Monday – May 17th

8:00  Opening Remarks - Chairman – Paul Craddock, Schlumberger
8:10  Keynote Speaker – Nial McCollam, Lloyd’s Register
8:40  Panel Discussion – Moderator- Siddarth Misra
10:00 Introduction of Technical Sessions - Vice President of Technology – Tegwyn J. Perkins
10:10  Break (15 mins)

10:25  Session 1A – Production Logging

10:30  SPWLA-2021-0001  PRODUCTION OPTIMIZATION OF SANDING HORIZONTAL WELLS USING A DISTRIBUTED ACOUSTIC SENSING (DAS) SAND MONITORING SYSTEM: A CASE STUDY FROM THE ACG FIELD IN AZERBAIJAN
Zahid Hasanov, Parviz Allahverdiyev and Fuad Ibrahimov, BP; Alberto Mendoza, Pradyumna Thiruvenkatanathan, Lilia Noble and Jonathan Stapley, LYTT Limited

10:50  SPWLA-2021-0111  UTILIZING ULTRASONIC AND PULSED-EDDY CURRENT TECHNOLOGIES TO MAP THE LOCATION OF FIBER-OPTIC CABLE AND CLAMPS: A CASE STUDY
Roddy Hebert, Rojelio Medina, JC Pinkett and Tyler Costa, Halliburton

11:10  SPWLA-2021-0003  DOPPLER VS. SPINNER PLT SENSING FOR HYDROCARBON VELOCITY ESTIMATE BY DEEP-LEARNING APPROACH
Klemens Katterbauer and Alberto Marsala, Saudi Aramco; Virginie Schoepf and Linda Abbassi, Openfield Technology

11:25  Session 1B – Conventional Reservoir Petrophysics- I

10:30  SPWLA-2021-0004  ADDRESSING RESERVOIR HETEROGENEITY BY INTEGRATION OF GEOCHEMISTRY AND PETROPHYSICAL LOGS IN CARBONATE PROSPECTS
Kemal C. Hekimoglu, Filippo Casali and Antonio Bonetti, Geolog International

10:50  SPWLA-2021-0005  AN ADVANCED PETROPHYSICAL ORIENTED NUMERICAL METHOD FOR RELIABLE ASSESSMENT OF MECHANICAL PROPERTIES IN CARBONATE FORMATIONS AT THE PORE-SCALE DOMAIN
Mehdi Teymouri and Zoya Heidari, The University of Texas at Austin

11:10  SPWLA-2021-0006  DECIPHERING LOW RESISTIVITY PAY TO DERISK A COMMERCIAL DISCOVERY: CASE STUDY FROM THE NORWEGIAN SEA
Mohammad Ibrahim Khan, Equinor; Harish Datir and Subhadeep Sarkar, Schlumberger; Bjarne Rafaelsen, Equinor

11:30  Exhibit Break (15 mins)

11:45 SPWLA Annual Business Meeting (60 mins)

12:50  Session 2A – Borehole Imaging

12:55  SPWLA-2021-0007  WELLBORE IMAGES DIGITAL FUSION: BEYOND SINGLE-SENSOR PHYSICAL CONSTRAINTS
Simone Di Santo, Nadege Bize-Forest and Isabelle Le Nir, Schlumberger; Carlos Maeso, Retired

13:15  SPWLA-2021-0008  TAMING THE THUNDER HORSE WITH AXES AND VECTORS
Bernd Ruehlicke, Andras Uhrin, Zbynek Veselovsky and Markus Schlaich, Eriksfiord

13:35  SPWLA-2021-0009  FIELD-TESTING A THROUGH-THE-BIT HIGH-DEFINITION ELECTRICAL BOREHOLE IMAGER FOR OIL-BASED MUD
Richard Bloemenkamp, Elia Haddad, Nadege Bize-Forest, Laetitia Comparon and Peter Schlicht, Schlumberger
12:50  **Session 2B – Deepwater Reservoir Analysis**

12:55  **SPWLA-2021-0010**  DIGITAL FLUID SAMPLING IN DEEP WATER RESERVOIRS USING RESERVOIR FLUID GEODYNAMICS: THE BEGINNING OF THE DIGITAL FLUID SAMPLING REVOLUTION  
Camilo Gelvez, The University of Texas at Austin; Gerardo Cedillo, Eric Soza, Doris Gonzalez, Benjamin S. Slotnick, Sol Moreno, Wilson Pineda and Milad Saidian, BP America; Oliver C. Mullins, Scott Paul, Jesus Cañas and Alok Kulkarni, Schlumberger

13:15  **SPWLA-2021-0011**  A PRACTICAL GUIDE TO EFFECTIVE DEEP-WATER FLUID SAMPLING WHILE DRILLING  
Matt Wandstrat, Consultant; Gerard Simms, LLOG Exploration Inc.; Femi Adegbola, Steve Smith and Vincent Liaw, Baker Hughes

13:35  **SPWLA-2021-0012**  ENHANCING THE UNDERSTANDING OF ASPHALTENE PRECIPITATION: A NOVEL APPROACH UNDER IN-SITU CONDITIONS  
Rohin Naveena-Chandran, Farrukh Hamza, Gibran Hashmi and Jason Rogers, Halliburton; John Meyer and Sara Chapman, Kosmos Energy

13:55  **Break (15 mins)**

14:10  **Session 3A – Formation Rock Analysis**

14:15  **SPWLA-2021-0013**  THE IMPACT OF OVERBALANCED DRILLING FROM EXPLORATION/APPRaisal WELLS TO FIELD DEVELOPMENT PLAN  
Mohammadhossein Mohammadlou, Matthew Guy Reppert, Roxane Del Negro and George Jones, Neptune Energy Norway

14:35  **SPWLA-2021-0014**  NANOtags FOR IMPROVED CUTTING DEPTH CORRELATION  
Martin E. Poitzsch, S. Sherry Zhu and Marta Antoniv, Aramco Research Center; Nouf M. Aljabri and Alberto F. Marsala, Saudi Aramco, EXPEC ARC

14:55  **SPWLA-2021-0015**  ADAPTATION OF CRUSHED ROCK ANALYSIS TO INTACT ROCK ANALYSIS FOR IMPROVING WATER SATURATION ASSESSMENT AND FAST PRESSURE DECAY PERMEABILITY QUANTIFICATION  
Kai Cheng, J. Alex Zumberge, Stephanie E. Perry and Patrick M. Lasswell, GeoMark Research, Ltd

14:10  **Session 3B – Well Integrity**

14:15  **SPWLA-2021-0016**  A RESONANCE-BASED THROUGH-TUBING CEMENT EVALUATION TECHNOLOGY  
Jie Li, Qinshan Yang, Jinsong Zhao, Jeff Olson, Marvin Rourke, GOWell International LLC; Mohamed Larbi Zeghlache, Saudi Aramco–EXPEC Advanced Research Center

14:35  **SPWLA-2021-0017**  APPLICATION OF ELECTROMAGNETIC TECHNOLOGY FOR CORROSION MONITORING IN WELLS WITH DUAL COMPLETIONS  
Junwen Dai and Ahmed E. Fouda, Halliburton

14:55  **SPWLA-2021-0018**  SUCCESSFUL SAND PRODUCTION MANAGEMENT THROUGH ADVANCED ANALYSIS OF WELL INTEGRITY LOGS IN CASABE FIELD, COLOMBIA  
Cristian Escarraga, Schlumberger; Emiro Leon, Ecopetrol; Marcia Benavides and Tatiana Taborda, Schlumberger

15:15  **Break (15 mins)**

15:30  **Session 4A – Brownfields Petrophysics**

15:35  **SPWLA-2021-0019**  SIDE FAULT MAPPING ENABLED BY 2D TRANSVERSE INVERSION ON NEW DEEP DIRECTIONAL RESISTIVITY MEASUREMENTS  
Michael Thiel, Haifeng Wang, Dzevat Omeragic and Jean-Michel Denichou, Schlumberger; Barry Goodin, Vermilion Oil & Gas Australia Pty Ltd

15:55  **SPWLA-2021-0020**  UTILIZING NEAR AND FAR FIELD BOREHOLE MEASUREMENTS FOR A COMPREHENSIVE CARBONATE FRACTURE CHARACTERIZATION  
Amr M. Serry, Sultan D. Al-Hassani, Shafiq N. Ahmed, Owais A. Khan, Hassan F. Aboujmeih, Hasan Zakaria and Olivier P. Pippi, ADNOC Offshore; Israa A. Salim, Amro Abdel-Halim and Adam Donald, Schlumberger
16:15  SPWLA-2021-0021  INTRINSIC CARBON-OXYGEN LOGGING FOR ENHANCED CONSISTENCY OF RESERVOIR SATURATION MONITORING
Shouxiang Mark Ma, Saudi Aramco; Nacer Guergueb, Weijun Guo and Mahmoud Eid, Halliburton

15:30  **Session 4B – New Borehole – Logging Technologies**

15:35  SPWLA-2021-0022  WELLSITE FULL WAVEFORM SONIC INTERPRETATION
J. Adam Donald and Erik Wielemaker, Schlumberger; Chris Holmes, Denison Gas and Tom Neville, Asia-Pacific Formation Evaluation Services

15:55  SPWLA-2021-0023  CAN A NEW DOUBLE PARTICLE DETECTOR-CLYC (CS$_2$LYCl$_4$:CE) BE USED IN PN LOGGING FOR TIGHT GAS EVALUATION?
Qixuan Liang, Feng Zhang, Xiaoyang Zhang, Qian Chen and Jilin Fan, China University of Petroleum (East China)

16:15  SPWLA-2021-0024  DECIPHERING THE CAPABILITIES OF LOOK-AHEAD METHODS IN LWD
Jun Zhu, Yong Die and Yuanshi Tian, LWD Center of China Petroleum Logging Co.Ltd. and John Zhou, Maxwell Dynamics Inc.

16:35  **End of 1st Day - Adjourn**

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**Tuesday – May 18th**

8:00  **Session 5A – Formation Fluid Analysis – I**

8:05  SPWLA-2021-0025  PIONEERING APPLICATION OF EMERGING TECHNOLOGIES TO THE CHALLENGE OF SAMPLING NEAR-SATURATED FLUIDS IN TIGHT RESERVOIRS
Brett Wendt, Adam Lewis, ConocoPhillips Alaska; German Garcia and Hadrien Dumont, Schlumberger

8:25  SPWLA-2021-0026  IMPROVING RESERVOIR TESTING AND SAMPLING IN H$_2$S CONTAMINATED FLUIDS BY ADAPTING STATE-OF-THE-ART SEMICONDUCTOR THIN FILM TECHNOLOGY FOR DOWNHOLE TESTER TOOLS
Jimmy Price, Darren Gascooke, Anthony Van Zulekom and Christopher Jones, Halliburton

8:45  SPWLA-2021-0027  DEEP TRANSIENT TESTING DIGITAL PRODUCTS CREATE NOVEL REAL-TIME RESERVOIR INSIGHTS

9:05  SPWLA-2021-0028  COMPARATIVE SIMULATION OF WATER-BASED MUD-FILTRATE INVASION IN HIGH-PERMEABILITY AND TIGHT SANDSTONE RESERVOIRS USING LARGE-SIZED FORMATION MODULES
Junchen Wu, Yiren Fan and Shaogui Deng, School of Geosciences, China University of Petroleum (East China); Ruokun Huang, Research Institute of Petroleum Exploration and Development, PetroChina Tarim Oilfield Company; Fei Wu, Suzhou Niumag Analytical Instrument Corporation; Zhongtao Wang, China Petroleum Logging CO.LTD.

8:00  **Session 5B – Core Analysis**

8:05  SPWLA-2021-0029  A DEEP-LEARNING APPROACH FOR LITHOLOGICAL CLASSIFICATION USING 3D WHOLE CORE CT-SCAN IMAGES
Kurdistan Chawshin, Carl Fredrik Berg, Damiano Varagnolo, Norwegian University of Science and Technology; and Olivier Lopez, Equinor ASA

8:25  SPWLA-2021-0030  A NEW OPTIMIZATION METHOD FOR ENHANCED FORMATION EVALUATION AND ROBUST PHYSICS-BASED AUTOMATIC ROCK CLASSIFICATION USING HIGH-RESOLUTION CT-SCAN IMAGE DATA AND CONVENTIONAL WELL LOGS
Andres Gonzalez and Zoya Heidari, The University of Texas at Austin; Olivier Lopez, Equinor
8:45 SPWLA-2021-0031 IMPACTS AND LESSONS LEARNED FROM AN APPLIED CASE STUDY IN THE WILLISTON, UINTA AND DJ BASINS UTILIZING OPEN VERSUS CLOSED RETORT QUANTIFICATION
Stephanie E. Perry, J. Alex Zumberge and Kai Cheng, GeoMark Research Ltd.

9:05 SPWLA-2021-0032 UNCERTAINTY QUANTIFICATION BY MONTE CARLO SIMULATION OF LAB-DERIVED SATURATION DATA FROM SPONGE CORES
Mohammed Alghazal and Dimitrios Krinis, Saudi Aramco

9:25 Break (15 mins)

9:40 Session 6A – Dielectric

9:45 SPWLA-2021-0033 DEEP DIELECTRIC-BASED WATER SATURATION IN FRESHWATER AND MIXED SALINITY ENVIRONMENTS
Ping Zhang, Wael Abdallah and Gong Li Wang, Schlumberger; Shouxiang Mark Ma, Saudi Aramco

10:05 SPWLA-2021-0034 INTERPRETATION OF MULTI-FREQUENCY DIELECTRIC PERMITTIVITY MEASUREMENTS FOR ASSESSMENT OF WATER SATURATION IN CARBONATE FORMATIONS WITH COMPLEX PORE STRUCTURE
Zulkuf Azizoglu and Zoya Heidari, The University of Texas at Austin

10:25 SPWLA-2021-0035 MODEL-BASED CORRECTION FOR DIP AND SHOULDER BED EFFECTS ON LWD PROPAGATION DIELECTRIC CONSTANT AND RESISTIVITY LOGS
Gong Li Wang, Dean Homan, Ping Zhang and Wael Abdallah, Schlumberger; Shouxiang Ma, Saudi Aramco

9:40 Session 6B – Machine Learning – I

9:45 SPWLA-2021-0036 DATA QUALITY CONSIDERATIONS FOR PETROPHYSICAL MACHINE LEARNING MODELS
Andrew McDonald, Lloyd’s Register

10:05 SPWLA-2021-0037 FACES CLASSIFICATION OF A COMPLEX RESERVOIR USING MACHINE LEARNING: CASE STUDY FROM VOLCANIC FORMATION, THE YURIHARA OIL FIELD, JAPAN
Yuki Maehara, Schlumberger; Takeaki Otani and Tetsuya Yamamoto, Japan Petroleum Exploration Co., Ltd.

10:25 SPWLA-2021-0038 EFFICIENT PETROPHYSICAL UNCERTAINTY PROPAGATION VIA DATA-DRIVEN ANALYTICS
Carlo Cristiano Stabile and Marco Pirrone, ENI S.p.A.

10:45 Break (15 mins)

11:00 Session 7A – Ultra-Deep Resistivity

11:05 SPWLA-2021-0039 DETECTION OF OFFSET WELLS AHEAD OF AND AROUND AN LWD ULTRA-DEEP ELECTROMAGNETIC TOOL
Nigel Clegg, Alban Duriez, Vladimir Kiselev and Supriya Sinha and Tim Parker, Halliburton; Fredrik Jakobsen and Erik Jakobsen, Aker BP; David Marchant and Christoph Schwarzbach, Computational Geosciences Inc.

11:25 SPWLA-2021-0040 TOWARD THREE-DIMENSIONAL RESERVOIR MAPPING – A NEW APPROACH FOR MAPPING RESERVOIRS WITH ADVANCED ULTRA-DEEP AZIMUTHAL RESISTIVITY MEASUREMENTS
Haifeng Wang, Michael Thiel, Jean-Michel Denichou, Diogo Salim, Soazig Leveque, and Vera Krissetiawati Wibowo, Schlumberger; Chris Woods and Darren Baker, Woodside Energy Ltd.

11:45 SPWLA-2021-0041 REAL-TIME 3D IMAGING OF COMPLEX TURBIDITIC RESERVOIR ARCHITECTURE
Supriya Sinha, Karol Rieofrio, Arthur Walmsley and Nigel Clegg, Halliburton; Stig Sviland-Østre and Nicolas Gueze, Aker BP

11:00 Session 7B – Case Studies- I

11:05 SPWLA-2021-0042 X-RAY DIFFRACTION, X-RAY FLUORESCENCE, AND NEUTRON INDUCED SPECTROSCOPY BASED CORRECTION TO IVAR AASEN GEOMODEL: AN OILFIELD FROM THE NORWEGIAN NORTH SEA
Egil Romsås Fjeldberg, Yngve Bolstad Johansen, Lodve Hugo Olshborg, Geir Frode Kvilaas, and Tor-Ole Jøssund, Aker BP; Harish Datir, Schlumberger
11:25  SPWLA-2021-0043  INTEGRATED EVALUATION OF LAMINATED SAND-SHALE GAS-BEARING RESERVOIR USING TENSOR MODEL: A CASE STUDY COMBINING DATA FROM TRIAXIAL RESISTIVITY, IMAGE, SONIC, AND RESERVOIR TESTING IN B-FIELD, MALAYSIA
Aditya Arie Wijaya, Ivan Zha Ming Wu, Sarvagya Parashar and Mohammad Iffwad, Halliburton; Amirul Afiq B Yaakob, William Amelio Toliooe, Adib Akmal Che Sidid and Nadhirah Bt. Ahmad, Petronas Carigali

11:45  SPWLA-2021-0044  AN INTEGRATED PETROPHYSICAL CHARACTERIZATION OF A SILICICLASTIC TIGHT GAS RESERVOIRS IN NEUQUÉN BASIN, WESTERN ARGENTINA
Nicolas Carrizo and Emiliano Santiago, YPF S.A. and Universidad Nacional del Comahue; Pablo Saldungaray, Schlumberger

12:05  Exhibit Break (15 mins)
12:25  Lunch

13:25  Session 8A – Case Hole Logging - I

13:30  SPWLA-2021-0045  THROUGH-TUBING CASING DEFORMATION AND TUBING ECCENTRICITY IMAGE TOOL FOR WELL INTEGRITY MONITORING AND PLUG-ABANDONMENT
Qinshan Yang, Kuang Qin, Jeff Olson and Marvin Rourke, GOWell International

13:50  SPWLA-2021-0046  IDENTIFICATION OF BREAKOUT BEHIND CASING: METHODOLOGY TO OBTAIN OPENHOLE EQUIVALENT CALIPER MEASUREMENTS THROUGH SLOTTED LINER USING THE DENSITY TOOL
Laurent Mosse, Schlumberger; Stephen Pell, Santos Ltd. and Thomas Neville, Asia-Pacific Formation Evaluation Services Pty Ltd

14:10  SPWLA-2021-0047  A NOVEL THROUGH-CASING CORRECTION ALGORITHM FOR A 4-DETECTOR GAMMA DENSITY TOOL
Ya Jin* and Shang Jie, Lin Huang, Zenghui Yu and Min Li, China Oilfield Services Limited; Chen ZengHai, CNOOC China Limited Pengbo Operating Company; Yulian Li*, Wei Tang, Yating Hu, Lvlin Lin, Qinzhong Zhang and Qiong Zhang, University of Electronic Science and Technology of China (Ya Jin* and Yulian Li* are co-first authors)

13:25  Session 8B – Borehole Imaging- II

13:30  SPWLA-2021-0048  A NEW PSEUDO-VELOCITY-BASED METHOD TO MITIGATE LWD IMAGE INTERPRETATION RISKS
Tianhua Zhang, Shiduo Yang, Chandramani Shrivastava, Adrian A and Nadege Bize-Forest, Schlumberger

13:50  SPWLA-2021-0049  EVALUATION OF LWD HIGH RESOLUTION ULTRASONIC IMAGING TECHNOLOGY AND APPLICATIONS IN SLIM HOLE SIZE
Mohamed M. Hashem, Saudi Aramco; Ahmed Taher, Mohamed Fouda and Rehab Al-Khalifah, Halliburton

14:10  SPWLA-2021-0050  ASSESSMENT OF NEW HIGH-DEFINITION BOREHOLE IMAGING-WHILE-DRILLING TECHNOLOGY: LEARNINGS FROM PRE-SALT CARBONATES OF BRAZIL
Nicolas Orban, Shashank Garg and Mikhail Shaldaev, TOTAL; Chandramani Shrivastava, Guillermo Cuadros, Victor Marquinez, Adrian A, Vera Wibowo and Ricardo Domingos, Schlumberger

14:30  Break (15 mins)

14:45  Session 9A – Petrophysics

14:50  SPWLA-2021-0051  RESERVOIR SCALE CHEMOSTRATIGRAPHY AND FACIES MODELING USING HIGH SAMPLE RATE GEOPHYSICAL SCANS OF WHOLE CORE
John J.Degenhardt, Jr., Saifdad Ali, Mansoor Ali, Brian Chin and W. D. Von Gonten, Jr., W. D. Von Gonten Laboratories and Eric Peavey, Shell Fellow-UROC and Dept. of Geology & Geophysics, Texas A&M University

15:10  SPWLA-2021-0052  ENHANCED ASSESSMENT OF FLUID SATURATION IN THE WOLF CAMP FORMATION OF THE PERMIAN BASIN
Sabyasachi Dash and Zoya Heidari, The University of Texas at Austin

15:30  SPWLA-2021-0053  WELL-TEST LOGGING TO ENDEAVOR MAPPING THE CARBONATES PERMEABILITY, OFFSHORE ABU DHABI
Antoine Jacques and Vincent Jaffrezic, TOTAL SE; Benoit Brouard, BROUARD Consulting; Shafiq Ahmed, Amr Mohamed Serry, Raymond Nguyen and Yann Bigno, ADNOC Off Shore
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<tr>
<td>14:45</td>
<td>Session 9B – Case Studies – II</td>
<td>ACQUISITION, ANALYSIS, AND INTEGRATION OF WELLBORE LOGS TO CHARACTERIZE A FRACTURED GEOTHERMAL RESERVOIR: THE CASE OF RITTERSHOFFEN, FRANCE</td>
<td>Giovanni Sosio, Andreia Mandiuc and Annalisa Campana, Schlumberger; Jeanne Vidal, Universidad de Chile; Régis Hehn, GéoPlusEnvironnement; Clément Baujard, ÉS Géothermie</td>
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<td>14:50</td>
<td>SPWLA-2021-0054</td>
<td>3D PETROPHYSICS FOR HAWE: CASE STUDIES</td>
<td>Alexander Kolomytsev, GazpromNeft; and Yulia Pronyaeva, Schlumberger</td>
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<td>15:10</td>
<td>SPWLA-2021-0055</td>
<td>STRESS MEASUREMENT CAMPAIGN IN SCIENTIFIC DEEP BOREHOLES: FOCUS ON TOOL AND METHODS</td>
<td>Jean Desroches, Rocks Expert; Emilie Peyret, Adriaan Gisolf, Ailsa Wilcox, Mauro Di Giovanni and Aernout Schram de Jong, Schlumberger; Siavash Sepehri, Independent; Rodney Garrard and Silvio Giger, Nagra</td>
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<td>15:30</td>
<td>SPWLA-2021-0056</td>
<td>stress measurement campaign in scientific deep boreholes: focus on tool and methods</td>
<td>Jean Desroches, Rocks Expert; Emilie Peyret, Adriaan Gisolf, Ailsa Wilcox, Mauro Di Giovanni and Aernout Schram de Jong, Schlumberger; Siavash Sepehri, Independent; Rodney Garrard and Silvio Giger, Nagra</td>
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<td>15:50</td>
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**Wednesday – May 19th**

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<th>Session 10A – Acoustics - I</th>
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<tr>
<td>8:00</td>
<td>Session 10A – Acoustics - I</td>
<td>ENHANCING THE RESERVOIR PERFORMANCE BY ACCESSING THE RESERVOIR SWEET SPOTS GUIDED BY FAR-FIELD SONIC IMAGING: AN INTEGRATED CASE STUDY FROM THE NORWEGIAN NORTH SEA</td>
<td>Harish Datir, Schlumberger; Knut Arne Birkedal, Aker BP; Sachin Kriplani and Hege Porten, Schlumberger; Nils Andre Aarseth, Aker BP</td>
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<tr>
<td>8:05</td>
<td>SPWLA-2021-0057</td>
<td>ULTRASONIC ANGLE-DEPENDENT REFLECTIVITY IN COMPLEX ROCKS FOR IMPROVED INTERPRETATION OF SONIC AND ULTRASONIC LOGS</td>
<td>Daria Olszowska, Gabriel Gallardo-Giozza and Carlos Torres-Verdín, The University of Texas at Austin</td>
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<td>8:25</td>
<td>SPWLA-2021-0058</td>
<td>AUTOMATIC LOGGING-WHILE-DRILLING DIPOLE SONIC SHEAR PROCESSING ENABLED BY PHYSICS-DRIVEN MACHINE LEARNING</td>
<td>Lin Liang, Ting Lei and Matthew Blyth, Schlumberger</td>
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<td>8:45</td>
<td>SPWLA-2021-0059</td>
<td>CHARACTERIZING CEMENT BOND QUALITY USING SLIP-INTERFACE THEORY AND COUPLING STIFFNESS</td>
<td>Xuelian Chen, Xiaoming Tang, Shengqing Li and Yuanda Su, China University of Petroleum</td>
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<td>SPWLA-2021-0060</td>
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<th>Session 10B – Conventional Reservoirs – II</th>
<th>Title</th>
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<tr>
<td>8:00</td>
<td>Session 10B – Conventional Reservoirs – II</td>
<td>USING HIGH FIDELITY CONTINUOUS CORE DATA FOR A FAST AND OBJECTIVE ESTIMATION OF RESERVOIR QUALITY</td>
<td>Izral Izarruddin Marzuki and Thanapala Murugesu, Petronas; Christophe Germay, Tanguy Lhomme and Luc Perneder, EPSLOG</td>
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<td>8:05</td>
<td>SPWLA-2021-0061</td>
<td>LEARNINGS FROM SPECTRAL GR MEASUREMENTS FROM LWD AND FROM CUTTINGS IN HIGH AND LOW ANGLE WELLS</td>
<td>Mohamed Azizi Ibrahim and Faisal Al-Enezi, Saudi Aramco; Marie Van Steene and Alan Fernandes, Schlumberger</td>
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<td>8:25</td>
<td>SPWLA-2021-0062</td>
<td>FROM PLUG MEASUREMENTS TO DYNAMIC SIMULATIONS: UPSCALING EFFECTS ON MODELED HYDROCARBON VOLUMES</td>
<td>Iulian N. Hulea, Shell Global Solutions International B.V.</td>
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<td>8:45</td>
<td>SPWLA-2021-0063</td>
<td>AUTOMATIC FLOW-CALIBRATED PERMEABILITY LOG ESTIMATION THROUGH DUAL RANDOM FOREST ALGORITHM: HOW PREDICTIVE ANALYTICS ENHANCES THE CHARACTERIZATION OF HETEROGENEOUS CARBONATE RESERVOIRS</td>
<td>Federica Di Maggio, Giulia Barbacini, Nicola Raimondi Cominesi, Dario Reolon, Marco Pirrone, ENI S.p.A</td>
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<td>9:05</td>
<td>SPWLA-2021-0064</td>
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<td>9:25</td>
<td>Break (15 mins)</td>
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9:40   Session 11A – Case Hole Logging - II

9:45 SPWLA-2021-0065  A NOVEL METHOD FOR FORMATION DENSITY MEASUREMENT IN CASED WELLS
Xinguang Wang, China University of Petroleum (East China); Dong Li, China Oilfield Services Limited; Lei Zhang, China National Offshore Oil Corporation International Limited; Feng Zhang and Wenhao Wang, China University of Petroleum (East China); Hui Gao, Xi’an HuiNeng Electronic Equipment Co. LTD

10:05 SPWLA-2021-0066  THEORETICAL METHOD AND EXPERIMENTAL RESEARCH ON HIGH PRECISION FOUR DETECTOR DENSITY LOGGING
Shanqing Cai, Juntao Liu, Lanzhou University; Xusheng Wang, Fudan University and Zhiyi Liu, Lanzhou University

10:25 SPWLA-2021-0067  DETERMINING THE DENSITY OF MULTIPLE LAYERS USING GAMMA SPECTROSCOPY
Mayir Mamtimin and Jeffrey Crawford, Halliburton

9:40   Session 11B – Machine Learning - II

9:45 SPWLA-2021-0068  THE APPLICATION OF PATTERN RECOGNITION AND MACHINE LEARNING TO DETERMINE CEMENT CHANNELING & BOND QUALITY FROM AZIMUTHAL CEMENT BOND Logs
Andrew Imrie, Halliburton

10:05 SPWLA-2021-0069  ENHANCED MINERAL QUANTIFICATION AND UNCERTAINTY ANALYSIS FROM DOWNHOLE SPECTROSCOPY LOGS USING VARIATIONAL AUTOENCODERS
Paul Craddock, Prakhar Srivastava, Schlumberger-Doll Research Center; Harish Datar, David Rose, Tong Zhou, Laurent Mosse and Lalitha Venkataramanan, Schlumberger

10:25 SPWLA-2021-0070  NOVEL METHODOLOGY FOR AUTOMATION OF BAD WELL LOG DATA IDENTIFICATION AND REPAIR
Ryan Banas, PetroRes Consulting; Andrew McDonald and Tegwyn J. Perkins, Lloyd's Register

10:45  Break (15 mins)

11:00  Session 12A – Formation Evaluation

11:05 SPWLA-2021-0071  ANALYTICAL UNCERTAINTY PROPAGATION IN FACES CLASSIFICATION WITH UNCERTAIN LOG-DATA
Fabio Ciabarri, Marco Pirrone and Cristiano Tarchiani, Eni S.p.A

11:25 SPWLA-2021-0072  APPLICATION OF IMAGE LOGS FOR ENHANCED RESISTIVITY-BASED WATER SATURATION ASSESSMENT IN ORGANIC-RICH MUDROCKS
Sabyasachi Dash and Zoya Heidari, The University of Texas at Austin

11:45 SPWLA-2021-0073  GAMMA RAY INDEX–SHALE VOLUME TRANSFORMS
David Kennedy, QED Petrophysics LLC

11:00  Session 12B – Unconventional Reservoirs - I

11:05 SPWLA-2021-0074  RV/RH ANISOTROPY IN UNCONVENTIONAL FORMATIONS: RESOLVING THE RIDDLE OF RESISTIVITY
Andrew Barry and Adam Haecker, Continental Resources Inc. and Siddharth Misra, Texas A&M University

11:25 SPWLA-2021-0075  EVALUATION OF RELATIVE PERMEABILITY OF A TIGHT OIL FORMATION IN DAQING OILFIELD
D. Leslie Zhang, CNPC USA Corp.; Chunyan Qi, Beijing Huamei Century International Technology Co.; Xiaodong Shi, Jianfei Zhan and Xue Han, Exploration and Development Research Institute of Daqing Oilfield Company Ltd.; Xiangyun Li, Beijing Huamei Century International Technology Co., Ltd.; Ze Wang and Baojun Bai, Missouri University of Science and Technology

11:45 SPWLA-2021-0076  MACRO-PORE HYDROCARBON SATURATION FROM NMR $T_1$ - $T_2$ MAPS IN THE UNCONVENTIONAL POINT-PLEASANT FORMATION
Xinglin Wang, Philip M. Singer, Zeliang Chen, Yunke Liu and George J. Hirasaki, Rice University; Zheng (Elton) Yang, Scott J. Seltzer, Boqin Sun, Marcus O. Wigand and Jon E. Burger, Chevron Technical Center
12:05  Exhibit Break (15 mins)
12:25  SPWLA Award Ceremony

13:35  Session 13A – Geochemistry

13:40  SPWLA-2021-0077  INTEGRATING A NOVEL CHLORINE MEASUREMENT WITH RESISTIVITY, DIELECTRIC DISPERSION, AND 2D NMR TO RESOLVE SALINITY AMBIGUITY: CASE STUDIES IN ORGANIC SHALE FORMATIONS
   Andrew C. Johnson, Jeffrey Miles, Laurent Mosse, Robert Laronga, Violeta Lujan, Niranjan Aryal and Dozie Nwosu, Schlumberger

14:00  SPWLA-2021-0078  REVISITING THE INTERPRETATION OF COMPLEX CARBONATE RESERVOIRS WITH THE USE OF NOVEL ADVANCED LOGS INTEGRATION TECHNIQUES
   Harish B. Datir and Laurent Mosse, Schlumberger and Terje Kollien, Lundin Energy Norway

14:20  SPWLA-2021-0079  A GEOCHEMISTRY-ORIENTED WORKFLOW FOR WETTABILITY ASSESSMENT AT RESERVOIR CONDITION USING MOLECULAR DYNAMICS SIMULATIONS
   Isa Silveira de Araujo, Archana Jagadisan and Zoya Heidari, The University of Texas at Austin

13:35  Session 13B – Borehole Imaging – II

13:40  SPWLA-2021-0080  INVERSION-BASED MEASUREMENT INTERPRETATION OF A NEW THROUGH-THE-BIT OBM PHOTOREALISTIC BOREHOLE IMAGER
   Yong-Hua Chen, Richard Bloemenkamp, Peter Schlicht, Lin Liang and Laetitia Comparon, Schlumberger

14:00  SPWLA-2021-0081  AN AI-BASED APPROACH TO ENHANCED FRACTURE RESOLUTION IN IMAGE LOGS
   James Howard, Joe Tracey, Mike Shen and Shawn Zhang, DigiM Solution LLC

14:20  SPWLA-2021-0082  DEEP-LEARNING-BASED AUTOMATED SEDIMENTARY GEOMETRY CHARACTERIZATION FROM BOREHOLE IMAGES
   Marie Lefranc, Zikri Bayraktar, Morten Kristensen, Hedi Driss, Isabelle Le Nir, Philippe Marza and Josselin Kherroubi, Schlumberger

14:40  Break (15 mins)

14:55  Session 14A – Case Studies – III

15:00  SPWLA-2021-0083  MULTISCALE LOGGING WHILE DRILLING DATA INTEGRATION UNVEILED COMPLEX GEOLOGICAL SCENARIO WHILE GEOSTEERING
   Maurizio Mele, Filippo Chinellato, Andrea Leone and Francesca Arata, Eni S.p.A.; Caterina Cappanneli, and Matteo Medaglia, Mizamtec Operating Co. S. de R.L. de C.V.

15:20  SPWLA-2021-0084  IDENTIFICATION OF NATURAL OPEN FRACTURES, INDUCED FRACTURES AND MATRIX PERMEABILITY IN CARBONATES WHILE DRILLING
   Jalal Dashti, Bader Al-Ajmi and Hawas Farwan, Kuwait Oil Company; Ahmad Shoeibi, Milton Sanclemente, Alberto Martocchi and Eliana R. Russo, Geolog International B.V.

15:40  SPWLA-2021-0085  INTERPRETATION OF LWD ACOUSTIC BOREHOLE IMAGE LOGS: CASE STUDIES FROM NORTH AMERICAN SHALE PLAYS
   Bo Gong, Ela Manuel, Youfang Liu, David Forand, Tom Malizia, Vahid Tohidi and Alex Saldana, Chevron

14:55  Session 14B – Conventional Reservoirs – III

15:00  SPWLA-2021-0086  FORMATION PRESSURE ESTIMATION IN ULTRA-LOW PERMEABLE RESERVOIRS EMPLOYING FORMATION RATE ANALYSIS (FRA) AND ARTIFICIAL INTELLIGENCE CONTROLLED TOOLS
   Yamal Askoul and Gavin JG Sibbald, Baker Hughes; Art Hooker and John Banks, TOTAL E&P UK LTD

15:20  SPWLA-2021-0087  ANISOTROPY QUANTIFICATION USING HIGH-RESOLUTION WHOLE-CORE CT-SCAN IMAGES
   Andres Gonzalez, Mehdi Teymouri and Zoya Heidari, The University of Texas at Austin; Olivier Lopez, Equinor
15:40 SPWLA-2021-0088 ROCK TYPING AND NOVEL APPROACH FOR FLUID-SATURATION DISTRIBUTION IN TILTED WATER/OIL CONTACT RESERVOIRS
Kresimir Vican, Venkat Jambunathan, Ehab Negm, Nacer Guergueb, Reinaldo Jose Angulo Yznaga, Halliburton; Francis Eriavbe, Al Dhafra Petroleum

16:00 End of 3rd Day - Adjourn

Thursday – May 20th

8:00 Session 15A – Machine Learning – III

8:05 SPWLA-2021-0089 PREDICTION AND ANALYSIS OF GEOMECHANICAL PROPERTIES OF JIMUSAER SHALE USING A MACHINE LEARNING APPROACH
Lianteng Song*, Zhonghua Liu, Chaoliu Li, Congqian Ning, China National Petroleum Corporation; Yating Hu*, Yan Wang, Feng Hong, Wei Tang, Yan Zhuang, Ruichang Zhang, Yanru Zhang, Qiong Zhang, University of Electronic Science and Technology of China (*Lianteng Song and Yating Hu are co-first authors)

8:25 SPWLA-2021-0090 MACHINE LEARNING FOR PRODUCTIVITY PREDICTION IN HETEROGENEOUS CARBONATE GAS RESERVOIRS, CENTRAL SICHUAN BASIN, CHINA
Zuoan Zhao, PetroChina SWOGC; Dali Wang, Schlumberger

8:45 SPWLA-2021-0091 AUTOMATED SELECTION OF INPUTS FOR LOG PREDICTION MODELS USING A NEW FEATURE SELECTION METHOD
Ravi Arkalgud, Helio Flare Ltd; Andrew McDonald and Ross Brackenridge, Lloyd’s Register

9:05 SPWLA-2021-0092 AUTO-NAVIGATION ON PRESSURE AND SAMPLING LOCATION IN WIRELINE AND LWD: BIG DATA CHALLENGES AND SOLUTIONS

8:00 Session 15B – Nuclear Magnetic Resonance

8:05 SPWLA-2021-0093 RELIABLE QUANTIFICATION OF PORE GEOMETRY IN CARBONATE ROCKS USING NMR AND ELECTRICAL RESISTIVITY MEASUREMENTS FOR ENHANCED ASSESSMENT OF PERMEABILITY AND CAPILLARY PRESSURE
Zulkuf Azizoglu, Artur Posenato Garcia and Zoya Heidari, The University of Texas at Austin

8:25 SPWLA-2021-0094 MEASURING KEROGEN, SOLID ORGANICS, AND OIL PRODUCTION POTENTIALS OF UNCONVENTIONAL SOURCE ROCKS USING SOLID TYPE 20-MHZ NMR TECHNIQUES
Z. Harry Xie, Thomas Gentzis and Humberto Carvajal-Ortiz, Core Laboratories, LP

8:45 SPWLA-2021-0095 NMR DRILL CUTTING ANALYSIS: METHODOLOGY EVALUATION AND OPERATIONAL BEST PRACTICES
Gabriela Singer, Mark Flaum and Songhua Chen, Halliburton; S. Mark Ma, Saudi Aramco

9:05 SPWLA-2021-0096 NMR WETTABILITY INDEX MEASUREMENTS AND METHODS COMPARED ON A VARIETY OF UNCONVENTIONAL SAMPLES
Shaina Kelly and Ron J.M. Bonnie, ConocoPhillips Company; Micheal J. Dick and Dragan Veselinovic, Green Imaging Technologies

9:25 Break (15 mins)

9:40 Session 16A – Pulsed Neutron Logging

9:45 SPWLA-2021-0097 DETERMINATION OF RESIDUAL OIL SATURATION IN A WATER AND GAS FLOODED GIANT OIL RESERVOIR USING CORE, CONVENTIONAL AND PULSED NEUTRON LOGS
Mike Davenport, Rufat Guliyev, Kasim Sadikoglu, Pavel Gramin and Adrian Zett, BP Exploration Operating Company
10:05 SPWLA-2021-0098 DERIVING SYNTHETIC BULK DENSITY USING FAST NEUTRON CROSS-SECTION IN A LOG-INTEGRATED APPROACH FROM SLIM PULSED NEUTRON LOGGING IN CASED-HOLE ENVIRONMENT
Khaled Saleh, Aly Morad, Chiara Cavalleri, Schlumberger; Emad Abdel Hakim, Mohamed Farouk, Eslam Atwa, Mohamed Ameen, Youssif Youssif, Kareem Mamdouh, General Petroleum Company

10:25 SPWLA-2021-0099 AN ENHANCED METHOD FOR CRACK EVALUATION UTILIZING NEUTRON GAMMA TRACER IMAGING LOGGING TECHNOLOGY IN CARBONATE RESERVOIR
Qian Chen, Feng Zhang, Lili Tian and Xiaoyang Zhang, China University of Petroleum (East China); Xianghui Li, Isotope Research Institute of Henan Academy of Sciences Co.Ltd; Qunwei Fang and Junting Fan, China University of Petroleum (East China)

9:40 Session 16B – Acoustics – II

9:45 SPWLA-2021-0100 INTRODUCING SONIC IMAGING WITH A SLIM-DIPOLE MEASUREMENT IN HIGH-ANGLE WELLS
Olusegun Akinyose and Rima Ali, Saudi Aramco; Rajeev Kumar and J. Adam Donald, Schlumberger

10:05 SPWLA-2021-0101 ENHANCING WELBORE LEAK LOCALIZATION WITH CONTINUOUS LOGGING DATA FROM A SONIC SENSOR ARRAY
Yao Ge, Yadong Wang, Xiang Wu, Ruijia Wang and Freeman Hill, Halliburton

10:25 SPWLA-2021-0102 ROBUST SONIC LOG TRACKING USING A MULTI-RESOLUTION APPROACH
Ting Lei, Michiko Hamada, Adam Donald and Takeshi Endo, Schlumberger

10:45 Break (15 mins)

11:00 Session 17A – Geosteering

11:05 SPWLA-2021-0103 VENDOR-NEUTRAL STOCHASTIC INVERSION OF LWD DEEP AZIMUTHAL RESISTIVITY DATA AS A STEP TOWARD EFFICIENCY STANDARDIZATION OF GEOSTEERING SERVICES
Mikhail Sviridov, Anton Mosin, Sergey Lebedev, ROGII Inc. and Ron Thompson, Beach Energy Limited

11:25 SPWLA-2021-0104 REAL-TIME 2.5D INVERSION OF LWD RESISTIVITY MEASUREMENTS USING DEEP LEARNING FOR GEOSTEERING APPLICATIONS ACROSS FAULTED FORMATIONS
Kyubo Noh and Carlos Torres-Verdin, The University of Texas at Austin; David Pardo, UPV/EHU, BCAM, Ikerbasque

11:45 SPWLA-2021-0105 REAL-TIME ENSEMBLE-BASED WELL-LOG INTERPRETATION FOR GEOSTEERING
Nazanin Jahani, NORCE Norwegian Research Centre; Joaquín Ambía, The University of Texas at Austin; Kristian Fossum, Sergey Alyaev and Erich Suter, NORCE Norwegian Research Centre and Carlos Torres-Verdin, The University of Texas at Austin

11:00 Session 17B – Completion Petrophysics and Reservoir Surveillance

11:05 SPWLA-2021-0106 LESSONS LEARNED FROM CROSS-VALIDATION OF FIBER OPTICS AND PRODUCTION LOGGING CLUSTER PERFORMANCE ASSESSMENT IN THE UNCONVENTIONAL WELLS
Yegor Se, Chevron ETC; Michael Sullivan, Vahid Tohidi, Michael Lazorek and, Chevron Canada; Ahmed Attia, Phillip Chen, Ziebel US; Linda Abbassi, Virginie Schoepf, Openfield Technology

11:25 SPWLA-2021-0107 FIELDWIDE DYNAMIC PRESSURE SURVEILLANCE WITH FPWD TECHNOLOGY
Yon Blanco, Schlumberger; Ben Fletcher and Robert Webber, CNOOC International; Alistair Maguire and Velerian Lopes, Schlumberger

11:45 SPWLA-2021-0108 CASE STUDIES ON MULTI-STRING ISOLATION EVALUATION IN P&A OPERATIONS
Jun Zhang, Probe; Dan T. Mueller, ConocoPhillips Company; David Bryce, Probe; Tom A. Brockway, ConocoPhillips Company and Fady Iskander, Probe

12:05 Exhibit Break (15 mins)
12:25 Lunch
13:25  Session 18A – Conventional Reservoirs – IV

13:30  SPWLA-2021-0117  APPLICATION OF LWD ACOUSTIC DISPERSIVE DATA PROCESSING FOR HIGH-QUALITY SHEAR SLOWNESS LOGS IN SLOW FORMATIONS
Ruijia Wang, Jiajun Zhao and Taher Kortam, Halliburton

13:50  SPWLA-2021-0118  SATURATION EXPONENT AS A FUNCTION OF RESERVOIR HETEROGENEITY AND WETTABILITY IN THE TAMBAREDIO OIL FIELD, SURINAME
Elias R. Acosta, Dunia Technology Solutions; Bhagwanpersad Nandlal, Staatsolie Maatschappij and Ryan Harripersad, Former Petrophysics Trainee at Staatsolie Maatschappij

14:10  SPWLA-2021-0119  A NEW LOOK AT THE DUAL DEPTH OF INVESTIGATION OF LWD PROPAGATION RESISTIVITY LOGGING
Gong Li Wang, Dean Homan, David Maggs and David Allen, Schlumberger

13:25  Session 18B – Formation Fluid Analysis – III

13:30  SPWLA-2021-0112  COMPRESSIVE SENSING BASED OPTICAL SPECTROMETER FOR DOWNHOLE FLUID ANALYSIS
Bin Dai, Christopher Jones, Jimmy Price, Darren Gascooke and Anthony van Zuilekom, Halliburton

13:50  SPWLA-2021-0113  AUTOMATED WORKFLOW TO INDICATE RESERVOIR CONNECTIVITY THROUGH ASPHALTENE EQUILIBRIUM
Melanie Jensen, Lalitha Venkataramanan, Li Chen, Sandip Bose, Peter Tilke and Oliver C. Mullins, Schlumberger

14:10  SPWLA-2021-0114  USING PROXY SIMULATOR FOR RESERVOIR ZONE SELECTION AND REDUCING THE FORMATION TESTER CLEANUP OPERATIONAL TIME
Andre C. Bertolini, Vanessa Simoes, Marianna Dantas and Patrick Pereira Machado, Schlumberger

14:30  Break (15 mins)

14:45  Session 19A – Unconventional Reservoirs – II

14:50  SPWLA-2021-0115  AN ACCURATELY DETERMINING POROSITY METHOD FROM PULSED-NEUTRON ELEMENT LOGGING IN UNCONVENTIONAL RESERVOIRS
Feng Zhang, Fei Qiu, Qunwei Fang, Xiaoyang Zhang, Hui Zhang, Fangwei Tang and Jilin Fan, China University Of Petroleum (East China)

15:10  SPWLA-2021-0116  A COUPLED PETROPHYSICAL AND GEOMECHANICAL WORKFLOW TO INTERPRET DIPOLE SONIC VELOCITIES FOR IN-SITU STRESS
Tom Bratton, Tom Bratton LLC

14:45  Session 19B – Case Studies – IV

14:50  SPWLA-2021-0109  RAPID CROSS- PLOT DISCRIMINATION OF COMMERCIAL POTASH MINERALIZATION – CASE HISTORIES
Donald G. Hill, Consulting Petrophysicist and E.R. Crain, Petrophysical Advisor and Mentor

15:10  SPWLA-2021-0110  PETROPHYSICS SKILL SET GUIDELINES FOR INDEPENDENT PETROPHYSICAL CONTRIBUTORS
Z. Zach Liu and S. Mark Ma, SPWLA Education SIG

15:30  Closing Remarks
15:50  End of 62nd Annual Symposium