

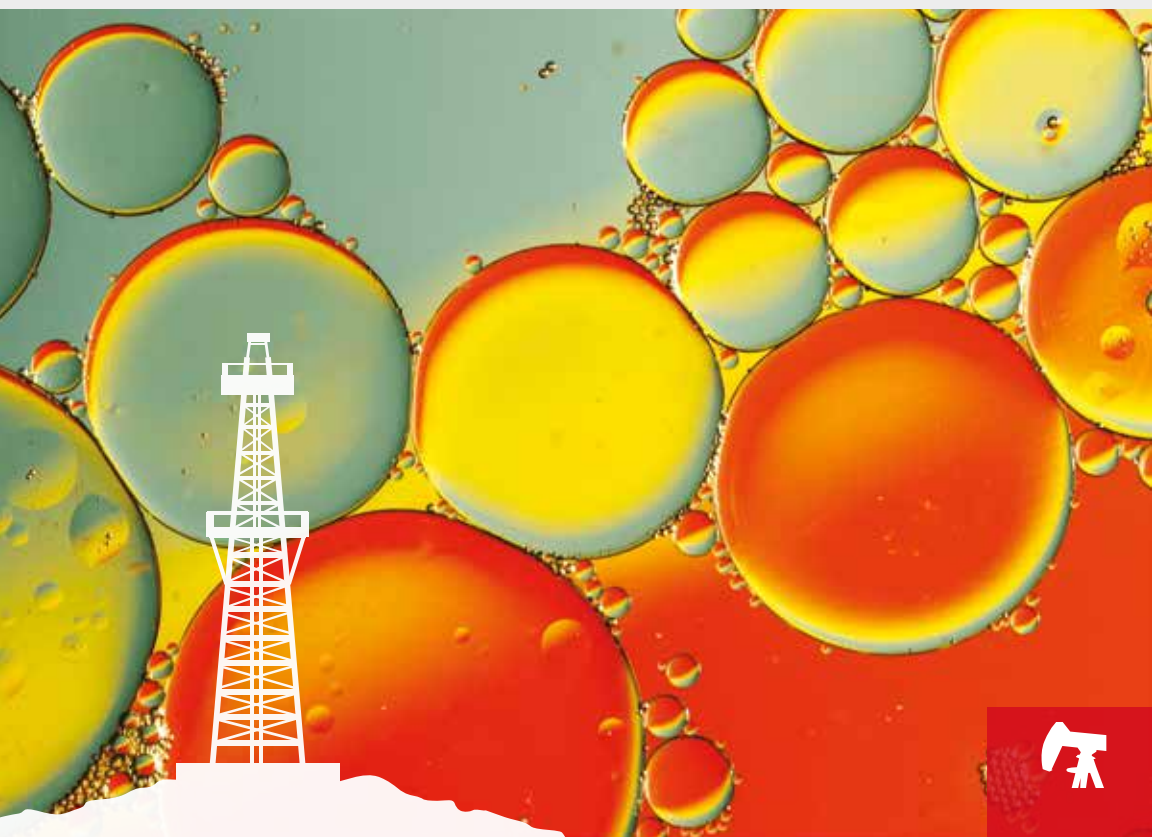
SPE International Conference on Oilfield Chemistry

8–9 April 2019

Moody Gardens Hotel and Convention Center
Galveston, Texas, USA

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Conference Program



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On behalf of the program committee, I welcome you to the SPE International Conference on Oilfield Chemistry. This conference will focus on emerging chemical technologies and designs for their application with papers that cover laboratory studies, simulations, and field applications. In addition, attendees will be able to network at the exhibition with suppliers offering products and services that support oilfield chemistry requirements.

This year we have 12 technical sessions, Knowledge Sharing ePoster presentations, an interactive Keynote Luncheon with Professor Anne Neville from University of Leeds, a Networking Luncheon, and an exceptional exhibit floor. There are multiple networking opportunities with other E&P professionals, which serve as great opportunities to build relationships with new and old colleagues.

Take advantage of all of the learning and knowledge sharing available over these two days.

Thank you for attending and enjoy the conference!

Sincerely,

Myles Jordan

Chairperson

Nalco Champion, an Ecolab Company

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Program Committee

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Nalco Champion, An Ecolab Company

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Carmen Garcia
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Stephen Haddon
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Katherine Hull
Aramco Services Company

Amy Kan
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Anthony Mitchell
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Lee Morgenthaler
Morning Valley Consulting

Arvind Patel
Gumpro R&D

Sunder Ramachandran
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Schedule of Events (as of 21 March 2019)

	Expo Reception Desk	Exhibit Hall South Lobby	Exhibit Hall A1	Exhibit Hall A2
Monday, 8 April 2019				
0700-1700	Registration			
0730-0830		Welcome Coffee		
0830-1200			Session 01 Drilling, Cementing, Completion Fluids and Additives I	Session 02 Separation and Asset Integrity
1000-1800				
1000-1030				
1000-1030				
1200-1300				
1300-1330				
1330-1700			Session 04 Drilling, Cementing, Completion Fluids and Additives II	Session 05 Geochemistry
1500-1530				
1500-1530				
1700-1800				
Tuesday, 9 April 2019				
0730-1700	Registration			
0730-0830		Welcome Coffee		
0830-1200			Session 07 Flow Assurance I	Session 08 Production Enhancement- Reservoir Recovery
1000-1530				
1000-1030				
1000-1030				
1200-1300				
1300-1330				
1330-1700			Session 10 Flow Assurance II	Session 11 Chemical Additives for Unconventional Reservoir Production
1500-1530				
1500-1530				

Schedule of Events (as of 21 March 2019)

Exhibit Hall A3	Exhibit Hall B	Exhibit Hall C	
			Monday, 8 April 2019
			0700-1700
			0730-0830
Session 03 New or Frontier Chemical Technologies I			0830-1200
	Exhibition		1000-1800
	Coffee Break		1000-1030
	Knowledge Sharing ePosters I, II, III		1000-1030
		Keynote Luncheon	1200-1300
	Coffee and Dessert		1300-1330
Session 06 New or Frontier Technologies II			1330-1700
	Coffee Break		1500-1530
	Knowledge Sharing ePosters IV, V, VI		1500-1530
	Welcome Reception		1700-1800
			Tuesday, 9 April 2019
			0730-1700
			0730-0830
Session 09 Water Management: Chemical Treatment and Additives			0830-1200
	Exhibition		1000-1530
	Coffee Break		1000-1030
	Knowledge Sharing ePosters VII, VIII, IX		1000-1030
		Networking Luncheon	1200-1300
	Coffee and Dessert		1300-1330
Session 12 Production Enhancement-Simulation			1330-1700
	Coffee Break		1500-1530
	Knowledge Sharing ePosters X, XI		1500-1530

Event Information

Registration and Badge Pick-Up

Registration will be available at the Expo Registration Desk, starting Sunday, 7 April.

Registration Hours

Sunday, 7 April 1400–1700
Monday, 8 April 0700–1700
Tuesday, 9 April 0730–1700

Speaker Check-in


Speaker check-in and Speaker Ready will be located in Ivy Room I. Speakers must check in prior to reporting to their assigned session room.

Speaker Check-In Hours



Sunday, 9 April 1400–1700
Monday, 10 April 0730–1700
Tuesday, 11 April 0730–1700

Coffee Breaks

Monday, 8 April

0730–0830, Exhibit Hall South Lobby
1000–1030, Expo B
1300–1330 **(with dessert)**, Expo B
1500–1530, Expo B, Sponsored by: 

Tuesday, 9 April

0730–0830, Exhibit Hall South Lobby
1000–1030, Expo B, Sponsored by:  **Nouryon**
1300–1330, **(with dessert)**, Expo B 
1500–1530, Expo B

Knowledge Sharing ePosters

Monday, 8 April

1000–1030, Exhibit Hall B
1500–1530, Exhibit Hall B

Tuesday, 9 April

1000–1030, Exhibit Hall B
1500–1530, Exhibit Hall B

Welcome Reception

Monday, 8 April

1700–1800, Exhibit Hall B

Keynote Luncheon

Monday, 8 April

1200–1300, Exhibit Hall C

Networking Luncheon

Tuesday, 9 April

1200–1300, Exhibit Hall C

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Technical Program (as of 21 March 2019)

Monday, 8 April 2019 | 0830-1200

Exhibition Hall A1

01 Drilling, Cementing, Completion Fluids and Additives I

Session Chairpersons: **Michael Fuller**, Chevron; **Mathew Samuel**, OPT Oilfield Services

A series of novel technologies and applications in drilling, cementing, and completions operations will be presented. Along with presentations on nanotechnology innovations for drilling/completions, technical papers will also present new studies of chemical additives, such as innovative chemical materials with broad fields of use; rheology modifiers for drilling; fluid-loss additives for cementing; and clay stabilizers for completions. Integrated fluid-system approaches and case studies to improve those operations are also included in two technical sessions on drilling, cementing, and completions.

Time	Paper #	Presentation
0830	193578	Surfactant-Inhibited Barium Sulphate Nanoparticles for Use in Drilling or Completion Fluids J.M. Whyte, Schlumberger
0900	193639	C-S-H-PCE Nanofoils: A New Generation of Accelerators for Oil Well Cement J. Plank, T. Echt, Technical University Munchen
0930	193538	Engineered Vesicles for the Controlled Release of Chemical Additives and Application for Enhanced Oil Well Cement Integrity E.Q. Contreras, K.D. Johnson, D. Rasner, C.J. Thaeamlitz, Aramco
1030	193588	Covalently-linked Organic Functionalities on Nano-platelets as a Viscosifier for Oil-based Muds H.A. Patel, A.K. Santra, C.J. Thaeamlitz, Aramco Services Company
1100	193537	Relationship between the 2-Acrylamido-2-Methylpropane Sulfonic Acid-NNDMA Copolymer Properties and FluidLoss and Mixability in Cementing Fluids W.C. Pearl, S. Lewis, J.P. Singh, Halliburton
1130	193544	Water-Based Drill-In Fluid Optimization Using Polyelectrolyte Complex Nanoparticles as a Fluid Loss Additive L.B. Whatley, R. Barati Ghahfarokhi, Z. Kessler, J. Tsau, University of Kansas
Alternate	193597	Development and Screening of Additives for Biodiesel Based Drilling Fluids: Principles, Strategies and Experience W. Li, The University of Western Australia; China University of Petroleum (Beijing); J. Liu, The University of Western Australia; X. Zhao, J. Jiang, China University of Petroleum (Beijing); H. Peng, Beijing Oilchemleader Science & Technology Development Co., Ltd.; M. Zhang, Shengli Oilfield Exploration and Development Research Institute (SINOPEC); T. He, GWDC Drilling Fluid Company (PETROCHINA); G. Liu, (1) China University of Mining and Technology; (2) The University of Western Australia; P. Shen, The University of Western Australia
Alternate	193585	Carbonic Acid Resistance of Hydroxyapatite Based Cement A. Srivastava, R.M. Ahmed, S.N. Shah, University of Oklahoma



Technical Program (as of 21 March 2019)

Monday, 8 April 2019 | 0830–1200

Exhibition Hall A2

02 Separation and Asset Integrity

Session Chairpersons: **Jonathan Wylde**, Clariant Oil Services; **Andre Gokool**, BP

This session deals with the direct and indirect effects of production chemicals and crude oil on the separation of water and asset integrity. Subjects such as novel chemistries and evaluation methodologies, that give the most up to date insight on both academic and industrial research and development, will be covered.

Time	Paper #	Presentation
0830	193640	PDEA-based Amphiphilic Polymer Enables pH-responsive Emulsions for a Rapid Demulsification Q. Hou, X. Zheng, D. Guo, Y. Zhu, Key Laboratory of Oilfield Chemistry, Research Institute of Petroleum Exploration and Development (R); H. Yang, Key Laboratory of Colloid, Interface and Chemical Thermodynamics, Institute of Chemistry, Chinese Ac; X. Xu, Energy Business Unit, Commonwealth Scientific Industrial Research Organization (CSIRO); Y. Wang, Key Laboratory of Oilfield Chemistry, Research Institute of Petroleum Exploration and Development (R); G. Chen, G. Hu, J. Wang, Key Laboratory of Colloid, Interface and Chemical Thermodynamics, Institute of Chemistry, Chinese Ac
0900	193591	A More Effective Solution to Treat Paraffinic Crude Oil Wells T. Phan, M. Faust, V. Balsamo, Nalco Champion, An Ecolab Company
0930	193633	Relation between Chemical Composition of a "Green" Nanofluid and Its Foam Film Stabilization for Robust Foam Injection EOR B. Wei, Y. Wang, S. Chen, R. Mao, J. Ning, W. Wang, Southwest Petroleum University
1030	193587	High-efficiency Corrosion Inhibitor for Acidizing: Synthesis, Characterization and Anti-corrosion Performance of Novel Indolizine Derivative Y. Wang, Z. Yang, R. Wang, W. Chen, M. Ding, F. Zhan, China University of Petroleum (East China); B. Hou, School of Petroleum Engineering, Yangtze University
1100	193628	Roles of the Hydrophobic Tail Groups on the Properties of CO₂-switchable Surfactants Q. Hou, Key Laboratory of Oilfield Chemistry, Research Institute of Petroleum Exploration and Development (R); Q. Wu, Y. Xu, Key Laboratory for Green Chemical Technology of Ministry of Education, Collaborative Innovation Cent; X. Zheng, Key Laboratory of Oilfield Chemistry, Research Institute of Petroleum Exploration and Development (R); Y. Zhao, Key Laboratory for Green Chemical Technology of Ministry of Education, Collaborative Innovation Cent; Y. Wang, D. Guo, Key Laboratory of Oilfield Chemistry, Research Institute of Petroleum Exploration and Development (R); X. Xu, Energy Business Unit, Commonwealth Scientific Industrial Research Organization (CSIRO)
1130	193636	Modeling/Forecasting Reservoir Souring in a Field (Rajasthan, India) with an Extremely Low Indigenous Volatile Fatty Acid (VFA) Concentration E.D. Burger, EB Technologies Inc.; P. Venkat, S. Mittal, Cairn India Ltd., Vendanta Ltd.
Alternate	193555	Insight of New Eco-Friendly Acidizing Corrosion Inhibitor: Structure and Inhibition of the Indolizine Derivatives Z. Yang, Y. Wang, R. Wang, W. Chen, M. Ding, F. Zhan, China University of Petroleum (East China); B. Hou, School of Petroleum Engineering, Yangtze University

Technical Program (as of 21 March 2019)

Monday, 8 April 2019 | 0830–1200

Exhibition Hall A3

03 New or Frontier Chemical Technologies I

Session Chairpersons: **Anthony Mitchell**, Equinor; **Amy Kan**, Rice University

As field conditions become more extreme, or new chemistry challenges are encountered and understood, new solutions have to be found. This session explores some of the test methods, chemicals, and technology solutions being developed to ensure that we provide fit for purpose treatment at the leading edge of the industry.

Time	Paper #	Presentation
0830	193600	Enhancing Scale Inhibitor Squeeze Retention in HT/HP & High Water Rate Wells—Laboratory to Field Case Study L. Sutherland, M. Jordan, Nalco Champion, An Ecolab Company
0900	193550	Identification of Novel Chemicals for Iron Sulfide Scale Control and Understanding of Scale Controlling Mechanism S. Ko, X. Wang, A.T. Kan, M.B. Tomson, Rice University
0930	193573	Effect of pH on Dissolution of Iron Sulfide Scales Using THPS M.E. Ahmed, A.T. Onawole, I.A. Hussein, M. Saad, Qatar University; M.A. Mahmoud, King Fahd University of Petroleum & Minerals; H. Nimir, Qatar University
1030	193613	Investigation Into The Synergistic Interaction Of A Range Of Generic Scale Inhibitors For Improved Sulphate Scale Control In North Sea Topside Processes M.M. Jordan, E. Temple, A. Sham, H. Williams, C. McCallum, Nalco Champion, An Ecolab Company
1100	193580	A New Approach to Testing Scale Inhibitors in Mild Scaling Brines—Are Dynamic Scale Loop Tests Needed? M. Barber, S. Heath, Baker Hughes, a GE Company
1130	193551	Aqueous Alternative System to Straight and Emulsified HCl Acids for Carbonate Acidizing A.M. Al Moajil, S.X. Caliskan, A. Al-Salem, I. Al-Yami, Saudi Aramco PE&D
Alternate	193566	Effect of Calcium Carbonate on Barite Solubility Using a Chelating Agent and Converter K. Abdelgawad, M.A. Mahmoud, S.M. Elkatatny, S. Patil, King Fahd University of Petroleum & Minerals
Alternate	193632	Application of Advanced Fluorescence Detection Technology to Improve Scale Management in Both Conventional and Sub-Sea Fields S.M. Heath, Baker Hughes, a GE company; S. Toivonen, V. Vuori, S. Puupponen, Kemira
Alternate	193619	Multifunctional Chemical for Simultaneous Dissolution of Iron Sulfide, Corrosion Inhibition, and Scale Inhibition P. Rodgers, B. Lundy, S. Ramachandran, J. Ott, D.J. Poelker, D. Lee, C. Stevens, C. Bounds, M. Sullivan, Baker Hughes, a GE Company

Keynote Luncheon: Understanding Kinetics and Polymorphic Changes in CaCO₃ Deposition in Single and Multi-Phase Flow Conditions

Monday, 8 April 2019 | 1200–1300

Exhibit Hall C



Professor Anne Neville
University of Leeds

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This talk will be a review of surface deposition work conducted over the last few years in Leeds which has enabled mechanisms and rates of surface deposition to be accessed. The integration of a suite of tests which include in-situ visualization, in-situ diffraction measurements, a new capillary cell, post-test spectroscopy, and diffraction measurements has been used to quantify how scale deposits and how it can be inhibited.

The emphasis will be on how we can link the processes occurring in the solution (bulk scaling) with what we see on the surface (surface deposition or adhesion) and how understanding of surface scale formation assists in its efficient inhibition.

Technical Program (as of 21 March 2019)

Monday, 8 April 2019 | 1330–1700

Exhibition Hall A1

04 Drilling, Cementing, Completion Fluids and Additives II

Session Chairpersons: **Arvind Patel**, Gumpro R&D; **Sam Lewis**, Halliburton

A series of novel technologies and applications in drilling, cementing, and completions operations will be presented. Along with presentations on nanotechnology innovations for drilling/completions, technical papers will also present new studies of chemical additives, such as innovative chemical materials with broad fields of use; rheology modifiers for drilling; fluid-loss additives for cementing; and clay stabilizers for completions. Integrated fluid-system approaches and case studies to improve those operations are also included in two technical sessions on drilling, cementing, and completions.

Time	Paper #	Presentation
1330	193618	An Innovative Rheology Modifier Which Provides Dual Function: Achieves Non-damaging Clay Free System For Reservoir Drilling And Flat Rheology For Deep Water Drilling. V. Gupta, S.B. Indulkar, M. Asrani, A.D. Patel, S. Ramane, A. Sarase, S. Thakur, A.K. Singh, Gumpro Drilling Fluids Pvt. Ltd.
1400	193620	Effect of Fluid Loss Polymers Architecture on Cement Slurry Rheology : Impact of Adsorption and Microstructure A. Cadix, V. Molinie, J.D. Wilson, SOLVAY
1430	193594	Evaluation of a Glutaraldehyde/THNM Combination for Microbial Control in Four Conventional Oilfields M. Paschoalino, J. Raymond, E. Sianawati, V. Silva, The Dow Chemical Company
1530	193625	Experimental Study on the Synthesis and Interfacial Properties of Oligomeric Silicone Surfactant J. Zhang, X. Xianguang, W. Lihui, L. Long, Z. Die, Z. Zhiliang, W. Shuangwei, CNPC Drilling Research Institute
1600	193567	Silica and Graphene Oxide Nanoparticle Formulation to Improve Thermal Stability and Inhibition Capabilities of Water-based Drilling Fluid applied to Woodford Shale J. Aramendiz, A.H. Imqam, Missouri University of Science and Technology
1630	193627	A New Class of Permanent Clay Stabilizers A.I. Assem, H.A. Nasr-El-Din, Texas A&M University; T.L. Harper, Maxflo Oilfield Chemical Solutions
Alternate	193624	Quantifying Volume Expansion of Gas-Generating Materials in Cement Slurries I. Partch, Fritz Industries, Inc.; J. Ferrell, Fritz Industries Inc.; D. Morrison, E. Salinas, S. Franks, Fritz Industries, Inc.

Technical Program (as of 21 March 2019)

Monday, 8 April 2019 | 1330-1700

Exhibition Hall A2

05 Geochemistry

Session Chairpersons: **Katherine Hull**, Aramco Services Company; **Nan Zhang**, Equinor

This session highlights topics ranging from rock characterization and interaction with fluids to new applications of water chemistry and oil fingerprinting. In addition, papers that describe reservoir changes from injected fluids including brine composition or scale inhibitor retention will be presented.

Time	Paper #	Presentation
1330	193562	Impact of Temperature on Fluid-Rock Interactions During CO2 Injection in Depleted Limestone Aquifers: Laboratory and Modelling Studies F. Jaafar Azuddin, PETRONAS; I. Davis, M. Singleton, S. Geiger, E. Mackay, D. Silva, Heriot-Watt University
1400	193635	Building a Fundamental Understanding of Scale Inhibitor Retention in Carbonate Formations K. Jarrahian, Heriot-Watt University, Institute of Petroleum Engineering; K.S. Sorbie, M.A. Singleton, L.S. Boak, A.J. Graham, Heriot-Watt University
1430	193576	Water Chemistry Application in Reservoir Management and Production W. Wei, W. Wang, S.R. Clinch, Chevron Corporation
1530	193601	Time Lapse Production Allocation Using Oil Fingerprinting for Production Optimization in Deepwater Gulf Mexico L. Xing, S. Teerman, F. Descant, Chevron
1600	193539	Characterization of Type and Maturity of Organic Matter in Source Rock by In-situ Electrical Heating and Temperature Transient Analysis K. Lee, University of Houston
1630	193638	Magnesium Depletion and Impact on Produced Brine Compositions in a Waterflooded Reservoir O. Ishkov, E.J. Mackay, Heriot-Watt University; M.M. Jordan, S. Blair, Nalco Champion, An Ecolab Company
Alternate	193569	Innovative Acidizing Solutions for Severely Damaged Clay-Rich Sandstone Reservoir with Gravel Pack Completions in Offshore Myanmar D. Kim, Y. Bae, Posco-Daewoo Corp; H. Liu, Schlumberger

Technical Program (as of 21 March 2019)

Monday, 8 April 2019 | 1330-1700

Exhibition Hall A3

06 New or Frontier Technologies II

Session Chairpersons: **Sunder Ramachandran**, Baker Hughes, a GE Company; **Lee Morgenthaler**, Morning Valley Consulting

As field conditions become more extreme, or new chemistry challenges are encountered and understood, new solutions have to be found. This session explores some of the test methods, chemicals and technology solutions being developed to ensure that we provide fit for purpose treatment at the leading edge of the industry.

Time	Paper #	Presentation
1330	193536	H2S Scavenger Development During the Oil and Gas Industry Search for an MEA Triazine Replacement in Hydrogen Sulfide Mitigation and Enhanced Monitoring Techniques Employed During their Evaluation G.N. Taylor, M. Smith-Gonzalez, J.J. Wylde, A. Oliveira, Clariant Oil Services
1400	193614	Differentiation and Quantification of Corrosive Amines through Simple Chemical Process S. Murugesan, R. Suresh, V.N. Khabashesku, Q. Darugar, Baker Hughes, a GE company
1430	193630	Kinetics And Thermodynamics Of Iron Sulfide Precipitation, Deposition, And Control. X. Wang, S. Ko, Y. Liu, A. Lu, Y. Zhao, K. Harouaka, G. Deng, S. Paudyal, C. Dai, A.T. Kan, M.B. Tomson, Rice University
1530	193586	A Unified Experimental Method and Model for Predicting Scale Inhibition C. Dai, Z. Dai, F. Zhang, Y. Zhao, D. Guannan, K. Harouaka, X. Wang, Y. Lu, S. Paudyal, S. Ko, S. Gao, A.T. Kan, M.B. Tomson, Rice University
1600	193548	Evaluation of Silica Matrix Ion Effects on Barite Scale Inhibitors Y. Zhao, H.m. Sriyathne, K. Harouaka, S. Paudyal, S. Ko, C. Dai, A. Lu, G. Deng, X. Wang, A.T. Kan, M.B. Tomson, Rice University
1630	193549	A High Temperature and Salt Resistance Supramolecular Thickening System Y. Ma, L. Ma, J. Guo, J. Lai, Southwest Petroleum University; H. Zhou, J. Li, Downhole Service Company, CNPC Chuangqing Drilling Engineering Company Limited
Alternate	193641	Enhanced Oil Recovery Using a Potential Nanofluid Based on the Halloysite Nanotube/Silica Nanocomposites T. Zhao, Y. Chen, W. Pu, B. Wei, Y. He, Y. Zhang, Southwest Petroleum University
Alternate	193609	Permanent Removal of Condensate Banking in Tight Gas Reservoirs Using Thermochemicals A. Hassan, M.A. Mahmoud, A.A. Al-Majed, King Fahd University of Petroleum & Minerals; A.R. Al-nakhli, M.A. Bataweel, Saudi Aramco PE&D; S.M. Elkhatny, King Fahd University of Petroleum & Minerals

Knowledge Sharing ePosters

Monday, 8 April 2019

Knowledge Sharing ePosters allow one-on-one interactions with presenters and opportunities to study a particular concept at an appropriate level of detail. Subject matter varies, but topics are consistent with the other technical sessions.

KS01 Knowledge Sharing ePoster I | Exhibition Hall B - Station 1

Session Chairperson: **Arvind Patel**, Gumpro R&D

Time	Paper #	Presentation
1000	193624	Quantifying Volume Expansion of Gas-Generating Materials in Cement Slurries I. Partch, Fritz Industries, Inc.; J. Ferrell, Fritz Industries Inc.; D. Morrison, E. Salinas, S. Franks, Fritz Industries, Inc.
1015	193569	Innovative Acidizing Solutions for Severely Damaged Clay-Rich Sandstone Reservoir with Gravel Pack Completions in Offshore Myanmar D. Kim, Y. Bae, Posco-Daewoo Corp; H. Liu, Schlumberger

KS02 Knowledge Sharing ePoster II | Exhibition Hall B - Station 2

Session Chairperson: **Katherine Hull**, Aramco Services Company

Time	Paper #	Presentation
1000	193563	Internal Viscoelastic Surfactant Breakers From In-Situ Oligomerization C. Daeffler, D. Perroni, S.M. Makarychev-mikhailov, A.L. Mirakyan, Schlumberger
1015	193579	A Novel Biochemical-Based Paraffin Wax Removal Program Providing Revenue Generation and Asset Enhancement K.H. Raney, K. Alibek, M.R. Shumway, K. Karathur, T. Stanislav, G. West, Locus Bio-Energy Solutions, LLC; M. Jacobs, Penneco Oil Company

KS03 Knowledge Sharing ePoster III | Exhibition Hall B - Station 3

Session Chairperson: **Lee Morgenthaler**, Morning Valley Consulting

Time	Paper #	Presentation
1000	193641	Enhanced Oil Recovery Using a Potential Nanofluid Based on the Halloysite Nanotube/Silica Nanocomposites T. Zhao, Y. Chen, W. Pu, B. Wei, Y. He, Y. Zhang, Southwest Petroleum University
1015	193609	Permanent Removal of Condensate Banking in Tight Gas Reservoirs Using Thermochemicals A. Hassan, M.A. Mahmoud, A.A. Al-Majed, King Fahd University of Petroleum & Minerals; A.R. Al-nakhli, M.A. Bataweel, Saudi Aramco PE&D; S.M. Elkhatny, King Fahd University of Petroleum & Minerals

Knowledge Sharing ePosters

Monday, 8 April 2019

KS04 Knowledge Sharing ePoster IV | Exhibition Hall B - Station 1

Session Chairperson: **Michael Fuller**, Chevron

Time	Paper #	Presentation
1500	193597	Development and Screening of Additives for Biodiesel Based Drilling Fluids: Principles, Strategies and Experience W. Li, The University of Western Australia; China University of Petroleum (Beijing); J. Liu, The University of Western Australia; X. Zhao, J. Jiang, China University of Petroleum (Beijing); H. Peng, Beijing Oilchemleader Science & Technology Development Co., Ltd.; M. Zhang, Shengli Oilfield Exploration and Development Research Institute (SINOPEC); T. He, GWDC Drilling Fluid Company (PETROCHINA); G. Liu, (1) China University of Mining and Technology; (2) The University of Western Australia; P. Shen, The University of Western Australia
1515	193585	Carbonic Acid Resistance of Hydroxyapatite Based Cement A. Srivastava, R.M. Ahmed, S.N. Shah, University of Oklahoma

KS05 Knowledge Sharing ePoster V | Exhibition Hall B - Station 2

Session Chairperson: **Jonathan Wylde**, Clariant Oil Services

Time	Paper #	Presentation
1500	193555	Insight of New Eco-Friendly Acidizing Corrosion Inhibitor: Structure and Inhibition of the Indolizine Derivatives Z. Yang, Y. Wang, R. Wang, W. Chen, M. Ding, F. Zhan, China University of Petroleum (East China); B. Hou, School of Petroleum Engineering, Yangtze University
1515	193619	Multifunctional Chemical for Simultaneous Dissolution of Iron Sulfide, Corrosion Inhibition, and Scale Inhibition P. Rodgers, B. Lundy, S. Ramachandran, J. Ott, D.J. Poelker, D. Lee, C. Stevens, C. Bounds, M. Sullivan, Baker Hughes, a GE Company

KS06 Knowledge Sharing ePoster VI | Exhibition Hall B - Station 3

Session Chairperson: **Amy Kan**, Rice University

Time	Paper #	Presentation
1500	193566	Effect of Calcium Carbonate on Barite Solubility Using a Chelating Agent and Converter K. Abdelgawad, M.A. Mahmoud, S.M. Elkhatny, S. Patil, King Fahd University of Petroleum & Mineral
1515	193632	Application of Advanced Fluorescence Detection Technology to Improve Scale Management in Both Conventional and Sub-Sea Fields S.M. Heath, Baker Hughes, a GE company; S. Toivonen, V. Vuori, S. Puupponen, Kemira

Technical Program (as of 21 March 2019)

Tuesday, 9 April 2019 | 0830-1200

Exhibition Hall A1

07 Flow Assurance I

Session Chairpersons: **Julie Fidoe**, Nalco Champion, An Ecolab Company; **Jonathan Wylde**, Clariant Oil Services

This session will focus on inhibitors, their novel chemistries and structures for the control of inorganic scales, asphaltene and paraffin deposits. The presentations will pertain to development of prediction models and laboratory studies that improve our understanding of these challenges along with monitoring and optimization of chemical programs under various field conditions.

Time	Paper #	Presentation
0830	193593	Amphiphilic Wax Inhibitor for Tackling Crude Oil Wax Deposit Challenges Z. Xiu, P. Dufils, J. Zhou, A. Cadix, K. Hatchman, T. Decoster, P. Ferlin, Solvay
0900	193570	Simulation Study of Scale Management during Hydraulic Fracturing in Unconventional Reservoirs A. Abouie, A. Sanaei, K. Sepehrnoori, The University of Texas At Austin
0930	193564	Scale Prediction and Mineral Solubility under HPHT Conditions D.A. Nichols, N.J. Goodwin, G.M. Graham, D.M. Frigo, Scaled Solutions Ltd
1030	193554	A Novel Phosphonate Scale Inhibitor for Scale Control in Ultra High Temperature Environments H. Lu, B. McCabe, J.L. Brooks, S.M. Heath, S. Stevens, Baker Hughes, a GE Company
1100	193559	Impact of Inorganic Salts and Minerals on Asphaltene Stability and Inhibitor Performance A.D. Punase, J.I. Aguiar, A. Mahmoudkhani, Clariant Oil Services
1130	193612	The Effect Of Molecular Composition On The Electro-Deposition Of Asphaltene S. Xia, K. Kostarelos, University of Houston
Alternate	193584	A Placement Case Study for a Well in the North Sea Field A. Kaur, R. Stalker, G.M. Graham, Scaled Solutions Limited
Alternate	193558	Strategies for Squeezing Co-Mingled Wells in the Same Flow Line in Sub-Sea and Deepwater Environments—Guidelines for Scale Inhibitor Selection and Effective Treatment Strategies and Design S.M. Heath, D. Dugue, N.S. Gjosund, Baker Hughes, a GE company

Technical Program (as of 21 March 2019)

Tuesday, 9 April 2019 | 0830-1200

Exhibition Hall A2

08 Production Enhancement - Reservoir Recovery

Session Chairpersons: **Eric Mackay**, Heriot-Watt University; **Yujun Feng**, Sichuan University

Chemical Enhanced Oil Recovery (EOR) and other Improved Oil Recovery (IOR) techniques are increasingly being considered to maximize economic recovery. This session will cover topics on new chemistries for use under harsh conditions and where cost control is imperative. This session will also discuss the impact of Chemical EOR methods on conventional production chemistry issues, such as scaling. In addition there will be a presentation on chemical treatments in intelligent completions.

Time	Paper #	Presentation
0830	193568	Production Chemistry Issues and Solutions Associated with Chemical EOR G.M. Graham, D.M. Frigo, Scaled Solutions Limited
0900	193534	Guerbet Alkoxy Betaine Surfactant for Surfactant-Polymer Flooding in High Temperature, High Salinity Reservoirs H. Cai, Q. Wang, W. Luo, H. Wang, X. Zhou, J. Li, SKL-EOR, RIPED, CNPC; Y. Zheng, Yangtze River University
0930	193575	Barium Sulphate Scaling and Control during Polymer, Surfactant and Surfactant-Polymer Flooding M.M. Al Kalbani, Heriot Watt University; M.M. Jordan, Nalco Champion, An Ecolab Company; E.J. Mackay, K. Sorbie, Heriot-Watt University; L.X. Nghiem, Computer Modelling Group Ltd.
1030	193542	A Summary of Analytical Methods to Simulate Chemical Treatments in ICD Completed Wells A. Kaur, R. Stalker, G.M. Graham, Scaled Solutions Limited; D.M. Frigo, Plinius Chemical Consulting
1100	193615	Tuning Ionic Liquids for Simultaneous Dilution and Demulsification of Water-in-Bitumen Emulsions at Ambient Temperature E. Abdelfatah, Y. Chen, P. Berton, University of Calgary; R.D. Rogers, 525 Solutions; S.L. Bryant, University of Calgary
1130	193546	Effect of Scaling and Corrosion Inhibitors on The Static Adsorption of an Anionic Surfactant on a Carbonate Rock M.E. Gutierrez Rengifo, S.J. Gaona Osorio, F.E. Calvete Gonzalez, J.A. Botett, Universidad Industrial De Santander; J.V. Ferrari, Universidade De Sao Paulo
Alternate	193572	The Development and Field Test of High Efficient Foam Unloading Agent Based on Gemini Surfactant and Nanomaterials J. Wu, Sinopec Research Institute of Petroleum Exploration and Development; W. Jia, Sinopec Research Institute of Petroleum Engineering; R. Zhang, X. Cen, H. WANG, J. Niu, Sinopec Research Institute of Petroleum Exploration and Development

Technical Program (as of 21 March 2019)

Tuesday, 9 April 2019 | 0830–1200

Exhibition Hall A3

09 Water Management: Chemical Treatment and Additives

Session Chairpersons: **Gordon Graham**, Scaled Solutions Limited; **Anthony Mitchell**, Equinor

Understanding and management of water, be it produced, injected, or for use in drilling and fracturing operations, is critical for our industry. This session reviews selection methods and application of chemical additives to solve problems associated with a range of challenges encountered, focusing particularly on scale and microbiology.

Time	Paper #	Presentation
0830	193606	Insights into Effective Microbial Control through a Comprehensive Microbiological Audit of Hydraulic Fracturing Operations J.D. Moore, E. Massie-Schuh, K. Wunch, K. Manna, DowDuPont Industrial Biosciences; R. Daly, M. Wilkins, K. Wrighton, Colorado State University
0900	193557	Cross-Linked Polymeric Controlled Release Particles for Inorganic Scale Inhibition P.M. Ferm, J. Germer, K. Heidemann, S.P. Holt, A. Robertson, J. Sanders, K. Rodrigues, J.S. Thomaidis, N. Wolf, L. Zhang, Nouryon
0930	193543	Development of a Barium Sulphate Scale Inhibitor for Chalk Solid Loaded Conditions E. Temple, M. Jordan, Nalco Champion, an Ecolab Company; H. Williams, Nalco Champion, an Ecolab Company; S. Kjelstrup, Nalco Champion, an Ecolab Company; M. Kilbarda, K. Johansen, Aker BP
1030	193571	Methodology to Evaluate the Performance and Stability of Hydrogen Sulphide Scavengers A. Rafferty, C. Stewart-Liddon, C. Simpson, P. Hammonds, G.M. Graham, P. Maskell, Scaled Solutions Limited
1100	193631	Effect of Network Parameters of Preformed Particle Gel on Structural Strength for Water Management M. Baghban Salehi, A. Mousavi Moghadam, Chemistry & Chemical Engineering Research Center of Iran; K. Jarrhian, Heriot-Watt University
1130	193592	Can the Viscoelasticity of HPAM Polymer Solution Make the Polymer Flooding Compete with Gel Treatment to Improve Sweep Efficiency? A Comparison with Different Polymer Gel Systems T.K. Khamees, R.E. Flori, Missouri University of Science & Technology
Alternate	193629	Reducing Backpressure and Enhancing Throughput of Saltwater Disposal Wells with Chlorine Dioxide and Complex Nano Fluids: Optimization and Case Studies R.W. Pagel, T. Tindall, QEP Resources; T. Pursley, T. Sweeney, Flotek; Z. Li, T. Lathrop, B. Sullivan, G.D. Simpson, Pureline Treatment Systems

Technical Program (as of 21 March 2019)

Tuesday, 9 April 2019 | 1330–1700

Exhibition Hall A1

10 Flow Assurance II

Session Chairpersons: **Wei Wei**, Chevron; **Myles Jordan**, Nalco Champion, An Ecolab Company

This session will focus on inhibitors, their novel chemistries and structures for the control of inorganic scales, asphaltene and paraffin deposits. The presentations will pertain to development of prediction models and laboratory studies that improve our understanding of these challenges along with monitoring and optimization of chemical programs under various field conditions.

Time	Paper #	Presentation
1330	193556	Novel Laser-Hydrothermal Apparatus for Nucleation and Inhibition Study of Scale Minerals at Temperatures up to 250°C G. Deng, A.T. Kan, Rice University; F. Zhang, Rice University Executive Education; A. Lu, M.B. Tomson, Rice University
1400	193560	Asphaltenes Risk Assessment and Mitigation—Designing Appropriate Laboratory Test Protocols A.R. Farrell, B. Martin, D.M. Frigo, G.M. Graham, Scaled Solutions Ltd.
1430	193545	On-site Fluids and Solids Characterization with Benchtop XRF Analyzer J. Lu, Shell E&P International Ltd; D. Toups, Shell E&P; B. Lamoureux, Shell International Exploration and Production; D. Snyder, S. Williams, Panalytical; J. Williams, G. Checkan, Baker Hughes
1530	193604	What Can We Learn from Analysis of Field Asphaltenes Deposits? Enhancing Product Development Through Knowledge-Based Field-to-Lab-to-Field Approach J. Da Silva De Aguiar, Clariant Oil Services; C.P. Mazzeo, Clariant Oil Services Ltd; R. Garan, Clariant; A.D. Punase, Clariant Oil Services; S. Razavi, Clariant Oil & Mining Svcs BU; A. Mahmoudkhani, Clariant Oil Services Ltd
1600	193611	Dissolution Study of Field Deposits for Oilfield Scale Mitigation and Remediation C. Yan, Chevron; W. Wang, Chevron ETC; W. Wei, Chevron
1630	193541	Development of Scale Squeeze Enhancement Technology via Application of Metal Nanoparticles Coupled with Polymer Scale Inhibitors P. Gurajeb, R. Tomson, Tomson Technologies; I.J. Littlehales, Nalco Champion, An Ecolab Company
Alternate	193552	Out with the Old: Developing a New Methodology for Paraffin Wax Dispersion and Inhibition Testing A. Miller, R. Smith, B. Dufresne, A. Mahmoudkhani, Clariant
Alternate	193583	The Impact of H₂S on Carbonate Scaling Risk. A Field Case Study G. Verri Ness, K.S. Sorbie, Heriot-Watt University; N.C. Lugo, C. Kelly, Chevron North Sea Ltd

Technical Program (as of 21 March 2019)

Tuesday, 9 April 2019 | 1330–1700

Exhibition Hall A2

11 Chemical Additives for Unconventional Reservoir Production

Session Chairpersons: **Mathew Samuel**, OPT Oilfield Services; **Yenny Christanti**, Schlumberger

The complexity of shale oil and gas fields requires tailored chemical selection to maximize hydrocarbon production. This session encompasses advancements in screening methods and understanding of structure-property relationships, both essential in selecting best-in-class additives.

Time	Paper #	Presentation
1330	193621	First Occurrence of a Shale Oil with Trimodal Carbon Chain Distribution and Paraffins Higher than Nonacotane (C90H182): A Real Fail Test for Existing Chemistries and Methods R. Smith, A. Miller, A. Mahmoudkhani, W. Samaniego, E. Granda, Clariant
1400	193634	Development of Structure-Property Relationships for Steam Foam Additives for Heavy Oil Recovery T. Nguyen, A. Raj, R. Rommerskirchen, J. Fernandez, Sasol Performance Chemicals
1430	193599	Development of a Novel Iron Sulfide Scale Inhibitor for Onshore US Application N. Bhandari, M. Bhandari, I.J. Littlehales, J. Fidoe, Nalco Champion, An Ecolab Company
1530	193553	Performance Comparison of Novel Chemical Agents in Improving Oil Recovery from Tight Sands through Spontaneous Imbibition H. Huang, Xi'an Shiyou University; T. Babadagli, X. Chen, H. Li, University of Alberta
1600	193589	Static Adsorption of Surfactants on Bakken Rock Surfaces in High Temperature, High Salinity Conditions X. Zhong, H. Pu, Y. Zhou, J. Zhao, University of North Dakota
1630	193623	Tailoring Alkoxylation of Flowback aid Surfactants for Maximum Efficiency F.C. De Rezende, R.B. Rabelo, L. Kinouti, C. Gerard Ewbank, O.C. Poltronieri, Oxiteno SA
Alternate	935951	Role of Surfactant Structures on Surfactant-Rock Adsorption in Various Rock Types D.F. Wilson, L.A. Poindexter, T. Nguyen, Sasol Performance Chemicals

Technical Program (as of 21 March 2019)

Tuesday, 9 April 2019 | 1330–1700

Exhibition Hall A3

12 Production Enhancement—Stimulation

Session Chairpersons: **Michael Fuller**, Chevron; **Jonathan Wylde**, Clariant Oil Services

This session presents a diverse set of papers which deal with findings in both acid stimulation and hydraulic fracturing. Selected papers will include field cases and lab studies related to carbonate acidizing, acid diversion, flowback analysis, inhibitor squeeze operations, corrosion inhibitors, viscoelastic surfactants, paraffin wax removal, and hydrophobic associative polymer-based fracturing fluids.

Time	Paper #	Presentation
1330	193610	Microstructural and Flowback Analysis Methodology in Matrix Acidized Carbonate Oil Reservoirs A.M. Al Moajil, B.S. Aldakkan, H. Al Badairy, S. Shen, Saudi Aramco
1400	193617	Three-Phase Carbonate Acidizing: Quantification and Analysis of Evolved CO₂ in the Presence of Oil and Water H.T. Kumar, S. Muhemmed, H.A. Nasr-EI-Din, Texas A&M University
1430	193540	Acid and Scale Inhibitor Squeeze Treatments on Two Subsea Gas Condensate Wells: Design Of Subsea Connection, Treatment, Wells Start-up and Results of the Operation S. Hatscher, M. Kiselnikov, Wintershall Norge AS
1530	193596	Novel Non-aromatic Non-ionic Surfactants to Target Deep Carbonate Stimulation K. Sokhanvarian, C. Stanciu, J.M. Fernandez, Sasol Performance Chemicals; A. Ibrahim, H. Nasr-EI-Din, Texas A&M University
1600	193616	A New Up-Scaled Wormhole Model Grounded on Experimental Results and in 2-Scale Continuum Simulations M. Palharini Schwalbert, Petrobras and Texas A&M University; A.D. Hill, D. Zhu, Texas A&M University
1630	193565	Experimental Investigation of Particulate Polylactic Acid Diversion in Matrix Acidizing R.M. Shirley, A.D. Hill, Texas A&M University
Alternate	193574	Effect of Corrosion-Inhibitor Chemistry on the Viscosity and Corrosion Rate of VES-Based Acids A.M. Hanafy, H.A. Nasr-EI-Din, Texas A&M University; A.I. Rabie, J. Zhou, Solvay
Alternate	193598	An Ounce of Prevention is Worth a Pound of Biofilm Mitigation O. Arends, Stepan Company; B.D. Seymour, Stepan Oilfield Solutions; B. Benko, Stepan Company; M.S. Elshahed, Oklahoma State University; L. Yakoweshen, Stepan Oilfield Solutions; S. Ganguly-Mink, Stepan Company
Alternate	193563	Internal Viscoelastic Surfactant Breakers From In-Situ Oligomerization C. Daeffler, D. Perroni, S.M. Makarychev-mikhailov, A.L. Mirakyan, Schlumberger
Alternate	193579	A Novel Biochemical-Based Paraffin Wax Removal Program Providing Revenue Generation and Asset Enhancement K.H. Raney, K. Alibek, M.R. Shumway, K. Karathur, T. Stanislav, G. West, Locus Bio-Energy Solutions, LLC; M. Jacobs, Penneco Oil Company

Knowledge Sharing ePosters

Tuesday, 9 April 2019

Knowledge Sharing ePosters allow one-on-one interactions with presenters and opportunities to study a particular concept at an appropriate level of detail. Subject matter varies, but topics are consistent with the other technical sessions.

KS07 Knowledge Sharing ePoster VII | Exhibition Hall B - Station 1

Session Chairperson: Wei Wei, Chevron

Time	Paper #	Presentation
1000	193552	Out with the Old: Developing a New Methodology for Paraffin Wax Dispersion and Inhibition Testing A. Miller, R. Smith, B. Dufresne, A. Mahmoudkhani, Clariant
1015	193583	The Impact of H₂S on Carbonate Scaling Risk—A Field Case Study G. Verri Ness, K.S. Sorbie, Heriot-Watt University; N.C. Lugo, C. Kelly, Chevron North Sea Ltd

KS08 Knowledge Sharing ePoster VIII | Exhibition Hall B - Station 2

Session Chairperson: Yenny Christanti, Schlumberger

Time	Paper #	Presentation
1000	193595	Role of Surfactant Structures on Surfactant-Rock Adsorption in Various Rock Types D.F. Wilson, L.A. Poindexter, T. Nguyen, Sasol Performance Chemicals

KS09 Knowledge Sharing ePoster IX | Exhibition Hall B - Station 3

Session Chairperson: Stephen Haddon, BP America Inc

Time	Paper #	Presentation
1000	193574	Effect of Corrosion-Inhibitor Chemistry on the Viscosity and Corrosion Rate of VES-Based Acids A.M. Hanafy, H.A. Nasr-El-Din, Texas A&M University; A.I. Rabie, J. Zhou, Solvay
1015	193598	An Ounce of Prevention is Worth a Pound of Biofilm Mitigation O. Arends, Stepan Company; B.D. Seymour, Stepan Oilfield Solutions; B. Benko, Stepan Company; M.S. Elshahed, Oklahoma State University; L. Yakoweshen, Stepan Oilfield Solutions; S. Ganguly-Mink, Stepan Company

Knowledge Sharing ePosters

Tuesday, 9 April 2019

KS10 Knowledge Sharing ePoster X | Exhibition Hall B - Station 1

Session Chairperson: Julie Fidoe, Nalco Champion, An Ecolab Company

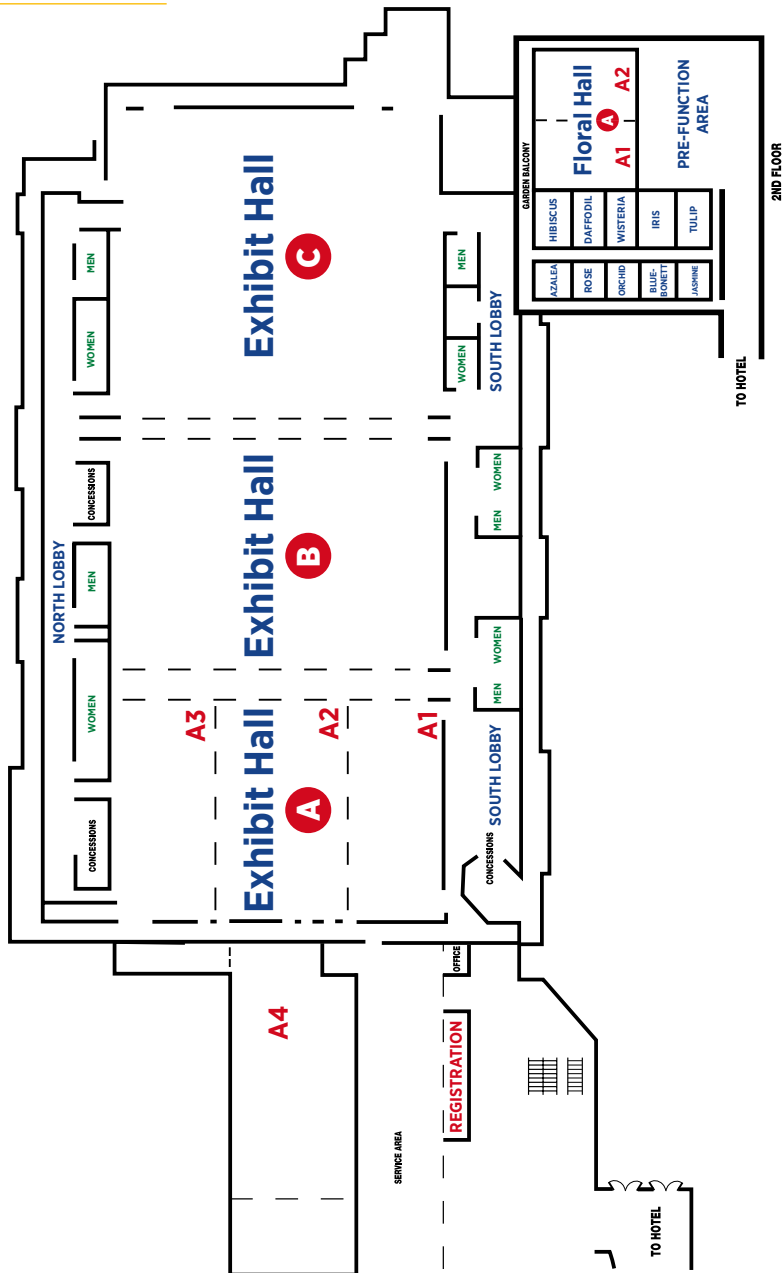
Time	Paper #	Presentation
1500	193584	A Placement Case Study for a Well in the North Sea Field A. Kaur, R. Stalker, G.M. Graham, Scaled Solutions Limited
1515	193558	Strategies for Squeezing Co-Mingled Wells in the Same Flow Line in Sub-Sea and Deepwater Environments—Guidelines for Scale Inhibitor Selection and Effective Treatment Strategies and Design S.M. Heath, D. Dugue, N.S. Gjosund, Baker Hughes, a GE company

KS11 Knowledge Sharing ePoster XI | Exhibition Hall B - Station 2

Session Chairperson: Yujun Feng, Sichuan University

Time	Paper #	Presentation
1500	193572	The Development and Field Test of High Efficient Foam Unloading Agent Based on Gemini Surfactant and Nanomaterials J. Wu, Sinopec Research Institute of Petroleum Exploration and Development; W. Jia, Sinopec Research Institute of Petroleum Engineering; R. Zhang, X. Cen, H. WANG, J. Niu, Sinopec Research Institute of Petroleum Exploration and Development
1515	193629	Reducing Backpressure and Enhancing Throughput of Saltwater Disposal Wells with Chlorine Dioxide and Complex Nano Fluids: Optimization and Case Studies R.W. Pagel, T. Tindall, QEP Resources; T. Pursley, T. Sweeney, Flotek; Z. Li, T. Lathrop, B. Sullivan, G.D. Simpson, Pureline Treatment Systems

Venue Floor Plan



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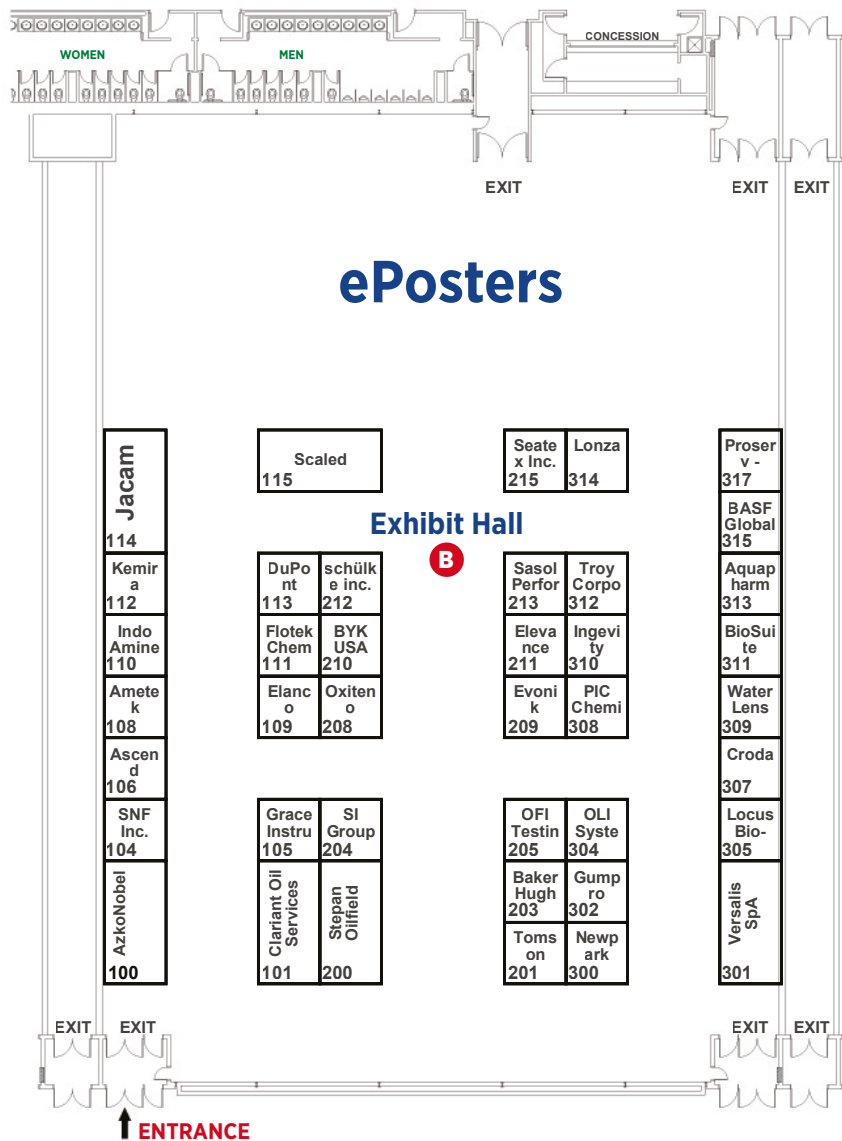
525 West Van Buren Street
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P: 312-659-6977
www.nouryon.com

OFI Testing Equipment, Inc. 205

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Exhibit Floor Plan



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