

SPE Latin American and Caribbean Petroleum Engineering Conference 2017

Buenos Aires, Argentina
17 - 19 May 2017

Volume 1 of 3

ISBN: 978-1-5108-4195-6

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2017) by Society of Petroleum Engineers
All rights reserved.

Printed by Curran Associates, Inc. (2017)

For permission requests, please contact Society of Petroleum Engineers
at the address below.

Society of Petroleum Engineers
P. O. Box 833836
Richardson, Texas 75083-3836

Phone: (800) 456-6863
Fax: (972) 952-9435

books@spe.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

VOLUME 1

SESSION 1: NEW TECHNOLOGIES, METHODS AND MATERIALS IN PETROLEUM ENGINEERING

Downhole Linear Reducer Application for Rod Load Optimization	1
<i>Dominguez, E.; Yorio, P.; Ferrigno, E.; Piña, J. L.; Somoza, M.</i>	
Onset of the Asphaltene Flocculation and Asphaltene Hydrodynamic Radius Determination Using H-Diffusion-Ordered Spectroscopy DOSY NMR	23
<i>Sandoval, M. I.; Muñoz Navaro, S. F.; Molina Velasco, D.</i>	
Simulation of Viscosity Enhanced CO₂ Nanofluid Alternating Gas in Light Oil Reservoirs	32
<i>Gallo, G.; Erdmann, E.</i>	
Development of an Environmentally Friendly Oil Based Drilling Fluid Using Castor Oil with Polar Activator and In Presence of Strong Bases Lime	42
<i>Bastidas, H. A. Norza; Perez, J. S. Campos; Castellanos, C. Vargas</i>	
Gas Lift Optimization Under Uncertainties in BSW	50
<i>De Santana, R. S.; Ferreira Filho, V. M.; Monteiro, D. D.; Chaves, G. S.; Duque, M. M.; Granja Saavedra, A. L.; Baioco, J. S.; Teixeira, A. F.; Vieira, B. F.</i>	
Visualization of Opportunities through Quick Workflows and Methods for Reservoir Characterization and Correlation	64
<i>Saccomano, A. F.; Limeres, A. C.</i>	

SESSION 2: EOR/IOR/MATURE FIELDS

Water Imbibition EOR Proposal for Shale Oil Scenarios	81
<i>Tuero, F.; Crotti M. M.; Labayen, I.</i>	
Oil Mobilization by Viscoelastic Flow Instabilities Effects During Polymer EOR: A Pore-Scale Visualization Approach	99
<i>Hincapie, R. E.; Rock, A.; Wegner, J.; Ganzer, L.</i>	
Inorganic Content of Asphaltenes Impacts Asphaltenes Stability	113
<i>Punase, A. D.; Hascakir, B.; Demir, A. B.; Bilgesu, H.</i>	
Mature Field Revitalization Using Polymer Flooding: Palogrande - Cebú Field Case	125
<i>Pérez, R.; Castro Garcia, R. H.; Jimenez, R.; Maya, G. A.; Leon Hinestroza, J. M.; Reyes, J. D.; Mendez, A.; Castillo Mejía, A. F.; Romero, M. P.; Fernandez Bedoya, F.; Quintero Roa, L. M.; Quintero, H.</i>	
Carbon Dioxide Storage in High Asphaltene Content Oil Reservoirs	139
<i>Hascakir, Berna</i>	
Grimbeek2: First Successful Application Polymer Flooding in Multilayer Reservoir at YPF. Interpretation of Polymer Flooding Response	147
<i>Juri, J. E.; Ruiz, A. M.; Pedersen, G.; Pagliero, P.; Blanco, H.; Eguía, V.; Vazquez, P.; Bernhardt, C.; Schein, F.; Villarroel, G.; Tosi, A.; Serrano, V.</i>	
Successful Field Application of a New Polymer Flooding Technique Suitable for Mature Oilfields Against Low-oil-Price Background – A Case Study from East China	165
<i>Wu, X.; Wu, Y.; Xiong, C.; Xu, H.; Jia, X.; Shao, L.; Xiong, Y.; Zhang, J.; Wang, A.; Xu, H.; Tian, J.; Bai, B.; Tian, X.</i>	
Optimization and Enhanced Productivity Study in the Furrial Field	175
<i>Peretti Leiva, F. C.; Gonzalez, S. J.; Zabala, C. L. Mora; Molina, G.; Rondón, A. K.; Jeschke, Z. A.; Camejo, M.</i>	

SESSION 3: FLOW ASSURANCE AND RESERVOIR CHEMISTRY

Impact of Clay Type on SAGD Performance Part I: Microscopic Scale Analysis of Clay-SARA Interactions in Produced Oil	195
<i>Kar, Taniya; Hascakir, Berna</i>	
Impact of Clay Type on SAGD Performance Part II: Microscopic Scale Analysis of Clay-Sand-Asphaltene Interactions in Spent Rock	205
<i>Kar, Taniya; Hascakir, Berna</i>	
A Novel Correlation for Predicting Permeability Impairment Due to Calcite Deposition in Sandstone Porous Media	214
<i>Santos, N.; Carrillo Moreno, L. F.; Carreño Hernandez, J. H.; Rodriguez Molina, J. J.; Martinez Lopez, R. A.; Modelamiento de Procesos Hidrocarburos, G.</i>	
Evaluation and Field Test of Combined Gel and Surfactant Imbibition Technology in High Temperature, High Salinity Fault Block Reservoir	227
<i>Cai, H.; Zhang, Q.; Yang, S.; Tian, M.; Wang, Q.; Zhou, Z.; Li, J.; Zhaoxia, Liu</i>	
Application of Transition Metal Nanoparticles in the Streams Production of Heavy Crude Oil Treatment: H₂S Mitigation	236
<i>Martinez, S. I.; Bastidas, C.</i>	

Study of Nanoparticle Adsorption and Release in Porous Media Based on the DLVO Theory	243
<i>Abdelfatah, E. R.; Kang, K.; Pournik, M.; Shiau, B.; Harwell, J.; Haroun, M. R.; Rahman, M. M.</i>	

SESSION 4: RESERVOIR CHARACTERIZATION AND DESCRIPTION

Flow of Non-Newtonian Fluids within a Double Porosity Reservoir under Pseudosteady State Interporosity Transfer Conditions	259
<i>Garcia-Pastrana, J. R.; Valdes-Perez, A. R.; Blasingame, T. A.</i>	
Methodology for Fluid Contact Monitoring Through Surface API Data	272
<i>Paredes, J. E.; Carbajal, A.; Izquierdo, R.; Loyo, I.; Perez, R.; Perera-Perez, L. M.; Larez, C. J.</i>	
A Production Characterization of the Eagle Ford Shale, Texas - A Bayesian Analysis Approach	284
<i>Moridis, Nefeli; Soltanpour, Yasser; Medina-Cetina, Zenon; Lee, W. John; Blasingame, Thomas A.</i>	
Historical Production Analysis of VacaMuerta Formation in the Neuquén Basin: A Guide to Understand the Past, Present and Future	298
<i>Tagarot-Seadi, G.; Vicente, M.; Luongo, S. A.</i>	
Identification of CO₂ with Magnetic Resonance Key to Understanding Production Behavior in Campo Palo Azul, Ecuador: A Case Study	322
<i>Ramirez, N. X.; Roldan, J. E.; Delgado, B.; Cuenca, D.</i>	
FEL Method in One 3D Project to Develop an Oil Field in Los Perales, San Jorge Basin, Argentina	341
<i>Ursule, J.; Farina Saint Selve, E. A.; Pedersen, G.; Lehu, R.</i>	
Integrated Dynamic Modelling of Unconsolidated Thin Bedded Reservoirs: The Greater Dolphin Area, Trinidad and Tobago	356
<i>Nurafza, P. R.; Urin, M. B.; Ryan, D.</i>	

SESSION 5: COUPLED FLOW, GEOMECHANICAL AND THERMAL PROCESSES

Integrating Pilot Well Measurements for Horizontal Well Planning - a Case Study, Vaca Muerta Formation, Neuquén Basin, Argentina	377
<i>Belobraydic, M.; Reynolds, L.; Frydman, M.; Makarychev, G. V.; Faulkner, Y.; Pacheco, F.; Luneau, B. A.; Higgins-Borchardt, S.; Kaufman, P.; Caniggia, J.; Nielsen, O.; Ponce, J. E.; Graf, G. C.</i>	
High Resolution Investigations of Flow and Thermal Processes During Production from Hydraulically Fractured Ultra-Low Permeability Media	388
<i>Moridis, G. J.</i>	
Depositional Controls Over the Lacustrine Source Rocks of the Cuyana Basin. An Approach to Model a Mechanical Cyclicality Through an Integrated Analysis of Sequence Stratigraphy, Petrophysics and Rock Properties	425
<i>Barredo, S. P.; Sosa Massaro, A.; Fuenmayor, E.; Abalos, R.; Stinco, L. P.; Abarzúa, F.</i>	
Methodology for Petrophysical and Geomechanical Analysis of Shale Plays. Case Study: La Luna and Capacho Formations, Maracaibo Basin	442
<i>Lobo, C.; Molina, A.; Faraco, A.; Mendez, J.; Delgadillo, J.; Rincon, G.</i>	
Hydraulic Fracture Propagation Modeling in a Homogeneous Elastic Media with Leakoff	476
<i>Morales-Matamoros, D.; Kanaun, S.; Chi-Chim, M.</i>	
Real-Time Monitoring of Naturally Fractured Carbonate Reservoir Stimulation Using Distributed Temperature Sensing: Case Study from Offshore Mexico	495
<i>Vazquez, J.; Inda, L.; Medina, E.; Narvaez, I. E.; Gleaves, J.</i>	

SESSION 6: HSE, SOCIAL CONCERNS & HR

Importance of the Study of Environmental Aspects in the Exploitation of Unconventional Reservoirs for Risk Assessment of the Activity in Argentina	509
<i>De La Zerda, M. A.; Erdmann, E.; Sarandón, R.</i>	
Assessing the Effects of Seismic Survey on Large Mammals, Using Cameras Trap in High Sensitivity Biodiversity Hotspot	524
<i>Ferretti, V.; Mange, G.; Aguerre, G.; Juarez, M.; Maffei, L.; Gomez, F.; Capello, N.; Mendoza, E.</i>	
Economic Analysis of the Law in Bolivia and the Declaration on the Rights of Indigenous People and Potential Social Implications for New Discoveries	536
<i>Lopez Monterrey, C. A.</i>	
Technical and Risk Evaluation of Underground Gas Storage Construction in Salt Caverns and Its Feasibility in South America	549
<i>Jin, F.; Xi, W.; Chen, C.; Shunyuan, Z.; Bingshan, L.</i>	
Industrial Waste Management of Exploratory Maritime Drilling Activity on the Coast of Bahia State: Case Study of BM-J-2 Block	569
<i>Amaro, T. P.; Pessoa, M. C.; Cardoso-Júnior, R. A.; de Campos, T. M.</i>	
Landscape Transformation Associated to the Development of Camisea Project and the Effectiveness of the Off Shore in Land Approach	576
<i>Leunda, G.; Dias, G.; Mendoza, E.; Capello, N.</i>	
Energy Efficiency Scenarios Following the Energy Trilemma - Argentina's Commitment to COP21	585
<i>Cervantes-Bravo, R.J.; Naupari-Barzol, H.; Jimenez-Nieves, E.T.; Magnelli, D.; Dabrowski, A.</i>	

Green Fracturing Technology of Shale Gas: LPG Waterless Fracturing Technology and its Feasibility in China	599
<i>Jin, F.; Shunyuan, Z.; Bingshan, L.; Chen, C.; Kedi, M.</i>	

SESSION 7: PETROLEUM RESERVES & RESOURCES ESTIMATION

Mechanistic Decline Curves for Gas-Condensate Reservoirs: Model Development	610
<i>Ariwibowo, R.; Barrufet, M. A.</i>	
Hybrid Method with a Probabilistic Approach to Estimate Reserves in Mature Fields	631
<i>Cervantes Bravo, Reynaldo J.; Savioli, Gabriela; Estrada, José</i>	
Handling Decommissioning and Restoration Liabilities within PRMS and their Impact on Reported Reserves of Producing Fields Approaching Abandonment	648
<i>Harrison, Bob; Falcone, Gioia</i>	

VOLUME 2

Are We Reasonably Certain that Reasonable Certainty Adequately Defines Uncertainty in Our Reserves Estimates?	664
<i>Harrison, B.; Falcone, G.</i>	
Optimizing Well Spacing of Multi Fractured Tight Gas Wells in Argentina's Lajas Formation through High Resolution Simulation: Barrosa Norte Field Case Study	677
<i>Franco, J. P.; Wagner, F.; Coppo, R.; Santiago, E.</i>	
Combining Physics, Statistics and Heuristics in the Decline Curve Analysis of Large Datasets in Unconventional Reservoirs	690
<i>Holanda, Rafael Wanderley de; Gildin, Eduardo; Valkó, Peter P.</i>	
Estimation of Tight Gas Reserves During the Transient Flow Using a Modified GPA Method	719
<i>Jimenez, E. T.; Cervantes, R.; Magnelli, D.; Huerta, V. A.</i>	
Assessing the Long-Term Energy Landscape Using a Global Energy Market Model	739
<i>Aguilera, R. F.; Aguilera, R.</i>	

SESSION 8: RESERVOIR MANAGEMENT

Dual Porosity Modeling for Shale Gas Wells in the Vaca Muerta Formation	749
<i>Manestar, G. J.; Thompson, A.</i>	
Data-Driven Model Reduction Based on Sparsity-Promoting Methods for Multiphase Flow in Porous Media	766
<i>Bao, A.; Gildin, E.</i>	
Evolution and Evaluation of SRV in Shale Gas Reservoirs: An Application in the Horn River Shale of Canada	782
<i>Urban, E.; Yousefzadeh, A.; Virues, C. J.; Aguilera, R.</i>	
New Trends in Waterflooding Project Optimization	812
<i>Mogollón, J. L.; Lokhandwala, T. M.; Tiller, E.</i>	
An Appropriate Waterflood or Waterdrive Performance Analysis for any Oil/Water Viscosity Ratio	841
<i>Tillero, E.; Mogollon, J. L.</i>	
Fully Compositional Integrated Subsurface-Surface Modeling for Critical Gas Condensate Reservoirs: Santa Barbara and Piritall Fields, Venezuela	857
<i>Pérez, J. G.; Cabrera, C. J.; Lopez, L. R.</i>	
Sand Production Risk Evaluation and Sand Control Screening, the Complete Workflow for the Future Development of the Oglan Field - Ecuador	870
<i>Andrade, A.; Correa, R. H.; Atahualpa, G. E.; Ripa, G.; Brignoli, M.; Ciccarone, T.</i>	
A Comprehensive Workflow for Near Real Time Waterflood Management and Production Optimization Using Reduced-Physics and Data-Driven Technologies	884
<i>Maqui, A. F.; Zhai, X.; Suarez Negreira, A.; Matringe, S. F.; Lozada, M. A.</i>	

SESSION 9: RESERVOIR TESTING AND PRODUCTION ANALYSIS

Use of Interference Tests to Constrain the Spacing of Hydraulically Fractured Wells in Neuquen Shale Oil Reservoirs	901
<i>Chen, T.; Salas-Porras, R.; Mao, D.; Jain, V.; Thomas, M. A.; Kruijs, E.; Huckabee, P. T.; Stephenson, B. J.; Scholten, S. O.</i>	
Prediction of PVT Properties in Crude Oil Using Machine Learning Techniques MLT	911
<i>Ramirez, A. M.; Valle, G. A.; Romero, F.; Jaimés, M.</i>	
Modeling and Interpretation of the Bottomhole Temperature Transient Data	923
<i>Onur, Mustafa</i>	
Transient and Boundary Dominated Partial Penetration Skin Effects with Turbulent Flow in Vertical Wells of Reservoirs with Near Wellbore Damage Produced at Constant Rate and Constant Pressure Conditions	950
<i>Kome, M.; Amro, M.</i>	
Empirical PVT Correlations Applied for Colombian Crude Oils: A New Approach	972
<i>Valle Tamayo, G. A.; Romero Consuegra, F.; Mendoza Vargas, L. F.; Osorio Gonzalez, D. A.</i>	

Probabilistic Approach of Advanced Decline Curve Analysis for Tight Gas Reserves Estimation Obtained from Public Data Base	989
<i>Jiménez, E. T.; Cervantes, R. J.; Magnelli, D. E.; Dabrowski, A.</i>	

SESSION 10: WELL CONSTRUCTION I

Five Years of Drilling with Casing in Argentina and Bolivia. Lessons Learned from the Field	1005
<i>Espinosa, C.; Codega, D.; Caglieri, A.; Grill, S.; Gutner, H.; Roldan, C.</i>	
New Methodology for Pore Pressure Prediction Using Well Logs and Divergent Area	1028
<i>Velázquez-Cruz, D.; Espinosa-Castañeda, G.; Díaz-Viera, M. A.; Leyte-Guerrero, F.</i>	
Automated MPD System in Offshore Gulf of Mexico Further Substantiates Value of Drilling Technique in High-Pressure Zones	1048
<i>Barbosa, Alberto; Gallego, Gilbert; Clemente, Fabricio; Padilla, Rivelino; Mondragón, Gabriel Enrique Garcia; Balderas, Jose Antonio</i>	
Materials for Controlling Severe Lost Circulation - Laboratory Evaluation	1059
<i>Miranda, C. R.; Oliveira, J. L.; Cavalcante, G. M. S.; d'Almeida, A. R.; Pereira, R. F. L.; Santos, R. L. L.; Surmas, R.</i>	
New Drill Pipe Size Improved Drilling Efficiency in Shale Plays	1072
<i>Lafuente, M.; Granger, S.</i>	
Successful Introduction of the First Worldwide 30 Casing while Drilling Job Saves 1.31 Days in an Exploratory Well in Shallow Waters, Mexico	1082
<i>Luna Gonzalez, O.; Van Balen, A.; Bavidge, M.; Mafla, J.; Karimov, J.; Hurtado Cardenas, P.; Karrer, C.; Sotelo Fonseca, M.; Gil Rodriguez, P.; Mora, A.; Noguez, M.; Gomez, G.; Garcia Lopez, J. R.; Zamudio Lopez, L. A.; Perez Cabrera, J. C.; Gomez Tapia, M.; Perez Ibarra, R.; Olcese, F.; Carranza, J. A.</i>	
Implementation of an Innovative Drilling Fluid and Cuttings Separator in Latin America	1092
<i>Luna, O. L.; Ibarra, R.; Carter, C.; Ramos, D.</i>	

SESSION 11: INTEGRATION OF GEOSCIENCE AND PETROPHYSICAL CHARACTERIZATION

Integrated Modeling of Formation Damage and Multiple Induced Hydraulic Fractures During Produced Water Reinjection	1102
<i>Fischer, K.; Ferreira, F. C.; Holzberg, B. B.; Schlumberger Pastor, J. S.; Reinli, L.; Furuie, R.; Vasconcelos, D. M.; Dutra, T. A.</i>	
Shale Reservoir Characterization Using LWD Azimuthal Sonic and Advanced Gas Detection	1129
<i>Mejia, C.; Crosby, Z.; Barnett, C.; Heard, S.; Llanos, D.; Marchal, D.; Porras, J.</i>	
Non-Destructive Measurement of Porosity, Compressibility and Gas Sorption in Core Plugs from the Wolfcamp Shale	1138
<i>Tovar, F. D.; Barrufet, M. A.; Schechter, D. S.</i>	
Evaluation of Water Oil Relative Permeability of Fractured Rock under Variable Conditions of Hydrostatic Effective Stress and Capillary Number	1161
<i>Restrepo, A.; Lopera, S. H.; Diez, K.</i>	
Models for Calculating Organic and Inorganic Porosities in Shale Oil Reservoirs	1184
<i>Piedrahita, J. A.; Aguilera, R.</i>	
Logging While Drilling Fluid Sampling and Real Time Formation Evaluation, An Approach for a Successful Sampling Operation	1203
<i>Correa, D.; Barbosa, A.</i>	

SESSION 12: WELL STIMULATION

Application of Numerical Simulation as an Integrated Methodology for Selecting the Best Candidates for Down Hole Heating. Huyapari Field, Orinoco Oil Belt, Venezuela, as a Case of Study	1218
<i>Landaeta, G.; Lara, V.</i>	
Field Treatment of an Injector Well in a Sandstone Formation Using a Low Corrosive Environmentally Friendly Fluid that Does Not Require Flow-Back	1227
<i>Núñez, W.; Bautista, O.; Cepeda, F. A.; Kleber, M. A.; Dos Santos, A. A.; Oliveira, E.; Rodriguez, O.</i>	
Detailed Modeling of Carbonate Acidizing by Coupling a Multi-Purpose Pore-Network Simulator to the Chemistry Package PHREEQC - Application to Chelating Agents	1236
<i>Ameri, A.; Raoof, A.; Blonk, N. C.; Cnudde, V.</i>	
Self-Channelling in Proppant Pack in the Eagle Ford Shale Formation	1254
<i>Guerra, J.; Zhu, D.; Uribe Chacon, J.; Luna Castillo, E.</i>	
Tackling the Challenges of a Mature Field with Multiple Oil-Water Contacts Generated in Major Reservoir Hydraulic Units: Case Study in the Shushufindi-Aguarico Field, Oriente Basin, Ecuador	1267
<i>Naranjo, M. A.; Freire, J. L.; Lafournère, J. P. B.; Pastrana, W.; Hurtado, J.; Bourge, J. P.; Vargas, A.; Cortez, O.; Bringer, F.; Izurieta, A.</i>	
A Probabilistic Approach to Tight Gas Economic Evaluation: The Future of Argentina	1281
<i>Cervantes-Bravo, R. J.; Naupari-Barzol, H.; Palacios-Chun, N.; Jimenez-Nieves, E. T.; Magnelli, D.; Huerta-Quñones, V. A.</i>	
Multipay Well Completion in Argentina: A Versatile Pinpoint Completion Technology Applied through Several Conventional, Tight, and Shale Reservoirs	1300
<i>Bonapace, J. C.; Kovalenko, F.; Sorenson, F.; Forni, P.; Capsa, Grupo; Barbalace, F.</i>	

Evaluation of Mobility Control with Nanoparticle-Stabilized CO₂ Foam	1319
<i>Emrani, A. S.; Ibrahim, A. F.; Nasr-El-Din, H. A.</i>	

VOLUME 3

SESSION 13: DIGITAL OILFIELD

Redistribution of Steam Injection in Heavy Oil Reservoir Management to Improve EOR Economics, Powered by a Unique Integration of Reservoir Physics and Machine Learning	1332
<i>Sarma, Pallav; Kyriacou, Stylianos; Henning, Mark; Orland, Paul; Thakur, Ganesh; Sloss, Dakin</i>	
Overhauling KPI Drilling Performance Trough RT Operations Integration Center	1358
<i>Fierro-Herrera, M.; Romero-Chacin, D.; Schmidt, A.; Erives-Gonzalez, J. L.; Dick, H. P.; Dorantes-Garcia-Barzanallana, A. E.; Amundsen, S.; Guedes de Carvalho, R.; Lopez, J. C.; Escobedo-Flores, M.; Basso-Mora, M. A.; Kim, A.; Hoil-Marrujo, G.; Garcia, H.</i>	
Innovative Engineering Workflows as Part of Digital Oil Field Implementation for Production Optimization of a Gas Asset MEXICO, PEMEX AIV	1369
<i>Espinola, O.; Castrejon, R.; Yanez, J. A.; Torres, A.; Martinez, R.; Guzman, J. D.; Ramirez, J. R.; Ramos, R.</i>	
Reduction of Opex Costs and Increase of Oil Production by Means of Production Deferment and Pump Failure Prevention with a Cost-Effective Well Monitoring System	1385
<i>Armacanqui, Samuel; Eyzaguirre, Luz; Lujan, Cesar; Tafur, Yeltsin; Marticorena, Harol; Rodriguez, José; Paccori, Hanco; De La Cruz, Ruben; Yataco, Sheyla; Sueldo, Freddy; Cuestas, Francis</i>	
Uncertainty Analysis for Production Forecast in Oil Wells	1397
<i>Monteiro, D. D.; Ferreira-Filho, V. M.; Chaves, G. S.; De Santana, R. S.; Duque, M. M.; Granja-Saavedra, A. L.; Baioco, J. S.; Vieira, B. F.; Teixeira, A. F.</i>	
A Practical Numerical Approach for the Determination of Flow Contribution of Multi-Zones Wellbores	1408
<i>Tarom, N.; Hossain, M.</i>	
Real-Time Surveillance and Optimization of Wells with Intelligent Completions in Ecuador	1417
<i>Villa, M. B.; Liang, W.; Gottumukkala, V.; Gornescu, B. C.; Contreras, C.</i>	

SESSION 14: MANAGEMENT OF INJECTED AND PRODUCED FLUIDS

First Project of Auto-injection in Patagonia Argentina	1426
<i>Bogan, F.; Ordoñez, M. N.; Pyczil, D.; Salvarredy Aranguren, M.; Verde, R.</i>	
Design of Injection Facilities for CO₂ Recovery Process: A Case Study	1437
<i>Hossain, M.</i>	
Use of Dynamic Data for Estimating Average Reservoir Pressure, OGIP, and Optimum Well Spacing in Shale Gas Reservoirs	1446
<i>Orozco, D.; Aguilera, R.</i>	
A Fluid Structure Interaction Model for Hydraulic Fracture Simulation on Vaca Muerta Argentina Shale Formation	1459
<i>Alderete, I. D.; Sosa-Massaró, A.; D'Hers, S.</i>	
How to Maximize the Value of the Lajas Tight Gas Play by Dynamic Modeling	1473
<i>Tanco, F. J.; Thompson, A.; Alencastre, P.; Santiago, E.</i>	
Deliquification in a Mature Gas Field: Comparison of Predicted and Observed Rates after Well Workover to Install Velocity Strings	1494
<i>Burford, J.; Falcone, G.</i>	

SESSION 15: REGIONAL PLAY ASSESSMENT AND CASE STUDIES

An Overview of Deepwater Well Integrity Developments After the Blowout of Macondo	1516
<i>Santos, O. L.; Ribeiro, P. R.</i>	
Using Hybrid Propulsion Autonomous Marine Vehicles to Better Characterize Geomagnetic Fields Offshore	1525
<i>Poedjono, B. H.; Pai, S.; Maus, S.; Paynter, R.</i>	
Surveillance and Initial Results of an Existing Polymer Flood: A Case History From The Rayoso Formation	1542
<i>Martino, L. A.; Fernandez Righi, E.; Gandi, S.; Thompson, A.; Giaquinta, A. D.</i>	
Reducing Fault Reactivation Risk on Deepwater Drilling	1558
<i>Frydman, M.; Holzberg, B.; Pastor, J. A.; Salies, J. B.; Pedroso, C. A.</i>	
Mature Basins Characterization and Opportunities Assessment. Case Study on Golfo San Jorge Basin Argentina	1573
<i>Palacios, G. R.; Tuero, F.; Biurdino, A. D. Airala</i>	
Uruguayan Petroleum Fiscal Regime	1589
<i>Ferro, F.; Tomasini, J.; Gristo, P.; Romeu, C.; Blázquez, N.; de Santa Ana, H.; McLeroy, P. G.</i>	
Fracturing-to-Production Integrated Completion Sensitivities for Horizontal Well Design in the Vaca Muerta Shale	1605
<i>Pichon, S.; Cafardi, F.; Cavazzoli, G. D.; Diaz, A.; Lederhos, M. R.</i>	
Designing Environmentally Conforming Drilling Fluids: Challenges and Considerations in Latin America	1621
<i>Fornasier, F. C.; Campo, M.; Djuric, A.; Obando, D. M.</i>	

SESSION 16: RESERVOIR CHARACTERIZATION AND DESCRIPTION II

Trends in Vaca Muerta Horizontal Wells Stimulation	1629
<i>Johanis, P. E.; Triffiletti, G. E.</i>	
High Resolution Dynamic Modelling to Revitalize a Mature Oil Field in a Low Oil Price Scenario	1641
<i>Perez, D. G.; Pedersen, G. A.; Lehu, R. E.; Thompson, A.; Morettini, E.</i>	
The PVT Properties of the Ecuadorian Crude Oils	1658
<i>Izurrieta, A. J.; Iza, A.</i>	
3D Modeling of Carbonate Rock Porous Media and Estimation of Petrophysical Parameters	1688
<i>Silveira, T. M.; Silva, W. G.; Couto, P.; Alves, J. L.</i>	
New Borehole Imaging for OBM Systems. Auca Mahuida Volcano and Las Manadas Fields, Neuquen, Argentina	1698
<i>Mallimaci, D.; Ribas, S.; Paris, M.; Grisolia, J.; Crespo, G.</i>	
Improved Numerical Modeling and Better Risk and Uncertainty Assessment Using Real-Time Downhole Pressure Data and Pressure and Rate Transient Analyses	1714
<i>Naime, R. Kansao; Yrigoyen, A.; Haris, Z. M.; Saputelli, L. A.; Da Prat, G.</i>	
Finding Incremental Oil In A Field With More Than 50% Recovery And With a Strong Aquifer: How We Did It!	1737
<i>Boettner, M. L.; Thompson, A. R.; Barros, P.; Berrios, V.; Lucero, R. A.; Vieytes, R. E.</i>	

SESSION 17: PRODUCTION FACILITIES AND DECISION SUPPORT SYSTEMS

Golfo San Jorge Basin, Argentina - A Conventional Gas Field Development. Management, Production and Challenges	1753
<i>Nougués, J. M.; Perez-Cometto, G.</i>	
Reversing Well Failure Trends in Shushufindi Increases Production and Reduces Costs through the Application of New Operating Practices and Technologies	1777
<i>Gozalbo, E.; Rodriguez, J. C.; Carrera, J.; Marquez, D.; Meza, D. I.; Gornescu, B. C.; Reyes, D.; Leon, R.</i>	
RMFinder 2.0: An Improved Interactive Multi-Criteria Scenario Reduction Methodology	1795
<i>Meira, L. A.; Coelho, G. P.; Silva, C. G.; Schiozer, D.J.; Santos, A. S.</i>	
Portfolio Management Strategies to Maximize Profitability from Mature Fields under Optimal Cash Exposure Mode in Ecuador	1818
<i>Rodas Cabrera, J. A.; Fun Sang, B. A.; Garibaldi, L. A.</i>	
Assessment of Economic Viability of Various Field Development Strategies	1826
<i>Igbokwe, L.; Hossain, M.</i>	
Development of Sensors Systems for the Validation of Mathematical Models for Sucker Rod Pumps	1845
<i>Bastos, I. C.; Mayr, L.</i>	

SESSION 18: HEAVY OIL

Investigation on the Impact of Voidage Replacement Ratio and Other Parameters on the Performances of Polymer Flood in Heavy Oil Based on Field Data	1853
<i>Delamaide, Eric</i>	
Extra-Heavy Oil Viscosity Estimation Using PVT and Geochemical Analyses: Applications at Huyapari Field, Orinoco Heavy Oil Belt, Venezuela	1871
<i>Landaeta, G. S.; Valencia, L. E.</i>	
Injection Completion and Well Integrity Performance of First Cyclic Steam Stimulations to Horizontal Wells in the Huyapari Field	1884
<i>López, A.; Sanchez, R.; Pacheco, J.</i>	
Kinetic of an In Situ Combustion Process in a Colombian Heavy Oil Using the Isoconversional Principle	1893
<i>Padilla, J.; Muñoz, S. F.; Trujillo, M. L.; Rodríguez, E.</i>	
Interrelationship Between Asphaltene Precipitation Methods and Asphaltene Characteristics and Self-Association Behavior	1910
<i>Afra, S.; Alrashidi, H. G.; Nasr-EL-Din, H. A.</i>	
A Practical Approach for Scale-Up of Solvent Transport Mechanisms in Post-CHOPS EOR Applications	1921
<i>Martinez-Gamboa, J. J.; Wang, M.; Leung, J. Y.</i>	

SESSION 19: WELL CONSTRUCTION II

Thermodynamic Behavior of Olefin and Methane Mixtures Applied to Synthetic Drilling Fluids Well Control	1938
<i>Marques, D. C.; Ribeiro, P. R.; Santos, O. L.; Lomba, R. F.</i>	
Determination of Load Effects on a Sealbore Packer with Floating Seal Assemblies During a Dynamic Underbalanced Perforation	1951
<i>Magri, J. L.; Scudino-Borges, R. P.; Jeronimo-Junior, E.</i>	
New Insight to Apply Azimuthal Geosteering	1964
<i>Cedeno, D.; Alvarez, A.; Fuentes, J.; Portilla, C.; Machare, V.; Erazo, R.; Escobar, K.; Cedeño, R. E.</i>	
Drilling Optimization of Argentina Horizontal Tight Sand Wells	1971
<i>Torres-Cabrera, N.; Pozo, M.; Finessi, A. A.</i>	

Integrated Services in Well Construction Collaborate to Reduce Well Delivery Time by 45% in the Carabobo Area, Orinoco Oil Belt in Venezuela	1982
<i>Pabón, C. A.; Hernandez, O. A.; Plazas, I.; Urbano, E.</i>	
Determination of Unconventional Technical Limit on Shale Wells	1995
<i>Castañeda, G. Espinosa; Cruz, D. Velazquez; Robles, A. Morquecho; Franco, R. Resendiz; Santiago, D. Silva</i>	
Author Index	