Fractures

**RC 3.1** (1784–1788)
Interpretation and detection of fracture zones by multiseismic attributes
Jianguo Yan*, Zhou Zhao, Xiaotao Wen, Xiang Rong Tang, and Wen Gu, Chengdu University of Technology, Ministry of Education, China

**RC 3.2** (1789–1793)
Closure stress gradient estimation of the Marcellus Shale from seismic data
Joel Starr*, EQT Production

**RC 3.3** (1794–1798)
Developing templates for integrating quantitative geophysics and hydraulic fracture completions data: Part I - Principles and theory
Marco Perez*, David Close, Bill Goodway, and Greg Purdue, Apache Canada Ltd.

**RC 3.4** (1799–1803)
Sensitivity study of fracture parameters in a carbonate oil reservoir
Mohammed Alhussain*, Kyle T. Spikes, and Mrinal K. Sen, University of Texas at Austin

**RC 3.5** (1804–1808)
Effect of in-situ stress and stresses state conditions on fractured and unfractured, homogeneous and laminated rocks permeability
Naif 8. Alqahtani*, Mufarreh M. Tale, and Abdulrahman A. Al-Qurishi, King Abdulaziz City for Science and Technology (KACST)

**RC 3.6** (1809–1813)
Double-beam stacking to infer seismic properties of fractured reservoirs
Yingcai Zheng*, Xinding Fang, Mike Fehler, and Daniel Burns, MIT

**RC 3.7** (1814–1818)
An integrated approach for fracture characterization and prediction using FMI logs, poststack seismic attributes and prestack anisotropy: A case study in Tishrine West Oilfield, Northeast Syria
Jian Yang, Xuemin Gou, Nabil Hilmi, and Rick Xia, Oudeh Petroleum Company; Xiangyang Sun, Peng Li*, Qiang Wu, and Hua Liu, LandOcean Energy Services Co., Ltd.

**RC 3.8** (1819–1824)
Estimation of fracture compliance from tube waves generated at a fracture intersecting a borehole
Sudhish K. Bakku*, Michael Fehler, and Daniel R. Burns, MIT

Methods and Interpretation I

**RC 4.1** (1825–1829)
Broadband seismic: The ultimate input for quantitative interpretation?
Cyrille Reiser*, Euan Anderson, Yermek Balabekov, and Folke Engelmark, Petroleum Geo-Services

**RC 4.2** (1830–1834)
Channel and fracture indicators from narrow-band decomposition at Dickman field, Kansas
Johnny Seales*, Tim Brown, and Christopher Liner, University of Houston

**RC 4.3** (1835–1839)
Estimation of quality factor Q from prestack CMP records using EPIFVO analysis
Jing Zhao* and Jinghuai Gao, Xi’an Jiaotong University; Da Xing Wang and Mengli Zhang, Research Institute of E&D, Changqing Oil-Field Company of CNPC

**RC 4.4** (1840–1844)
Integrated geophysics and geomodeling workflows for reservoir characterization: A case study of waterflood optimization
David Close* and Francisco Caycedo, Apache Canada Ltd

**RC 4.5** (1845–1849)
Detecting carbonate-karst reservoirs using the directional amplitude gradient difference technique
Chen Maoxian*, Zhan Shifan, Wan Zhonghong, Zhang Hongying, and Li Lei, BGP, CNPC

**RC 4.6** (1850–1854)
Automatic geological body identification using the modified rival penalized competitive learning clustering algorithm
Zhan Shifan*, Li Lei, Xiong Wei, and Wan Zhonghong, BGP, CNPC

**RC 4.7** (1855–1860)
Estimation of interval velocity and attenuation anisotropy from reflection data at the Coronation Field
Jyoti Behura, Colorado School of Mines, BP Americas, Houston; Ilya Tsvankin, Colorado School of Mines; Edward Jenner and Alex Calvert, ION Geophysical, Maersk Oil, Denmark

**RC 4.8** (1861–1865)
Inverse continuous wavelet transform “Deconvolution”
Marcilio Castro de Maia*, Sismo Research & Consulting, AASPI/OU; Kurt I. Marfurt, The University of Oklahoma
Methods and Interpretation II

RC 5.1 (1866–1870)
The integrated interpretation of reservoir simulation and seismic data: A case study
Cai Yintao*, Ling Yun, Guo Xiangyu, and Zhang Feng, BGP, CNPC

RC 5.2 (1871–1875)
Integrated workflow for the development of a calibrated coupled geomechanical flow simulator for unconventional reservoirs
Simon Emsley*, Ikon Science Ltd; Ebrahim Zadeh and Michel Kemper, Ikon Science AP Ltd

RC 5.3 (1876–1881)
Advanced dipole borehole acoustic processing: Rock physics and geomechanics applications
Javier Franquet*, Doug Patterson, and Daniel Moos, Baker Hughes

RC 5.4 (1882–1886)
Surface-to-borehole TEM for reservoir monitoring
Azizuddin Abdul Azz*, University of Houston; Kurt Strack, KMS Technologies Inc., Mahidol University; Tilman Hanstein, KMS Technologies Inc

RC 5.5 (1887–1891)
3D petrophysical modeling using complex seismic attributes and limited well log data
Mehdi Eftekharifar* and De-Hua Han, University of Houston

RC 5.6 (1892–1896)
Comparison of a vertical electric and a vertical magnetic source for cross well CSEM monitoring of CO₂ injection
Brett Harris* and Andrew Pethick, Curtin University

RC 5.7 (1897–1902)
Structural joint inversion of AVO and CSEM data using flexible representations
Martha Lien*, Uni CIPR; Trond Mannseth, Uni CIPR, University of Bergen, Norway

RC 5.8 (1903–1907)
3D reservoir characterization of a North Sea oil field using quantitative seismic & CSEM interpretation
Jan Petter Morten* and Friedrich Rohr, EMGS; David Timko and Constantin Pacurar, Fugro-Jason; Anh Kiet Nguyen and Per Arle Olsen, Statoil

Attribute Applications I

RC P1.1 (1908–1912)
Curvature-fracture relations in clay experiments
Evan Staples* and Kurt J. Marfurt, University of Oklahoma

RC P1.2 (1913–1917)
PSO-based multiattribute dynamic clustering technology and its application
Liu Xingfang, Zheng Xiaodong, Xu Guangcheng, Yang Hao, and Song Jianyong, Research Institute of Petroleum Exploration and Development, Petrochina

RC P1.3 (1918–1922)
Reservoir evaluation for carbon sequestration at Dickman Field, Kansas
Son Phan* and Mrinal K. Sen, The University of Texas at Austin

RC P1.4 (1923–1927)
Thickness estimation using gradient of spectral amplitude from spectral decomposition
Tri Wuri Atri Sulistyowati*, Lita Novitasari, and Sonny Winardhi, Bandung Institute of Technology

RC P1.5 (1928–1932)
Detection of a viscoelastic inclusion using spectral attributes of the quasi-stationary seismic surface response
M. A. Lambert* and E. H. Saenger, ETH Zurich, Spectraseis; B. Quintal, ETH Zurich; S. M. Schmalholz, University of Lausanne

RC P1.6 (1933–1937)
Application of fluid elastic impedance inversion in QHD area of Bohai Sea
Jun Wang, Danghong Zhou, and Zhongqiao Zhang, China National Offshore Oil Corporation (CNOOC) Ltd.; Shixiong Zhang, China University of Petroleum

RC P1.7 (1938–1942)
Correlation of AVO inversion methods with porosity seen on logs and cores: A case study for Mississippian chert reservoir of Oklahoma, USA
Malleswar Yenugu and Kurt J. Marfurt, University of Oklahoma; Charles Wickstrom and Shane Matson, Spyglass Energy

RC P1.8 (1943–1948)
Utilizing waveform segmentation and gas chimney detection to distinguish productive and nonproductive reservoirs in the deep, geopressed Miocene play: Grand Bay Field, Louisiana
Andy Clifford*, Saratoga Resources; David Connolly, dGB Earth Sciences
**Attribute Applications II**

**RC P2.1** (1949–1952)
Fracture characterization based on analysis of frequency attenuation anisotropy

Li Mei*, Chengdu Technology University, LandOcean Energy Services Co.; Shi Zejin, Chengdu Technology University; Yang Shaoguo and Yang Tao, LandOcean Energy Services Co.; Huang Ling, Research Institute of JiLin Oil Field Branch Company, PetroChina

**RC P2.2** (1953–1957)
Seismic characterization of fractured reservoirs: A resolution matrix approach

Mehdi Eftekharifar*, University of Houston; Colin M. Sayers, Schlumberger

**RC P2.3** (1958–1962)
Hydrocarbon detection using adaptive selected spectrum attenuation

Lingling Wang* and Jinghuai Cao, Xian Jiaotong University; Bin Weeng and Xiudi Jiang, Research Center of CNOOC

**RC P2.4** (1963–1967)
Fast probabilistic inversion of seismic attributes for petrophysical parameters

Mohammad Shahraeeni* and Andrew Curtis, University of Edinburgh; Gabriel Chao, Total E&P UK

**RC P2.5** (1968–1972)
3D seismic attribute optimization technology and application for dissolution caved carbonate reservoir prediction

Lifeng Liu*, Sam Zandong Sun, Haiyang Wang, Lab for Integration of Geology and Geophysics (LiGG), China University of Petroleum (Beijing); Haijun Yang; Jianfa Han, and Bing JIng, Tarim Oilfield Co., CNPC

**RC P2.6** (1973–1977)
Value of instantaneous-frequency spikes in thin-bed and stratigraphic interpretation

Hongliu Zeng*, Bureau of Economic Geology, University of Texas at Austin

**RC P2.7** (1978–1983)
Rock formation characterization for CO2-EOR and carbon geosequestration: 3D seismic amplitude and coherency anomalies, Wellington Field, Kansas, USA

Derek Ohl* and Abdelmoneam Raef, Kansas State University; Lynn Wathen and Saibal Bhattacharya, Kansas Geological Survey

**RC P2.8** (1984–1988)
Parameter estimation for a variable density hydrodynamic model of the Gippsland Basin in Australia using wireline logs and seismic inversion

Sunil Varma*, Bozkurt Ciftci, Sanjeev Rajput, Karsten Michael, and Elise Bekele, Commonwealth Scientific and Industrial Research Organization; Geoff O'Brien and Peter Tingate, Victoria Department of Primary Industries

**Techniques**

GLCM parameters of channel texture analysis

Zhiguo Wang* and Cheng Yin, Southwest Petroleum University, Chengdu, China; Wei Zhao, CNOOC Research Center, Beijing, China

**RC P3.2** (1994–1998)
Seismic response analysis of fractured-cavernous reservoirs in the central Tarim basin

Haining Gu, Jiao Xue*, Yingyue Zhao, and Chengguo Cai, China University of Geosciences

**RC P3.3** (1999–2003)
Effect of the conductivity in the dissipation of acoustical propagations through porous media

Luiz Pompeo-Neto*, Oswair V. Trevisan, and Euclides J. Bonet, University of Campinas (Unicamp), Brazil

**RC P3.4** (2004–2008)
Predicting permeability from well log data and core measurements using support vector machines

Siamak Nazari* and James W. Rector III, University of California, Berkeley; Heidi A. Kuzma, East Donner Research LLC

**RC P3.5** (2009–2013)
Gas prediction in sand-shale interbeds by prestack simultaneous inversion

Liang Yan, Zhang Zhongping, Zhang Zhensheng, and Wu Na, BGP, CNPC

**RC P3.6** (2014–2018)
Effects of offset-depth ratio on fracture detection: A physical modeling study

Zhiheng Yin, Xiangyang Li, Bangrang Di, Jianxin Wei, and Sihai Zhong, China University of Petroleum

**RC P3.7** (2019–2023)
Application of 3D modeling technique to reservoir prediction within complex fault-block oil field

Yao Shengli*, Zhang Zhiqiang, Li Tinghui, and Yang Anyuan, BGP, CNPC

**RC P3.8** (2024–2028)
A new reservoir prediction method: PCA value-weighted attribute optimization

Lifeng Liu*, Sam Zandong Sun, Haiyang Wang, Lab for Integration of Geology and Geophysics (LiGG), China University of Petroleum (Beijing); Haijun Yang; Jianfa Han, and Bing JIng, Tarim Oilfield Co., CNPC
Diverse Studies

RC P4.1 (2029–2033)
Direct inversion of differenced seismic reflection data for time-lapse structural changes
K. A. Innanen, M. Naghizadeh, University Calgary, CREWES; S. T. Kaplan, ConocoPhillips

RC P4.2 (2034–2038)
Depth Imaging in a marine HRDZ and reef effected area: A case history
Guo Mengqiu* and Zhang Wei, LandOcean Energy Services Co. Ltd; Zuo Shengjie, Sinopec Oil & Gas Australia Pty Ltd

RC P4.3 (2039–2043)
Imaging using the ambient wave field; Low-frequency seismic imaging of an unproduced oil reservoir in Egypt
Brad Birkelo* and Ben Witten, Spectraseis

RC P4.4 (2044–2048)
Geophysical software ergonomics: Methods for effective evaluation
S. Camille Peres and Magdy Akladios, University of Houston-Clear Lake; Philip Kortum, Rice University; Andrew Muddimer*, Schlumberger; Sam Napit, ExxonMobil

RC P4.5 (2049–2053)
Analysis of the seismic response of an anisotropic viscoelastic reservoir
Zhiqi Guo*, British Geological Survey, Jilin University; Xiangyang Li, British Geological Survey

RC P4.6 (2054–2058)
Multi-geometry SAR interferometry for CO2 sequestration monitoring
Alessio Rucci*, Alessandro Ferretti, Fabrizio Novelli, and Andrea Tomburini, TRE – Tele Rilevamento Europa; D. W. Vasco, Lawrence Berkeley National Laboratory

RC P4.7 (2059–2063)
Effects of microporosity on permeability and sonic velocity of miocene carbonates and an approach to relate micrite microtextures with microporosity occurrences in miocene carbonate reservoirs of offshore Sarawak, Malaysia
Md. Habibur Rahman* and Bernard J. Pierson, South-East Asia Carbonate Research Laboratory(SEACARL), University Teknologi PETRONAS, Malaysia

RC P4.8 (2064–2068)
Delineating the gas reservoir with the C-wave diodic effect correction in Qaidam Basin, Northwest China
Shai Zhang*, Xiaoming Li, and Zhiheng Yin, China University of Petroleum; Hengchang Dai, British Geological Survey; Xiang-Yang Li, China University of Petroleum, British Geological Survey

Numerical Modeling

RP 1.1 (2069–2073)
Building a seismic-driven 3D geomechanical model in a deep carbonate reservoir
Mita Sengupta*, Jianchun Dai, Stefano Veiterrani, and Nader Dutta, Western-Geco; Narthi Srinivas Rao, Bashar Al-Qadeeri, Vijaya Kumar Kidambi, Kuwait Oil Company

RP 1.2 (2074–2078)
A diagenetic rock model for exploration
Anders Drage*, Statoil ASA

RP 1.3 (2079–2083)
Pore-shape and composition effects on rock-physics modeling in the Haynesville Shale
Meijuan Jang* and Kyle Spikes, University of Texas at Austin

RP 1.4 (2084–2088)
Memory of rocks: How burial history controls present day seismic properties. Example from Troll East, North Sea
Per Aaseth*, Odin Petroleum, Norway; Anders Drage, Statoil

RP 1.5 (2089–2093)
S-wave attenuation caused by wave-induced fluid flow
Beatriz Quintal* and Marcel Frehner, ETH Zurich; Holger Steeb, Ruhr-Universitat Bochum; Stefan M. Schmalholz, University of Lausanne

RP 1.6 (2094–2098)
Density estimate from well log data using a diagenetic rock model
Marcelo Benabentos*, Repsol Services USA; John Castagna, University of Houston

RP 1.7 (2099–2102)
Extracting attributes from model to seismic: Sichuan Basin Example, Oolitic Limestone Reservoir
Mei Li*, Chengdu University of Technology; Yijie Zhan, Shaoguo Yang, Yihong Pan, and Yi Li, LandOcean Energy Services Co., Ltd; Zejin Shi, Chengdu University of Technology

RP 1.8 (2103–2107)
Rock physics analysis of deepwater sediments, West Africa
Mosab Nasser* and Gary Ostroff, Maersk Oil Houston Inc.; Gary Mavko and Jack Dvorkin, Rock Physics Group
Laboratory and Computational Methods

RP 2.1 (2108–2113)
CO2 sequestration in basalt: Carbonate mineralization and fluid substitution
Ludmila Adam*, Thomas Otheim, and Kasper van Wijk, Boise State University; Michael Batzle, Colorado School of Mines; Travis L. McLing and Robert K. Podgorny, Idaho National Laboratory

RP 2.2 (2114–2118)
Further developments in measurement of low-frequency seismic attenuation in laboratory
Claudio Madonna and Nicola Tisato*, ETH Zurich; Claudio Delle Piane, CSIRO; Erik H. Saenger, ETH Zurich, Spectraseis

RP 2.3 (2119–2123)
Differentiating chemical effects and pressure effects on the elastic properties of the Lower Tuscaloosa sandstone in Cranfield, Mississippi by injecting carbon dioxide rich brine
Corey Joy* and Mrinal K. Sen, The University of Texas at Austin; Tiziana Vanorio, Stanford Rock Physics Laboratory

RP 2.4 (2124–2129)
Computing rock physics trends using sandstone micro-CT images and digital mineral precipitation
Fabian Krzikalla* and Tiziana Vanorio, Stanford University; Ratnanabha Sain, ExxonMobil Upstream Research Company

RP 2.5 (2130–2134)
Laboratory measurements of ultrasonic P-wave and S-wave attenuation in partially frozen unconsolidated sediments saturated with brine
Jun Matsushima*, Makoto Suzuki, Yoshibumi Kato, and Shuichi Rokugawa, The University of Tokyo

RP 2.6 (2135–2139)
Rock physics and petrophysics testing of shales from the Canning Basin, Western Australia
Claudio Delle Piane, Lionel Esteban, David Dewhurst*, and Ben Clennell, CSIRO Earth Science and Resource Engineering; Mark Raven, CSIRO Land and Water

RP 2.7 (2140–2144)
Digital rock physics: Effect of fluid viscosity on effective elastic properties
E. H. Saenger*, ETH Zurich, Spectraseis; H. Steeb, RU Bochum

RP 2.8 (2145–2149)
Uniaxial stress and ultrasonic anisotropy in a layered orthorhombic medium
Bode Omoboya*, Nikolay Dyaur, and Robert R. Stewart, University of Houston; J. J. S de Figueiredo, Unicamp-Brazil, University of Houston

Attenuation, Dispersion, and Fluids

RP 3.1 (2150–2154)
Viscosity scaling of wave attenuation mechanisms in porous rocks: Theory and numerical simulations
Tobias M. Muller, CSIRO Earth Science and Resource Engineering, Perth; Erik H. Saenger*, ETH Zurich, Spectraseis; Pratap N. Sahay, CICESE Department of Seismology, Ensenada, Mexico

RP 3.2 (2155–2160)
Bounds for seismic dispersion and attenuation in poroelastic rocks
Boris Curevich*, Curtin University, CSIRO Earth Science and Resource Engineering; Dina Makarynska, Curtin University; Osei de Paula, Curtin University, Petrobras

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Fluid substitution in gas/water systems: Revisiting patchy saturation
Amrita Sen* and Jack Dvorkin, Stanford University

RP 3.4 (2166–2170)
Seismic attenuation in heterogeneous partially saturated rocks
J. German Rubin* and Klaus Holliger, University of Lausanne

RP 3.5 (2171–2176)
Effective medium modeling of fluid-filled fractured-porous medium
Ranjana Ghosh* and Mrinal K. Sen, University of Texas at Austin

RP 3.6 (2177–2182)
Influence of pore fluid and frequency on elastic properties of greensand as interpreted using NMR data
Zakir Hossain* and Ida L. Fabricius, Technical University of Denmark; Tapas Mukerji, Stanford University

RP 3.7 (2183–2187)
Fluid substitution for laminated sand-shale sequences
Piyapa Dejtrakutwong* and Gary Mavko, Stanford University

RP 3.8 (2188–2193)
Asymptotic Biot's model for estimation of seismic attenuation in porous layered medium
Elmira Chabysheva* and Gennady Goloshubin, University of Houston
Anisotropy, Fractures, and Stress

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Mindlin’s friction term and implications for shear modulus and anisotropy in granular media
Kenneth Duffaut*, Martin Landro, Roger Sollie, and Oljan Pedersen, StatOil ASA, Norwegian University of Science and Technology

RP 4.2 (2200–2205)

Role of microheterogeneities on fabric, stress, and elastic anisotropy in granular media
Ratnanabha Sain*, ExxonMobil Upstream Research Company, Houston; Tapan Mukerji and Gary Mavko, Stanford University

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Elastic scattering by planar fractures
Thomas E. Blum* and Kasper van Wyk, Boise State University; Roel Snieder, Colorado School of Mines; Mark E. Willis, ConocoPhillips

RP 4.4 (2211–2215)

Analysis of mesoscopic loss effects in anisotropic poroelastic media using harmonic finite element simulations
Juan E. Santos*, CONICET, Facultad de Ciencias Astronomicas y Geofisicas, Universidad Nacional de La Plata, Purdue University; Jose M. Carcione and Stefano Picotti, Istituto Nazionale di Oceanografia e di Geofisica Sperimentale - OCS, Italy

Measurements and Applications

RP P1.1 (2236–2240)

Laboratory measurements of modulus dispersion in sandstone at seismic frequencies

RP P1.2 (2241–2245)

Tight shale elastic properties using the soft-porosity and single aspect ratio models
Franklin Ruiz and Ilgar Azizov, RSI

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Quantitative DC and high frequency AC seismmoelectric measurement on Berea sandstone
Xin Zhan*, ExxonMobil Upstream Research Company; Zhenyu Zhu and M. Nafi Toksöz, MIT

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Theoretical validation of fluid substitution by Hashin-Shtrikman bounds
Fuyong Yan* and De-hua Han, University of Houston

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Approximate Eshelby tensor for transversely isotropic media
Yaping Zhu* and Enru Liu, ExxonMobil Upstream Research Company

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Ran Bachrach, WesternGeco, Tel Aviv University

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Fracture intersections and interface waves
Laura J. Pyrak-Nolte, Bradley C. Abell, and Fan Wu, Purdue University

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Pressure-dependent seismic velocities based on unified asperity-deformation model
Kai Gao* and Richard L. Gibson Jr., Texas A&M University
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Low frequency measurements of seismic wave attenuation in Berea sandstone
Nicola Tisato* and Claudio Madonna, ETH Zurich; Brad Artman, Spectraseis; Erik H. Saenger, ETH Zurich & Spectraseis

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Seismic monitoring of permeability reduction due to biopolymer formation in unconsolidated materials
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**RP P2.3** (2287–2291)
Seismic signature of a patchy saturation and its implications to time-lapse monitoring of carbon-sequestrated deep saline reservoirs
Amit Padi*, Subhashish Mallick, Pradip K. Mukhopadhyay, Hamid Behzadi, and Vladimir Alvarado, University of Wyoming

**RP P2.4** (2292–2296)
Stress-dependent seismic dispersion in fluid-saturated granular media
Ranajit Ghose and Alimzhan Zhubayev*, Delft University of Technology

Caribbean Petroleum Systems

**SGS 1.1** (2319–2323)
Land seismic acquisition in the Southern Caribbean: A Trinidad case study
Sean Cardinez* and Victor Young On, Petrotrin Exploration and Geophysics

**SGS 1.2** (2324–2325)
The 2011 Trinidad offshore bid round: Results and expectations for future exploration
Helena Innis-King, Ministry of Energy and Energy Affairs, International Waterfront Centre

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Regional integrated interpretation, central north Gulf of Mexico
L. Bomatici, WesternGeco

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C. J. Matchette-Downes, MDOIIL Limited

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Paul Mann*, University of Texas at Austin; Alejandro Escalona, University of Stavanger

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Azra N. Tutuncu, Colorado School of Mines

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Anne Sheehan, University of Colorado at Boulder

**SGS 2.6** (2352–2353)
Predicting natural fractures in the tight Nordegg gas sandstone of West Central Alberta using azimuthal Fourier coefficients
Jon Downton*, Benjamin Roure, Hampson Russell, Canada; Lee Hunt, Scott Reynolds, and Scott Hadley, Fairbarne Energy Ltd
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Integrating 3D full waveform inversion into depth imaging projects
Laurent Siguer*, Bertrand Denel, and Fuchun Gao, Total

SI 1.5 (2374–2378)
Full-waveform inversion application in different geological settings
Denes Vigh*, Jerry Kapoor, and Hongyan Li, WesternGeco

SI 1.2 (2359–2363)
True amplitude imaging of ocean bottom cable data by Gaussian beams based weighted summation
M. P. Kutovenko, M. I. Protasov, and V. A. Cheverda, Institute of Petroleum Geology and Geophysics SD RAS

SI 1.6 (2379–2383)
Prestack full waveform inversion of tight gas sand reservoirs of Xujiahe formation in Northeast Sichuan Basin, China
Aifei Bian* and Wenhui Yu, China University of Geosciences, Wuhan

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Variable-depth streamer acquisition: Broadband data for imaging and inversion
Robert Soubaras* and Yves Lafet, CGGVeritas

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Full waveform inversion: A North Sea OBC case study
Andrew Ratcliffe*, Caroline Win, Vetle Vinje, and Graham Convoy, CGGVeritas; Mike Warner, Adrian Limpely, Ivan Sleki, and Tenice Nangoo, Imperial College London; Alexandre Bertrand, ConocoPhillips

SI 1.4 (2369–2373)
Least-squares reverse time migration/inversion for ocean bottom data: A case study
Mandy Wong*, Shuki Ronen, and Binndo Biondi, Stanford University

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Hierarchical waveform inversion with double beamforming
Romain Brossier and Philippe Roux, Universite Joseph Fourier, CNRS

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SI 2.1 (2395–2400)
2.5D forward and inverse modeling of elastic full-waveform seismic data
J. Xiong*, A. Abubakar, Y. Lin, and T. M. Habashy, Schlumberger-Doll Research

SI 2.5 (2418–2422)
A blocky regularization scheme for full waveform inversion
Antoine Culin*, GeoImaging Solutions Inc.

SI 2.2 (2401–2405)
A projected Hessian matrix for full waveform inversion
Yong Ma* and Dave Hale, Colorado School of Mines

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Random-beam full-wavefield inversion
Nathan Downey, Partha Routh, and Young Ho Cha, ExxonMobil Upstream Research Company

SI 2.3 (2406–2410)
Multiparameter material model and source signature full waveform inversion
Volkan Akrelik*, Huseyn Denli, Alex Kanevsky, Kinish Patel, Laurent White, and Martin-Daniel Lacasse, ExxonMobil Research and Engineering Company

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Improving the convergence rate of full waveform inversion using spectral shaping
Spyros Lazaratos*, Ivan Chikichev, and Ke Wang, ExxonMobil Upstream Research Company

SI 2.4 (2411–2417)
Source-receiver compression approach for 3D full-waveform inversion with an iterative forward solver
A. Abubakar*, T. M. Habashy, G. Pirn, and A. Belani, Schlumberger

SI 2.8 (2433–2438)
Encoded simultaneous source full-wavefield inversion for spectrally shaped marine streamer data
Partha Routh*, Jerry Krebs, Spyros Lazaratos, Anatoly Baumstein, Sunwoong Lee, Young Ho Cha, Ivan Chikichev, Nathan Downey, Dave Hinkley, and John Anderson, ExxonMobil Upstream Research Company, Houston
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Full waveform inversion with reflection energies
Bin Gong* and Yunqing Shen, ConocoPhillips Company; Yang Ma, Colorado School of Mines

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Wavelet estimation and multiple modeling in full waveform inversion
Ke Wang*, Spyros Lazaratos, and Ivan Chikichev, ExxonMobil Upstream Research Company, Houston

**SI 3.3** (2449–2453)
Toward broadband nonlinear full-waveform inversion with the help of shot/receiver relocusing
Peter Haffinger*, Dries Gisolf, and Peter van den Berg, Delft University of Technology

**SI 3.4** (2454–2458)
Full waveform inversion using wave-equation depth migration with tying to wells
Gary F. Margrave*, Robert J. Ferguson, and Chad M. Hogan, CREWES, University of Calgary

Time-lapse and CO₂ Sequestration Applications

**SI 4.1** (2482–2486)
Sensitivity analysis of time-lapse images obtained by differential waveform inversion with respect to reference model
Amir Asnaashari*, Romain Brossier, Stephane Garambois, and Jean Virieux, Université Joseph Fourier, CNRS; Francois Audibert and Pierre Thore, TOTAL E&P

**SI 4.2** (2487–2491)
Prediction method research on reservoir of Diabase Alteration Zone in Huanghua Depression
Jun Yao*, Shuangwen Li, Huaqing Liu, and Changkuan Ni, Northwest Branch of Research Institute of Petroleum Exploration and Development, PetroChina

**SI 4.3** (2492–2496)
Time-lapse seismic elastic impedance difference inversion and application
Jingye Li*, Shoudong Wang, and Xiaohong Chen, China University of Petroleum

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Time-lapse prestack elastic impedance inversion based on seismic difference data
Zhu Zhenyu*, Jiang Xiudi, and Zhao Wei, CNOC Research Institute; Wang Shoudong, China University of Petroleum, Beijing

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Multiscale time-domain full-waveform inversion for anisotropic elastic media
Olga Podgornova* and Marwan Charara, Schlumberger Moscow Research

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Acoustic VTI full waveform inversion: Sensitivity analysis and realistic synthetic examples
Y. Gholami, Stephanie Operto, and A. Riboulet, Géoaazur, CNRS, Université Nice Sophia-Antipolis; R. Brossier and Jean Virieux, ISTerre, Université Joseph Fourier

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Full waveform inversion: A diffuse optical tomography point of view
Sunsong Park and Changwoon Shin, Seoul National University; Maarten V. Hoop, Purdue University; Henri Calandra, TOTAL

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Rie Kamei*, Andrew J. Brenners, and R. Gerhard Pratt, University of Western Ontario
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Shen Wang*, Jianlin Xia, Yinchong Situ, and Maarten V. de Hoop, Purdue University; Xinye Li, Lawrence Berkeley National Laboratory

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CUDA-based acceleration of full waveform inversion on GPU
Baoli Wang* and Jinghui Gao, Xian Jiaotong University; Huanfan Zhang, Xian University of Science and Technology; Wei Zhao, Research Center of CNOOC

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Practical strategies for waveform inversion
Chao Wang*, Helen Delome, Carlos Cakirer, David Yingst, Jacques Leveille, Robert Bloor, and Paul Farmer, ION Geophysical, Houston

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Full waveform tomography with consideration for large topography variations
Wei Zhang* and Jie Zhang, GeoTomo LLC, Houston

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Two-dimensional acoustic anisotropic (VTI) full waveform inversion: The Valhall case study
Y. Cholambi, S. Opreto, V. Prieux, and A. Ribodetti, Cénoazur, CNRS, Universite Nice Sophia-Antipolis; R. Brossier and J.Virieux, ISTerre Universite Joseph Fourier

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Recovering long wavelength of the velocity model using waveform inversion in the Laplace domain: Application to field data
Henri Calandra*, Total E&P; Christian Rivera, Changsoo Shin, Sukjoon Pyun, Youngso Kim, and Wansoo Ha, Seoul National University

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The contribution of wide-azimuth point-receiver acquisition to the success of full-wave inversion
Hongyan Li, Denes Vigh, and Jerry Kapoor, WesternGeco

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Sangmin Kwak*, Youngsoo Kim, and Changsoo Shin, Seoul National University; Sukjoon Pyun, Inha University

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Xinfa Zhu* and George McMechan, University of Texas at Dallas

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Rui Zhang, University of Texas at Austin; John Castagnas, University of Houston

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Yunseok Choi* and Tariq Alkhalifah, King Abdullah University of Science and Technology

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Ehsan Jamali Hondor;, Hitoshi Mikada, Tada-nori Goto, and Junichi Takekawa, Kyoto University; Hamid Reza Siahkoohi, University of Tehran

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Yang I. Liao*, Zheng Xiaodong, and Li Jin-song, Research Institute of Petroleum Exploration and Development, PetroChina Limited Company; Ma Shui-fang, Research Institute, China National Offshore Oil Corporation

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Tongning Yang* and Paul Sava, Colorado School of Mines

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Xiaolong Song, University of Texas at Austin; Anatoly Baumslein and Partha Routh, ExxonMobil Upstream Research Company, Houston

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Brahim Abbadi*, IPT, NTNU, Trondheim; Statoil; Bjarn Ursin, IPT, NTNU, Trondheim
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**Characterizing thin sand reservoirs in onshore northern China**
Anubrati Mukherjee*, Sagnik Dasgupta, Zhao Chun Duan, Han Xiao Li, and Liu Wei, DC5, Schlumberger, China; Zhang Yan, Gan Lideng, and Zhang Xin RIPED, PetroChina

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**Monitoring of CO₂ sequestration at the Sleipner site: Time-lapse seismic full waveform inversion versus migrated waveforms**
Manuel QueiBo* and Satish Singh, Laboratoire de Géosciences Marines, IPC Paris

**SI P1.3** (2619–2623)
**CO₂ pre-injection reservoir characterization on Cranfield with basis pursuit inversion**
Rui Zhang, Mrinal K. Sen, and Sanjay Srinivasan, The University of Texas Austin

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**Added value of distributed anamorphosis in prestack seismic inversion: A case study of the CO₂ storage reservoir (Utsira sand formation) at Sleipner site**
Vincent Clochard, Michel Léger, and Nicolas Delépine*, IFP Energies Nouvelles, Rueil-Malmaison, France

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André Buicão, Djajla Manoel Soares Filho*, Custavo Caio Alves, Luiz Alberto Santos, and Tito do Valle Moreira, PETROBRAS; Peter van den Berg, and Dries Ciuoff, Delft University of Technology

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**2D frequency-domain elastic full waveform inversion using finite-element method for VTI media**
Woodon Jeong, Dong-Joo Min, and Cyu-hwa Lee*, Seoul National University; Ho-Yong Lee, Korea National Oil Company

**SI P2.3** (2659–2663)
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Ho Seok Bae*, Wookeen Chung, Seung-Goo Kang, and Changsoo Shin, Seoul National University; Sukjoon Pyun, Inha University

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Chris Bird*, K. A. Inmanen, L. R. Lines, and M. Naghizadeh, University of Calgary, CREWES

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Michael Jordan* and Zhijun Du, SINTEF Petroleum Research; Marco Brönnier and Jørg Ebbing, Norwegian Geological Survey

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**Rock strength determination in shale caprock through inversion of 3D seismic in the Forties Field, UK**
Aliya Urazimanova*, Kurt J. Marfurt, and Jean-Claude Roegiers, University of Oklahoma

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**Seismic characterization of near-surface drainage pattern: Bull Creek, Oklahoma**
Ammanuel Woldearegay*, Priyank Jaiswal, and Alexander Simms, Oklahoma State University

**SI P1.8** (2644–2648)
**Geophysical inversion using petrophysical constraints**
Jiajia Sun* and YaoGuo Li, Colorado School of Mines