

# **SPE Tight Gas Completions Conference 2010**

**San Antonio, Texas, USA  
2-3 November 2010**

**ISBN: 978-1-61782-040-3**

**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© (2010) by the Society of Petroleum Engineers  
All rights reserved.

Printed by Curran Associates, Inc. (2011)

For permission requests, please contact the 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](mailto: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: 845-758-2634  
Email: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

# TABLE OF CONTENTS

<b>SPE 130255: Unique Hydrajet Tool Provides Cost Savings and Improved Performance in Placing Many Perforations and Proppant Fractures in Horizontal Wellbores</b> .....	1
<i>K. A. Van Gijtenbeek, J. B. Surjaatmadja, C. Heitman</i>	
<b>SPE 132541: Determining Production Casing and Tubing Size by Satisfying Completion: Stimulation and Production Requirements for Tight Gas Sand Reservoirs</b> .....	11
<i>Y. Wei, K. Cheng, X. Jin, B. Wu, S. A. Holditch</i>	
<b>SPE 133134: Shale Gas Horizontal Production Logging Measurements and Challenges</b> .....	24
<i>D. C. Heddleston, M. Haggarty</i>	
<b>SPE 133806: Returns Matching Reveals New Tools for Fracture/Reservoir Evaluation</b> .....	32
<i>R. D. Gdanski, D. D. Fulton, B. J. Johnson</i>	
<b>SPE 134966: Identifying the Optimum Wettability Conditions for the Near-Wellbore Region in Gas-Condensate Reservoirs</b> .....	48
<i>B. Zoghbi, M. M Fahes, H. Nasrabadi</i>	
<b>SPE 135268: Advances in Openhole Packer/Sleeve Completions Coupled With Multilaterals Provide Cost-Effective Solutions</b> .....	59
<i>C. Christopher Johnson, David W. Courrege</i>	
<b>SPE 135325: Estimation of Uncertainty in Microseismic Event Location Associated With Hydraulic Fracturing</b> .....	68
<i>A. F. Castano, C. H. Sondergeld, C. S. Rai</i>	
<b>SPE 136183: Engineering a Successful Fracture-Stimulation Treatment in the Eagle Ford Shale</b> .....	90
<i>N. A. Stegent, A. L. Wagner, J. Mullen, R. E. Borstmayer</i>	
<b>SPE 136338: In-Situ Closure Stress on Proppant in the Fracture: A Controversial New Thinking</b> .....	110
<i>P. A. Sookprasong</i>	
<b>SPE 136801: SMA Technology Extends the Useful Range of Nonceramic Proppants in the Eagle Ford Shale</b> .....	117
<i>N. A. Stegent, A. L. Wagner, M. Montes, A. Omsberg, K. M. Riley</i>	
<b>SPE 136807: A Novel Nondamaging Friction Reducer: Development and Successful Slickwater Frac Applications</b> .....	126
<i>H. Sun, R. F. Stevens, J. L. Cutler, B. Wood, R. S. Wheeler, Q. Qu</i>	
<b>SPE 136873: Evaluation of Stimulation Techniques Using Microseismic Mapping in the Eagle Ford Shale</b> .....	136
<i>Abhijeet Inamdar, Raj Malpani, Keith Atwood, Keith Brook, Abdunnaser Erwemi, Tolu Ogundare, Dave Purcell</i>	
<b>SPE 137126: An Integrated Single-Well Approach to Evaluating Completion Effectiveness and Reservoir Properties in the Wind Dancer Field</b> .....	147
<i>B. V. Cherian, A. O. Clausus, M. Dilli, D. Mata, J. C. Stichler, S. Alatrach, J. L. Neumiller, M. L. Panjaitan</i>	
<b>SPE 137136: Enhancing Well Productivity in a Tight-Gas Formation With an Aqueous-Based, Surface-Modification Agent: Laboratory Study</b> .....	155
<i>P. D. Nguyen, J. D. Weaver</i>	
<b>SPE 137441: Cement Technology Improves Fracture Initiation and Leads to Successful Treatments in the Eagle Ford Shale</b> .....	168
<i>N. A. Stegent, L. M. Leotaud, W. Prospere, C. P. Veillette</i>	
<b>SPE 137515: Experimental Investigations of Hydraulic Fracture Growth Complexity in Slickwater Fracturing Treatments</b> .....	185
<i>Y. Wang, J. L. Miskimins</i>	
<b>SPE 137642: Application of CT-Conveyed Perforating With the Sand Jetting Technology on North Sea Deep Horizontal Tight Gas Producer</b> .....	201
<i>R. Fryzowicz, R. Naughton-Rumbo, E. Schrama</i>	
<b>SPE 137709: Reserves Management: A Concerted Effort</b> .....	218
<i>Nathan McMahan, Efren Munoz</i>	
<b>SPE 137996: Improving Well Completion via Real-Time Microseismic Monitoring: A West Texas Case Study</b> .....	237
<i>E. A. Ejojodomi, M. E. Yates, R. Downie, T. Itibrout, O. A. Catoi</i>	
<b>SPE 138277: Survey of over 1000 Frac Stage Database with Net Pressure in the Barnett Shale. Part 1</b> .....	251
<i>Lyle V. Lehman, R. F. Shelley, Koras Shah</i>	
<b>SPE 138319: Ultra-Lightweight Proppants in Shale Gas Fracturing</b> .....	265
<i>A. Gaurav, E. K. Dao, K. K. Mohanty</i>	

<b>SPE 138322: Frac Sleeves: Is Milling Them Out Worth the Trouble?</b> .....	278
<i>G. Wozniak</i>	
<b>SPE 138412: Application of J-Functions to Prepare a Consistent Tight Gas Reservoir Simulation Model: Bossier Field</b> .....	288
<i>A. Rojas</i>	
<b>SPE 138423: Evaluating the Production Potential of Hydraulically Fractured Horizontal Completions Using Engineering and Data-Driven Modeling Techniques</b> .....	296
<i>R. F. Shelley, B. Dzubin, K. Shah</i>	
<b>SPE 138425: Improving Production in the Eagle Ford Shale with Fracture Modeling, Increased Conductivity and Optimized Stage and Cluster Spacing Along the Horizontal Wellbore</b> .....	310
<i>Lucas W. Bazan, Sam D. Larkin, Michael G. Lattibeaudiere, Terry T. Palisch</i>	
<b>SPE 138427: Unlocking the Shale Mystery: How Lateral Measurements and Well Placement Impact Completions and Resultant Production</b> .....	333
<i>J. D. Baihly, R. Malpani, C. Edwards, S. Y. Han, J. C. L. Kok, E. M. Tollefsen, C. W. Wheeler</i>	
<b>SPE 138438: The Significance of Accurate Well Placement in the Shale Gas Plays</b> .....	348
<i>J. C. L. Kok, B. Moon, S. Y. Han, E. M. Tollefsen, J. D. Baihly, R. Malpani</i>	
<b>SPE 138441: Microseismic Mapping of Laboratory-Induced Hydraulic Fractures in Anisotropic Reservoirs</b> .....	355
<i>Y. Chitrana, C. Moreno, C. H. Sondergeld, C. S. Rai</i>	
<b>SPE 138442: Natural Gas Lift Method for Wellbores With Multiple Open Formations</b> .....	374
<i>A. Rodriguez, R. Schott</i>	
<b>SPE 138445: Tight Gas Multi-stage Horizontal Completion Technology in the Granite Wash</b> .....	393
<i>W. M. Jason Edwards, Daniel K. Braxton, Vince Smith</i>	
<b>SPE 138446: Lessons Learned Developing the Eagle Ford Shale</b> .....	402
<i>J. Mullen, J. C. Lowry, K. C. Nwabuoku</i>	
<b>SPE 138447: Shale Gas Plays: A Performance Perspective</b> .....	416
<i>R. P. Sutton, S. A. Cox, R. D. Barree</i>	
<b>SPE 138488: Wellhead Compression on Tight Gas Wells in the Long Run: A Follow-Up Case History on Seven Years of Success in Lobo</b> .....	428
<i>L. K. Harms</i>	
<b>Author Index</b>	