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# **SPWLA - Houston Chapter News**

# November 2010

## **November 2010 Luncheon Meetings**

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	Long and Short of It
	by Steve Crary, Schlumberger
Northside The Greenspoint Club Tuesday, November 16, 2010	Horizontal Wells: Where do we
	perforate?
	by Greg Praznik, Halliburton
<b>Downtown</b> Hess Office Wednesday, November 17, 2010	Construction of Reliable Static and Dynamic
	Multi-Layer Petrophysical Models in
	Camisea Gas Reservoirs, Peru
	by Ankur Gandhi, Anadarko

# SPWLA Houston Chapter 17<sup>th</sup> Annual Petrophysical Software Exhibition and Networking Event

### **Special Joint Luncheon Meeting of the SPWLA Houston Chapter**

The SPWLA Houston Chapter would like to invite your company to participate in the 17th Annual Petrophysical Software Exhibition and Networking Event.

This event highlights computer software, hardware, and services that aid and expedite interpretation by petrophysicists, geologists, and anyone else who processes or views logs. This exhibition is open to the 1470+ members of the local Chapter. A free lunch buffet will be provided for attendees.

The show will be held at the Omni Houston Hotel at Westside. This hotel is conveniently located at the intersection of I-10 and Eldridge Parkway on the west side of Houston near the western energy corridor.

Date: Thursday, December 9th, 2010

Time: 10:00 AM to 2:00 PM Location: The Omni Hotel

13210 Katy Freeway

Houston, Texas 77079 Phone: (281) 558-8338 Fax: (281) 558-4028

\$400.00

Cost:

Payments can be made by check or credit card at the time of the

event. Credit card payment may be taken in advance over the

phone.

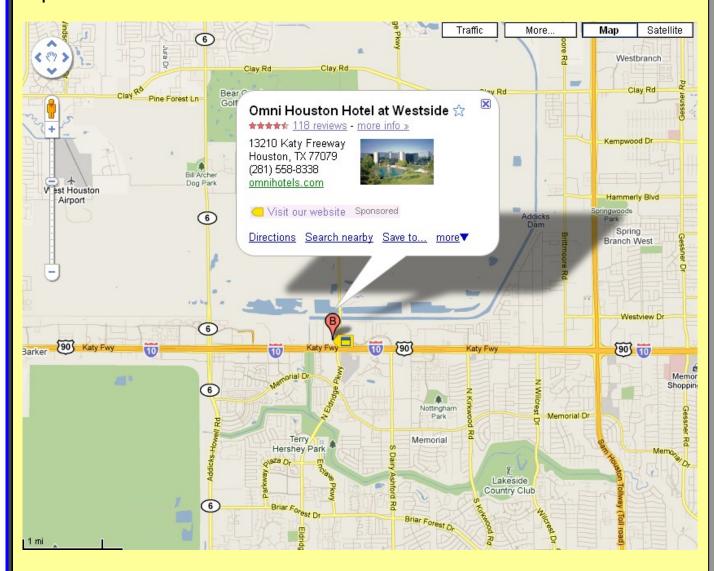
### SPWLA Houston Chapter News - November 2010

### 17<sup>th</sup> Annual Petrophysical Software Exhibition and Networking Event (continued)

Website: http://www.spwla-houston.org/pages/events.htm

Please, let Loren Roberts know if you plan to participate <u>secretary@spwla-houston.org</u>. If you have any questions, please contact Loren Roberts or the Chapter President, Jesus Salazar <u>president@spwla-houston.org</u>

### Мар:



Want to contribute to the SPWLA Houston Chapter Newsletter?
Contact: Thaimar Ramirez at ramirtr@conocophillips.com

## **President's Corner**

### November 2010

Dear Members,

In the booming time of Facebook, Twitter, and YouTube, social networking has taken off as the new way to keep in touch with friends, share ideas, hobbies, discussions, and even to find a job. We don't want to fall behind that trend and last year we created the SPWLA Houston Chapter group in <a href="http://www.linkedin.com/">http://www.linkedin.com/</a>. So, I encourage our members to join the group and connect with peers or pass on that job that some company or recruiter is advertising to anyone of us.

As the year is winding down, we would like to invite you to the 17<sup>th</sup> Annual Petrophysical Software Exhibition and Networking event, which is our year end gathering. The show will be held at the Omni Westside Hotel, conveniently located in the Energy Corridor. The exhibition is a great opportunity to check out the latest updates in petrophysical software and to hang out with our peers in a professional and friendly environment. So, mark your calendar for December the 9<sup>th</sup>, around noon.

On a side note, I would like to thank those who attended the 4<sup>th</sup> Annual Golf Tournament last October 8<sup>th</sup> at the Cinco Ranch Country Club. It was a great success with 60 participants in a spectacular day, the weather couldn't have been better than that. I also want to thank our sponsors and volunteers that made this event possible. Way to go to Loren and Alexander who took the lead as organizers.

This November we will be treated with three excellent talks during the luncheon seminars. Please, make sure you save your seat before it sells out. There will not be any luncheon seminars during December since all our efforts is on the Software Exhibition and Networking event.

For more information about the luncheon seminars, Petrophysical Software Exhibition and Networking event, and any other Chapter's activities check our website <a href="http://www.spwla-houston.org/index.shtm">http://www.spwla-houston.org/index.shtm</a>

Jesús M. Salazar Houston Chapter President

# **Westside Luncheon Meeting**

BP Plaza Terrace Room, 1<sup>st</sup> floor next to the cafeteria 501 Westlake Park Boulevard, Houston, TX 77079

Parking: BP Plaza Garage Lunch: 11:30 Talk: 12:00

Wednesday, November 10, 2010

Magnetic Resonance Applications – The Long and Short of It

by Steve Crary, Schlumberger

RSVP Alexander Kostin before 3:00 p.m. Tuesday, November 9

westvp@spwla-houston.org

### **Abstract**

Magnetic Resonance (MR) has been used to solve a number of log analysis problems. The first problem was the determination of oil-water contacts in a low-contrast formation from the Middle East. The problem was complicated by low free fluid (which reduces the signal from the formation oil) and deep invasion of oil-base mud filtrate. The solution utilized 3D NMR interpretation of diffusion from the deepest reading part of the measurement and required stationary measurements.

The other side of the problem was the need to quickly acquire MR data over long intervals of exploration wells. This utilized Bound Fluid (BFV) logging techniques, which were complicated by the relatively long BFV cutoffs for this area. The solution was to fine tune the fast BFV acquisition and processing which allowed this data to be acquired in combination with the initial density – neutron – resistivity acquisition. Our examples showed that Fast BFV acquisition maximized the value from MR logging by minimizing data acquisition time.

### **Biography**

**Steve Crary** is Petrophysical Advisor for Schlumberger Oilfield Services in Sugar Land TX. He started with Schlumberger in 1975 and has held various positions around North America, Russia, and the Middle East.

# **Northside Luncheon Meeting**

The Greenspoint Club 16925 Northcase Drive,

Houston, TX 77060

**Price:** \$30 (with reservations)

**Lunch:** 11:30 **Talk:** 12:00 Tuesday, November 16, 2010

Horizontal Wells: Where do we perforate?

by Greg Praznik, Halliburton

RSVP Loren Roberts before 9:00 a.m. Tuesday, November 16

secretary@spwla-houston.org

### Abstract

In the initial stages of the development of shale plays, extensive evaluation of the vertical pilot well is necessary. Volumes of hydrocarbon in place determine if the play is economical and Mechanical Rock properties for fracture design are computed. From the vertical well the "Sweet Spot" is identified for placement of the horizontal. After the horizontal well is drilled, it is assumed that geological conditions do not change over the lateral and a sequence of stages for hydraulic fracturing are designed based on information obtained in the vertical well evaluation.

This presentation will show that the horizontal lateral does not have consistent properties and that by utilizing pulsed neutron technology modeling of the horizontal, we can identify proper fracture initiation points, type and amount frac fluid, and type and amount of proppant.

### **Biography**

**Greg Praznik** started with Schlumberger Offshore Services in 1970. He has worked as a field engineer, sales engineer, offshore service manager, district manager, and senior sale engineer in Morgan City, Larose, Belle Chasse, Houma, Lake Charles, Lafayette, New Orleans, LA and Houston, Texas handling open-hole and cased-hole services. Greg joined Acutec Logging Company and developed the Shell and Mobil Dipole Sonic research tools to production models and sold them to Baker Atlas. He moved to Halliburton as an Account Representative in Logging Sales in 1997, and then joined Computalog Logging Services in 2001 as a Sr. Sales Engineer. Greg moved again back to Halliburton in 2007 as logging services representative on the Tech Team. He has served as Westside VP and Treasurer for the Houston chapter of the SPWLA. He also served as VP, Chairman and board member of the Spindle Top chapter of the SPE and Board member of the Houma Chapter of SPE. Greg graduated from the University of Mo. at Rolla in 1970 with a degree in Petroleum Engineering.

# **Downtown Luncheon Meeting**

Hess Conference Center Room 330, check-in at security 500 Dallas Street Houston, TX 77002 Lunch: 11:30 Talk: 12:00

Wednesday, November 17, 2010

Construction of Reliable Static and Dynamic Multi-Layer Petrophysical Models in Camisea Gas Reservoirs, Peru by Ankur Gandhi\*, Carlos Torres-Verdín, and Ben Voss, The University of Texas at Austin
Johnny Gabulle and Federico Seminario, Pluspetrol Peru S.A.
\*now with Anadarko
RSVP Randy Mitchell before 3:00 p.m. Tuesday, November 16
ramitchell@hess.com

### **Abstract**

Estimation of static and dynamic petrophysical properties of multi-layer hydrocarbon reservoirs is crucial for the assessment of storage and flow capacities, compartmentalization, and for best primary or enhanced recovery practices. Interactive numerical simulation to reproduce field logs and core data is a reliable procedure to estimate static and dynamic petrophysical properties of complex rock formations.

Previously, Voss et al. (2009) introduced the concept of Common Stratigraphic Framework (CSF) to construct and cross-validate multi-layer static/dynamic petrophysical models by invoking the interactive, numerical simulation of well logs both before and after invasion. In this talk, we will be showing the successful implementation of the CSF concept to examine and quantify the effects of mud-filtrate invasion on apparent resistivity, nuclear, and magnetic resonance logs acquired in San Martin, Cashiriari, and Pagoreni gas fields in Camisea, Peru. Conventional petrophysical interpretation methods yield abnormally high estimates of water saturation in some of the reservoir units that produce gas with null water influx. This anomalous behavior is due to relatively low values of deep apparent electrical resistivity, and has otherwise been attributed to the presence of clay-coating grains and/or electrically conductive grain minerals. On the other hand, electrical resistivity logs exhibit substantial invasion effects as evidenced by the separation of apparent resistivity logs (both LWD and wireline) with multiple radial lengths of investigation. In extreme cases, apparent resistivity logs stack because of very deep invasion. We diagnose and quantify invasion effects on resistivity and nuclear logs with interactive numerical modeling before and after invasion. The assimilation of such effects in the interpretation consistently decreases previous estimates of water saturation to those of irreducible water saturation inferred from core data. It is shown that capillary pressure effects are responsible for the difference in separation of resistivity curves in some of the reservoir units.

The final multi-layer CSF is in agreement with gas production measurements and permits reliable flow predictions to assist in reservoir engineering and production studies.

This work reported in this presentation was part of Ankur Gandhi's M.Sc. research project at the University of Texas at Austin. The speaker is obliged to Pluspetrol and the Camisea Consortium, which consists of Hunt Oil Company, SK Energy Co. Ltd., Tecpetrol, and Sonatrach Oil and Gas Group, for providing the data used in the case studies and for their permission to publish the results.

### **Biography**

Ankur Gandhi is currently a petrophysicist working for Anadarko Petroleum Corp. in the Woodlands, Texas. He has a B.Tech. degree in Petroleum Engineering with honors from the Indian School of Mines, India. For 2 years, he worked in the oil and gas industry as a logging engineer followed by a reservoir engineering position. He worked on various onshore and deep-water offshore projects and was responsible for one of the major gas discoveries in India. Later on, he obtained a M.S. degree in Petroleum Engineering from The University of Texas at Austin. He is the author of two technical papers and co-author of one technical paper. Ankur's interests include formation evaluation, well testing, application of forward and inverse modeling techniques in the oil and gas industry, and reservoir engineering.