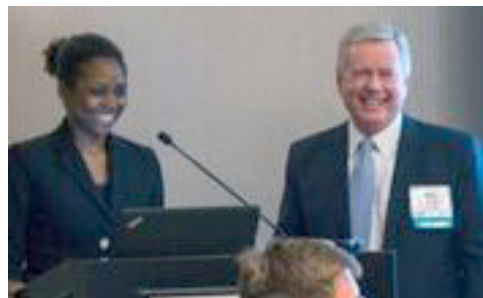
Thank you again to all the many and various organizations and individuals who contributed to this past semester's success and helping to create the next generation of talented energy professionals.



NOIA Annual Meeting

Ashley Menendez, Southwest High School 2013 salutatorian and class president, and member of the **IPAA/PESA Petroleum Academy at Southwest**, spoke on April 5, 2017 at the annual meeting of the **National Ocean Industries Association (NOIA)** in Washington, DC. Ashley spoke about her experience in the academy including her high school externship at **EOG Resources** in Fort Worth. Ashley expressed gratitude on behalf of all current and former Petroleum Academy students to **NOIA** and its member companies and other energy companies for their support of the **IPAA/PESA Energy Education program**.

Ashley is majoring in chemical engineering at Howard University in Washington DC. She is a member of an honors engineering fraternity Tau Beta Pie, President of the American Society of Chemical Engineers and involved with the National Society of Black Engineers, the Society of Women Engineers, and a robotics organization. She has completed a number of internship opportunities. One of her memorable internships involved research in nanotechnology at Cornell University and presenting her findings at a conference there as a part of the Particles of Reduced Dimensional Materials program. Another internship involved consulting for an IBM engineering department. Ashley's aspirations after graduation are to be able to work with nanotechnology to make energy more economical.



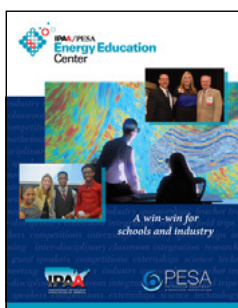
Ashley Menendez with Galen Cobb, IPAA/PESA Education Advisory Board Co-Chairman and NOIA Public Affairs & Education Committee Chairman.



PESA Annual Meeting

On April 22, 2017, **Jack Nassab, 2013 IPAA/PESA Petroleum Academy at Westside** graduate, spoke on behalf of all current and former **IPAA/PESA Petroleum Academy** students before the National Membership of **PESA** in Mesa, Arizona.

Jack is currently a senior at Louisiana State University, majoring in Petroleum Engineering. He is actively involved in the Phi Kappa Psi fraternity, the Society of Petroleum Engineers and the American Association of Drilling Engineers. He has served as a senator in student government and as the director of corporate relations for the College of Engineering. Jack's high school externship was in **Shell's** subsea division and he has had college internships with **Scandriil, Halliburton, Schlumberger** and **DistributionNOW**. While at **Schlumberger**, Jack presented a paper to the National Academies of Science in Washington, DC.



IPAA/PESA
Energy Education Center

*"A win-win for
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www.ipaa.org/education/pdf/ipaa_edcenterbrochure.pdf

Dale Carnegie & Energy Training Resources Teacher Training

The IPAA/PESA Energy Education Center kick-started the 2017-18 school year with a new opportunity through Dale Carnegie for our Petroleum Academy teachers. This exclusive event would not have been made possible without the generous financial support of Dale Carnegie and Southwestern Energy. Petroleum Academy teachers from each school were invited to attend. Through this 2-day training, participants had the chance to work on human relations skills, communication effectiveness, interpersonal relationships, problem solving, and leadership. These skills will be taken into the classroom and combined with the existing oil and gas training, resulting in a dynamic learning experience for our students.

In addition to the Dale Carnegie training, teachers are invited to attend the Energy Training Resources Oil & Gas Industry Overview courses at no cost to the teachers on August 15, 2017 at the George R. Brown Convention Center as part of the summer NAPE week. Teachers will be taking the course with industry professionals from around the nation. Proceeds will go to support the IPAA Educational Foundation.

And finally, onsite at each campus, additional Petroleum Academy-specific training is taking place.

We are grateful for the generous sponsorship of Core Laboratories, Dale Carnegie, Energy Training Resources, NAPE and Southwestern Energy.



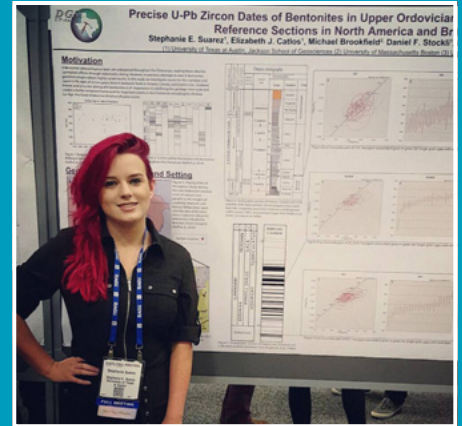
BSEE

This March, Academy students competed in the 2nd annual High School Offshore Science and Technology Stars Challenge at the University of Houston's TDECU Stadium. This competition was sponsored by Bureau of Safety and Environmental Enforcement (BSEE) with the Ocean Energy Safety Institute. Participants cheered each other on while working on a series of challenges designed to help students gain the skills that replicate trainings that would be imperative in the industry workforce, including circuit design, electrical engineering, piezoelectric technology (developed by NASA), process safety and working in teams. A team from Westside High School placed third.

View Stephanie's recently published article here:

<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0179262>

IPAA/PESA Milby Graduate Accepted to Prestigious University of Houston Geology Master's Program



Stephanie Suarez graduated in 2012 as a member of the IPAA/PESA Petroleum Academy at Milby and this past May she graduated with a Bachelor of Science in General Geology from the Jackson School of Geosciences at UT Austin. Stephanie's externship was at Valerus in 2011.

Her research at UT used U-Pb radiometric dating of zircon grains found in volcanic ashes deposited during the Ordovician period to determine when ancient volcanic eruptions occurred. Determining a precise and accurate age of these events is important information for a multitude of other geoscientists. Stephanie has presented her research at two conferences, the Geological Society of America Annual meeting in Denver, Colorado and the American Geophysical Union meeting in San Francisco, California. Stephanie has also participated in a Research for Undergraduate Experience funded by the National Science Foundation that allowed her to conduct mineralogy research internationally in an active mine in Baja California Sur, Mexico.

Stephanie plans to obtain her PhD in Geology, an ambitious goal as she is the first in her family to attend college.

The IPAA/PESA Energy Education Center could not be more proud of Stephanie and her achievements.

We are all very excited to see just how far she will go in the future and wish her well as she starts her masters degree in geology at the University of Houston.

Offshore Energy Center Knowledge Box

IPAA/PESA Petroleum Academy at Westside students volunteered to teach 4th grade students from Barbara Bush Elementary School about energy with materials from the **Offshore Energy Center**. The elementary students participated in a variety of engaging activities that taught them about the oil and gas industry.



NATIONAL ENGINEERS DAY

Richard Sukup | Magnolia Global Engineering

In celebration of National Engineers Week, the **IPAA/PESA Petroleum Academy** 10th graders at **Southwest High School** attended **Tarrant County College's "Dream Big: Challenges in Deep Oil and Gas Well Exploration"** event at the south campus in February. The keynote speaker was **Richard Sukup**, President of **Magnolia Global Energy Ltd.** and retiree from **Mobil Oil Corporation**. Thanks to **Tarrant County College** for inviting our students and sponsoring this educational event!

WEIR OIL & GAS GUEST SPEAKERS

Dave Warnick and Carrie Murtland

Weir Oil & Gas guest speakers **Dave Warnick**, **Carrie Murtland** and **Joe Carroll** spoke to the sophomores and seniors at **Southwest High School** in March. The students learned about **Weir Oil & Gas**, the products they make and advice for success in high school and beyond.



Southwest High School Speaking Competition

IPAA/PESA Petroleum Academy at Southwest High School held their annual **Public Speaking Competition** in January.

The competition was fierce, with guest judges from the petroleum industry deciding the winners. Judges from the Dallas/Fort Worth Chapter of **American Association of Drilling Engineers (AADE)** included **Steve Boyd**, President of Integrity Directional, **Laura Klein**, Drilling Manager at **Reef Oil & Gas Company** and **Jack Doak**, Technical Sales at **Weatherford International**. We were also honored to have **Tonya Ehret**, retired **IPAA/PESA Petroleum Academy at Southwest High School** teacher, join as a guest judge.

The public speaking topics were all related to global concerns of the petroleum industry and allowed the students an opportunity to speak and be judged by professionals in their field of study. Special thanks to all of our judges and to **Matt Scott**, member of **AADE** and **Offshore Energy Center Knowledge Box Champion**, for coordinating the event with the judges.



American Energy Security: Higher Price Domestic Oil vs Dependence on Foreign Oil:

Fabiola Campos, Dailon Wynn, Jordan Coffman, Elizabeth Sloan and Josiah Butterfield



Transitioning from Current Energy Infrastructure to Alternative Energy Sources:

Avery King, Alexis Orta, Prabin Phuyel, Vianey Jauregui and Roderick Simmons



Alternative Resources: Larry McPhail, Tylín Armstrong, Trew Tackett & Xavier Smith

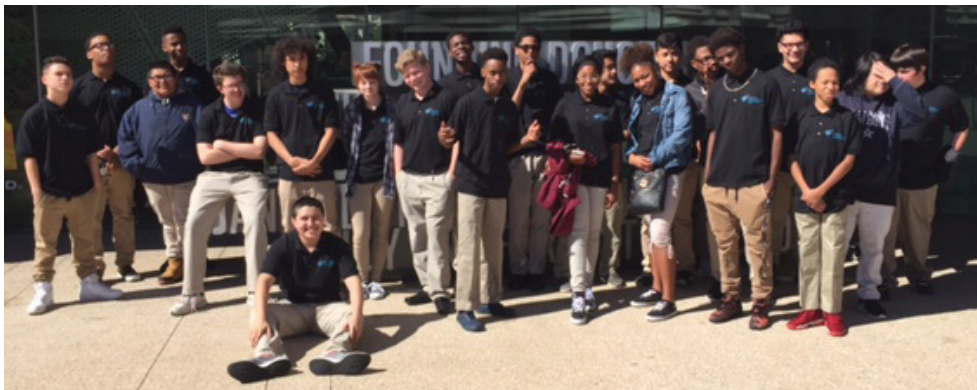


Finding Fossil Fuels: Derick Legan and Waylan Fogarty



Comanche Peak Nuclear Power Plant

Juniors in the **IPAA/PESA Petroleum Academy at Southwest High School** gained first-hand knowledge of nuclear energy when they explored the **Comanche Peak Nuclear Power Plant** in Glen Rose, Texas in February. This exciting learning experience introduced the students to yet another source of energy. **Andrew Saunders** explained the nuclear industry, his role and that of his colleagues and the many facets of the power plant.



The Perot Museum

The **IPAA/PESA Petroleum Academy at Southwest High School** freshmen academy students visited the **Perot Museum** in February. Fascinating exhibits in the Texas Instruments Engineering and Innovation Hall and in the Tom Hunt Energy Hall gripped the students' attention, providing exciting hands-on learning experiences. Students competed head to head with robots and learned more about the process of natural gas production.



College Visit | University of Texas at Arlington

IPAA/PESA Petroleum Academy at Southwest High School sophomores toured the **University of Texas at Arlington (UTA)** in April. The itinerary included awe-inspiring interactive physics activities along with hearing **Dr. Jones**, assistant professor of physics, speak. The underclassmen enjoyed great learning experiences, on both academic and personal levels. Many students commented that one of their biggest takeaways from the event was seeing for themselves how a college campus functions, instead of just hearing about it, watching a video or looking at a college website.



IPAA/PESA Petroleum Academy at Southwest High School seniors had a blast at the **Six Flags Physics Day** activities in May. Six Flags Over Texas provided a physics workbook that covered math and science topics including force, data collection and analysis, quadratics, laws of conservation of energy and momentum, rational and polynomial functions, measurement of qualitative and quantitative data and mathematical modeling. It was a fun and unique opportunity for the Academy students to take their knowledge of physics from the classroom to the amusement park.



Weir Oil & Gas

IPAA/PESA Petroleum Academy at Southwest High School seniors delved deeper into the nuts and bolts of the oil and gas industry when they explored pump manufacturing particulars at **Weir Oil & Gas** in February. Staff explained the design process of pumps, how to determine if a pump is needed, the time it takes to produce the product, and how **Weir's** pumps are tested against their competitors. **Weir Oil & Gas** employees, including **Dave Warnick**, Vice President of Human Resources, took the time to share their personal stories with the students regarding the steps they took after high school in order to advance to the careers they have today.

Thank You To Our Sponsors!



EOG Resources Transition to College Luncheon

Seniors from the **IPAA/PESA Petroleum Academies at Milby & Westside High School**, along with **Young Women's College Preparatory Academy** were treated to **Jeff Stofa** and **Rachel Belk** from **EOG Resources** hosting the **Transition to College Luncheon**. Seniors were also presented with the **Newfield 'Life After School Explained'** books.



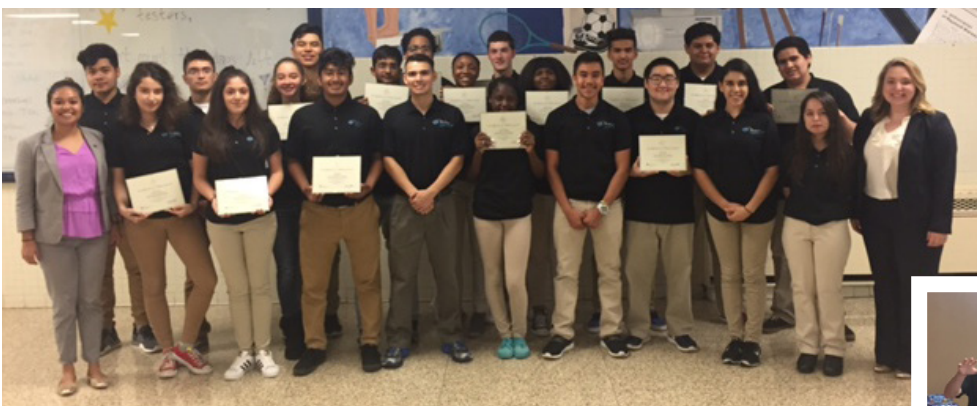
Texas Christian University Energy Institute Fossil Dig

IPAA/PESA Petroleum Academy at Southwest High School sophomores participated in a **Fossil Dig** and then visited the **TCU Energy Institute**. Director **Dr. Ken Morgan** gave a tour of the facility and a presentation on the background history of the **Barnett Shale** and how it has affected the Fort Worth area. The students also had an opportunity to see the film "**Fractured**". The Academy students took a personalized tour of the Monnig Meteorite Gallery and touched Mars! The gallery houses one of the largest university-based collections, consisting of almost 3,000 samples.



Graduation Medals

Students received **IPAA/PESA Energy Education Center** medals of distinction in May that were worn at their June graduation ceremony.



Dale Carnegie Extern Training

Ninety-five students in Fort Worth and Houston prepared for their externships by attending a two-day **Dale Carnegie Skills for Success** program. The world-renowned **Dale Carnegie** program covered a variety of personal growth and workplace success topics including **Building a Greater Self-confidence**, **Strengthening People Skills**, **Enhancing Communication Skills**, **Developing Leadership Skills**, **Reducing Stress** and **Improving One's Attitude**.

Dress for Success

The mission of **Dress for Success** Houston is to empower women to achieve economic independence by providing a network of support, professional attire and development tools to help women



thrive in work and life. In May of 2017, several of our female externs had the opportunity to take advantage of this opportunity. The girls first entered **First Impressions**,

a program sponsored by **Chevron**, where trained volunteers share important information to help clients build skills and participate in mock interviews; followed by a one-hour suiting appointment. In the suiting appointment, each girl was partnered with a personal shopper and received a suit, blouse, purse, pearls, pearl earrings, scarf and shoes. **Dress for Success Houston** has provided business attire, and a boost of confidence for our outstanding externs.



Externship2017

This summer 83 Academy rising seniors participated in a summer Externship in one of 17 oil and gas companies or in the Marathon Oil Co-Op Program. This brings to date 559 students who have participated since 2010 in the highly competitive IPAA/PESA Externship Program. The program provides an 8 to 12 day job shadowing opportunity for future engineering and geosciences students at various Houston and Dallas/Fort Worth petroleum exploration, production and service company locations.



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Please contact Anne Ford at aford@ipaa.org



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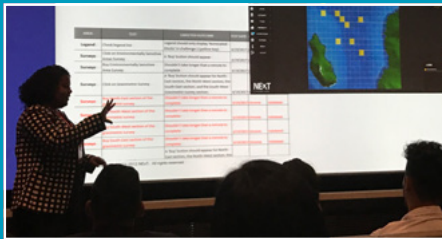
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SHELL



SOUTHWESTERN ENERGY



TECHNIPFMC



TEXLAND PETROLEUM



W&T OFFSHORE



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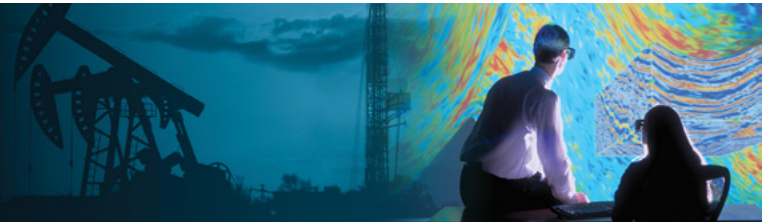
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- Atlas Resource Partners
- Baker Hughes
- Barnett Shale Energy Education Council
- Comanche Nuclear Power Plant
- Consumer Energy Alliance
- Corridor & Associates
- Creighton Drilling Services
- Energy City of the Future
- Flex Pipe Systems
- Fort Worth Science Museum Energy Blast
- Gearhart Industries
- Houston Community College
- Houston Museum of Natural Science
- Integrity Directional
- Knight Oil Tools
- Kosmos Energy
- Lamar University
- Limerock Partners
- Maersk
- NASA
- National Oilwell Varco
- Noble Drilling
- Offshore Energy Center
- Pedernales Energy
- Perot Museum of Nature and Science
- Railroad Commission of Texas
- Reef Oil & Gas Company
- Rice University
- Seely Oil
- Select Energy Services
- Silver Oak Energy
- Sloan Consulting
- Texas Christian University Energy Institute
- Texas A&M University, College Station
- Titan Liner
- University of Texas, Arlington
- University of Texas, Austin
- Women's Global Leadership Conference in Energy & Technology
- World Affairs Council

FOR MORE INFORMATION, PLEASE CONTACT: Barry Russell, President & CEO, IPAA | brussell@ipaa.org | 202.857.4735