

**32nd Annual GCSSEPM Foundation  
Bob F Perkins Research Conference  
2012**

**New Understanding of the Petroleum  
Systems of Continental Margins of  
the World**

**Houston, Texas, USA  
2 – 5 December 2012**

**ISBN: 978-1-62748-115-1  
ISSN: 1544-2462**

**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© (2012) by GCSSEPM  
All rights reserved.

Printed by Curran Associates, Inc. (2013)

For permission requests, please contact GCSSEPM  
at the address below.

GCSSEPM@gcssepm.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: 845-758-2634  
Email: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

## Table of Contents—Papers Listed by Session

---

### Session 1—Gulf of Mexico: Kurt Campion and Jory Pacht, Co-Chairmen

<i>North American Offshore Resource Potential and Operating Environment: Prize Versus Challenge Versus Cost</i> .....	1
Finnstrom, Erik	
<i>Mexico: State of the Exploration for Oil and Gas</i> .....	4
Guzmán, Alfredo E.	
<i>Straining at the Leash: Understanding the Full Potential of the Deep-Water, Subsalt Mad Dog Field, from Appraisal through Early Production</i> .....	25
Walker, Christopher; Belvedere, Paul; Petersen, Jennifer; Warrior, Shalina; Cunningham, Andrew; Clemenceau, George; Huenink, Christina; and Meltz, Robert	
<i>21st Century Atlantis—Incremental Knowledge from a Staged-Approach to Development, Illustrated by a Complex Deep-Water Field</i> .....	65
Mander, Joanna; d’Ablaing, Julie; Howie, John; Wells, Ken; Ramazanova, Rahila; Shepherd, David; and Lee, Cherie	
<i>Immediate and Postevent Effects of the K/Pg Boundary Chicxulub Impact on the Northern Gulf of Mexico</i> ....	96
Scott, Erik; Denne, Richard; Kaiser, James; and Eichkoff, David	
<i>Petroleum Geology of the Mississippi Canyon, Atwater Valley, Western Desoto Canyon, and Western Lloyd Areas, Northern Deep Gulf of Mexico: Traps, Reservoirs, and Their Timing</i> .....	110
Weimer, Paul and Bouroullec, Renaud	
<i>The Aspen Basin: A Case Study in the Integration of Biostratigraphy, Core Analysis, Depositional Models, and Production Data for the Purpose of Understanding Reservoir Architecture in a Deep-Water Sheet Sand System</i> .....	133
Wagner, J. B.; Rush, P. F.; Coryell, J.; Ragan, Gerald; and Morin, Ron	

<i>Initial Evaluation of Structural and Stratigraphic Compartmentalization in the Pony-Knotty Head Field, Green Canyon, Deep-Water Gulf of Mexico</i> .....	145
Kilsdonk, Bill and Handford, C. Robertson	
<i>Context, Challenges, and Future of Deep-Water Plays: An Overview</i> .....	181
Flinch, Joan	

### **Session 2—Australia/New Zealand: Richard Fillon and Art Saller, Co-Chairmen**

<i>Seismic Stratigraphy of the Reinga Basin, Northwest New Zealand: Tectonic and Petroleum Implications</i> ...	221
Bache, François; Stagpoole, Vaughan; and Sutherland, Rupert	
<i>Exploration of Contemporaneous Delta and Deep-Water Deposits: Berriasian Lower Barrow Group, Exmouth Plateau, North Carnarvon Basin, Australia</i> .....	253
Minken, Jon; Handford, C. Robertson; and Miller, Josh*	
<i>Characterization of Channels in the Mungaroo Formation, Exmouth Plateau, North Carnarvon Basin, Australia</i> .....	282
Minken, Jon and Miller, Josh*	

### **Session 3—South America: Paulo Otávio Gomes and Patricia Santogrossi, Co-Chairmen**

<i>Tectonic Reconstructions and Petroleum System Correlations in the Southern South Atlantic: Exploratory Analysis and the Search for a New Hydrocarbon Play</i> .....	306
Mohriak, Webster Ueipass; Mello, Marcio Rocha; Filho, Azambuja; and Chagas, Nilo	
<i>Main Trap Models of OGX's Oil Discovery from Albian/Cenomanian Carbonate Reservoirs—Cabo Frio High, Southern Campos Basin</i> .....	347
Silva, Osvaldo Braga; Santos, Paulo Ricardo; Caixeta, Leonardo Borges; Ribeiro, Carolina; and Barros, Paulo*	
<i>Work Flow for Geological Characterization and Modeling of the Albian Carbonate Reservoirs from Offshore Campos Basin, Brazil</i> .....	365
Blauth, Marcelo; de Faria, Rosane T.; Maul, Alexandre R.; Monteiro, Marcelo C.; Franco, Miguel P.; Carneiro, Sandra R.; R.; de Oliveira, Rildo M.; and Tibana, Paulo	

<i>Santonian-Campanian Channelized Systems of the Santos Basin, Brazil: Stratigraphic Framework and Reservoir Potential</i> .....	381
Michelton, Diogo; Marques, Edmundo; Figueiredo, Jorge; Ferraz, Heitor; and Barros, Paulo	
<i>Contrasting Tectonic-Sedimentary Styles of Deep-Water Systems—Campos Basin, Brazil</i> .....	397
Magalhães, Pierre and Fetter, Marcos	
<i>Turbidite Systems in the Campos Basin Oligo-Miocene and Miocene, Brazil</i> .....	410
Arienti, Luci M.; Santos, Viviane S. S. dos; Voelcker, Helga E.; Mucelini, Hilario; Gontijo, Rogério C.; and d’Avila, Roberto S. F.	
<i>Jubarte Field 3D Modeling Based on the Integration of Outcrop Analogs and Elastic Seismic Attributes</i> .....	429
Del Rey, Antonio Cosme; Falcone, Celia Maria Oliveira; da Silva, José Guilherme Rodrigues; Meira, Mateus Goés Castro; Zorzanelli, Isabella Barcelos; and Vieira, Roberto Adelar Bonora	
<i>An Active Petroleum System in Shallow Waters in Eastern Pará-Maranhão Offshore Basin, Brazilian Equatorial Atlantic Margin</i> .....	N/A
Figueiredo, Jorge; Baldi, Ronaldo; Sampol, Juliana; Fernandez, Bianca; Bastos, Albano; and Stumpf, Vernei	

#### **Session 4—Africa: Richard Fillon and Mike Mayall, Co-Chairmen**

<i>West Africa Presalt Exploration: Background and Perspective of the West African “Tupi” Myth</i> .....	460
Lottaroli, Fabio; Andreotti, Paolo; and Meciani, Lorenzo	
<i>Field-Scale Stratigraphy and Depositional Elements of a Slope Channel System and Implications for Reservoir Dynamics; A Case Study from the Angolan Margin</i> .....	469
Cobos, Luz Sophia; Mayall, Mike; Primmer, Tim; and Osvaldo, Rosa	
<i>Deep-Water Angola: Block 15/06: Technology and Ideas to Turn a Risky Challenge into an Exploration Success Case</i> .....	494
Mantovani, Marco; Barbieri Arnaldi, Paolo; Brajuca, Riccardo; Lottaroli, Fabio; Nolli, Vilia; and Spadini, Giacomo	

<i>Contrasting Depositional Styles on a Slope System and Their Control by Salt Tectonics: Through-Going Channels, Ponged Fans, and Mass Transport Complexes</i> .....	503
Jones, Gemma; Mayall, Mike; and Lonergan, Lidia	

**Session 4—Africa continued: Tony d’Agostino and Marek Kacwicz, Co-Chairmen**

<i>Offshore Southern Oman: New Insights into the Petroleum Potential of the Northeastern Margin of the Gulf of Aden</i> .....	534
Harker, Stuart	
<i>Evolution of a Pliocene Upper Slope Channel Complex Set, Giza Field, West Nile Delta, Egypt: Interaction of Sedimentation and Tectonics</i> .....	541
Butterworth, Peter and Verhaeghe, Jona	
<i>Review of Petroleum Systems and Hydrocarbon Plays of the Levant Margin, Offshore Israel</i> .....	573
Gardosh, Michael A.	

**Session 5—North America: Tony d’Agostino and Marek Kacwicz, Co-Chairmen**

<i>A Late Jurassic Play Fairway Beyond the Jeanne d’Arc Basin: New Insights for a Petroleum System in the Northern Flemish Pass Basin</i> .....	598
Cody, John; Hunter, David; Schwartz, Stephen; Marshall, Jonathan; Haynes, Simon; Gruschwitz, Kai; and McDonough, Michael	
<i>Thermal History Analysis of the Beaufort-Mackenzie Basin, Arctic Canada</i> .....	609
Issler, Dale; Reyes, Julito; Chen, Zhuoheng; Hu, Kezhen; Negulic, Eric; Grist, Alexander; Stasiuk, Lavern; and Goodarzi, Fari	
<i>Petroleum Systems and Seismic Expression of Exploration Plays, Canadian Arctic Margin, Beaufort Sea</i> ....	642
Emmet, Peter A.; Kumar, Naresh; Helwig, James A.; and Dinkelman, Menno	

## Session 6—Europe/Asia: Menno Dinkelman and Jory Pacht, Co-Chairmen

- Source to Sink Assessment of Oligocene to Pleistocene Sediment Supply in the Black Sea* ..... 664  
Maynard, James R.; Ardic, Can; and McAllister, Niall
- The “Sink” of the Danube River Basin: The Distal Danube Deep-Sea Fan* ..... 701  
Lericolais, Gilles; Bourget, Julien; Jorry, Stephan; Popescu, Irina; Abreu, Vitor; Jouannic, Gwénaél; and Bayon, Germain

## Session 7—General Topics: Menno Dinkelman and Jory Pacht, Co-Chairmen

- From Petroleum Systems Modeling to Fluid Prediction—A Story: Choosing the Right Kinetics may be the Wrong Thing to do* ..... 736  
Tschemy, Robert; Kacwicz, Marek; Katz, Barry J.; Curiale, Joe; Friberg, Lothar; and Arango, Irene
- Application of Geomechanics-Based Restoration in Structural Analysis along Passive Margin Settings—Deep-Water Niger Delta Example* ..... 737  
Banerjee, Subho and Muhuri, Sankar

## Poster Sessions

- Sequestration of Organic Matter in Marine Mud: Flume Experiments, Biogeochemistry, Mass Physical Properties, and 3D Modeling* ..... 761  
Bennett, Richard; Schieber, Juergen; Schimmelmann, Arndt; Hulbert, Matthew; Curry, Kenneth; Douglas, Jessica; Head, Andrew; and Curry, Ann
- Structure and Prospectivity of the Ceduna Delta—Deep-Water Fold-Thrust Belt Systems, Bight Basin, Australia* ..... 779  
MacDonald, Justin; Holford, Simon; and King, Rosalind

## Author Index