September 2017

SPWLA Houston Chapter Newsletter

We hope all of you impacted by Hurricane Harvey are safe and secure. As we recover, let us not forget to lend a helping hand!

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Event Coordinator 2017-2019 **Jeff Crawford,** Halliburton Jeffrey.Crawford@halliburton.com	**Investment Officer** **Jing Li, OXY** Jing.Li@oxy.com

Meet our Sponsors

Upcoming Events

SPWLA Networking Happy Hour **|** *September 7th* ***[****link****]***

Westside Luncheon | Improved fluid characterization in complex water flooded reservoirs with advanced LWD measurements by Ting Li, Schlumberger **|** *September 21st* ***[****link****]***

Northside Luncheon | Navigation wealth of Permian Basin data by Lewis Matthews, CrownQuest Operating **|** *September 27th* ***[****link****]***

SPE GCS Hiring Event **|** *October 3rd* ***[****link****]***

President's Corner

Dear members of the Houston Chapter,

Welcome to the new season. We are happy to start with our traditional luncheons and will be hosting Ting Li, Schlumberger with a talk on Improved fluid characterization in complex water flooded reservoirs with advanced LWD measurements at the Westside location on September 21st and Lewis Matthews, CrownQuest Operating with a talk on navigation wealth of Permian Basin data on September 27th at the Northside location. Please see our calendar for locations and registration details.

Houston Chapter and SPE GCS MiT and other societies of Houston partnered to hold the SPE Upstream Hiring Event on October 3rd. Please see https://spegcs-mit-hiringevent.org *for more details.*

We are organizing a bootcamp on Machine Learning for Petrophysics that is tentatively scheduled for the end of October. We are ironing out details and will send an announcement soon, so stay tuned!

*Our traditional Technology Show is scheduled for beginning of December at Weatherford Labs Saint James location. If you are interested to have a booth please get in touch with our event organizer - Jeff Crawford (*events@spwla-houston.org*) or myself (*president@spwla-houston.org*) and for sponsorship opportunities please contact our treasurer Tianmin Jiang (*treasurer@spwla-houston.org*) or* president@spwla-houston.org.

We are looking forward to another interesting season and hope to see you at our events!

Kind regards,
Irina Borovskaya
President
Houston Chapter of SPWLA

Irina Borovskaya
Houston Chapter President
president@spwla-houston.org

Useful links

Sign up for the Houston Chapter Mailing List [Link]

Houston Chapter

SPWLA International

Join SPWLA – become a member

Houston Chapter LinkedIn page

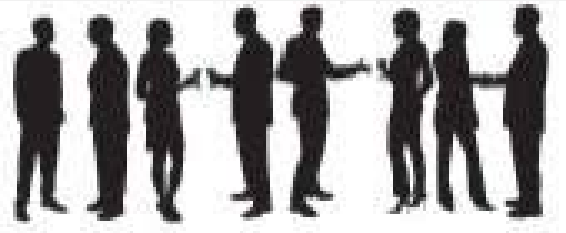
SPWLA Networking Happy Hour

Join us to kick-off the fall season with our first 2017 SPWLA Networking Happy Hour! The entire SPWLA community is invited. Come and mingle with fellow petrophysics enthusiasts!

Everybody is welcome!

When: 6-9 PM Thursday September 7th, 2017
Where: Cedar Creek Café Bar & Grill, 1034 W 20th St, Houston, TX 77008

No need to RSVP, no charge, come at leisure
Endorsed by the SPWLA YPs



Westside Luncheon

Improved fluid characterization in complex water flooded reservoirs with advanced LWD measurements by Ting Li

Thursday, September 21, 2017
Lunch: 11:30 Talk: 12:00-1:00
Register Online by Monday at noon before meeting
Free- Bring your own lunch or purchase in the cafeteria
BP Plaza, Westlake 1 - Pondview 1, 501 Westlake Park Blvd
BP Visitor Parking Garage
You can proceed directly from the BP reception to the meeting room. Signing in at the security is not required. Please sign in on the attendance sheet in the meeting room.

Abstract

We present a new method to derive continuous reservoir fluids properties (saturation, salinity, density and hydrogen index) in a complex siliciclastic brownfield. The complexity of our study field lies in the uncertainty of formation salinity, as the water-flooded sands contain an unknown mixture of the connate brine and injected water. In such environments, one cannot simply assume a fixed salinity value when calculating saturation logs with equations that rely on a good knowledge of salinity. Formation evaluation is further complicated by low resistivity contrast between wet and pay sands, where high volume of salty irreducible water lowers resistivity in hydrocarbon-bearing sands. In this field, water production is a big concern for the operator. They would like to gain better understanding of the water flood encroachment to make smarter development plans in the future. To achieve this goal, they acquired advanced LWD logs in a number of development wells to characterize reservoir fluids. The use of LWD ensures that invasion of the drilling fluid into the reservoir sands is minimal. The interpreted Sw logs in horizontal wells are consistent with the well production history. The interpretation also identifies changes in water flooding and provides a better understanding of the horizontal well production. The interpreted hydrocarbon density and viscosity logs are also consistent with measurements made on produced hydrocarbon samples at the surface.

Ting Li is a senior interpretation engineer with Schlumberger in Houston, TX. He began his career as a research engineer in 2006 at the petroleum engineering department of Stanford University. He joined Schlumberger-Doll Research in 2008 as a research engineer and spent 5 years working on nuclear spectroscopy, NMR and integrated interpretation of unconventional reservoirs. In 2013, he was transferred to Beijing, China as an associate domain champion of LWD petrophysics to support operations and technical sales of Schlumberger Drilling and Measurements. He received his Master of Science degree in computer science from University of New Mexico. He is a member of SPE and SPWLA.

Northside Luncheon

The 2nd Shale Revolution by Lewis Matthews

Wednesday, September 27, 2017
Lunch: 11:30 Talk: 12:00-1:00
Register Online by Monday at noon before meeting
$15-industry professionals/$10-students
Weatherford building at 15710 John F Kennedy Blvd
Parking: Weatherford Visitor Parking Garage

Abstract

Less than a decade after the 1st shale revolution the Permian Basin sits on the verge of another shale revolution. Laboratory results are suggesting that recovery factors could increase from roughly 12% to greater than 50% with EOR. The implications of this value creating revolution are huge and stand to further tip US energy production in America's favor. However, the Permian Basin is still wrestling with trying to find the optimum spacing and completion method that maximizes production. Optimal well spacing to maximize production at the granular level is a unique solution for each well and is dependent upon geology, geophysics, geomechanics, wellbore geometry, proximity to other wellbores, drilling engineering, and completion engineering. There are literally thousands of variables yielding unwieldy sized solution spaces with sparse datasets. Many companies are turning to non-parametric modeling to make predictions in data where parametric models have failed. These non-parametric methods are very quickly hitting the limits of the data which are thousands of variables with only hundreds of samples. This ill-posed problem results in poorly constrained endpoints which increase the probability of having failed to realize maximum production. We propose a consortium solution with Lawrence Berkeley National Laboratory, industry and academic collaborative learning. This talk is about solving this problem together and what that framework is starting to look like.

Lewis Matthews was born and raised in the United Kingdom of Great Britain. At the age of 17 he left the UK and joined the United States Navy where he served with the United States Marine Corps as a Corpsman for 9 years. Lewis has a BA in Economics from Washington College, a BS in Geology with a math minor, and a MS in Geoscience from Texas Tech University. He is currently working for CrownQuest Operating where he enjoys solving complex problems and conveying those solutions in ways that provide useful conceptual models.

SPE GCS Hiring Event

SPWLA-Houston chapter is co-sponsoring SPE-GCS Upstream Oil & Gas Professionals Hiring Event. Job seekers, employers, recruiters, sponsors and collaborating professional organizations are all welcome.

Please check out their official event page for more information.