Houston Chapter Officers
2013 – 2014

President
MATTHEW BLYTH
Schlumberger
president@spwla-houston.org

Vice President – Northside
ROBIN SLOCOMBE
Schlumberger
northvp@spwla-houston.org

Vice President – Westside
SHUJIE LIU
BP America
westvp@spwla-houston.org

Vice President – Downtown
MICHAEL ASHBY
Apache Corporation
downtownvp@spwla-houston.org

Treasurer
ZHIPENG (Z) LIU
Kinder Morgan CO2
treasurer@spwla-houston.org

Secretary
CHUN LAN
ConocoPhillips
secretary@spwla-houston.org

Editor
REBECCA NYE
Weatherford
editor@spwla-houston.org

Webmaster
CHICHENG XU
BP America
webmaster@spwla-houston.org

SPWLA – Houston Chapter News

November, 2013

Luncheon Meetings

Northside **Mon, Nov 4, 2013** **The Greenspoint Club**	**Integrated Evaluation of Unconventional Reservoirs From a Petrology Prospective** By Ryan McLin, Schlumberger.
Downtown **Friday, Nov 15, 2013** **Kinder Morgan**	**A New Nuclear Logging Method to Locate Proppant Placement in Induced Fractures** By Harry D. Smith Jr.- CARBO Ceramics, Inc.
Westside **Wed, Nov 13, 2013** **BP Plaza Westlake 4**	**Kerogen Content and Mineralogy from DRIFTS Analysis of Cuttings or Core** By Michael Herron, Schlumberger

Local SPWLA Upcoming Events

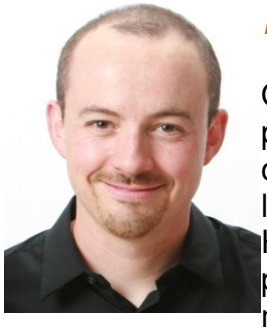
Houston SPWLA Technology Show
December 9, 2013 10 am – 2 pm
Kinder Morgan, Downtown
Event Sponsors needed, contact ZHIPENG (Z) LIU treasurer@spwla-houston.org

55th Annual SPWLA Symposium
May 18th to 22nd
Abu Dhabi, UAE

Complete Calendar of Events

President's Corner

November, 2013



Dear Chapter Members,

October again saw three well attended speaker luncheons. The Northside presented a talk on completion optimization in the Eagle Ford, delivered by our Northside VP Robin Slocombe. The Westside presented a talk NMR logging in unconventionals, delivered by Dr. Songhua Chen with Halliburton and Downtown presented a talk on comparing grainsize, porethroat and permeability measurements from different conveyance methods, delivered by Nick Harvey with Harvey Rock Physics. Once again I would like to thank all those who attended and helped to support the activities of the chapter.

Preparations are now well underway for the 2013 Software Show. This will take place on December 9th at the Kinder Morgan building, Downtown. The show will open at 10am, with free and entry and free lunch so come on by! Details are available on our website. A very large thank you to Kinder Morgan for kindly allowing us the use of their conference facilities for the event. We are also planning the golf tournament and the 2014 spring topical conference and as mentioned in last month's letter these events take considerable time and resources to plan and execute and if you are interested in volunteering to help us with one or more then please let me know.

You may also have seen the recent email about a Petrophysics training class being put on by Petrophysics Pty Ltd. in Houston in January. This is not a SPWLA course but the course instructor has very kindly offered to make a donation of 10% to the SPWLA foundation to encourage attendance from members of our local chapter who may be interested. Details can be found at http://www.petrophysics.net/training/iprc-course/

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 thank you to all those that attended our October speaker sessions and I looking forward to seeing you all (and more) back again in November and at our software show in December. Remember, we always welcome your feedback and ideas and for more information on chapter events please visit our website www.spwla-houston.org .

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

Thank you to our sponsors!!!

ALLIED WIRELINE

TRAINING THAT IS INDUSTRY DIRECTED.
www.petroskills.com

HALLIBURTON

REDEFINING FORMATION EVALUATION
Paradigm™ Geolog®7
Paradigm

Weatherford®

Schlumberger

RESTECH
Reservoir Evaluation Services
Evaluating Unconventional Reservoirs Since 1984

bp

Saudi Aramco
Now Hiring Petrophysicist

BAKER HUGHES

Chevron
Human Energy™

There's still time to add *YOUR company* ad.

Northside Luncheon Meeting

Date: Monday, November 4th, 2013
Lunch: 11:30 Talk: 12:00
Reservations: Email Robin Slocombe
RSVP before NOON, Friday November 1st
Place: The Greenspoint Club,
16925 Northchase Drive, Houston, TX 77060
Parking: Visitor parking is available in the parking lot below the Greenspoint Club
Cost: $35 (please use PayPal)
Lunch is included.

Integrated Evaluation of Unconventional Reservoirs from a Petrology Prospective

Presenter: Ryan McLin, Schlumberger.

Abstract

One of the largest challenges faced with the characterization of unconventional reservoirs is the fact that they are heterogeneous and anisotropic. This heterogeneity occurs at multiple scales (basin, well field, log, core, sample, pore) and needs to be characterized in an effective and efficient manner to build scale relationships. An integrated workflow identifies log scale heterogeneity (Heterogeneous Rock Analysis) and combines it with core scale heterogeneity as a template for reservoir characterization at these scales. Using these relationships between core and log scales allows for the development of a representative sampling strategy for physical and digital core analysis. This provides a basis for propagating measured properties beyond the cored interval and into the field- and basin- scale.

Petrological evaluation of unconventional reservoirs is critical in providing an interpretation of data gathered at the sample- and pore- scale and to isolate key textural features that affect reservoir and completion quality. One example is to characterize the nature and distribution of organic matter and correlate with reservoir properties (i.e. porosity, permeability, hydrocarbon generation, and strength). Another example is in the assessment of mineralogy, texture, and fauna types to determine depositional environments and associated diagenetic lithofacies. Some of the key tools and techniques used in petrological evaluation will be covered in this lecture, as well as newly developed products for cost effective and innovative reservoir characterization.

Biography

Ryan McLin is the Senior Geologist, Petrology Manager and DRIFTS Product Champion at the Schlumberger Reservoir Laboratory in Houston. He began his career in the environmental industry in 1999 as a Soils Laboratory Technician and moved to support the oilfield industry in 2005 when Ryan began working as a geologist at TerraTek in Salt Lake City, UT. Ryan has a BS and MS degree in geology from New Mexico Institute of Mining and Technology.

Downtown Luncheon Meeting

Date: Friday, November 15th, 2013
Lunch: 11:30 Talk: 12:00
Reservations: Email Michael Ashby
RSVP before NOON, Friday October 11th
Place: We have changed location – Kinder Morgan – First Floor Conference Room
1001 Louisiana St Houston, TX 77002
Cost: $30 (includes lunch*) Please, use PayPal.

A New Nuclear Logging Method to Locate Proppant Placement in Induced Fractures

Presenter*:* Harry D. Smith Jr. - CARBO Ceramics, Inc.

Abstract

Traditional proppant placement evaluation in hydraulically induced fractures utilizes detection of radioactive tracers such as iridium 192, scandium 46 and antimony 124, which are manufactured in nuclear reactors, and then shipped to the wellsite and pumped downhole with the frac slurry. Although this technique has proven useful, it involves environmental, safety, and regulatory concerns/issues. Recently a new technology has become available that offers a viable alternative to radioactive tracers, and with these concerns/issues eliminated. The new technology utilizes a non-radioactive ceramic proppant that contains a high thermal neutron capture compound (HTNCC). This high thermal neutron capture compound is inseparably incorporated into each ceramic proppant grain during manufacturing in sufficiently low concentration that it does not affect any proppant properties. The non-radioactive tracer proppant (NRT) taggant is detected using standard pulsed neutron capture tools (PNC) or compensated neutron tools (CNT), with detection based on the high thermal neutron absorptive properties and/or capture gamma ray spectral properties of the tagged proppant relative to other downhole constituents. The presence of proppant is indicated from: (1) decreases in after-frac PNC and/or CNT detector count rates relative to corresponding before-frac count rates, (2) increases in PNC formation and borehole component capture cross-sections (Σ_{fm} and Σ_{bh}), and/or (3) increases in the PNC derived elemental yield of the neutron-absorbing tag material, computed from the observed capture gamma ray energy spectra. In some applications, enhancements to these methods have also been developed to eliminate the requirement for the before-frac log. Monte Carlo modeling data and several field examples will be given in this presentation which demonstrate the viability of both the PNC and CNT non-radioactive tracer proppant detection technologies.

Biography

Harry D. Smith Jr. is sole proprietor of Harry D. Smith Consulting. Harry was employed in Halliburton R&D for 28 years, during the last seven of which he was the Director of HES Research. He worked in Texaco Logging Research for 10 years prior to joining Halliburton. Harry was selected as an SPE Distinguished Lecturer twice, and has three times been an SPWLA Distinguished Speaker. He has been president of the Houston SPWLA chapter and a member of the SPWLA Board of Directors. He is the first person in SPWLA to have received both the Distinguished Technical Achievement Award and the Gold Medal for Technical Achievement. Harry has had numerous SPWLA and SPE publications and has 90 issued US Patents, including three US Patents assigned to CARBO Ceramics dealing with the use of non-radioactive tagged proppant to locate induced fractures in downhole formations. He also holds basic patents in the fields of carbon/oxygen logging, pulsed neutron capture logging, density and neutron logging, and natural gamma ray and tracer spectroscopy logging.

Westside Luncheon Meeting

Date: Wednesday, November 12th, 2013 PLEASE NOTE REVISED DATE
Lunch: 11:30 Talk: 12:00
Reservations: Email Shujie Liu
RSVP before NOON, Tuesday November 12th
Place: We have changed location -- BP Plaza Westlake 4– Townhall Room 107
200 Westlake Park Boulevard, Houston, TX 77079
Parking: Visitor parking is available at Westlake 4 overflow lot
Cost: Free
Lunch is not provided, bring your own or purchase in the BP cafeteria.

Kerogen Content and Mineralogy from DRIFTS Analysis of Cuttings or Core

Presenter*:* Michael Herron, Schlumberger

Abstract

Diffuse reflectance infrared Fourier transform spectroscopy (DRIFTS) has recently been introduced and is currently being evaluated as a rapid, robust, and efficient technique for simultaneously quantifying kerogen and mineralogy from core and cuttings samples both in the laboratory and at the wellsite. The technique quantifies mineralogy and kerogen content by measuring the vibrational frequency of chemical bonds. Core and cuttings samples from wells in unconventional reservoirs in North America were analyzed using standard processing that solves for kerogen, illite plus smectite, kaolinite, calcite, dolomite, and quartz plus feldspars. Samples were also analyzed for mineralogy by the more accurate transmission dual range Fourier-transform infrared spectroscopy technique and for total organic carbon (TOC) by Leco/coulometry, and results for both mineralogy and TOC compare very well. The DRIFTS hydrocarbon signal is due to the C¬¬–H bond vibrational modes of aliphatic hydrocarbons. This signal decreases in magnitude faster than the TOC decreases as kerogen matures. As a result, the ratio of TOC to the DRIFTS signal is presented as a new estimate of organic maturity that is shown to usually agree well with estimates from vitrinite reflectance or Tmax.

Biography

Dr. Michael Herron is a scientific advisor in the Reservoir Geosciences Department at Schlumberger-Doll Research. He has a BA in chemistry from the University of California at San Diego and a PhD in geology from the State University of New York at Buffalo. He has spent thirty years in oil and gas research focusing on sedimentary geochemistry, petrophysics and mineralogy. He helped develop spectroscopy applications such as SpectroLith as well as laboratory mineralogy methods such as dual range Fourier transform infrared spectroscopy. He is a member of SPE, SPWLA, AGU, and AAPG.

Petrophysics Training Opportunity

INTEGRATED PETROPHYSICS FOR RESERVOIR CHARACTERIZATION

Instructor: Mark Deakin, PhD (Petrophysics)
13-17th January 2014
Omni Hotel, W. Loop 610, Houston

Course Outline

This course will teach you how to evaluate reservoirs and quickly identify flawed results. Presents a carefully interleaved sequence of lectures, PetroDB-Vault demos in IP, micro-practicals, movies and Excel workshops to convey a flexible and very powerful petrophysical method. Includes templates for Quick Look Log Analysis and Essential Core-Log Integration.

Full Course Description & Registration http://www.petrophysics.net/

Class Instructor has kindly offered to donate 10% of the proceeds to the SPWLA Foundation