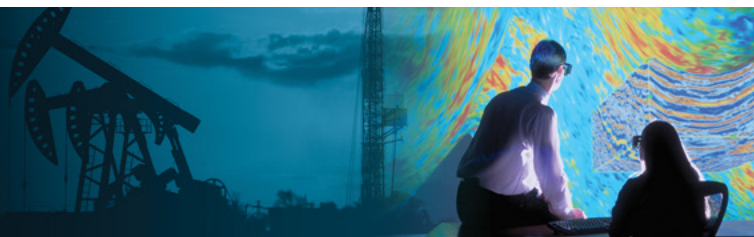




IPAA/PESA Energy Education Center

SPRING 2017



INDEPENDENT PETROLEUM ASSOCIATION OF AMERICA

PETROLEUM EQUIPMENT & SERVICES ASSOCIATION

The 2016-17 fall semester closed with many activities being provided for the students in the five **IPAA/PESA Petroleum Academies** in Houston and Fort Worth. 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** since the creation of the first Petroleum Academy at Charles H. Milby High School in the Houston Independent School District. Along with the Petroleum Academy at Milby High School, there are Academies at Westside High School, Southwest High School, the Young Women's College Preparatory Academy and the Energy Institute High School.

We are very thankful for the involvement of organizations both large and small and other industry associations. There are now between 50 to 100 individuals, companies and organizations that support the Academies. In particular, I would like to mention the involvement of other associations, such as the **American Fuel & Petrochemical Manufacturers, Houston Geological Society, Houston Producers' Forum, North American Prospect Expo, National Ocean Industries Association, Outer Continental Shelf Advisory Board, Ocean Energy Safety Institute, Offshore Technology Conference, Society for Independent Professional Earth Scientists of Houston, Society of Petroleum Engineers**, and the **World Affairs Council of Greater Houston**.

The Petroleum Academy Education Advisory Board has been instrumental in the continued growth and sustained success of the Academies, with many board members having served since the inception of the Academies 10 years ago.

We are very thankful for the support this past semester of the following organizations that provided field trip locations, camps, and support for our students, many on multiple occasions: **Bureau of Economic Geology, Consumer Energy Alliance's Houston Energy Day, Fort Worth Museum of Science & History, Gearhart Industries, Gulf Publishing's Women's Global Leadership Conference, High Island Beach Trenching, Houston Geological Society, Houston Museum of Natural Science, Marathon Oil, Offshore Energy Center Career Day**,

continued on page 2



Barry Russell
President & CEO, IPAA

TRAINING COURSE FUNDRAISERS

IPAA has partnered with **Energy Training Resources** to provide Oil & Gas industry overview courses with the proceeds supporting the IPAA Educational Foundation.

2017 COURSES:

Monday, February 13 at the George R. Brown Convention Center as part of the winter NAPE week

Friday, April 28 at NRG Park as part of the Offshore Technology Conference

Tuesday, August 15 at the George R. Brown Convention Center as part of the summer NAPE week

Valuable continuing education credits available.

To register, please visit:
<http://www.ipaa.org/meetings-events/>



2020 World Petroleum Congress

On December 15th, it was announced in Bahrain that Houston was successful in the competition for the triennial meeting of the 2020 World Petroleum Congress. Houston beat out Vancouver for the coveted event that has an estimated economic impact of \$60-\$80 million and draws as many as 10,000 top-level international oil executives together every three years. The last time Houston was selected as the host was 1987.

A key factor in Houston's win over Vancouver was a promise to dedicate 100% of the net profit from the Houston event to establish a **Global Legacy Program** that will benefit the next generation of energy industry young professionals. The funds will be redistributed around the world by the WPC to select Legacy Projects that align with WPC Legacy Committee initiatives, including educating and developing the future of the energy industry. "The young people in school today will be the industry professionals and innovators of tomorrow," said Houston

Mayor, Sylvester Turner. "They will develop the solutions needed to conquer our global energy challenges. We have to invest in their futures."

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To further support the IPAA Educational Foundation's educational outreach efforts, IPAA, through its partnership with Energy Training Resources, is excited to launch the first of its **elearning courses, Geology for Non-Geologists**.

Due for launch in early 2017 is **Mineral Rights and Leasing** and then in mid 2017, **Joint Operations**.

VISIT
www.ipaa.org/education/elearning/
for details.

EIHS

Ground Breaking Ceremony



EIHS Principal Lori Bruns, Houston ISD Superintendent Richard Carranza, and IPAA/PESA Energy Education Center Director Sarah Hewitt.



IPAA/PESA Energy Education Center Director, Sarah Hewitt, signed the beam in November at the ground breaking ceremony commemorating the start of the new building for the **Energy Institute High School**.

Barry Russell *continued from page 1*

Perot Museum, Schlumberger Surfside Beach Cleanup, Texas A&M University, Texas Christian University Energy Institute & Fossil Dig, University of Texas, Arlington, and Weatherford Training Facility.

Academy students are very competitive and they participated in the annual **Shell STEM Showdown Competition** at the University of Houston with involvement from Rice University, University of St. Thomas, University of Houston and University of Texas, Austin; the annual **PetroChallenge Competition** sponsored by Occidental Petroleum, Schlumberger and NeXT; and the **Fort Worth Speaking Competition** with support by American Association of Drilling Engineers member companies.

This semester we held the second annual **Guest Speaker Lecture Series Conference** in Houston to model how students should prepare for and conduct professional presentations. These conferences were made possible through the support of **Core Laboratories, INEOS, Marathon Oil, National Ocean Industries Association, Schlumberger and 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, Lamar University, Houston Geological Society, Limerock Partners, Lockheed, Occidental Petroleum, Railroad Commission of Texas, Texland Petroleum, University of North Texas, Weir Oil & Gas and XTO Energy**.

In the spring semester we are gearing up for two **Training Fundraisers** provided by **Energy Training Resources** with support by **North American Prospect Expo** and **Society of Petroleum Engineers**, the summer externship program, further field trips, competitions, guest speakers and the second annual **Bureau of Safety and Environmental Enforcement** competition with involvement by the **Ocean Energy Safety Institute** and the **University of Houston**.

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.



2020 WPC *continued from page 1*

As part of the bid, IPAA/PESA Petroleum Academy graduate, **Madison Jackson**, representing the next generation of energy professionals, was featured in the video presentation. Madison is a 2012 graduate of the IPAA/PESA Petroleum Academy at Westside High School in Houston, Texas. Madison undertook her IPAA/PESA high school externship at Newfield Exploration, and had college internships with Chevron and EOG Resources. We thank **Newfield Exploration** and all companies who have hosted IPAA/PESA high school externs.



>ALUMNI MIXER

The role of the IPAA/PESA Petroleum Academy Alumni Network is to help former academy students who are currently in college or have graduated, along with current academy seniors, to network with company representatives and get an inside track as to what companies are looking for when hiring college interns and employees. The alumni mixer helps everyone stay in touch with fellow classmates and share industry experiences with each other.

The Energy Education Center held our 4th Alumni Mixer in August 2016.

The Fall IPAA Board meeting and the Alumni Mixer were held on the same date; allowing our board members to meet and network with our students. The event brought excitement this year with an unexpected fire alarm, forcing everyone to exit the building via three flights of stairs at the Four Seasons Hotel in Houston, Texas. The Alumni Mixer is such an exciting and successful event that despite the fire alarm, a majority of the guests returned to the ballroom to hear from a number of our Alumni. Our sincerest thanks to **Shell**, our 2016 Alumni Mixer sponsor, for their generous support.



Teacher Training

The IPAA/PESA Energy Education Center kick started the 2016-17 school year with the annual industry training for teachers. This event would not have been made possible without the generous financial support of **Core Laboratories**, **Energy Training Resources**, **University of Houston**, **Bureau of Safety and Environmental Enforcement (BSEE)**, and **Ocean Energy Safety Institute (OESI)** also helped support this event by providing the content, meeting space and a variety of guest speakers. All IPAA/PESA Petroleum Academy STEM teachers from each program were invited to attend.

On the first day of the 2-day training, Paul Parsons, with Energy Training Resources, led the teachers through an engaging day of current industry topics. The comprehensive content took the educators through a series of lectures and hands on activities that explained how oil and gas topics can be incorporated into regular high school coursework such as biology, chemistry, geology, earth sciences, physics, economics and even reading comprehension and communication skills.

On the second day, additional guest speakers organized by **BSEE** included **Jarvis Outlaw, BSEE Petroleum Engineer**, **Scott Randall, Global Business Management Consultants**, and **Graham Mullings**, grad student from the **University of Houston**, all of whom offered insightful and up-to-date industry material.

The IPAA/PESA Energy Education Center appreciates the extended support of our hardworking teachers and the next generation of industry professionals.



Incoming Freshman Summer Camps

Marathon Oil provided generous financial support for the incoming freshman summer camps. At Southwest High School the incoming freshmen participated in a leadership camp before school started on Monday, August 8, 2016. The students enthusiastically participated in activities coordinated by Leadership on the Move and enjoyed a pizza lunch. All of the ninth graders were given a t-shirt recognizing the event that was designed by 10th grade IPAA/PESA Petroleum Academy student, **Luis Tinoco**. Some senior academy students also participated in welcoming the incoming freshmen.



Shell STEM SHOWDOWN

IPAA/PESA Petroleum Academy students had the opportunity to participate in a nationally acclaimed Science, Technology, Engineering, and Math (STEM) competition, coordinated by **Great Minds in STEM**. The **Shell STEM Showdown** competition was generously powered by **Shell Oil Company** and made exclusively available to the students participating in the IPAA/PESA Petroleum Academies. Over 120 High School students spent the day at the **University of Houston** competing in a variety of innovative technology and engineering challenges. Each team worked alongside college students from local universities who are majoring in STEM fields and had the opportunity to interact with professionals from **Shell** who helped mentor throughout the competition. Students left feeling fired-up after understanding how STEM parallels exciting careers in math, science and engineering.

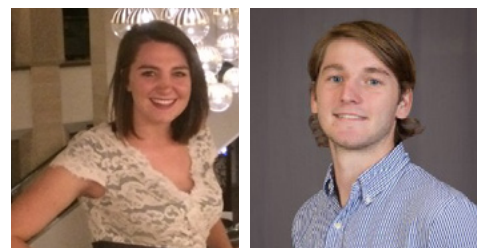
University of Texas Donation

Shell STEM Showdown 2015 – University of Texas Students Donate Prize Money to Milby IPAA/PESA Petroleum Academy Students

In fall 2015, engineering students from the University of Texas at Austin, **Ms. Christian Dowdle** and **Mr. Dylan Hart**, led an incredible group of freshmen students from the IPAA/PESA Petroleum Academy at Milby High School to victory at the **Shell STEM Showdown** hosted at the **University of Houston** by **Great Minds in STEM**. As

the college mentors to these students, Christian and Dylan were each granted \$1,000 in scholarship funds for academic pursuits of their choosing.

While still students themselves, Christian and Dylan decided to donate the prize money to the Milby Petroleum Academy instead of using the funds themselves to



encourage the students to aspire toward higher education and careers in STEM. We are appreciative of their selfless and most generous donation.

Houston Museum of Natural Science Field Trip

First year IPAA/PESA Petroleum Academy students from Milby and Westside High Schools, and Young Women's College Preparatory Academy participated in the Houston Geological Society sponsored field trip to the **Houston Museum of Natural Science**. The students toured the Mineral and Gems and Paleontology Halls as well as interacted with docents who presented touch carts for the Energy Hall. This is the students' first encounter with geosciences.



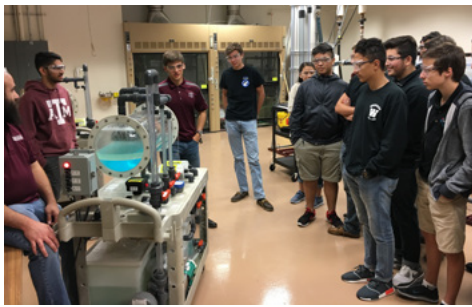
Bureau of Economic Geology

Houston Geological Society organized an opportunity for students from the IPAA/PESA Petroleum Academies at Milby and Westside High Schools, and Young Women's College Preparatory Academy to learn about how to identify rocks and minerals at the **Bureau of Economic Geology** with several geologist volunteers.



Texas Adopt-A-Beach

Over 75 students from the IPAA/PESA Petroleum Academies at Milby (pictured), and Westside High Schools, and Young Women's College Preparatory Academy, enjoyed the day cleaning Surfside Beach for the annual Texas Adopt-A-Beach program sponsored by **Schlumberger**.



Texas A&M Field Trip

Westside High School juniors in the IPAA/PESA Petroleum Academy visited **Texas A&M University's Petroleum Engineering and Geosciences College**. Toured by members of the Texas A&M Chapter of the **Society of Petroleum Engineers**, the students learned about college requirements and programs that Texas A&M offers.



Fort Worth Natural History Museum

Energy Blast at the **Fort Worth Museum of Science and History** was the prime focus of the field trip taken by freshmen engineering students in late October. The exhibit featured interactive stations for the students to explore, including a 50,000-pound seismic vibroseis truck, a 30-foot model of a drilling apparatus and a model city where students used renewable and non-renewable resources to "power" the city.

The students also embarked on a *Journey to the Center of the Barnett Shale*, by viewing and experiencing the 4-D film. The video explained how natural gas formed within the shale deposits of North Texas. The field trip concluded with the Coral Reef Adventure at the Omni.

Milby High School

Guest Speaker Lecture Series Conference

Randall Luthi, President, **National Ocean Industries Association (NOIA)** and IPAA/PESA Education Board Member kicked off the **2016 Guest Speaker Lecture Series Conference** at Milby High School in Houston, Texas. Randall served as this year's keynote speaker at Milby & Westside High Schools and wowed the students with his "Top 10 Things I Have Learned." Mr. Luthi entertained the crowd with a 45 minute address followed by a 15 minute Q&A session. Following Randall, the Speaker Panel took place which included panelists from **Marathon**

Oil: Stephanie Cook, Glen Hodge, Kristian O'Conner, Robyn Marchand and Susan Rodriguez from **INEOS**. The panelists shared their journey from high school to college and how they became interested in the industry. A Milby High School senior served as the moderator for this event and thanked each member as they shared their advice and wisdom with the audience.



ENERGY DAY

On Saturday, October 15th, the **Consumer Energy Alliance** and the **Consumer Energy Education Foundation** hosted their annual **Energy Day** in Houston, Texas. Students from Young Women's College Preparatory Academy, Milby High School, and Westside High School's IPAA/PESA Petroleum Academies volunteered to demonstrate a variety of petroleum based science experiments for the attendees at the IPAA/PESA Energy Education Center booth. Energy Institute students also volunteered their time with CEA throughout the day. Over 22,000 Houstonians attended the 2016 event which highlights science, technology, engineering, and mathematics (STEM) as well as showcasing the various forms of energy, efficiency, conservation, and careers in the energy industry.





Young Women's College Preparatory Academy

Guest Speaker Lecture Series Conference

Evelyn Medvin, Vice President, Core Laboratories and IPAA/PESA Education Board Member served as the keynote speaker at Young Women's College Preparatory Academy at the second annual Guest Speaker Conference. Ms. Medvin educated the students with "Where I've Been & How I Got There, a 30+ Year Journey". Ms. Medvin entertained the crowd with a 45 minute address followed by a 15 minute Q&A session. Following Ms. Medvin, the Speaker Panel took place which included panelists from **Southwestern Energy**: Whitney Mathias, Nicki Atkinson, Lauren Land, Seema Menon and Bernadette Creasey. The panelists shared their journey from high school to college and how they became interested in the energy industry. A Young Women's College Preparatory Academy senior served as the moderator for this event and thanked each member as they shared their advice and wisdom with the high school audience. **Southwestern Energy** finished off the event by generously providing each student with gifts.



ROSE Ceremony

The 2016 Young Women's College Preparatory Academy ROSE Ceremony held on October 13, was a wonderful event. ROSE is the motto of the school and stands for—**Responsible, Organized Sisterhood of Excellence**. The program, led by YWCPA student leaders was both inspirational and heartening. Guests were welcomed by **Principal Delesa O'Dell Thomas**, followed by the procession of proud new YWCPA students. Students were then encouraged and challenged by **Ms. Carol Calloway**, Asset Manager, Texas Delaware North, **Occidental Petroleum Corporation** to be bold, to keep pushing and to never give-up.

Milby High School

Guest Speaker Lecture Series Conference Marathon Oil Panel with Milby High School Co-Op Students

Marathon Oil employees Robyn Marchand, Kristian O'Conner, Stephanie Cook and Glen Hodge with Milby High School Marathon Oil Co-op students, Daniel Antonio and Enrique Macedo (Below Left, 3rd and 2nd from the right). Below Right: Photo of panelist Susan Rodriguez from **INEOS**.



Southwest High School

Guest Speaker Lockheed Martin

Build the tallest paper tower that can also sustain a simulated earthquake and hurricane! **Rachel Bodien** from **Lockheed Martin** coordinated this incredible learning opportunity for the Engineering Academy seniors at Southwest High School in October. She also spoke to the students about **Lockheed Martin**. Special thanks to Ms. Bodien for her expertise on this memorable project!



Westside High School

Guest Speaker Lecture Series Conference

Westside High School seniors, Chiugo Akujuobi and Ty'Rae Carter, join the guest speaking panelists, from **Schlumberger**: Reisin Toolsi, Ahmad Din, and Michael Lam; and from **Apache**, Michelle Hanson.





Women's Global Leadership Conference

On November 2nd, the female IPAA/PESA externs from Energy Institute High School and the Young Women's College Preparatory Academy attended the 13th annual **Women's Global Leadership Conference in Energy** held at the Hyatt Regency Hotel in Houston, Texas. Their attendance at the conference and the Silent Auction fundraiser were generously sponsored by **Gulf Publishing**. This year's conference theme was 'Changing the Landscape of Leadership in the Energy Industry'. Keynote speakers, presenters and panelists shared their leadership ideas to support women moving into leadership positions in our industry. **Ms. Astra Zeno**, from Young Women's College Preparatory Academy and **2016 IPAA/PESA teacher of the year**, served as a panelist for the very intriguing panel discussion of 'Building a brighter, diversified tomorrow for STEM professionals'.

Offshore Land Game

Alicia Elias and Maggie Hegenbart from **Apache** taught IPAA/PESA Petroleum Academy students at Milby High School and Young Women's College Preparatory Academy by having them play the popular **Offshore Land Game**, where students are grouped as technical teams for different oil and gas companies, and go through the bidding process to obtain a lease from the government.



PetroChallenge



PetroChallenge is a hands-on, educational competition that utilizes technology to teach our academy students about the upstream process. The online simulation challenges the students to prospect, bid for licenses, negotiate with other teams and select providers in order to drill on their lease. IPAA/PESA Petroleum Academy students are the only high school students in the United States participating this competition. This year's competition, sponsored by **Occidental Petroleum**, **Schlumberger** and the Schlumberger company, **NExT**, was held in January at the Houston Community College - Southwest Campus.

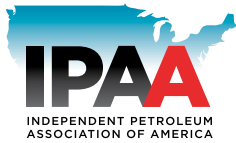
OEC Career Day

Academy students from all four Houston Academies attended the **Career Fair at the Ocean Star Offshore Drilling Rig Museum and Education Center (OEC)** and furthered their understanding of geology by beachtrenching at High Island with support from volunteers from the **Houston Geological Society** and the **Houston Museum of Natural Science**. While at the museum, career information in the energy industry was showcased by exhibiting companies including service companies, drilling companies, oil and natural gas companies, universities and colleges. Geologists continued to educate our students at High Island through various stations including: a salt station, a beach sand station and reservoir saturation station and a trenching station. A trip to Galveston would not be complete without the ferry ride. Students enjoyed eating their lunch on the ferry ride while watching dolphins in the open water. A good time was had by all.





IPAA/PESA
Energy Education
Center



Thank You To Our Major Supporters

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