Data Driven Methodologies for Decisions and Uncertainties

Session Chairs:
Daniel Arnold, Heriot-Watt University
Thomas Schaaf, Storengy SAS, A Company of ENGIE

200623  Quantifying the Importance of Decisions and the Impact of Data Acquisition on Decisions in Hydrocarbon Field (Re-)developments
D. Steineder, T. Clemens, OMV E&P

200540  Impact of Digitalization on the Way of Working and Skills Development in Hydrocarbon Production Forecasting and Project Decision Analysis
T. Clemens, OMV E&P; M. Viechtbauer-Gruber, OMV AG

200555  Wavelet Modelling Approach for Reservoir Model Classification
H. Alimohammadi, N. Chen, University of Calgary; H. Karimi, Schlumberger; H. Rahamanifard, University of Calgary

200579  Exploration of Correlated Prospects and Possible Joint Development Solutions
B. Jafarizadeh, Heriot-Watt University

200601  An Artificial Intelligence-based Nonlinear Solver for Hydrocarbon Reservoir Simulations
M. Ebadi, Skolkovo Institute of Science and Technology; Y. Bezyan, Concordia University; S.H. Zabihifar, Bauman Moscow State Technical University; D.A. Koroteev, Skolkovo Institute of Science and Technology

200614  Machine Learning Clustering of Reservoir Heterogeneity With Petrophysical and Production Data
D. Konoshonkin, G. Shishaev, I. Matveev, A. Volkova, V. Rukavishnikov, Tomsk Polytechnic University; V. Demyanov, Heriot-Watt University; B. Belozerov, Gazpromneft STC

200608  Application of Numerical Flow Simulation Methods to Risk-Based Well Decommissioning Design
C. Johnson, M. Haghighat Sefat, D. Davies, Heriot-Watt University

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200641  Recognize the Spatial Extent and Properties of the Hydraulic Fracture Network with Multiple Data
C. Dai, Sinopec Group; H. Chang, Peking University; S. Fang, Sinopec Group
Disruptive Headway in Well Performance
Heikki Jutila, Phoenix RDS Ltd

Joachim Oppelt, Technology University Clausthal

200553 ESP Operational Challenges in Complex Mature Oilfield in the North Sea
E. Bisso Bi Mba, G. Diker, A. Frohberg, Wintershall Dea

200588 Fracturing with Height Control Extends the Life of Mature Reservoirs: Case Studies from the Pannonian Basin
R. Malon, J. Abbott, L. Belyakova, Schlumberger; S. Pepic, V. Kulakov, K. Demenesku, NIS

200538 Accounting for Particle Size Distribution in Hydraulic Fracturing Modeling Improves Simulation Accuracy

200581 Development of a Multi-solution Framework for Simultaneous Well Placement, Completion, and Control Optimization
M. Salehian, M. Haghighat Sefat, K. Muradov, Heriot-Watt University

200558 Improving Reservoir Development by Integrating Reservoir Navigation Interpretations Into Sub-surface 3D Models
S.P. Austin, X. Wang, E. Ferreira, Baker Hughes; A. Vetsak, Baker Hughes Canada

200646 The Application of Enhanced Geo-navigation Technique in Multilateral Well Targeting Multiple Reservoir Zones in Challenging Geological Environment
H. El-Din Ibrahim, N. Al Aboud, Kuwait Oil Company; P Odiase, J Reyes, Baker Hughes

200627 Successful Drilling of Deep Wells Aided by Geomechanical Analysis and Real-time Decision Making in Complex Geological Setting in the North-eastern Part of the India
S. Bhardwaj, N. Baruah, M. Kumar Sharma, Oil India Ltd.; R.R. Kumar, Schlumberger

Alternate
200645 From Lab to Field - Assessing the Impact of Laboratory Scale Conditionson Formation Damage Assessment in Gas Wells
I. Mokogwu, P. Hammonds, S.C. Wilson, C. Healy, E. Sheach, Scaled Solutions Limited

200618 Novel Techniques Enable Successful Gravel Packing of Long Horizontal North Sea Wells
P. Saldungaray, CARBO Ceramics, Inc.; H. Hamid, T. Peake, BP; J.A. Firth, Baker Hughes, a GE company

200619 Acid Fracture Design Optimization in Naturally Fractured Carbonate Reservoirs
M.M. Al-Sulaiman, Saudi Aramco; M.S. Al Jawad, KFUPM University; M. Palharini Schwalbert, Petrobras; S. Alafnan, M.A. Abdallah, KFUPM University
Dynamic Well and Reservoir Modelling
Heikki Jutila, Phoenix RDS Ltd

Francesca Verga, Politecnico di Torino

200589 Applications of Computational Geometry for Automatic Transformation to Unstructured Reservoir Gridding
F.H. Melaih, A.A. Alturki, R.M. Al-Harbi, M.A. Baddourah, Saudi Aramco

200561 De-risking a Plugged and Abandoned Offshore Well Using Coupled Reservoir Geomechanics Fracturing Modelling
E.J. Castillo, P. McCurdy, Lloyd's Register; D.A. Walters, M. Nassir, CGG Services Canada Ltd; D.A. Littlejohn, TAQA Bratani Limited

200609 Modelling of Multi-stage Hydraulic Fractured Wells Made Easy in Conventional Reservoir Simulations
H. Hoegstoel, Equinor; J. Stoeren, M. Sjaastad, G. Lindkvist, Ceetron Solutions

200586 Using Synthetic Production Data from an Open Source Carbonate Reservoir Model to Improve Our Understanding of Flow Behaviour
J. Costa Gomes, S. Geiger, D. Arnold, Heriot-Watt University

200615 Parallel Framework for Complex Reservoir Simulation with Advanced Discretization and Linearization Schemes
L. Li, Hamad Bin Khalifa University; M. Khait, D.V. Voskov, TU Delft; A.S. Abushaikha, Hamad Bin Khalifa University

200541 Assisted History Matching of a Highly Heterogeneous Carbonate Reservoir Using Hydraulic Flow Units and Artificial Neural Networks
A. Sengel, Turkish Petroleum; G. Turkarslan, Schlumberger

200593 Early and Late Time Analytical Solutions for Co-current Spontaneous Imbibition and Generalized Scaling
P. Andersen, University of Stavanger

200572 Special Connections for Representing Multiscale Heterogeneities in Reservoir Simulation
M.G. Correia, D.J. Schiozer, University of Campinas

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200606 Uncertainty Quantification and Management in Model Calibration and History Matching with Ensemble Kalman Methods
A.A. Alturki, A.A. Al-Taib, M. Baddourah, B.O. Moriwawon, Saudi Aramco; Z. Sawlan, KAUST

200628 Feasibility of Sector Modeling Approach in a Giant Petroleum Field
L.O. Pires, V.E. Botechia, D.J. Schiozer, University of Campinas

EOR - Flow in Porous Media and Nanoparticles
I. Yucel Akkutlu, Texas A&M University
Rafael Hincapie, OMV Exploration & Production GmbH

200624  A Core Scale Investigation of Drainage Displacement
D. Arab, A. Kantzas, University of Calgary; O. Torsæter, Norwegian University of Science and Technology; S.L. Bryant, University of Calgary

200610  A Rigorous Method for Special Core Analysis (SCAL) Data Correction in the Presence of Capillary End Effects
S. Goodarzian, K.S. Sorbie, Heriot-Watt University

200643  Influence of Nanofluids on Wettability Changes and Interfacial Tension Reduction
E. Neubauer, R.E. Hincapie, A. Borovina, M.L. Biernat, T. Clemens, OMV Exploration & Production GmbH; Y.K. Ahmad, Nissan Chemical America Corporation

200640  Conformance Gel Design For High Temperature Reservoirs

200584  Co2 Foam Stabilized with Switchable Surfactants and Modified Nanoparticles Effected by pH and Salinity
X. Zhang, G. Zhang, J. Ge, China University of Petroleum (East China); Y. Wang, The University of Tulsa

200547  Heterogeneity Effects on Low Salinity Water Flooding
H.H. Al-Ibadi, Heriot Watt University/Misan Oil Company; K.D. Stephen, E.J. Mackay, Heriot-Watt University

200534  Investigation of the Ionic Interactions of Using Nanoparticles in Waterflooding
M. Omran, Norwegian University of Science and Technology; H. Omran, British University in Egypt; O. Torsaeter, Norwegian University of Science and Technology

200639  Numerical Modeling on the Influence of Reservoir Porosity and Microbial Kinetics on Enhanced Oil Recovery by Microbial Flooding
S. Chakraborty, S. Govindarajan, S. N. Gummadi, Indian Institute of Technology Madras

Alternate

200528  Performance Evaluation of Long-horizontal-well Solvent-assisted SAGD in Rising Stage
H. Liu, Y. Wang, Hohai University; L. Cheng, S. Huang, China University of Petroleum-Beijing; X. Chen, China National Offshore Oil Corporation-Shenzhen

EOR - Gas/CO2 - Joint with EAGE
Taoufik Manai, Schlumberger

200552  Co2 Dissolution and Convection in Oil at Realistic Reservoir Conditions: A Visualization Study
W.S. Amarasinghe, I. Fjelde, NORCE Norwegian Research Centre AS/University of Stavanger; Y. Guo, NORCE Norwegian Research Centre AS
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200598  Numerical Simulation Guideline Of Oil Recovery By Cycle-dependent Three-phase Process
         H.A. Alzayer, Saudi Aramco PE&D RD&SD; M. Sohrabi, Heriot-Watt University
200602  Assessment on Gas Re-injection Performance After 19 Years: A Brownfield Case Study
Deriving Alkali Polymer Parameter Distributions from Core Flooding by Applying Machine Learning in a Bayesian Framework to Simulate Incremental Oil Recovery
D. Steineder, G.D. Vanegas, T. Clemens, OMV E&P; M. Zechner, OMV E&P/Stanford University

Impact of Mechanical Entrapment on the Design of Mobility Control in Chemical Enhanced Oil Recovery
B. Meulenbroek, R. Farajzadeh, J. Bruining, Delft University of Technology

Optimisation of Polymer Flooding in a Heterogeneous Reservoir Considering Geological and History Matching Uncertainties
E. Ibiam, S. Geiger, V. Demyanov, D. Arnold, Heriot-Watt University

Visualization of Polymer Retention Mechanisms in Porous Media Using Microfluidics
A. Sugar, M.F. Serag, King Abdullah University of Science & Technology; V.A. Torrealba, King Abdullah University of Science & Technology (now at Chevron Corp.); U. Buttner, S. Habuchi, H. Hoteit, King Abdullah University of Science & Technology

Polymer Injection for EOR: Influence of Mobility Ratio and Slug Size on Final Oil Recovery
J. Juarez, CEPSA; H. Bertin, Université de Bordeaux; A. Omari, INP; C. Romero, G. Bourdarot, S. Jouenne, D.C. Morel, V. Neillo, TOTAL

Wettability Changes and Interfacial Tension Reduction in Alkali Polymer Flooding of High and Low Tan Number Oils
V.V. Arekhov, OMV Russia Upstream GmbH / University of Leoben; R.E. Hincapie, T. Clemens, OMV Expl.&Production GmbH

Biodegradation Mitigation and Protection Strategies for the Biopolymer Schizophyllan
E. Alagic, N. Dopffel, G. Bødtker, B. Hovland, NORCE – Norwegian Research Center; S. Mukherjee, Wintershall DEA; P. Kumar, Antelopus Energy Pvt Limited (formerly Wintershall DEA); M. Dillen, Wintershall DEA

Coupling Microfluidics Data with Core Flooding Experiments to Understand Sulphonated/Polymer Water Injection
M. Tahir, R.E. Hincapie, N. Langanke, L. Ganzer, Clausthal University of Technology

Autonomous Nanosurfactant for Enhanced Oil Recovery Applications
N. Shi, Saudi Aramco; A.A. Mashat, A.I. Abdel-Fattah, Saudi Aramco PE&D
Field Appraisal and Development - Joint with EAGE

Carolina Coll, International Finance Corp.

200607  Exergoeconomic Optimization Of Oil And Gas Production Systems
M. Akchiche, J. Beauquin, Total SA; S. Sochard, S. Serra, J. Reneaume, P. Stouffs,
Universite de Pau et des Pays de l’Adour

200626  SEC And PRMS Proved Reserves: Differences Due to Varying Interpretations of
“Final Investment Decision”
E. Morales, ISVA Oil and Gas Consultancy; J. Lee, Texas A&M University

200556  Understanding the Spatial Relationships that Trigger Movements in Regulatory
Frameworks Through Time
N. Moridis, J. Lee, Texas A&M University; W. Sim, Aucerna; T.A. Blasingame,
Texas A&M University

200652  Compaction Drive Characterisation for Field Development Screening
A. Ali, BP; G. Bacci, LBS (previously BP); M. Da Cruz, P. Harrison, BP

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200525  Influence of Representative Models in the Expected Value of Information
Applied to Petroleum Fields Development
L.S. Santos, S.M. Santos, A.S. Santos, D.J. Schiozer, L.M. Silva, University of
Campinas

200604  High Definition Reservoir Mapping Technology Provides a Unique Solution to
Map Uncertain Water Contact as an Innovative Approach for Pilot Hole
Elimination; Umm Ghudair Field, West Kuwait
N.F. Alhajri, PAAET; A.D. Al-Khaldy, J.M. Hassan, R.A. Dashti, M.A. Kader,
S.K. Gupta, Z.A. Al-Buloushi, Kuwait Oil Company; S.M. Abdelbaset, M.M. Siam,
A. Al-Hassan, C. Chang, Z.J. Ramadan, Schlumberger

Reservoir Characterisation – From Surveillance to Decision Making

Amna Ali, BP Institute

Taoufik Manai, Schlumberger

200649  Extended Limit Tests for Improved Management and Initial Dynamic Reservoir
Characterization
R. Alcantara, R. Mendez, A. Ruiz, F. Samaniego, PEMEX E&P; M. Briones,
Universidad de Oriente; J.R. Alcantara, IPN

200617  Assessing the Non-uniqueness of a Well Test Interpretation Model Using a
Bayesian Approach
T. Botsas, J. Cumming, I.H. Jermyn, Durham University; A.C. Gringarten, Imperial
College London

200622  A New Methodology For Naturally Fractured Reservoir Characterization: Use of
Multi-Well Interference Tests Interpretation
P. Vincent, E. Portier, Neptune Energy
A New Way to Estimate Fracture Closure Pressure From Injection Fall-off Testing Using Water Hammer
P. van den Hoek, PanTerra Geoconsultants B.V.

A Novel Approach to Initialize a 3D Dynamic Model Using Saturation Height Modelling
A. Mazzacca, C. Musca, G. Picone, C. Tarchiani, Eni S.p.A.

Implementation Of Three-phase Black-oil Reservoir Models Assisted By Micro-scale Analyses
E. Ranaee, G.R. Guédon, Politecnico di Milano; L. Moghadasi, Eni; F. Inzoli, M. Riva, Politecnico di Milano; G. Maddinelli, M. Bartosek, Eni E&P; A. Guadagnini, Politecnico di Milano

Dynamic Immiscible Flood Monitoring in Sand Packs Via Frequency Domain Reflectometry
I. Kuznetcov, A. Kantzas, S.L. Bryant, University of Calgary

The History of a Reservoir Model Become an Innovation Platform
C. Musca, A. Cossa, C. Tarchiani, Eni S.p.A.

Automated Interpretation Tool for Synchronous History Matching of Multiple Scal Experiments with Advance Nurbs Representations of Relevant Functions
R. Manasipov, myr:conn solutions GmbH; B. Jenei, Clausthal University of Technology

New Workflow of the Facies Analysis and Prediction Based on Artificial Neural Network: A Case Study for the Mid-Cretaceous Reservoir from the Supergiant Oil Field
A.J. Al Ali, K.D. Stephen, Heriot-Watt University

Reservoir Rock Tortuosity Estimates Based on Geodesic Reconstruction and Fluid Velocity Field Techniques
W. Leite Roque, Federal University of Paraiba; D. Nardelli Siebert, Federal University of Santa Catarina

Reservoir Characterisation - Joint with EAGE
Paul van den Hoek, PanTerra Geoconsultants B.V.

A Comparison of Multi-objective Optimization and Optimization with Constraints as a Tool For Reservoir History Matching and Characterization: Application to an Aquifer Gas Storage Case
T. Schaaf, STORENGY SAS; D. Sinoquet, IFP Energies Nouvelles

Compaction Seismicity: What Determines Seismic vs. Non-seismic Behavior in Dutch Gas Fields?
C.J. De Pater, C. Berentsen, Fenix Consulting Delft BV; H. Martens, Vermilion Energy BV
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<td>200616</td>
<td>A Practical Probabilistic Upscaling Workflow for Compositional Reservoir Simulations of Miscible Gas Injection</td>
<td>V. de Souza Rios, Petrobras; V. de Souza Rios, D.J. Schiozer, Unicamp; L.O. Schmall, Petrobras</td>
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<td>200563</td>
<td>Multi-dimensional Approach to Inter-well Connectivity Analysis</td>
<td>L. Wong, H. Amini, C. MacBeth, Heriot-Watt University</td>
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<td>200542</td>
<td>Waterflood Analysis With Pulse-Code Pressure Interference Testing In Eastern Siberia Carbonate Reservoirs</td>
<td>V. Kim, Irkutsk Oil Company; A. Aslanyan, Nafta College; D. Gulyaev, R. Farakhova, Sofoil</td>
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<td>200633</td>
<td>Static and Dynamic Considerations for «Perched Water» and the Consequence in Reservoir Modelling</td>
<td>A. Larsen, F. Ahmadhadi, E. Øian, S. Nerbøvik, Perecon AS</td>
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<td><strong>Sustainable Geosciences</strong></td>
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<td>Astley Hastings, University of Aberdeen</td>
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<td>200526</td>
<td>Modelling of Calcite Deposition on Geothermal Well Inflow Performance</td>
<td>S. Mousavi Mirkalaei, Computer Modelling Group Ltd.; M.D. Edmondson, CMG Middle East LLC; A. Kumar, Computer Modelling Group Ltd.</td>
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<td>200560</td>
<td>Co2-EOR and Storage Potentials in Depleted Reservoirs in the Norwegian Continental Shelf (NCS)</td>
<td>E. Imanovs, S. Krevor, Imperial College London; A. Mojaddam Zadeh, Equinor ASA</td>
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<td>200544</td>
<td>Semi-quantitative Assessment of Seismic Hazard in Geothermal Reservoirs</td>
<td>J.W. Poessé, P. van den Hoek, PanTerra Geoconsultants B.V.</td>
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<td>200580</td>
<td>Scaling Analysis To Characterise Co2 Storage In Saline Aquifers</td>
<td>S. Ghanbari, E.J. Mackay, G.E. Pickup, Heriot-Watt University</td>
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<td>200532</td>
<td>Methane Hydrate Formation, Storage And Dissociation Behavior In Unconsolidated Sediments In The Presence Of Environment-friendly Promoters</td>
<td>J. Shanker Pandey, Y. Jouljamal Daas, N. Von Solms, Technical University of Denmark</td>
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<td>200565</td>
<td>Scale Treatment Optimization in Geothermal Wells</td>
<td>V. Azari, M. Al Badi, O. Vazquez, M. Al-Kalbani, E.J. Mackay, Heriot-Watt University</td>
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200630 LNG Market - Passing Trend or Effective Solution During Energy Transition - Global Market Forecast for 2020-2030
P. Kiebzak, Shell Polska; F.K. Czerniawski, Warsaw School of Economics

200537 Carbon Dioxide Sequestration in Unconventional Shale Reservoirs Via Physical Adsorption: An Experimental Investigation
S.M. Fakher, Missouri University of Science and Technology; A.M. Eltonbary, American University in Cairo; H.A. Abdelaal, University of Lisbon; Y.E. Elgahawy, University of Calgary; A.H. Imqam, Missouri University of Science and Technology

200543 Stress Mechanism of Microseismic Events During Hydraulic Fracture Stimulation for Unconventional Hydrocarbon Reservoirs
S.I. Kaka, College of Petroleum Engineering and Geosciences, King Fahd University of Petroleum & Minerals

200564 Influence of Total Organic Content on Co2-Water-Sandstone Wettability and Co2 Geo-storage Capacity
C.A. Fauziah, Curtin University; E. Al-Khdheewi, Curtin University/University of Technology-Petroleum Technology Department; S. Iglauer, Edith Cowan University; A. Barifcani, Curtin University

Unconventional - Joint with EAGE
Olga Bradulina, ERCE

200595 Digital Rock Physics in Low-permeable Sandstone, Downsampling for Unresolved Sub-micron Porosity Estimation
M. Ebadi, I.V. Makhotin, D.M. Orlov, D.A. Koroteev, Skolkovo Institute of Science and Technology

200543 Stress Mechanism of Microseismic Events During Hydraulic Fracture Stimulation for Unconventional Hydrocarbon Reservoirs
S.I. Kaka, College of Petroleum Engineering and Geosciences, King Fahd University of Petroleum & Minerals

Unconventional Resources
I. Yucel Akkutlu, Texas A&M University

Carolina Coll, International Finance Corp.

200596 On the Role of Molecular Diffusion in Modelling Enhanced Recovery in Unconventional Condensate Reservoirs
C.S. Santiago, University of Calgary; A. Kantzas, University of Calgary, Perm Inc.

200582 Formation Damage Mechanisms Due to Hydraulic Fracturing of Shale Gas Wells
R. Elputranto, Pertamina; A.P. Cirdi, I. Akkutlu, Texas A&M University

200587 Effects of Heterogeneous Local Swelling and Multiple Pore Types on Coal and Shale Permeability Evolution
J. Zeng, J. Liu, W. Li, J. Tian, Y. Leong, University of Western Australia; D. Elsworth, Pennsylvania State University; J. Guo, Southwest Petroleum University
Unlocking Unconventional Reservoir for Optimum Production Through Integrated Multi-disciplinary Approach - A Case Study

Increasing Oil Recovery from Unconventional Shale Reservoirs Using Cyclic Carbon Dioxide Injection
S.M. Fakher, Missouri University of Science and Technology; A.M. Eltonbary, American University in Cairo; H.A. Abdelaal, University of Lisbon; Y.E. Elgahawy, University of Calgary; A.H. Imqam, Missouri University of Science and Technology

GOR Performance for Tight Unconventional Wells with Layer-wise Fluid Heterogeneity
F.M. Alqahtani, A. Khan, E.D. Chuparova, Norwegian University of Science and Technology; C.H. Whitson, Norwegian University of Science and Technology and Whitson AS

Modelling Micro-proppant Transport In Stress-sensitive Naturally-fractured Reservoirs
N. Di Vaira, C. Leonardi, R. Johnson Jr., The University of Queensland

Study Of Plugging Capability And Seepage Characteristics Of Air Foam Flooding In Low Permeability Reservoirs
Z. Sun, H. Nasrabadi, Texas A&M University; W. Keliu, University of Calgary
ePoster Session I
Daniel Arnold, Heriot-Watt University

Benjamin Stewart, Independent

200612 The Role of Back Pressure and Perforation Hole Erosion on the Magnitude of the Coefficient of Discharge in Hydraulic Fracturing Stimulation
D. M.Yosefnejad, B. Fricke, J. Loehken, L. McNelis, DynaEnergetics Europe GmbH

200555 Wavelet Modelling Approach for Reservoir Model Classification
H. Alimohammadi, N. Chen, University of Calgary; H. Karimi, Schlumberger; H. Rahamanifard, University of Calgary

200634 Numerical Modelling of Radial Crack Propagation in Cement Sheath During Hydraulic Fracturing
Y. Yan, Z. Guan, Y. Xu, X. Zhang, China University of Petroleum (East China); W. Yan, No.1 Drilling Company, CNPC Greatwall Drilling Company

200608 Application of Numerical Flow Simulation Methods to Risk-Based Well Decommissioning Design
C. Johnson, M. Haghighat Sefat, D. Davies, Heriot-Watt University

200566 A Study On The Adsorption Behavior Of Surfactants In Carbonate Reservoirs Using Different Techniques
H.A. Almatouq, Z.A. Al-Yousef, D.M. Tayyib, Saudi Aramco; A. Gizzatov, Aramco Research Center

200549 Multi-dimensional Project Based Learning on Understanding Petrophysical Properties by Utilizing Image Processing and 3D Printing
N.M. Alyafei, J. Bautista, S. Mari, T.I. Khan, T.D. Seers, Texas A&M University at Qatar
ePoster Session II
Daniel Arnold, Heriot-Watt University

Benjamin Stewart, Independent

200653  Optimization of Liquid Pipeline Control for Economic and Efficient Operations
E. Khlebnikova, A. Zlotnik, K. Sundar, M. Ewers, B. Tasseff, R. Bent, Los Alamos National Laboratory

200539  Numerical Modelling the Stress Dependent Transitional Fluid Flow in Coal Bed Methane Reservoirs
S. Nainar, G. Suresh Kumar, Indian Institute of Technology Madras

200550  A Novel Double-group Cross-linking Hydrogel with High Thixotropy for Water Control in the Horizontal Wells
L. Chen, Y. Chen, X. Zhu, G. Li, M. Fu, Yangtze University

200621  Data Driven Machine Learning Models for Shale Gas Adsorption Estimation
L. Wang, Nazarbayev University; M. Liu, University of Wyoming; A. Altazhanov, B. Syzdykov, Nazarbayev University; J. Yan, X. Meng, Xinjiang Oilfield; K. Jin, Jiangxi Shale Gas Institute

200592  The Effect of Horizontal-permeability Anisotropy on the Design of Geothermal Doublets
M. Talebian, H. Salimi, PanTerra Geoconsultants

200625  Efficiency and Accuracy Boosts in Exploration and Production from Natural Language Processing Virtual Advisor
A. Walker, DelfinSia, Inc.

200527  Evaluating the Effects of Acid Fracture Etching Patterns on Conductivity Estimation Using Machine Learning Techniques
M. Desouky, M.S. Al Jawad, King Fahd University of Petroleum and Minerals; H. Alhoori, Northern Illinois University; D. Al Shehri, King Fahd University of Petroleum and Minerals