



spwla today



NEWSLETTER

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DUBAI CHAPTER

General News

Dubai Chapter continues with online meetings during 2022. Anyone interested is welcome to visit our profile on LinkedIn SPWLA Dubai Chapter or email us at dubai@spwla.org to join our virtual events and ask any questions regarding our chapter.

As the Dubai Chapter says farewell to our VP Marvin Rourke, we also welcome the newest member of the board, Dr. Ihsan Gok, who will serve as IT Coordinator.

Recent Events

29 June 2022—The second presentation of 2022 was held. Mr. Gok conveyed the importance of production logging for wells that identify fluid entry points and diagnose problems in production. This very interesting and concise presentation garnered a few questions from the audience at the end.

SPWLA Dubai Chapter - Virtual Event
Technical Presentation (via Webinar)

'An Overview of Production Logging Tools (PLT) for Horizontal Wells'
Speaker: Dr. Ihsan Gok

Please join us for this SPWLA Microsoft Teams-Webinar
Date : Wednesday, 29th June 2022
Time : 5:00pm Dubai-UAE Time
Registration for the technical session event in the link below:
[Link](#)

SPWLA Dubai Chapter Sponsor
CONVEL

31 August 2022—Raghu Ramamoorthy presented “Towards a Petrophysically Consistent Implementation of Archie’s Equation for Heterogeneous Carbonate Rocks.”

SPWLA Dubai Chapter - Virtual Event
Technical Presentation (via Webinar)

'Towards a Petrophysically Consistent Implementation of Archie's Equation for Heterogeneous Carbonate Rocks'
Speaker: Raghu Ramamoorthy

Please join us for this SPWLA Microsoft Teams Webinar
Date : Wednesday, 31st August 2022
Time : 5:00pm Dubai-UAE Time
Registration for the technical session event in the link below:
[Registration Link](#)

Biodata of Speaker
Raghu Ramamoorthy is a consultant petrophysicist based in Abu Dhabi, UAE. Earlier until 2017, he was a petrophysics advisor to Schlumberger in the Middle East. He has over 38 years in the oil industry, mostly served with Schlumberger in various capacities. He has several patents on the interpretation techniques and logging technology and is widely published in the SPWLA, SPE, and AAPG. He has served on the Board of the SPWLA and is a recipient of the SPE Regional Award in Formation Evaluation. His current interests are in carbonate petrophysics, EOR, and the evaluation of tight gas reservoirs.

EAST CHINA CHAPTER

Recent Events

A series of academic exchanges were presided over by the East China Chapter of SPWLA (ECC-SPWLA) during June and July to promote the development of well logging and provide a communication platform for researchers. The ECC-SPWLA invited Professor Li Ning, Professor Han Dehua, and Dr. Zhang Chi to give talks. Their reports attracted innumerable relevant practitioners in borehole geophysics to attend the event and gave valuable comments.

25 July 2022—Professor Li Ning delivered a report on well-logging methods and processing software. Professor Li Ning is an academician from the Chinese Academy of Engineering who graduated from the China University of Petroleum (East China) in 1977. He, as the former Chief Expert of CNPC Research Institute of Engineering Technology, is specialized in borehole geophysics theory researching, building well-logging evaluation systems for complex reservoirs, and large-scale logging software development, where he also made outstanding contributions.



Professor Li Ning delivered a report at the Huangdao Forum.

Professor Li's report started with his personal experience with the NMR well-logging method. He mentioned that well logging is a field of intensive high-tech applications. To develop and expand the subject of well logging, first of all, the scholars must establish the concept that there is no distinction between subjects, and every subject is equally important. Secondly, scholars must pay attention to the research and development of the original core technologies, especially in the field of theoretical and methodological research.

In the next part of the report, he elaborated on how to develop and expand the well-logging subject. Professor Li showed his own insights and three suggestions. The first suggestion is to regard borehole geophysics as an independent subject and develop it. The second suggestion is to build two centers. One is the China petroleum exploration and production research institute, which is critical for theoretical method research, well-logging software development, and interpretation, and the other is CNPC logging Co., Ltd, which serves as the core of instrument manufacturing and oilfield service. The last suggestion is to build the third-generation well-logging instrument and software of CIFLog 4.0.



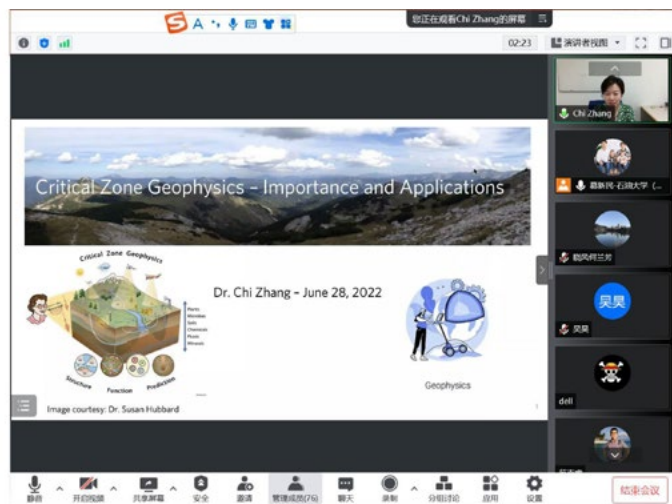
Teachers and students participate in the Huangdao Forum.

CIFLog is a large-scale logging processing and interpretation software platform developed by Professor Li, with completely independent intellectual property rights of CNPC Research Institute of Engineering Technology. According to Professor Li during his introduction, the most distinctive function of the software is the imaging logging processing method and the well-logging evaluation technology system for complex reservoirs. The software can achieve the high-definition imaging of electrical imaging logging in the whole borehole, which makes it at the world's leading level. Apart from the electrical imaging logging, the data processing method of CIFlog is in array acoustic imaging well logging, NMR, and formation element capture logging. In the aspect of oilfield block evaluation, the software realized the deep integration of single-well interpretation and oilfield multiwell evaluation, enabling the conventional multiwell evaluation to turn into a block risk exploration evaluation. Especially in the condition of horizontal wells, CIFlog made several breakthroughs in the key of horizontal well-logging data processing, such as fast-forward modeling of LWD, 3D horizontal well attribute modeling, and borehole environment

correction. At present, CIFLog has been widely used in more than 50 overseas operating areas of CNPC and 13 countries, such as Kazakhstan, Iran, and Sudan. More than 20,000 wells have been processed annually.

At the end of the report, Professor Li had some discussions with participants and took the development experience of CIFlog as an example to encourage us.

28 June 2022—Dr. Zhang Chi from the University of Vienna delivered an online report, namely the “Critical Zone Geophysics – Importance and Applications.” More than 200 people attended the online event. Dr. Zhang is a hydro-geophysicist studying complex fluid-rock interactions using geoelectrics, nuclear magnetic resonance, and modeling tools. Before joining the University of Vienna, she was an assistant professor in the Department of Geology at the University of Kansas. She is interested in studying the tightly coupled physical, chemical, and biological processes that govern the behaviors of geologic media and their constituent fluids (water, brine, CO₂, and hydrocarbons) on the microscale to macroscale. Currently, Chi studies water distribution, weathering, and geochemical fluxes in carbonate rocks.



Dr. Zhang Chi gave a presentation online.

Dr. Zhang's report starts with the role of geophysics in many scientific and societal challenges. Then, she introduced the critical zone geophysics. Moreover, she focused on the carbonated critical zone and its importance and introduced the advanced work on carbonate critical zone geophysics in her research group. Her report featured the importance and role of geophysical methods in the critical zone. Methods

have been extensively applied to the critical zone evaluation, including ground-penetrating radar, electromagnetics, nuclear magnetic resonance, electrical resistivity methods, self-potential methods, as well as distributed temperature sensing methods. Many case studies all over the world were presented to inform us on how to figure out the underground water content and its spatial distribution. At the end of the speech, Dr. Zhang also listed some remaining science questions which should be taken seriously. For example, where is the base of the critical zone in a karst system? How is the carbonate critical zone different in the Alpine region? How do lithology and rock-fluid interactions impact the subsurface architectures? What are the impacts of structural heterogeneity on flow and transport on a different scale? It was a fascinating report for teachers and students whose research is focused on the detection and evaluation of fossil fuels.

21 June 2022—Professor Han Dehua from the University of Houston gave an online lecture entitled “Geophysical Exploration of Oil and Gas Fields in Deep and Ultradeep Water.” Famous experts and scholars from China Petroleum University (East China) and China University of Mining and Technology attended the event. Professor Han Dehua is an internationally renowned petrophysicist who graduated from Stanford University and has been engaged in petrophysics research for more than 40 years. He has made numerous achievements in the study of the effects of porosity, fluid, etc., on the physical properties of rocks.



The online meeting in China University Petroleum (East China).

This was a wonderful lecture. Professor Han focused on oil and gas fields in deep and ultradeep water. His lecture had four sections with themes of scientific conceptions for complicated geosystems, seismic properties of shale resource rocks, evaluation of shale reservoirs, and exploration of hydrocarbon reservoirs in ultradeep. In the lecture, Professor Han explained the significance of exploring complex reservoirs and unconventional reservoirs. He also called on the current logging community to pay attention to geological knowledge and to focus on not only the present but also the past. After the lecture, the attending experts and scholars also exchanged their academic opinions and discussed with Professor Han the logging evaluation of complex reservoirs and unconventional reservoirs.

Complex and unconventional reservoirs are difficult and hot issues in petroleum exploration and development, which also pose a great challenge to the logging detection and evaluation technology. This lecture offered a favorable communication platform for industry peers to summarize their experiences and enhance the consensus. Moreover, this lecture is of great significance in promoting the rapid improvement of logging technology level and the development of the discipline.

Upcoming Events

3–5 November 2022—The 13th UPC International Symposium on New Well-Logging Techniques will be held in Qingdao. This symposium will focus on the frontiers and challenges of electric-logging technology and covers novel techniques in other logging methods.

Conference Topics:

1. LWD Electric Logging Technology and Geosteering Application
2. Simulation and Inversion of Electric Logging Data of High-Angle and Horizontal Wells
3. New Technology and Application of Electric Logging for Cased/Wireline Well
4. Crosswell or Borehole-Ground Exploration Methods With Electromagnetic Waves
5. The Application of Artificial Intelligence Technology in Well Logging
6. Advanced Petrophysical Measurements and Formation Evaluation
7. Other Well-Logging Technologies and Applications

Important deadlines:

- Abstract: September 15, 2022. Submit to gexinmin2002@upc.edu.cn.
- Final manuscript: October 15, 2022. Submit to leiwang1989@upc.edu.cn.

HOUSTON CHAPTER**General News**

The Houston Chapter of SPWLA successfully organized its board elections. We congratulate the newly elected 2022–2024 board members and thank/honor our outgoing board members.

SPWLA Houston continues to organize and support many exciting and fun activities for our members. Recently, we organized one technical seminar with **Bjørn Dybdahl** (Expro). The seminar was held online on June 23. We want to sincerely thank the speaker for his excellent talk. We thank all the attendees and participants for making the event successful and Q&A sessions lively and dynamic.

We are glad to continue our in-person events. A social networking event was also hosted in Houston on July 14. The entire SPWLA community was invited. The event was the last in-person social networking event hosted by the outgoing chapter board and the elected board.

We work diligently to bring the best speakers for you, and we are looking forward to seeing you again at our upcoming events and activities.

If you would like to receive notifications of upcoming events and chapter news, please register on the new SPWLA Houston Chapter website and follow us on LinkedIn. Additionally, there are multiple exciting sponsorship opportunities and job postings announced there. Please reach out to us in case you are interested or if you would like to receive additional information. As always, we are open to new speakers in our seminars, and we look forward to bringing other guests in addition to our SPWLA DS if the topic interests the petrophysics audience. Contact our VPs in case you have a presentation you would like to share.

Please stay tuned and check it out for upcoming news! As always, feel free to contact any of the board members if you have any questions or comments using our contacts included below.

Recent Events**SPWLA Houston Chapter June Lunch Seminar**

23 June 2022—SPWLA Houston Chapter recently organized a lunch seminar with **Bjørn Dybdahl** (Expro) titled

“Bridging the Gap Between Reservoir and Sample; Reducing Asset Development Risk by Using Downhole Mercury Trapping and Nonreactive Sampler for Trace Component Sampling.” We would like to thank Bjørn for presenting his work to our chapter members and other attendees who were interested in the topic.

SPWLA Houston Chapter Social Networking

14 July 2022—The Houston Chapter of SPWLA hosted a social networking event. The event was the last in-person social networking event hosted by the outgoing chapter board and the elected board. The entire SPWLA community was invited. Attendants had a great time meeting with chapter members, including experienced SPWLA members.

Upcoming Events

14 September 2022—Lunch Seminar and Lab Tour from 11:30 am–1:00 pm.

STRATUM RESERVOIR: SOLVING CO₂ SEQUESTRATION CHALLENGES**Speaker: Dr. Jennifer Adams (Stratum Reservoir)**

The presentation will be followed by a **30-minute tour** of the onsite Stratum labs for those interested in staying on. This activity includes a boxed lunch. This event is sponsored by STRATUM and has no charge for registration. However, you still need to register using the applicable links below.

Registration Link: <https://spwla-houston.org/seminar-detail.php?id=50>

More details are available on the Houston Chapter’s

website: <https://www.spwla-houston.org/>
and the Houston Chapter LinkedIn profile: <https://www.linkedin.com/company/houston-chapter-of-spwla/>.

Chamber	002		003		006		013	
	Type	Coated	Uncoated	Type	Coated	Uncoated	Type	Coated
Test duration (hours)		46	45	312	311			
Recovery in Gas		57%	97%	84%	77%			
Recovery in Lixiviant		41%	4.7%	5.8%	20%			
Recovery in Acid		0.8%	0.2%	0.2%	1.0%			
Overall Recovery		98%	102%	90%	97%			

- Chambers filled with mercury calibration gas
- Periodic sampling and analysis
- Total mercury recovered in drained gas calculated
- Empty chambers subsequently rinsed with lixiviant solution then an acid solution
- Lixiviant rinse recovered the majority of lost mercury
- Overall recovery close to 100%
- Requires use of harmful chemicals so not suitable offshore, but offers a potential cleaning tool

Bjørn Dybdahl (Expro) made his insightful technical talk online about bridging the gap between the reservoir and sample.