

Final Agenda

Ninth Annual Meeting

Location:

ACES Building
201 East 24th Street
Austin, Texas 78712
512-471-7217
The University of Texas
at Austin

Joint Industry Research Consortium on Formation Evaluation

August 12, 13 & 14 (Wednesday, Thursday and Friday), 2009

Center for Petroleum and Geosystems Engineering
Department of Petroleum and Geosystems Engineering
The University of Texas at Austin

This year's annual technical meeting will be held on Thursday and Friday. Wednesday is optional and is intended for software demonstrations. We are scheduling an informal happy hour on Wednesday and a dinner event on Thursday evening consisting of a relaxing boat ride in the lower section of Lady Bird Johnson's Lake.

Wednesday, August 12

SOFTWARE DEMONSTRATIONS

AVAYA Auditorium, ACES Building (ACES 2.302, 201 East 24th Street | Austin, Texas 78712)

Live Software Demonstrations

- | | |
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| 8:30 AM | Continental breakfast |
| 9:00 AM | Welcome. Logistics and time table for software demonstrations. General description of software modules, status of codes and user-friendly interfaces: Carlos Torres-Verdín . |
| 9:45 AM | Break |
| 10:00 AM | Status and Live Demonstration of the Integrated Petrophysics and Well-Log Modeling Platform (<i>Common Stratigraphic Framework (CSF)</i> , or <i>UTAPWeLS</i>), Part I: Ben Voss and <i>Gbenga Alabi</i> . |
| 12:00 PM | Lunch |
| 1:00 PM | Status and Live Demonstration of the Integrated Petrophysics and Well-Log Modeling Platform (<i>Common Stratigraphic Framework (CSF)</i> , or <i>UTAPWeLS</i>), Part II: Ben Voss and <i>Gbenga Alabi</i> . |
| 3:00 PM | Break |
| 3:15 PM | Future Development Plans for the Integrated Petrophysics and Well-Log Modeling Platform (<i>Common Stratigraphic Framework (CSF)</i> , or <i>UTAPWeLS</i>), Part II: Ben Voss . |
| 3:45 PM | Update on the Pore-Level Petrophysics Toolbox (PLPT): Ben Voss , <i>Kanay Jerath</i> , and <i>Vahid Shabro</i> . |
| 4:45 PM | Software update on resistivity, sonic, nuclear modeling, formation-tester, and invasion modeling: Carlos Torres-Verdín . |
| 5:00 PM | Adjourn |



Informal happy-hour and hors d'œuvre event planned for this evening: AT&T Executive Education and Conference Center, 1900 University Avenue, Austin, Texas 78705



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Thursday, August 13

AVAYA Auditorium, ACES Building (ACES 2.302, 201 East 24th Street | Austin, Texas 78712)

INTRODUCTION

- 7:45 AM Continental breakfast.
- 8:15 AM Project update: consortium status, summary of projects, accomplishments, and deliverables: **Carlos Torres-Verdín**.
- 9:00 AM Software status and future developments: **Carlos Torres-Verdín**.
- 9:30 AM Break

TECHNICAL PRESENTATIONS (Part I)

Petrophysical Interpretation of Well Logs (Part I)

- 10:00 AM Common Stratigraphic Framework (CSF) to simulate and cross-validate static and dynamic petrophysical interpretations: **Ben Voss, Carlos Torres-Verdín, and Gbenga Alabi**.
- 10:30 AM Field examples of the Bayesian inversion of gamma-ray, density, and resistivity logs for the petrophysical appraisal of thinly-bedded clastic rock formations: **Jorge Sanchez-Ramirez, David Wolf, Carlos Torres-Verdín, Alberto Mendoza, and Gong Li Wang**.
- 11:00 AM Improving the assessment of residual hydrocarbon saturation with the combined quantitative interpretation of resistivity and nuclear logs: **Zoya Heidari, Carlos Torres-Verdín, Alberto Mendoza, Bill Preeg, and Gong Li Wang**.
- 11:30 AM Appraisal of dynamic petrophysical properties of water-bearing sands invaded with oil-base mud: **Zoya Heidari, Ali Moinfar, and Carlos Torres-Verdín**.
- 12:00 PM **Lunch recess:** catering service

Petrophysical Interpretation of Well Logs (Part II)

- 1:30 PM Time-lapse variations of multi-component electrical resistivity measurements acquired in high-angle wells: **Ali Moinfar, Robert Mallan, Carlos Torres-Verdín, and Renzo Angeles**.



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Thursday, August 13 (continued)

Petrophysical Interpretation of Well Logs (Part II cont.)

- 2:00 PM Joint radial inversion of resistivity and sonic logs to estimate in-situ petrophysical and elastic properties of rock formations: **Robert Mallan**, *Carlos Torres-Verdín*, *Gong Li Wang*, and *Jun Ma*.
- 2:30 PM Estimation of permeability with Bayesian inversion methods: **Chicheng Xu**, *David Wolf*, *Jorge Sanchez-Ramirez*, and *Carlos Torres-Verdín*.
- 3:00 PM Update on Bayesian inversion procedures for the estimation of petrophysical properties from well logs: **David Wolf**, *Jorge Sanchez-Ramirez*, *Chicheng Xu*, and *Carlos Torres-Verdín*.
- 3:30 PM Break
- 3:45 PM Comprehensive 1D, 2D, and 3D simulation of invasion in the presence of water- and oil-base muds: **Rooholah A. Pour**, *Kamy Sepehrmoori*, and *Carlos Torres-Verdín*.

Production Logging

- 4:15 PM Progress report on the numerical simulation of multi-phase fluid production measurements: **Amir Frooqnia**, *Kamy Sepehrmoori*, and *Carlos Torres-Verdín*.
- 4:45 PM Progress report on the fast numerical simulation of cased-hole nuclear measurements: **Jordan Mimoun**, *Bill Preeg*, *Carlos Torres-Verdín*, and *Alberto Mendoza*.
- 5:15 PM Adjourn
- 6:30 PM Boat ride and dinner: lower section of Lady Bird Johnson Lake (ending approximately at 9:30 PM).



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Friday, August 14

AVAYA Auditorium, ACES Building (ACES 2.302, 201 East 24th Street, Austin, TX 78712)

7:45 AM Continental Breakfast

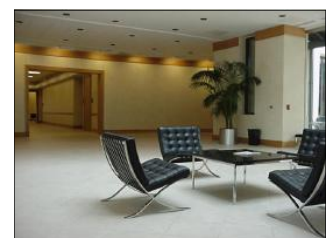
TECHNICAL PRESENTATIONS (Part II)

Pore-Scale Petrophysics

- 8:15 AM Pore-level study of grain-shape effects on petrophysical properties of porous media: **Guodong Jin** and **Carlos Torres-Verdín**.
- 8:45 AM New methods for the pore-level calculation of absolute and relative permeability: diffusive-advective finite-differences modeling at various Knudsen regimes and pore-level streamline modeling: **Vahid Shabro**, **Carlos Torres-Verdín**, **Farzam Javadpour**, and **Sergey Fomel**.
- 9:15 AM Progress report of nono-material probing of porous and permeable media: **Vahid Shabro**, **Farzam Javadpour**, **Carlos Torres-Verdín**, **Sergey Fomel**, and **Andrea Alu**.

Formation Testing

- 9:45 AM History matching of multiphase-flow formation-tester measurements acquired with focused-sampling probes in deviated wells: **Renzo Ángeles**, **Carlos Torres-Verdín**, **Kamy Sepehrnoori**, and **Hani Elshahawi**.
- 10:15 AM Break
- 10:30 AM Simulation of probe-type formation-tester measurements acquired in the presence of water- and oil-base muds: **Rooholah A. Pour**, **Kamy Sepehrnoori**, and **Carlos Torres-Verdín**.
- 11:00 AM Wireline and while-drilling formation-tester sampling with oval, focused, and conventional probe types in the presence of water- and oil-base mud-filtrate invasion in deviated wells: **Hamid Nishabori**, **Mark Proett**, **Carlos Torres-Verdín**, and **Kamy Sepehrnoori**.
- 11:30 AM Progress report on the fast streamline-based simulation of formation-tester measurements: **Hamid Nishabori**, **Carlos Torres-Verdín**, and **Kamy Sepehrnoori**.
- 12:00 PM **Lunch recess:** catering service.



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Friday, August 14 (continued)

Resistivity Logging

1:15 PM Self-adaptive *hp* finite-element simulation of multi-component induction measurements acquired in the presence of conductive and resistive mandrels: *M.J. Nam, David Pardo, and Carlos Torres-Verdín.*

Sonic Logging

1:45 PM 2D finite-difference numerical simulation of sonic measurements acquired in the presence of a mandrel tool: *Jun Ma and Carlos Torres-Verdín.*

2:15 PM 3D numerical simulation of borehole sonic measurements acquired in dipping, anisotropic, and invaded formations: *Robert Mallan, Jun Ma, and Carlos Torres-Verdín.*

2:45 PM 2D finite-element numerical simulation of sonic measurements acquired in the presence of a mandrel tool: *Pawel Matuszyk, David Pardo, Leszek Demkowicz, Carlos Torres-Verdín, and Jun Ma.*

3:15 PM Break

Nuclear Logging

3:30 PM Advances in the rapid simulation of neutron porosity measurements: *Olabode Ijasan, Alberto Mendoza, Carlos Torres-Verdín, and Bill Preeg.*

4:00 PM Inversion of sector-based LWD density measurements acquired in laminated sequences penetrated by high-angle and horizontal wells: *Alberto Mendoza, Carlos Torres-Verdín, Bill Preeg, John Rasmus., R. J. Radtke, and Ed Stockhausen.*

4:30 PM Rapid, interactive assessment of petrophysical and geometrical effects on density and neutron logs acquired in vertical and deviated wells: *Zoya Heidari, Carlos Torres-Verdín, Alberto Mendoza, Olabode Ijasan, and Bill Preeg.*

SUMMARY SESSION

4:45 PM Summary and final round-up discussions. Action items and conclusions: *Carlos Torres-Verdín.*

5:00 PM Adjourn

