

April 2017

SPWLA Houston Chapter Newsletter

SPWLA Houston Chapter Board 2016 - 2017

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Upcoming Events

SPWLA Downtown Spring Seminar – How Pore-Scale Attributes May Be Used To Derive Robust Drainage and Imbibition Water Saturation Models In Complex Tight-Gas Reservoirs | Chevron Auditorium Houston, TX April 19, 2017 [\[link\]](#)

Resistivity SIG – Spring 2017 Meeting | Schlumberger WesternGeco Houston, TX April 20, 2017 [\[link\]](#)

Integrated Petrophysics For Reservoir Characterization training
Petrophysics Pty Ltd Houston, TX May 1, 2017 [\[link\]](#)

2017 SPWLA Houston Chapter Spring Topical Conference | Chevron Auditorium Houston, TX May 10, 2017 [\[link\]](#)

SPWLA 58th Annual Symposium 2017 | Oklahoma City, OK, June 17-21, 2017 [\[link\]](#)

Meet our Sponsors



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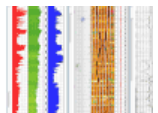


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President's Corner

Dear Chapter Members,

It's been a while since we issued a Newsletter, meanwhile it has been a great 2016 for the chapter. We had 9 interesting talks in the fall of 2016 during our luncheons, an amazing turnout during our traditional Annual Software Show and received a great feedback from both vendors and participants. This year we also introduced a Happy Hour Social/ Networking event, that we hope will become a tradition. Our invited speaker Jennifer Ayers, Life Coach was sharing with us how to define and use our strengths.

And so far in 2017, we have already hosted talks by Robert Lieber, Corsair Petrophysics on A New Rock Type Based Evaluation Method for Unconventional Reservoirs; Richard Merkel, Denver Petrophysics, LLC on Advanced Log interpretation in field development; Matt Blyth, Schlumberger on Dipole Shear Anisotropy Using Logging While Drilling Tools; Boqin Sun, Chevron on Using NMR to characterize fluids in tight rock unconventional and shale formations; Nate Bachman, Schlumberger on A new large hole nuclear magnetic resonance logging while drilling tool for early stage formation evaluation; Vivek Anand, Schlumberger on Fluid characterization in unconventional shale reservoirs through new generation NMR T1-T2 logging.

This year our team has evolved into adding a two new volunteer positions and a change in the Board of Directors crew. The Software Show has been managed by our Event Coordinator – Jeff Crawford, Halliburton. We've expanded our social media presence and our Social Media Coordinator is Mehrnoosh Safeinar, BHP Billiton. As the elected editor chose to leave the chapter, we are welcoming our new Acting Editor – Andrew Hind. Please join us in welcoming them to the chapter and extending our gratitude for all their efforts.

This year's Spring Topical Conference will be devoted to Cased Hole Petrophysics. The call for abstracts has been already sent out and we are welcoming participants and authors to submit their abstracts to presidnet@spwla-houston.org.

As always, if you have any questions or comments about chapter activities, then please feel free to contact me directly at president@spwla-houston.org.

*Regards,
Irina Borovskaya*



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

Useful links

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[SPWLA Houston Spring
Topical Conference](#)

CALL FOR ABSTRACTS

2017 SPWLA Houston Chapter Spring Topical Conference

CASED-HOLE PETROPHYSICS

May 10, 2017

Chevron Auditorium, 1500 Louisiana St, Houston TX, 77002

Topical Description:

Cased-hole logging and its interpretation has attracted growing interest when the market calls for more attention diverted into activities in cased wells. In the meantime, environmental concerns and regulation requirements have always demanded the oil industry to provide more accurate assessment of well integrity during or after production. Petrophysics has found applications in formation evaluation, production logging, well integrity monitoring to contribute to the various aspects of cased-hole logging. New technologies and interpretation methods aim to help operators and service companies move toward an direction of increasing revenue, efficient operation, and low cost.

This one day conference will be a forum for presentations and open discussions addressing practical petrophysical issues and challenges in cased-hole logging with updates on recent advances and sharing experiences.

Abstract submission deadline: April 10, 2017

Please send your abstract to president@spwla-houston.org .

For sponsorship opportunities please contact the treasurer at treasurer@spwla-houston.org.

Registration for participation will begin in April.

Event Recap - Houston Chapter Topical Seminar

Northside Lunch Seminar Summary

Jan. 11th 2017

On Jan 11th 2017 the SPWLA Houston Northside Lunch seminar took place in the Weatherford Northside facility on JFK Blvd. Dr. Dick Merkel from Denver Petrophysics LLC presented his work on identifying where the low salinity water flood breakthrough occurred in infill wells and determining reservoir properties.

During his talk, Dr. Merkel discussed how to identify sands with breakthrough of low-salinity injection water so engineers could avoid these zones when completing infill producing wells. He also talked about their work on designing an initial testing program using dielectric, NMR, and triple combo data combined with rotary sidewall core and RFT measurements. Those data enable the assessment of reservoir properties such as (1) wettability, (2) relative permeability, (3) Archie saturation exponents, (4) better OIP calculations, (5) residual oil saturation (Sor), and (6) reservoir pressure (depleted, native state, and water flood over pressure). Examples on the log response, analysis, and results in the independent and/or isolated producing sands in Monument Butte were presented.

Dick Merkel is President of Denver Petrophysics LLC, a consulting firm dedicated to developing logging analytical techniques for petrophysical models tied to core, completion, and production data in complex reservoirs. Over 50 attendees from service companies, operators and consultancies attended this event. One student from the student Chapter in Texas A&M also attended the seminar. The audience was actively engaged in discussion with the speaker.



Dr. Merkel (right) with Northside VP Yike Hu. Dr. Merkel spoke in the Northside seminar series.

Event Recap - Houston Chapter Topical Seminar

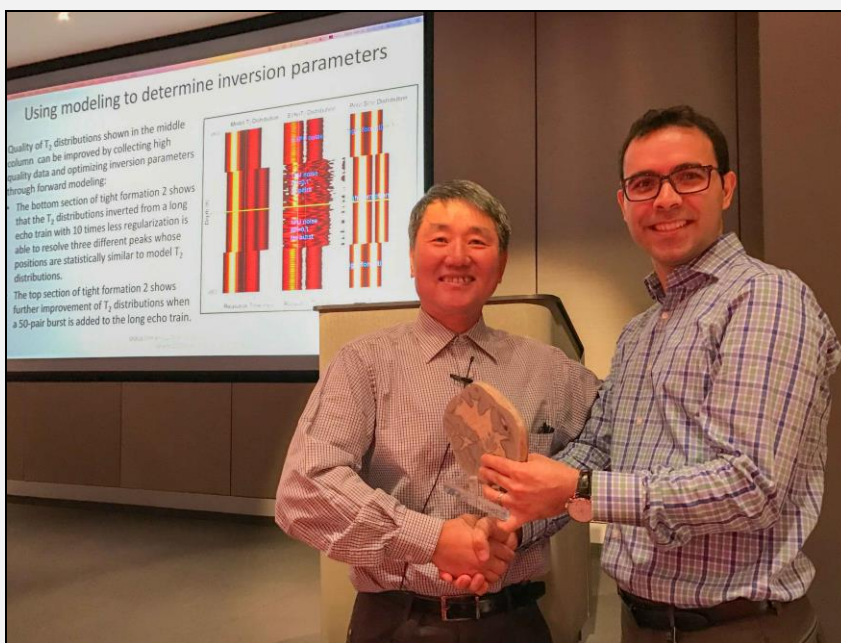
Downtown Lunch Seminar Summary

Feb. 15TH 2017

On Feb 15th 2017 the SPWLA Houston Downtown Lunch seminar took place in the Auditorium at 1500 Louisiana Street (Chevron building). Dr. Boqin Sun from Chevron presented their work on the development of the NMR shale interpretation workflow in tight rock unconventional (TRU) and shale reservoirs. The workflow has been successfully applied to evaluate petrophysical properties in the Marcellus and Vaca Muerta formations. It reduces the uncertainty of total porosity and free fluid volume (FFV), and identifies fluid types and sweet spots.

During his talk, Dr. Sun discussed their novel approach to evaluate porosity, saturation and matrix permeability in TRU. The new workflow including four major steps: (1) obtaining high-quality raw echo data by optimizing data activation sequences for TRU and shale formations, (2) improving the data processing scheme by enhancing T2 resolution to separate different fluid components in T2 distributions, (3) adapting a new fluid typing method that only involves clay-bound water and capillary bound fluids, part of which is also producible, and (4) using NMR core analysis to verify the cutoff and T1/T2 ratio trend to improve fluid identification in TRU and shale reservoirs.

Boqin Sun has been a research consultant of Chevron Energy and Technology Co. since 2001. He has been working on various NMR applications in solution, solid, and petrophysics.



Dr. Sun (left) with Downtown VP Rohollah Abdollah. Dr. Sun spoke in the Downtown seminar series.

Event Recap - Houston Chapter Topical Seminar

Northside Lunch Seminar Summary

March 8th 2017

On March 8th 2017, the SPWLA Houston Northside Lunch seminar took place in the Weatherford Lab on North Sam Houston Pkwy W. Dr. Nate Bachman from Schlumberger presented their work on the development of a new large borehole LWD NMR tool. This talk discussed the tool performance in a variety of lithologies, mud types, and hydrocarbon types and shows the benefits of real-time formation evaluation using LWD logs in Ecuador and the Gulf of Mexico.

During his talk, Dr. Bachmann presented two case studies in which the data provided by the new LWD NMR tool adds valuable insight into the porosity, rock quality, hydrocarbon properties and producibility of reservoirs at the earliest stages of exploration and development drilling. High resolution LWD NMR data during early exploration is well suited for principal component analysis, which is highlighted in this paper. He also provided in-depth insights on how to develop the factoring analysis for the NMR log and potential applications with other petrophysical attributes.

H. Nate Bachman is principal physicist and project manager at the Schlumberger Houston Formation Evaluation Center. He received a BS degree in physics from Valparaiso University, Indiana, USA, in 1993 and a PhD in physics from Northwestern University, Illinois, USA. Nate has worked on both research and engineering projects relating to NMR logging tools and applications, including 2 years of research at the Dhahran Carbonate Research Center in Saudi Arabia. About 20 attendees from service companies, operators and consultancies attended this event.



Dr. Bachman (right) with Northside VP Yike Hu. Dr. Bachman spoke in the Northside seminar series.