

October 2014

SPWLA Houston Chapter Newsletter

Luncheon meetings in October	
Northside Mon, Oct 6, 2014 Talisman Energy USA Inc. Suite 1200, 2445 Technology Forest Blvd, The Woodlands, TX 77381	Malleswar Yenugu, Ph.D., Ikon Science Americas Elastic, petrophysical, geochemical and micro-structural characterization of kerogen maturity for Green River shale
Westside Wed, Oct 10, 2014 BP Plaza Westlake 4	Mark G. Kittridge, HESS Corp Investigating the Influence of Mineralogy and Pore Shape on the Velocity of Carbonate Rocks: Insights from Extant Global Data Sets
Downtown Wed, Oct 14, 2014 Kinder Morgan	Cary Purdy, FEI Pore to Core Workflow for Improved Reservoir Characterization

Houston Chapter News

• Houston Chapter Donates \$ 50k to SPWLA Scholarship Fund

It is a day our chapter members should feel proud for ourselves. We are happy to report that, on Sep 3, 2014, SPWLA Houston Chapter has made a one-time donation of \$50k to the SPWLA Foundation to fund the Houston chapter scholarships, which supports students in Houston and nearby area. The SPWLA Foundation is a non-profit 501 (c) (3) foundation formed in 1985 exclusively for issuing scholarships and grants to pursue studies in the field of formation evaluation. SPWLA Foundation has expressed gratitude to the generosity of Houston Chapter members, and the donation will be mentioned in the Petrophysics Journal and at the SPWLA Symposium.

Our Houston chapter is a non-profit organization. Any profit generated from our business is used to raise awareness and promote petrophysics and formation evaluation among students and support SPWLA Scholarship Fund. We specially thank the support and patronage from Houston chapter members, sponsors and other companies over the years who helped made this donation possible.

SPWLA Upcoming Events

2014 SPWLA FALL TOPICAL CONFERENCE | Mineralogy and Elemental Composition: Measurement and Interpretation from Core Cuttings, Samples, and Logs | October 19-22, 2014, Fort Myers, Florida

SPWLA JAPAN CHAPTER 20th FORMATION EVALUATION SYMPOSIUM
October 1-2 2014 | JOGMEC-TRC, Chiba, JAPAN

SPWLA 56TH Annual Symposium | Long Beach, CA, July 18-22, 2015

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KINDER MORGAN

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President's Corner

Dear Chapter Members,

The Houston SPWLA chapter speaker luncheons have got off to a successful start in September, with three well attended meetings being conducted. The Northside speaker was Rick Reischman (Schlumberger) who presented on utilizing horizontal well logging information for completions optimization. This meeting was held at our new location at the Talisman building in the Woodlands. On the Westside Richard Bloemenkamp (Schlumberger) discussed the design of a new high definition, micro-resistivity imaging wireline tool and in the downtown venue Mark Kittridge (HESS) talked about the effect of pore shape and mineralogy on the velocity of carbonate rocks. I would like to thank all our presenters and attendees for their time and help along with BP, Kinder Morgan and Talisman for kindly hosting our events. Of course I would also like to thank our chapter VP's for getting this season off to a good start. Going forward we will have another three speaker meetings in October, as detailed in this newsletter.

We are currently finalizing the arrangements for the December software show and the details will be posted shortly. There will be an addition to the format this year to hopefully expand the range of topics covered and to provide everyone with an extra incentive to attend.

As always if your company is interested in sponsoring the Houston Chapter or one of our events then please contact our chapter treasurer (Zhipeng 'Z' Liu) for details treasurer@spwla-houston.org. Once again I would also like to encourage you to join the global SPWLA organization if you are not already a member. Remember, we always welcome your feedback and ideas and for more information on chapter events please visit our website.

Regards,
Matt Blyth
Houston SPWLA Chapter President



Matt Blyth
Houston Chapter President
president@spwla-houston.org

SPWLA Houston Chapter Officers 2014 – 2015	
President Matthew Blyth , Schlumberger president@spwla-houston.org	Treasurer Zhipeng (Z) Liu , Kinder Morgan CO2 treasurer@spwla-houston.org
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Useful links

[Houston Chapter
spwla-houston.org](http://spwla-houston.org)

[SPWLA International
spwla.org](http://spwla.org)

[Join SPWLA – become a
member](http://www.spwla.org/member/join)
http://www.spwla.org/member/join

[Houston Chapter
LinkedIn page](#)

[SPWLA Symposium 2015](#)

Northside Luncheon Meeting

Monday, Oct 06, 2014 | Lunch: 11:30 | Talk: 12:00

Elastic, petrophysical, geochemical and micro-structural characterization of kerogen maturity for Green River shale

Malleswar Yenugu, Ph.D., Ikon Science Americas

Successful exploration and production programs for organic rich shales depend mainly on the kerogen characterization, i.e. identification of kerogen content and its maturity. To better understand the hydrocarbon production from shales, a multi-disciplinary approach involving geology, geomechanics, geochemistry, geophysics, petrophysics, and rock physics plays an important role. This talk focuses on the links between petrophysics, rock physics, geochemistry and micro-structural imaging to understand the effects of artificial kerogen maturation on Green River shale sample. Organic rich Green River shale sample is subjected to anhydrous pyrolysis for artificial maturation by cooking it at 3500C for three days. Hydrocarbon induced cracks are visible on the sample. A weight loss of 11% is observed after maturation. Petrophysical analysis shows that bulk and grain densities increase after maturation. Significant amount of porosity is also developed in the organic matter after maturation. Elastic measurement results show decrease in the P-wave anisotropy (ϵ) after maturation. This indicates that hydrocarbon induced cracks have no significant effect on seismic velocities.

Malleswar Yenugu

Malleswar Yenugu is currently working as a senior reservoir geophysicist at Ikon Science Americas in Houston. He has a PhD degree in geophysics from University of Houston. He received MS (Geophysics) and BS (Physics) degrees from Andhra University in India. Malleswar worked as a reservoir geophysicist in India for more than five years before moving to US to pursue his PhD. He gained experience in seismic attribute analysis and reservoir characterization. His PhD dissertation is on how kerogen maturity affects the seismic properties for organic-rich shales. He also worked as a summer intern for Spyglass energy, Chevron, ExxonMobil and ConocoPhillips. He is a recipient of SEG, AAPG, SPE, PBGS and other scholarships from various societies. Malleswar was awarded a SPIRIT scholarship (2011) from ConocoPhillips and Global geoscience award (2012) from ExxonMobil. His research interests include rock physics, geomechanics and reservoir characterization.

Venue Details Northside

Talisman Energy USA Inc.
Suite 1200, 2445 Technology
Forest Blvd, The Woodlands, TX
77381

Parking: Parking Garage adjacent to the Talisman building. Visitor Parking available in 5th floor and above.

Reservations:
Email [Robin Slocumbe](mailto:Robin.Slocumbe@northvp@spwla-houston.org)
northvp@spwla-houston.org

RSVP by Fri Oct 3.

Cost: \$30.
Lunch is included.
Please use PayPal
([click this link to pay](#))

Student discount rate \$15
([Students use this link](#))



Westside Luncheon Meeting

Wednesday, Oct 8, 2014 | Lunch: 11:30 | Talk: 12:00

Investigating the Influence of Mineralogy and Pore Shape on the Velocity of Carbonate Rocks: Insights from Extant Global Data Sets

Mark G. Kittridge, HESS Corp.

Using a variety of recent public-domain data sets comprising porosity, velocity (P- and S-wave) and, in most cases, mineralogy and petrographic data, I created an extensive global data set and evaluated the importance of mineralogy and pore type on the elastic properties behavior of carbonate core plugs. Results from this investigation clearly illuminated the potential for overinterpreting elastic properties behavior as a function of pore type(s) when mineralogy is not explicitly included in the analysis. Rock physics analysis using a combination of heuristic and theoretical models illustrated that mineralogy exerted a significant additional variation on velocity at a given porosity. Failure to account for mineralogy exacerbated inferences about the effect of pore type(s) made using a comparison of P-wave velocity to an inappropriate empirical model (Wyllie) that did not account for pore shape(s). In this analysis, extreme variability in carbonate velocity was observed in only portions of two data sets, when mineralogy was explicitly considered and robust models that accounted for inclusion (pore) shape were used. Results from this analysis resulted in a recommended workflow, including a rock physics template and dry-rock modulus diagnostics, for the evaluation of lab-based carbonate rock physics data. The workflow was amenable to further integration with well-based data and other core-based petrophysical measurements (e.g., electrical properties).

Mark G. Kittridge is a Petroleum Engineer with more than 25 years' experience in Petrophysics, including well operations, integrated reservoir studies, enhanced oil recovery, and rock physics. Mark is currently Geophysics Manager – Physics of Rocks for HESS Corporation. Previously, he was Regional Discipline Lead (Petrophysics) and global Principal Technical Expert (QI Petrophysics) at Shell International EP Inc. Additional roles included Manager – Petrophysics and Rock Physics (ConocoPhillips) and VP Technology (Ikon Science). Mark earned an MSc. in Petroleum Engineering from The University of Texas at Austin (1988) and his BSc. and Professional degrees in Geological Engineering from The Colorado School of Mines (1986). Mark is the co-inventor of one US patent for the characterization of logging tool performance.

Venue Details Westside

BP Plaza Westlake 4
Townhall Room 107
200 Westlake Park Blvd
Houston, TX 77079

Reservations:

Email to [Rohollah A. Pour](mailto:Rohollah.A.Pour@westvp@spwla-houston.org)
westvp@spwla-houston.org

RSVP by Oct 7

Cost: Free

Lunch: not provided, bring your own or purchase in the BP cafeteria

Parking:

Visitor parking is available at Westlake 4 overflow lot



Downtown Luncheon Meeting

Wednesday, Oct 14, 2014 | Lunch: 11:30 | Talk: 12:00

Pore to Core Workflow for Improved Reservoir Characterization

Cary Purdy, FEI

Mineralogy and microstructure are key variables defining the physical properties of a rock. Rocks that have a heterogeneous mineralogy/microstructure will exhibit equally heterogeneous physical properties. For shale reservoirs quantifying mineralogy and microstructure permits more accurate determination of a variety of physical properties important to modeling production potential: e.g. organic versus inorganic porosity, permeability, brittleness etc...

Three recent technological advances have paved the way for routine, accurate microstructural characterization from the nanometer to meter scales: Ultrahigh resolution scanning electron imaging, automated mineralogy and 3D imaging (X-ray computed tomography (CT) and FIB/SEM analysis). When combined, data from these sources can be used to quantify shale at a resolution that is only now possible.

We present examples of integrating multi-scale 2D and 3D electron imaging with proven automated mineralogy algorithms to more accurately evaluate the mineralogy/microstructure of shale and other fine-grained reservoir rocks. This multi-scale multi-dimensional workflow also provides a pathway for upscaling observations in a repeatable and quantifiable way. Integration of mineralogical and microstructural data provides a unique opportunity to evaluate shale and other fine-grained reservoir systems with unparalleled fidelity.

Cary Purdy is Global Director Oil and Gas for FEI in Houston, Texas. He has almost 40 years in E&P. (This means he remembers when SPWLA stood for Society of Professional Well Log Analysts and the journal was named The Log Analyst.) Cary spent most of his career with The Superior Oil Company and then Mobil Oil after they acquired Superior. He has published numerous papers on a variety of subjects and holds several patents. He is a past President of the parent SPWLA and has also been an officer in the local Houston Chapter. He was an SPWLA Distinguished Speaker and received the SPWLA Distinguished Service Award. Cary holds degrees in Geology and Physics from Bowling Green State University.

Venue Details Downtown

Kinder Morgan

1st Floor Conference Rm
1001 Louisiana St
Houston, TX 77002

Reservations:

Email to [David Diaz](mailto:David.Diaz@downtownvp@spwla-houston.org)
downtownvp@spwla-houston.org

RSVP by Tue., Oct 13

Cost: \$30. Lunch is included.

Please use PayPal
([click this link to pay](#))

Students discounted rate
\$10 ([Link for students](#))

Parking: closest options:

- Travis Garage across milam, in front of Kinder Morgan
- Open Air parking between Kinder Morgan and Shell N 2



Dear Houston SPWLA Chapter Members,

The following training class will take place in Houston, on January 19-23. The instructor has kindly offered to make a donation from the course proceeds to the SPWLA Foundation in the name of the Houston SPWLA Chapter.

Integrated Petrophysics for Reservoir Characterization

Instructor: **Mark Deakin, PhD (Petrophysics)**

This course will teach you how to evaluate reservoirs and quickly identify flawed results. A carefully interleaved sequence of lectures, PetroDB-Vault demos, micro-practicals, movies and Excel workshops is presented to convey a flexible and very powerful petrophysical method. The Comprehensive Manual and Petrophysical Toolbox include templates for Quick Look Log Analysis and Essential Core-Log Integration.

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'The single most important course I have attended'
'An insightful and excellent presentation'
'Thank you so much Dr Mark!'
'An extremely practical and powerful course'
'Excellent lecturer, enthusiastic and knowledgeable...'
'...has a passion for his subject'
'THE LECTURER IS GREAT! I learnt things I could actually use!'
'...like having a Master Degree in just one week!'
'Mark is very knowledgeable and open to questions and new ideas from attendees of the course'

Venue & Details

**19-23 January 2015
(Mon through Fri)
8am- 4pm**

**Omni Hotel,
Riverway, W. Loop
610, Houston**

**Course Details &
Registration:**

[Click for Full Details](#)

**Advanced Registration
Required**

Space is Limited
(max 25)

For additional
information contact:

Dr Mark Deakin
PETROPHYSICS Pty Ltd

Tel: +61 416058 916

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