

SPE Mid-Continent Section Newsletter

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Mid-Continent Section



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SPE Mid-Continent Section

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Voting members consist of the Executive Committee. The Chairman only votes in the event of a tie. A Motion can be voted upon with a Quorum of the Voting Members present. A Quorum consists of five Voting Members present. An affirmative vote will consist of 50% of the Quorum present. Committee Chairmen and in their absence, the Committee Vice Chairmen are encouraged to attend board meetings and provide representation and committee reports. The editor welcomes newsworthy items about SPE members or events. Please provide a **draft to the newsletter editor by the 25th of the month**. Change of contact information requests should be made to SPE in Richardson, TX, 1-800-456-6863, or service@spe.org.

Chairman's Gavel

Mike Stafford, 2021-2022 Chairman

We are excited about the November Monthly SPE Meeting being in person at the Tulsa Country Club! And we are looking forward to conducting our future meetings at TCC. This will be our last meeting for 2021 so make plans to come meet with your Petroleum Industry colleagues on Thursday the 18th at 11:20 – 1 PM at TCC.

I know that we all feel the same in that things were down for so long – it is so good to see WTI hanging in there in the \$80's. While natural gas has been exhibiting \$1 price swings, it is good that those swings are between \$5 and \$6 / MCF. The North American Baker Hughes Rig Count has steadily increased from 360 rigs in January to 550 rigs on Nov 8th. And what is really good is that we are starting to see an uptick in job placement and opportunities. Let's keep our fingers crossed that this trend continues.

With our Industry getting its legs back, it is important that we continue to operate as efficiently as possible to keep our businesses healthy. Miranda Dunham, our Programs Chair, has arranged for a slate of speakers through next summer that is focused on just that – to bring in speakers that will bring operational ideas that will benefit our bottom lines. This month she has arranged for Brian Ellithorp with Blackjack Production Tools to bring his message on how to do that. I am looking forward to this meeting and I hope to see you there.

Mike Stafford

2021-2022 Chairman

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From Your Editor

Betty Felber, 2021-2022 Editor

Yea!! Our first face to face meeting for a while is to be held this month. Thanks to those of you who worked hard to put in place our meeting location. I know that it wasn't an easy task. Welcome back to the Tulsa Country Club. Our meetings are an important activity for our Section.

To improve the success of your company, come to our November program. Even though we have Thanksgiving this month and Christmas to follow, your attendance at our luncheon offers you new technologies for you to apply to your operations. Take a little time to avail yourself of this opportunity.

Also continue to support our advertisers. We, your newsletter staff, appreciate their interest in sustaining our endeavors to gain your attention on our sections activities.

Betty Felber
Editor

Calendar of Events

Thursday, November 18, 2021 - Luncheon Meeting - Tulsa Country Club

- Brian Ellithorp, BlackJack Production Tools / Echometer UPS - The Impact of Exceptional Production Operations and Properly Utilized Technologies on the Balance Sheet of Today's Oilfield - (to register see page 6)

April 25-29, 2022, SPE Improved Oil Recovery Conference - Virtual

- Technical Program Sessions, Mon. 25th - Wed. 27th, Short Courses Thursday and Friday April 28th & 29th - www.speior.org. Watch for details on registration opening November 2021.

See p6 for more details

TU SPE Student Spotlight

by Gage Bradford, TU SPE Student Chapter Communications & PR Chair

Tate Brocket (BA PE '24) is a current sophomore studying petroleum engineering at the University of Tulsa. Tate exceeded the norm of most petroleum engineering students by securing a coveted internship with Hilcorp Energy Co. This spotlight will highlight Tate's accomplishments and showcase his stellar representation of the University of Tulsa. Below are some of the interview questions that Tate answered on October 31st, 2021.



What did your internship with Hilcorp look like?

My internship with Hilcorp was a 7 day on – 7 day off rotation on a shallow water production facility off the coast of Louisiana. The most important knowledge I gained involved an in-depth understanding of process-flow and production equipment. More specifically, I was able to piece together how every piece of equipment works together to optimize the production of crude oil and natural gas. I thoroughly enjoyed researching and discovering different engineering methods that create a safe and economic asset for Hilcorp.

The highlight of my internship was the presentation of my final project to company engineers. My project entailed the facility's saltwater disposal system. I was tasked with locating the weaknesses of the system and to create an informed recommendation on how to optimize the disposal system. I noticed that the saltwater disposal system was serving as a choke point of the wider production capacity of the facility. Since the facility was not able to dispose of saltwater at a fast enough rate, a couple higher water-cut wells were forced to be shut in. I researched the piping system, header system, and the pumps. I found that the pipe and headers were the cause of the flow restriction.

Where do you see yourself in 10 years?

Looking ahead, I would like to be in a business focused role. I want to use my engineering expertise to make informed business decisions that effect the larger vision of the company I am working with. I take great pride in engineering systems that run safely and efficiently.

TU SPE Professional Spotlight

by Gage Bradford, TU SPE Student Chapter Communications & PR Chair



Evren M. Ozbayoglu, PhD, is currently a “Chapman Endowed Wellspring Professor” of The University of Tulsa (TU), McDougall School of Petroleum Engineering, and the Director of The University of Tulsa, Drilling Research Projects (TUDRP). He was awarded for SPE Regional Drilling Engineer Award, 2019, “Outstanding Technical Editor Award” for SPE Journal, SPE Reservoir Application & Engineering, and SPE Drilling & Completion for years 2012, 2013, 2015, 2018, “SPE Regional Distinguished Faculty Award – Mid-Continent Region – 2013” within 2012-2013 academic year. He is an SPE member since 1994, and ASME member since 2015. Below are some interview questions Dr. Ozbayoglu was kind enough to answer.

What is one of your proudest times when your research affected the oil and gas industry?

“All of the research conducted through the University of Tulsa’s north campus is centered around industry application”, said Dr. Ozbayoglu. “Since we are sponsored by the industry, we want our research to be applicable to relevant problems.”

Dr. Ozbayoglu is particularly proud of the time when his and his teams research on the circulation of drilling cuttings received positive feedback from the industry. “Cuttings transport is a big problem because cuttings tend to accumulate towards the bottom of a well-bore which can slow down drilling operations. That results in lost time which means lost money. Our multi-year research on mediating this phenomenon has lead to companies in our consortium utilizing our modeling. It has reduced drilling time by 20% to 30% in many cases.”

One of your areas of expertise is well completions. Is there anyway to model the distance that hydraulic fractures travel in a reservoir?

“That is a very good question that we are addressing,” said Dr. Ozbayoglu, “when you are fracturing, the propagation of the fractures follows the path of least

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NOVEMBER 2021

THURSDAY, November 18 | Luncheon Meeting | 11:20 am - 1:00 pm

Location: Tulsa Country Club, 701 North Union Avenue, Tulsa, OK 74127

Speaker: Brian Ellithorp, Blackjack Production Tools / Echometer UPS

Topic: "The Impact of Exceptional Production Operations and Properly Utilized Technologies on the Balance Sheet of Today's Oilfield"

Register: <https://spemc11821.eventbrite.com> (Registration deadline is Monday, November 15 at Noon)

Description

With our industry evolving so much over the past few years it has become more important than ever to be a diligent, self-aware, and well-informed operator, specifically as it relates to production operations. With less drilling and new wells being brought online it can become clearly evident when production operations are struggling first from operational proficiency and then ultimately financially. Again, with less IP's to carry the workload of maintaining or even improving production volumes we need to exploit all reasonable resources to help achieve our production goals and targets.

We need to be engaging sources for new technologies that fit a profile not a lot of new technologies meet: solutions that are 1) highly function and reliable, 2) flexible in application and forgiving in design, and (likely most important) cost-effective even in a depressed commodities environment. Delivering on all three of these elements at the same time has been and continues to be the biggest challenge.

This presentation will cover examples of the need to reach and maintain a high level of operational success and some disruptive production technologies that would help in that process.

Presenter

Brian Ellithorp

Brian graduated with a B.S. in Mechanical Engineering Technology from Oklahoma State University in 2003 and immediately joined Chesapeake Energy working com-

The safety of our members is our top priority so in-person scheduling for 2021-22 events is tentative based on health guidelines in our area as well as availability of meeting venues. Watch for announcements about future meetings and events in this newsletter or by email.

To register and pay by credit card, or make a reservation to pay by check or cash at the door, go to the corresponding link for a luncheon. In-person luncheon cost is \$25.00 for Professionals, \$10 for Retired/Unemployed/Graduate Students, and free for Undergraduate Students. Payment by credit card is for advanced registrations ONLY, no credit cards will be accepted at the meeting, only check or cash accepted at the door with a reservation. No walk-ins please.

pletions and production in multiple business units and he spent the majority of his tenure there in the Engineering Technology Group as an Engineering Advisor of Well Optimization supporting artificial lift operations throughout the company.

In 2013 Brian joined Devon's newly formed Production Operations Excellence team as an Artificial Lift Advisor and ultimately functioned as the Artificial Lift Coordinator for the enterprise.

Brian started Echometer UPS and Blackjack Production Tools in 2016 to develop production and artificial lift solutions for the industry.

Brian is currently President of Echometer UPS and Blackjack Production Tools.



PetroWiki

PetroWiki is a free resource from SPE to answer many basic petroleum engineering and operational questions. SPE professional members can contribute their expertise through updating or adding to PetroWiki content.

<http://petrowiki.org/PetroWiki>

resistance. A hydrocarbon reservoir is not a uniform structure which means it is exceedingly difficult to model.”

Dr. Ozbayoglu highlighted that there are many unknown variables involved in solving this question. “However, our models are intending to estimate as accurately as possible conventional approaches starting with the elasticity principles of metals (which are well-known) and then applying those principles to a porous medium.”

What is your advice for current and prospective petroleum engineering students?

“There are good days and bad days in our cyclical industry”, said Dr. Ozbayoglu, “although demand in oil may not be increasing as fast as it has in previous cycles, I like to think of another hydrocarbon, coal, and what its cyclical nature has looked like over the past 150 years. What happened with coal is that its growth was replaced by the growth of oil and gas, however, coal is still being widely used today. Coal did not disappear overnight and neither will oil and gas.”

Dr. Ozbayoglu discussed the importance of economics. “It is important to examine the cost to produce a Kilowatt hour of electricity per energy source. Oil and gas remains the most economic through that metric and is a testament to its importance in today’s economy.”

“Don’t let yesterday take up too much of today.”

— Will Rogers

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