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2024 - 2026

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2026 Q2 Technical Talks / Luncheon Meetings

Northside Stratum Labs 5200 Sam Houston W., Houston, TX 77086	**Pore pressure prediction while drilling: Three-dimensional earth model in the GOA** *By: Fausto Mosca* **Learning Across Wells: Artificial Intelligence for Missing Resistivity Log Reconstruction** *By: Dr. Behzad Ghanbarian*
Westside SLB - 6350 West Sam Houston Parkway North Houston, TX 77041	**The Good, The Bad and The Ugly of multi-frequency pad based image tools** *by Bernd Ruehlicke* **Full Automation, High Performance and Novel Insights: A New Sonic Processing Framework** *By Chongbing Liu*
Downtown Virtual / webinar	**Refining Rock Type Input Properties to Extend the (Physics-Based) Thomas Stieber Shaly Sand Model in Order to Generate Calibrated Permeability Estimates from Triple Combo Logs** *By William Hovarth*


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Editor

Presidents Corner Q2 2026

April 11, 2026

Dear Members oft he SPWLA Houston Chapter

This is the 9th and final time that I will be writing this column as President of the ’24-’26 Executive Committee. It has been, not only a privilege, but a great and fun experience too, leading this Chapter and its Board, stocked with great, talented individuals. Thank you, Ali, Andrew, Shan, Ronke, Zeyad, Tianmin and Muhammad, for all your hard work, help, energy and laughter. I will miss my interactions with all of you.

Just before the curtain closes, we have been announced 2025-2026 Outstanding Professional Chapter. This is only the 4th time in its long history that this honor befalls the Houston Chapter (previously: 1981, 1997, 2010). I cannot think of any greater reward of all members for continued commitment to technical excellence, member engagement and support of the next generation of industry professionals.

I will not bore you all with a lookback, listing achievements of these past 2 years, but prefer to focus on our challenging, yet exciting future.

With that, I want to draw your attention to the upcoming 67th SPWLA Annual Logging Symposium, May 16–20, 2026, at Margaritaville Lake Resort. Check out a great selection of interesting short-courses on Saturday and Sunday, a great keynote speaker opening the symposium on Monday, a fantastic Technical Program, a host of vendors showcasing their latest and greatest technologies and products in the exhibition hall and the entertaining social program that allows for mingling, catching up with old (and new) friends and offers great networking opportunities.

Please make sure to read on page 9 details about the upcoming elections for the ’26-’28 Executive Committee of the SPWLA Houston Chapter. There is (still) time to nominate either yourself or someone you would really like to see in one of the Board positions. Following tha nomination period, there will be elections and the newly elected Board will take control after 67th Annual Symposium in Lake Conroe.

Ron J.M. Bonnie
Houston Chapter President.

Sponsors and Friends of the Houston Chapter Q2 2026

SPWLA Houston Chapter Networking Events Q2 2026

The monthly networking events continue to be a hit with (many of) our members and are well attended. Our February meeting (photo) was generously sponsored by TGS and in March, we shared the venue with Houston Geological Society's NeoGeos meeting. We witnessed serious "cross-pollination" with several going back and forth between both gatherings.

Come and join us Thursday, April 30 from 5:00 – 8:00 pm at Cedar Creek Bar & Grill, 1034 West 20th Street, Houston, TX 77008. At this meeting you will have the opportunity to say goodbye to the outgoing '24-'26 Executive Committee of the SPWLA Houston Chapter.

SPWLA – Houston Chapter News		Q2 2026
Thursday, Feb 26th, 2026 11:30 am – 1:00 pm	**Stratum Labs 5200 Sam Houston W., Houston, TX 77086**	Northside Technical Talk / Luncheon Meeting

Pore pressure prediction while drilling: three-dimensional earth model in the GOA

By: Fausto Mosca

Abstract

Subsalt Gulf of Mexico deep-water wells routinely cost more than $100 million. A reliable pore pressure prediction can translate into considerable savings in terms of drilling costs and safety. Traditional methods used to determine pore pressure are based on either logs (e.g., Eaton's or Bowers' methods) or seismic data (e.g., calibrated seismic velocities, acoustic impedance). Another method for pore pressure prediction is based on basin modeling: building a three-dimensional earth model and simulating the processes of pressure formation, through geologic time. Recent advancements in basin modeling, such as the coupling of stress and pressure and the implementation of models for mineral diagenesis and rock failure, have significantly improved its applicability. However, no single method is commonly accepted as better than another, therefore, using, comparing, and integrating all three methods together in a predrilling project can provide a higher degree of confidence for pore pressure prediction. The purpose of this presentation is to describe a new approach to pore pressure prediction that combines the above methods with petroleum system modeling. A special emphasis is put on the explanation of the basin modeling workflow. The first step of the workflow is to create and calibrate a regional model based on a set of regional maps with the main goal of providing the regional context. The second step is to create a smaller area of interest (AOI) model using high-resolution structural and facies maps. This refined model is then used for pore pressure prediction at the prospect scale. The smaller AOI model, albeit at very high resolution, allows a model to be run overnight, so that pore pressure can be predicted ahead of the drilling bit. Finally, the predicted pore pressure and fracture gradient allow the drilling engineer to optimize operating performance and reduce drilling costs.

Biography

Fausto Mosca, a world-renowned basin modeler and petroleum geochemist, has joined Stratum Reservoir's OilTracers® Group. The OilTracers® consulting team specializes in integrating geochemical, geological, and engineering data to solve complex challenges throughout the field life cycle. Fausto is a master user of PetroMod (1D, 2D, 3D, TecLink 2D, and Stress Simulator), Trinity T3, and Genesis 1D, and is widely recognized for his leadership in basin modeling in complex thrust belt and salt tectonic settings. He brings extensive expertise in solving exploration, development, and production challenges through advanced organic geochemical analysis of gases, oils, and source rocks. He is also a recognized expert in pore pressure prediction while drilling and in the real-time interpretation of Gas While Drilling (GWD) data generated by advanced mud logging tools. Throughout his career, Fausto has served as a subject-matter expert with Agip, Shell, Devon, Nexen, and Murphy, working across nearly all major sedimentary basins worldwide, including Europe and the Mediterranean, the USA and Mexico, North, Central, West, and South Africa, Central America, South America (Pacific and Atlantic margins), Far East Asia, and Australia.


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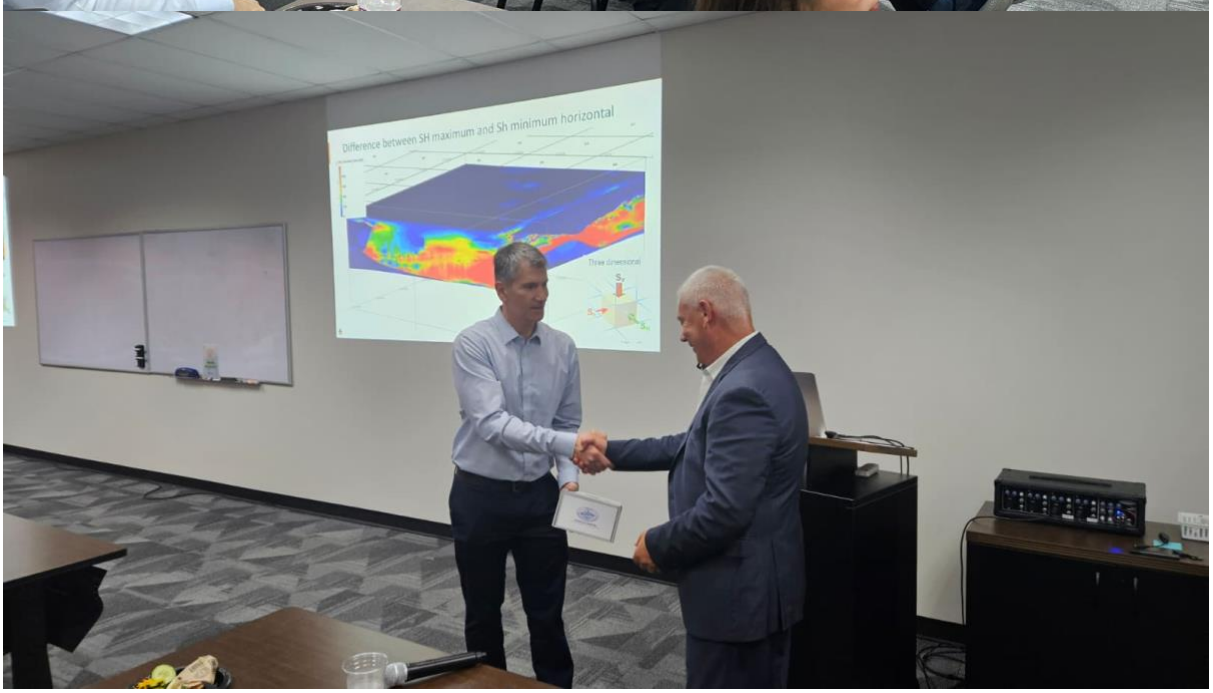
Difference between SH maximum and Sh minimum horizontal
Three dimensional

Future Events and Details Q2 2026

SPWLA – Houston Chapter News Q2 2026

Thursday, May 7th, 2026 11:30 am – 1:00 pm	Online	Northside Technical Talk / Luncheon Meeting

Learning Across Wells: Artificial Intelligence for Missing Resistivity Log Reconstruction

By: Dr. Behzad Ghanbarian, Director of iResearchE3 Lab, UT Arlington

Abstract

Resistivity logs are widely used in petrophysics to estimate how much oil, gas, or water is present in a reservoir. However, these logs are not always available because they may not have been recorded in some wells due to cost or operational constraints. This study presents an artificial intelligence approach that reconstructs missing resistivity logs by learning from both the available measurements in a well and information from nearby wells. The proposed model analyzes common well logs such as gamma ray and density porosity from the target well and combines them with similar logs and resistivity measurements from neighboring wells. These wells are connected in a data-driven network that allows the model to learn how geological properties vary both vertically within a well and laterally across multiple wells. The method was tested using data from 142 wells in the Groningen gas field. Results show that incorporating information from surrounding wells significantly improves predictions compared with conventional deep learning methods that treat each well independently. In fact, the new approach reduces prediction errors by more than 40%. Overall, the results demonstrate that learning relationships between wells can successfully recover missing resistivity logs, even when no resistivity measurements are available in the target well. This approach provides a practical and scalable tool for improving reservoir characterization when log data is incomplete.

Biography

Dr. Behzad Ghanbarian is an Associate Professor in the Department of Earth and Environmental Sciences at the University of Texas at Arlington and the Director of the iResearchE3 Lab. His research focuses on applying modern techniques in artificial intelligence and data science to address complex real-world challenges in energy, environmental systems, and industry. Behzad has authored more than 150 peer-reviewed journal articles and three books. He currently serves as President of the SPWLA Dallas Chapter and is an active member of the American Geophysical Union (AGU), Society of Petrophysicists and Well Log Analysts (SPWLA), and Society of Petroleum Engineers (SPE). Behzad received the Donald L. Turcotte Award in Nonlinear Geophysics from the American Geophysical Union in 2015 and has been recognized among the top 2% of scientists worldwide (Stanford/Elsevier ranking) from 2021 to 2025.

SPWLA – Houston Chapter News Q2 2026

Thursday, April 23th, 2026 11:30 am – 1:00 pm	SLB, 6350 West Sam Houston Parkway North, Houston, TX 77041	Westside Technical Talk / Luncheon Meeting

The Good, The Bad and The Ugly of multi-frequency pad based image tools

by Bernd Ruehlicke

Abstract

Back in ~2001/2002 Baker Atlas wrote a paper for the 43rd SPWLA Annual Symposium in Japan introducing the EARTH Imager, a new micro-resistivity imaging device for use in oil-based mud. The idea (simply put) was to model the mud and rock as a capacitor and resistor in an AC circuit allowing to derive rock resistivity from the complex sensor signal. It was a major technological step up from the OBMI/OMRI/COI image log tools on the market at that time.

A 2nd generation tool was released around 2008/2009 leveraging multiple frequencies to address not just high-resistive rocks but also low-resistive rocks. SLB's 8 arm NGI (Quanta Geo) was released around 2014 and Halliburton released its STX (StrataXaminer) around 2021 both with 6 and 8 arm setups – all recording complex impedance at multiple frequencies.

The presentation will address what delivery one should expect, and tries to, at least partly, help in de-mystifying how to leverage the full breadth of acquired data (real, imaginary, magnitude, phase angle) to support interpretation of detected

features and to put them into geological context. Image examples will be given to represent some of the good, bad and ugly of this technology to foster a discussion and might therefore be thought-provoking on purpose. A few mathematical equations may be un-avoidable, but nothing more complicated than Pythagoras, basic trigonometry and vector calculus.
Key words: EMeX (Enhanced iMager eXplorerTM), NGI (Quanta GeoTM) , STX (StrataXaminerTM). Multi-frequency image log, impedance, complex readings, stand-off, vector, real, imaginary, phase angles, roll-over.

Biography
Bernd Ruehlicke is the president of Eriksfiord, Inc. He leads the numerical group in Eriksfiord as senior image and sonic log specialist with 30 years of experience in the processing and application of image and sonic logs to geology and geomechanics. Bernd's first exposure to Image Logs was in 1993 when joining Z&S Geologi in Stavanger to develop geological applications for RECALL(Halliburton). Bernd was president of the SPWLA-Houston chapter (2022-2024) and was a SPWLA distinguished speaker 2021-22. He holds a MSc in theoretical Mathematics, a BSc in Computer Science from Aarhus University, Denmark and an MBA from the University of Houston-Victoria.

SPWLA – Houston Chapter News Q2 2026

Thursday, June 25th, 2026 11:30 am – 1:00 pm	**SLB, 6350 West Sam Houston Parkway North, Houston, TX 77041**	Westside Technical Talk / Luncheon Meeting

Full Automation, High Performance and Novel Insights: A New Sonic Processing Framework
By Chongbing Liu

Abstract
Sonic measurements play a crucial role in well construction and reservoir evaluation, and sonic processing software is essential for transforming the raw data to operational insights with accuracy in a timely manner. This presentation introduces a new sonic processing framework that is fully automated, high-performance, and capable of delivering novel insights.
The structure of the framework includes common modules such as unpacking raw sonic waveforms, preparing input data, (D)STC processing, Alford rotation, and computing compressional and shear slowness. The framework also incorporates sonic data classification to quickly characterize azimuthal anisotropy and borehole condition.
The key techniques that enable full automation and high performance include the followings.
1. Multi-Resolution Tracking (MRT), which is an analysis of the monopole data for the compressional and shear slowness that uses automatic peak detection on multiple receiver levels, removing any subjective manual labeling after semblance processing.
2. Machine Learning Aided Dipole Inversion (MLADI), which computes shear slowness from dipole waveforms using a physics-based machine learning without the need of processing parameter tuning unlike the traditional (D)STC processing.
3. Sonic data classification, which uses machine learning and MLADI outputs to classify azimuthal anisotropy, borehole ovality and VTI feature in vertical wells.
4. Integration of complex work steps to a single workflow without user interaction.
5. High-Performance Computing (HPC) methods, including parallel processing and MPI, to parallelize independent computation steps and process multiple depths simultaneously whenever feasible.
This sonic processing framework accelerates the transformation of raw sonic waveforms to interpretation-ready outputs, completing in hours rather than days.

Biography
Chongbing Liu is a Senior Software Engineer in the Interpretation Engineering group at SLB-Houston Formation Evaluation center. He joined Schlumberger in 2018. His expertise includes software development, well logging interpretation, cloud-native development, high-performance computing, and machine learning. Chongbing received his master's degree in geophysics from China University of Geosciences in 1994 and his Ph.D. in computer science from New Mexico State University in 2008. He is a member of SEG

Wednesday, April 29th, 2026 11:30 am – 1:00 pm	Online	Uptown Technical Seminar & Lunch

Refining Rock Type Input Properties to Extend the (Physics-Based) Thomas Stieber Shaly Sand Model in Order to Generate Calibrated Permeability Estimates from Triple Combo Logs

By: William Hovarth

Abstract

An extended interpretation model for thin bedded / shaly sand interpretation has been constructed to address heterogeneous reservoir architecture in systems that violate the original assumptions of the Thomas-Stieber model. For thin bedded shaly sands in the central Deep- Water Gulf of Mexico, where the Thomas-Stieber model was developed, the foundational assumptions are: shale is the only porosity reducer, shale in laminations, bounding shales, structural and dispersed clays are the same (ie., clay minerals in all shale types are consistent as is the total porosity associated with each shale or clay type). Other characteristics of the system in the central GOM include: rapid deposition has resulted in compaction disequilibrium overpressure development and under-compacted shales for a given burial depth, and the system is at maximum burial depth present-day (there has been no uplift). In contrast to the conditions in the GOM, for thin bedded shaly sands on the north slope of Alaska, the thin bedded system under investigation has been more deeply buried and uplifted, the entire system is normally compacted, and the properties of laminar, structural and dispersed clays are not the same. These heteroliths require a more rigorous interrogation procedure than the original assumptions included in the Thomas Stieber model. Discrete properties for laminar shale, dispersed clay, and structural shale were determined from high resolution SEM imaging and image analysis and verified using NMR and Acoustic logging data from the wellbore. The discovery that dispersed clay and laminar shale indeed possess differing porosity values presents the opportunity to propose that the dispersed clay endpoint of the Thomas Stieber triangle be permitted to be determined independently. Currently, the dispersed clay endpoint is fixed in most industry software applications and represents the product of both the gamma ray and density values selected for the interpreter's laminar shale and clean sand endpoints.

Biography

William Hovarth.

SPWLA Houston Chapter Board Elections Q2 2026

Dear Members oft he SPWLA Houston Chapter

You may have seen earlier announcements and "forewarnings" of the upcoming elections for the '26 – '28 Executive Committee of the SPWLA Houston Chapter.

This is the official call for nominations to the list of candidates for the following open board positions:

- President
- Vice President Northside
- Vice President Westside
- Secretary
- Treasurer
- Editor.

Following the SPWLA Houston Chapter bylaws (available for viewing at this link (**), we are now accepting both self-nominations and peer nominations.

The following guidelines apply to the process:

- Nominations must be from within the membership of the SPWLA Houston Chapter.
- Nomination to be sent no later than Wednesday, April 22 by email to president@spwla-houston.org with a copy to secretary@spwla-houston.org.
  - For self-nominations: please include a brief statement of interest and commitment (details below*)
  - For peer nominations: please write a brief statement in support of said peer and copy (cc) the nominee on the same email.
    The nominee should then reply to the email, either accepting with a statement of commitment (details below*), or declining.
- Nominees are encouraged to include their resume and / or LinkedIn profile but are not required to.
- Nominees (both self and peer) are not automatically guaranteed to be added to the candidate list for the upcoming elections. All nominees will be assessed equally and fairly by the Executive Committee according to the bylaws, to ensure balance and diversity across multiple variables.
- The final candidate list will be shared with all members shortly after the nomination period closes.

We are trying to stay with the following (target) timeline for the Elections process:

Critical date	**Action**
Monday, April 13, 2026	Call for nominations email to members
Friday, April 24, 2026	Final day to receive nominations (20:00 Houston Time)
Sunday, April 26, 2026	Call for elections with candidates announced
Wednesday, April 29, 2026	Open Elections
Wednesday, May 13, 2026	Close Elections (by 23:59 Houston Time)
Friday, May 15, 2026	Announce election results
Wednesday, May 20, 2026	New Board takes control after 67th Annual Symposium in Lake Conroe

* Definition of commitment: the SPWLA Houston Chapter is very active in the Society. Accordingly, the successful nominee must be willing to join monthly board meetings (for which remote access is always available), attend Technical Seminars, Networking Meetings and other Chapter events when possible. Board membership is for a minimum of two years, but it can be extended beyond two years for officers and board members who wish to remain.

** https://spwla-houston.org/newsletters/Newsletter_84-230117_By_Laws_SPWLA_Houston_Chapter.pdf