PRE-REGISTRATION BROCHURE

58th ANNUAL SYMPOSIUM
Society of Petrophysicists and Well Log Analysts
June 17-21, 2017
The information in this brochure may change as planning progresses, and it is recommended that delegates check the symposium website www.spwla2017.com, for updates.

Contact

SPWLA
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The Society of Petrophysicists and Well Log Analysts was founded in 1959 in Tulsa, Oklahoma in the middle of the booming oil and gas era in the United States. The international board of directors of the SPWLA elected to return to its state of origin nearly 60 years later to share and contribute to the technology advancements and new practices to help provide safe and affordable energy to the global population that is accustomed more and more of its comfort.

The 58th SPWLA Annual Symposium is located in Oklahoma City, Oklahoma in the heart of the US. Centrally located and home to many small and big size oil and gas companies and service companies it is a perfect location to join the most renowned event of the year for petrophysics, formation evaluation and reservoir exploration and exploitation.

Oklahoma is one of the pioneer states in the United States of America for oil and gas exploration. The first commercial well drilled in Oklahoma was the “Nellie Johnstone No. 1” on April 15 1897. It was also one of the first wells that was “shot”. “Shooting” had been used since 1859 in Pennsylvania to stimulate production. Liquid nitroglycerin was poured into a metal canister – or “torpedo” – and lowered into the well. Then the “go devil” detonating device got dropped down the well bore to set off the waiting nitroglycerin. This technology was the forefather of modern day “fracking” with the ultimate goal of improving well production.

Oklahoma is still today one of the most active states in oil and gas production in the USA. It has the second most rig counts in the US after Texas.

We look forward to have you share the excitement on June 17 to June 21st 2017 at the Cox Convention Center in Oklahoma City’s vibrant Bricktown district for a successful event filled with opportunities to expand your network and knowledge through technical presentations, technical workshops and exhibitions of state-of-the-art technologies.

On behalf of the SPWLA Oklahoma chapter and the organizing committee, we would like to welcome you to Oklahoma City Oklahoma!
Symposium Highlights ............................................................... 5
Sponsors and Exhibitors ............................................................ 6
General Information ............................................................... 7
Speaker’s Breakfast ............................................................... 7
Technical Program ............................................................... 8-13
Technical Committee ............................................................ 14
Workshops ............................................................... 15-17
Field Trip ............................................................... 18-19
Society Functions / Social Events ............................................. 20
Spouse / Guest Information .................................................... 21-22
Hotel Accommodations ......................................................... 23
Registration Information ......................................................... 24-25
Registration Form ............................................................... 26
Board of Directors ............................................................... 27

Cox Convention Center
1 Myriad Gardens, Oklahoma City, Ok 73102
Phone: (405) 602-8500
Fax: (405) 602-8505
Email: info@coxconventioncenter.com

Area Airport
Will Rogers World Airport - OKC
SYMPOSIUM HIGHLIGHTS

All functions will be held in The Cox Convention Center unless otherwise indicated. Please confirm exact location and timing prior to event from information available at registration.

Saturday, June 17
Registration  7:00 a.m. - 5:00 p.m.
Field Trip  7:30 a.m. - 7:30 p.m.
Workshop 1 – CORE ANALYSIS BACK TO BASICS  8:00 a.m. - 5:00 p.m.
Workshop 2 – RESERVOIR GEOMECHANICS AND DESIGNED  8:00 a.m. - 5:00 p.m.
Workshop Luncheon  11:30 a.m. - 1:30 p.m.
Student Paper Competition  8:00 a.m. - 5:00 p.m.

Sunday, June 18
Registration  7:00 a.m. - 5:00 p.m.
Work Shop 3 – SURFACE DATA LOGGING FUNDAMENTALS  8:00 a.m. - 5:00 p.m.
Work Shop 4 – PRACTICAL REVIEW OF RESERVOIR PROPERTIES  8:00 a.m. - 5:00 p.m.
Work Shop 5 - ORGANIC SHALE PETROPHYSICS – INTEGRATING  8:00 a.m. - 5:00 p.m.
Work Shop 6 - HORIZONTAL LOG INTERPRETATION  8:00 a.m. - 5:00 p.m.
Speaker Preparation Center  8:00 a.m. - 5:00 p.m.
Technology Committee Meeting  5:00 p.m. - 6:00 p.m.
VP Publications Meeting  5:00 p.m. - 6:00 p.m.
Icebreaker Reception  6:30 p.m. - 9:30 p.m.

Monday, June 19
Speakers Breakfast  6:00 a.m. - 8:00 a.m.
Speaker Preparation Center  7:00 a.m. - 5:00 p.m.
Registration  7:00 a.m. - 5:00 p.m.
Spouse/Guest Hospitality Suite  7:30 a.m. - 5:00 p.m.
Exhibition  7:45 a.m. - 5:00 p.m.
Opening Remarks  8:00 a.m. - 9:30 a.m.
Spouse/Guest Day Tour  9:00 a.m. - 5:00 p.m.
Morning Technical Sessions  9:45 a.m. - 11:45 a.m.
Annual Business Meeting and Lunch  11:45 a.m. - 1:00 p.m.
Poster Authors in Booth  1:10 p.m. - 1:30 p.m.
Afternoon Technical Sessions  1:50 p.m. - 5:30 p.m.

Tuesday, June 20
Speakers Breakfast  6:00 a.m. - 8:00 a.m.
Speaker Preparation Center  7:00 a.m. - 5:00 p.m.
Registration  7:30 a.m. - 5:00 p.m.
Spouse/Guest Hospitality Suite  7:30 a.m. - 5:00 p.m.
Exhibition  7:45 a.m. - 5:00 p.m.
Spouse/Guest Day Tour  9:30 a.m. - 3:30 p.m.
Morning Technical Sessions  8:00 a.m. - 11:45 a.m.

Tuesday, June 20 (continued)
Awards Presentation and Lunch  11:45 a.m. - 1:00 a.m.
Poster Authors in Booth  1:10 p.m. - 1:30 p.m.
Afternoon Technical Sessions  1:50 p.m. - 5:30 p.m.

Wednesday, June 21
Speakers Breakfast  6:00 a.m. - 8:00 a.m.
Speaker Preparation Center  7:00 a.m. - 5:00 p.m.
Registration  7:30 a.m. - 12:00 p.m.
Spouse/Guest Hospitality Suite  7:30 a.m. - 5:00 p.m.
Exhibition  7:45 a.m. - 3:00 p.m.
Morning Technical Sessions  8:00 a.m. - 11:45 a.m.
Spouse/Guest Day Tour  9:00 a.m. - 5:30 p.m.
Lunch Break – On your own  11:45 a.m. - 1:00 p.m.
Leadership Lunch  11:45 a.m. - 1:00 p.m.
Poster Authors in Booth  1:00 p.m. - 1:20 p.m.
Afternoon Technical Sessions  1:30 p.m. - 5:30 p.m.
Closing Remarks & Door Prize Drawing  5:30 p.m.

Thursday, June 22
Acoustics SIG Meeting  8:00 a.m. - 5:00 p.m.
### SPONSORS

- Apache Corp
- Devon Energy
- Fracture ID
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- Maxwell Dynamics
- Outsource Petrophysics
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- Schlumberger

### EXHIBITORS

- Baker Hughes
- Bruker Optics
- Chesapeake Energy
- Cordax Evaluation Technologies
- Core Laboratories
- ECOTEK Corporation
- Excellence Logging
- Geolog Americas
- Green Imaging Technologies
- Halliburton
- Ingrain
- Micro-G Lacoste
- Schlumberger
- SuperSonic Geophysical
- Weatherford

Confirmed exhibitors and sponsors as of the date this brochure was sent to print.
REGISTRATION
Registration for all attendees, spouses and guests will be located in the Cox Convention Center.

Hours:
Saturday, June 17 7:00 a.m. - 5:00 p.m.
Sunday, June 18 7:00 a.m. - 5:00 p.m.
Monday, June 19 7:00 a.m. - 5:00 p.m.
Tuesday, June 20 7:30 a.m. - 5:00 p.m.
Wednesday, June 21 7:30 a.m. - 12:00 noon

EXHIBITION
Cox Convention Center
Exhibit hours:
Monday & Tuesday 7:45 a.m. - 5:00 p.m.
Wednesday 7:45 a.m. - 3:00 p.m.

Please note: For safety consideration, no one under the age of 13 will be allowed in the exhibit hall.

OPENING SESSION AND SPECIAL GUEST SESSION
Monday, June 19, 8:00 a.m.
Join us as General Chairman, Eric Murphy officially opens the SPWLA 58th Annual Logging Symposium with brief opening remarks and the introduction of the keynote speaker. Immediately following, SPWLA Vice President of Technology Jennifer Market will officially open the technical session.

SPEAKERS BREAKFAST
All speakers and Session Co-Chairmen/Co-Chairwomen are invited to attend a complimentary breakfast on the morning of their session. Breakfast is served 6:00 a.m. – 8:00 a.m., Monday through Wednesday.

SPEAKER PREPARATION CENTER
All speakers are encouraged to view their presentation in the Preparation Center and have their file checked by the projectionist at their earliest convenience. The Preparation Center will provide a computer for speakers to load their PowerPoint® presentations onto the symposium’s computer network and verify compatibility and consistency with the system. The Preparation Center is open Sunday through Wednesday, 7:00 a.m. to 5:00 p.m.

POSTER PRESENTATIONS
Posters are on display in the Exhibition area all day on Monday, Tuesday and Wednesday with a dedicated session each day.

SPOUSE/GUEST HOSPITALITY SUITE
Hospitality Suite is open Monday through Wednesday, 7:30 a.m. to 5:00 p.m.

PHOTOGRAPHY
Photography and video/audio recording of any kind is strictly prohibited in all areas including technical sessions, workshops and exhibition hall.

DOOR PRIZE DRAWING
The door prize will be drawn immediately after the close of the technical session, Wednesday, June 21. YOU MUST BE PRESENT TO WIN!

SIG MEETING
Acoustic SIG Meeting, Held at Continental Resources Office, Oklahoma City on Thursday, June 22nd, 8:00 a.m. - 5:00 p.m. Fee $40.00.
COMPLETION PETROPHYSICS

A CASE STUDY OF SUCCESSFUL OPTIMIZED STIMULATION DESIGN IN THE WOODFORD FORMATION IN CENTRAL OKLAHOMA; Trent Scaggs, Payne Exploration, Erik Hutto, Bill Grieser, James Calvin, Halliburton

A DETERMINATION OF THE CAPABILITY OF USING GADOLINIUM TAGGED PROPPANT TO EVALUATE PROPPED FRACTURE WIDTH; Jeremy Zhang, Carbon Ceramics Inc., Harry D. Smith Jr, Harry D. Smith Consulting

A NEW BOREHOLE GAMMA RAY IMAGING METHOD TO DETERMINE HYDRAULIC FRACTURE USING GD NEUTRON TRACER LOGGING; Qian Chen, Feng Zhang, Juntao Li, Quanying Zhang, Lili Tian, He Wu, China University of Petroleum

A NOVEL TECHNIQUE FOR MEASURING (NOT CALCULATING) YOUNGS MODULUS, POISSONS RATIO AND FRACTURES DOWNHOLE: A BAKKEN CASE STUDY; Adam Haecker, Continental Resources, James Lakings, Eric Marshall, Josh Ulla, Frac ID

A STUDY OF PROPPED-FRACTURE CONDUCTIVITY: IMPAIRMENT MECHANISMS UNDER LABORATORY CONDITIONS; Abhinav Mittal, Chandra S. Rai, Carl Sondergeld, University of Oklahoma

IMPACT OF PETROPHYSICAL PROPERTIES ON HYDRAULIC FRACTURE ANALYSIS; Kelsey Seals, Thomas Engler, New Mexico Tech

NANOINDENTATION STUDY OF THE MECHANICAL ANISOTROPY OF EAGLE FORD SHALES, Henry Herren, University of Oklahoma

COMPLEX RESERVOIRS AND NEW PLAY TYPES

CARBONATE FORMATION EVALUATION USING JOINT INVERSION OF RESISTIVITY AND DIELECTRIC LOGS; Alireira Shahin, Michael T. Myers, Lori A. Hathon, University of Houston

CONGLOMERATES EVALUATION AT LISAMA FORMATION: ASSESSING NEW HYDROCARBON PLAYS IN COLOMBIA. AN EXAMPLE FROM MIDDLE MAGDALENA BASIN; Luisa Ana Barilllas Cortez, Schlumberger, Julio Alejandro Palencia, Vetra

DOWNHOLE ESTIMATION OF RELATIVE PERMEABILITIES WITH INTEGRATION OF FORMATION-TESTER MEASUREMENTS AND ADVANCED WELL LOGS; Mona Rashad, Hamad Al-Rashedi, Kuwait Oil Company, Hamid Habib, Mehdi Azari, Waqar Khan, Sami Eyuboglu, Sandeep Ramakrishna, Luis Quintero, Reinaldo Angulo, Rafael Vasquez, Mahmoud Kalawina, Halliburton

FACIES MODELING OF COMPLEX CARBONATE PLATFORM ARCHITECTURE IDENTIFIED FROM BOREHOLE IMAGE LOG AND OTHER LOGGING TECHNOLOGIES; Pierre Karam, Xiaoxuan An, Stephen Morris, Baker Hughes

IMPROVED ASSESSMENT OF HYDROCARBON SATURATION IN MIXED-WET ROCKS WITH COMPLEX PORE STRUCTURE; Archana Jagadisan, Artur Posenato Garcia, Zoya Heidari, The University of Texas at Austin

MINERAL MODEL IMPROVEMENT USING HIGH RESOLUTION CASED HOLE SPECTROSCOPY MEASUREMENTS, APPLIED FOR JURASSIC CARBONATE RESERVOIRS, OFFSHORE ABU DHABI; Amr Mohamed Serry, John Hassall, Mohamed Al-Braik, ADMA-OPCO

MIXED RESERVOIR WETTING IN UNCONVENTIONAL RESERVOIRS AND INTERPRETATION OF POROSITY/RESISTIVITY CROSS PLOTS, DERIVED FROM TRIPLE-COMBO LOG DATA; Michael Holmes, Antony M. Holmes, Dominic I. Holmes, Digital Formation, Inc.

MULTI-DOMAIN INTERPRETATION WHILE DRILLING UNRAVELS CHALLENGING DEEPWATER LAMINATED PAY RESERVOIR; Aldrick Garcia Mayans, Michiko Hamada, Julia Huff, Soazig Leveque, Schlumberger

PETROPHYSICAL CHARACTERIZATION OF TIGHT CARBONATE USING NMR, MICP AND PORE NETWORK MODELING; Rui Xu, Ayaz Mehmani, Masa Prodanovic, The University of Texas at Austin

PINPOINTING PRODUCTIVE INTERVALS IN COMPLEX HYDROCARBON-BEARING ZONES USING RADIAL INVERSION PROFILES FROM DIELECTRIC MEASUREMENTS; Martin G. Luling, Schlumberger, Steve Grayson, Consultant, Matthieu Simon, Laurent Mosse, Schlumberger, James Hemingway, Consultant

PORE-SCALE NUMERICAL MODELING OF NUCLEAR MAGNETIC RESONANCE RESPONSE IN ROCKS WITH COMPLEX PORE STRUCTURE USING FINITE VOLUME METHOD; Saurabh Tandon, Zoya Heidari, The University of Texas at Austin, Grigoris Matenoglou, Vassilios Kelessidis, Texas A&M University, Georgios Papavassiliou, National Centre of Scientific Research Demokritos

ROCK TYPING IN WOLFCAMP FORMATION; Ishank Gupta, Chandra Rai, Carl Sondergeld, Deepak Devegowda, University of Oklahoma

FORMATION EVALUATION OF CONVENTIONAL RESERVOIRS

A PETROPHYSICAL ORIENTED METHOD FOR THE ANALYSIS OF DIFFERENTIAL PRESSURE STUCK PIPE AND WIRELINE TOOLS ACROSS PERMEABLE ROCKS; Wilson Pineda, Nayyer Islam, BP Exploration and Production Inc.

A LAYMANS GUIDE TO ACOUSTIC ANISOTROPY; Jennifer Market, Weatherford

A NEW GEOLOGICAL INTERPRETATION METHODOLOGY FOR DERIVA-
A NEW NMR-BASED TOOL FOR QUANTIFYING CATION EXCHANGE CAPACITY; Kai Cheng, Zoya Heidari, The University of Texas at Austin

A NEW RESISTIVITY-BASED MODEL FOR IMPROVED HYDROCARBON SATURATION ASSESSMENT IN SHALY FORMATIONS USING QUANTITATIVE CLAY NETWORK GEOMETRY AND ROCK FABRIC; Artur Posenato Garcia, Zoya Heidari, The University of Texas at Austin

ABOVE-ZONE PRESSURE RESPONSE TO LEAKAGE THROUGH FAULT VERSUS CAPROCK: IDENTIFICATION AND ANALYSIS; Mojtaba Mosaheb, Mehdi Zeidouni, Louisiana State University

ACCURATE NEUTRON POROSITY LOGGING IN HIGH TEMPERATURE ENVIRONMENTS; Matthew McCleskey, Feyzi Inanc, Joe Koudelka, Kevin Kapka, Baker Hughes

AN INTEGRATED GEOMECHANICAL APPROACH FOR SUCCESSFUL DRILLING THROUGH COAL IN TEMBIKAI FIELD, PENINSULAR MALAYSIA AND THAI Binh FIELD, OFFSHORE VIETNAM; Avirup Chatterjee, Amitava Ghosh, Namsu Park, Sanjeev Bordoloi, Baker Hughes, M Baihakya B Abdullah, M Syafiq Namsu Park, Sanjeev Bordoloi, Baker Hughes, M Baihakya B Abdullah, M Syafiq

CHALLENGES OF COMPARING AND DETERMINING RESERVOIR STORAGE AND FLOW PROPERTIES USING DETERMINISTIC PETROPHYSICAL ROCK TYPES VIA MULTIPLE PORE THROAT RADIUS INDICATORS; Gary W. Gunter, Schlumberger - NEX, David F. Allen, Schlumberger, Eduardo J. Viro, Consultant

DETECTION OF INTERMEDIATE AND LIGHT HYDROCARBONS WITH FAST MULTIDIMENSIONAL NMR LOGGING OPTIMIZED FOR COMPLEX LITHOLOGIES; Albina Mutina, Nate Bachman, Schlumberger, Jose Vasquez, Consultant, Alexander Marin, Martha Jaramillo, Pacific Stratus Energy

DETERMINING ANISOTROPIC RESISTIVITY IN THE PRESENCE OF INVASION WITH TRIAXIAL INDUCTION DATA; Gong Li Wang, Aria Abubakar, David Allen, Schlumberger, Su Yan, University of Illinois

GAMMA RAY API DEFINITION RELATED ISSUES AND MODEL BASED LWD TOOL CHARACTERIZATION AND CALIBRATIONS; Feyzi Inanc, Matthew McCleskey, Baker Hughes Inc.

HIGH-RESOLUTION FACIES PREDICTION BY MEANS OF INTEGRATING DIP QUALITY INDEX AND TEXTURE ANALYSIS FROM RESISTIVITY BOREHOLE IMAGES LOGS IN A PRE-SALT COMPLEX CARBONATE RESERVOIR LOCATED IN A BRAZILIAN FIELD; Eliany Teran, Paradigm, Anelise Lima, Petrosbras

HOW THE INVASION ZONE CAN CONTRIBUTE TO THE ESTIMATION OF PETROPHYSICAL PROPERTIES FROM LOG INVERSION AT WELL SCALE?; Vandammme Thibaud, Caroli Emmanuel, TOTAL, Gratton Serge, ENSEEIHT

IMPROVED ACCURACY IN RESISTIVITY-TEMPERATURE-SALINITY ESTIMATION; Sweta Bose, Consultant, David Kennedy, QED Petrophysics


INTEGRATED LWD TO CHARACTERIZE COMPLEX RESERVOIR LITHOLOGY AND FLUID TYPES OFFSHORE ANGOLA; Doug Murray, Nadleiny Silva, Schlumberger, Bobby Kurniawan, Chevron

INVERSION OF DIELECTRIC LOGGING USING MIXING MODEL AS A REGULARIZATION FUNCTION; Babak Kouchmeshky, Alberto Mezzatesta, Otto Fanini, Roberto Arro, Baker Hughes

LOOKING DEEP BEYOND THE WELLBORE: DEEP SHEAR-WAVE IMAGING AND HYDRAULIC FRACTURE OPTIMIZATION OF HIGH-RESOLUTION FORMATION LITHOLOGY AND MINERALOGY; Qiong “Sabrina” Zhang, Alberto Mezzatesta, Elton Frost, Nora Alarcon, Stephen Dymmock, Hao Zhang, Baker Hughes Inc.

NEW METHOD FOR ROCK CLASSIFICATION IN CARBONATE FORMATIONS USING WELL-LOG-BASED ROCK FABRICATION QUANTIFICATION; Sonia Arumdu Purba, Zoya Heidari, The University of Texas at Austin

NMR RELAXATION OF POLYMER - ALKANE MIXES, A MODEL SYSTEM FOR CRUDE OILS; Philip M. Singer, Zeliang Chen, George J. Hirasaki, Rice University, Kairan Zhu, Xidian University, Z. Harry Xie, Tuan Vo, Core Laboratories

PETROPHYSICAL WORKFLOW TO IDENTIFY NET PAY AND RESERVOIR PRODUCTIVITY IN THIN BEDS, DEEP-WATER WEST AFRICA; Sunday Adole, Keith Boyle, Chevron, Chiara Cavalleri, Schlumberger, Vigen Ghazarian, JD Akgun, Chukwuma Atuanya, Alex Ikeneku, Seye Ekun, Dapo Adeyemo, Jacob Diedjomahor, Mike Adeyemo, Chevron, Jurry Van Doorn, Schlumberger

PETROPHYSICS AND GEOLOGY INTERTWINED: A CASE STUDY OF AN INTEGRATED MODELING WORKFLOW; Abbie V. Morgan, Johanna F. Hoyt, Aera Energy LLC

QUANTITATIVE INTERPRETATION OF SONIC COMPRESSIONAL AND SHEAR LOGS FOR GAS SATURATION IN MEDIUM POROSITY SANDSTONE; Maciej Kozlowski, John Quirein, Bob Engelman, Halliburton, Krzysztof Wolanski, Slawomir Chelmicki, PGNiG SA

RESERVOIR FLOW UNITS IN UNCONSOLIDATED SANDSTONES: ROCK TYPING OR FZI METHODOLOGY?; Luis Lander, Weatherford

SATURATION HEIGHT MODELLING: ASSESSING CAPILLARY PRESSURES STRESS CORRECTIONS; Iulian N.
THE EARLY HISTORY OF FORMATION EVALUATION: Raymond P. Sorenson

THE PARADOX OF ANISOTROPY AND THE ARRAY-LATERLOG ANISOTROPY RESPONSE; Isabelle Dubourg, Richard Leech, Martin G. Luling, Schlumberger

THE PROBLEM WITH SILT IN LOW-RESISTIVITY-LOW-CONTRAST PAY RESERVOIRS; Alexander Belevich, Adriaan Bal, Baker Hughes

THROUGH-THE-BIT LOGGING TECHNOLOGY ENABLES IMPROVED RESERVOIR CHARACTERIZATION IN THE ORINOCO BELT, VENEZUELA: 3D STRUCTURAL MODEL INTEGRATING ADVANCED LOGS IN A MULTI WELL STUDY; Ricardo Rodriguez, Pavel Bellorin, Elvio Villavincencio, PDVSA, Jose Orozco, Andreina Quintero, Alvaro Chapellin, Albina Mutina, Sachin Bammi, Schlumberger

UNCONSOLIDATED THIN BED CLASTIC PETROPHYSICS - LESSONS LEARNED, GREATER DOLPHIN AREA, TRINIDAD; Stefan Calvert, Candice Ogiste, Josephine Wheeler, Mithidiss Parotidis, Shell, Arden Burrowes, Mike Millar, Tim Pritchard, Independent Consultants

UNDERSTANDING WIRELINE DEPTH CONTROL IN WELLS WITH HIGH CABLE TENSION AND BEST PRACTICES TO ACCOUNT WIRELINE STRETCH WHILE PERFORMING STATIONARY MEASUREMENTS; Wilson Pineda, John Bergeron, BP Exploration and Production Inc.

UPSCALING CORE-DERIVED SATURATION HEIGHT FUNCTIONS: ABADI CASE STUDY; Vivek Kumar, Manu Singhal, Walrick Van Zandvoord, Shell

USING FRACTALS TO DETERMINE A RESERVOIR’S HYDROCARBON DISTRIBUTION; Dr. Steve Cuddy, Baker Hughes

FORMATION EVALUATION OF UNCONVENTIONAL RESERVOIRS

ALTERATIONS IN PORE TOPOLOGY OF ORGANIC-RICH SHALE SAMPLES DUE TO THE REMOVAL OF DEAD OIL, BITUMEN, AND KEROGEN; Shiv Ojha, Siddharth Misra, Ali Tinni, Ankita Sinha, Son Dang, Carl Sondergeld, Chandra Rai, University of Oklahoma

APPLICATION OF FOURIER-TRANSFORM INFRARED SPECTROSCOPY IN CONNECTING THERMAL MATURITY OF KEROGEN TO ITS DIELECTRIC PERMITIVITY IN ORGANIC-RICH MUDROCKS; Nima Dabidian, Archana Jagadisan, Zoya Heidari, The University of Texas at Austin

BRIGGS COLOUR CUBING OF SPECTRAL GAMMA Ray - A NOVEL TECHNIQUE FOR EASIER STRATIGRAPHIC CORRELATION AND ROCK TYPING; Michael Sullivan, Lisa Song, Chevron

CHALLENGES IN DIELECTRIC DISPERSION INTERPRETATION IN THE BAKKEN PETROLEUM SYSTEM; Yifu Han, Siddharth Misra, The University of Oklahoma, Gary Simpson, Hess Corporation

CHARACTERISTICS OF VACA MUERTA FORMATION REVEALED BY NMR T1-T2 LOGGING AT LARGE SCALE; Alberto Ortiz, YPF S.A., Laurent Mosse, Schlumberger, Carolina Bernhardt, YPF S.A., Vivek Anand, Ravinath Kausik, Erik Rylander, Schlumberger

CHARACTERIZATION OF THERMAL MATURITY AND ORGANIC MATERIAL TYPE WITH RAMAN SPECTROSCOPY IN SHALE RESERVOIRS; Zhengfan Liu, Michael T. Myers, Lori A. Hathon, University of Houston

COMPARING AND ESTIMATING INITIAL PRODUCTION OF FRACTURED WELLS USING VERTICAL WELL LOGS; Narayan Nair, Jerome Truax, Linn Energy LLC


EFFECTS OF BITUMEN EXTRACTION ON THE 2D NMR RESPONSE OF SATURATED KEROGEN ISOLATES; Zeliang Chen, Philip M. Singer, George J. Hirasaki, Rice University

ESTIMATION OF PORE NETWORK CHARACTERISTICS AND SATURATION-DEPENDENT RELATIVE PERMEABILITY IN ORGANIC-RICH SHALE SAMPLES FROM VARIOUS MATURITY WINDOWS; Shiv Ojha, Siddharth Misra, Ankita Sinha, Son Dang, Chandra Rai, Carl Sondergeld, University of Oklahoma

ESTIMATION OF WETTABILITY AND PRODUCIBILITY OF TIGHT RESERVOIRS FROM NMR MEASUREMENTS; Vivek Anand, Erik Rylander, Schlumberger, Steve Brackeen, J Cleo Thompson, Andrew Valori, Wael Abdallah, Schlumberger

GEOMECHANICAL EVALUATION ENABLED SUCCESSFUL STIMULATION OF UNCONVENTIONAL APOLLONIA TIGHT CHALK RESERVOIR IN ABU-GHARADIG BASIN, EGYPT; Mohamed Salah, Khalda Petroleum

IMPACT OF DIFFERENT CLEANING METHODS ON PETROPHYSICAL MEASUREMENTS; Ishank Gupta, Chandra Rai, Ali Tinni, Carl Sondergeld, University of Oklahoma

INTEGRATING GEOCHEMICAL AND GEOMECHANICAL ANALYSIS TO MAXIMIZE LATERAL PLACEMENT IN RESERVOIRS; Sebastien Kamgang, Segun Jebutu, Baker Hughes

INTENSIVE FRACTURE STUDY OF ELK HILLS MONTEREY FORMATION TO BETTER UNDERSTAND PRODUCTION VARIABILITY; Robert Gales, Rad Sobczyk, California Resource Corporation, Nicholas Harvey, Harvey Rock Physics

INVESTIGATION OF 2 MHZ NMR MEASUREMENTS SENSITIVITY TO MOVEABLE, BOUND AND STRUCTURAL WATER IN SHALES; Ali Tinni, Carl Sondergeld, Chandra Rai, University of Oklahoma

LESSONS LEARNED IN PERMIAN CORE ANALYSIS COMPARISON BETWEEN...
RETORT, GRI AND ROUTINE METHODOLOGIES, Aidan Blount, Tyler Croft, Brian Driskill, Brian Tepper, Shell Western E&P Co.

MECHANICAL MEASUREMENTS FOR UNCONVENTIONAL FORMATION WITHOUT PLUGS; Son Dang, Ishank Gupta, Aditya Chakravarty, Pritesh Bhoomick, Carl Sonderegard, Chandra Rai, University of Oklahoma

METHODS FOR EVALUATING ELEMENTAL CONCENTRATION AND GAS SATURATION BY A THREE-DETECTOR PULSED NEUTRON WELL LOGGING TOOL; Juntao Liu, Feng Zhang, China University of Petroleum, Cancan Zhou, Xiangzhi Cheng, Chao Yuan, Research Institute of Petroleum Exploration and Development PetroChina, Guojing Hou, Haoping Chang, North Carolina State University

NEW PERSPECTIVES ON THE EFFECTS OF GAS ADSORPTION ON STORAGE AND PRODUCTION OF NATURAL GAS FROM SHALE FORMATIONS; Ali Tinni, Carl Sonderegas, Chandra Rai, University of Oklahoma

OPTIMIZATION OF NMR PERMEABILITY TRANSFORM AND APPLICATION TO MIDDLE EAST TIGHT SANDS; Jinzhong Chen, Stacey M. Althaus, Mohammad Delshad, Jilin Zhang, Dan Georgi, Fahd Almaliki, Qiushi Sun, Aramco Research Center-Houston, Ali M. Al-Shawaf, Saudi Aramco

QUANTIFYING ORGANIC POROSITY AND PREDICTING ESTIMATED UMTATE RECOVERY (EUR) IN THE EAGLE FORD FM; Rich McLean, Halcon Resources

QUANTIFYING ORGANICS IN MUDSTONES USING HIGH FREQUENCY NMR; Z. Harry Xie, Humberto Carvajal-Ortiz, Core Laboratories

QUANTIFYING THE IMPACTS OF THERMAL MATURITY ON ELASTIC PROPERTIES OF KEROGEN; Clotilde Chen Valdes, Texas A&M University, Zoya Heidari, The University of Texas at Austin

SIMULTANEOUS NEUTRON AND X-RAY IMAGING OF 3D KEROGEN AND FRAC-TURE STRUCTURE FOR FLOW PATH IN SHALES; Wei-Shan Chiang, Aramco Research Center-Houston, Jacob LaManna, Daniel Hussey, National Institute of Standards and Technology, Jin-Hong Chen, Aramco Research Center-Houston, Yun Liu, National Institute of Standards and Technology

THE APPLICATION OF THE COMBINATION OF NMR LOGGING AND NMR MEASUREMENTS AT RSWC SAMPLES AT THE WELL SITE TO IDENTIFY PRODUCIBLE OIL IN TIGHT ROCKS; Anton Nikitin, Shell International Exploration and Production, Arcady Reiderman, Ecotek Inc, Rahul Grover, Schlumberger, Sean Dolan, Aidan Blount, Shell Exploration and Production Company

THE USE OF PRE & POST FRACTURE STIMULATION LOGS TO BETTER INTEGRATE STATIC PETROPHYSICAL ANALYSIS WITH DYNAMIC DATA FROM PRODUCTION LOGS; Jose Murta de Oliveira Neto, Alexey Yakovlev, Royal Dutch Shell plc

ULTRASONIC CEMENT LOGGING: EXPANDING THE OPERATING ENVELOPE AND EFFICIENCY; Sylvain Thierry, Christoph Klieber, Mikhail Lemarenko, Thilo Brill, J.-L. Le Calvez, Fabrice Mege, Thomas Barrou, Schlumberger, Kevin Constable, Statoil ASA

UNRAVELING THE ACOUSTIC CHALLENGES IN HORIZONTAL WELLBORE ENVIRONMENTS; A CASE STUDY IN THE DELAWARE BASIN; Andrew Perry, Stephanie Perry, Inga Mathews, Anadarko, Jennifer Market, Weatherford

USE OF ISOLATED KEROGEN TO IMPROVE MODELING INPUTS AND AS A MORE ROBUST INDICATOR OF THERMAL MATURITY; Steve Chipera, Johnny Barton, Christopher Geyer, Leonardo Alcantar-Lopez, Vincent Nowaczewski, Mike Lewan, Chesapeake Energy Corporation

HA/HZ WELL EVALUATION AND OR ADVANCED MUD LOGGING AND REAL-TIME DECISION-MAKING

2D RESERVOIR IMAGING USING DEEP DIRECTIONAL RESISTIVITY MEASUREMENTS; Michael Thiel, Michael Bower, Dzevat Omeragic, Schlumberger

ACOUSTIC FRACTURE CHARACTERIZATION: INTELLIGENT INTERPRETATION; Jennifer Market, Nicole Harris, Weatherford

CONTINUOUS RESERVOIR FLUIDS CHARACTERIZATION WITH ADVANCED LWD MEASUREMENTS IMPROVES HORIZONTAL WELL EVALUATION IN A BROWNFIELD; Ting Li, Chanh Cao Minh, Schlumberger

DISTANCE OF DETECTION FOR LWD DEEP AND ULTRA-DEEP AZIMUTHAL RESISTIVITY TOOLS; Hu Li, John Zhou, Maxwell Dynamics, Inc

INTEGRATION OF GEOSTEERING OUTCOMES, IMAGING LOG INTERPRETATION AND ADVANCED PETROPHYSICAL ANALYSIS TECHNIQUES FOR A PROMPT RESPONSE TO FIELD DEVELOPMENT NEEDS: A CASE HISTORY; Paola Cardola, Francesco Grilli, Maurizio Mele, Antonio Valdisturlo, Eni SpA, Joshua Zuber, Eni US

INTERPRETATION OF SONIC MEASUREMENTS ACQUIRED IN HIGH-ANGLE AND HORIZONTAL WELLS USING 3D FAST FORWARD MODELING; Elsa Maalouf, Carlos Torres-Verdin, The University of Texas at Austin

NEW BOREHOLE LOGGING TECHNOLOGY

A NEW METHOD TO IMAGE WATER-PHASE TURTOUSITY IN FORMATIONS DRILLED WITH OIL-BASED MUD: Tianhua Zhang, Jean-Marc Donadille, Tetsushi Yamada, Schlumberger

ADVANCES IN DENSITY LOG PROCESSING DELIVER ENHANCED PRECISION AND OPERATIONAL EFFICIENCY; P.J. Williams, Weatherford International, J.R. Samworth, B. Claricoates, Weatherford UK

ADVANCES IN QUANTIFICATION OF MISCELLABLE CONTAMINATION IN HYDROCARBON AND WATER SAMPLES FROM DOWNHOLE TO SURFACE LABORATORIES; Julian Y. Zuo, Adriaan Gisolf, Thomas Pleiffer, Schlumberger
AN ASSESSMENT OF FUNDAMENTALS OF NEUTRON POROSITY INTERPRETATION: AM-BE SOURCE VERSUS GENERATOR-BASED ALTERNATIVES; Ahmed Badruzzaman, Pacific Consultants and Engineers, Andrea Schmidt, Lawrence Livermore National Laboratory, Arlyn Antolak, Sandia National Laboratories

CHARACTERIZING NATURAL-GAMMA-RAY TOOLS WITHOUT THE API CALIBRATION FORMATION; Gordon Moake, Halliburton

COHERENT INTERPRETATION OF WIDEBAND ELECTROMAGNETIC MEASUREMENTS IN THE MILLIHERTZ TO GIGAHERTZ FREQUENCY RANGE; Nikita Seleznev, Chang-Yu Hou, Denise Freed, Tarek M. Habashy, Michael Jones, Tony Van Zulekom, Halliburton

ENHANCEMENT OF PERMEABILITY FROM NMR T1/T2 RATIO FOR CARBONATES; Yuesheng Cheng, Songhua Chen, Magdalena Sandor, Wei Shao, Mahmoud Eid, Ron Balliet, Halliburton, Gabor Hursan and Shouxian Ma, Saudi Aramco

DIELECTRIC DISPERSION INTERPRETATION AS AN INTEGRATED PETROPHYSICAL WORKFLOW FOR SATURATION AND BEYOND; Haijing Wang, Hanming Wang, Emmanuel Tourmeline, Ronald L Brown, Luisa Crousse, Chevron

DYNAMIC RESERVOIR CHARACTERIZATION INTEGRATING OPENHOLE LOGS AND CONTINUOUS FLOWING TEMPERATURE SURVEY DURING WELL TEST OPERATIONS: A WAY TO INCREASE THE RESERVOIR KNOWLEDGE MITIGATING OPERATIONAL COSTS AND RISKS; Giuseppe Galli, Marco Pirrone, Patrizio Gossenberg, Andrea Leone, Eni SpA

ESTIMATION OF ROCK STIFFNESS COEFFICIENTS IN VTI FORMATIONS USING LWD ACOUSTIC MEASUREMENTS; Elsa Maalouf, Carlos Torres-Verdin, The University of Texas at Austin

FLUID FRONTS TRACKING IN A MATURE JURASSIC CARBONATE RESERVOIR USING INNOVATIVE PULSED NEUTRON SOLUTIONS FOR THE FIRST TIME OFFSHORE ABU DHABI; Amr Mohamed Serry, ADMA-OPCO, Pablo Saldungaray, Schlumberger, Marianne Espinasseau, Jawdat Bilbeisi, ADMA-OPCO, Tong Zhou, David Rose, Schlumberger

GEOCHEMICAL PHOTOLECTRIC (PE) LOGGING; James Galford, Nicholas Garrison, Halliburton

IMAGING NEAR-WELLBORE PETROPHYSICAL PROPERTIES BY JOINT INVERSION OF SONIC, RESISTIVITY, AND DENSITY LOGGING DATA; Sushil Shetty, Lin Liang, Vanessa Simoes, Fabio Canesin, Austin Boyd, Smaine Zeroug, Bikash Sinha, Tarek Habashy, Schlumberger, Ana Beatriz Domingues, BG-Group/Shell, Claudia Amorim, Shell

INFLUENCE OF MUD-FILTRATE INVASION EFFECTS ON PRESSURE GRADIENTS ESTIMATED FROM WIRELINE FORMATION TESTER MEASUREMENTS; Colin Schroeder, Carlos Torres-Verdin, University of Texas at Austin

LOGGING-WHILE-DRILLING DIPOLE SHEAR LOGGING IN FAST FORMATIONS USING HIGHER-ORDER FORMATION FLEXURAL MODE; Pu Wang, Mitsubishi Electric Research Laboratories, Sandip Bose, Bikash K. Sinha, Ting Lei, Matthew Blyth, Schlumberger

MODERN ADVANCES IN ACOUSTIC REFLECTION IMAGING; Thomas Bradley, Douglas Patterson, Gennady Koscheev, Baker Hughes

OIL-SOLUBLE CONTRAST AGENTS FOR NMR; Boyang Zhang, Hugh Daigle, University of Texas at Austin

RESULTS OF A NEW IMAGING WHILE-DRILLING SERVICE FOR USE IN NONCONDUCTIVE MUDS; Brian Moody, Stephen Dymmock, Roger Steinsiek, Preeti Pathak, Baker Hughes Inc.

SOLVING FOR RESERVOIR SATURATIONS USING MULTIPLE FORMATION PROPERTY MEASUREMENTS FROM A SINGLE PULSED NEUTRON LOGGING TOOL; David Rose, Tong Zhou, Pablo Saldungaray, Schlumberger

TOWARD ACCURATE RESERVOIR CHARACTERIZATION FROM NEW-GENERATION NMR LOGGING; Vivek Anand, Laurent Mosse, Schlumberger, Boqin Sun, Chevron, Albina Mutina, Tianmin Jiang, Schlumberger, Ronald L. Brown, Luisa Crousse, Chevron

RESERVOIR AND PRODUCTION SURVEILLANCE

A NEW MULTI-SENSOR APPROACH TO DOWNHOLE SAMPLE FILTRATE MEASUREMENT WITH A WIRELINE FORMATION TESTER; Bin Dai, Christopher Nardiello, Qiong Zhang, Yonghwee Kim, David Chace, Baker Hughes, Giuseppe Galli, Marco Pirrone, Massimiliano Borghi, ENI SpA

CASED HOLE PRESSURE AND FLUID SAMPLING FOR PRODUCTION OPTIMIZATION - A CASE STUDY; Hamad Al-Hamad, Ahmad Al-Jasmi, Sanjeev Kumar, Syed Badusha, Kuwait Oil Company, Viet Le, Baker Hughes

CASED HOLE RESERVOIR PRESSURE ANALYSIS USING PULSED NEUTRON LOG MEASUREMENTS IN CHALLENGING MATURE ENVIRONMENTS: PHYSICS, MODELING, UNCERTAINTY ASSESSMENT AND APPLICATION; Roberto Nardiello, Qiong Zhang, Yonghwee Kim, David Chace, Baker Hughes, Giuseppe Galli, Marco Pirrone, Massimiliano Borghi, ENI SpA

COMPARISON OF MULTI-DETECTOR PULSED NEUTRON NUCLEAR ATTRIBUTES OF MULTIPLE VENDORS IN THE PRUDHOE BAY FIELD, ALASKA, Gerardo Cedillo, Adrian Zett, Xiaogang Han, Behrooz Raeesi, David Itter, BP

COMPARISON OF THE STATISTICAL PERFORMANCE OF DIFFERENT PULSED-NEUTRON WELL LOGGING TOOLS FOR OIL SATURATION MONITORING, Anton Nikitin, Sean Dolan, Shell International Exploration and Production Inc

CRITICAL FACTORS FOR RESERVOIR SATURATION MONITORING IN HETEROGENEOUS CARBONATE RESERVOIRS; Yahia Eltaher, Shouxian Ma, Mamdouh Nasser, Saudi Aramco
EXPANDING APPLICATION OF MULTI-DETECTOR PULSED NEUTRON INSTRUMENTATION FOR QUANTITATIVE GAS SATURATION MONITORING IN AIR- OR GAS-FILLED BOREHOLES; Behrooz Raeesi, Gerardo Cedillo, Xiaogagn Han, Adrian Zett, BP, Sandeep Gade, Qiong Zhang, David Chace, Jehad Abou-Saleh, Arelys C. Martinez, Baker Hughes

INNOVATIVE CEMENT AND CASING CORROSION EVALUATION TECHNOLOGIES PROVIDE RELIABLE WELL INTEGRITY INFORMATION IN NATURAL GAS STORAGE WELLS; Sebastien Kamgang, Rodney Foster, Amer Hanif, Baker Hughes, Craig Johnson, Consumers Energy

INNOVATIVE TRIANGULATION TECHNIQUE ENABLES SIMULTANEOUS DETERMINATION OF THREE-PHASE FORMATION FLUID SATURATIONS USING PULSED NEUTRON LOGGING; Yonghwee Kim, Baker Hughes, Keith Boyle, Chevron, David Chace, Pius Akagbosu, Baker Hughes, Akomeno Oyegwa, Dennis Wyatt, Chevron, Victor Okowi, Sandeep Gade, Baker Hughes

ROCK TYPING FOR RELATIVE PERMEABILITY; Hendrik Rohler, OMV
VP TECHNOLOGY:
Jennifer Market, Weatherford

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Joanne Tudge, Weatherford
Katerina Yared, QEP Resources
Adrian Zett, BP
Ferdinanda Pampuri, ENI Upstream and Technical Services
WORKSHOP 1:
CORE ANALYSIS BACK TO BASICS

Instructors: Pat Lasswell and Raymond Bruce, Weatherford Labs

Date: Saturday, June 17, 2017
Time: 8:00 a.m. - 5:00 p.m.
Place: Meeting Room 16
Fee: $375.00 for registered attendees; $575.00 non-registered (includes lunch)

About the Course
Back to Basics, a review of the analytical processes which provide the basic rock properties of Permeability, Porosity and Fluid Saturations. The course is designed for those who are relatively new to the profession as well as for those who are “seasoned”. Conventional and unconventional materials will be covered, but an emphasis will be given to the unconventional analytics.

Within the main test categories, the following analytical methods will be covered:
Permeability: Steady-State, Unsteady-State, Pressure Decay in Crushed Preparations
Porosity: Fluid Summation, Total and Effective Models, Plug vs Crushed Fluid Saturations: Dean-Stark, Retort, Plug vs Crushed

For each of the analytics, the procedural steps will be presented in detail and common variations of a test will be presented as applicable. The methods and their results will be compared and contrasted. Test uncertainties will be discussed. The strengths and weaknesses of each method will be considered as well as the QC steps available to both the investigator as well as the end user.

Several case studies will be presented to explore the applicability of specific analytical methodologies. The question of fit for purpose will be considered for these tests, within the context of unconventional materials.

This short course is designed to provide investigators and data end-users with a better understanding of our basic analytical tools, to open up discussions on the merits of the available tools and to provide a platform for discussing better documentation and analytical transparency.

WORKSHOP 2:
RESERVOIR GEOMECHANICS AND DESIGNED COMPLETIONS WITH AN EMPHASIS ON THE PRACTICAL

Instructors: Dr. Ahmad Ghassemi, University of Oklahoma, Aaron Burton, UOG Training, Bill Grieser, Halliburton, Roger Reinmiller and Dr. David Martinez, Borehole Image Specialists

Date: Saturday, June 17, 2017
Time: 8:00 a.m. - 5:00 p.m.
Place: Meeting Room 17
Fee: $375.00 for registered attendees; $575.00 non-registered (includes lunch)

About the Course
This course is designed to give geoscience and engineering professionals the tools they need to customize hydraulic fracture designs with geomechanical models. The goal of this one day course is that you will gain familiarity with the techniques required to actively space and design completion stages in a horizontal well in an unconventional reservoir. In order to provide a foundation for the completions discussion we will cover basic rock properties and fracture mechanics first. Then we will demonstrate how to calculate pore pressure, rock strength and principal stresses from log and well test data. These are the fundamental building blocks of any fracture model. Then the often contentious role of natural fractures and mineralogy will be discussed. Natural fractures may both help or hurt a completion strategy and different scenarios will be introduced. Following the geomechanical overview we will discuss completions modelling in detail and the current thinking on how to design staging. We will finish the day with a panel discussion and participant Q&A.

1. Overview of Geomechanics
   a. Basic Rock Properties
   b. In situ stress and why it is important
   c. Calculation of pore pressure
   d. Rock Strength
   e. Stress Fields and the Anderson fault model
   f. Calculation of in-situ stress in isotropic and vertically transverse isotropic mediums

2. Effects of Natural Fractures and Mineralogy
   a. What is the influence of minerals and rock strength?
   b. What role do natural fractures play?

3. Hydraulic Fracture Modeling Fundamentals
   a. Fracture Models and Discrete Fracture Networks
   b. Formation Injection Testing
   c. Matching pressures in modeling
   d. Designed staging

4. Panel Discussion and Participant Q&A

WORKSHOP 3:
SURFACE DATA LOGGING FUNDAMENTALS AND ADVANCED MUD LOGGING

Instructor: Simon Hughes, Weatherford

Date: Sunday, June 18, 2017
Time: 8:00 a.m. - 5:00 p.m.
Place: Meeting Room 16
About the Course

Petrophysicists don’t always effectively integrate mud log information with well log data, often due to unfamiliarity with the measurements and recent advances in surface data logging techniques. The course is intended for those who are relatively unfamiliar with mud logging and those who wish to learn about updates in advanced mud logging techniques.

• Advanced Mud Logging
  ◦ Sample control and quality
  ◦ Lag depth
  ◦ Cuttings derived GR
  ◦ Cuttings Measurement
  ◦ High resolution microscopy
  ◦ Grain / Matrix Density
  ◦ Porosity
  ◦ NMR
  ◦ Gamma Ray
  ◦ Mineralogy
  ◦ XRD
  ◦ FTIR
  ◦ Inorganic elemental analysis
  ◦ Organic geochemistry
  ◦ Gas Analysis
    ◦ High resolution gas chromatography
    ◦ Delta gas analysis
    ◦ Isotopic analysis
  ◦ Applications of Advanced Mud Logging through case studies and including
    ◦ Conventional reservoirs
    ◦ Unconventional reservoirs
    ◦ Correlation
    ◦ Geosteering
    ◦ Completions
    ◦ Identification of tarmats and heavy oil

WORKSHOP 5:
ORGANIC SHALE PETROPHYSICS – INTEGRATING TRIPLE COMBO AND CORE DATA

Instructors: Gary Gunter, Schlumberger

About the Course

Our petrophysics society is facing an epic challenge from multiple fronts: commodity price, people transitioning and the need for technology innovation to develop new types of assets with lower costs. This course is designed for engineers, researchers, and supervisors to develop broad petrophysical knowledge, and learn the most from each logging technology. An overview on static and dynamic reservoir properties will kick-off the course. Subject matter experts will then share their knowledge on measurement theory, applications to determine reservoir properties, and representative case studies. A broad portfolio of downhole logging technology will be covered: EM, Nuclear, Acoustic, Formation Testing and NMR.

• Application of and differences between resistivity services - shallow to very deep (0-50m), low to high frequencies (0-1ghz), vertical to horizontal.
• Pulsed neutron tool theory and applications on reservoir surveillance
• Acoustic Delta-T to 3D Anisotropy, permeability, fractures, geomechanics, and deep imaging.
• Advanced theory and applications of pressure testing, downhole fluid compositional analysis, and sampling.
• NMR capabilities overview and applications on porosity, permeability, rock texture, fluid types and volumes.

The focus of this course is to emphasize the practical applications of well logging tools while enhancing measurement understanding.
for log quality control, quick look log scans, Vshale, DeltaLogR and GIP calculations.

WORK SHOP 6:
TITE: HORIZONTAL LOG INTERPRETATION IN CONVENTIONAL AND UNCONVENTIONAL RESERVOIRS

Instructors: Dale Fitz, John Zhou, Maxwell Dynamics and Jennifer Market, Weatherford

Date: Sunday, June 18, 2017
Time: 8:00 a.m. - 5:00 p.m.
Place: Meeting Room 19
Fee: $375.00 for registered attendees; $575.00 non-registered (includes lunch)

About the Course
Many borehole logging measurements are significantly affected by the inclination of the wellbore. Horizontal well logs are frequently mis-interpreted, which may lead to errors in calculated reservoir properties, production planning, and wellbore stability.

This course begins with a detailed review of the effects of horizontal wellbores on each logging measurement. Both conventional and unconventional reservoirs will be considered in detail. Methods for correctly addressing the horizontal logging effects will be discussed for each tool. The students will be presented with multiple field example datasets to work through the correct processes for integrating logging data in horizontal reservoirs.

WORKSHOPS
Fee: $375 Pre-registered attendees $575 Non-registered attendees

Each course requires a minimum number of participants to proceed and each course has a maximum number that can be accepted. Early booking is recommended.

Non-registered rates are for applicants who do not plan to attend the Symposium. Booking preferences will be given to Pre-registered attendees.
This unique opportunity to see a world class shale reservoir that is producing in the subsurface only a few miles away from the conference site.

The Woodford Shale of Oklahoma is mainly upper Devonian in age and sits unconformably upon the Hunton Group in the areas of the field trip. The unconformity is in the form of paleokarst and incised valley topography, which has a significant impact on sedimentation of the overlying transgressive Woodford Shale. The Woodford is traditionally subdivided into Lower, Middle, and Upper intervals.

A depositional model has been developed for this area based upon outcrop and subsurface stratigraphy. The model is dependent upon topographic relief on the Hunton unconformity surface. During sea level fall, and early rise, semi- to restricted basins can form which impede open ocean circulation and create oxygen deficiency, thus preventing organic matter from being oxidized and removed; thus it accumulates on the sea floor. With continued rise in sea level, eventually there is communication between restricted basin and open ocean waters, thus oxygenating the waters, and eliminating organic matter. Two 3D seismic surveys tend to support this model. Seismic amplitudes are inverted to acoustic impedances, which are then calibrated to rock-derived TOC. In both surveys there are ‘pockets’ of high TOC dispersed in the sediment column, but in greater abundance and distribution near the Hunton unconformity, indicating deposition and preservation in restricted basins on the unconformity surface.

Stop 1: This stop has been visited by many people over the years as it affords a good stratigraphic section, mainly of the upper Woodford. The studies by Galvis and Becerra are the most comprehensive studies completed at this outcrop. This stop one is located on the south flank of the Ardmore Basin, in southern Oklahoma.

The lower, unconformable contact of the Woodford with the underlying Hunton Group is well exposed; a distinctive green shale lies above the contact; this shale is traceable to several other outcrops in the area. The middle Woodford is covered at this site. The exposed Woodford is mainly the upper Woodford; just beneath the contact with the overlying Sycamore Limestone is a distinctive green shale that is traceable to several of the other outcrops in the area. Rock types vary from very fissile shale to hard chert beds, but in some sections, Radiolarians, which are precursors to the recrystallized chert, have retained their skeletal structure and are porous. Within the upper Woodford section, gamma ray response generally decreases as the proportion of chert beds increases. However, distinct gamma ray log intervals of decreasing upward, increasing upward, and blocky patterns are recognizable.

Various parameters were measured in about 600 beds to evaluate the fracture patterns at this outcrop. Fractures tend to be contained within chert beds but are generally absent in adjacent shale beds. Two fracture sets are identified: Set 2 with fold axis about N45oE (regional stress field) and Set 1 about N15oW. Fracture frequency (# fractures per vertical ft. of beds) is directly proportional to the bed frequency. Fracture frequency (density) along a bed is directly proportional to the bed thickness and hard chert beds contain more fractures than soft shale beds for any given bed thickness. These properties can be related to the gamma ray response.

Stop 2: This is a popular stop to view Woodford fracture patterns, but to our knowledge, this outcrop has not been extensively studied until now. It has been studied by our students Richard Brito, Sayantan Ghosh, and Carolina Mayorga. This outcrop is on the south limb of the Arbuckle Mountains. Beds are steeply dipping and are overturned.

The I77 Road cut provides an excellent set of fractured Woodford. Five sets of fractures have been identified here, and their timing of formation has been deciphered. An aerial view, shot from a drone, shows the location of the I77 road cut and the nearby Arbuckle Wilderness Area, which was also studied in detail, both stratigraphically and structurally, but is no longer accessible for study or field trips. By walking west along I77, beneath the I35 Highway, another exposed Woodford section, which is referred to as I35 road cut is present, though it is not the same as Stop 1 and to our knowledge has never been documented. There is no place to park cars along I35, so one hikes over a small ridge on I77 to reach this outcrop, which also has been documented.
view shows the two areas: East of fried pies shop is US 77D outcrop which is 1.3 kms to the northwest of the AWO. Beds at both places are overturned. In the AWO, the average strike and dip of exposed formations is approximately 130/60 (Right hand rule) in areas devoid of minor folds and 113/72 (Right hand rule) in the US-77D Outcrop.

Along both the I77 and I35 road cuts, the contact between the Hunton Group and overlying Woodford is clearly exposed. Sitting directly on the Hunton surface is a tight, conglomeratic sandstone, which is overlain by a dark transgressive shale, then lighter colored, more siliceous shale. Whether these beds are lower, middle, or upper Woodford has not been ascertained. A outcrop gamma ray log was run along the I35 side of outcrop. TOC values in addition to the measured stratigraphic section. Several different rock types are present, and TOC values range from 0.6wt. % to 16.9wt. %. An outcrop gamma ray log was also run on the I77 outcrop, which is correlative with the I35 gamma ray log. Rocks collected from the I35 side of the outcrop were measured for Hardness. The tendency is for rocks of high hardness to correlate with rocks of low outcrop gamma ray response. For any given bed thickness, brittle (BRI), cherty strata have higher frequency of occurrence of fractures than do softer, ductile (DUC), clay-shale strata. Fracture aperture measurements were taken in Set 2 fractures at AWO location. Aperture is generally greater when fracture frequency (fractures per m) decreases.

Five (5) fracture sets were documented along the I77 outcrop face. Fractures were also measured from Arbuckle Wilderness Area (AWO) and compared with the I77 outcrop. The same fracture sets are found in both areas. Based on the restored view of the horizontal bedding, cross-cutting and length, presence and absence/type of cement and knowing the event timings the fracture formation timing can be constrained. The Set 1a fractures, which are the longest and highly bitumen filled are the earliest (Pre chesterian-Morrowan Orogeny. The set 1b fractures formed either around the same time or a bit later during early Chesterian/Morrowan orogeny before there was too much erosion and lower pressure that could sustain bitumen generation. Set 1c stylolites developed around the early to mid-stage of the orogeny. This also compacted some of the Set 1b fractures. Set 3 and subsequently developed between late Chesterian/Morrowan to the Mid Virgilian Arbuckle orogeny. Set 2 was most likely during Mid Virgilian (parallel to folds).

Fractures are prevalent on bedding planes. Many of the fractures are filled with bitumen, which highlights the fracture patterns. Fracture aperture was also measured at the Quarry. Most of the aperture trends are lognormal or exponential, which are both characteristic sizes. These non-power law agrees with no repeated opening. This also indicates a barrier in fracture growth. The stratigraphy of the quarry was measured, described, and a full outcrop gamma ray log was obtained. Various lithologies were identified which comprise the almost 400 ft. of stratigraphy at this location. Hardness measurements were also obtained from samples at closely spaced intervals. Hardest rocks are chert (except where the radiolarians have retained their skeletal structure) and the softest Rocks are massive siliceous shale and laminated siliceous shale.

Chemostratigraphic (elemental composition of rocks) analysis reveals considerable detail in elemental composition. For examples, spikes of high Sr and Ca indicate limestone, and dolomite when Mg spikes occur at depths along with Ca and Sr. Low Si and Si/Al and high K, Al, Ti, and Zr indicate clay minerals, quartz and/or feldspars (detrital minerals). High Si/Al, and low K, Al, Ti, and Zr indicate biogenic quartz. High P indicates zones with P/Ca concretions. High Mo and V are indicative of reducing or anoxic oceanic conditions.

**Target audience:** Anyone who likes to walk, petrophysicists, petroleum engineers and geologists, historians and environmentalists.

**Attire:** Casual clothes and walking or hiking shoes

**What to bring:** Sun screen, insect repellent and a hat/cap.

**Exertion:** Transportation by passenger van. Walking on uneven surface.
STUDENT PAPER COMPETITION
Date: Sunday, June 18, 2017
Time: 8:00 a.m. - 5:00 p.m.
Place: TBA

This event will allow students competing to engage with colleagues from other schools and industry professionals. We hope both graduate and undergraduate students will share their work and research for the opportunity of being awarded “best paper presentation”. The competition will be held in three groups: Bachelor, MSc and PhD.

ICEBREAKER RECEPTION
Date: Sunday, June 18, 2017
Time: 6:30 p.m. – 8:00 p.m.
Fee: Complimentary
Sponsored by Halliburton

Registered guests of the symposium are invited for the Sunday evening icebreaker reception. This will be a great opportunity meeting up with old acquaintances or making new contacts while celebrating the opening of the symposium!

MONDAY EVENING RECEPTION
Date: Monday, June 19, 2017
Time: TBA
Fee: Complimentary
Sponsored by Schlumberger

Check our website www.spwla2017.com for updated information.

TUESDAY EVENING RECEPTION
Date: Tuesday, June 20, 2017
Time: TBA
Fee: Complimentary
Sponsored by Lloyd’s Register (LR)

Check our website www.spwla2017.com for updated information.

SPWLA ANNUAL BUSINESS MEETING AND LUNCH
Date: Monday, June 19, 2017
Time: 11:45 a.m. - 1:00 p.m.
Place: Ballroom C
Fee: $25

The SPWLA Annual Business Meeting is a lunch meeting open to all delegate attendees. During the lunch the 2016-2017 President and Board Members will share their accomplishments made during their tenure. Followed by the introduction and welcoming of the 2017-2018 President and Board Members.

SPWLA AWARDS PRESENTATION AND LUNCH
Date: Tuesday, June 20, 2017
Time: 11:45 a.m. - 1:00 p.m.
Place: Ballroom C
Fee: $25

The SPWLA Annual Awards luncheon is open to all delegates, their spouses and guests. During the lunch, individuals will be honored and rewarded for their outstanding achievements and contributions to the Society and industry.

SPWLA LEADERSHIP LUNCHEON*
Date: Wednesday, June 21, 2017
Time: 11:45 a.m. - 1:00 p.m.
Place: Meeting Room 14

All current SPWLA Chapter Presidents (outgoing and incoming), all Past SPWLA Presidents and SIG coordinators are invited to a complimentary luncheon.

*BY INVITATION ONLY
**SPouse HOSPITALITY SUITE**

**Date:** Monday – Wednesday  
**Time:** 7:30 a.m. – 5:00 p.m.  
**Place:** Native American Room  
**Fee:** $100.00

If you’re looking for a place to catch up with old friends, visit the Hospitality Suite for refreshments and companionship. The suite will be open to registered accompanying spouses, family members and guests of conference attendees.

**OKLAHOMA HERITAGE TOUR**

**Date:** Monday, June 19th  
**Time:** 8:00 am – 5:00 pm  
**Fee:** $75.00

The adventure around Oklahoma City starts downtown Oklahoma City to see one of the world’s largest bronze sculptures depicting the 1889 land run. Then travel to the State Capitol Building for a photo op. Next door is the Oklahoma History Center. Explore Smithsonian-quality exhibits that bring to life visions of Oklahoma. Visit and enjoy lunch at Remington Park. Come and see the vast collection of classic and contemporary Western art at the National Cowboy and Western Heritage Museum. It is an Oklahoma City must see.

**Highlights:**  
About (8) Hour Tour

**OKLAHOMA CITY STANDARD TOUR**

**Date:** Tuesday, June 20th  
**Time:** 8:00 am – 5:00 pm  
**Fee:** $75.00

Explore Downtown Oklahoma City with a visit to the River Walk to delight in the venue without the crowds. See the world’s largest collections of glass sculpture by Dale Chihuly and decades of art that resides at the OKC Museum of Art. Enjoy a glass of wine with your meal at the Art Museum Café. Next at the OKC National memorial, learn about the Oklahoma standard that came from a day Oklahomans will never forget, the 1995 bombing that hit the heart of Oklahoma City.

**Highlights:**  
About (7) Hour Tour

- A walk around the River Walk
- Guided Tour of the Oklahoma City Museum of Art
- Lunch at the Art Museum Café
- Self-Guided Tour of Oklahoma City National Memorial along with a first person: Stories of Hope
CHICKASAW NATION TOUR
Date: Wednesday, June 21st
Time: 8:00 am – 5:00 pm
Fee: $55.00

Take a trip to experience Native American Culture in Chickasaw Country in Sulfur, Oklahoma. The first stop is at the Badre’ Chocolate Factory to enjoy a sample of their fine chocolate. Badre’ which simply means better in Norwegian started over four decades ago and now is the only Native American tribe owned shop to create its own brand of delicious morsels. Next will be a small stop to see the Chickasaw national Recreation area and then an authentic lunch at the Aaimpa’ Café. Afterwards tour the Chickasaw Cultural museum that takes you through Chickasaw history and their rich culture. Lastly stop to relax and drink at the Rusty Nail Winery for a wine tasting of Oklahoman wines.

About (8) Hour Tour
• Self-Guided Tour of the Bedre Chocolate Factory
• Chickasaw National Recreation Area shopping and/or short hike
• Lunch at the Aaimpa’ Café
• Wine tasting at the Rusty Nail Winery
Book your accommodations at one of our Host Symposium Hotels.

Downtown Oklahoma City Renaissance Convention Center Hotel
Discover the vibrant charm of Oklahoma City when you stay at the Renaissance Oklahoma City Convention Center Hotel by Marriott. This downtown Convention Center hotel is located just steps from popular destinations such as Bricktown Entertainment District, Chickasaw Ballpark home of the Oklahoma City Dodgers, the Oklahoma City National Memorial & Museum, Chesapeake Arena, home of the Oklahoma City Thunder, and more. With Four Diamond status, we are your choice for style, class and a provocative ambiance. Dine at our downtown Oklahoma City restaurant, 10 North Grille, and enjoy top-notch cuisine with your traveling companions from our world-class executive chef.

Please book your reservations through the SPWLA hotel room block to receive our convention discount on or before May 15, 2017.

RENAISSANCE BY MARRIOTT
10 North Broadway Avenue
Oklahoma City, Oklahoma 73102 USA

Deluxe Guest Room Rate - $149.00 + Tax
For reservations go online to the SPWLA web site: www.spwla2017.com

Courtyard Oklahoma City Downtown
Adjacent to Historic Bricktown, the hottest entertainment district in Oklahoma, you will find Oklahoma City’s most exciting hotel, The Courtyard by Marriott Oklahoma Downtown. Our hotel offers a prime location in the city’s thriving urban area. Our upscale hotel invites you with a stylish modern lobby and sleek and spacious guest rooms featuring Marriott’s luxurious Revive bedding. Each of our 225 smoke-free rooms feature free high-speed Internet and oversized work areas. Enjoy a fresh buffet breakfast at the Courtyard Grille while reading your complimentary weekday newspaper. Our deluxe fitness center and indoor heated pool make it easy to stay on track while traveling.

Please book your reservations through the SPWLA hotel room block to receive our convention discount on or before May 15, 2017.

COURTYARD BY MARRIOTT
2 West Reno Avenue
Oklahoma City, Oklahoma 73102 USA

Deluxe Guest Room Rate - $149.00 + Tax
For reservations go online to the SPWLA web site: www.spwla2017.com
Pre-registration Deadline: Thursday, June 1, 2017

WAYS TO REGISTER

By Mail: SPWLA Symposium
9866 Gulf Freeway, Suite 320
Houston, TX 77017

By Fax: +1 713-947-8747 (open 24 hours)
DO NOT send another copy by mail.

Online: www.spwla.org

REGISTRATION TYPE/PACKAGE INCLUDES

DELEGATES:
• Admission to technical program and exhibits
• Symposium transactions on USB
• Complimentary Tickets to Social Events
  (Request On-site with Badge Pickup)

SPOUSE/PARTNER:
• Admission to Spouse Hospitality Suite
• Admission to the Exhibition Hall
• Complimentary Tickets to Social Events
  (Request On-site with Badge Pickup)

STUDENT:
• Admission to technical program and exhibits
• Symposium transactions on USB
• Complimentary Tickets to Social Events
  (Request On-site with Badge Pickup)

DAY PASS:
• $355.00 per day (registration on-site only)
• Admission to the technical program and exhibits
• Symposium transactions on USB

HOW TO PAY FOR REGISTRATION

Registration cannot be processed unless full payment is received with your registration form.

Payments may be made by:

• Check or Money Order payable in US dollars to:
  SPWLA Symposium

• Credit Card (Visa, Master Card, Discover or American Express)

• Wire Transfer (Bank Information must be requested by sending email to stephanie@spwla.org)

REGISTRATION*

Before June 1, 2017
On-Site
$ 650.00 SPWLA Member $  755.00 SPWLA Member
$ 975.00 Non-member $1130.00 Non-member
$  90.00 Spouse $  90.00 Spouse
$  30.00 Student $  30.00 Student
$  355.00 One Day Pass

*Pre-registration payments will not be accepted after June 1, 2017

On-Site Registration Hours
Saturday, June 17 7:00 a.m. to 5:00 p.m.
Sunday, June 18 7:00 a.m. to 5:00 p.m.
Monday, June 19 7:00 a.m. to 5:00 p.m.
Tuesday, June 20 7:30 a.m. to 5:00 p.m.
Wednesday, June 21 7:30 a.m. to 12:00 noon

CONFERENCE PROCEEDINGS

Conference Proceedings on USB are included in full registration fee. Additional copies may be purchased for $40.00 each on site.

CONFIRMATION

You will receive a confirmation notice by email listing your registration fees and activities. Please check for accuracy. If necessary, any changes in your registration (additions (will require additional payment) or deletions (refund request)), must be made through email to stephanie@spwla.org on or before June 1, 2017.

that person’s full name for the computerized badge. Delegates cannot register as a spouse or guest.

Please register one attendee per form. If your spouse or guest is attending, be sure to include
REQUEST FOR NAME CHANGE
All name substitutions addressed to stephanie@spwla.org before June 1, 2017, will be processed at no extra charge. Requests made thereafter and on-site will be subject to a $10.00 processing fee.

CANCELLATION POLICY
General conditions - All cancellation notices must be made in writing to stephanie@spwla.org
Refunds will be issued after the Symposium in accordance with the Cancellation Terms and Conditions.
Hotel cancellations must be made directly with the hotel.

CANCELLATION TERMS AND CONDITIONS
Registration, field trip, spouse/guest tours and workshop fees:
Cancellation notices received on or before June 1, 2017: Full Refund (less 10% processing fee)
Cancellation notices received after June 1, 2017:
No refund. Unused tickets are not refundable.

COMPLIMENTARY FUNCTIONS
Admittance to complimentary functions is by Ticket:
• Tickets will be available at the registration desk on-site.
• Tickets are 1 per registered guest.
• Tickets will be distributed on a first come, first serve basis.
• Tickets are not guaranteed.
PRE-REGISTRATION FORM

SPWLA MEMBER NUMBER: ________________________________

SPWLA Member Status:  □ Member  □ Honorary
                      □ Senior Member □ Student Member □ Non-Member

Please check one:  □ Oil Company  □ Service Company
                  □ Software Company  □ Independent  □ Academia
                  □ Retired  □ Other

Name (first, last)

Nickname for badge (if desired)

Partner name for badge (ONLY IF REGISTERING)

Company (name for badge)

Mailing address  Apt/suite #

City  State/country  Zip/postal code

Phone number (area/country code)  Fax number (area/country code)

Email

Special needs (dietary/disabled, etc.)

Please check if applicable:  □ 01/Former Int’l President
                            □ 02/Int’l Officer  □ 03/Current Chapter President  □ 04/Speaker

PAYMENT INFORMATION  □ Credit Card  □ Check (enclose with form)

CREDIT CARD  VISA / MASTERCARD / AMEX / DISCOVER

Card no. ___________________________ Exp. date __/____/____

Signature ___________________________ Print name ___________________________

CHECK Please make payable to SPWLA. Send registration form and check to SPWLA, 8866 Gulf Freeway, Suite 320, Houston, TX 77017. Our office number is +1-713-947-8727.

HOTEL INFORMATION  Reservations can be made directly with Renaissance by Marriott and Courtyard by Marriott or through the SPWLA 2017 website, www.spwla2017.com. In order to take advantage of the discounted SPWLA room rates, you are advised to book before June 1, 2017. Be sure to mention you are attending the 2017 SPWLA Symposium. For general information, please visit www.spwla2017.com.

*REGISTRATION FEES BEFORE JUNE 1, 2017

<table>
<thead>
<tr>
<th>Cat No.</th>
<th>Registration Category</th>
<th>Before June 1, 2017</th>
<th>Cost</th>
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<tr>
<td>101</td>
<td>SPWLA Member ** (includes proceedings USB)</td>
<td>$650</td>
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<td>102</td>
<td>Non-Member ** (includes proceedings USB)</td>
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<td>Proceedings on USB (if NOT included in registration)</td>
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<td>104</td>
<td>Partner/Spouse</td>
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<td>105</td>
<td>Student ***</td>
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Subtotal - Registration Fees

Note: One-day registrations can be made onsite. *Date as postmarked. **Price included in registration fee.
***Proof of status is required. Please attach a copy of student ID to this registration form.

FIELD TRIP AND WORKSHOPS

<table>
<thead>
<tr>
<th>Cat No.</th>
<th>Date</th>
<th>Event</th>
<th>No. of tickets</th>
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<td>OK200</td>
<td>June 17</td>
<td>Field Trip World Class Shale</td>
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<td>OK220N</td>
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<td>OK202</td>
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<td>Workshop 2 – Reservoir Geomechanics &amp; Design</td>
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<td>OK203N</td>
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<td>OK204</td>
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**** Non-Registered: For those who will only attend a workshop and not register for the Symposium.

PARTNER ACTIVITIES

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<th>Cat No.</th>
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<td>Oklahoma Heritage Tour</td>
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<td>OK208</td>
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<td>Oklahoma City Standard Tour</td>
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<td>Chickasaw Nation Tour</td>
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SPWLA FOUNDATION

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<tr>
<th>Cat No.</th>
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SOCIETY FUNCTIONS

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<td>OK212</td>
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<td>Annual Business Meeting &amp; Lunch</td>
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<td>OK213</td>
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<td>Awards Presentation &amp; Lunch</td>
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<td>OK211</td>
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<td>Acoustic SIG Meeting</td>
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TOTAL AMOUNT DUE (REGISTRATION and all activities)
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