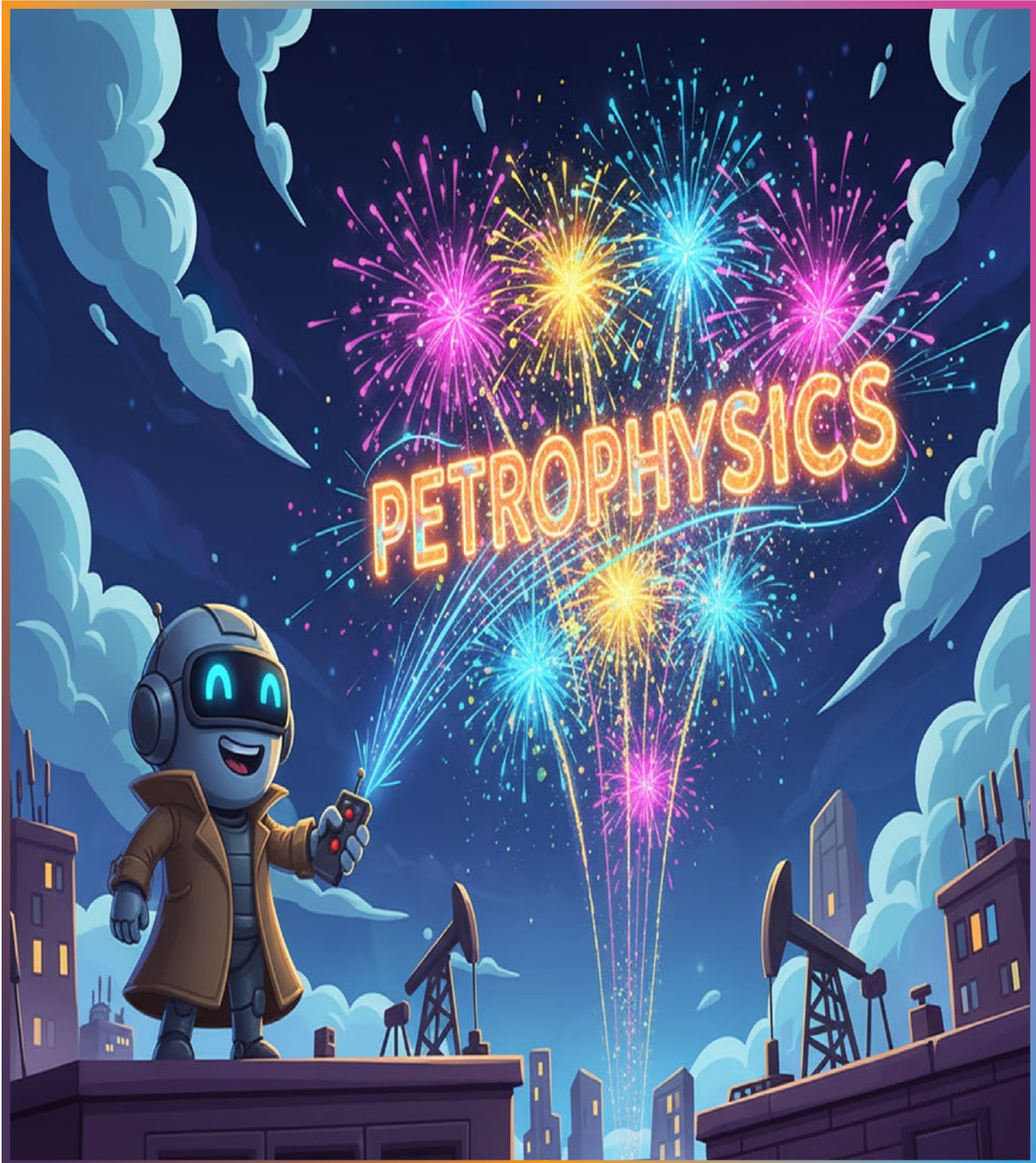




# spwla today



NEWSLETTER

# *Petrophysics Journal*

# PAPERS

- PAPERS ACCEPTED FOR REVIEW THROUGHOUT THE YEAR
- SPWLA CONFERENCE PROCEEDINGS ARE ELIGIBLE FOR SUBMISSION
- PUBLISHED PAPERS AVAILABLE ON SPWLA AND ONEPETRO DIGITAL LIBRARIES



MORE  
INFORMATION  
ON SPWLA.ORG



**ISSUE SPONSORSHIP AVAILABLE**

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The Society of Petrophysicists and Well Log Analysts  
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2025–2026



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CALENDAR OF EVENTS

**March 23–25, 2026**

*SPWLA Topical Conference*  
Ultradeep Azimuthal Resistivity (UDAR)  
Geological Society,  
London, United Kingdom  
www.spwla.org

**May 16–20, 2026**

*SPWLA 67th Annual Logging Symposium*  
Margaritaville Resort  
Lake Conroe, TX USA  
www.spwla.org

About the Cover

This cover was created with AI to reflect the evolving role of artificial intelligence across the petrophysics community and its growing place in today's workflow.

Notice: Articles published in *SPWLA Today* are not subject to formal peer review but are subject to editorial review and are verified for technical consistency and relevance.



# 66<sup>th</sup> ANNUAL SYMPOSIUM



**May 16 – 20 | Conroe, Texas | US**

Margaritaville Hotel & Resort

## **EXHIBITING AND SPONSORSHIP OPPORTUNITIES**

Contact the SPWLA business office for more details or visit  
[https:// www.spwla.org/Symposium](https://www.spwla.org/Symposium)



S. Mark Ma  
2024–2026  
Vice President Publications

Dear SPWLA community,

As we begin a new year, I am excited to share with you the January 2026 issue of the *SPWLA Today* newsletter. This issue is packed with insightful articles, updates on upcoming events, and news from our global community of petrophysicists.

As we look back on the past year, I am proud of the progress we have made in advancing the field of petrophysics. Our journal *Petrophysics* has continued to publish interesting research and case studies, and our *SPWLA Today* newsletter has kept you informed about the latest developments and trends in the industry.

As we move forward into 2026, I encourage you to get involved in the SPWLA community—attend our conferences, participate in SPWLA technical committees and special interest groups (SIGs), and submit your research and ideas for presentation at SPWLA workshops and annual symposium, as well as to the *Petrophysics* journal for publication. Your contributions will help shape the future of petrophysics and ensure that our organization remains a leader in the industry.

By the way, what do you think of our cover image for this issue, which depicts an AI robot celebrating petrophysics with festival fireworks? I'd like to extend my thanks to our managing editor, Elizabeth, for her innovative thinking, and to her AI assistant, for producing such an artful piece that beautifully captures the essence of what we petrophysicists do in the era of AI. I'm especially fond of how it reflects the industry's current move towards AI-driven autonomous petrophysics, where machine learning and automation are transforming the way we work (Rayo et al., 2025). It's exciting to see our field evolving in this way, and I think our cover image does a great job of capturing that spirit!

On behalf of the SPWLA editorial board of *Petrophysics* journal, I would like to thank our authors, reviewers, editors, and managing editor Elizabeth and her production staff for their hard work and dedication to producing high-quality content. I would also like to thank our members for their continued support and engagement.

I hope you enjoy this issue of the *SPWLA Today* newsletter, and I look forward to hearing your feedback and suggestions for future editions.

Happy New Year!

S. Mark Ma

VP Publications

### REFERENCE

Rayo, L., Alshammasi, L., Meridji, Y., and Kanfar, M., 2025, A Monitoring and Analysis Platform for Real Time and Autonomous Formation Evaluation and Machine Learning Deployment of Multiple Concurrent Assets, Paper 50, *Transactions, SPWLA 66th Annual Logging Symposium*, Dubai, UAE, May 17–21, 2025. DOI: 10.30632/SPWLA-2025-0050.

## From the President



**Robert H. (Bob) Gales**  
2025–2026 President

When you receive this, we will be past the holidays and barely 5 months from the 67th Annual Symposium in Conroe, Texas, May 16–20, 2026. Robin and Artur will have an update on the abstract results. As a Technical Committee reviewer, I was impressed with the range of topics and look forward to another great symposium. I hope to see you there. We encourage everyone to register for the workshops and hotel rooms early to help with planning. You can also help by providing operator or service company contacts for sponsorship or exhibits. The symposium committee is on top of it, but it always helps to have more contacts. Thanks in advance for your help.

**Education:** One of the SPWLA's main goals is knowledge sharing. I have been impressed by local and student chapter activities and SIG workshops since my last letter. The ASET, Resistivity, High Angle/Horizontal Well, NMR, and Formation Testing SIGs all held workshops. The Borehole SIG hosted a joint event with the London Petrophysical Society on December 11 – Everything Borehole Imaging. What is exciting is that many were hybrid events that allow people globally to participate. These are great initiatives. Let us know if we can be of technical support. We encourage other local chapters to reach out to the SIGs for workshops on specific topics.

We encourage all local and student chapters to update their activities on the SPWLA website and provide them to Sharon ([Sharon@spwla.org](mailto:Sharon@spwla.org)) so they are included in the weekly updates to the SPWLA email list.

The Regional Distinguished Speakers (RDS) were recently published. Congrats to all those who were recommended. Any local or student chapter can reach out to Global or Regional Distinguished Speakers for talks at their meetings. They may be virtual, but they dramatically expand the list of available SMEs.

We continue to evaluate conferences as affiliated sponsors or co-sponsors. We feel this is important because it allows you to get a member discount when enrolling at those conferences (this savings almost covers your membership fee).

**SPWLA Board Activities:** The Board received the auditors' report at the November board meeting. The Board, Sharon, and Stephanie closely watch our expenditures and your society's condition. The board meeting minutes are published for your review. You will notice a very modest change to membership fees, which have not been adjusted in several years. We compared membership to other major societies and remain on the low side. We did add multiyear payments with a discount, which was asked for by some members. We have also heard that some locations around the world are having difficulty paying. We recommend using a resident country bank credit card. Let Sharon ([sharon@spwla.org](mailto:sharon@spwla.org)) or Jing Li, VP Finance ([VP-Finance@spwla.org](mailto:VP-Finance@spwla.org)), know if you are having problems.

Paid membership by February 1 is important to vote for the Board of Directors positions.

Unfortunately, due to higher publishing and mailing costs, with reduced paper copy requests, we have joined SPE and APPG in going 100% digital for the *Petrophysics* journal. Even with adjusted paper costs over the past few years, we continue to lose money each year. As a member, you have access to over a decade of *Petrophysics* journal issues on the SPWLA website.

In brighter news, we added two new student chapters: UERJ (Universidade Estado do Rio de Janeiro – Brazil) and the Dallas-Fort Worth Student Chapter of the SPWLA. Congrats to all the new student members.

We continue to evaluate options to leverage our rich technical database. We have visited with some technical leaders in the LLM space. We are now looking for partners to fund the initial steps of converting the pre-OnePetro data to easily searchable digital data. Reach out to me ([President@spwla.org](mailto:President@spwla.org)) if you have input or are interested in joining the venture.

**General Information:** As noted on SPWLA.org and LinkedIn, we are in the process of selecting candidates for the next board election and awards nominations. We have received several good nominations. Nominations for SPWLA awards were due on December 20. This is an annual event and a great way to recognize petrophysics leaders who have been active in SPWLA.

We will also be soliciting proposals for the best local and student chapters. To provide consistency and transparency, the matrix was distributed to the Regional Directors to forward to each chapter and is posted in the Chapter Tab (Resources for Chapter Officers) on SPWLA.org.

## From the President

Local chapters and student chapters should spread the word on the SPWLA Foundation Scholarships and Grants. These are due April 1. The information can be found under the Foundation tab at [SPWLA.org](http://SPWLA.org).

Thank you for your support of SPWLA. It is truly an honor to represent this family of passionate geoscientists. Feel free to reach out with any input. We welcome feedback to keep improving your SPWLA.

Regards,  
Robert H. (Bob) Gales  
President





**Javier Miranda**  
**2025–2026**  
**President-Elect**

Our SPWLA International Board of Directors continues to move full steam ahead on several key objectives for the 2025–2026 term. One major focus is our **2026 Annual Symposium**, which will take place in **May 2026 at Lake Conroe, Texas**. At the same time, preparations for 2027 are already underway. We are currently reviewing the proposals received to host the **2027** conference, which—continuing our long-standing tradition—will be held **outside the United States** following next year’s event in Texas. This rotation reflects our growing international footprint, with significant membership across Latin America, Asia, Europe, and the Middle East. The final selection for 2027 will be made early next year and announced thereafter.

In the meantime, please follow the upcoming announcements for the Lake Conroe symposium, secure your **Margaritaville Lake Resort reservation**, and plan to join us! The venue offers a fun, family-friendly setting that blends work and leisure—a great combination for an international conference welcoming many visitors from abroad. Its proximity to the Houston metropolitan area—home to numerous global operators, service companies, consulting firms, and universities—makes it an ideal host location. Additionally, being within driving distance of Austin, San Antonio, Dallas, Fort Worth, and other major hubs with significant oil and gas and energy-sector activity greatly expands the potential reach of the event.

By the time you read this column, **Robin, Artur, and the Technology Committee** will have finalized a strong technical program. This was not an easy task: the committee received many excellent abstracts, making the selection process both competitive and rewarding. A key benefit of this rigorous review—often involving 10 or more committee members per abstract—is a highly curated and technically robust program for next year’s symposium.

I would like to extend my sincere thanks to all **Technology Committee and Symposium Organizing volunteers** who have devoted their time and expertise to this effort. In a landscape shaped by mergers, acquisitions, and smaller teams, many of our volunteers balance demanding careers, family responsibilities, and personal commitments—yet still find the time to give back. Many continue contributing to SPWLA long after retirement and after serving as Editors, SMEs, Instructors, Regional Directors, Vice Presidents, or Presidents. Their dedication is a reminder that:

**“Volunteering is at the very core of being a human. No one has made it through life without someone else’s help.”**  
— Heather French Henry

If you would like to be part of our SPWLA community, I encourage you to explore our open volunteer opportunities and **JOIN US!**

<https://spwla.org/SPWLAArchived/SPWLA/Volunteer/VolunteerOpportunities.aspx>

We are also currently accepting nominations for next year’s election, a topic I will discuss in more detail in my March column. As SPWLA President-Elect, I continue to engage with our **Special Interest Groups (SIGs)** through bimonthly meetings—two so far, with most SIGs actively represented. These sessions have generated strong ideas to strengthen SIG initiatives and enhance support for their activities (see **Picture 1**). A primary focus has been connecting SIGs and subject matter experts (SMEs) with local chapters to deliver technical talks, workshops, and lectures in coordination with our Regional Directors. This collaboration has already begun and will expand through SPWLA’s social media channels to reach a wider audience. Special thanks to **Artur Posenato Garcia, VP Technology-Elect**, for his support in coordinating workshop proposals and focused sessions for our 2026 Annual Symposium. And thank you to all SIG leaders for joining our early Friday bimonthly meetings—your dedication keeps SPWLA strong! Our next SIG meeting will be in **January 2026**.

**Table 1** lists the current SIG leaders for the 2025–2026 term, with whom I have the privilege of working this year. My goal, as their voice on the International Board, is to strengthen the connections between SIGs, SMEs, and local chapters—expanding opportunities for regional talks, conference workshops, and technical exchanges. These collaborative efforts have been a central theme in our 2025 discussions and will remain a priority moving forward.

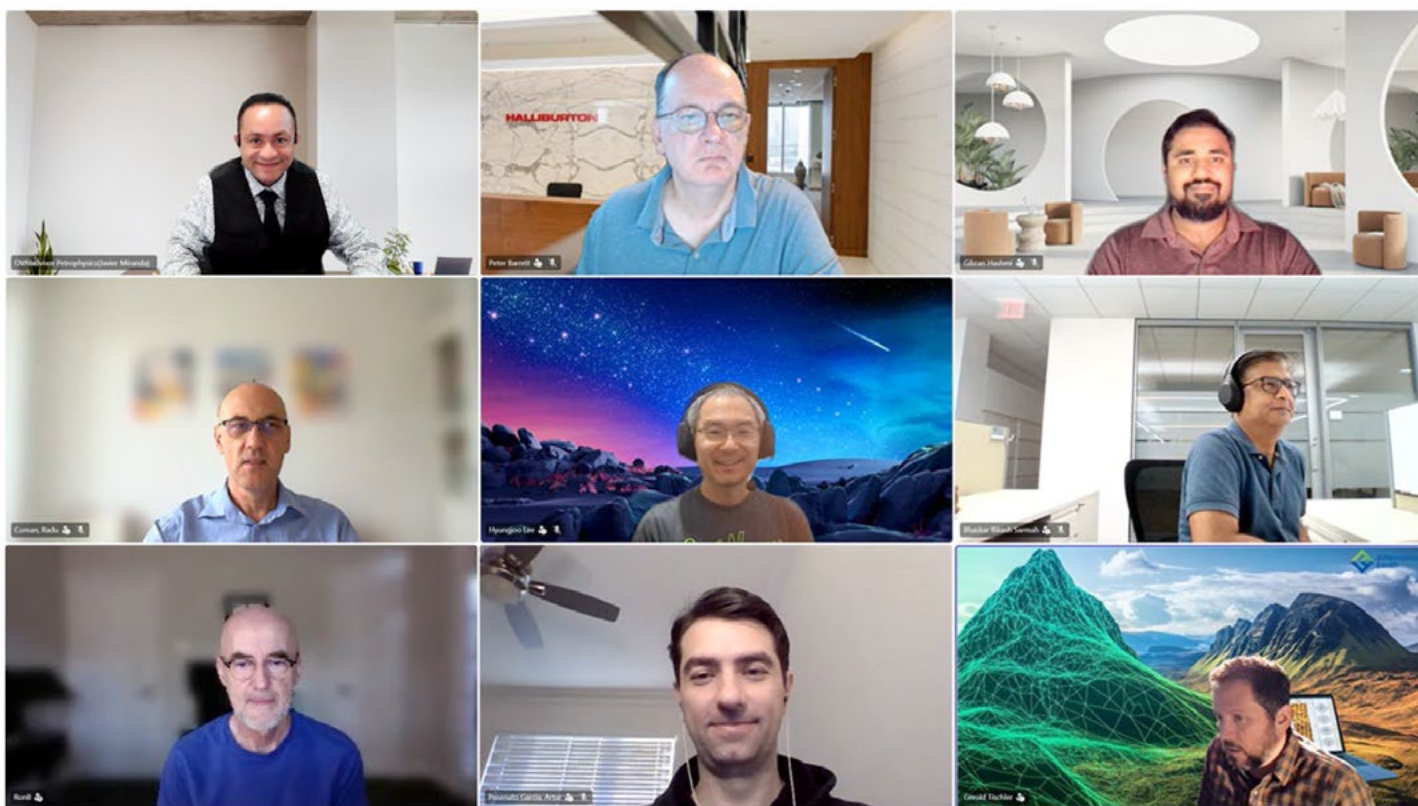
## Up Next

I would like to close by highlighting the importance of collaboration with our **sister societies**—not only as individuals but also as representatives of SPWLA. As part of these initiatives, I recently participated as an instructor in the **AAPG Imperial Barrel Award (IBA)** program for Latin America and the Caribbean, delivering an online session on “Well Log Data and Petrophysical Evaluation” in November 2025 (**Picture 2**).

Your ideas and recommendations are always welcome. Your board members are here to listen—and, more importantly, to work toward the best for our professional society. You know where to reach me.

Stay in touch friends, amigos, amis, vrienden, venner, قديص, 朋友, दोस्त, друзья!

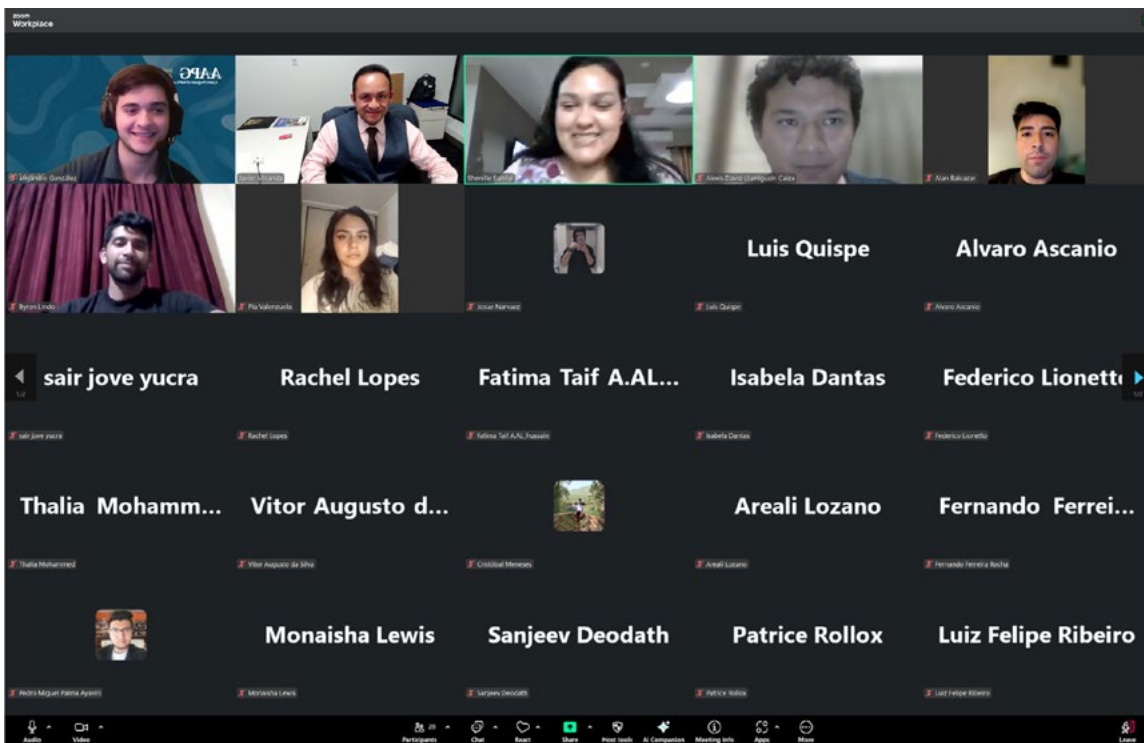
Javier Miranda  
SPWLA President-Elect  
President-Elect@spwla.org



**Picture 1**—SPWLA Special Interest Groups (SIG) representatives during November with SPWLA President-Elect Javier Miranda and VP Technology-Elect Artur Posenato Garcia. From left to right, top to bottom (excluding me): Peter Barrett (Borehole Image), Gibran Hashmi (Formation Testing), Radu Coman (Nuclear Magnetic Resonance NMR), Hyungjoo Lee (Petrophysical Data-Driven Analytics PDDA), Bhaskar Sarmah, Ron Bonnie (NMR), Artur Posenato Garcia (VP Technology-Elect), and Gerold Tischler (Alternative Subsurface/Energy Transition ASET).

**Table 1**—Current SPWLA Special Interest Groups leaders (2025–2026)

Chapter Name	First Name	Last Name	Company	Position in Chapter	Official SIG Email address
Acoustics SIG	Gennady	Koscheev	Halliburton	Communications	<a href="mailto:acoustics_sig@spwla.org">acoustics_sig@spwla.org</a>
Acoustics SIG	Jennifer	Market	Well ID	Chair	<a href="mailto:acoustics_sig@spwla.org">acoustics_sig@spwla.org</a>
Alternative Subsurface/Energy Transition	Gerold	Tischler	Alternative Earth	Chair	<a href="mailto:aset_sig@spwla.org">aset_sig@spwla.org</a>
Alternative Subsurface/Energy Transition	Femi	Onita	Shell	Vice Chair	<a href="mailto:aset_sig@spwla.org">aset_sig@spwla.org</a>
Borehole Imaging - BHI SIG	Christian	Rambousek	NiMBUC Geoscience	Chair	<a href="mailto:bhi_sig@spwla.org">bhi_sig@spwla.org</a>
Borehole Imaging - BHI SIG	Peter	Barret	Halliburton		<a href="mailto:bhi_sig@spwla.org">bhi_sig@spwla.org</a>
Education SIG	Ahmed	Badruzzaman	Independent	Chair	<a href="mailto:ahmed.badruzzaman@gmail.com">ahmed.badruzzaman@gmail.com</a>
Formation Testing SIG	Gibran	Hashmi	Halliburton	Chair	<a href="mailto:formation.testing_sig@spwla.org">formation.testing_sig@spwla.org</a>
Formation Testing SIG	Camilo	Gelvez	BP	Vice Chair	<a href="mailto:formation.testing_sig@spwla.org">formation.testing_sig@spwla.org</a>
HAHZ	Chapter Officer			Chair	<a href="mailto:HAHZ@spwla.org">HAHZ@spwla.org</a>
HAHZ	Meretta	Qleibo	SLB	Chair	<a href="mailto:HAHZ@spwla.org">HAHZ@spwla.org</a>
Hydrocarbon Reserves	Philip	Gibbons	Gaffney Cline	Chair	<a href="mailto:reserves_sig@spwla.org">reserves_sig@spwla.org</a>
Hydrocarbon Reserves	Brett	Gray	Ryder Scott	Vice Chair	<a href="mailto:reserves_sig@spwla.org">reserves_sig@spwla.org</a>
Hydrocarbon Reserves	Joshua	Oletu	Gaffney Cline	Past Chair	<a href="mailto:reserves_sig@spwla.org">reserves_sig@spwla.org</a>
Hydrocarbon Reserves	Luis	Quintero	Halliburton	Past Chair	<a href="mailto:reserves_sig@spwla.org">reserves_sig@spwla.org</a>
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NMR SIG	Radu	Coman	Baker Hughes	Chair Elect	<a href="mailto:NMR@spwla.org">NMR@spwla.org</a>
NMR SIG	Nate	Bachman	SLB	Past Chair	<a href="mailto:NMR@spwla.org">NMR@spwla.org</a>
Nuclear SIG	Ahmed	Badruzzaman	Independent	Chair	<a href="mailto:ahmed.badruzzaman@gmail.com">ahmed.badruzzaman@gmail.com</a>
PDDA	Hyungjoo	Lee	Helmerich & Payne	Chair	<a href="mailto:pdda_sig@spwla.org">pdda_sig@spwla.org</a>
The Resistivity Modeling SIG	Dean	Homan	SLB	Chair	<a href="mailto:rt-sig@spwla.org">rt-sig@spwla.org</a>



**Picture 2**—AAPG Imperial Barrel Award for Latin America and the Caribbean Session: Well Log Data and Petrophysical Evaluation in November 2025.



**Robin Slocombe**  
2025–2026 VP Technology

### 2026 Symposium Abstract Selection: A Testament to Technical Excellence

- 309 abstracts submitted for the 2026 SPWLA Annual Symposium, demonstrating strong global engagement from the petrophysics community
- 70 expert judges participated in the Technology Committee, each reviewing approximately 50 abstracts aligned with their areas of expertise
- 120 papers and 30 posters selected through a rigorous evaluation process that assessed submissions against multiple technical criteria
- Strong selection integrity achieved through a well-distributed grading system that enabled clear differentiation among submissions
- Author notifications scheduled for the first week of December 2025, with successful applicants receiving acceptance letters
- A strict manuscript timeline will be enforced to ensure all presenters submit final papers in time for the 2026 symposium

We are delighted to announce that the SPWLA Technology Committee has completed the abstract review process for our 2026 Annual Symposium, and the results reflect the vibrant state of petrophysics and formation evaluation worldwide! With 309 abstracts submitted from our global community, this year’s response demonstrates the continued relevance and importance of our annual gathering in advancing subsurface science.

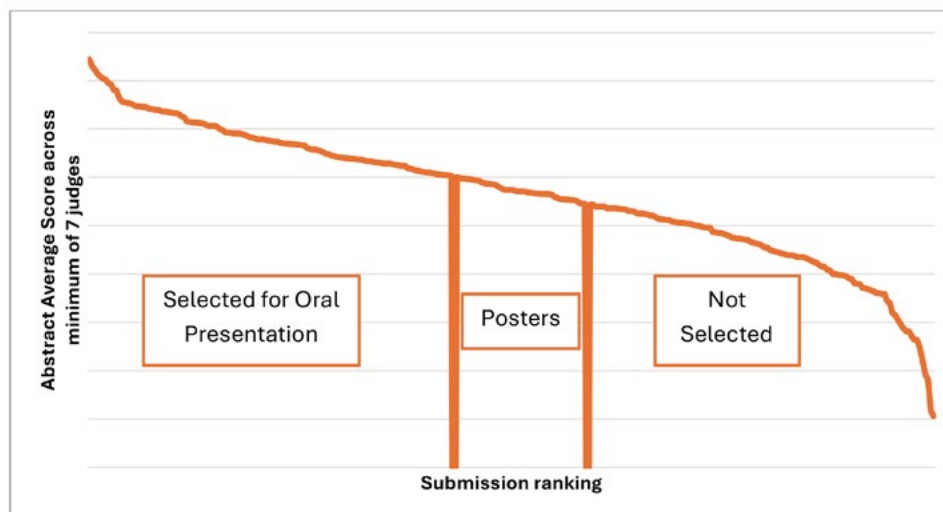
#### A Rigorous and Fair Review Process

Our Technology Committee assembled 70 distinguished judges from across the industry, each bringing specialized expertise in various aspects of petrophysics and well logging. The review system matched judges with abstracts in their areas of technical expertise, ensuring that each submission received an informed and qualified evaluation.

Each judge reviewed approximately 50 abstracts, assessing them against established criteria that measure technical merit, innovation, practical application, and contribution to the field. This distributed approach not only ensured thorough review coverage but also provided multiple perspectives on the quality and relevance of submitted work.

#### Selection Results

The Committee has selected 120 papers and 30 posters based on a distribution of grades that provided clear differentiation among submissions and enabled confident selection decisions. This spread in scoring reinforces the integrity of our review process and ensures that the symposium program will showcase the highest quality technical content.



### Next Steps for Authors

Authors of successful submissions will receive notifications during the first week of December. We congratulate all accepted authors and look forward to their contributions to what promises to be an outstanding technical program.

It is critical that accepted authors note: a strict timeline for manuscript submission will be enforced. Only authors who meet the manuscript deadline will be permitted to present at the 2026 Symposium. This policy ensures we can deliver a complete and professionally published proceedings volume that maintains the high standards our members expect.

### Key Dates for the 2026 Symposium

**January 6, 2026:** Your abstract will be included in the SPWLA's Symposium website and in the *SPWLA Today* newsletter. Abstracts will be shown as originally submitted. If you need to revise your original submission, including author changes or additions, please send them before January 6th for committee approval to [stephanie@spwla.org](mailto:stephanie@spwla.org).

**March 2, 2026:** Submit your draft manuscript to [stephanie@spwla.org](mailto:stephanie@spwla.org) to be reviewed by a Technology Committee member. Papers not received by March 3rd will be deleted from the program. Papers cannot be withdrawn after the deadline.

\*\*\*There will be no extensions\*\*\* All poster presentations require a manuscript.

**April 1, 2026:** Submit your final manuscript and copyright form to [stephanie@spwla.org](mailto:stephanie@spwla.org). Papers with copyright forms not received by April 1st will be deleted from the program. Papers cannot be withdrawn after the deadline. \*\*\*There will be no extensions\*\*\*

**May 1, 2026:** Submit your presentation to [stephanie@spwla.org](mailto:stephanie@spwla.org). Presentations not received by this deadline will be deleted from the program.

**May 16–20, 2026:** Attend the speaker breakfast on the day of your presentation (details and schedule will be announced in late April) to meet Session Chairs and receive instructions on stage presentations.

### Symposium Workshops

We'd also like to share some important details regarding technical workshop proposals. For planning purposes, we would appreciate receiving a **preliminary workshop proposal by December 20, 2025**.

This initial version should include: **Title, Short abstract, Estimated duration**. We will use this information to begin advertising the workshop in early January 2026.

The **final workshop proposal** should be submitted **no later than February 6, 2026**, and should include:

- **Title**
- **Organizer(s) and contact information**
- **Duration and proposed location** (SPWLA 2026, Lake Conroe)
- **Abstract** (max. 100 words)
- **Objectives, Target Audience, Outline, Teaching Methods, Prerequisites, and Expected Outcomes**
- **Instructor biographies** (including photo)

Please feel free to reach out if you have any questions. We look forward to your proposal and appreciate your continued support in making these workshops a vital part of our technical program.

We look forward to an outstanding 2026 Symposium.

Kind regards,  
Robin Slocombe  
VP Technology

Artur Posenato Garcia  
VP Technology-Elect



Jing Li  
2025-2027 VP Finance,  
Secretary, and  
Administration

**New Membership Structure: Updated Pricing and Multi-Year Options**

The Finance Committee has reviewed and approved a new membership structure that includes updated pricing and options for multi-year memberships as shown in the table below. Members can now select a 3-year membership (~5% discount) and a 5-year membership (~10% discount). These changes are now reflected on the membership renewal page.

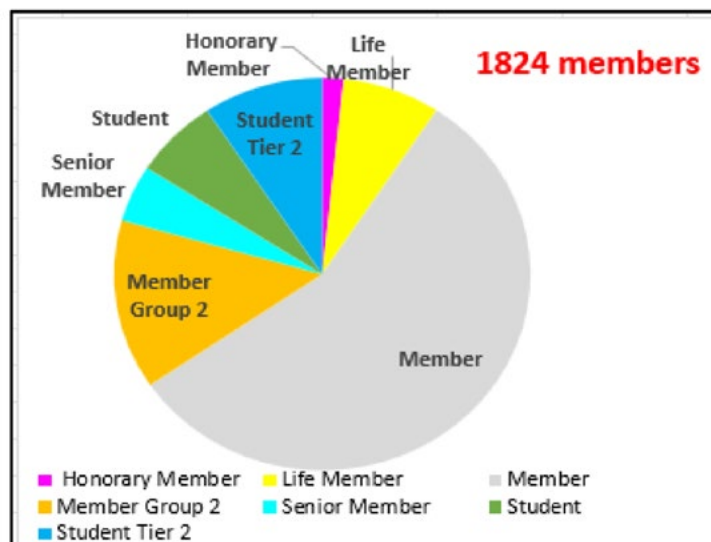
We sincerely appreciate everyone who has already joined or renewed. Your support is vital to our community. If you haven't yet renewed, we kindly encourage you to do so. Membership dues remain a key source of income, enabling us to continue providing value through publications, events, and a wide range of member services.

	Proposed fees starting from 2026
Honorary Member	Gifted \$0 fee for life
Lifetime Member*	one time fee for \$600
Annual Member	\$120
Annual Member Tier2	\$55
Annual Student Member	\$25
Annual Student Member Tier2	\$15
Annual Senior Member	\$60
3-year Member	\$340
3-year Member Tier2	\$160
3-year Student Member	\$70
3-year Student Member Tier2	\$43
3-year Senior Member	\$170
5-year Member	\$540
5-year Member Tier2	\$250
5-year Student Member	\$115
5-year Student Member Tier2	\$70
5-year Senior Member	\$270

**Membership and Printed Copies for the *Petrophysics* Journal**

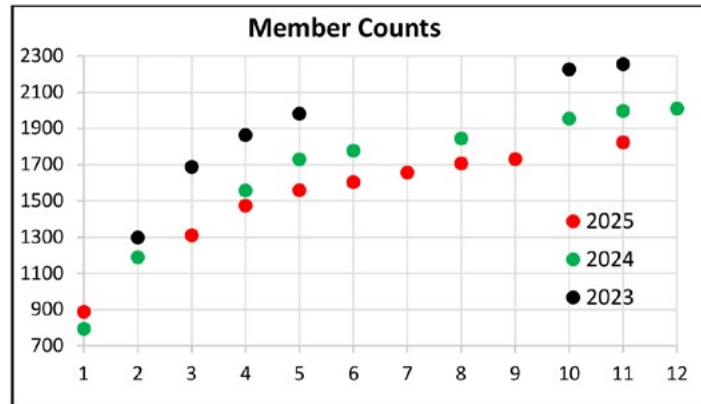
SPWLA has sold 29 copies of the printed *Petrophysics* journal as of November 11. After several consecutive years of operating the printed edition at a loss, the Board has decided to discontinue the print version and transition to digital-only subscriptions beginning in 2026.

SPWLA's total membership has reached 1,824. A percentage breakdown of current membership categories is provided below.



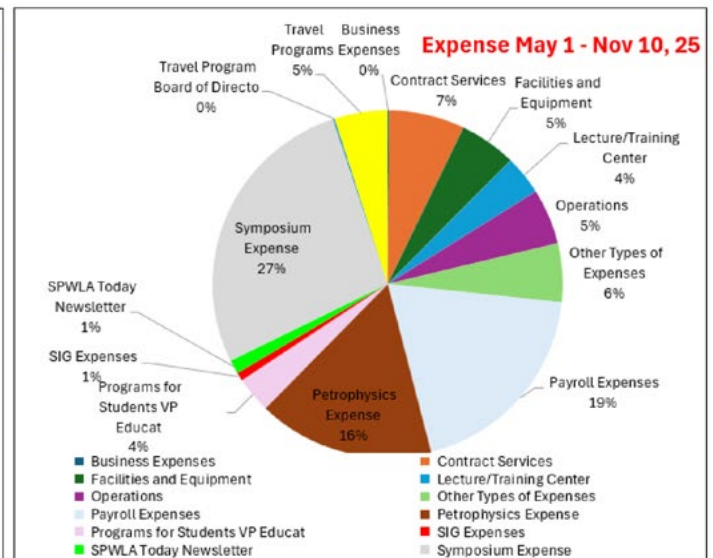
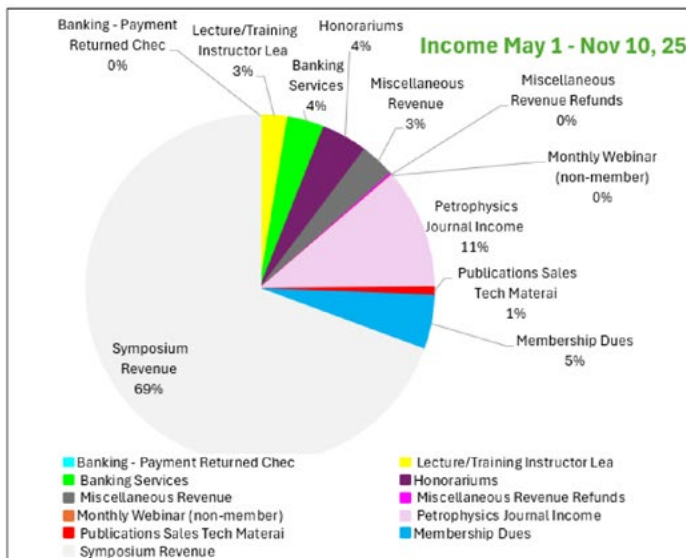
# Financial Times

The following plot illustrates the monthly membership counts from 2023 to 2025, which shows a continued decline over the past several years. Membership typically reaches ~85%–88% of the yearly total during symposium months.



## Financial Overview: May to November 2025

SPWLA continues to demonstrate steady and healthy financial performance. The pie charts below illustrate the percentage breakdowns of revenue and expenses from May to November 2025. These charts offer a detailed view of fund distribution and provide insights into spending across various programs, including the *Petrophysics* journal, publication sales, travel expenses for Distinguished Speakers, and support for student chapters. Overall, revenue and expenses remain well balanced.



## Get Involved

We value your feedback and welcome your ideas, especially those that help identify new revenue opportunities or enhance the value we provide for our members. Your continued participation plays a vital role in SPWLA’s success.

Thank you for being part of our community. Together, we’re building a stronger, more connected future.

Sincerely,

Jing Li  
VP Finance, Secretary, and Administration



**Matt Blyth**  
2024–2026  
VP Education

### Dear SPWLA community,

Hello! How did it get to the end of the year already!? By the time you read this, we will have completed our GDS webinar series through December, and we have launched the 2026 International Student Presentation Competition (ISPC), the finals of which will take place in Conroe as part of the 2026 symposium. We have also finalized and announced our Regional Distinguished Speakers (RDS) for the coming year. The RDS are those speakers who have delivered outstanding presentations at chapter events over the previous year and have been nominated for the award by the chapters. Our RDS are:

- Ryan Banas, PetroRes Consulting
- Patacharapoen Petchdee, PTTEP
- Marie Van Steene, SLB
- Russel Farmer, ADNOC
- Elisabeth Bemer, IFPEN
- Priscila Caldas, HAL
- Gonzalo Preboste, Geolog
- Juan Carlos Porras, Inter Rock C.A.
- Terry O’Sullivan, consultant
- Gibran Hashmi, Halliburton
- Philip Singer, Rice University

You can view the speakers’ abstracts and bios on our website, and I would like to thank them all for their contributions to the SPWLA! Looking forward to 2026, we will continue our GDS webinar series and, hopefully, introduce a few other webinars of interest to the society. We are also working hard on rolling out new Nuggets of Wisdom and educational videos for the membership. As usual, everything we do relies on volunteers, so if you are willing to help with the SPWLA educational program, please reach out!

- **Short Courses:** We are seeking people willing to teach short courses on relevant topics. These courses can be as long or as short as needed, and are usually taught online, with half days each day, to allow attendees to balance work and training—and we share the course revenue with the instructors, so you get paid to teach!
- **On-Demand Training Classes:** These courses are available for an extended period, with attendees able to access prerecorded training modules online and attend scheduled Q&A sessions with the course instructor. This is a great opportunity to deliver a training course that may be too long to cover in a single week.
- **Nuggets of Wisdom:** This is a series of online talks by industry experts on particular topics that interest them most.

So, if you have a passion for a particular subject and would like to teach a course or class, or just record your thoughts as an online information archive, please contact me at [VP-Education@spwla.org](mailto:VP-Education@spwla.org)!

Take care!  
Matt Blyth  
VP Education



**Chicheng Xu**  
2025-2027  
VP Communications

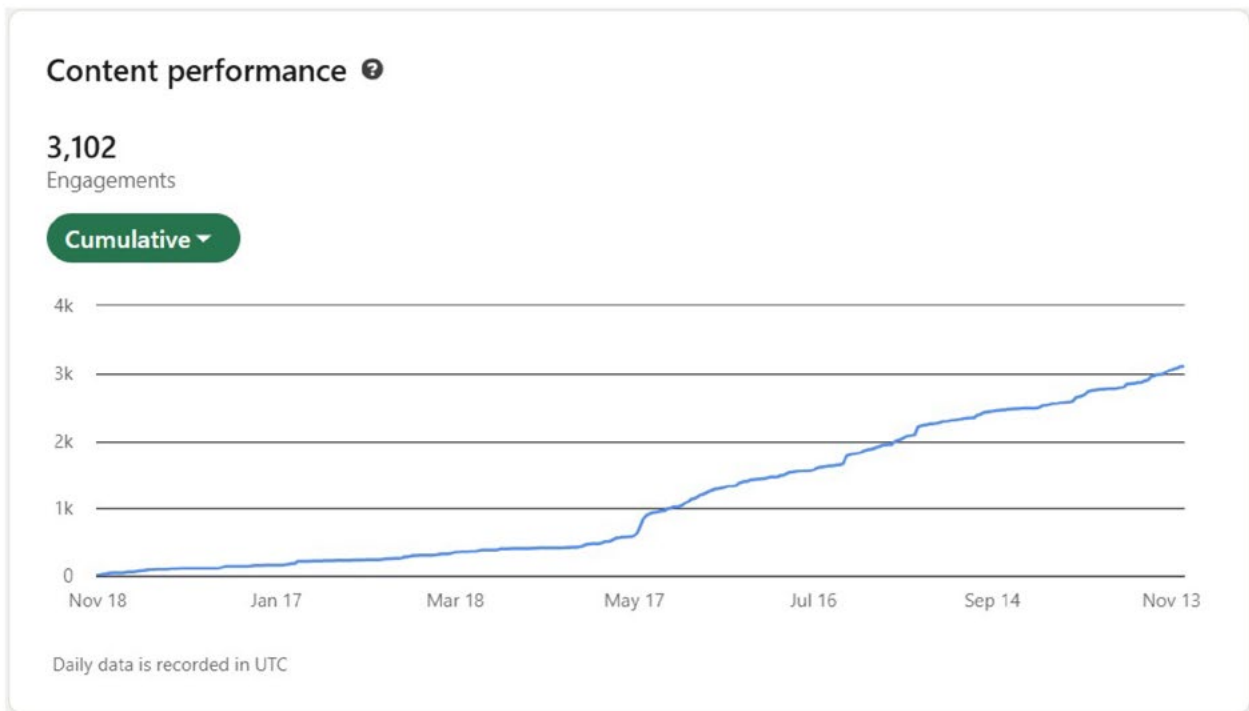
Since taking over the SPWLA VP Communications role in mid-May following the 66th Annual Symposium, our communications team implemented a streamlined and high-impact strategy: **focusing exclusively on LinkedIn with high-frequency, high-quality, and highly engaging content**, rather than spreading resources across multiple social platforms.

This focused approach has delivered *exceptional results*, significantly strengthening SPWLA’s global digital presence and community engagement.

**1. Engagement Growth: Strong Upward Momentum**

Over the past 12 months, SPWLA LinkedIn engagement reached **3,102 total interactions**, showing a sharp acceleration after mid-May.

- Daily engagement spikes increased substantially, reflecting more interactive posts (webinars, awards, technical highlights, and conference announcements).
- Engagement growth rate increased **multiple times compared to earlier months**, demonstrating the effectiveness of consistent content.

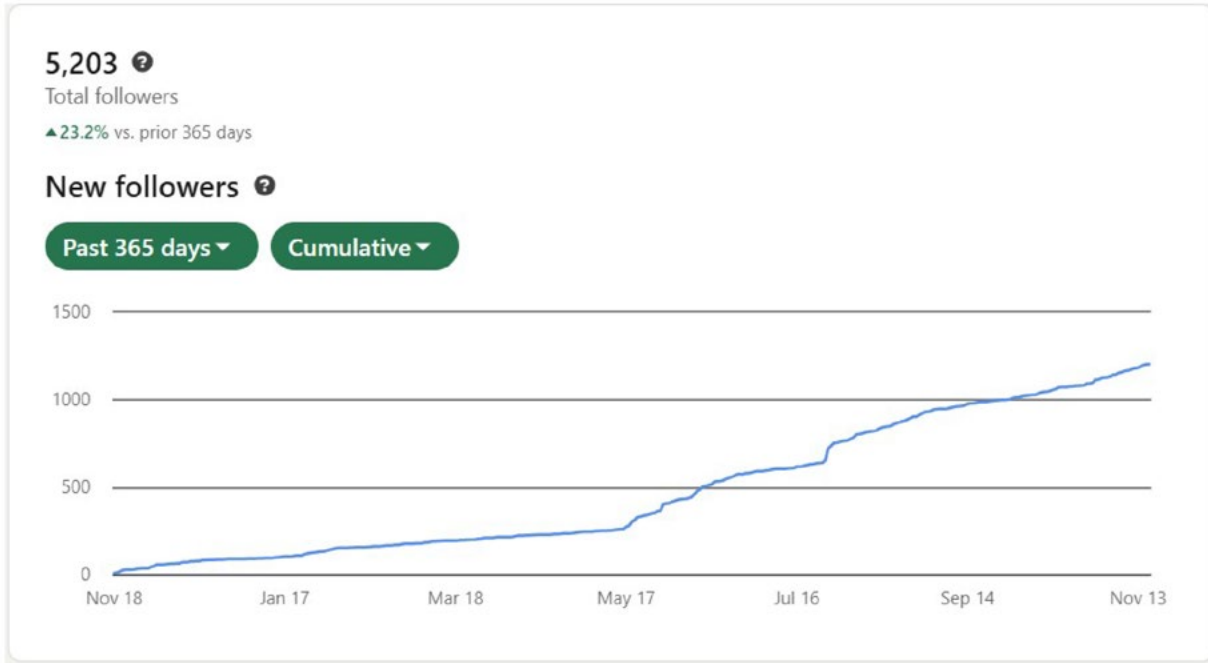


**2. Membership Pipeline Strengthened: 23.2% YoY Growth in Followers**

LinkedIn followers climbed to **5,203** — a **23.2% increase over the prior 365 days**.

- The follower growth rate accelerated visibly after the new communications strategy began.
- Daily new follower surges corresponded closely to technical announcements, Distinguished Speaker posts, and symposium-related updates.

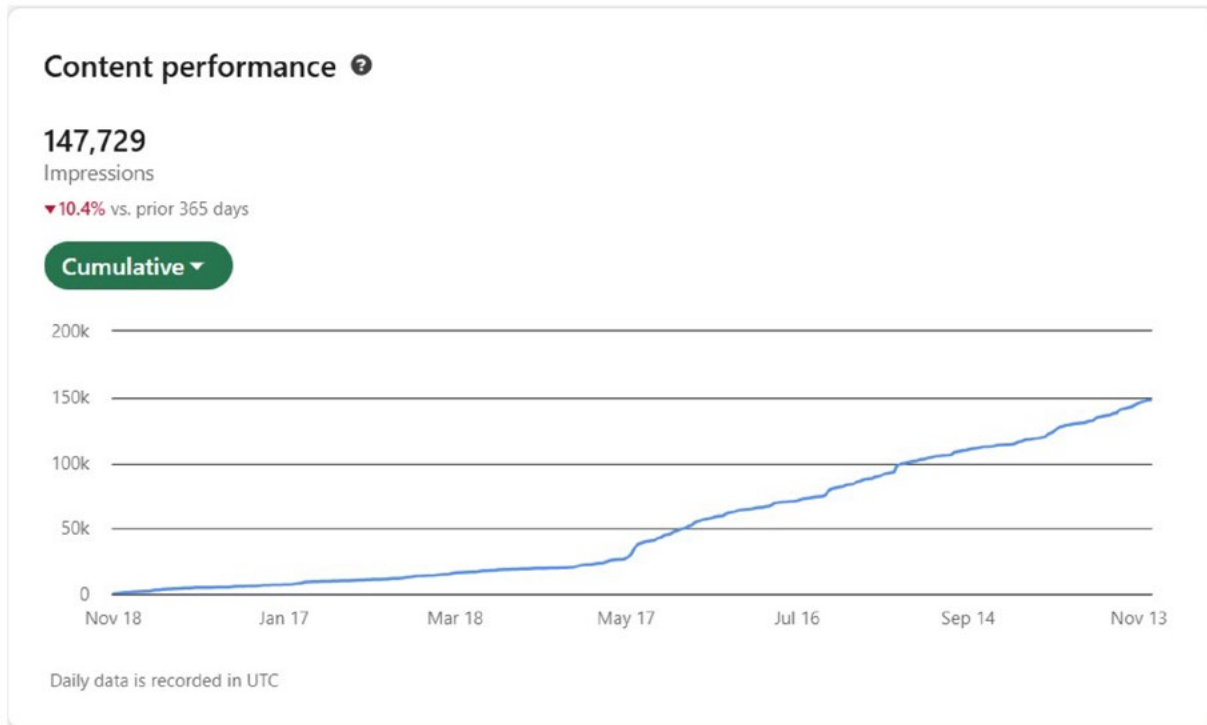
This consistent organic growth indicates a broader, more global audience discovering SPWLA, supporting membership outreach and international visibility.



**3. Visibility & Branding: Nearly 150,000 Annual Impressions**

SPWLA posts generated **147,729 impressions** over the past year.

- While the platform saw an overall industry-wide dip, SPWLA maintained strong visibility.
- After May, the slope of the cumulative impression curve increased significantly due to improved content cadence and relevance.
- High-value posts frequently exceeded **4,000 to 8,000 impressions**, well above typical organizational benchmarks.

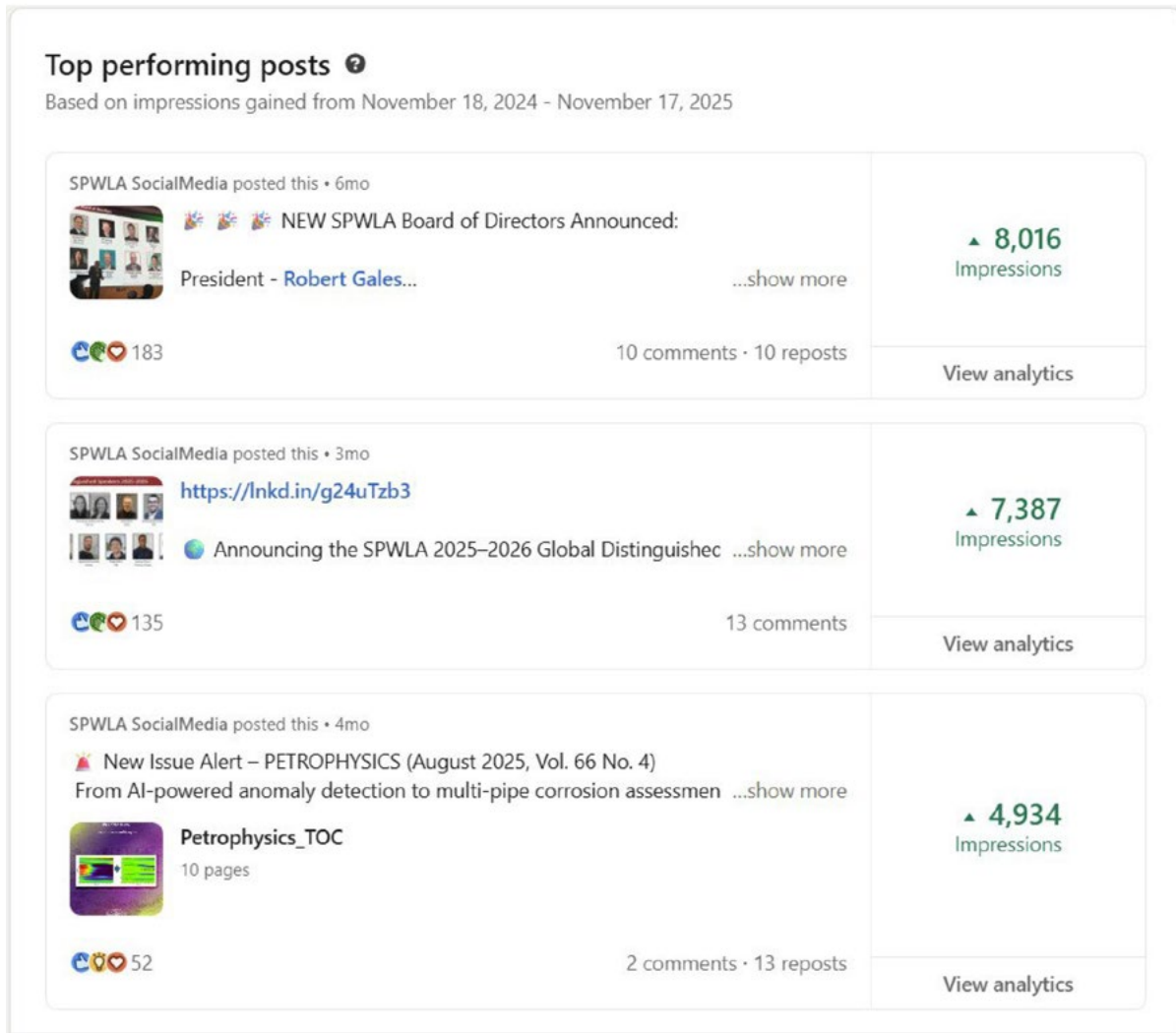


4. Top-Performing Content

The most successful posts this year showcased SPWLA’s leadership and technical excellence:

- **New Board Announcement** – 8,016 impressions
- **2025–2026 Global Distinguished Speaker Series Launch** – 7,387 impressions
- **Petrophysics Journal Issue Release** – 4,934 impressions

These results reaffirm the community’s strong interest in leadership updates, society programs, and technical publications.



5. Summary of Achievements

Since mid-May, the SPWLA social media communication strategy has:

- Dramatically increased **engagement frequency and volume**
- Boosted **follower growth** to one of the highest levels in recent years
- Strengthened **global visibility** of SPWLA programs and publications
- Enhanced **brand consistency** via a unified LinkedIn-focused strategy
- Supported society initiatives including Distinguished Speakers, SIGs, webinars, journals, and the upcoming 2026 Symposium

## THE FEED

This digital transformation in our communication approach is directly benefiting SPWLA’s mission: advancing petrophysics knowledge and expanding our global community.

### 6. Looking Ahead

We will continue:

- High-frequency updates
- Better integration with SIG events, journal releases, and member highlights
- Strategic campaigns leading into the **SPWLA 2026 Annual Symposium (Lake Conroe)**
- Outreach to broaden our digital footprint across energy, academia, and technology sectors

Thank you to all SPWLA members and volunteers for your engagement and support. Our digital voice is stronger than ever, and we look forward to building on this momentum in 2026.

Chicheng Xu  
VP Communications (2025–2027)



# Regional Understandings—North America 1



**Amer Hanif**  
2024–2026 NA1 Regional  
Director

Dear SPWLA members,

I am excited to announce the formation of a new student chapter in our region representing the Dallas-Fort Worth (DFW) area. Founded on the **University of Texas, Arlington** campus under the guidance of **Faculty Advisor Dr. Behzad Ghanbarian**, the chapter aims to build a community that extends past UTA with members from UT Dallas and other colleges in the area. President Brylan Eden shares this message: “Although we are in the early stages of the new chapter, we look forward to building a community for students in the DFW area interested in geology, hydrology, and/or petrology by engaging with the field through community building, networking opportunities, field outings, and technical talks led by industry professionals. We are thrilled to be here and excited for what is next for our new chapter.” We welcome the new board (**President Brylan Eden, Vice President Hannah Powers, Treasurer Omar Nagem, Secretary Mashaël Sayed**, and other founding members) to SPWLA and look forward to making this a worthwhile experience for them.

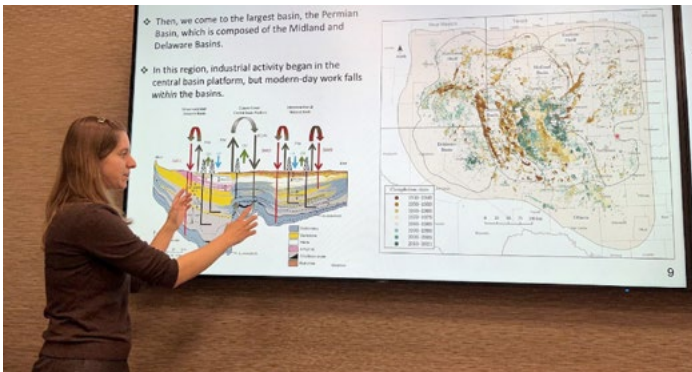
The technical activities in Houston and Dallas were kept alive, during the last couple of months, through a combination of technical lunch events and NMR, Resistivity, and FT SIG conferences. I include here only a few pictures, capturing the vibe, and encourage you to read the respective columns from dedicated board members who made them happen in the Chapter News. I will miss sharing news from the **Houston Technology Show** by just a few days; however, the December 5 event is shaping up well with a great show of support from both sponsors and members.

As I express my gratitude to my colleagues in the region for their selfless contributions to SPWLA causes in the past year, I also wish all of you a joyful holiday season and a happy New Year. We look forward to greeting you at the Annual Symposium next spring in Conroe, Texas.

Amer Hanif  
NA1 Regional Director



Dallas-Fort Worth Student Chapter officers (from left to right): President Brylan Eden, Vice President Hannah Powers, and Treasurer Omar Nagem. Not pictured: Secretary Mashaël Sayed



SPWLA Dallas Chapter’s Nadine Ushakov, assistant professor at UT Dallas, Editor SPWLA Dallas, and the speaker at the November Technical Lunch, sharing her research on understanding induced seismicity and its implications in Texas basins.



SPWLA Houston Chapter’s Andrew Hind, VP Downtown, invited 2025–2026 Global Distinguished Speaker Agustin Kriscoutzky to present his case study on characterization of Vaca Muerta using drill-cuttings-based analysis methods to our local audience.

# Regional Understandings–North America 1



The Formation Testing (FT) SIG meeting in the SLB Q Auditorium, Houston, Texas. SIG Chairman Gibran Hashmi opening the panel discussion on the practical realities of AI adoption in formation testing.



The Resistivity SIG meeting at the Baker Hughes Center of Technology Innovation, Houston, Texas. It was a hybrid event with both in-person and online participation. (Top) Robert Gales giving a warm welcome speech to the attendees. (Bottom) Jinjuan Zhou introducing the next talk from Xiaoyan Zhong.



NMR SIG attendees are all smiles unwinding at the SPWLA Houston Monthly Social while connecting with the larger petrophysics community at the same time.

## Regional Understandings—North America 2



**Andrew Anderson**  
2025–2027  
NA2 Regional Director

Dear SPWLA colleagues,

I hope you all had the chance to enjoy the holiday season doing the things that bring you joy. As we step into the new year, I want to extend my warmest wishes to you and your families for a happy and successful year ahead.

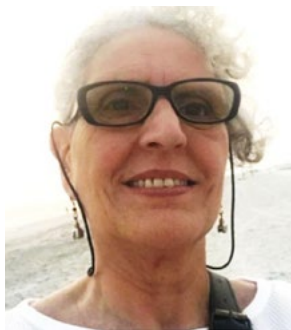
In December, the NA2 region chapters came together to discuss plans for the upcoming year, share ideas, and explore opportunities for collaboration. Both the Permian and Oklahoma Chapters celebrated the holidays with joint events alongside other local professional societies—a great example of community and networking in action.

The San Joaquin Well Logging Society (SJWLS) is moving forward with Adam Cox as President and Elyse Goin continuing as Treasurer. I will remain involved as VP Technology, supporting the chapter remotely. We're excited about the return of technical luncheons featuring engaging speakers in the coming months.

Across the NA2 region, chapters are continuing their technical programming through the 2025–2026 season and working diligently to strengthen connections with universities and potential student chapters. Stay tuned to SPWLA publications and social media for updates—we're committed to expanding our outreach and visibility across multiple platforms this year.

Best regards,  
Andy Anderson  
NA2 Regional Director

## Regional Understandings—Latin America



**Marta Inés D'Angiola**  
2024–2026 Latin America  
Regional Director

Dear colleagues,

As we approach the end of the year and many of us begin preparing for the summer holidays, I would like to share a brief update on the recent and upcoming activities across the region.

### LAM SPWLA PROFESSIONAL CHAPTERS

#### Suriname Professional Chapter

Over the past 2 months, the Suriname Professional Chapter held a single online technical meeting. During this session, **Sharon Kuhn** (Staatsolie, senior petrophysicist at the Subsurface Appraisal & Evaluation Division – Offshore Directorate) delivered an insightful presentation titled **“A Workflow for Basic Geomechanics: Offshore Suriname Cretaceous Reservoirs in Block 58.”** Her talk provided valuable perspectives on geomechanical characterization in emerging deepwater plays and fostered a productive discussion among participants.

#### Argentina Professional Chapter

Before the year closed, we hosted one final webinar on December 3. The speaker was **Gabriel Gallardo** (SLB), who spoke on the topic, **“Introduction to Geomechanics and Applications in Reservoirs.”** This session was designed to provide a practical overview of geomechanical principles and their relevance to reservoir characterization and field development.



### LAM SPWLA STUDENT CHAPTERS

#### SPWLA UFC SC (University Federal of Ceará, Brazil)

The SPWLA-UFC Student Chapter has maintained a strong pace of activities over the past 2 months, kicking off October with participation in the AAPG International Conference & Exhibition (ICE) Rio'25, followed by a technical visit to the Petrobras CENPES research center. Furthermore, early November marked the successful integration of six new members who had successfully completed the selection process.

#### SPWLA Argentina Student Chapter Activities

**Reservoir Simulation Webinar Series** (October 9, 16, 23, and 30 – in collaboration with GeoLatinas)

They contributed to the promotion, support, and moderation of the **Reservoir Simulation Webinar Series**, an initiative aimed at sharing knowledge on reservoir characterization. The webinars featured lectures delivered by international researchers and industry professionals, covering topics such as: Introduction to Reservoir Simulation, Open-Source Tools (OPM Flow), Custom Type Curves, and Reservoir Multifunctionality for the Energy Transition.



#### Leapfrog Geo + Edge Intensive Course (November 11, 25, and December 2, 9 – in collaboration with Seequent and SEG UNLP)

Four editions of an intensive **Leapfrog Geo + Edge** course were delivered, introducing participants to 3D geological modeling and advanced analysis tools. The course targeted geoscience students seeking practical skills in software widely used in exploration and mining. Covered topics included: Fundamentals of Implicit Modeling, Management of Geological and Drilling Data, Construction of Structural Models, and Introduction to the Edge Module for Geostatistical Analysis.

## Regional Understandings–Latin America

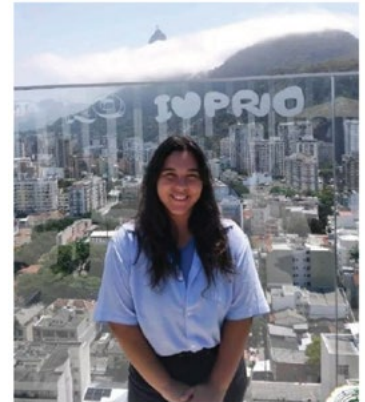


### November 28 – 4th Anniversary of the Argentina Student Chapter: “Virtual Mate Gathering”

To celebrate the chapter’s 4th anniversary, the students hosted an informal **virtual mateada**, focused on discussing early career experiences in the energy industry. They invited young professionals to share their insights on the transition from university to the workplace, key lessons learned during the first years of their careers, and practical advice for students nearing graduation. The event provided an open, motivating environment for participants planning their professional future, and several prizes were raffled among attendees.

### UFRuralRJ Student Chapter – Brazil

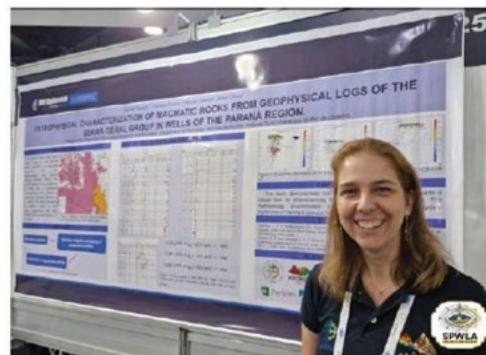
**October 2025:** A member of their chapter, Karoline Gabry, had the opportunity to represent the chapter in the Nuclear Logs and Well Scale Mineralogy Course, held at PRIO, Rio de Janeiro, and taught by petrophysics specialist, Gabriel de Nascimento Freitas.



**October 2025:** The SPWLA UFRuralRJ (in a partnership with the Brazilian Petroleum Institute) managed to get an entrance to the Offshore Technology Conference, held in Rio de Janeiro. Their Vice President, Gabrielly Vianna, represented the chapter in the event. It not only proved to be a great opportunity of learning about the upcoming oil and gas technologies, but also a huge networking experience.



**November 2025:** The SPWLA UFRuralRJ team (in a partnership with the Society of Exploration Geophysicists) received passes to take part in the SBGf Conference, where they gained valuable insights about geophysics and petrophysics. Their Co-advisor, Liliane Paiva Panetto, presented a piece of her PhD research at the Modeling and Geological Evolution Laboratory (LabMeg-UFRRJ), titled “Petrophysical Characterization of Magmatic Rocks From Geophysical Logs of the Serra Geral Group in Wells of the Parana Region.”



## Regional Understandings–Latin America

The SPWLA UFRuralRJ Chapter is currently organizing a series of upcoming short courses and lectures aimed at expanding their members' technical knowledge and professional development. Among the planned activities, they are preparing a technical visit to Equinor, one of the leading global energy companies, where participants will gain valuable insights into exploration and production operations. In addition, they are scheduling a visit to LAGESED (Sedimentary Geology Laboratory – UFRJ), providing an opportunity to deepen understanding of sedimentary processes and basin analysis. These initiatives reflect their commitment to promoting applied learning and strengthening connections between academia and the energy industry.

### LAST NEWS

Two new RDS, proposed by the Argentina Professional Chapter and Argentina Student Chapter, respectively, were added to the long list of RDS.

- **Juan Carlos Porras: “Artificial Intelligence in Petrophysics: Evolution and Applications” (right)**
- **Gonzalo Preboste: “Seismostratigraphic Analysis of the Vaca-Muerta Formation in the Veta Escondida – Rincon de Aranda Area, Neuquen Basin” (left)**



### New Student Chapter Created in Brazil

- SPWLA Student Chapter at UERJ (Universidade Estado do Rio de Janeiro) has been created, and the President is Rafaela Nunes.

### Students Are Preparing for the 2026 Paper Competition

Across Latin America, students are already preparing for the **2026 Student Paper Competition**. We are encouraged by the strong participation from universities throughout the region, with many students developing innovative research on geosciences, engineering, and topics related to the energy transition. We look forward to supporting their efforts in the coming months.

**Let us remember the power of three simple yet magical words that I will share in my own language: *Por favor, perdón, y gracias!***

Warm regards!  
Marta Inés D'Angiola  
Latin America Regional Director

## Regional Understandings–Asia Pacific



**Ryan Banas**  
2025–2027 Asia Pacific  
Regional Director

Dear SPWLA members,

The year 2025 has drawn to a close. The Asia Pacific region has had a very active year with chapter meetings and conferences. In the final quarter of 2025:

**SPWLA Bangkok Chapter** was pleased to host SPWLA 2025–26 Regional Distinguished Speaker Patcharaporn Petchdee in November, who presented a case study on integrated reservoir modeling.



SPWLA Bangkok Chapter meeting with Distinguished Speaker Patcharaporn Petchdee, November 2025.

The **Formation Evaluation Society of Australia (FESAus)** is now holding regular meetings in Perth.

The **Formation Evaluation Society of Malaysia (FESM) & EAGE** held a joint conference (Petrophysics Meets Geoscience) on November 18–20. I personally attended this conference with my team in Kuala Lumpur. It was an outstanding and well-attended symposium with great presentations. A very smooth and polished event from start to finish by the EAGE and FESM.



(From left to right) SPWLA APAC Regional Director Ryan Banas, Petronas Petrophysics General Manager Amran Bin Mohamed Zakei, and FESM President Thanapala Singam Murugesu.



Petrophysics Meets Geoscience Symposium, Kuala Lumpur, November 2025.

The **Japan Formation Evaluation Society (JFES)** held its 30th Annual Symposium on October 8–10 in Chiba.

The **SPWLA East China Chapter** held a topical conference on September 10–12 in Xinxiang, Henan.

The **Southwest Petroleum University Student Chapter in Chengdu** is now active and held its opening ceremony and forum on November 22.

## Regional Understandings–Asia Pacific

### Upcoming Events in 2026

**The 8th International Workshop on Rock Physics (February 23–27, 2026, Auckland)** is organized by the International Association of Rock Physicists. This workshop will cover the latest in rock physics theory, experiments, and applications. **The call for abstracts is closed.**

The Asia Pacific Region has two Regional Distinguished Speakers for 2025–2026:

- Patcharaporn Petchdee, “Petrophysics Insights for Integrated Reservoir Modeling in an Offshore Sabah Field, Malaysia”
- Ryan Banas, “An Applied Approach to Predicting Petrophysical Log Data With Microsoft ML.Net Regressors”

Best wishes to all in hopefully a very productive, healthy, and stress-free 2026.

Ryan Banas

Asia Pacific and Australia Regional Director

Director-Asiapacific@spwla.org

# Join the Steering Committee of *The Bridge*!

*Are you a young professional in petrophysics who's excited to share your ideas and experiences?*

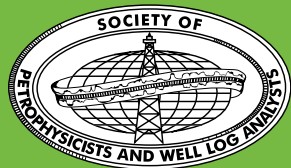
*The Bridge, our newsletter section, is looking for volunteers to help shape content and keep the conversation going in our field.*

## Why Volunteer?

- **Share What You Know:** Writing for *The Bridge* gives you a chance to share your thoughts and expertise with others in the industry. It's a great way to contribute while making your voice heard.
- **Connect with Others:** Being on the Steering Committee means you'll meet and work with other young professionals, building valuable connections along the way.
- **Make a Difference:** You can help shape the direction of the petrophysics community by sharing stories and insights that resonate with others and inspire them.
- **Enhance Your Resume:** Volunteering as a content creator or editor showcases your leadership, commitment to the field, and ability to contribute to industry-wide dialogue—traits highly valued by employers.

If you're passionate about petrophysics and want to help build a bridge to the future, we'd love to have you on board!

To express your interest or learn more,  
please contact [SPWLAYP@spwla.org](mailto:SPWLAYP@spwla.org).



## SPWLA Papers of the Quarter Series

January 2026

2026 Steering  
Committee

*Editors*

Issa Haddad

Javier Miranda

Clara Palencia

*Senior Editor*

Nelson Suarez Arcano

SPWLAYP@SPWLA.ORG

*In this edition:*

*SPWLA Papers of  
the Quarter Series*

*Starting Your Oil  
Industry Journey:  
Embracing Opportunities,  
Navigating Challenges,  
and Being Thankful*  
By Clara Palencia

*The SPWLA Papers of the Quarter Series highlights relevant and impactful papers published by the SPWLA. We encourage readers to nominate any papers they have enjoyed and would like to see summarized in the next issue. Nominations should be sent to [SPWLAYP@spwla.org](mailto:SPWLAYP@spwla.org).*

**Title:** Advanced Reservoir Characterization Using Drill-Cuttings-Based Advanced Image Analysis, Elemental Analysis, and AI Algorithms: A Case Study of the Organico Inferior and Cocina Members, Vaca Muerta Formation, Neuquen Basin, Argentina

**Authors:** Agustin Kriscautzky, Guy Oliver, Ceaser E. Lugo, Deis Marchal, and Claudio Naides, Geolog

**Summary:** This paper presents a comprehensive drill cuttings workflow that integrates high-resolution imaging, X-ray fluorescence (XRF) elemental analysis, X-ray diffraction (XRD) mineralogy, and artificial intelligence (AI) to characterize cuttings from two horizontal wells drilled in the Vaca Muerta Formation targeting the Cocina and Organico Inferior Members. The case study demonstrates how cuttings workflow integration on 208 samples collected every 20 m in two well lateral sections can help support stratigraphic correlation, optimize geosteering decisions, and reduce uncertainty during drilling.

### Key Points

#### 1. Technical Review

##### a. High-Resolution Image Analysis (WL and UV Imaging)

A standardized and calibrated imaging workflow was used to acquire white (WL) and ultraviolet (UV) images for each cutting sample at 10 μm resolution. WL imaging enabled quantification of RGB spectra, particle size, and particle morphology, while UV imaging provided YUV spectra sensitive to fluorescent mineral phases. Calibrated brightness values (0 to 255) were extracted using a patented workflow; these values correlate with mineralogy, grain, size, organic matter, and bulk clay content. Brightness trends were essential for defining detailed lithotypes and recognizing cyclicity analogous to parasequences.

##### b. XRF Elemental Analysis and XRD Mineralogy

XRF was conducted on powdered, milled cuttings after cleaning from oil-based mud (OBM) contamination to quantify 10 major elements and 22 traces. A 10-PPM barium cutoff was considered to determine OBM contamination cleaning efficiency. Major uses of XRF are Si/Ca ratios used for the lithology domain. Cu/Zn is used for redox-influence terrigenous/organic variations. V/Al, Mo/Al, and U/Al is used for anoxia/euxinic. Two lithology domains were selected based on Si/Ca > 2.4 for the siliciclastic domain and the muddy carbonate domain, where Si/Ca < 2.4. XRD analysis was carried out to understand the mineralogical differences in selected samples and break them into total clay, carbonate, evaporite, and quartz.

##### c. AI-Assisted Lithotype Modeling

An AI algorithm integrated imaging, and geochemical data sets were used to classify samples into 22 detailed lithotypes based on calibrated brightness boundaries and Si/Ca ratio. Based on the Si/Ca ratio, the rock was broken into siliciclastic (S) vs. muddy carbonate (CL) and brightness boundaries from S0 to S10 and CL0 to CL10. The combination of Si/Ca domains and brightness classes created a high-resolution geological model for each well.

**2. Case Study:**

The authors analyzed 208 cuttings sample from two horizontal laterals—102 from the Cocina Member and 106 from the Organic Interior Member of the Vaca Muerta Formation, in the Neuquen Basin, Argentina. Samples were spaced every 20 m and processed under the same laboratory workflow. XRF, high-resolution imaging, XRD, and MWD gamma ray and cuttings descriptions were integrated to provide geological interpretation, and quantitative rock typing was done.

**Key Findings:**

**a. Lithology and Mineral Identification**

- Tuffaceous intervals were detected through UV luminance peaks and confirmed by XRD, reflecting volcanic ash layers common in the Vaca Muerta Formation.
- Extremely high clay content (63 to 86%) was observed in fluorescent samples.

**b. Geochemical Variability and Redox Conditions**

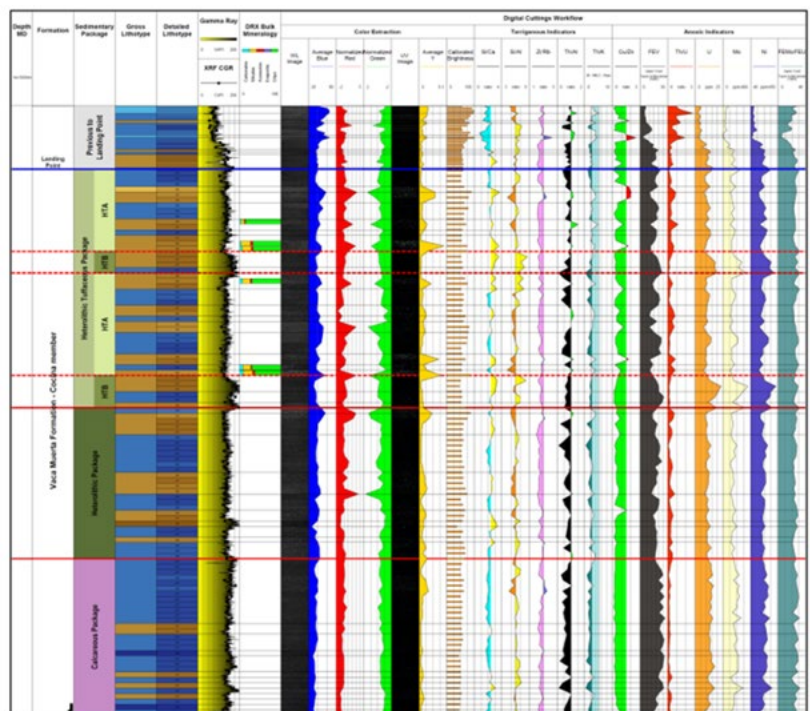
- The Cocina Member exhibited significantly higher VEF and strong euxinic signatures (MoEF > UEF), while the Orgánico Inferior displayed moderate anoxia.
- CGR values generally matched measured-while-drilling gamma ray (MWD GR) trends, validating XRF-derived uranium and thorium levels.
- Si/Ca ratio effectively separated carbonate- vs. siliciclastic-dominated zones and guided lithotype classification.

**c. Geosteering and Bit Trajectory Awareness**

- Cu/Zn anomalies correlated with true vertical depth variations, identifying intervals where the bit deviated above or below the intended window.
- Key geochemical markers (Si/Ca, Cu/Zn, VEF) enabled recognition of subtle facies boundaries and operational deviations during drilling.

**d. Lithotype Classification and Lateral Packages**

- Twenty-two lithotypes provided a high-resolution understanding of facies distribution.
- Three lateral packages per well allowed consistent stratigraphic comparison and helped predict lithologic variability across the field.



**Fig. 1**—Data summary chart for the Cocina Member. The blue horizontal line indicates the landing point. This chart summarizes key elemental trends and elemental ratios (XRF), bulk mineralogy (XRD), color extraction (from WL and UV images), MDW GR and CGR, as well as interpretations, including detailed lithotypes, gross lithotypes, and lateral well packages.

### 3. Conclusion

The 208 cuttings samples analyzed from two horizontal wells demonstrate that no single data set alone can accurately characterize the complex mixed carbonate-siliciclastic system of the Vaca Muerta Formation. Instead, an integrated workflow—combining high-resolution imaging, XRF elemental analysis, XRD mineral identification, and AI-based lithotype modeling—produces a consistent, quantitative, and scalable reservoir characterization method.

This approach allows:

- Precise identification of tuffaceous layers, heterolithic facies, and carbonate-rich zones
- Tracking of anoxic/euxinic depositional environments
- Detection of drill-bit deviations via subtle geochemical changes
- Improved geosteering decisions and more reliable horizontal well placement
- Enhanced static model refinement through standardized lithotype definitions

The workflow provides a foundation for future real-time applications, where digital cuttings analysis could feed directly into geosteering systems and reservoir models. Integration of more wells (vertical and horizontal) is recommended to expand predictive capabilities and strengthen stratigraphic correlations across the basin.

This paper was originally presented at the SPWLA 66th Annual Logging Symposium, Dubai, UAE, May 17–21, 2025, Paper 136. It will be published in the upcoming February 2026 *Petrophysics* Best of Symposium issue.

By Clara Palencia



**Clara Palencia**  
Petrophysicist

Embarking on a career in the oil industry is an exciting and transformative step, whether you're a recent graduate, a graduate student, or a young professional seeking new horizons abroad. The journey ahead is filled with unique challenges and tremendous opportunities for growth, learning, and connection. As you step into this dynamic field, you'll encounter a vibrant community of people who are passionate about energy and innovation, and you'll have the chance to develop skills that are valued across the globe.

This article is designed to help you understand the employment landscape of the oil sector, not only the realities of economic cycles, technological innovation, and evolving workforce trends, but also to share practical advice, encouragement, and insights from those who have walked this path before. Whether you're navigating periods of uncertainty or celebrating new achievements, the goal is to support you in building a fulfilling and resilient career. Remember, every challenge faced in this industry is an opportunity to learn, adapt, and thrive, and you have a community behind you every step of the way. In the rapidly evolving oil industry, the ability to be flexible and adaptable is a precious secret for success.

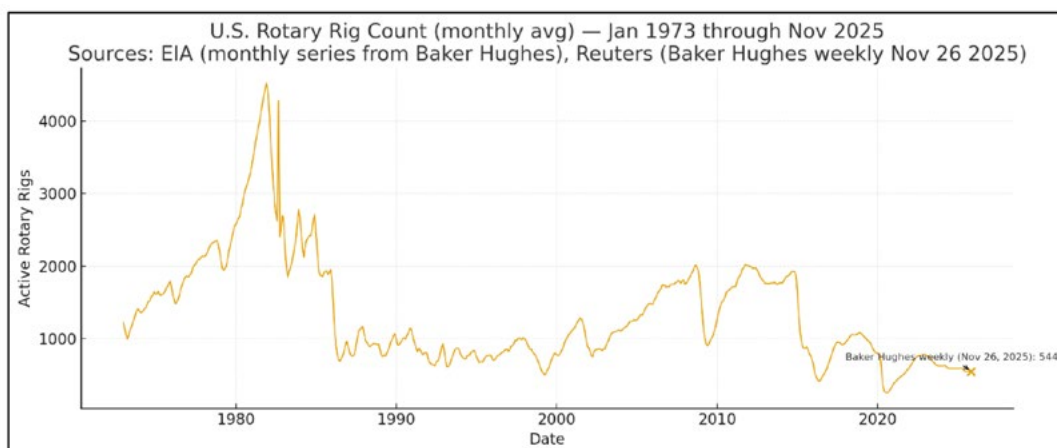
## Economic Cycles and Your Career: Understanding the Landscape

The oil industry is closely tied to broader economic trends—both global and domestic. When economies slow down, demand for oil and refined products typically drops, leading to lower prices and lower company revenues. These changes often prompt companies to review their workforce needs, which can result in layoffs or organizational restructuring. For example, during the 2008–2009 global financial crisis and again in the 2020 pandemic-induced recession, the industry experienced substantial workforce reductions as demand and activity fell sharply. These cycles highlight how interconnected markets and employment are in the energy sector.

Technological advancements, especially in artificial intelligence (AI) and digital tools, are reshaping the oil industry's job landscape. Automation, predictive analytics, and AI-driven operations are making processes more efficient, but they're also changing the types of roles that are in demand. Routine and manual tasks are increasingly automated, while positions that require advanced digital and analytical skills are on the rise. While this shift offers new opportunities, it also means some traditional roles are becoming less common, leading to a smaller but more specialized workforce. Adapting to these changes by developing digital competencies will be vital as you progress in your career.

## A Key Indicator of Employment Trends

In the United States and globally, rig counts—the number of active drilling rigs—serve as a barometer for oilfield activity and employment. When oil prices are high and investment is strong, rig counts rise, signaling increased hiring and operational expansion. Conversely, falling rig counts typically indicate reduced investment and potential layoffs. Historical examples, such as the dramatic decline in US rig counts during the 2014–2016 downturn and the swift drop in 2020, underline how closely employment follows operational activity. While recoveries do bring jobs back, efficiency gains and industry consolidation mean that employment levels may not always return to previous highs.



By Clara Palencia

## How Can We Be Smart About All the Challenges?

One of the most practical steps you can take is to prepare financially for inevitable career transitions. Use the good times—when employment and salaries are strong—to build your savings and invest wisely. Creating a financial safety net will give you peace of mind and flexibility if transitions or layoffs occur. Smart financial habits, such as budgeting, saving, and long-term planning, are essential skills for every professional. A simple rule of thumb is to have an emergency fund of at least enough to cover your expenses for 6 months.

Another invaluable strategy for navigating the ups and downs of an oil industry career is to get involved with technical associations and volunteering. Building a strong network of friends and professional contacts not only opens doors to new opportunities but also provides essential support during challenging times. Being part of organizations like the Society of Petrophysicists and Well Log Analysts (SPWLA) has been a cornerstone in my own professional and personal growth, helping me understand the industry, support others, and create positive momentum for those around me. These communities remind you of your worth and reassure you when you need it most, making each transition easier and more meaningful.



## Layoffs and Restructuring: A Shared Experience, Not a Personal Failing

Layoffs and restructuring are a part of life in the oil industry—and, in fact, across nearly every sector. The prospect of job loss, or even the stress of surviving a restructuring when friends and colleagues are let go, can be emotionally challenging. Feelings of stress, survival guilt, and missing former teammates are natural responses to these experiences. It's important to remember that layoffs are rarely about individual performance. They result from economic shifts, technological changes, and strategic decisions far beyond any one person's control. Acknowledging these realities can help you process emotions while keeping perspective.

Despite its challenges, a career in oil offers many benefits. Competitive salaries and robust benefits packages are common, providing financial stability and security. The global nature of industry opens doors to learning about different cultures, working with extraordinary people, and traveling to unique locations. These experiences contribute to both professional and personal growth, making the oil sector a rewarding place to build a career.

If you experience a layoff, remember—it's not about you. Broader market forces, economic cycles, and technological change drive these decisions. What matters is how you respond.

Embrace adaptability, seek out new opportunities to learn, and maintain a resilient outlook. Each transition is an opportunity to apply your skills in new settings and grow from experience. Some colleagues have even found better professional choices after a layoff. Gratitude for the journey and the people you meet can help you move forward with confidence.

Sharing your experience with others can be a powerful way to foster resilience and reassure those who may be hesitant to take risks or uncertain about the future. By openly discussing the challenges you've faced and how you've overcome them, you can inspire confidence and offer practical guidance to colleagues or newcomers navigating similar transitions. Supporting others not only helps them build the courage to embrace change but also creates a sense of community and peace of mind, reminding everyone that they are not alone on their journey through the evolving oil industry.

The oil industry is full of opportunities and challenges. By understanding the forces that shape employment, embracing change, and preparing both emotionally and financially, you can navigate your career with resilience and optimism.

Be thankful for the experiences, the people you meet, and the growth you achieve along the way. The key is to stay adaptable, keep learning, and appreciate the unique journey that a career in the oil and gas industry can offer.

In addition to pursuing our professional development and personal goals, we also have a responsibility to assist others, thereby enhancing the significance of our lives and providing support during challenging times.

Clara Palencia  
Petrophysicist

# Reassessing Final Deliverables: Preventive Strategies for Logging Data Quality in an AI-Driven Era

By Yuancai Cong

## Abstract

Wireline logging and logging-while-drilling (LWD)/ measurement-while-drilling (MWD) logging provide the foundation for nearly every decision in subsurface evaluation. Reservoir characterization, petrophysics, drilling optimization, completions design, geomechanics, groundwater assessments, and regulatory approvals all depend on the quality of these measurements. Yet, a pervasive assumption persists across the industry. If the service company marks it as “final delivery,” it must be correct. This assumption often fails in practice. Hidden acquisition problems, undetected mechanical issues, miscalibration, algorithmic errors, information masking caused by constrained processing, incorrect processing parameters, and depth mismatches often persist in the final data set—even when every quality control (QC) flag appears green. With the rapid rise of artificial intelligence (AI) and machine-learning (ML) workflows, the consequences of such errors have become magnified. Flawed logging inputs now produce flawed automated interpretations, and flawed interpretations feed downstream decisions that may affect drilling, completions, reserves, and safety. This paper discusses traceable and nontraceable logging errors. As a case study, this paper reviews the physics behind spectral gamma ray (GR) measurements and presents a field example illustrating flawed final-delivery GR spectral log data, potentially masking true spectral behavior. Practical recommendations are offered to help operators maintain technical ownership of logging data and ensure that both interpretation and AI/ML training are based on reliable, physically consistent inputs.

## Introduction

Subsurface evaluation depends fundamentally on logging measurements. In both oil and gas and civil engineering applications, wireline and LWD/MWD logs are often the first quantitative records of the subsurface. Petrophysical interpretation, rock typing, water saturation modeling, reservoir quality assessment, and even regulatory groundwater work frequently assume that logging curves accurately represent downhole conditions.

However, logging is not as simple as a toggle switch. It is a workflow that links mechanical/electrical hardware, downhole sensors, power supplies, data/command transmission, surface acquisition software, real-time processing, automated or manually intervened curve adjustment and/or environmental corrections, spectral deconvolution, calibration, and post-job

reprocessing. Any weakness in this chain can introduce subtle but important distortions into the final log. Those distortions may not be visible in the standard final deliveries or in service-company quality indicators.

The challenge has become more critical in the digital era. AI and ML workflows are increasingly used in the oil and gas industry. These algorithms treat the logging data as ground truth. If the inputs are wrong, the model faithfully learns and propagates those errors. A human interpreter may notice physically impossible behavior; a machine-learning model will not. It can, but it needs a lot of extra training.

## Background and Literature Review

Logging data quality has been discussed in the literature for several decades. Classical references, such as Ellis and Singer’s work (2007) on well logging for earth scientists, describe GR physics, detector response, calibration pits, and the impact of borehole conditions on measurement quality. Other studies address depth correlation, tool-offset problems, and general QC practices for wireline and LWD operations.

In parallel, a large body of recent work has focused on digital workflows, including data mining, automation, and ML techniques for log interpretation. These publications often assume that the input data are either inherently correct or at least internally consistent. In practice, this assumption is not always valid, and modest inconsistencies may still appear in some modern logging data.

This paper builds on the classical physics-based understanding of logging tools and bridges it to modern AI/ML workflows. It shows, using a real spectral GR data set to demonstrate how “non-standard” processing steps can distort the measured GR spectral log response, leading to misleading final deliverables and propagating errors into both traditional interpretation and data-driven models.

## Sources of Logging Errors

Instead of using more scientific subclassifications, I prefer to group logging errors into two broad categories: traceable and nontraceable. Traceable errors leave some footprint in the measurements or surface parameters and can often be identified through careful QC. Nontraceable errors are more dangerous because they leave little to no obvious signature in the raw data and standard curves, yet they still distort the physical meaning of the data.

Traceable errors include malfunctioning sensors, telemetry dropouts, incorrect processing parameters, and certain types of tool design or algorithm limitations. For example, a mis-specified mud weight in the environmental correction will systematically shift neutron or density responses; an incorrect borehole diameter may distort caliper-based corrections. These problems are often visible; in many cases, they can be corrected by playback, reprocessing, or relogging.

Nontraceable errors include tool string configuration mistakes (such as mis-ordered tool strings or accessories shielded detectors), depth encoder slippage, subtle rig-related depth effects, calibration issues, downhole failures that cannot be monitored on surface, and surface electrode problems for certain measurements. These issues can produce logs that look smooth and internally stable, yet the underlying values are physically incorrect. Because no obvious alarm is triggered, such data often pass into the final delivered product and may be used as “truth” in subsequent workflows.

### Physics of Spectral Gamma Ray

Spectral gamma ray (SGR) logging decomposes the total natural radioactivity into contributions from potassium (K), uranium (U), and thorium (Th). Only three naturally occurring radioactive isotopes are abundant and long-lived enough to contribute significantly to the GR signal in typical sedimentary rocks: K-40, U-238, and Th-232.

Downhole scintillation detectors measure the energy spectrum of incoming GR. Through energy-window or channels analysis and deconvolution, the tool estimates the relative contributions of K, U, and Th. Other naturally occurring radionuclides, such as rubidium-87, do exist, but their abundance and GR output are too low to be resolved reliably in the downhole environment. Their spectral lines are masked by noise, mud attenuation, and the dominant peaks of K, U, and Th. As a result, practical SGR logging focuses only on these three elements.

### GR and GRSL Conversion Relationships

In addition to the three elemental windows, the tool also measures the total GR. The GRSL,  $(K+TH)_{API}$ ,  $K_{API}$ ,  $U_{API}$ , and  $Th_{API}$  curves are all computed from the elemental weight concentrations— $K_{\%}$ ,  $U_{ppm}$ , and  $Th_{ppm}$ —which are themselves derived from their respective CPS by deconvoluting the spectrum either with multiwindows or all of the channels. The relationship between elemental concentrations and GR API units has been established through calibration pits and controlled laboratory experiments. A commonly referenced formulation, based on Ellis and Singer (2007), is as follows:

$$GR_{API} = 16 K_{\%} + 8 U_{ppm} + 4 Th_{ppm}$$

As documented by The Medusa Institute (2019), a more detailed calibration based on the AMDEL (Adelaide) API pit gives a slightly different set of coefficients:

$$GRSL_{API} = 19.6 K_{\%} + 8 U_{ppm} + 4 Th_{ppm}$$

A further refinement,

$$GR = 16.32 K_{\%} + 8.09 U_{ppm} + 3.93 Th_{ppm}$$

is attributed to Rider (2006) and reflects the response characteristics of a specific wireline SGR system. These alternative coefficients demonstrate that practical K,U,Th to API transformations vary with calibration methodology, spectral window definitions, detector efficiency, and manufacturer-specific processing algorithms.

Although the numerical coefficients differ slightly, these three relationships reflect the same physical reality: each unit of K, U, and Th should always contribute a fixed amount of GR intensity at the detector, regardless of depth or tool. If the K response shifts with concentration or if spectral-derived GR from K-U-Th (GRSL) is higher than total GR—a physical impossibility—then there is a problem in the system.

Crossplots are effective tools for revealing such inconsistencies. Still, they are often overlooked because SGR logs are widely viewed as too simple to fail.

### Case Study: Well A

A legacy well has been studied, referred to here as Well A, with about 11,000 ft TD and a 4,000-ft logging interval. The data set includes total natural GR, GRSL, and elemental yields reported as  $K_{\%}$ ,  $U_{ppm}$ , and  $Th_{ppm}$ . Four crossplots were constructed to evaluate internal consistency.

In a properly calibrated system, GRSL should closely track the total GR, forming a narrow trend just below the 1:1 line. This behavior is observed in Fig. 1 from the final-delivery data, which appears physically consistent—at least before examining the deeper details

The second crossplot compares total GR with a GR value constructed from the  $K_{api}$ ,  $U_{api}$ , and  $Th_{api}$  by respectively applying 16-8-4 conversion factors, which is marked as GRSLconstruction. If the elemental yields are accurate and the relationship is honored, this GRSLconstruction should confirm GRSL. Instead, the crossplot shows a cloud of points with substantial dispersion, where roughly 80% of the values are too high and the rest are too low compared to the total GR.

The third crossplot examines the K calculated conversion factor of the date set; this conversion factor was calculated as  $K_{api}/k_{\%}$ . In Well A, instead of a constant, like 16 as industrially accepted, the conversion factor varies dramatically, and multiple clusters of points are observed.

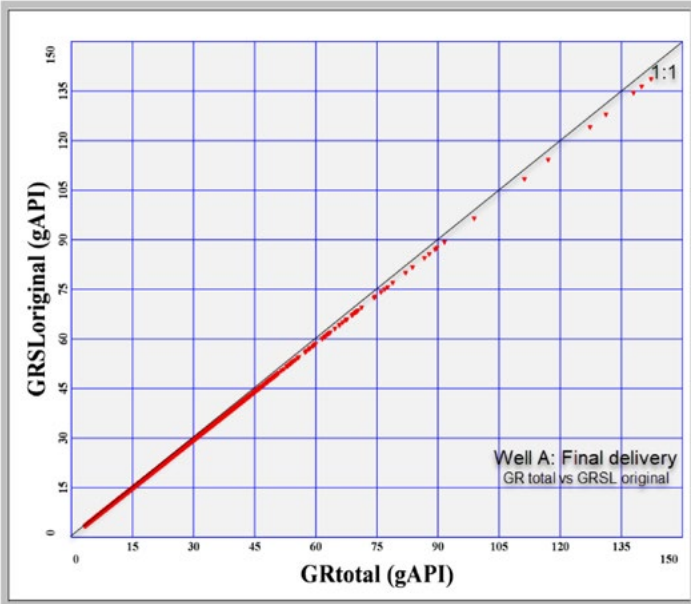


Fig. 1—GRSL vs. total GR (final delivery data set).

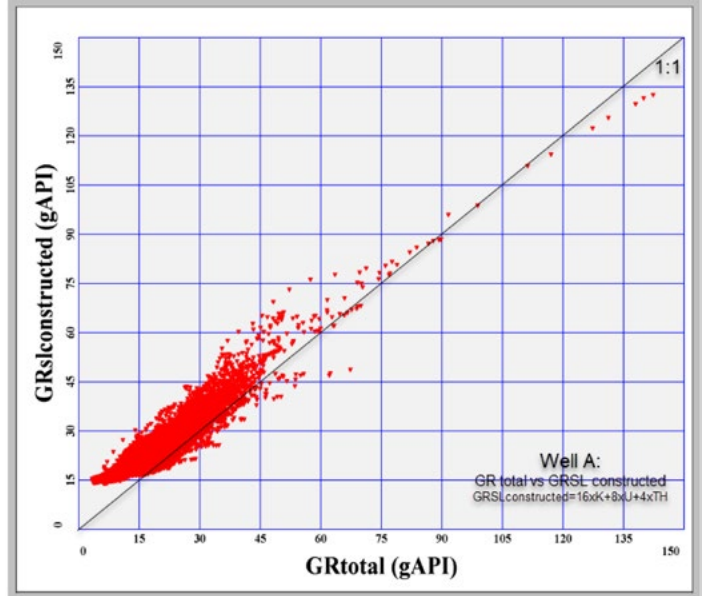


Fig. 2—GRSL constructed vs. total GR.

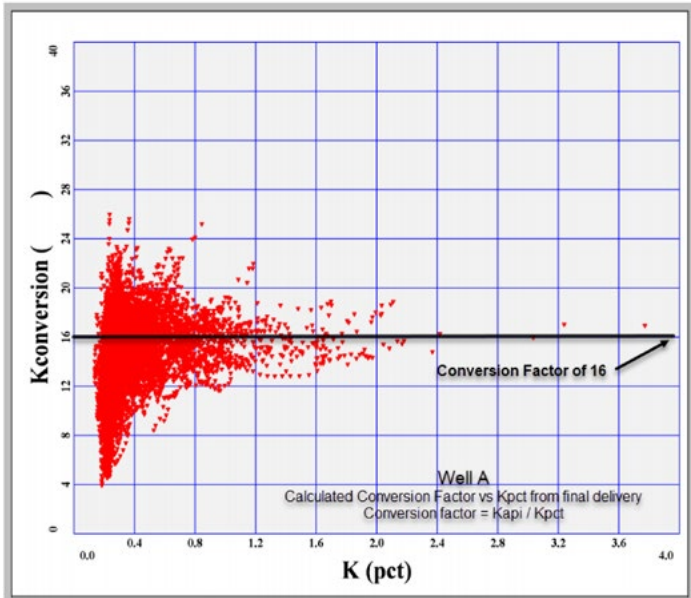


Fig. 3—K calculated conversion factor vs.  $K_{pct}$ .

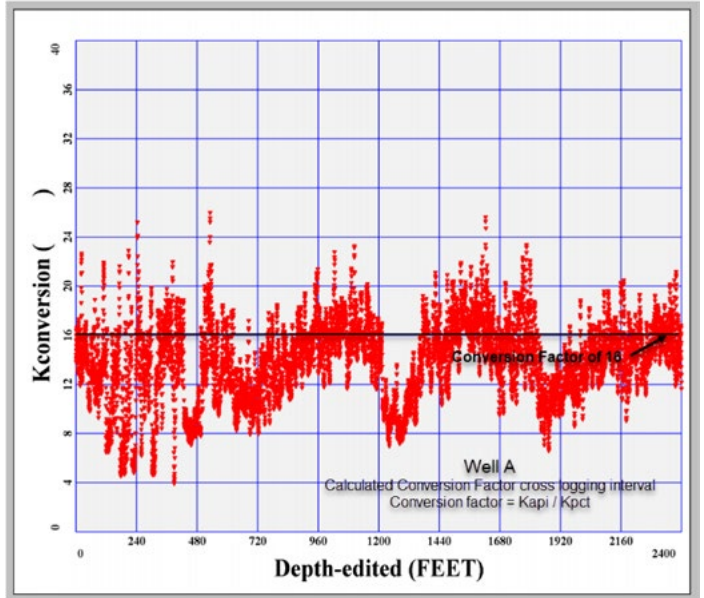


Fig. 4—K calculated conversion factor vs. logging interval (depth edited).

The fourth crossplot evaluates the potassium conversion factor derived as  $K_{\text{api}}/k_{\%}$ . The same inconsistency persists, but it is expressed with greater clarity in this representation.

This may raise another question: why did the GRSL in the final delivery data set appear correct in the first place? This is a separate topic that will not be covered here, but it is evident that the curve was tailored to match the total GR rather than being derived from true elemental calculations.

### Implications for Formation Evaluation and AI/ML

Inconsistent spectral GR data affect far more than elemental reporting. Because K, U, and Th support critical applications—such as clay typing, radioactive-sand identification, and detecting organic-rich intervals, or may use it to assist formation elementary evaluation—any loss of elemental accuracy undermines these interpretations. The GRSL case presented here is only one scenario; many other logs and processing steps may also need to be studied and enforced.

The impact on AI and ML workflows is even more serious. Data-driven models are only as trustworthy as their training data. When large numbers of wells are used to train models for lithofacies prediction, missing-log reconstruction, or production forecasting, flawed logging data contaminate the training set. The resulting models may show excellent internal statistics yet be fundamentally inconsistent with physical reality. Because these models operate as black boxes, users may not recognize that a seemingly simple issue has propagated through the entire digital workflow. It is important to note that this paper discusses only one specific issue; it does not imply that all other processing steps are flawless—only that even a single elemental error can cascade through the workflow, and additional, unaddressed issues may further compound the problem.

### Operational Recommendations

To mitigate these risks, operators must take an active role in logging program design and QC. At the planning stage, they should understand the capabilities and limitations of the selected tools and the flow chart of signal processing, parameter selection principle, constrain conditions and values, operational best practices, etc. During operations, onsite personnel should verify tool configuration, depth references, accessories position/orientation, and acquisition parameters selection. It will dramatically reduce the opportunity of introducing errors into the data set and at least make it controllable.

After the job, operators should perform independent QC on the raw and delivered data. Any inconsistency should trigger a deeper review and, if necessary, reprocessing or even relogging. These steps require time and technical effort, but they are essential if logging data are to be used as a trusted foundation for critical decisions and AI/ML workflows.

### Discussion

The Well A example highlights a broader industry challenge. Logging tools and processing algorithms have become more sophisticated, but the complexity of the workflow also creates more opportunities for subtle failures. Meanwhile, digital transformation has accelerated the use of automated and data-driven techniques. Without strong data ownership, operators may unknowingly feed flawed logs into increasingly powerful analytical systems.

Addressing this gap requires both technical and cultural shifts. Technically, QC workflows must extend beyond basic curve display to include physics-based checks. Culturally, operators must recognize that final deliveries are not the end of QC but rather the starting point for their own validation.

### Conclusions

Hidden acquisition, calibration, and processing issues can persist even when all visible quality indicators are green.

The case study from Well A demonstrates how GR, GRSL, and elemental K-U-Th responses can become inconsistent, producing data that are unsuitable for reliable formation evaluation or AI/ML training. To safeguard data quality, operators must understand tool physics, engage in logging-program design, perform onsite and post-job QC, and insist on physically consistent relationships among curves.

Only when operators actively own data quality can final deliveries be considered trustworthy inputs for technical interpretation and advanced digital workflows.

### References

- Ellis, D.V., and Singer, J.M., 2007, *Well Logging for Earth Scientists*, Second Edition, Springer. ISBN: 9781402037382.
- Rider, M.H., 2006, *The Geological Interpretation of Well Logs*, Second Edition, Gardner Books. ISBN: 9780954190606.
- The Medusa Institute, 2019, Gammaray API Unit Conversion, The Medusa Institute Wiki, URL: <https://the.medusa.institute/wiki/Working-version/gammaray-api-unit-conversion>. Accessed November 29, 2025.

**SPWLA BOARD OF DIRECTORS MEETING MINUTES**  
**REMOTE**  
**November 14, 2025**

President Robert “Bob” Gales called the meeting to order at 7:04 am CST. In attendance, President Elect, Javier Miranda, Vice President Technology Elect, Artur Posenato-Garcia, Vice President Education, Matt Blyth, Vice President Finance and Admin, Jing Li, Vice President Information Technology, Peter Barrett, Vice President Communications, Chicheng Xu, Regional Director N. America 2, Andrew Anderson, Regional Director N. America 1, Amer Hanif, Regional Director Europe, Pascal Debec, Vice President Publications, S. Mark Ma and Regional Director, Vice President Technology, Robin Slocombe, Middle East/ Africa, Elsa Maalouf, Regional Director Latin America, Marta D’Angiola, Regional Director Asia Pacific/Australia, Ryan Banas and Executive Director, Sharon Johnson

**Motions**

**1. Approval of Previous Minutes**

A motion was made by Vice President of Technology, Robin Slocombe, and seconded by President-Elect, Javier Miranda, to waive the reading of the Board Meeting Minutes from September 12, 2025. The motion passed by a majority vote.

**2. New Student Chapter – UERJ Brazil**

A motion was made by President-Elect, Javier Miranda, and seconded by Vice President of Information Technology, Peter Barrett, to approve the establishment of the SPWLA Student Chapter at UERJ Brazil. The motion passed by a majority vote.

**3. New Student Chapter – Dallas–Fort Worth (DFW)**

A motion was made by President-Elect, Javier Miranda, and seconded by Vice President of Information Technology, Peter Barrett, to approve the establishment of the SPWLA Dallas–Fort Worth (DFW) Student Chapter. The motion passed by a majority vote.

**4. *Petrophysics* Journal – Discontinuation of Print Edition**

A motion was made by the Vice President of Information Technology, Peter Barrett, to discontinue the printed edition of the *Petrophysics* journal and transition to digital-only subscriptions. The motion was seconded by President-Elect, Javier Miranda, and passed by majority vote.

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**Action Items**

- Regional Director Marta D’Angiola – Please notify and welcome the UERJ SPWLA Student Chapter leadership of the approved motion at your earliest convenience.
- Regional Director Amer Hanif – Please notify and welcome the SPWLA Dallas–Fort Worth (DFW) Student Chapter leadership of the approved motion at your earliest convenience.

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**SPE – OnePetro Update (Q2 2025 Royalty Funds)**

The situation regarding the bank fraud involving SPWLA royalty funds remains unresolved.

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**Adjournment**

A motion to adjourn the meeting was made by Vice President of Information Technology, Peter Barrett, and seconded by President-Elect, Javier Miranda.

Meeting adjourned at 11:18 am.

Respectively Submitted by  
Sharon Johnson  
Executive Director

**NEXT MEETING: January 9, 2026**

## ARGENTINE STUDENT CHAPTER

### General News

The SPWLA Argentine Student Chapter continues to promote activities focused on academic development, technical training, and professional integration. During November and December, the Chapter strengthened its commitment to supporting students in their transition toward the professional world, while also expanding opportunities for learning and engagement within the geoscience community. Several initiatives were carried out to enhance interaction between students, young professionals, and international organizations, reinforcing collaboration and knowledge exchange.

### Recent Events

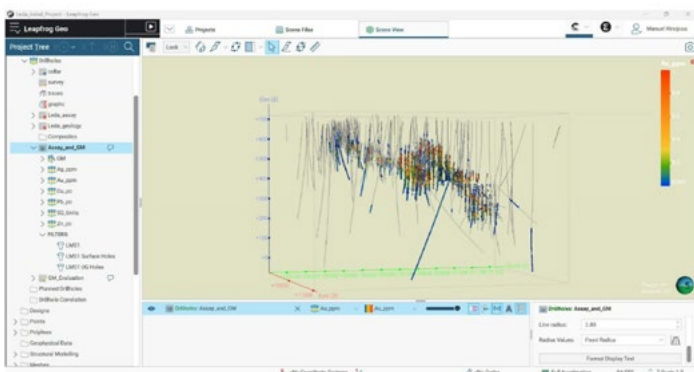
**11, 18, 25 November and 2 December 2025**—We organized a comprehensive Leapfrog Geo + Edge training session in collaboration with Seequent and SEG UNLP. The activity was designed to provide students with hands-on experience in modern 3D geological modeling workflows commonly used in exploration, mining, geothermal studies, and subsurface characterization.

- Introduction to the Leapfrog interface and project structure
- Importing drill hole data, geological information, and geophysical data sets
- Implicit modeling fundamentals, including vein, intrusion, and lithological modeling
- Construction of structural frameworks and interpretation of geological contacts
- Generation of surfaces and wireframes for geological units
- Integration of data for model validation
- Basic introduction to Leapfrog Edge, focusing on geostatistical concepts such as variograms and block modeling

Throughout the session, instructors from Seequent guided participants through practical exercises that enabled them to build a complete 3D geological model from raw data. The joint organization with SEG UNLP fostered collaboration between student societies and industry partners, enhancing participants' technical skillset and professional exposure. This training provided a valuable opportunity for students to engage with state-of-the-art modeling software widely applied across the energy and geoscience industries.

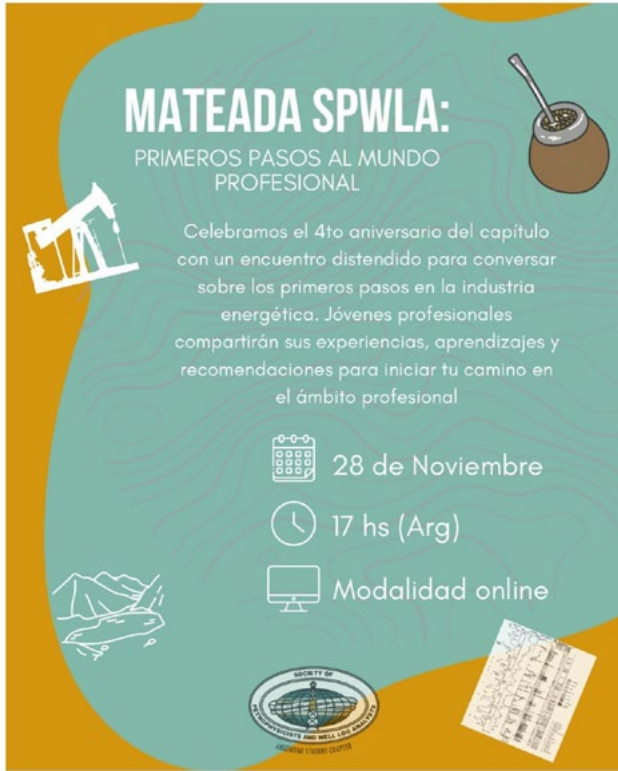


Flyers that were published to promote the training.



This is a screenshot taken during the third lesson of the training.

**28 November**—To celebrate the chapter's fourth anniversary, an online *Mateada Event* was held with the objective of providing guidance to students approaching graduation. Young professionals shared their early career experiences, challenges faced during their first steps in the industry, and key advice for entering the energy sector. The meeting encouraged open dialogue and helped build a supportive environment for students preparing for their professional transition. After the event, a series of prizes were raffled among the participants, including a membership and a magazine related to petrophysics.



The event flyer for the Mateada SPWLA.

**Upcoming Events**

This session will continue our commitment to providing learning opportunities for students and promoting engagement with emerging topics in the energy industry.

In addition, we will maintain our internal work dynamics: members will continue meeting both virtually and in person to develop new ideas, define future initiatives, and strengthen collaboration within the chapter. These meetings ensure ongoing progress in our activity planning and allow us to remain responsive to the needs and interests of our student community.

**To learn more about us,**

- \* **Mail:** [spwla.arg.sc@gmail.com](mailto:spwla.arg.sc@gmail.com)
- \* **LinkedIn:** [www.linkedin.com/in/spwla-argentine-student-chapter](http://www.linkedin.com/in/spwla-argentine-student-chapter)
- \* **Instagram:** <https://www.instagram.com/spwlaarg/>

**BANGKOK CHAPTER**

**General News**

The Bangkok Chapter of SPWLA holds meetings most months. The meetings are held on the 4th Thursday of each month, starting at 5 pm with a networking session with food and drinks, followed by a technical presentation at 6:15 pm. There is no charge to attend, but we do ask that you register in advance so that we can tell the hotel how many people are expected.

If you're traveling through Bangkok, please do drop in on our meeting. All O&G disciplines are welcome.

**2025 Bangkok Chapter Committee Members**

- Chapter President:** Andrew Cox
- Technical Coordinator:** Ryan Banas
- Sponsorship:** Marvin Rourke
- Secretary:** Ronald Ford
- Treasurer:** Nipista Pongpanit
- Web Coordinator:** Alex Beviss
- Corporate Liaison:** Rinlita Lertkornteeranan
- Student Liaison:** OPEN

**Website:** [https://www.spwla.org/SPWLA/Chapters\\_SIGs/Chapters/Asia/Bangkok/Bangkok.aspx](https://www.spwla.org/SPWLA/Chapters_SIGs/Chapters/Asia/Bangkok/Bangkok.aspx)

**Email:** [bangkok.chapter@spwla.org](mailto:bangkok.chapter@spwla.org)



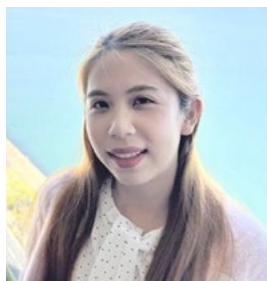
A screenshot of the people who attended the Mateada.



Another screenshot of the people who attended the event.

## Recent Events

**27 November 2025**—Our November 2025 meeting was the last meeting for 2025, with no meeting scheduled for December. **“Petrophysics Insights From an Integrated Reservoir Model: A Case Study From a Deepwater Field in Malaysia\*”** was presented by Patcharaporn Petchdee (petrophysicist, PTTEP) (*\*From a paper presented at the 30th Formation Evaluation Symposium of Japan, October 2025*). **Khun Patcharaporn** presented a case study from Malaysia demonstrating an integrated approach to reservoir modeling, which effectively identified reserves that had previously been overlooked, and the updated model allowed improved understanding of production and waterflood performances, enabling more efficient development.



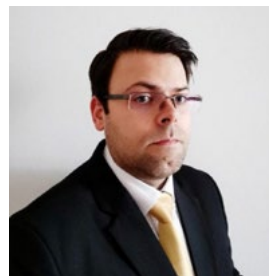
Patcharaporn Petchdee.



Khun Patcharaporn was presented with an honorarium in appreciation of her presentation at the SPWLA Bangkok Chapter meeting on November 27, 2025. (From left to right) Ryan Banas, Patcharaporn Petchdee, and Andrew Cox.

**December 2025—Break for the Holidays:** Wishing all our members and sponsors a happy holiday season and a safe and prosperous 2026.

**Other News:** The SPWLA Bangkok Chapter is proud to announce that two local members have been selected as Regional Distinguished Speakers for 2026.



**Ryan Banas, P.G.**

Principal at PetroRes Consulting  
<https://www.petrores.net/>



**Patcharaporn Petchdee**  
 Petrophysicist (PTTEP)

Please check our local website for the latest information on events and activities for the Bangkok Chapter on the SPWLA main page:

[https://www.spwla.org/SPWLA/Chapters\\_SIGs/Chapters/Asia/Bangkok/Bangkok.aspx](https://www.spwla.org/SPWLA/Chapters_SIGs/Chapters/Asia/Bangkok/Bangkok.aspx)

or visit us on LinkedIn (SPWLA Bangkok Chapter)

## BOREHOLE IMAGING (BHI) SIG

### Upcoming Events

The SPWLA BHI SIG has teamed up with the London Petrophysics Society to host a one-day workshop on “Everything Borehole Imaging.” As a SIG, we hope to not only have a significant presence from the SIG board there, but we will be submitting some abstracts to answer some of the questions we received, which relate to what tools should be used when. As the SIG board team will be present, this is also

an opportunity to ask us about processing, QC, and anything else that comes to mind. We are hoping that this workshop event can be a useful precursor to our BHI Workshop at the SPWLA symposium in May. In London, we will cover many of the basics to give the May workshop more focus on analysis. The deadline for abstract submission has already closed.

For our next SIG online workshop, the topic will be “Sedimentological Analysis Using Borehole Images.” We need to confirm a date, but it will be sometime in the New Year and in a European-friendly time slot.

## BRAZIL CHAPTER

### General News

Our monthly meetings are being held online, predominantly every third Tuesday of the month, at 4 pm BRT (UTC-03), through our **YouTube channel** (<https://www.youtube.com/@spwlabrazil/>). Please consider subscribing to the channel and turning on notifications to stay updated on our latest videos. Anyone wishing to participate is welcome. Meetings are held in Portuguese or English, depending on the preference of the speaker. Even if it is held in Portuguese, questions in English are also welcome!

Please consider subscribing to our **LinkedIn page** (SPWLA Brazil Chapter – <https://www.linkedin.com/company/spwlabrazil/>), where we post chapter updates and meeting links.

For further information about the chapter, please contact our secretary, David Xavier ([dx@equinor.com](mailto:dx@equinor.com)).

**Membership in our chapter is free and can be claimed by filling out the form** available at <https://lnkd.in/g4KQjYf>.

Excited to announce we have launched our monthly meetings dashboard! Visit and check the statistics of all registered monthly meetings delivered by our chapter at <https://SPWLABRChapterdashboard>.

### Recent Events

#### Webinars

**19 August 2025**—We had **Mathieu Ducros** (<https://www.linkedin.com/in/mathieuducros/>, chief product officer at Kognitus), who presented “Cloud-Native Automated Multi-Well and Multi-Log Correlation Using Dynamic Time Warping and Machine Learning – Application to Brazilian Basins,” discussing how to overcome traditional manual approaches for stratigraphic correlation of well logs, using

a cloud-native, automated solution combining dynamic time warping (DTW) for sequence alignment and machine learning for data preprocessing.

**23 September 2025**—We had **Bernardo Fraga** (<https://www.linkedin.com/in/bernardo-mo-fraga/>, researcher at Brazilian Center for Research in Physics (CBPF)), who presented “DeepSWIrr: Predicting Water Saturation From Raw NMR Data Using Deep Learning,” discussing a deep-learning approach to directly estimate irreducible water saturation (SWIrr) from NMR decay curves, eliminating the need for explicit upscaling models. Trained on laboratory data from presalt reservoirs, the model achieved a 90% correlation on a blind test set, demonstrating strong potential for application to noisier logging data.

**28 October 2025**—We had **Rodrigo Azambuja** (<https://www.linkedin.com/in/rodrigo-azambuja/>, researcher at Sedimentary Geology Laboratory from UFRJ (LAGESED)), who presented “Structural and Porosity Characterization Based on Borehole Image Logs and Nuclear Magnetic Resonance (NMR) in the Iracema Area, Santos Basin, Brazil,” discussing how integrating borehole image logs with NMR data improves the characterization of fractures, bedding, and vuggy porosity in the heterogeneous carbonates of the Barra Velha Formation. The study identifies key structural zones and fracture sets while highlighting how nonmatrix porosity affects total porosity estimation in these complex presalt reservoirs.

**18 November 2005**—We had **Marcelo Magalhães** (<https://www.linkedin.com/in/marceloabbehusen/>, senior geologist at Petrobras S.A.), who presented “Optimization of Pretest Operations Using Data Science and Mathematical Modeling,” discussing the application of data science and mathematical modeling techniques to real pretest data, aiming at time reduction and operational optimization.

### Courses

The Brazil Chapter offered three courses during the second semester of 2025.

The **Second Edition of the Laboratory Petrophysics Course**, led by MSc **Felipe Eler** (a researcher at the Enhanced Oil Recovery Laboratory (LRAP/COPPE/UFRJ)), was held at the LRAP, located in the Federal University of Rio de Janeiro, Rio de Janeiro - RJ, from September 1–5, 2025. Over the 5 days, participants explored theoretical and practical aspects of routine and special core analysis, including capillary pressure, relative permeability, and coreflooding.



The second edition of the Laboratory Petrophysics Course.

The **First Edition of the Nuclear Logs and Log-Scale Mineralogy Course**, led by PhD **Gabriel do Nascimento Freitas** (petrophysicist at COPPE/UFRJ), was held at the PRIO, located in the Botafogo neighborhood, Rio de Janeiro - RJ, from October 27–31, 2025. Over the 5 days, participants explored the main nuclear logs—including total and spectral gamma ray, density, photoelectric factor, neutron porosity, sigma, and elemental spectroscopy—understanding the key factors that affect measurements, data processing, and interpretation. They also gained the necessary foundation to build mineralogical models using these logs.



The first edition of the Nuclear Logs and Log-Scale Mineralogy Course.

The **First Edition of the Multiphase Flow Porous Media** course, led by PhD **Martin J. Blunt** (<https://www.linkedin.com/in/martin-blunt/>, professor at Imperial College London), was held at Pontifical Catholic University (PUC) of Rio de Janeiro, located in the Gávea neighborhood, Rio de Janeiro - RJ, December 1–5, 2025. Over the 5 days, participants reviewed the fundamental physics of pore-scale flow and recent advances in imaging and modeling. It focused on predicting multiphase flow properties and applying these concepts to field-scale recovery.



The first edition of the Multiphase Flow Porous Media Course.

### Student Chapters

Since June, students from the Geology Department of Federal Rural University of Rio de Janeiro (UFRRJ), located in Seropédica, RJ, have been working together to launch a new student chapter. During its journey, the students received support from the UFC Student Chapter and from DSc Suze Nei Pereira Guimarães (<https://www.linkedin.com/in/suze-nei-pereira-guimaraes>) and DSc Liliane Paiva Panetto (<https://www.linkedin.com/in/liliane-paiva-panetto/>), the faculty advisors. The student chapter was launched in August, and the current board is:

- **President:** Gian Lucca Bruscatin
- **VP:** Gabrielly Vianna
- **Secretary:** Karen Maciel
- **Tesoureira:** Enry Vilela
- **Marketing Directors:** Bernardo Carvalhaes and Karoline Gabry
- **Visual Design Director:** Luísa Pires
- **Event Director:** Bianca Santos
- **External Relations Directors:** Felipe Porath and Vitor Augusto



Members of UFRuralRJ and UFC Student Chapters during their visit to the Petrobras Research Center in October.

Follow the UFC SC page: <https://www.linkedin.com/company/ufruralrj-spwla-student-chapter/> to meet the other members and stay updated.

Since September, students from the Geology Department of the State University of Rio de Janeiro (UERJ), located in Rio de Janeiro - RJ, have been working together to launch a new student chapter. The student chapter was recently launched in November. Stay tuned to **get updates on the members and activities**.

**Upcoming Events**

The SPWLA Brazil Chapter is planning the remaining 2026 courses and presentation calendars, so stay tuned to our LinkedIn page and YouTube channel to stay up to date with our schedule.

**CHINA EAST CHAPTER**

**Recent Events**

**10 September 2025—The 16th UPC International Symposium on New Well-Logging Technologies and the 2nd SPWLA China East Chapter Theme Conference Concludes Successfully:** Hosted jointly by the State Key Laboratory of Deep Oil and Gas and China University of Petroleum (East China), and organized by the 22nd Research Institute of China Electronics Technology Group Corporation, the 16th UPC International Symposium on New Well-Logging Technologies and the 2nd SPWLA China East Chapter Theme Conference was successfully held in Xinxiang City, Henan Province, China. The conference attracted over 230 experts and scholars from domestic and foreign petroleum enterprises, universities, research institutions, as well as countries including the United States. Centering on the theme “AI Empowers Well-Logging Technology: Innovative Practices, Equipment R&D and Future Challenges,” in-depth exchanges were conducted to provide innovative ideas for complex oil and gas exploration and development, as well as energy security guarantee.



Group photo of the conference participants.

**Opening Ceremony: Jointly Initiating a New Chapter of Well-Logging Technology**

The opening ceremony was hosted by Hao Baoliang, deputy director of the 22nd Research Institute of China Electronics Technology Group Corporation. Wei Jianping, mayor of Xinxiang Government, extended a welcome and gratitude to all academicians, experts, scholars, and industry representatives on behalf of the Municipal Party Committee and Municipal Government. Professor Wu Qiangming, secretary of the Party Committee of China University of Petroleum (East China), and Chen Xinyu, director of the 22nd Research Institute of China Electronics Technology Group Corporation, delivered welcome speeches, respectively. They emphasized that against the backdrop of the growing demand for deep, ultradeep, and unconventional oil and gas exploration, the in-depth integration of artificial intelligence and well-logging technology has become a key engine driving the development of the industry.

**Keynote Reports: Academicians Leading the Way to Explore Technological Frontiers**

Li Ning, member of the Chinese Academy of Engineering and expert in geophysical well logging, delivered a report titled “CIFLog4.6: The First Large-Scale Well-Logging Industrial Processing Software Supporting Domestic CPUs, Operating Systems, and Databases,” elaborating on the R&D progress of the independent innovation version of CIFLog4.6. The software has achieved full compatibility with domestic CPUs, operating systems, and databases, marking that China’s large-scale well-logging industrial software has entered a new stage of independent controllability and is contributing Chinese solutions to the global development of well-logging technology.



Academician Li Ning of the Chinese Academy of Engineering delivering an academic report.

Liu He, a member of the Chinese Academy of Engineering and an expert in energy and mining engineering management, in his report “Reflections on Well-Logging Requirements for Water-Drive Oilfields Under Extreme Conditions,” analyzed the challenges faced by well-logging technology, such as limited instrument accuracy and complex comprehensive interpretation. He also proposed three frontier directions: construction of multimodal large models to integrate core-log-seismic data and improve interpretation capabilities under complex geological conditions, wellbore-near-wellbore integrated monitoring technology to realize precise dynamic management of old oilfields, and intelligent steering technology to enhance the efficiency and safety of sidetracking operations.



Academician Liu He of the Chinese Academy of Engineering delivering an academic report.

### Thematic Seminars: AI Empowering to Solve Industry Difficulties

The conference set up one main venue, two parallel venues, and one student paper competition venue, with more than 100 academic reports released. In the 11 invited reports at the conference, focus was placed on the integration of artificial intelligence and well-logging technology and their applications in the exploration and development of deep/ultradeep oil and gas, low porosity-permeability and low-resistivity oil and gas, as well as various unconventional oil and gas resources such as hydrates, shale oil and gas, and coalbed methane. The reports covered professional directions including rock physics, well-logging methods, instrument equipment, intelligent interpretation, and production

monitoring, as well as the achievements and applications of new-generation information technologies such as well-logging big data, large models, artificial intelligence, and deep learning in digital empowerment, quality and efficiency improvement, and well-logging intelligence advancement. Experts attending the conference unanimously agreed that the in-depth integration of AI and well-logging technology will provide solid support for solving problems such as extreme wellbore environment detection and complex geological condition evaluation, and significantly improve the efficiency of oil and gas exploration and development.



Professor Harry Xie delivering an academic report.

### Student Competition: Cultivating Future Well-Logging Talents

The 2nd SPWLA China East Chapter Theme Conference set up a student paper competition, attracting 39 master's and doctoral students from more than 10 universities, including China University of Petroleum (East China), China University of Petroleum (Beijing), Jilin University, and Yangtze University. The competition selected four special prizes, eight first prizes, and 12 second prizes. Participating students demonstrated their innovative research achievements in fields such as rock physics, intelligent interpretation, and well-logging instrument R&D through English presentations. Harry Xie, chairman of the Competition Committee and former SPWLA Vice President, stated that the competition not only improved students' academic summary and international communication capabilities, but also laid a solid foundation for their participation in the SPWLA International Paper Competition.

DALLAS CHAPTER

Recent News

**October 2025**—The Dallas Chapter held its October meeting in the DeGolyer & MacNaughton-sponsored Providence Towers’ Business Conference Room. The featured talk was by Bo Henk (adjunct professor at TCU) presenting his talk titled “Stratigraphy and Depositional Environment of the Woodbine Group in North Central Texas From an Integrated Core and Outcrop Study.” His study, based on recent outcrop work and cores taken in several USGS drill holes, concluded that the Woodbine formation’s depositional environments were of primarily shallow marine and tidally influenced origins. This assumption should be helpful in interpreting the Woodbine in the subsurface along the western margins of the East Texas Basin. A lively discussion followed his presentation. The attendees included several students from UTA and UTD, in addition to members of the Dallas geoscience community. A box lunch was provided by Baker Hughes for those in attendance.



Group photo of judges and students at the Student Competition Venue of the 2nd SPWLA China East Chapter Theme Conference.

**Closing Ceremony: Looking to the Future and Jointly Drawing a Blueprint**

The closing ceremony of the conference and the award ceremony of the student paper competition were hosted by Professor Zhang Feng, chairman of SPWLA China East Chapter and representative of China University of Petroleum (East China). The summary pointed out that this conference promoted the in-depth integration of AI and well-logging technology and provided innovative solutions for the industry. In the future, efforts will be made to further deepen international cooperation, promote the development of well-logging technology towards intelligence and autonomy, and cultivate innovative talents in the well-logging industry.



**November 2025**—The Dallas Chapter of the SPWLA held its November technical meeting at the Providence Towers’ Business Conference Room, generously sponsored by DeGolyer & MacNaughton. The featured presentation, “Induced Seismicity: Harnessing Well Logs, Microseismic, and DAS to Decode Wellbore Deformation and Earthquake Dynamics in Texas Basins,” was delivered by



Awarding the students who won the Grand Prize in the Student Competition.

Dr. Nadine Ushakov (assistant professor at UT Dallas). Dr. Ushakov addressed the critical issue of induced seismicity impacting all major producing basins across Texas, primarily driven by wastewater injection and hydraulic fracturing operations. Her research leverages comprehensive data analysis from the TexNet earthquake catalog to establish clear spatial correlations between event epicenters and active well locations across key plays, including the Eagle Ford Shale, the Dallas/Fort Worth (Barnett Shale) Basin, and the Permian (Delaware) Basin. A significant focus of the talk was the role of subsurface geology in localizing these events. Dr. Ushakov presented compelling evidence correlating some seismically defined basement features with pronounced trends in induced seismicity epicenters. The presentation highlighted the multifaceted mechanisms of energy release related to these events, extending beyond traditional fault activation to include surface deformation (uplift and/or subsidence), fluid migration (manifesting as wellbore blowouts or surface flows), and wellbore deformation, a direct risk to infrastructure integrity. Of particular interest to the petrophysical community was the discussion on utilizing sonic well logs to refine the velocity model. This refinement is crucial for accurately determining the true depths of earthquakes, particularly those originating within the basement formations of the Delaware Basin. The meeting concluded with a highly enthusiastic and engaging discussion, underscoring the relevance and importance of this research to the industry.



Dr. Nadine Ushakov, assistant professor at UT Dallas.



Dr. Nadine Ushakov (left) receiving the Dallas Chapter speaker award from Behzad Ghanbarian (right).

## DUTCH PETROPHYSICAL SOCIETY (DPS) CHAPTER

### Recent Events

The Dutch Petrophysical Society has hosted a lively series of presentations during the past year, as well as invited a new prospective member to the DPS board. Each of our quarterly meetings has been held at the Koninklijk Instituut van Ingenieurs (KIVI) in The Hague, with all the attendees and audience present in person, with the exception of one hybrid session with an online speaker.

The December 2024 quarterly meeting was followed by a Christmas buffet at KIVI. The topic of that meeting was geohazard monitoring and modeling, focused on geothermal operations, and featured Han Claringbould (Sproule) and Peter A. Fokker (TNO) as speakers. There was a lively discussion about the regulatory requirements for induced seismicity afterwards.

The theme of the March 2025 meeting was the digital subsurface, with perspectives from Christophe Germy (Epslog SA), whose presentation highlighted the application of machine learning to amalgamate digital core logs into distinct facies, and Sebastian Geiger (TU Delft), who showcased an open-source rapid reservoir modeling platform for exploring geological and petrophysical uncertainties pertaining to low-carbon geo-energy applications.

For the June 2025 meeting, there was no overarching theme, with the two presenters, Virginie Schoepf (Openfield Technology) and Brice Fortier (Equinor) describing work on a third-generation production logging tool, designed for both oil and gas and geothermal operations, and determining the distribution of remaining oil saturation in the Johan Sverdrup Field (Norway), respectively, and strategies to obtain the goal of recovering 70%.

The September 2025 quarterly meeting saw a departure from the usual two-speaker format with three speakers and the audience contributing to a panel discussion on petrophysical uncertainty. The first talk, by Harald Bolt (DwpD Ltd), described the latest developments in depth uncertainty determination, and its significance, and the other two speakers, Hans de Koningh (Vermilion Energy) and Iulian Hulea (Petrophysics.eu), described aspects of uncertainties in saturation height modeling. The photograph below shows the three speakers having received their presenter awards (phone holders emblazoned with the DPS logo).



The board welcomes prospective new member Joost van den Broeck (EBN), who is an ideal candidate to fulfil the long-standing student and young professional vacancy on the board.

Attendance throughout the year at the face-to-face meetings (except for one online speaker, as mentioned above) ranged between about 15 and 20, and the goal of the board in the coming months is to boost this to levels of about 30 to 40 that we saw prior to the pandemic. To help achieve this, joint meetings with other geoscience organizations in the Netherlands are envisaged.

### FORMATION TESTING SIG

#### General News

Officers meet biweekly to plan and discuss events. Multiple events had been planned for this year. The team is focused on the events for the start of the next year.

Elections will be announced early next year for the open positions for the Executive Committee of the SPWLA FT SIG.

#### Recent Events

**8 October 2025**—FT SIG Webinar Series continued with another webinar. The title of the presentation was “Lithium Enrichment in Shallow US Gulf Coast Groundwater and Structural Implications for Deep Brine Mineral Resource Exploration.” It was delivered by Colton Hayden (University of Texas at Austin). The event generated quite a bit of interest from the audience, giving rise to discussions related to increased activity around Lithium exploration.

**19 November 2025**—Another webinar titled “Measurements and Modeling of Wireline Formation Tester Depth Quality” took place. It was delivered by Guy Wheeler (Gaia Earth Group). This webinar received positive feedback as well, with questions around depth control and certainty during wireline logging.

**4 December 2025**—The Formation Testing SIG also hosted its Annual Meeting in Houston. The meeting took place at SLB Q Auditorium at 10001 Richmond Avenue, Houston, TX 77042. The meeting featured a strong technical program, including expert-led talks on emerging methods in formation testing, downhole fluid analysis, microfracturing, wireline-based stress measurements, and depth-control innovations. Attendees had the opportunity to engage in a panel discussion of industry experts highlighting the hype and the reality of the use of AI in the field of formation testing. We sincerely appreciate our sponsors (Kappa Engineering, Baker Hughes, and SLB) for their contributions. The photographs from the event will be shared in the next update.

#### Upcoming Events

- Webinars are planned for the start of the year in 2026.
- FT SIG is also planning a workshop along with the SPWLA Annual Symposium in May 2026. More details about the workshop will be announced at a later date. For all our updates and events, please stay connected with the FT SIG page on the SPWLA website and the SPWLA Formation Testing SIG page on LinkedIn.

If you have questions about any of our events, you can contact us at [formation.testing.sig@spwla.org](mailto:formation.testing.sig@spwla.org)

### HOUSTON CHAPTER

#### General News

Dear Members of the SPWLA Houston Chapter,

I am repeating myself and will say again, time flies as we’ve already entered the holiday season. Time for some reflection: 2025 has been a “productive” year, and we were able to offer our members a total of 18 Technical Seminars on a wide variety of topics, monthly networking opportunities, and, following a one-year hiatus, the return of the Houston Technology Show (read all about it further down in our news).

We are also planning on a well-deserved break, enjoying the festive season with family and friends, preparing to “spool up” once again for an exciting year: not only will the FIFA World Cup 2026 come to a stadium near you, the 67th SPWLA Annual Symposium will once again be held in our backyard (Lake Conroe). Abstracts have been reviewed, rated, and ranked, and acceptance notifications have been sent. Most, if not all, Special Interest Groups are proposing exciting learning opportunities through a wide variety of short

courses. I want to encourage all to not just take advantage of all these opportunities, but also to get involved in these courses and the symposium in general, be it as an instructor, a volunteer, or both. Yes, it will add to (y)our already busy lives, but it's also very rewarding and a great learning/development opportunity.

### 2024-2026 Executive Board



Ron JM Bonnie  
President



Ali Eghbali  
VP Northside



Andrew Hind  
VP Downtown



QinShan Yang  
VP Westside



Ronke Olutola  
Secretary



Zeyad Ramadan  
Treasurer



Tianmin Jiang  
Webmaster



Muhammad N Khan  
Editor

If you've been keeping track, you will know that the "tenure" of many Board Members, mine included, will come to an end in the spring of next year. Ask yourselves whether serving on our Board is for you. A call for candidates/nominations will go out early in the year, followed by elections. The Society as a whole, including the local and student chapters, as well as the special interest groups, would come to a grinding halt without volunteers.

Wishing you and yours Merry Christmas/Happy Holidays and a happy, healthy, and prosperous New Year 2026.

Ron J.M. Bonnie  
Houston Chapter President



Sponsors and Friends of the Houston Chapter (Technology Show).

### Recent Events – Networking Meetings



Combined SPWLA Houston Chapter NMR-SIG Conference Networking Meeting, October 23, 2025.

### 28 November 2025—Uptown Technical Seminar & Lunch “Advanced Reservoir Characterization Using Drill-Cuttings-Based Advanced Image Analysis, Elemental Analysis, and AI Algorithms: A Case Study of the Orgánico Inferior and Cocina Members, Vaca Muerta Formation, Neuquén Basin, Argentina”

By: Dr. Agustín Kriscautzky (GEOLOG)

Agustín delivered a compelling session filled with real-world data and fresh insights into combining AI algorithms with image and elemental analysis. This novel and practical workflow highlights the power of using drill cuttings for reservoir characterization. Special thanks to GEOLOG for hosting us at their Houston facility and supporting the continued exchange of technical knowledge in the geoscience community. And thank you to our amazing community for making this seminar a great success.

**Contact:** Andrew Hind, VP Downtown, SPWLA Houston Chapter  
**Email:** [vpdowntown@spwla-houston.org](mailto:vpdowntown@spwla-houston.org)



Andrew Hind (right) thanking Agustín Kriscautzky (left) for a great seminar.

## 17 December 2025—Uptown Technical Seminar & Lunch

### “Quantification of CO<sub>2</sub> Flow in Organic-Shale Formations Using NMR Saturation Profile Measurements”

By: Ali Oshaish (University of Texas)

#### Abstract

Reliable evaluation of CO<sub>2</sub> transport in porous rocks is essential for several subsurface applications such as oil recovery and gas storage. Visualizing CO<sub>2</sub> front advancement is crucial for oil shales. The goal of this work is to evaluate the front movements during gas Huff-and-Puff (HnP) in shales. A Mancos shale core sample of 3.51% porosity and 112 nD permeability is used. The HnP cycles were performed in a Hassler core holder, with HnP pressure applied only at the sample inlet. Nuclear magnetic resonance (NMR)  $T_2$  and high-resolution 1D saturation profile measurements were acquired after each cycle to monitor the spatial distribution of kerosene and track the advancement of the CO<sub>2</sub> front along the core length. The core is fully saturated with kerosene prior to conducting three CO<sub>2</sub> HnP cycles, each performed at an injection pressure of 3,000 psi and varying soaking times of 1, 4.5, and 12 hours.

#### Biography

Ali Oshaish is a petroleum engineer and graduate research assistant at The University of Texas at Austin, specializing in petrophysical and fluid-flow characterization of unconventional reservoirs. His work integrates advanced geophysical measurements, such as NMR, dielectric dispersion, and spectral induced polarization, with analytical modeling and AI/ML techniques to quantify petrophysical properties and simulate fluid transport in organic-rich mudrocks. Ali brings over 11 years of oilfield and engineering experience to his research, encompassing wireline formation evaluation and surface production and completion systems with SLB and Cameron. He holds a BS and MS in petroleum engineering from King Fahd University of Petroleum & Minerals and is currently pursuing his PhD at UT Austin. His research focuses on integrating geochemistry, adsorption isotherms, and NMR to enhance reservoir characterization and improve production prediction in unconventional systems.

#### Recent Events

### 5 December 2025—SPWLA Houston Technology Show:

Following a one-year hiatus, the annual SPWLA Houston Technology Show has returned with a bang. A long time in the making, with preparations starting early summer, we were able to offer a great program with 11 companies showcasing their latest technology offerings and a

technical program with 10 invited talks/speakers and an exceptional keynote by David Bat, president at Kimberlite Oilfield Research. The discussion afterwards was a testament to how relevant and on-key (pun intended) his speech was. My expectations were high, and David did not disappoint. In fact, his speech exceeded my expectations. We had a total of exactly 100 preregistered participants and a few walk-ins. New this year, a “rapid-fire presentation” allows all exhibitors to briefly mention, elevator-pitch-style, what’s new and exciting in their booth. Also new was a special afternoon program for the students from UH and UT with a tour of Halliburton’s facility and presentation of the various technologies, labs, and manufacturing areas. As I mentioned in my opening remarks, organizing an event of this size is a team effort, requiring commitment and hard work. I want to thank the Executive Committee for all that they have done to make this event not just happen, but a great success. Thanks also to Halliburton for offering their facility as the home of the 2025 Tech Show and the numerous volunteers who were instrumental to a glitch-free event. I want to single out Halliburton’s Gabriela (Gabby) Davalos and SPWLA President Bob Gales—both were particularly instrumental in the success of the show. And, of course, our sponsors and exhibitors: there would not have been a Technology Show without them.



Chapter President Ron Bonnie opens the 2025 Houston Technology Show.



2024–2026 Executive Committee; missing are Ali Eghbali (VP Northside) and Muhammad Norman Khan (Editor).



Keynote speaker David Bat answering questions from the audience.



**Recent Events**

**4 November 2025**—We organized a Technical Talk on “Integrated Subsurface Interpretation and Geomodelling Workflows” by Mr. Mahabir Prasad Mahapatra (senior geologist, QatarEnergy). The session provided valuable insights into integrated subsurface interpretation, the fundamentals of geomodeling, and the evolving workflows that are shaping today’s energy industry. The talk was highly enriching, with real-world case studies and clear academic perspectives that greatly benefited both students and researchers. The session concluded with an interactive session, providing attendees the opportunity to engage directly with the expert and clarify conceptual and industry-oriented questions.



Participants of the 2025 Houston Technology Show.

**IITISM DHANBAD STUDENT CHAPTER**

**General News**

We are delighted to begin this new chapter with the launch of our newly designed SPWLA T-shirts for the 2025–26 academic session.



**29 November 2025**—We organized an outreach program at the Department of Physics, Tinsukia College, Assam, India, aimed at introducing students to the exciting world of subsurface sciences. The session, titled “Introduction to Petrophysics and Geoscience,” provided students with a foundational understanding of these domains. During the program, we interacted with young and curious minds, discussed real-world applications, and highlighted the future prospects and career opportunities in petrophysics and geoscience. The initiative successfully helped students gain clarity about how physics connects to Earth sciences and energy exploration.



**Upcoming Events**

**First week of January 2026**—Quiz Event 2  
**17–18 January 2026**—Local round of ISPC

**INDIA CHAPTER**

**General News**

SPWLA India Chapter conducted Interim Elections for the 2024–2026 Executive Committee, necessitated by the resignations and relocations of several EC members, including former President Shri S. K. Singhal and Jt. Secretary (Publications) Shri Naman Wadhwa. Three positions were filled unopposed, while the post of Joint Secretary (Technology) was decided through an internal election, completed smoothly as per SPWLA By-Laws.

Please find below the list of newly elected Board Members of SPWLA INDIA Chapter. We thank our previous Board members who served our community.

Sno	Position	First Name	Company	Email Address
1	PRESIDENT	B P Singh	ONGC	singh_bp3@ongc.co.in
2	VICE PRESIDENT (MEMBERSHIP)	PRAMOD KUMAR	ONGC	kumar_pramod5@ongc.co.in
3	VICE PRESIDENT (RESEARCH)	K V SARMA	ONGC	sarma_kraleti@ongc.co.in
4	VICE PRESIDENT (TECHNOLOGY)	KANCHAN PRASAD	SLB	kprasad2@slb.com
5	VICE PRESIDENT (TECH EVALUATION)	KUMAR SAURABH	BAKER HUGHES	kumar.saurabh@bakerhughes.com
6	VICE PRESIDENT (EDUCATION)	SANJAY VOHRA	PREMIER AGENCIES	sanjayvohra@premag.co.in
7	VICE PRESIDENT (PUBLICATIONS)	SOMA CHATTERJEE	ONGC	chatterjee_soma@ongc.co.in
8	SECRETARY	SUNIL GARG	ONGC	garg_sunil@ongc.co.in
9	TREASURER	SATEESH KUMAR TAMMINANA	ONGC	tamminana_sateesh@ongc.co.in
10	JOINT SECRETARY (MEMBERSHIP)	PATI RAJ PATEL	OIL	prpatel@oilindia.in
11	JOINT SECRETARY (MEMBERSHIP)	ALLAM SUDHIR KUMAR	ONGC	kumar_allamsudhir@ongc.co.in
12	JOINT SECRETARY (TECHNOLOGY)	AUGUSTINE MANJU	ONGC	augustine_m@ongc.co.in
13	JOINT SECRETARY (TECHNOLOGY)	TUSHAR KANTI MAHATO	ONGC	mahato_tushar@ongc.co.in
14	JOINT SECRETARY (EDUCATION)	RANDHIR KUMAR SHAH	SLB	rshah10@slb.com
15	JOINT SECRETARY (EDUCATION)	KULDEEP SINGH CHIB	HLSA	kuldeep.chib@hlsasia.com
16	JOINT SECRETARY (PUBLICATIONS)	PAWANDEEP BAGGA	BAKER-LWD	pawandeepsingh.bagga@bakerhughes.com
17	JOINT SECRETARY (PUBLICATIONS)	JADHAV VIRESH KUMAR	ONGC	kumar_jadhav@ongc.co.in

**Recent Events**

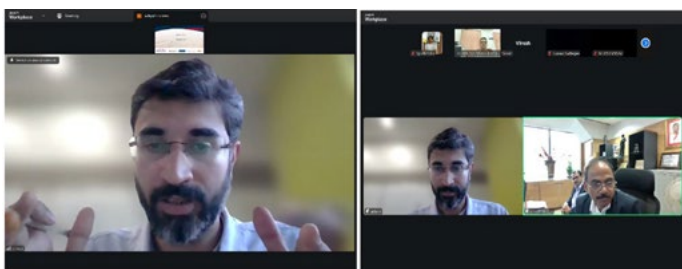
**SPWLA India Knowledge Connect Series – National Education Day Special Session**

On the occasion of **National Education Day**, the SPWLA India Chapter hosted an insightful online session under its **Knowledge Connect Series**, strengthening academia-industry collaboration within the petrophysics community.

The technical talk, delivered by **Dr. Achyut Mishra** (assistant professor, IIT Gandhinagar), focused on “**Interpreting Sedimentary Heterogeneity Using Wireline Logs and Its Impact on Modeling Geological CO<sub>2</sub> Storage.**” The session provided a comprehensive overview of how fine-scale lithological heterogeneity influences reservoir modeling, fluid flow simulation, and CO<sub>2</sub> plume behavior—key themes in India’s growing energy-transition research.

Dr. Mishra shared cutting-edge methodologies integrating **core data, high-resolution geological modelling, composite rock types, machine-learning tools (IRIDA), and graph-theory-based simulations** to more accurately characterize CO<sub>2</sub> storage reservoirs. The talk drew active engagement from SPWLA India members, enabling meaningful discussions bridging academic research and industry applications.

The session proved enriching and well-received, reflecting SPWLA India’s continued commitment to knowledge sharing, capacity building, and collaboration across the geoscience community.



(Left) Professor Dr. Achyut Mishra delivering the technical talk. (Right) SPWLA India Chapter President Shri B P Singh welcomes the presenter (Achyut Mishra).

### SPWLA India Stall at SPG India Conference 2025 – Quarterly Update

**26–28 October 2025**—The SPWLA India Chapter had a remarkable presence at the **SPG India Conference 2025**, beginning with a special visit from **Shri O. P. Sinha, director (Exploration), ONGC**, who appreciated the Chapter’s initiatives in advancing formation evaluation, digital innovation, and technical outreach. Across the 3 days, the SPWLA India Stall attracted strong engagement from professionals, students, and young geoscientists. Visitors explored the **evolution of logging technologies**, interacted with our experts, and participated in a series of lively outreach activities. Key attractions included the **Petrophysics Quiz Series** and a highly popular **SPWLA INDIA Photo Engagement Challenge**, both of which saw excellent participation. Quiz winners were **Sumeet Mavani, Jaya Pandey, and Navneet Srivastav**, while the Selfie Contest winners were **Kolli Laxminarayana (Winner)**,

**Muthulakshmi V** (1st Runner-Up), and **Pawandeep Singh Bagga** (2nd Runner-Up). We extend our sincere thanks to **SPG India** for providing this valuable platform to showcase the work of the SPWLA India Chapter and to promote collaboration within the geoscience community. We remain committed to strengthening the petrophysics fraternity through continuous engagement and technical excellence.



Glimpses of Successful campaign of SPWLA India chapter at SPG-2025 Conference, Jaipur (India).

### JAPAN FORMATION EVALUATION SOCIETY

#### Recent Events

**30th JFES Symposium – Best Presentation Award:** The JFES Symposium committee awarded the Best Presentation Award of the 30th Symposium to Ms. Patcharaporn Petchdee (PTTEP). The title of the presentation, abstract authors, and speaker are reported below:

<Title> “Petrophysics Insights for an Integrated Reservoir Modeling in an Offshore Sabah Field, Malaysia”

<Authors> Patcharaporn Petchdee and Teenavat Lurprommas (PTT Exploration and Production Co., Ltd.)

<Speaker> Patcharaporn Petchdee



Ms. Patcharaporn Petchdee, winner of the Best Presentation Award in 2025.



Mr. Tetsuya Yamamoto, winner of the Best Presentation Award in 2024.

**16 December 2025—128th JFES Chapter Meeting:** We are pleased to announce that the 128th JFES Chapter Meeting was held as a hybrid in-person and remote event. Titles and presentation speakers are reported below:

**Presentation 1**

**<Title>** Efforts in Data Assimilation for Reservoir Simulation  
**<Speaker>** Dr. Chihiro Nakajima (Japan Oil Engineering Co., Ltd, JOE)

**Presentation 2**

**<Title>** Heat Recovery Evaluation Simulation in a Closed-Loop System Assuming a Geothermal Area in Japan  
**<Speaker>** Yusuke Shimotoku (Japan Oil Engineering Co., Ltd, JOE)

**KAUST SPWLA Student Chapter**

**General News**

The newly elected SPWLA board members were recently finalized and are shown below:

- President:** Zhilei Han (zhilei.han@kaust.edu.sa)
- Vice President:** Hussain Alqahtani (hussain.alqahtani.1@kaust.edu.sa)
- Secretary:** Kania Saffanah (kania.saffanah@kaust.edu.sa)
- Treasurer:** Haotian Li (haotian.li@kaust.edu.sa)
- Public Relations Officer:** Asahi Matsumoto (asahi.matsumoto@kaust.edu.sa)



Group photo of our new board at King Abdullah University of Science and Technology, Kingdom of Saudi Arabia.

**Recent Events**

**28 October 2025—**The SPWLA KAUST Student Chapter hosted a technical seminar by Prof. Deepak Devegowda (University of Oklahoma). He presented a talk titled “Describing Enhanced Oil Recovery in Shales Using Molecular Dynamics and Experimental Observations,” highlighting how molecular dynamics simulations, combined with laboratory data, enhance our understanding of fluid behavior and improve oil recovery in unconventional shale reservoirs. The seminar sparked excellent discussions on nanoscale fluid-rock interactions, MD modeling, and the future of unconventional reservoir research.



Group photo after the seminar by Prof. Deepak, King Abdullah University of Science and Technology, Kingdom of Saudi Arabia.

**11 November 2025—**The SPWLA KAUST Student Chapter hosted a SPWLA Global Distinguished Lecture delivered by Dr. Hyung Tae Kwak (Saudi Aramco). He delivered a talk titled “Discrete Inversion Method for Nuclear Magnetic Resonance Data Processing and Its Applications to Fluid Typing and Quantification,” introducing advanced approaches for nuclear magnetic resonance (NMR) data processing and their applications in the oil and gas industry. The session sparked engaging discussions on advanced NMR petrophysics, inversion workflows, and their impact on modern reservoir evaluation.



Group photo after the seminar by Dr. Kwak, King Abdullah University of Science and Technology, Kingdom of Saudi Arabia.

**Upcoming Events**

**February 2026**—A scheduled technical seminar by Dr. Chicheng Xu (founder and chief scientist at OpenPetro AI)

**Additional technical seminars** are currently being arranged, with schedules under discussion with speakers.

**LONDON PETROPHYSICAL SOCIETY (LPS)**

**General News**

The London Petrophysical Society (LPS) continues to actively engage its membership throughout 2025 with our recent New Technology Seminar, AGM, and off-topic lecture. We extend our sincere thanks to our sponsors for their generous and ongoing support—your contributions are vital to our mission of advancing petrophysics and fostering a vibrant professional community in London and beyond. Below are our current sponsors:



We recently announced the Executive Committee for 2026. We thank all the committee members for their work during 2025 and welcome the 2026 committee for what proves to be an exciting year ahead, with both existing committee members staying on for another term, as well as several new volunteers.

2026 LPS Committee	
President	Phil Gibbons
Past President	Jack Willis
Treasurer	Alina Khmelevskaya
Secretary	Ian Draper
VP Sponsorship	Andrew Mynors
VP External Liaison	Melissa Johansson
VP Technology	Joanna Hansford
VP Seminars	Martin Leonard
VP Arrangements	Ollie Tallon
VP Data Protection & Membership	Mohamed Nour
Communications	Dhiman Majumder
Newsletter Editor & Seminar Support	Jorge Gonzalez Iglesias
VP Publications	Sherif Farag

**Recent Events**

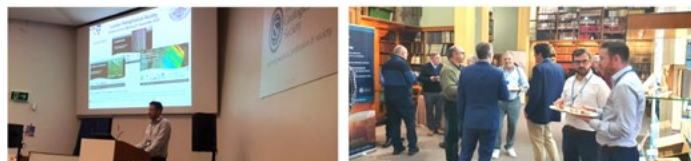
**6 November 2025**—The LPS hosted its latest one-day seminar with our New Technology Day, bringing together speakers and exhibitors with our members at the Geological Society. The day showcased cutting-edge developments across petrophysics. The seminar flowed directly into the AGM, where we reviewed the year’s events, accounts, and activities, formally introduced the incoming committee, and shared our outline plans for 2026. The day concluded with a fascinating off-topic lecture from Jonathan Gammon on “The Influence of Geology on the London Underground Railway,” an engaging and insightful end to a full program, with discussions continuing with refreshments in the Lower Library.



(Left to right) Louey Tiiba, LPS Sponsors, Romulo Cuevas, and Jonathan Gammon at the Geological Society.



(Left to right) Arthur Walmsley and Trond Rolfsvåg presenting during the New Technology Seminar.



(Left to right) LPS AGM and networking in the Lower Library.

**Upcoming Events**

See below for a list of upcoming LPS events.

Event	Date
Evening Lecture – topic TBC	15 January 2026
SPWLA 2026 UDAR Topical Conference	23–25 March 2026

Location
The Geological Society, Burlington House
The Geological Society, Burlington House

The LPS is also proud to support the upcoming **SPWLA UDAR Topical Conference**, which will explore cutting-edge applications and challenges in geosteering and reservoir mapping using UDAR technology. Planning is well underway, and more details will be shared soon.

For event registration, abstract submissions, and the latest updates, please visit our LPS website ([www.lps.org.uk/lps-events](http://www.lps.org.uk/lps-events)) and follow us on [LinkedIn](#).

**NMR SIG**

**General News**

Expanding Our Digital Presence 🖱️ Follow [SPWLA NMR SIG](#) on LinkedIn.

The SPWLA NMR Special Interest Group has launched a new LinkedIn organization page to better connect with the petrophysics community. Through this platform, we will share updates on our activities, upcoming events, and technical content related to NMR formation evaluation.

We invite all members and colleagues to follow the SPWLA NMR SIG on LinkedIn and stay engaged with the latest developments in our field.

**Recent Events**

The SPWLA NMR SIG successfully hosted the 2025 NMR SIG Conference in October at Halliburton headquarters in Houston. The event, themed “Reaching Full Polarization in an NMR Conference,” was co-chaired by Ron Bonnie, Ron Balliet, and Stacey Althaus. Professionals from both industry and academia convened to share and discuss recent advancements in NMR technology and its applications. The conference featured 18 presentations covering a broad spectrum of topics, including logging while drilling, kerogen research, core analysis, and exotic nuclei studies. SPWLA President Bob

Gales provided the opening remarks, followed by a keynote address from Sriram Srinivasan (senior vice president of Halliburton Global Technology). Appreciation is extended to all presenters, session chairs, participants, and sponsors for their invaluable contributions and support. Additionally, the SPWLA is acknowledged for organizing registration and communications for this event.



2025 SPWLA NMR SIG Conference attendees.



2025 SPWLA NMR SIG Conference Co-Chairs: Ron Bonnie, Stacey Althaus, and Ron Balliet.

**Upcoming Events**

**17–18 September 2026—SPWLA 2026 NMR SIG Conference:**

Mark your calendars! The SPWLA NMR Special Interest Group will host its next conference in **Celle, Germany**, at Baker Hughes. Stay tuned for updates early next year.

**SPWLA 2026 NMR SIG Conference** **NMR:**

17–18 September 2026 – Celle, Germany

**Key Dates**

- May 1 – May 31: Abstract Submission Window
- June 17: Notification of Acceptance or Rejection

**Chair:** Radu Coman (Baker Hughes)  
**Organizing Committee:** Ron Bonnie (SPWLA NMR SIG); Nate Bachman (SLB); Ron Balliet (Halliburton); Kristopher Farmer (Core Laboratories). Additional committee members to be announced.

NORWEGIAN FORMATION EVALUATION SOCIETY (NFES)

General News

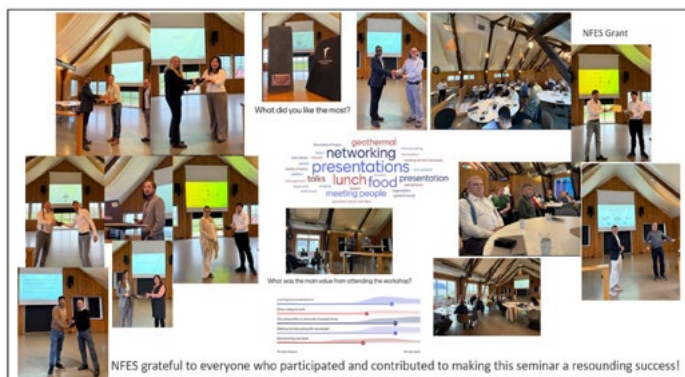
Month	Title	Presenter	Affiliation	Attendance (incl speaker) at the Gård	Attendance (incl speaker) via Teams	Attendance (incl speaker) Total
jan.25	Obtaining Remaining Oil Saturation For The Johan Sverdrup Field From a Variety of Logging Data Reservoir fluid properties from cuttings: An innovative Synergy of Gel Permeation Chromatography and Data Analytics	Brice Fortier Alexandra Cely	Discipline leader for petrophysics at Equinor Principal reservoir engineer at Equinor	32	3	35
feb.25	CORE SCANNER FOR ELECTRICAL PROFILING OF FULL-BORE CORES AT THE WELL SITE WITH ADVANCED PULSE ELECTROMAGNETIC TECHNOLOGY	Dier Mirza	Subsurface Manager at Aker BP The President of NFES	29	7	36
mar.25	President of Society of Petrophysicists and Well Log Analysts (SPWLA) CCUS from emitter to storage – where are we and what do we need?	Iulian Hulca Charlie August	The President of SPWLA Regions Business Development Leader for CCUS at Baker Hughes	24	7	31
apr.25	Geothermal Energy in the Nordics: Drilling and Sustainable Utilization	Kirsti Midttemme	chief scientist at NORCE	25		25
mai.25	Prototype HLT Pilot Testing Offshore Norway 2024	Trond Rolfsvåg	CEO of Hydrophilic	23	6	29
jun.25	Energy Transition Outlook and the role of Norwegian Oil & Gas	Geir Egil Eie	Head of Technology Centre's Northern Europe in DNW	26	5	31
sep.25	NFES field trip to Tabernas/Sorbas/Guadix basins in south-east Spain (18-23.09.2025).	Cesar Viseras Luis Miguel Yeste	university of Granada	12		12
sep.25	Evaluating Waterflood Effectiveness and Hydrocarbon Recovery Using Constraint Inversion of Resistivity Sigma and Core Data	Harish Dasir	Principal Domain Champion for Petrophysics, Acoustics and Geology services at SLB	23	4	27
okt.25	Beyond Gas Bubbles in a Norwegian Oil Fields: An Integrated Technique to Understand Reservoir Fluid Distribution	Maria Cecilia Bravo Silvia Roblero Nunez	Principal reservoir engineer at Equinor Principal petrophysicist at Equinor	27	3	30
nov.25	NFES Full day Formation Evaluation Seminar	9 Presentations				50+
des.25						

**18–23 September 2025—NFES Field Trip to Tabernas/Sorbas/ Guadix Basins in Southeast Spain:** The Norwegian chapter of SPWLA (NFES) invited the community to a field trip to Spain. The field trip was hosted by Professor Cesar Viseras (University of Granada) and his colleague, Luis Miguel Yeste. Ten participants, seven nationalities, from seven different companies (operators and service providers) took part in this event. Included was the incoming Aberdeen Chapter President (AFES). Professor Viseras guided the group on an interesting journey through beautiful landscapes with world-class outcrops, including the fascinating world of sedimentation related to the Messinian Salinity Crisis (MSC) event. The deep marine environment of Tabernas-Sorbas Basins (deep-sea fan systems, submarine canyons, turbidite megabeds) drew parallels to reservoir targets in petroleum basins across the Norwegian Continental Shelf. In Granada Geopark, we visited deltaic and mixed platform systems, fluvial and lacustrine environments, and made observations on the tectonic, eustatic, and geomorphological evolution of the central sector of the Betic Cordillera.



NFES field trip on September 18–23, 2025, Tabernas/Sorbas/Guadix Basins in southeast Spain.

**12 November 2025—Full-Day NFES Seminar:** The Norwegian Formation Evaluation Society (NFES) hosted a very interesting full-day Formation Evaluation Seminar at Solastranden Gård in Stavanger. The event successfully brought together over 50 participants, including students, researchers, and professionals from energy companies and service providers.



Presenters at the NFES Full-Day Seminar on November 12, 2025, in Stavanger.

The following topics were addressed:

1. Petrophysical and well-log analysis in support of carbon capture and storage (CCS) and the energy transformation agenda.
2. Innovative methodologies: Applications of machine learning, digitalization, and artificial intelligence.
3. Automation: Utilizing surface data for formation evaluation.
4. Advanced logging and core evaluation technologies for complex formation assessment.

- Optimizing well performance: Petrophysical support extending beyond drilling—encompassing completion, intervention, and well integrity.

This seminar served as an invaluable forum for learning, collaboration, and innovation in the field of formation evaluation. The opening featured inspiring addresses from NFES President Dler Mirza, who set a positive tone for a day filled with insightful discussions and meaningful exchanges.

The program included nine technical presentations that showcased compelling case studies, innovative methodologies, and effective strategies for optimizing well performance. Overall, the event was highly regarded by attendees, fostering a spirit of community and knowledge sharing that will undoubtedly benefit the NFES moving forward. A great effort and contribution. Thank you to all presenters and co-authors for making the NFES Seminar a success!



Presenters at the NFES Full-Day Seminar on November 12, 2025, in Stavanger.

**Knut Arne Birkedal (Aker BP) et al.:**  
 “A Cloud-Native Workflow for Formation Pressure Evaluation: Enhancing Subsurface Analysis and Field Development”

**Viktoriya Nam (snr. casedhole geoscientist, Baker Hughes):**  
 “Production Logging Interpretation Challenges in Deviated Multiphase Flow (Mature Oil Well Case Study)”

**Kjetil Westeng (Aker BP):**  
 “Optimized Dynamic Depth Alignment Between Well Logs for Enhanced Petrophysical and Rock Physics Interpretation”

**Trond Rolfsvåg (Hydrophilic AS):**  
 “Petrophysical Sensemaking”

**Durra Handri Saputera (University of Bergen) et al.:**  
 “Rapid Modeling of Electromagnetic Induction Log Data Using an Adaptive Born Approximation”

**Darling Criollo (Halliburton) et al.:**  
 “Advanced Gas Analysis Meets Geoscience Solution in Norway Field: The Insights of a Holistic Approach”

**Tom Bradley (Baker Hughes) et al.:**  
 “Quantifying Porosity, Permeability and Reservoir Quality in Geothermal Wells Using a New High Efficiency Nuclear Magnetic Resonance Logging Methodology”

**Amit Govil (SLB – RP-intervention advisor) et al.:**  
 “Lightweight Cement Evaluation Using Tight Processing From Pulse-Echo and Pitch-Catch data”

**Chee Kong Chen (Baker Hughes):**  
 “Maximizing Casedhole Logging Data – A Case History of Discovering Unexpected Crossflow”

In addition, and in compliance with the NFES board strategy, supporting academia and students, the NFES Student Travel Grant was given to Durra Handri Saputera.



NFES full-day seminar; Presenters, November 12, 2025, in Stavanger. Sergey Alyaev, NFES VP PR & Academia, presents the NFES student grant to Durra Handri Saputera (to the right)

**NFES 2025 Sponsors**



## OKLAHOMA CITY CHAPTER

## General News

SPWLA OKC Technical luncheons are held at Vast on the second Tuesday of the month from 11:30 am to 1 pm.

## Recent Events

**11 November 2025**—Milly Wright – RohmTek – ATR FTIR – (Attenuated Total Reflectance – Fourier Transform Infrared) – A discussion of calibration methodologies for robust and cost-effective generation of mineralogical data.

**3 December 2025**—Joint SPWLA OKC, OCGS, and GSOC holiday party at Chicken and Pickle.

## Upcoming Events

**13 January 2025**—Dylan Miner—Edge Systems – Application of AI in Mudlogging.

**10 February 2025**—TBD

## RESISTIVITY SIG

## General News

Peter Swinburne will continue to serve as our secretary for another two-year term. He will continue to work with the service companies to update the resistivity tool types in a database formally kept by John Zhou.

Mike Bower was voted in as our new co-leader for the 2026–2027 term.

We are actively looking for an energy company petrophysicist to co-lead with Mike Bower. We are also in need of a treasurer.

## Recent Events

We would like to thank Peter Swinburne, Xiaoyan Zhong, John Rasmus, David Kennedy, Prof. Jiefu Chen, Diogo Salim, Eduard Bikchandaev, Nigel Clegg, Igor Hernandez Martinez, and Egor Kovarskiy for attending and presenting at our Fall Resistivity SIG meeting held on November 12, 2025. This was the first open session in our SIG history, and it was a success due in part to the hard work of our host Jun Zhang, who works with local IT to make it a smooth meeting.

We had a total of 38 attendees (11 online-only and 27 in-person), 10 presentations, and 10 presenters. Many thanks to Jun Zhang and Baker Hughes for hosting the meeting and Qiming Li and Oliden Technology for providing coffee and food!

Robert (Bob) Gales addressed the attendees and spoke about the upcoming SPWLA 2026 UDAR Topical Conference.

Please see the embedded photo of our closed session speakers, leadership, and host with inset names.



**In-person Speakers:** Xiaoyan Zhong, David Kennedy, Prof. Jiefu Chen, Diogo Salim

**RT SIG Leadership:** Dean M. Homan, JinJuan Zhou, Bishnu Karki

**RT SIG Host:** Jun Zhang, Qiming Li

## Upcoming Events

We are looking forward to seeing everyone again at the next SIG meeting in 2026.

## SAUDI ARABIA CHAPTER

## Recent Events

**29 October 2025**—The SPWLA Saudi Arabia Chapter had the honor of hosting a Lunch & Learn session featuring Dr. Abdulwahab Bello (KFUPM), who presented his study titled “Experimental Evidence of Clay-Driven Dolomitization.” The research utilized hydrothermal reactor experiments at temperatures ranging from 80 to 250°C to investigate the role of clay minerals in post-compactional dolomitization. The results demonstrated that smectite and illite significantly enhance dolomitization by providing nucleation sites and facilitating  $Mg^{2+}$  dehydration due to their highly negative surface charges. Dolomitization was observed to occur through two primary mechanisms: (1) complete calcite dissolution followed by dolomite

nucleation and (2) recrystallization with progressive Mg incorporation. These findings highlight clay-catalyzed dolomitization as an important abiotic pathway in ancient muddy carbonates and mixed clastic-carbonate systems. The session generated great interest and was well attended by professionals from Aramco, KFUPM, and various service companies. The SPWLA Saudi Arabia Chapter extends its sincere appreciation to Baker Hughes for organizing and hosting this event.



October Lunch & Learn session by Dr. Bello.

session. We look forward to continued collaboration in future events. With this final event of the year, the SPWLA Saudi Arabia Chapter concludes its 2025 activities and wishes everyone a Happy New Year 2026.

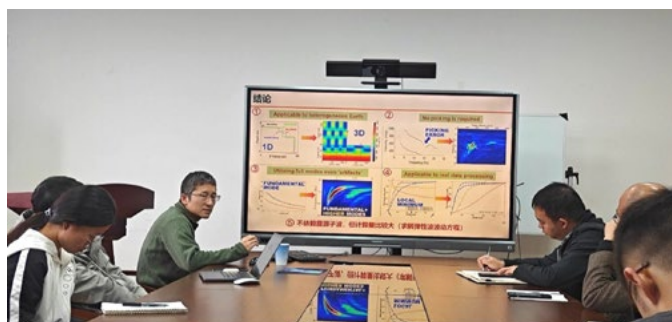


Mike received a token of appreciation from KFUPM CPG Dean Dr. Ali.

**20 November 2025**—The SPWLA Saudi Arabia Chapter successfully conducted a Knowledge Sharing Session titled “Anisotropy Sensitivity in Ultradeep Azimuthal Resistivity Technologies and Becoming Certain About Deterministic Inversion Uncertainty,” presented by Mike Bower (principal geologist and product owner for Geosteering and Reservoir Mapping (GRM), Texas, USA). The session opened with welcoming remarks by CPG Dean Dr. Ali Al-Yousef. Mike began with an overview of deep azimuthal measurement principles before focusing on two main aspects of the study: (1) exploring the measurement sensitivity to formation  $R_v$  and  $R_h$  using a  $45^\circ$  tilted antenna architecture across a broad set of realistic synthetic modeling scenarios and (2) discussing methods to quantify and interpret the uncertainty associated with inverted  $R_v$  and  $R_h$  outputs. The presentation offered valuable insights into the limitations, uncertainties, and opportunities for enhancing resistivity-based geosteering workflows in complex reservoirs. The event was well attended, and the SPWLA Saudi Arabia Chapter extends its gratitude to KFUPM Management for hosting the

**SOUTHWEST CHINA CHAPTER**

**3 November 2025**—At the invitation of the School of Resources and Environment at the University of Electronic Science and Technology of China (UESTC) and the Southwest Chapter of the Society of SPWLA, Zhang Zhendong, a specially appointed researcher at the Institute of Geology and Geophysics of the Chinese Academy of Sciences, delivered a special report titled “Theory and Applications of Full Dispersion Spectrum Inversion of Seismic Surface Waves.” The event was attended by faculty and student representatives from the School of Resources and Environment, including Professor Wang Yaojun, Professor Lu Cai, Researcher Fang Zhilong, and Associate Professor Cai Hanpeng.



Professor Zhang Zhendong introduced an important method for imaging the internal velocity structure of the Earth: seismic surface wave inversion. This technique is used for cross-scale target imaging, including applications in crustal studies, oil and gas reservoir exploration, and urban underground space investigations.



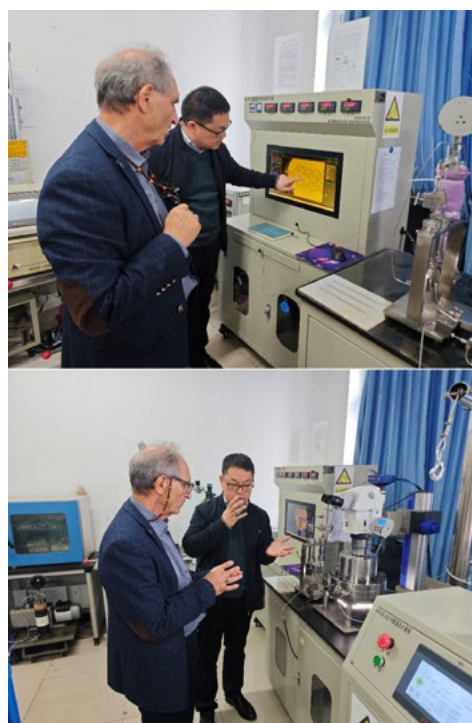
**12 November 2025**—The SPWLA Southwest China Chapter and the State Key Laboratory of Oil & Gas Reservoir Geology and Exploitation at SWPU hosted an academic exchange event. The event featured a visit and lecture by Professor Majid Hassanizadeh, a member of the European Academy of Sciences, executive director of the International Society for Porous Media (InterPore), and a professor in the Department of Earth Sciences at Utrecht University, the Netherlands.



Professor Hassanizadeh delivered an insightful academic presentation titled “Pore-Scale Experimental Studies of Two-Phase Flow, Mass and Heat Transport in Porous Media.” During his talk, he introduced the latest advancements in

experimental research utilizing micro-visualization models to study fluid flow, mass transfer, and heat transfer processes within porous media. The exchange session was chaired by Professor Wenlian Xiao, Vice Chair of the SPWLA Southwest China Chapter. Following the lecture, Professor Hassanizadeh engaged in a warm and in-depth discussion with attending faculty and students. Participants found the interaction highly rewarding, noting that it significantly broadened their academic perspectives and provided valuable insights into cutting-edge research methodologies. This event successfully facilitated dialogue between the domestic research community and an international leading scholar, contributing to the advancement of related disciplines and potential future collaborations.

Following the presentation, Professor Hassanizadeh, accompanied by Professor Wenlian Xiao, toured the university’s advanced microfluidic experimental laboratories. He gained an in-depth understanding of the performance and capabilities of the high-temperature, high-pressure micro-visualization experimental apparatus. During the visit, detailed exchanges took place regarding the significant achievements made using these visualization systems in key research areas such as carbon capture, utilization, and storage (CCUS) and enhanced oil recovery (EOR). Both parties expressed a strong willingness to pursue further collaborative research, marking a positive step towards future joint scientific endeavors.



Professor Hassanizadeh held talks with Professor Xiao Wenlian about micro-visualization experiments.

**SOUTHWEST PETROLEUM UNIVERSITY STUDENT CHAPTER**

**22 November 2025**—Under the guidance and strong support of the SPWLA Southwest Chapter, the inaugural meeting of the SPWLA Southwest Petroleum University (SWPU) Student Chapter and the “SWPU Innovation Forum on Petrophysics and Logging in Oil and Gas Engineering” were successfully held in Conference Room A114 of the Sixue Building at Southwest Petroleum University.



Following the inaugural ceremony, over 20 experts and scholars from institutions such as the University of Electronic Science and Technology of China, Jilin University, China University of Petroleum (Beijing), China University of Petroleum (East China), China University of Mining and Technology (Beijing), and Chengdu University of Technology, as well as technical experts from leading industry enterprises including PetroChina Southwest Oil & Gasfield Company and China Oilfield Logging Services Company, delivered presentations. They introduced cutting-edge technologies in the industry and discussed future development prospects.



In the future, under the continued guidance of the SPWLA Southwest Chapter, the SPWLA Southwest Petroleum University Student Chapter will prioritize organizing high-quality activities such as international academic lectures, technical seminars, and field visits. By actively participating in regional academic exchanges organized by the Southwest Chapter and strengthening collaboration with other SPWLA chapters worldwide, the student chapter will consistently enhance the university’s international influence in the fields of petrophysics and logging. At the same time, it will provide students with a platform to engage with the forefront of the global energy sector, supporting their growth into key contributors to the worldwide energy industry.



**UFRuralRJ STUDENT CHAPTER — BRAZIL**

**General News**

- During the months of October and November, internal meetings were organized to define and plan future projects, courses, and lectures so as to spread petrophysical and well-log knowledge.
- Our flag bearing our logo was created and taken to oil and gas events, where our team managed to represent the chapter.

**Recent Events**

**October 2025**—A member of our chapter, Karoline Gabry, had the opportunity to represent us in the Nuclear Logs and Well Scale Mineralogy Course, held at PRIO, Rio de Janeiro, and taught by petrophysics specialist, Gabriel de Nascimento Freitas.



**October 2025**—The SPWLA UFRuralRJ (in a partnership with the Brazilian Petroleum Institute) managed to get an entrance to the Offshore Technology Conference, held in Rio de Janeiro. Our Vice President Gabrielly Vianna represented us in the event. It not only proved to be a great opportunity of learning about the upcoming oil and gas technologies, but also a huge networking experience.



**November 2025**—The SPWLA UFRuralRJ team (in a partnership with the Society of Exploration Geophysicists) received passes to take part in the SBGF Conference, where we gained valuable insights about geophysics and petrophysics. Our co-advisor, Liliane Paiva Panetto, presented a piece of her Phd research at the Modeling and Geological Evolution Laboratory (LabMeg-UFRJ), titled “Petrophysical Characterization of Magmatic Rocks from Geophysical Logs of The Serra Geral Group in Wells of the Parana Region.”



### Upcoming Events

The SPWLA UFRuralRJ Chapter is currently organizing a series of upcoming short courses and lectures aimed at expanding our members’ technical knowledge and professional development. Among the planned activities, we are preparing a technical visit to Equinor, one of the leading global energy companies, where participants will gain valuable insights into exploration and production operations. In addition, we are scheduling a visit to LAGESED (Sedimentary Geology Laboratory – UFRJ), providing an opportunity to deepen understanding of sedimentary processes and basin analysis. These initiatives reflect our commitment to promoting applied learning and strengthening connections between academia and the energy industry.

### SPWLA UFRuralRJ – Social Networks

#### LinkedIn:

<https://www.linkedin.com/company/ufruralrj-spwla-student-chapter/>

#### Instagram:

[https://www.instagram.com/spwla\\_ufruralrj?igsh=MTExdDZvaW14angyeA%3D%3D&utm\\_source=qr](https://www.instagram.com/spwla_ufruralrj?igsh=MTExdDZvaW14angyeA%3D%3D&utm_source=qr)

### UNIVERSITAS PERTAMINA STUDENT CHAPTER

#### General News

Between October and December 2025, SPWLA UP SC actively carried out a series of academic, professional, and

self-development programs designed to strengthen members' competencies and broaden their exposure to real industry practices. These initiatives involved workshops, industrial visits, academic support sessions, and digital learning activities that collectively contributed to enhancing both technical knowledge and soft skills.

**Recent Events**

**18 October 2025**—The SPWLA Core Memory 1.0 program was held in Rooms 2703–2704 of the Griya Legita Building, Universitas Pertamina. Organized by the Internal Affairs Department in collaboration with KPM Universitas Pertamina, the event aimed to strengthen the public speaking skills and confidence of 44 internal SPWLA members through an interactive workshop. The session covered effective communication principles, techniques for managing anxiety, and proper use of intonation and body language, followed by a Q&A segment. The program is expected to equip participants with practical communication abilities and improved self-confidence.



SPWLA Core Memory.

**3–19 November 2025**—The Petrosphere mid-semester exam series was conducted at the Airy Study Room and was organized by the Academic Affairs Department. The primary objective of this program was to support SPWLA internal members from Batches 23 and 24 in preparing for their mid-semester examination. The activity engaged 15 participants from Batch 23 and 24 participants from Batch 24. Throughout the program, participants reviewed academic materials and discussed relevant problem sets in a structured learning environment. The initiative proved effective, as participants reported improved readiness and confidence for the upcoming examination.



Petrosphere.

**Educational Content Vol. 1** was delivered through the official SPWLA UP SC Instagram platform and administered by the Academic Affairs Department. This initiative aimed to provide accessible educational material on petrophysics and well logging while simultaneously enhancing the digital engagement of SPWLA's online audience. The content reached all SPWLA Instagram followers and featured learning modules on petroleum systems, accompanied by an interactive quiz with rewards for accurate responses. The program achieved its intended outcomes by increasing conceptual understanding among participants and fostering active engagement through the quiz activity.



Educational content quiz and winners.

**24 November 2025**—Company Adventure Series 3.0, in collaboration with PT Geo Dipa Energi Unit Patuha, was held in Bandung and organized by the Professionalism Department in partnership with PT Geo Dipa Energi. The activity aimed to provide 30 SPWLA officers with direct insights into geothermal operations, technological innovations, and sustainable resource management. The program included a guided visit to operational facilities, such as the power plant, cooling tower, and geothermal well, as well as exposure to direct-use geothermal applications through the Kadieu program. Participants were expected to gain a comprehensive understanding of geothermal energy processes and career opportunities in the sector.



Company Adventure Series 3.0 in collaboration with PT Geo Dipa Energi Unit Patuha.

**29 November 2025**—The P-Shale program was held at the Modular Building Room 7302, Universitas Pertamina, under the coordination of the Training and Development Department. The event aimed to provide foundational

knowledge on petrophysics and well logging to a broad public audience. A total of 50 participants attended the session. The program delivered comprehensive introductory material covering essential petrophysical concepts and logging principles. Participants demonstrated improved understanding of fundamental petrophysics, fulfilling the educational objectives of the event.



P-Shale.

**2 December 2025**—The Company Adventure Series 4.0 x M – Shale in collaboration with the PT Geoservices program was held at the PT Geoservices Geological Laboratory in Jakarta. Jointly organized by the Professionalism Department and the Training and Development Division, the event aimed to introduce 40 petroleum engineering students to subsurface data acquisition and analysis workflows. Participants toured key laboratories, including PVT Analysis, Geochemistry, Biostratigraphy, Extraction, SCAL, and RCAL, and were also introduced to the Geolog software used for interpreting laboratory results. The activity enhanced participants' understanding of subsurface data processes and provided exposure to professional industry practices.



Company Adventure Series 4.0 x M – Shale in collaboration with PT Geoservices.

- 4 December 2025—SLICE IPFEST SERIES:** The SLICE IPFEST Series took place on MS Teams and was organized by the Academic Affairs Department. This program aimed to support Universitas Pertamina teams, particularly those from the Faculty of Exploration and Production, in preparing for the Oil Rig Design Competition and the Paper Poster Competition. The activity provided academic guidance and strategic preparation to strengthen the teams’ performance ahead of the competition.
- 12 December 2025—EXPRO: Professional Exploration & Exchange** was held on online benchmarking, presented as a collaborative program between SPWLA UP SC and SPE PEM AKAMIGAS. This event was designed to create an interactive space for students to exchange ideas, gain

fresh insights, and connect with new perspectives in the world of geoscience and petroleum engineering. Through guided discussions and shared experiences, participants broadened their understanding of professional practices and industry highlights.

- 13 December 2025—SPWLA Course Vol. 1:** SPWLA Course Vol. 1 was held at the Universitas Pertamina Auditorium and was organized by the Academic Affairs Department in collaboration with Pertamina Hulu Energi. This event provided students from the 2024 cohort of the Petroleum Engineering Program with a comprehensive understanding of petrophysics and its real-world industry applications. The session aimed to enhance participants’ knowledge and readiness for professional practice in the oil and gas field.
- 20 December 2025—LOGGING 1.0:** LOGGING 1.0 “Energy for Young Generation: Navigating Your Careers Through the Intersection of Finance, Digitalization, and Sustainable Operations” was held at the Universitas Pertamina Auditorium. Organized by the Professionalism Department in collaboration with PT Pertamina (Persero), the event aimed to equip young individuals with relevant hard and soft skills for navigating today’s evolving energy landscape. The interactive talk show featured practitioners from PT Pertamina (Persero) and covered three key topics: the future outlook of the energy sector, essential digital and sustainable operations competencies, and practical strategies for personal branding and career preparation. The program provided participants with clear insights into career pathways in the modern energy industry.

### UNIVERSITY OF HOUSTON STUDENT CHAPTER

#### General News

We organized a Halloween social to provide students a chance to unwind from their studies and build camaraderie with fellow department members. Shifting focus to technical development, we hosted hands-on training sessions for GeoDict and Dragonfly. These workshops provided advanced digital rock physics experience for the students, enhancing their industry readiness.

#### Recent Events

**Halloween Social**—To foster stronger professional bonds, we organized the Halloween Social. This event provided students with an opportunity to decompress from the academic rigor and strengthen their network with peers in a festive setting.



Halloween Social.



Dragonfly Training Workshop.

### Digital Rock Physics Seminar

The seminar provided students with an opportunity to learn about the history and applications of digital rock physics, linking lab measurements with quantitative sample characterization, upscaling CO<sub>2</sub>-fluid-rock interactions, hands-on GeoDict demos and rock-lab tours, plus talks on grain-contact modeling for digital elastics and using thin sections as a fast-track to 3D digital rock physics.

Thanks to our speakers and partners for sharing their expertise:

- Mike Marsh & Christian Hinz, Math2Market
- Lori Hathon & Mike Myers, University of Houston
- Ibrahim Gomaa, University of Texas & Chevron

### Well-Logging Help Session

A special thanks to Franklyn Sáez and Son Nguyen for leading a help session focused on homework assistance and problem-solving before the midterm exam. They guided students through the fundamentals of reading different log types and shared best practices for log interpretation.



Well-Log Help Session.



Digital Rock Physics Seminar.

### Dragonfly Training Workshop

Led by Dr. Lori Hathon and Dr. Jim Funk, this two-day workshop provided students with a comprehensive workflow for digital rock physics using Dragonfly software. Participants gained hands-on experience in the full imaging life cycle, moving from micro-CT data loading, filtering, and ROI selection to advanced quantitative analysis involving porosity and NMR simulations via Dragonfly Bootstrap. The curriculum also introduced pore network modeling (Open-PNM) and data visualization techniques, equipping students to apply their learning directly to real-world reservoir characterization challenges.

### Upcoming Events

We plan on arranging a trip to the Houston Museum of Natural Science to provide another learning opportunity for students. In addition, we are collaborating with the Society of Petroleum Engineers to arrange a visit to Chevron.

## THE UNIVERSITY OF TEXAS AT AUSTIN STUDENT CHAPTER

### General News

On behalf of the SPWLA University of Texas at Austin Chapter, we are pleased to share highlights from November and December 2025. This period marked the beginning of our Distinguished Speaker Program, a successful social event, and substantial planning for the upcoming spring semester.

During these months, our board coordinated speaker invitations for February, prepared our next social/volunteering event, and launched invitations for the new People of Energy speaker series. We are also organizing chapter participation in the upcoming SPWLA Houston Annual Technology Show and a field trip to the Halliburton Technology Center.

We also congratulate two of our officers, Dalma Cerro (December 1st), Alejandro Lopez (December 2nd), and Mariella El Khoury (December 4th) for advancing to PhD Candidacy.

**Recent Events**

**1 November 2025—PetroPotLuck Social Event:** Our chapter hosted the first PetroPotLuck, a themed potluck where students brought dishes inspired by their cultural backgrounds and their experiences in petrophysics courses. For this event, our board designed and 3D-printed the awards that were given to the top entries. Students voted for their three favorite dishes. The winning dish was Bougatsa, a Greek pastry that drew attention for its layered structure resembling a seismic section.



Group photo of attendees, dishes, and the award at the PetroPotLuck.

**4 November 2025—Distinguished Speakers Maria Cecilia Bravo and Silvia Roblero Nunez (Equinor):** Our first Distinguished Speaker session of the month featured Maria Cecilia Bravo (principal reservoir engineer) and Silvia Roblero Nunez (principal petrophysicist) from Equinor. Their presentation, “Beyond Gas Bubbles in a Norwegian Oil Field: An Integrated Technique to Understand Reservoir Fluid Distribution,” covered an approach that combines mud-gas data, fluid sampling, and petrophysical logs to evaluate reservoir fluid phases in real time. The speakers discussed practical case studies from depleted Norwegian fields and highlighted the impact of integrated workflows on fluid contacts and field development decisions.



Distinguished Speaker session with Maria Cecilia Bravo and Silvia Roblero Nunez from Equinor.

**7 November 2025—Distinguished Speaker Seán Dolan (Shell):** Our chapter welcomed Seán Dolan (discipline manager for petrophysics and geomechanics at Shell) for a technical session on laboratory NMR applications in carbonate reservoirs. His talk, “Petrophysical Characterization of Secondary Organic Matter and Hydrocarbons in the Early Jurassic Marrat Formation Using Laboratory NMR Techniques,” demonstrated how advanced  $T_1$ - $T_2$  measurements can be used to identify bitumen-related signals and refine NMR-derived porosity in organic-rich intervals.



Distinguished Speaker session with Sean Dolan from Shell.

**12 November 2025—Distinguished Speaker Marco Pirrone (Eni):** Marco Pirrone (production petrophysics technical at Eni) delivered a presentation on fiber-optic distributed temperature sensing (DTS) as a tool for monitoring CO<sub>2</sub> injection in early-stage CCS projects. His talk, “Real-Time Monitoring of Carbon Dioxide Injection Through Fiber Optics: Physics-Based Modeling of DTS Data,” showed how temperature-based inference can be used to track phase transitions, pressure changes, and CO<sub>2</sub>-brine interface evolution in real time.



Distinguished Speaker session with Marco Pirrone from Eni.

**18 November 2025—Distinguished Speaker Hyung Tae Kwak (Saudi Aramco):** Our final Distinguished Speaker event of the month featured Dr. Hyung Tae Kwak (Advanced Petrophysics group leader at Saudi Aramco). His talk, “Discrete Inversion Method for NMR Data Processing and Its Applications to Fluid Typing and Quantification,” introduced a discrete component inversion approach that bypasses the limitations of Laplace-based ILT. The method improves robustness for low-SNR data sets and allows direct reservoir-specific calibration of relaxation components.



Distinguished Speaker session with Hyung Tae Kwak from Saudi Aramco.

Yuhang Guo (Jilin University) as the keynote speaker. Prof. Guo provided a comprehensive introduction to digital rock physics (DRP), emphasizing its role as a crucial link between microscopic pore structures and macroscopic physical properties, as well as its significance in advancing traditional core analysis workflows. The presentation highlighted research efforts aimed at developing efficient and high-precision technical pathways through the integration of artificial intelligence and high-performance computing.



Attending faculty and students posed for a commemorative photo with Prof. Guo.

## UPCOMING EVENTS

**February 2026**—Two Distinguished Speaker talks scheduled, a volunteering social event, and the SPWLA Local Paper Contest.

**Spring 2026**—Launch of the new People of Energy speaker series.

## YANGTZE UNIVERSITY STUDENT CHAPTER

### General News

The SPWLA Yangtze University Student Chapter continues to expand its academic engagement and enhance connections within the geoscience community. In recent months, our members have actively participated in high-level conferences and scholarly exchanges, strengthening academic visibility and fostering professional development.

### Recent Events

**14 November 2025**—Our chapter successfully organized an academic lecture titled “Application and Reflection on Digital Rock Physics Technology.” The event featured Prof.

Key topics included the application of deep-learning models to replace conventional threshold-based segmentation, enabling automated mineral identification and high-fidelity 3D digital rock reconstruction. Prof. Guo also discussed the use of high-performance computing to conduct multiphysics simulations, which in turn provides essential data support for oil and gas exploration and related energy applications. The lecture concluded with an interactive Q&A session, during which Prof. Guo addressed technical questions from faculty members and students, fostering deeper understanding and academic engagement.

**15 November 2025**—Members of our chapter attended the International Young Scholars Summit on Underground Gas and Energy Storage Innovations held in Wuhan. During the event, students had the opportunity to gain deeper insight into cutting-edge research on carbon sequestration, underground gas storage, and multiphase flow in porous media.



Faculty advisor Prof. Xin Nie, chapter members, and Prof. Martin Blunt posed for a group photo.

The summit featured the PIFI Awarding Ceremony honoring Academician Martin Blunt, a globally recognized authority in porous media flow. Members participated in technical sessions delivered by experts from leading institutions, learning about advancements in digital rock analysis, visualization of multiphase flow, and emerging energy storage technologies. During the networking session, our chapter members engaged in meaningful discussions with **Academician Blunt**, exchanging views on research challenges and future directions in porous media studies.

**18 November 2025**—Our chapter successfully hosted the “Academic Paper Illustration and Competition Experience Sharing Session” at Yangtze University, in Room D318. The event was chaired by Chapter President Ying Zhou and conducted in a hybrid format, attracting students and faculty from Yangtze University as well as other universities. **Prof. Xin Nie, Assoc. Prof. Wei Xu, Ms. Quanying Zhang, and Mr. Dong Zhao** were invited to attend and provide guidance. The session focused on three main topics: academic paper competitions, literature management, and scientific illustration.

- **Yaping Zheng** shared insights on structuring presentations, effective communication, and delivery techniques, providing practical guidance for giving high-quality English academic talks.
- **Huazhong Yang** introduced efficient tools and methods for literature search and management, and discussed reflections on interdisciplinary

research combining artificial intelligence with other fields, offering both practical and forward-looking perspectives.

- **Wenhao Xiong** drew from his expertise in well logging to share best practices for scientific illustration, recommended software, and important considerations for paper submission, providing valuable guidance for improving figure quality and submission success.



Mr. Yang sharing insights on literature management.

Following the presentations, faculty and students engaged in lively discussions on academic presentation, literature handling, and illustration skills. The instructors praised the speakers’ contributions and presented them with commemorative gifts in recognition of their preparation and excellent sharing.



The instructors honored the three student speakers with commemorative gifts.

## Welcome New Members – October 16, 2025 – December 4, 2025

**Achur, Giovanna**, UERJ, Rio De Janeiro, Brazil  
**Ade, Marcus**, Universidade Do Estado Do Rio De Janeiro, Rio De Janeiro, Brazil  
**Ajo-Franklin, Jonathan**, Rice University, Houston, TX, United States  
**Akmal, Muhammad**, The University of Texas at Austin, Austin, TX, United States  
**Al Ghassani, Bushra**, Sultan Qaboos University, Dhank, Oman  
**Alhaddad, Abdullah**, Aramco, Alhasa, Saudi Arabia  
**Alrifai, Azeez**, SLB, Richmond, TX, United States  
**Alves, Gabriela**, Universidade Do Estado Do Rio De Janeiro, Rio De Janeiro, Brazil  
**Arayathirant, Rasikan**, PTTEP, Bangkok, Thailand  
**Azizi, Arash**, The University of Texas at Arlington, Arlington, TX, United States  
**Boyd, Austin**, UFRJ, Rio De Janeiro, Brazil  
**Brabin, Joseph**, University of Leeds, PRESCOT, Merseyside, United Kingdom  
**Bunlam, Atiwut**, PTTEP, Vibhavadi Rangsit Rd., Chatuchak, Bangkok, Thailand  
**Busch, Pedro**, UERJ, São Gonçalo, Brazil  
**Chang, Kiven**, Southwest Petroleum University, Chendu, China  
**Chatterjee, Kamallesh**, Baker Hughes, Houston, TX, United States  
**CHEN, Shi**, Equinor, BERGEN, Norway  
**Chertova, Anastasia**, SLB, Katy, TX, United States  
**Choudhary, Anshul**, IIT (ISM) Dhanbad, Dhanbad, India  
**Colpitts, Robert**, Joint Resources Company, Weatherford, TX, United States  
**De Souza, Beatriz**, UERJ, Nova Iguaçu, Brazil  
**Deelom, Chayanut**, PetroRes Consulting, Sattahip, Thailand  
**Do Nascimento, Júlia**, Universidade Do Estado Do Rio De Janeiro, Rio De Janeiro, Brazil  
**Durcanin, Michael**, Rutgers University, Houston, TX, United States  
**Dutta, Shusant**, IIT (ISM) Dhanbad, Dhanbad, India  
**Earle, Ethan**, The University of Texas at Arlington, Mansfield, TX, United States  
**Eden, Brylan**, The University of Texas at Arlington, Arlington, TX, United States  
**Ferdinand, Oliver**, University of Aberdeen, Aberdeen, United Kingdom  
**Garrouch, Ali**, Kuwait University, Houston, Texas, United States  
**Giakoumi, Matheos**, University of Texas at Austin, Austin, TX, United States  
**Gizatullina, Zulfia**, Equinor, Bergen, Norway  
**Glenwright, Michael**, University of Aberdeen, Aberdeen, United Kingdom  
**Gross, Matthew**, DeGolyer and MacNaughton, Irving, TX, United States  
**Hasanov, Gurban**, University of Oklahoma, Norman, OK, United States  
**Herdy Ferraz Barbosa, Catarina**, Universidade Do Estado Do Rio De Janeiro, Rio De Janeiro, Brazil  
**Hutto, Andrew**, Daylight Petroleum, Houston, TX, United States  
**Karoussi, Omid**, Equinor, Stavanger, Norway  
**Khitam, Mohammad**, The University of Texas at Austin, Austin, TX, United States  
**Kongsumrit, Wilasinee**, PTTEP, Bangkok, Thailand  
**Konkaew, Pimpakarn**, PetroRes, Chiang Mai, Thailand  
**Lai, Hong Loong**, Gaia Earth Group, Kuala Lumpur, Malaysia  
**Lertsrisunthad, Punnya**, PTTEP, Bangkok, Thailand  
**Li, Xiaoqiang**, The University of Texas at Arlington, Arlington, TX, United States  
**Li, Ce**, Southwest Petroleum University, Sichuan Province, China  
**Mandal, Nabin**, IIT (ISM) Dhanbad, Dhanbad, India  
**Manral, Prateek**, IIT (ISM) Dhanbad, Dhanbad, India  
**May Piggott, Lynette**, The University of Texas at Dallas, Garland, TX, United States  
**Menezes Da Silva, Osmar**, ANP, Rio De Janeiro, Brazil  
**Meng, Li**, Yangtze University, Wuhan, China  
**Montero, Jose**, Advanced Logic Technology, Abingdon, Oxfordshire, United Kingdom  
**Moody, Mary Ann**, University of Texas at Arlington, Arlington, TX, United States  
**Mook, Bryant**, BAH, LLC, Cypress, TX, United States  
**Moore, Brandon**, University of Oklahoma, Norman, OK, United States  
**Mora, Miguel**, The University of Texas at Arlington, Arlington, TX, United States  
**Morgan, James**, Land Seismic Noise Specialists, Cypress, TX, United States  
**Nagem, Omar**, The University of Texas at Arlington, Arlington, TX, United States  
**Nunez, Miguel**, Capixaba Energia, Aracruz, Brazil  
**Nurpeiis, Assel**, Satbayev University, Astana, Kazakhstan  
**Oliveira, Reyson**, Universidade Do Estado Do Rio De Janeiro, São Gonçalo, Brazil  
**Paul, Pratyant**, IIT (ISM) Dhanbad, Dhanbad, India  
**Perdomo, Andrea**, University of Houston, Houston, TX, United States  
**Pirovolou, Dimitrios**, Weatherford, Katy, TX, United States  
**Podolyak, Max**, CoreLab, Kuala Lumpur, Malaysia  
**Powers, Hannah**, University of Texas at Arlington, Conroe, TX, United States  
**Rahimi, Shayan**, University of Texas Arlington, Arlington, TX, United States  
**Rahman, Razlan**, GeoSoftware, Seremban, Malaysia  
**Ruiz, Damian**, Williams, Katy, TX, United States

## Welcome New Members – October 16, 2025 – December 4, 2025

**Sampaio, Nycole**, Universidade Do Estado Do Rio De Janeiro, Rio De Janeiro, Brazil

**Santos, Marcio**, Universidade Do Estado Do Rio De Janeiro, Nova Iguaçu, Brazil

**Sayed, Mashael**, The University of Texas at Arlington, Bedford, TX, United States

**Shimells, Isobel**, University of Manchester, Brough, East Yorkshire, United Kingdom

**Silva, Rafaela**, Universidade Do Estado Do Rio De Janeiro, Rio De Janeiro, Brazil

**Soyuslu, Ali**, TP\_OTC, Ankara, Turkey

**Sukkee, Nisa**, PTTEP International Limited, Bangkok, Thailand

**Surawut, Laksanaporn**, PTTEP, Bangkok, Thailand

**Taghiyev, Yunis**, University of Texas at Austin, Austin, TX, United States

**Tazowar, Md Manshib**, The University of Texas at Arlington, Arlington, TX, United States

**Terrell, Chinwenwa**, Baker Hughes, Lanham, MD, United States

**Trindade, Guilherme**, UERJ, Rio De Janeiro, Brazil

**Tsiantis, Ioannis**, Energean, Marousi, Greece

**Visetnat, Krai**, PTTEP, Vibhavadi Rangsit Rd, Chatuchak, Bangkok, Thailand

**Waldo, Blake**, Impac Exploration Services, Edmond, OK, United States

**Yang, Songlin**, Southwest Petroleum University, Sichuan Province, China

**Yu, Kun**, Southwest Petroleum University, Chengdu, China

**Zare, Shima**, The University of Texas at Arlington, Arlington, TX, United States

**Zarudzki, Wojtek**, Cegal, Stavanger, Norway

**Zhan, Weichen**, The University of Texas at Austin, Austin, TX, United States

**Zhao, Haihua**, China University of Petroleum (East China), Qingdao City, Shandong Province, China

# SPWLA 67th Annual Logging Symposium Lake Conroe, Texas, USA, May 16–20, 2026

## Technical Program

### NOTE: Tentative Program

Paper order and content are subject to change due to withdrawals or program updates. All technical sessions will be held at the Margaritaville Lake Resort. Photography and video or audio recording are strictly prohibited in all areas, including technical sessions, workshops, and the exhibition hall.

### ADVANCED GEOSTEERING TECHNIQUES

#### **Advanced Well Positioning System With AI-Driven Telemetry for Geosteering Application: Transforming Relative Reservoir Mapping Into Absolute Field Accuracy**

Diogo Salim, Alex Trindade Neves, Lucas Vieira Oliveira, and Ligia Matos, SLB; Antonio Mainieri da Cunha and Silas da Rocha Roberto, Petrobras

#### **Advancing Precision and Efficiency Through Geosteering Automation: Automating Dip Analysis, Bed Boundary Mapping, and Well Placement While Drilling in Real Time**

Mohamed Fouda, Eduard Bikchandaev, and Ahmed Taher, Halliburton

#### **Geosteering in Ultra-Thin Reservoirs: High-Definition Boundary Mapping LWD for Precise Well Placement**

Mohamed Fouda, Halliburton

### ADVANCEMENTS IN MACHINE LEARNING AND AI FOR PETROPHYSICAL APPLICATIONS

#### **A Foundation Model for Well Logging: Pre-Training, Fine-Tuning, and Cross-Region Generalization**

Yan Liu, China National Logging Corporation; Jun Zhou and Juan Zhang, China National Logging Corporation and China University of Petroleum, Beijing; Xin Chen, Pin Li, Yuange Zhou, Zhengfa Yang, Yi Gao, Huikun Dong, and Yubo Liu, China National Logging Corporation

#### **AI-Augmented Reservoir Mapping Inversion Technique for Enhanced UDAR Resistivity Imaging**

George Bittar, University of Houston; Hsu-Hsiang (Mark) Wu and Dagang Wu, Halliburton; Jiefu Chen, University of Houston; Michael Bittar, Halliburton

#### **AI-Driven Inversion Framework for Ultrasonic Measurements in Underbalanced Coiled Tubing Drilling: Synthetic Data Validation**

Rand Alqahtani, Klemens Katterbauer, and Saleh Komies, Aramco

#### **Assessing the Reliability of VAE-Based Uncertainty Quantification for Shear Wave Velocity ( $V_s$ ) Prediction**

Amrit Krishn, IIT ISM Dhanbad

#### **Automatic Semantic Segmentation of Textures and Structures in Resistivity Borehole Images Using Deep Learning**

Rodrigo Bragato Piva and Paola Margareth Corpas Braga, WIISE

Vision; Vitor Pereira Matias, University of São Paulo (USP); Willian Andrighetto Trevizan and Camilla Quitan Bazzarella, Petróleo Brasileiro S.A.; Rodrigo Araújo Cardoso Dias, WIISE Vision; Rodrigo Salvador Monteiro, Fluminense Federal University (UFF); André Moreira Souza, University of São Paulo (USP); Marcos Vinicius Naves Bedo, Fluminense Federal University (UFF); Mirela Teixeira Cazzolato, University of São Paulo (USP)

#### **Beyond Conventional Rock Typing: A Well-Log-Driven, Machine-Learning Approach in the Unconsolidated Sands of the Tambaredjo Heavy Oil Field, Suriname**

Dharminderpersad Ramesar, Elias Acosta, Ralph Kariodimedjo, and August Nelson, Staatsolie Suriname

#### **Data-Driven Reservoir Characterization and Modeling: From Rock Typing to Unsupervised Machine Learning**

André Moreira Souza, University of São Paulo (USP); Paola Margareth Corpas Braga, WIISE Vision; Vitor Pereira Matias, University of São Paulo (USP); Rodrigo Bragato Piva, WIISE Vision; João Victor Lopes Pereira dos Santos and Mirela Teixeira Cazzolato, University of São Paulo (USP); Tanguy Lhomme and Christophe Gernay, EPSLOG; Iulian N. Hulea, Global Petrophysical Advisors B.V.

#### **Data-Efficient Transfer Learning for Fine-Scale Multiphase Flow Prediction in Porous Media**

Haotian Li, King Abdullah University of Science and Technology; Saideep Pavuluri and Harris Sajjad Rabbani, Hamad Bin Khalifa University; Bicheng Yan, King Abdullah University of Science and Technology

#### **Enhancing Accuracy and Generalization in Well-Log Interpretation via a Knowledge-Guided Large Time-Series Model**

Pin Li, Jun Zhou, Juan Zhang, Yan Liu, Yubo Liu, and Yi Gao, China National Logging Corporation

#### **Estimation of Petrophysical Properties From Laser Particle-Size Measurements: Applications to Permeability, Shale Volume, And Capillary Pressure**

Oriyomi Raheem and Carlos Torres-Verdín, The University of Texas at Austin; Chicheng Xu, OpenPetro AI

#### **Integrating Intelligent Steering and Continuous Surveying for Accurate 3D Trajectory Execution in Challenging Carbonate Formations**

Dania Issa, Halliburton

# Technical Program

## **Lithology Identification in Glutenite Reservoirs From Electrical Imaging Logs By Integrating Physical Constraints With Semi-Supervised Learning**

Wang Liang and Ai Yizhuo, Chengdu University of Technology

## **Low-Resistivity Pay Zones and Water Saturation Uncertainty: A Data-Driven Approach Using Machine Learning**

Sajjad Esmaeilpour, New Mexico Tech University

## **Machine-Learning-Based Depth Selection for Enhancing Wireline Formation Testing Efficiency in Complex Siliciclastic Reservoirs**

Kassem Kalife Nege, Artur Costa Sarmiento, Vitoria Gomes Pereira Flores, Henrique Antunes Padoves, Vinicius Veríssimo Nóbrega de Oliveira, and Frederico Silveira de Miranda, ENEVA

## **Optimizing Signal-to-Noise Ratio in NMR Logging: Implementation and Assessment of the FastICA Algorithm**

Paulo Roberto Alves Netto, Petrobras; Pedro Romero, Houston Christian University; Giovanni Stael, Observatorio Nacional

## **Unlocking Value From Historical Documents: Automated Raster Log Digitization Using Visual Language Models and Computer Vision**

Karim Rekik, Sohaib Ouzineb, Olfa Zened, and Ayoub Diouri, SLB

## **ADVANCES IN AUTOMATION FOR FORMATION EVALUATION**

### **Assessment of Directional Textural Heterogeneity via Integration of 3D Micro-CT-Scan and 3D Whole-Core-CT-Scan Images**

Pallavi Sahu, Fahid Abu-Salah, and Zoya Heidari, The University Of Texas At Austin

### **Automated Fracture Extraction for Highly Fractured Formations Across all Borehole Imaging Tools and Well Deviations**

Nadege Bize Forest, Daniel Quesada, Laure Su, Josselin Kherroubi, Martin Carles, and Peter Schlicht, SLB

### **Automated Multivariate Well-Log Normalization With Gaussian Mixture Modeling: Honoring Joint Log Properties and Geological Context**

Mason Edwards, Artur Posenato Garcia, Kevin Kaczorowski, Michael Cheshire, Luisa Crousse, Andrew Tipton, and Haijing Wang, Chevron U.S.A. Inc.

### **Automated Petrophysics for Real-Time Geosteering**

Yevgeny Karpekin, Zeyad Ramadan, Zoryana Snovida, Vikas Jain, and Egor Kovarskiy, SLB

## **Automating Geological Formation and Marker Propagation Using Self-Supervised Deep Learning: Application to the Powder River Basin**

Vanessa Simoes, Ben Hoffman, Per Irgens, and Shashin Sharan, SLB

## **Experimental Study of Using Agentic AI for Automatic Well-Log Data Quality Control and Quick-Look Interpretation**

Chicheng Xu and Yangjun Liu, OpenPetro AI; Guanliang Li, EnergyStacks AI

## **Fast Automated Pattern Recognition in Well Logs via Embedding Mappings for Object-Oriented Formation Evaluation**

Maria Fernanda Gonzalez-Garces, Carlos Torres-Verdín, Michael Pycrc, and Misael Morales, The University of Texas at Austin

## **High Performance Workflow for Automated Log Conditioning and Quality Control for Field-Scale Evaluation – From Months to Hours**

Mohammad Taghi Salehi, Jean-Etienne Jacolin, Sylvain Wlodarczyk, Vanessa Garnier, and Mahmoud Yassin, SLB

## **CARBONATES EVALUATION AND SPECIAL APPLIED TECHNOLOGIES**

### **A Novel Method for Evaluating Rock Strength Based on Microfracture Mechanics Using Rock Debris**

Cheng Meng, Xiangyu Fan, and Qiangui Zhang, Southwest Petroleum University

### **A Saturation Model for Pore-Vug-Fracture Systems Based on Equivalent Medium Theory**

Jie Tian, Liang Wang, and Yizhuo Ai, Chengdu University of Technology; Haibo Liao, China Petroleum Logging Co.; Gang Li and Tianhao Zhao, Chengdu University of Technology

### **Assessment of Directional Permeability Using Integration of NMR and Hydraulic/Electric Current Flow in Complex Carbonate Formations**

Dalma Arrieta, Zulkuf Azizoglu, Pallavi Sahu, and Zoya Heidari, The University of Texas at Austin

### **From Matrix to Karst: Multiscale Permeability Prediction for Dissolved Carbonates**

Perrine Baron, Emmanuel Caroli, Adrien Embs--Schneider, and Emmanuelle Poli, TotalEnergies; Lionel Degermann, Consultant

### **Implications of Lateral Vibrations on NMR Response in Presalt Carbonates, Santos Basin, Brazil**

Marcio Roque Coutinho, Larissa de Santana do Nascimento, Elisangela Cordeiro Pessoa, and Hugo Raphael Gomes Silva, Petrobras

# Technical Program

## **Log Characterization of Bitumen in Presalt of the Santos Basin – Brazil**

Valerio Picorelli Ladeira Dutra, Leonardo Gonçalves, Luma Botelho De Souza, Gabriel Do Nascimento Freitas, and Julia Campos Guerrero, Petrobras

## **Permeability Evaluation of Pore-Type Carbonate Reservoirs Based on Fractal Theory and Flow Units**

Gang Li, Liang Wang, Mingxuan Gu, and Yizhuo Ai, Chengdu University of Technology

## **Resolving Fluid Evaluation Dilemmas in Carbonate Reservoirs: A Novel Workflow Leveraging New-Generation Formation Testing**

Zhaoya Fan, SLB

## **CASEDHOLE LOGGING: EVALUATION AND SURVEILLANCE TECHNIQUES**

### **Analysis of a Pipe-Conveyed Pulse-Echo Ultrasonic Tool for Verification of Formation as a Barrier**

Andy Hawthorn, Baker Hughes; Sigrid Kramer and Laurent Delabroy, Aker BP; Roger Steinsiek and Mats Ingebretsen, Baker Hughes

### **Axial Bond Log Quality Control Indicators for Dual-String Barrier Evaluation**

Elizabeth Godoy, Sandip Bose, Amit Govil, and Kamaljeet Singh, SLB

### **Beyond Resolution Limits: A Practical Workflow for Quantitative Casing Damage Assessment Using Low-Frequency (250 kHz) Ultrasonic Logs**

Jia He and Hua Wang, University of Electronic Science and Technology of China; Wanying Li, China Oilfield Services Limited; Wenhe Wu, University of Electronic Science and Technology of China; Zhenyong Hou and Jie Zhao, China Oilfield Services Limited

### **Characterization of Cement Integrity in Wellbores Using Joint S0 and A0 Guided Wave Modal Analysis**

Yingyu Qi, Ruijia Wang, Jason Sun, Banerjee Somnath, Xiang Wu, and Yadong Wang, Halliburton

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Alhadi Zahmuwl, Susanna Dragotto, and Maurizio Civitarese, SLB; Augusto Zanchi, Stogit; Robert Loov, SLB

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Mingjun Xie, University of Electronic Science and Technology of China; Gulnara Golovatskaia, Aleksandr Potapov, and Dmitri Perelygin, JSC Research and Production Enterprise GITAS; Aleksandr Shumilov, Perm State University

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## **Next-Gen Electromagnetic Logging for Corrosion Monitoring in Chrome Alloys: Enabling Integrity in Sour Gas and CCUS Wells**

Mahmoud Saada, Fransiska Goenawan, Wael Ali, Richard Orta, and Rodolph Hebert, Halliburton

## **Petrophysical Insights From Casedhole Measurements to Support Field Redevelopment and Extended Exploration**

Zsuzsanna Winkler, MOL PLC

## **Precision Sand Control: Targeted Detection and Remediation of Screen Failures**

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Robert Laronga, SLB

## **Revealing Gas Potential in Half-Century-Old Wells by Advanced Pulsed-Neutron Logging Behind The Casing Case Study in Sichuan Basin, China**

Zuoan Zhao and Jizhi Zhang, PetroChina Southwest Oil and Gas Company; Kaixuan Li, Yanyan Chen, Liang Cai, and Jinlong Wu, SLB

## **Through-Tubing Cement Quality Evaluation in Multiply Cemented Wellstrings Using Selective Non-Harmonic Resonance**

Jim Jenkinson, Qinshan Yang, and Jinsong Zhao, GOWell International, LLC

## **Time-Lapse Gamma Ray – A Novel Framework for Flow Path Visualization and CO<sub>2</sub> Containment Assurance**

Terry O’Sullivan, Flow Path Visualization; Tom Bratton, Tom Bratton LLC

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Daiguo Yu and Jinlong Wu, SLB; Chao Yuan, PetroChina

### Formation Water Salinity in the Permian Basin – Reduce Uncertainty by Integrating Nuclear Spectroscopy Logs and Chemical Analysis of Core and Produced Water

Haijing Wang, Mehrnoosh Saneifar, Luisa Crousse, Michael Cheshire, Aygul Kostinovsky, and Bobby Kurniawan, Chevron U.S.A. Inc.

### Integrating Dean-Stark, Porous Plate, and MICP Data to Improve Hydrocarbon Saturation and Reserves Estimation in Complex Carbonate Reservoirs

Arfan Ali, Mohamed Abdou, Ibrahim Meer, and Gabor Hursan, Saudi Aramco

### Quantitative Evaluation of Reservoir Gas Content Using Full-Diameter Core Mobile NMR Scanning

Bai Sha, Shi Yujiang, Zhang Haining, Zhao Jianbin, Liu Peng, Cai Wenyan, Han Bo, and Fang Chaoqiang, China National Logging Corporation

### The Fundamental Flaws of the Waxman-Smiths and Dual Water Formulations, Part II – Model Fit to Partially Saturated Rocks

John Rasmus, Induced Polarization Dielectric Petrophysics

### Unifying Primary Drainage and Imbibition Saturation Height Modeling: Closing a Gap in Water Saturation Prediction

Iulian N. Hulea, Petrophysics EU

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Ying Zhou, Xin Nie, and Zhansong Zhang, Yangtze University

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Hussain Al Qatari and Adly Helba, Halliburton; Ramsin Eyvazzadeh, Aramco; Abraham Grader, Independent; Robert Gales, Halliburton

### Dynamic Visualization of Immiscible Fluid Displacement in Porous Media Using Near-Real-Time 4D Micro-CT

Zhaoyang Ma, Hongjin Yu, Ziyou Zhu, and Shiwei Wu, Nanjing University

### Integrating X-ray $\mu$ CT and Pore Scale Simulation for Capillary Pressure and Relative Permeability Estimation

Ronaldo Herlinger Junior, Benjamin Young, and Mark Knackstedt, Australian National University; Alexandre Campana Vidal, Unicamp

### Mechanisms and Modeling: A Digital Core Workflow for Electrical Properties and Saturation in Clay-Rich Shale

Zhou Feng, Hongliang Wu, Chaoliu Li, Han Tian, and Jun Yu, Research Institute of Petroleum Exploration and Development, PetroChina; Jiandong Zhen, Daqing Oilfield Exploration and Development Institute; Xuefeng Liu, China University of Petroleum (East China)

### Modeling of Grain Contacts for Determination of Elastic Properties and Seismics in Digital Rocks

Mike Marsh, Olga Lykhachova, Christian Hinz, Arne Jacob, Jens-Oliver Schwartz, and Andreas Wiegmann, Math2Market GmbH

### Petrophysical Characterization of Microporous Regions of Complex Carbonate Rocks Through Integration of Electrical Conductivity and Core-Scale Measurements

Dalma Arrieta, Zulkuf Azizoglu, and Zoya Heidari, The University of Texas at Austin

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Wen Xu, Ying Zhou, and Xin Nie, Yangtze University

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### Designing for Precision: Gauge Length and EBF Impact on DAS Measurements

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### Evaluation of Deployment Strategies for Low-Frequency Distributed Acoustic Sensors for Monitoring Hydraulic Fracture Propagation

Dan Hill, Peter Chauvel, and Ding Zhu, Texas A&M University

### Lossy Compression of Das Data via Wavelet Decomposition: Preserving Signal Integrity at Scale

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### Real-Time Wellbore Integrity Monitoring in CO<sub>2</sub> Injection Wells Using Distributed Temperature Sensing Data

Saida Machicote and Marco Pirrone, Eni S.p.A.; Tommaso Mantegazza, EniProgetti S.p.A.

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### **Advanced Characterization of Carbonate Reservoirs: Quantifying Pore Contributions With SDEM Models and Multiphysics Data**

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### **Influence of Salt Type and Concentration in Brine on the Multifrequency Dielectric Permittivity of Rocks With Complex Pore Structure**

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## **Interacting Conduction Model for Accurate Saturation Evaluation in Low-Resistivity Pay Microporous Carbonates**

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## **Modeling Water Saturation in Carbonates Using Staged Differential Effective Medium and Pore Combination Methods**

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## **Portable Laser-Induced Breakdown Spectroscopy (LIBS) for Accurate Lithium Quantification During Well Testing Operations**

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## **Revealing the Mystery of Characteristics of Fracture Gneiss Reservoir by the Integration of Advanced Logging Techniques, Case Study From East China Sea Basin**

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## **Saturation-Height Modeling from Drainage and Imbibition Capillary Pressure Data: Uncovering Saturation History and Structural Evolution**

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## **Water Invasion Characteristics Logging Analysis and Residual Gas Prediction Evaluation of Fractured Sandstone Gas Reservoir**

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**New Insights for Obtaining Accurate Formation Pressure Measurements in Complex Conglomerates and Tight Basement Reservoir – A Case Study From the Norwegian Sea**  
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## **Revealing the Invisible: Extending Fracture and Formation Evaluation in Carbonate Reservoirs Using 3D Sonic Imaging and Borehole Resistivity Imaging**

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## **$T_2$ - $T_2$ Relaxation Exchange NMR Reveals the Mechanism of CO<sub>2</sub> Adsorption-Induced Alteration of Wettability and Pore Connectivity in Coal Reservoirs**

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## **Correlation Between Thermal Conductivity and Elastic Wave Velocity in Quartz Sandstone and Unconsolidated Sand Packs**

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## **Effects of Wettability and Bottomhole Pressure on CO<sub>2</sub> Plume Spread and Saturation in Saline Aquifers**

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## **Electrical Property Alterations in Sandstone Induced by CO<sub>2</sub> and Associated Impurities**

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Guodong Jin, Walid K. Hussein, Hassan A. Marzooq, Hussam H. Banaja, and Hyung T. Kwak, Saudi Aramco

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Jennifer Market, Roland Chemali, and Lars Øy, Well ID; Luc Monteilhet, ConocoPhillips

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**An Automatic Spectral Drift Correction Method Based on Global Spectrum Matching for Formation Element Logging**  
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**Application of Two-Dimensional NMR  $T_1$ - $T_2$  Relaxometry for Fluid Typing in Deep Coalbed Methane Reservoirs**  
Bo Han, China Petroleum Logging Co., Ltd.

**Asia's First Microfrac Using Intelligent Wireline Formation Tester: Advancing Reservoir Evaluation Techniques in Greenfield Appraisal**

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Daria Spivakovska, Shell Global Solutions International B.V.; Glenn Donovan, Shell International Exploration and Production Inc.; Virginie Schoepf, Openfield; S. Prosvirkin, TGT; Alain Gysen, Interpretive Software Products; S. Baggio, Shell U.K. Limited

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Rahaf Jaizani, Rand Alqahtani, and Saleh Komies, Saudi Aramco; Sara Kellal and Panagiotis Kirmizakis, King Fahad University of Petroleum and Minerals

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**Naturally Fractured Reservoir Characterization Using Stoneley Reflections, Dipole Sonic Imaging, Integrated with Borehole Micro-Resistivity Image**

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**Pore Compressibility in Tight Rocks Using Mercury Injection, Ultrasonic Pulse Transmission, and Nuclear Magnetic Resonance: An Eagle Ford Case Study**

Nghiem Vuong, Tan Tai Vo, and Nhung N. H. Truong, The University of Oklahoma; Yashwanth Chitralla, BPX Energy; Chandra Rai and Son Dang, The University of Oklahoma

**Relative Permeability and Capillary Pressure of Tight Gas Sandstone by Integrated Centrifuge, Pulse-Decay, and NMR Measurements**

Jun Gao, Jinxun Wang, Moataz Abu Alsaud, and Hyung Kwak, Saudi Aramco

**Study of Underground Formation Density Measurement Based on X-Ray Source**

Yue Zhou, CNOOC; Meng Wang, Ya Jin, Jiajie Chen, and Quan Zhou, China Oilfield Services Limited

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**Automated Lithology Recognition in Drill Cuttings: From Global Context to Instance-Level Classification Using Vision Transformers**

Raounek Zeghdoud, Excellence Logging; Bruno Figliuzzi, MINES ParisTech; Aymeric-Pierre Peyret, Excellence Logging

**High-Contrast UV Fluorescence of Drill Cuttings Integrated With LWD Logs for Reservoir Description and Characterization**

Mahdi Ammar, SLB; Amjad Kharaba and Ahmed Fateh, Saudi Aramco; Mahdi Ammar and Marie Van Steene, SLB

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Pengfei Liang, Qingyun Di, Wenxuan Chen, Wenxiu Zhang, Xinghan Li, and Hong Li, Chinese Academy of Sciences

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Jun Zhu, Yong Die, Ting Yang, and Yuanshi Tian, China National Logging Corporation; Shanjun Li and John Zhou, Maxwell Dynamics

## **Precision Landing on the First Global Deployment of New Generation Multi-Depth Azimuthal Resistivity in Low-Resistivity Contrast Environment**

Ayman Khamry and Ramy Abdelkader, Saudi Aramco; Yazil Abbas, James Dolan, and Mike Bower, SLB

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### **Impact of Interfacial Tension and Contact Angle Uncertainties on J-Leverett Function: A Monte Carlo Approach Applied to the Mero Field Carbonate Reservoir**

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### **Optimizing 3D Subsurface Positional Uncertainty in Complex Multilateral Wellbores: Delivering Value Through Improved Reservoir Models and Enhanced Operational Efficiency**

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### **Rock Physics Framework for Clastic Reservoirs: Coupling Burial-Diagenetic Evolution and Clay-Sensitive Petrophysics for Fluid Discrimination in Tipam Sand, Northeast India**

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### **Uncertainty Evaluation of Reservoir Boundaries With Bayesian Well-Log Correlation**

Kilian Eichenseer, Durham University; Krishna Milani Simoes Silva, Petrobras; Matthias Sinnesael, Trinity College Dublin; Martin R. Smith and Andrew R. Millard, Durham University

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