



TECHNICAL PROGRAM

38TH IEA-EOR WORKSHOP AND SYMPOSIUM 2017

26TH - 30TH SEPTEMBER, 2017 - RIVIERA MAYA, MEXICO

OPENING

TUESDAY 26TH

| | | |
|-------|---|-------|
| 17:00 | Executive Committee meeting | 19:00 |
| 19:00 | Opening and welcome remarks: IEA TCP, SENER, CNH | 19:35 |
| 19:35 | Chairman IEA EOR TCP speech concerning Colombia joining | 19:40 |
| 19:40 | Signing of IEA EOR TCP Amendment by Colombian representative | 19:50 |
| 19:50 | Colombian representative speech on Colombia joining IEA EOR TCP | 20:00 |

| | | |
|-------|------------|-------|
| 20:00 | Icebreaker | 20:30 |
| 20:30 | Dinner | 22:30 |

| | |
|----------|---|
| A | A: Studies of fluids and interfaces in porous media |
| B | B: Surfactants and polymers |
| C | C: Thermal Recovery |
| D | D: Gas flooding techniques |
| F | F: Emerging Technologies |
| S | S: EOR in Fractured Reservoirs |

| 08:00 | <Registration> | | | 08:35 |
|-------|----------------|---|--|---|
| 08:35 | B | <Experiences with Foam-Surfactant Chemical EOR Application in Naturally Fractured Reservoirs of Mexico: a Way Forward for Future> | Maghsood ABBASZADEH¹ Fernando RODRIGUEZ ¹ Antonio VILLAVICENCIO George HIRASAKI ² | 1: INNOVATIVE PETROTECH SOLUTIONS 2: RICE UNIVERSITY 09:00 |
| 09:00 | B | <Application of Polymers at High Temperature: Experimental Evaluation and Pilot Design> | Jaime JIMENEZ Alvaro VILLAR Jose ZAPATA | ECOPETROL 09:25 |
| 09:25 | B | <A look at a Polymer Flood Pilot Test in Petrocedaño> | Andrés HERNÁNDEZ Alberto BRITO Edgar VASQUEZ Liliana SUE | PDVSA 09:50 |
| 09:50 | B | <Chromatography Effects in Alkali Surfactant Polymer Flooding > | Markus LUEFTENEGGER Torsten CLEMENS | OMV 10:15 |
| 10:15 | B | <Mechanism Study on Chemical Enhanced Oil Recovery with Low Surfactant Concentration> | Jing TIAN Youyi ZHU Hong YUAN | RESEARCH INSTITUTE OF PETROLEUM EXPLORATION & DEVELOPMENT, CNPC 10:40 |
| 10:40 | <Break> | | | 11:00 |
| 11:00 | B | <Advanced selection guidelines for synthetic polymers for chemical recovery processes based on their shear and hardness tolerances - New insight> | Guillaume DUPUIS Nicolas GAILLARD | SNF FLOERGER 11:25 |
| 11:25 | B | <Studies on Movable Gel and ASP Hybrid Flooding Further EOR for Daqing Reservoir after Polymer Flooding > | Jian FAN Youyi ZHU | RESEARCH INSTITUTE OF PETROLEUM EXPLORATION AND DEVELOPMENT, CNPC 11:50 |
| 11:50 | B | <Colloidal Dispersion Gels (CDG) to Improve Volumetric Sweep Efficiency in Waterflooding Processes> | Gustavo MAYA Juan LEON Rubén CASTRO | ECOPETROL 12:15 |
| 12:15 | B | <Studies on a Hybrid of Foam and ASP Flooding EOR for a Complex Fault Block Sandstone Reservoir> | Youyi ZHU Yousong LUO Jian FAN | RESEARCH INSTITUTE OF PETROLEUM EXPLORATION AND DEVELOPMENT, CNPC 12:40 |
| 12:40 | <Lunch> | | | 14:10 |
| 14:10 | C | <Near Wellbore and Reservoir Effects in In-Situ Combustion> | Mario RODRIGUEZ ¹ Torsten CLEMENS ¹ Guenther GLATZ ² Anthony KOVSCEK ² | 1:OMV 2: STANFORD UNIVERSITY 14:35 |
| 14:35 | C | <An Optimization Algorithm For Evaluation of Crude Oil Combustion Kinetic Parameters> | Kuy KOH¹ Luiz BITTENCOURT ² Margot GERRITSEN ² Anthony KOVSCEK ² | 1: STANFORD UNIVERSITY AND PEMEX E&P 2: STANFORD UNIVERSITY 15:00 |
| 15:00 | C | <Field Case of SAGD Application in a Heavy Oil Reservoir: Senlac, Canada> | Eric DELAMAIDE | IFP TECHNOLOGIES (CANADA) INC 15:25 |
| 15:25 | C | <Thermal Evaluation, Selection Criteria and Design Wells, of the Area Subjected to Thermal Recovery Process with Cyclic Steam Injection, San Tomé District, Faja Petrolifera Del Orinoco Hugo Chavez F> | Jesus RODRIGUEZ, Francisco ARMAS Salvador SALAZAR Fidel ALVAREZ | PDVSA 15:50 |
| 15:50 | <Break> | | | 16:10 |

| | | | | | |
|-------|----------|---|---|---|-------|
| 16:10 | C | <In-Situ Upgrading: A Thermo-Catalytic Process of EOR and Oil Upgrading (Laboratory Case of a Naturally Fractured Reservoir of Heavy Oil: Tekel)> | Silvia CHÁVEZ ¹ Pedro PEREIRA ² | 1: PEMEX 2: UNIVERSITY OF CALGARY | 16:35 |
| 16:35 | D | <Improved utilization of APG through the miscible displacement process in reservoirs with gas cap> | <u>Vitaly KUNTSEVICH</u> Nikolay GLAVNOV Maiia VERSHINANA | GAZPROMNEFT | 17:00 |
| 17:00 | D | <Carbon dioxide saturated water injection for EOR in carbonate rocks> | <u>Mai SHIMOKAWARA</u> ^{1,2} Elakneswaran YOGARAJAH ¹ Toyoharu NAWA ¹ Satoru TAKAHASHI ² | 1: HOKKAIDO UNIVERSITY 2: JOGMEC | 17:25 |
| 17:25 | D | <Gas realization efficiency improvement from the group of field by miscible recycling gas injection > | <u>Nicolay GLAVNOV</u> Vladimir BABIN Vitaly KUNTCEVICH Artem PENIGIN | GAZPROMNEFT | 17:50 |
| 20:00 | | | <Dinner> | | 22:30 |

| 08:00 | | <Registration> | | | 08:35 |
|-------|---|--|--|---|-------|
| 08:35 | F | <A two phase simulation of gel injection with functionalized silica nanoparticles> | Bahador NAJAFIAZAR¹ Dag WESSEL-BERG Per BERGMO Ole TORSÆTER ¹ Torleif HOLT ² | 1: NTNU 2: SINTEF PETROLEUM RESEARCH | 09:00 |
| 09:00 | F | <Rapid and Cost-Efficient Investigations of EOR Processes Using Microfluidics Technologies> | Leonhard GANZER ¹ Jonas WEGNER ² Diethard KRATZER ³ | 1: TU CLAUSTRAL 2: HOT MICROFLUIDICS GMBH 3: HOT ENGINEERING GMBH | 09:25 |
| 09:25 | F | <Organic composition of calcite surfaces of North Sea Chalk samples and the effect on wettability and rock-fluid chemistry> | Karen Feilberg Dmytro MIHRIN Casper HOECK | TECHNICAL UNIVERSITY OF DENMARK | 09:50 |
| 09:50 | F | <Modeling additional oil recovery by low salinity designed composition water flooding in lab cores > | Manuel CORONADO Martín DIAZ Enrique SERRANO Ed WILSON José MITRE | INSTITUTO MEXICANO DEL PETRÓLEO | 10:15 |
| 10:15 | F | <Optimal salinity, a key parameter during surfactant formulation> | Benoit CRETON Claire MARLIERE | IFP ENERGIES NOUVELLES | 10:40 |
| 10:40 | | <Break> | | | 11:00 |
| 11:00 | F | <Recent updates on Smart Water injection strategies for optimized EOR in sandstone reservoirs> | Iván PIÑEREZ Haker ABDULLAH Tord BLEVIK Tina PUNTERVOLD Skule STRAND Tor AUSTAD | UNIVERSITY OF STAVANGER | 11:25 |
| 11:25 | F | <Prediction, Control and Validation of Rock Dissolution and its Impact on Smart Water Injection Performance in Carbonate Heavy Oil Reservoirs> | Heron GACHUZ ¹ Mehran SOHRABI ² | 1: PEMEX E&P 2: HERIOT WATT UNIVERSITY | 11:50 |
| 11:50 | F | <Effect of Cations on Adsorption of Oil Molecule onto Calcite Surface: Toward Improved Description of Low-Salinity EOR> | Yunfeng LIANG¹ Yoshihiro Masuda ¹ Yugo HYOTANI ² Kazuya KOBAYASHI ² Sumihiko MURATA ² Satoru TAKAHASHI ³ | 1: THE UNIVERSITY OF TOKYO 2: KYOTO UNIVERSITY 3: JOGMEC | 12:15 |
| 12:15 | F | <Combined Controlled Salinity Bio-surfactant Enhanced Oil Recovery in Carbonate Rocks> | Tinuola UDOH^{1,2} Lateef AKANJI ¹ Jan VINOGRADOV ¹ | 1: UNIVERSITY OF ABERDEEN 2: AKWA IBOM STATE UNIVERSITY | 12:40 |
| 12:40 | | <Lunch> | | | 14:10 |

| | | | | | |
|-------|---|--|--|--|-------|
| 14:10 | F | <Polymer Selection for High Salinity/High Temperature Carbonate Reservoirs> | <u>Robert FORTENBERRY</u> | ULTIMATE EOR SERVICES | 14:35 |
| 14:35 | F | <Surfactant Flooding of Heavy Oil> | <u>Petro NAKUTNY</u> Santhosh VEERABHADRAPPA Gay RENOUF | SASKATCHEWAN RESEARCH COUNCIL | 15:00 |
| 15:00 | F | <Artificial intelligence based on neuro-fuzzy algorithm for technical screening of enhanced oil recovery Techniques: A case study of Block T in offshore Angola> | <u>Geraldo RAMOS</u> ^{1,2,3,4} Lateef AKANJI ¹ | 1: UNIVERSITY OF ABERDEEN 2: SONANGOL EP 3: ACADEMIA SONANGOL 4: ISPTec - DET | 15:25 |
| 15:25 | F | <Enhancing oil recovery from dolomitic reservoirs- investigation of temperature limitations> | Tina PUNTERVOLD Skule STRAND Iván PIÑEREZ Paul HOPKINS Tor AUSTAD | UNIVERSITY OF STAVANGER | 15:50 |
| 15:50 | | <Break> | | | 16:10 |
| 16:10 | F | <Lab Scale Uncertainty Quantification Associated With Low Salinity Water Flooding> | Markus ZECHNER Anthony KOVSCEK | STANFORD UNIVERSITY | 16:35 |
| 16:35 | A | <Double displacement process project implementation planning and field test at Akal reservoir, Mexico> | Guadalupe LUNA Marcos TORRES Nemesio HERNÁNDEZ Pedro SÁNCHEZ | PEMEX | 17:00 |
| 17:00 | A | <CT-scan monitoring of combined chemical EOR processes in fractured carbonate cores> | <u>David ROUSSEAU</u> ¹ Elisabeth ROSENBERG ¹ Michel ROBIN ¹ Bernard BOURBIAUX ¹ Serge GAUTIER ¹ Max CHABERT ² Eloïse CHEVALIER ² | 1: IFP ENERGIES NOUVELLES 2: SOLVAY | 17:25 |
| 17:25 | A | <CT scanings of core floods: Quantitative analysis of saturation without dopant> | Amalia Yunita HALIM Anders Nymark CHRISTENSEN Sidsel Marie NIELSEN Erling Halfdan STENBY | TECHNICAL UNIVERSITY OF DENMARK | 17:50 |

| | | | | |
|-------|---|--|--|---|
| 08:00 | <Registration> | | | 08:35 |
| 08:35 | <Opening and welcome remarks: CNH, IEA TCP> | | | 08:50 |
| 08:50 | S | <Enhanced Oil Recovery Strategy in PEP> | <u>Miguel LOZADA</u> | PEMEX E&P 09:15 |
| 09:15 | S | <Five Years of Ecopetrol's EOR Program: Lessons and Findings> | <u>Rafael GUZMAN</u> Carlos CHAPARRO Rodrigo DALLE Carmen HINDS Jaime JIMENEZ Cesar PATIÑO Lexy QUINTERO Juan LEON Jose ZAPATA | ECOPETROL 09:40 |
| 09:40 | S | <Enhanced Oil Recovery (EOR) Context in Venezuela> | <u>Celia BEJARANO</u> Fernancelys RODRIGUEZ | PDVSA 10:05 |
| 10:05 | S | <Technologies and Experiences in Chemical EOR > | <u>David ROUSSEAU</u> | IFP ENERGIES NOUVELLES 10:30 |
| 10:30 | <Break> | | | 10:50 |
| 10:50 | S | <EOR on the Norwegian Continental Shelf - A screening of technical potential> | <u>Mariann DALLAND</u> | NORWEGIAN PETROLEUM DIRECTORATE 11:15 |
| 11:15 | S | <CO2 EOR Technology R&D Portfolio for Heterogenous Reservoirs> | <u>Hideharu YONEBAYSAHI</u> Tetsuro TOCHIKAWA | INPEX CORPORATION 11:40 |
| 11:40 | S | <CO2 Injection Considering Molecular Diffusion and Stress-Dependent Deformation in Tight Oil Reservoir> | <u>Kun S. LEE</u> Tae KIM Jinhyung CHO | HANYANG UNIVERSITY 12:05 |
| 12:05 | S | <CO2 Injection in Unconventional Reservoirs: Chicontepec Turbidites Case Study> | <u>Uriel SALAZAR</u> ¹ David SCHECHTER ² | 1: PEMEX E&P 2: TEXAS A&M UNIVERSITY 12:30 |
| 12:30 | <Lunch> | | | 14:00 |
| 14:00 | S | <CO2-Enriched Smart Water injection for oil Recovery from Water-Invaded Zones > | A. FARZANEH ¹ M. SOHRABI ¹ A. SISSON ¹ H. GACHUZ ² | 1: HERIOT-WATT UNIVERSITY 2: PEMEX 14:25 |
| 14:25 | S | <Super Critical CO2 and Steam co-injection Process for Deep Extra-Heavy Oil Reservoir> | <u>Guo ERPENG</u> | RESEARCH INSTITUTE OF PETROLEUM EXPLORATION AND DEVELOPMENT, CNPC 14:50 |
| 14:50 | S | <CO2-EOR Storage Projects in Mexico: The Key Element for CCUS Implementation> | <u>Jazmín MOTA</u> ¹ Herón GACHUZ ² Fernando RODRÍGUEZ ³ | 1: SENER 2: PEMEX 3: CONSULTANT 15:15 |
| 15:15 | S | <Measurement and Monitoring of CO2 Storage Associated with EOR in a Depleted Reef Complex> | <u>Neeraj GUPTA</u> ¹ Mark KELLEY ¹ Sanjay MAWALKAR ¹ Autumn HAAGSMA ¹ Lydia CUMMING ¹ Caitlin HOLLEY ¹ Robert MANNES ² | 1: BATELLE 2: CORE ENERGY, LLC 15:40 |
| 15:40 | S | <Towards successful CO2 flooding for tight oil reservoirs: assessing the critical interplay of lithological framework, mineralogy and geochemical fluid-rock interactions> | <u>Peng LUO</u> ¹ Sheng LI Petro NAKUTNYI ¹ | 1: SASKATCHEWAN RESEARCH COUNCIL 16:05 |
| 16:05 | S | <The U.S. Gas Flooding experience: CO2 Injection Strategies and Impact on Ultimate Recovery> | <u>Vanessa NUÑEZ</u> Seyyed HOSSEINI | THE UNIVERSITY OF TEXAS AT AUSTIN 16:30 |
| 16:30 | <Closing> | | | 17:00 |