

Curriculum Vitae

Boyun Guo

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EDUCATIONAL BACKGROUND

- Ph.D. Petroleum Engineering, New Mexico Institute of Mining and Technology, Socorro, NM, 1992
M.S. Petroleum Engineering, Montana College of Mineral Science and Technology, Butte, MT, 1989
B.S. Engineering, Daqing Petroleum Institute, Anda, Heilongjiang, P. R. China, 1982

EMPLOYMENT HISTORY

- 2000-19 University of Louisiana at Lafayette, Lafayette, LA –Professor and Graduate Coordinator in Petroleum Engineering. Director of Center for Optimization of Petroleum Systems (COPS). Courses Taught: Well Design and Well Control, Drilling Engineering, Petroleum Production Engineering, Natural Gas Engineering, Petroleum Engineering Computer Applications, Horizontal Well Engineering, Formation Damage Control, Drilling Optimization, Advanced Petroleum Production Systems and Optimization, Advance Mass Transfer in Porous Media, Special Design Problems, and Undergraduate Research. Research Interests: 1) Underbalanced Drilling, 2) Development of Unconventional Reservoirs, and 3) Hydrocarbon Production Optimization.
- 1998-00 Edinburgh Petroleum Services Americas, Inc., Houston, TX – Senior Petroleum Engineer and TechTEAM Leader. Major Responsibility: Providing technical services in the areas of production optimization, well test design and analyses, and flow assurance analyses. Software Development Involvements: WellFlo, FieldFlo, Dynalift, PanSystem, PanMesh, ReO.
- 1994-98 Petroleum Recovery Research Center (PRRC), New Mexico Institute of Mining and Technology, Socorro, NM - Senior Research Associate. Research Conducted: Oil production improvement from complex reservoirs (naturally fractured reservoir, low permeability reservoir, low pressure reservoir), Flow modeling, CO₂ flooding process, and mechanism of oil recovery in low interfacial tension systems.
- 1992-94 Petroleum Engineering Department, New Mexico Institute of Mining and Technology, Socorro, NM - Visiting Assistant Professor. Courses Taught: Well Design, Production Engineering, Production Engineering Design, Engineering Mechanics, Advanced Strength of Materials, Vibrations in an Elastic Continuum, Engineering Design Clinics. Research and Technology Development: Flow of lightened fluids (air, aerated mud, and foam), and drill bit dynamics.
- 1989-92 Petroleum Engineering Department, New Mexico Institute of Mining and Technology, Socorro, NM - Research Assistant. Research and Technology Development: Gas hydrates decomposition and its mathematical modeling, water/gas coning phenomena and control, and 3-dimensional well drilling.
- 1988-89 Petroleum Engineering Department, Montana College of Mineral Science and Technology, Butte, MT - Research Assistant. Research Conducted: Probability of well bore interference.
- 1982-88 The Second Drilling Company, Daqing Petroleum Administrative Bureau, Daqing, Heilongjiang, P.R. China - Petroleum Engineer. Designed and supervised drilling operations for over 100 high-pressure and high-temperature wells.

AWARDS RECEIVED

- The Distinguished Faculty Award, New Mexico Institute of Mining and Technology, USA, 1993.
- Outstanding Technical Editor Awards, Society of Petroleum Engineers (SPE), 2000 and 2009.
- Awards for the Exceptional Support to the Flight Projects Directorate of NASA's Marshall Space Flight Center, 2003 and 2004.
- The 2008 Teacher of the Year Award, UL Lafayette College of Engineering, 2008.
- Award for the Distinguished Contributions to the Petroleum Engineering in the Area of Production and Operations, SPE Central/Southeastern North America Region, 2009.
- Distinguished Achievement Award for Petroleum Engineering Faculty, SPE Eastern Region, 2012.
- Researcher of the Year Award, UL Lafayette College of Engineering, 2016.
- Distinguished Professor, UL Lafayette, 2017.

PROFESSIONAL ACTIVITIES

- *Journal of Natural Gas Engineering* Editorial Board member.
- Associate Editor for *Journal of Natural Gas Science & Engineering*: Evaluation of technical papers based on reviewer's comments.
- Technical Editor for *SPE Drilling & Completion Journal*: Review technical papers.
- Technical Editor for *Journal of Petroleum Science and Engineering*: Review technical papers.
- Technical Editor for *Journal of Energy Resources Technology*: Review technical papers.
- Technical Editor for *Journal of Canadian Petroleum Technology*: Review technical papers.
- Member of IADC Publications Committee.

PATENTS

- US Patent No. 5473904: Method and Apparatus for Generating, Transporting and Dissociating Gas Hydrates.
- US Patent pending EFS ID 31417983: Harvesting Natural Gas from Seafloor Gas Hydrates Using Moving Riser Method.
- China Patent No. 201010245400: A New Design of Annular Flow Diverging Joint (FDJ) and Calculation Method for Gas Drilling.
- China Patent No. 201410605630: A technique for manufacturing drill bits for rotary jet pumps for reverse circulation drilling with the dual-wall drill pipe.
- China Patent No. 201410605684: A technique for manufacturing drill bits for tangential-feed rotary jet pumps for reverse circulation drilling with the dual-wall drill pipe.
- China Patent No. 201410605713: A technique for manufacturing jet-drill-bits for horizontal drilling.
- China Patent No. 201410605681: A technique for manufacturing jet-pump-bits for reverse circulation drilling with the dual-wall drill pipe.
- China Patent No. 201310654747: A technique for manufacturing high-efficiency safe mud-drill jet-bits for horizontal drilling.

- China Patent No. 201310654718: A technique for manufacturing high-efficiency safe gas-drill jet-bits for horizontal drilling.

PUBLICATIONS

Peer-Reviewed Journal Papers

1. Gao Li, Boyun Guo, Jun Li, and Ming Wang. 2018. A Mathematical Model for Predicting Long-Term Productivity of Modern Multifractured Shale Gas/Oil Wells. SPE-194495-PA. *SPE Drilling and Completion Journal*, Vol. 34, Issue 01 (March 2019).
2. Xuejun Hou, Boyun Guo, and Xiaohui Zhang. 2019. Mathematical Modeling of Fluid Flow to Unconventional Oil Wells with Radial Fractures and Its Testing with Field Data. *Journal of Energy Resources Technology* (Online Feb. 4, 2019). JERT-18-1579. doi: 10.1115/1.4042714
3. Chengli Zhang, Peng Wang, Boyun Guo, Guoling Song. 2018. Analytical modeling of productivity of multi-fractured shale gas wells under pseudo-steady flow conditions. *Energy Science & Engineering*: 2018; 6: 819–827. DOI: 10.1002/ese3.258
4. Yi Feng, Gao Li, Yingfeng Meng, and Boyun Guo. A Novel Approach to Investigating Transport of Lost Circulation Materials in Rough Fracture, *Energies* 2018, 11(10), 2572; <https://doi.org/10.3390/en11102572>.
5. Guo, B., Shan, L., Jiang, S., Li, G., and Lee, J. The Maximum Permissible Fracturing Pressure in Shale Gas Wells for Wellbore Cement Sheath Integrity, *Journal of Natural Gas Science and Engineering*, 56 (2018) 324-332
6. Guo, B. and Shan, L. Heat Transfer in Counter-Current Two Phase Flow Applied to Feasibility Study of Harvesting Natural Gas from Seabed Hydrates, *International Journal of Heat and Mass Transfer*, 126 (2018) 603-612.
7. Shan, L., Guo, B., Weng, D., Liu, Z., and Chu, H. Posteriori Assessment of Fracturing Propagation in Re-fractured Vertical Oil Wells by Pressure Transient Analysis, *Journal of Petroleum Science and Engineering* (2018), PETROL12431.
8. Cai, X., Guo, B., Lee, J., and Li, B. A semi-analytical model for predicting screen-out in hydraulic fracturing horizontal wells, *Journal of Natural Gas Science and Engineering*, 52 (2018) 117–127.
9. Wang, G. Du, H. and Guo, B. Determination of Viscosity and Wall Slip Behavior of a Polymer-Gel Used for Leakage Control From Couette Viscometry Data, *J. Energy Resour. Technol* 140(3), 032910 (March 2018), doi: 10.1115/1.4038384.
10. Li, J., Cao, L., Guo, B. and Zhang, X. Prediction of productivity of high energy gas-fractured oil wells, *Journal of Petroleum Science and Engineering*, 160 (2018) 510-518.
11. Shan, L., Cao, L., Guo, B., Identification of flow units using the joint of WT and LSSVM based on FZI in a heterogeneous carbonate reservoir, *Journal of Petroleum Science and Engineering* (2017), doi: 10.1016/j.petrol.2017.11.015.
12. Shi, Y., Guo, B., Guan, Z., Xu, Y, and Zhang, B. 2017. Influence of the initial loaded state on the stress distribution of a wellbore system, *Journal of Petroleum Science and Engineering*, 157 (2017) 547-557.
13. Boyun Guo, Na Wei, Jinze Song, and Jim Lee. 2017. Prediction of the Maximum Allowable Bottom Hole Pressure in CO₂ Injection Wells, *Journal of Petroleum Science and Engineering*, Vol. 156, July 2017, Pages 575–581.
14. Boyun Guo, Jun Li, Jinze Song, and Gao Li. 2017. Mathematical modeling of heat transfer in counter-current multiphase flow found in gas-drilling systems with formation fluid influx, *Journal of Petroleum Science* (May 2017). DOI 10.1007/s12182-017-0164-3.
15. Feng, F., Wang, X, Guo, B. and Ai, C. 2017. Mathematical model of fracture complexity indicator in multistage hydraulic fracturing, *Journal of Natural Gas Science and Engineering*, 38 (2017) 39-49.
16. Xiao Cai and Boyun Guo, 2017. Semi Analytical Model for Predicting Screenout in Hydraulic Fracturing in Vertical Wells, *Journal of Natural Gas Engineering* (June, 2017), Vol. 2, No. 1, 1-19.
17. Li, B., Li, H., Guo, B., Cai, X., and Konggidinata, M.I. 2017. A New Numerical Solution to Predict the Temperature Profile of Gas-Hydrate-Well Drilling. *SPE Journal* (February 2017). SPE-185177-PA <http://dx.doi.org/10.2118/185177-PA>.

18. Boyun Guo, Gao Li, Jinze Song, and Jun Li. 2017. A feasibility study of gas-lift drilling in unconventional tight oil and gas reservoirs, *Journal of Natural Gas Science and Engineering*, 37 (Jan. 2017), 551–559.
19. Boyun Guo, Gao Li, and Jinze Song, 2016. An Analytical Thermal-Model for Optimization of Gas-Drilling in Unconventional Tight-Sand Reservoirs, *Journal of Sustainable Energy Engineering* (Dec 2016), Vol. 2, No. 2, 108-126.
20. Boyun Guo and Jinze Song, 2016. An Improved Model for Predicting Fluid Temperature in Deep Wells, *Mathematical Modelling in Engineering Applications* (October 2016), Vol. 1, No. 1, 20-25.
21. Xuyue Chen, Deli Gao, Boyun Guo, and Yongcun Feng, 2016. Real-time optimization of drilling parameters based on mechanical specific energy for rotating drilling with positive displacement motor in the hard formation, *Journal of Natural Gas Science and Engineering*, 35 (Sept. 2016), pp 686-694.
22. Xuyue Chen, Deli Gao, and Boyun Guo, 2016. A Method for Optimizing Jet-Mill-Bit Hydraulics in Horizontal Drilling, *SPE Journal* (April 2016), pp 16-22.
23. Zheng Zhang and Boyun Guo. 2016. An Experimental Investigation of the Critical Flowback Velocity in Hydraulic-Fracturing Shale Gas Wells with Sand as Proppant, *Hydraulic Fracturing Journal*, Vol. 3, No 2, 2016, pp 76-80.
24. Liqun Shan, Boyun Guo, and Xiao Cai, 2016, Development of an Analytical Model for Predicting the Fluid Temperature Profile in Drilling Gas Hydrates Reservoirs, *Journal of Sustainable Energy Engineering*, Volume 3, Number 3, February 2016, pp. 254-269(16).
25. Zheng Zhang and Boyun Guo. 2016. The Critical Flow back Velocity in Hydraulic-Fracturing Shale Gas Wells, *Int. Journal of Engineering Research and Applications*, Vol. 6, Issue 2, (Part - 6) February 2016, pp. 7-11.
26. Ben Li, Boyun Guo, Hui Li, Yucai Shi. 2015. An Analytical Solution to Simulate the Effect of Cement/Formation Stiffness on Well Integrity Evaluation in Carbon Sequestration Projects, *Journal of Natural Gas Science & Engineering*, 27, 1092-1099.
27. Ben Li, Boyun Guo, Hui Li, Yin Feng and Jim Lee. 2015. Leak Risk Assessment for Plugged Wells in Carbon Sequestration Projects, *Journal of Sustainable Energy Engineering* Vol. 3, No. 1, 44-65.
28. Ben Li, Boyun Guo, Hui Li, and Yuanlong Zhou. 2015. Well Degradation Assessment and Leakage Risk Prediction in a Carbon Sequestration Project Using Neural Networks, *Journal of Sustainable Energy Engineering*, Vol. 2, No. 4, pp. 331-349(19).
29. Yucai Shi, Ben Li, Boyun Guo, Zhichuan Guan, Hui Li. 2015. An Analytical Solution to Stress State of Casing-Cement Sheath-Formation System with the Consideration of Its Initial loaded State and Wellbore Temperature Variation, *International Journal of Emerging Technology and Advanced Engineering*, Volume 5, Issue 1 (Jan. 2015), pp59-65.
30. Jun Li, Boyun Guo, and Ben Li. 2015. A closed form mathematical model for predicting gas temperature in gas-drilling unconventional tight reservoirs,” *Journal of Natural Gas Science and Engineering*, 2, 284-289.
31. Boyun Guo, Jinze Song, and David O. Ugwu: “An Experimental Investigation of the Critical Flowback Velocity in Hydraulic-Fracturing Shale Gas Wells,” *Hydraulic Fracturing Journal* (Jan 2015), Vol. 2 (1), 19-25.
32. Xiaohui Zhang and Boyun Guo. “A Review of CO₂ Behavior During Geological Storage and Leakage Assessment,” *International Journal of Recent Development in Engineering and Technology* (October, 2014), Vol. 3 (4), 14-23.
33. Xuyue Chen, Deli Gao, Boyun Guo, Limin Luo, Xiaobo Liu, and Xin Zhang: “A new method for determining the minimum gas injection rate required for hole cleaning in horizontal gas drilling.” *Journal of Natural Gas Science and Engineering*, 21 (2014), 1084-1090.
34. Jun Li, Boyun Guo, Shunji Yang, and Gonghui Liu: “The Complexity of Thermal Effect on Rock Failure in Gas-Drilling Shale Gas Wells,” *Journal of Natural Gas Science and Engineering*, Vol. 21 (Sept 2014), 255-259.
35. Boyun Guo, Jia Shan, and Yin Feng: “Productivity of Blast-Fractured Wells in Liquid-Rich Shale Gas Formations,” *Journal of Natural Gas Science and Engineering* (April 14, 2014). 18C, pp. 360-367. DOI: 10.1016/j.jngse.2014.03.018.
36. Jun Li, Rui Pan, Boyun Guo, and Jia Shan: “Thermal Stability of Brine Foams for Shale Gas Drilling,” *Journal of Natural Gas Science and Engineering* (March 2014), Vol. 17. 131-135.
37. Hongyun Zhang, Deli Gao, Saeed Salehi, and Boyun Guo. 2014. Effect of Fluid Temperature on Rock Failure in Borehole Drilling, *ASCE Journal of Engineering Mechanics*, Vol. 140, No. 1, 82-90.

38. Boyun Guo and Deli Gao: "The Significance of Fracture Face Matrix Damage to the Productivity of Fractured Wells in Shale Gas Reservoirs," *Petroleum Science and Technology*, 32:1-9, 2014. DOI: 10.1080/10916466.2011.585365.
39. Jia Li, Boyun Guo, and Yin Feng: "An Analytical Solution of Fracture-Induced Stress and Its Application in Shale Gas Exploitation," *Journal of Energy Resources Technology*, Vol. 136(2), 023102 (Nov. 26, 2013), doi:10.1115/1.4025714.
40. Boyun Guo and Deli Gao: "New Development of Theories in Gas Drilling," *Petroleum Science*, Springer, December 2013, 10 (4): 507-514. DOI: 10.1007/s12182-013-0302-5.
41. Ling, K., Wu, X., Guo, B. and He, J.: "A New Method to Estimate the Surface Separators Optimum Operating Pressures," *SPE Oil and Gas Facilities Journal* (June 2013), Vol. 2, No. 3.
42. Li, J., Guo, B., Liu, G., and Liu, W.: "The Optimum Range of Nitrogen Injection Rate in Shale Gas Well Drilling," *SPE Drilling & Completion* (March 2013), Vol. 28, No. 1.
43. Li, J., Guo, B., and Ling, K.: "Flow Diverting for Reducing Wellbore Erosion in Gas-Drilling Shale Gas Wells," *Journal of Energy Resources Technology* (May 24, 2013), Vol. 135, No. 3.
44. Ling, K., Guo, B. and Zhang, H.: "Numerical Simulation of Transient Flow in a Gas Pipeline and Tank," *SPE Oil and Gas Facilities Journal* (Dec. 2012).
45. Li, J., Yang, S., Guo, B., Feng, Y., and Liu, G.: "Distribution of the Sizes of Rock Cuttings in Gas Drilling," *CMES*, Vol. 2340, No.1, pp.1-18, 2012.
46. Liu, C., Zhang, N., and Guo, B.: "Experimental Investigations of Heavy-Foam Properties for Offshore Drilling," *Russian Oil and Gas Technology* (September 2012), No. 9, 21-26.
47. Li, J., Guo, B., Gao, D., and Ai, C.: "The Effect of Fracture Face Matrix Damage on Productivity of Fractures with Infinite and Finite Conductivities in Shale Gas Reservoirs," *SPE Drilling & Completion* (September 2012), Vol. 27, No. 3.
48. Li, J., Liu, G., and Guo, B.: "Pilot Test Shows Promising Technology for Gas Drill," *JPT* (July 2012).
49. Tabatabaei, M, Ghalambor, A., and Guo, B.: "An Analytical Solution for Water Coning in Vertical Wells," *SPE Production & Operations* (May 2012), Vol. 27, No. 2.
50. Daneshy, A., Guo, B., Krasnov, V., and Zimin, S.: "ICD Design: Revisiting Objectives and Techniques," *SPE Production & Operations* (February 2012), Vol. 27, No. 1.
51. Guo, B., Gao, D., Ai, C., and Qu, J.: "Critical Oil Rate and Well Productivity in Cold Production from Heavy-Oil Reservoirs," *SPE Production & Operations* (February 2012), Vol. 27, No. 1.
52. Zhang, H, Zhang, H., Guo, B., and Gang, M.: "Analytical and Numerical Modeling Reveals the Mechanism of Rock Failure in Gas UBD," *Journal of Natural Gas Science and Engineering* (January 2012), Vol. 4, 29-34.
53. Guo, B. and Gao, D.: "A New Analytical Well Model for Characterizing Shale Gas Reservoirs," *Russian Oil and Gas Technology* (January 2012), No. 1, 55-62.
54. Guo, B., Zhang, H., and Gang, M.: "Effect of Low Fluid Temperature on Rock Failure," *Russian Oil and Gas Technology* (May 2011), No. 5, 22-27.
55. Sun, K., Guo, B., and Saputelli, L.: "Multinode Intelligent-Well Technology for Active Inflow Control in Horizontal Wells," *SPE Drilling & Completion* (September 2011), Vol. 26, 3.
56. Guo, B.: "Corrections to Horizontal Drainhole Productivity Equations for Wellbore Friction Effect," *Journal of Petroleum Science and Engineering* (January 2010), Vol. 70, 3-4, pp 344-349.
57. Guo, B., Yu, X., and Khoshghadam, M.: "A Simple and Accurate Mathematical Model for Predicting Productivity of Multifractured Horizontal Wells," *SPE Reservoir Evaluation & Engineering Journal* (December 2009). Vol. 12, No. 6.
58. Ai, C., Zhao, W. and Guo, B.: "Casing Collapse-Strength Reduction Under Lateral Loads From Yielding Shales in the Daqing Oilfield," *SPE Drilling & Completion Journal* (December 2008).
59. Guo, B., Ling, K., and Ghalambor, A.: "A Rigorous Composite-IPR Model for Multilateral Wells," *SPE Production & Operations Journal* (May 2008).
60. Fang, Q, Guo, B., and Ghalambor, A.: "Formation of Underwater Cuttings Piles in Offshore Drilling," *SPE Drilling & Completion Journal* (March 2008).
61. Guo, B., Al-bemani, A.S. and Ghalambor, A.: "Improvement in Sachdeva's Multiphase Choke Flow Model Using Field Data," *Journal of Canadian Petroleum Technology* (May 2007).
62. Guo, B. and Ghalambor, A.: "Characterization and Analysis of Pressure Instability in Aerated Liquid Drilling," *Journal of Canadian Petroleum Technology* (July 2006).

63. Wang, X., Guo, B., and Ghalambor, A.: "2nd and 3rd-Order Finite Difference Methods with Counter-Error Formulations for Solving the Convection-Diffusion Equation," *Polish Academy of Sciences—Archives of Mining Sciences*, 51, No. 1, 2006.
64. Sun, K., Guo, B. and Ghalambor, A.: "An Analytical Solution for Aerated Mud and Foam Drilling Hydraulics in Deviated Holes," *Journal of Canadian Petroleum Technology* (March, 2006).
65. Guo, B., Ghalambor, A., and Xu, C.: "A Systematic Approach to Predicting Liquid Loading in Gas Wells," *SPE Production & Operations Journal* (February, 2006).
66. Guo, B., Duan S., and Ghalambor, A.: "A Simple Model for Predicting Heat Loss and Temperature Profiles in Insulated Pipelines," *SPE Production & Operations Journal* (February 2006).
67. Guo, B., Holder, D.W, and Tester, J.: "Two-Phase Oxidizing Flow in a Volatile Removal Assembly Reactor under Microgravity Conditions," *American Institute of Aeronautics and Astronautics Journal* (December 2005).
68. Sun, K., Samuel, R. and Guo, B.: "Effect of Stress Concentration Factors due to Corrosion on Production String Design," *SPE Production & Facilities Journal* (Nov. 2005).
69. Guo, B. and Wang, X.: "Testing of New High-Order Finite Difference Methods for Solving Convection-Diffusion Equation," *E-Journal of Reservoir Engineering* (October, 2005).
70. Guo, B.: "Analytical Solutions for Steady and Transient Temperatures in Oil Pipelines," *Journal of Petroleum Science & Technology* (March 2005) 23, 307-325.
71. Guo, B., Holder, D.W, and Schechter, D.S.: "Mathematical Modeling of Wastewater Oxidation under Microgravity Conditions," *American Journal of Applied Science* (Feb. 2005), 2, No. 2.
72. Guo, B., Holder, D.W, and Carter, L.: "Distribution of Flowing Fluids in a Confined Porous Medium under Microgravity Conditions," *Journal of Physics of Fluids* (August 2004), 16, No. 8.
73. Guo, B., Sun, K., Ghalambor, A., and Xu, C. "A Closed Form Hydraulics Equation for Aerated Mud Drilling in Inclined Wells," *SPE Drilling & Completion Journal* (June 2004).
74. Guo, B., Ghalambor, A., and Duan, S.: "Correlation between Sandstone Permeability and Capillary Pressure Curves," *Journal of Petroleum Science & Engineering* (August 2004), 43, No. 3-4.
75. Guo, B., Ghalambor, A., and Duan, S.: "A Rigorous Approach to Estimating Permeability from Capillary Pressure Curves," *Journal of Petroleum Science & Technology* (April 2004), 22, No. 3-4.
76. Guo, B.: "Proof of the Young-LaPlace Equation Using the Theory of Calculus of Variations Applied to Petroleum Fluids," *Journal of Petroleum Science & Technology* (July 2003), 21, No. 7-8.
77. Al-Bemani, A., Guo, B., and Ghalambor, A.: "The Challenge of Model Identification in Well Test Interpretation – A Unique Build Up Analysis Case Study," *Journal of Petroleum Science & Technology* (June 2003), 21, No. 5-6.
78. Guo, B., Stewart, G, and Toro, M.: "Linearly Supported Radial Flow – A Flow Regime in Layered Reservoirs," *Journal of Reservoir Evaluation & Engineering* (April 2002).
79. Guo, B. and Schechter, D.S.: "A Simple and Rigorous IPR Equation for Vertical and Horizontal Wells Intersecting Long Fractures," *Journal of Canadian Petroleum Technology* (July 1999).
80. Schechter, D.S. and Guo B.: "Parachors Based on Modern Physics and Their Uses in IFT Prediction of Reservoir Fluids," *SPE Reservoir Evaluation & Engineering Journal* (June 1998).
81. Guo, B., Hareland, G. and Rajtar, J.: "Computer Simulation Predicts Unfavorable Mud Rate and Optimum Air Injection Rate for Aerated Mud Drilling," *SPE Drilling & Completion Journal* (June 1996).
82. Guo, B., Rajtar, J.M.: "Volume Requirements for Aerated Mud Drilling," *SPE Drilling & Completion Journal* (September 1995).
83. Guo, B., Hareland, G., and Rajtar, J.M.: "Design of Aerated Mud Drilling Programs," *PD-Vol. 65, Drilling Technology*, ASME, 1995.
84. Guo, B. and Lee, R.L.: "A Simple Approach to Optimization of Completion Interval in Oil/Water Coning Systems," *SPE Reservoir Engineering Journal* (November 1993).
85. Guo, B., Miska, S. and Lee, R.L.: "An Innovation in 3-D Drilling Trajectory Design Using Concept of Constant Curvature," *Journal of Energy Resources Technology* (September 1993), Trans. ASME, 115.
86. Guo, B., Lee, R.L., and Miska, S.: "Constant-Curvature Equations Improve Design of 3D Well Trajectory," *Oil & Gas Journal* (April 19, 1993).
87. Dai, M. Guo, B.: "Probability of Encounter of Two Well Bores," *Journal of China Petroleum Drilling & Exploitation Technology* (July 1988).
88. Dai, M. Guo, B.: "Length Change of Drill Pipe in Deep Well Drilling – Theory and Applications," *Journal of China Petroleum Drilling & Exploration Technology* (May 1988).

89. Dai, M. and Guo, B.: "How to Determine the Flow Rate Index 'm' in Drilling Circulating Systems," *Journal of China Petroleum Drilling & Exploration Technology* (February 1987).
90. Wang, Y. and Guo, B.: "A Laboratory Study of Differential-Pressure Pipe Sticking Caused by Heavy Mud," *Journal of China Petroleum Drilling & Exploration Technology* (February 1984).

Conference Papers

1. Guo, B., Bretz, E.R. and Lee, R.L.: "Gas Hydrates Decomposition and Its Modelling," proceedings of the 1992 International Gas Research Conference held 16-19 November 1992 in Orlando, Florida, USA.
2. Guo, B. and Lee, R.L.: "Determination of the Maximum Water-Free Production Rate of a Horizontal Well with Water/Oil/Interface Cresting," paper SPE 24324, proceedings of the SPE Rocky Mountain Regional Meeting held 18-21 May 1992 in Casper, Wyoming, USA.
3. Guo, B., Molinard, J-E., and Lee, R.L.: "A General Solution of Gas/Water Coning Problem for Horizontal Wells," paper SPE 25050, proceedings of the SPE European Petroleum Conference held 16-18 November 1992 in Cannes, France.
4. Guo, B., Miska, S. and Lee, R.L.: "Volume Requirements for Directional Air Drilling," paper IADC/SPE 27510, proceedings of the IADC/SPE Drilling Conference held 15-18 February 1994 in Dallas, Texas, USA.
5. Guo, B. and Hareland, G.: "Bit Wobble: A Kinetic Interpretation of PDC Bit Failure," paper SPE 28313, proceedings of the SPE Annual Technical Conference and Exhibition held 25-28 September 1994 in New Orleans, Louisiana, USA.
6. Guo, B., Miska, S. and Hareland, G.: "A Simple Approach to Determination of Bottom Hole Pressure in Directional Foam Drilling," proceeding of the 1995 ASME-ETCE Conference held January 25 to February 1, 1995 in Houston, Texas, USA.
7. Guo, B., Hareland, G., and Boonyapaluk, P.: "Case Studies Suggest a Better Approach to Analyzing Collapse of Inclined Boreholes ," paper SPE 29495, proceedings of the SPE Production Operations Symposium held 2-4 April 1995 in Oklahoma City, Oklahoma, USA.
8. Schechter, D.S. and Guo, B.: "Mathematical Modelling of Gravity Drainage after Gas Injection into Fractured Reservoirs," paper SPE 35170, proceedings of the 1996 SPE Improved Oil Recovery Symposium held 22-24 April 1996 in Tulsa, Oklahoma, USA.
9. Guo, B., and Schechter, D.S.: "A Simple and Rigorous Mathematical Model for Estimating Inflow Performance of Wells Intersecting Long Fractures," paper SPE 38104, proceedings of the 1997 SPE Asia Pacific Oil and Gas Conference held 14-16 April 1997 in Kuala Lumpur, Malaysia.
10. Guo, B., and Schechter, D.S.: "A Simple and Accurate Method for Determining Low IFT from Pendant Drop Measurements," paper SPE 37217, proceedings of the 1997 SPE International Symposium on Oilfield Chemistry held 18-21 February 1997 in Houston, Texas, USA.
11. Guo, B., Schechter, D.S., and Baker, R.O.: "An Integrated Study of Imbibition Waterflooding in the Naturally Fractured Spraberry Trend Reservoirs," paper SPE 39801, proceedings of the 1998 SPE Permian Basin Oil and Gas Conference held 23-27 March 1998 in Midland, Texas, USA.
12. Schechter, D.S., and Guo, B.: "An Integrated Investigation for Design of a CO₂ Pilot in the Naturally Fractured Spraberry Trend Area, West Texas," paper SPE 39881, proceedings of the 1998 SPE International Petroleum Conference and Exhibition held 3-5 March 1998 in Villahermosa, Mexico.
13. Schechter, D.S., Grigg, R., and Guo, B.: "Wellman Unit CO₂ Flood: Reservoir Pressure Reduction and Flooding the Water/Oil Transition Zone," paper SPE 48948, proceedings of the 1998 SPE Annual Technical Conference and Exhibition held 27-30 September 1998 in New Orleans, Louisiana.
14. Guo, B., Schechter, D.S., and Banik, A.K.: "A Mathematical Model for Estimating Anisotropic Fracture Permeabilities from Single-Well Transient Pressure Tests," paper SPE 39807, proceedings of the 1998 SPE Permian Basin Oil and Gas Conference held 23-27 March 1998 in Midland, Texas, USA.
15. Guo, B., Westaway, P., and Jacquemont, J.: "Field Case Studies of Pressure Transient Data from Complex Reservoirs," paper SPE 63308, proceedings of the 2000 SPE Annual Technical Conference and Exhibition held 1-4 October 2000 in Dallas, Texas, USA.

16. Guo, B. and Toro, M.: "Use of a New Reservoir Model in Pressure Transient Analysis Reduced Uncertainties in Asset Appraisal" paper SPE 59409, proceedings of the 2000 SPE International Petroleum Conference and Exhibition held 1–3 February 2000 in Villahermosa, Mexico.
17. Guo, B.: "An Analytical Model for Gas-Water-Coal Particle Flow in Coalbed-Methane Production Wells," paper SPE 72369, proceedings of the 2001 SPE Eastern Regional Meeting held 17-19 October 2001 in Canton, Ohio, USA.
18. Guo, B.: "Use of Spreadsheet and Analytical Models to Simulate Solid, Water, Oil and Gas Flow in Underbalanced Drilling," paper SPE 72328, proceedings of the 2001 IADC/SPE Middle East Drilling Technology Conference held 22–24 October 2001 in Bahrain.
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