

DUANE A. MCVAY

Associate Professor and holder of the
Mike and Heidi Gatens Development Professorship in Petroleum Engineering
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Education

- Texas A&M University Petroleum Engineering B.S. 1980
- Texas A&M University Petroleum Engineering M.S. 1982
- Texas A&M University Petroleum Engineering Ph.D. 1994

Professional Appointments

1. **Texas A&M University (1998-present):** Associate Professor, Department of Petroleum Engineering (1999-present, granted tenure 2005); Visiting Assistant Professor, Department of Petroleum Engineering (1998-1999).
2. **Schlumberger Holditch-Reservoir Technologies (1999):** Principal Consultant.
3. **S. A. Holditch & Associates, Inc. (1982-1999):** Senior Vice-President and Technology Specialist (1998-1999); Vice-President and Technology Specialist (1997-1998); Vice-President and Manager of Reservoir Studies Group (1992-1997); Senior Petroleum Engineer (1986-1992); Petroleum Engineer (1982-1986).
4. **Texas A&M University (1981-1983):** Graduate Teaching Assistant.
5. **Getty Oil Research Company (1982):** Petroleum Engineer (summer).
6. **Reservoir Simulation Technology (1980-1982):** Petroleum Engineering Consultant.

Areas of Specialization

- Petroleum reservoir simulation
- Integrated reservoir management
- Risk and uncertainty assessment
- Unconventional reservoirs

Licenses

Registered Professional Engineer, Texas, License No. 66169, granted June 1989

SCHOLARSHIP

Refereed Journal Publications (* indicates student or post-doc co-author)

1. Liu, C.* and McVay, D.A. 2010. Continuous Reservoir Simulation Model Updating and Forecasting Improves Uncertainty Quantification. *SPE Reservoir Evaluation & Engineering* (accepted for publication with minor revisions).
2. Wang, J.Y.*, Holditch, S.A. and McVay, D.A. 2010. Modeling Fracture Fluid Cleanup in Tight Gas Wells. *SPE Journal* (accepted for publication).
3. Salazar, J.*, McVay, D.A. and Lee, W.J. 2010. Development of an Improved Methodology to Assess Potential Unconventional Gas Resources. *Natural Resources Research* (accepted for publication with only minor revisions).
4. Cheng, Y.*, Lee, W.J., and McVay, D.A. 2010. A New Approach for Computing Pressure Derivative in Well-test Analysis. *Petroleum Science and Technology* (accepted for publication).

5. Old, S.*, Holditch, S.A., Ayers, Jr., W.B. and McVay, D.A. 2010. PRISE Validates Resource Triangle Concept. *SPE Economics & Management*, Vol. 2, No. 1, pp. 51-60, April.
6. Cheng, Y.*, Wang, Y.*, McVay, D.A., and Lee, W.J. 2010. Practical Application of a Probabilistic Approach to Estimate Reserves Using Production Decline Data. *SPE Economics & Management*, Vol. 2, No. 1, pp. 19-31, April.
7. Cheng, Y.*, McVay, D.A., and Lee, W.J. 2009. A practical approach for optimization of infill well placement in tight gas reservoirs. *Journal of Natural Gas Science and Engineering*, Vol. 1, No. 6, pp. 165-176, December.
8. McVay, D.A., Bello, R.O.*, Ayers, Jr., W.B., Hernandez-A., G.*, Rushing, J.A., Ruhl, S. K., Hoffmann, M. F., and Ramazanov, R. I.* 2009. Evaluation of the Technical and Economic Feasibility of CO₂ Sequestration and Enhanced Coalbed Methane Recovery in Texas Low-Rank Coals. in Grobe, M., J.C. Pashin, and R.L. Dodge, eds., *Carbon Dioxide Sequestration in Geological Media – State of the Science: AAPG Studies in Geology #59*, Ch. 41, p. 665-688.
9. Cheng, Y.*, Lee, W. J. and McVay, D.A. 2009. A New Approach for Reliable Estimation of Hydraulic Fracture Properties Using Elliptical Flow Data in Tight Gas Wells. *SPE Reservoir Evaluation & Engineering*, Vol. 12, No. 2, pp. 254-262, April.
10. Cheng, Y.*, Lee, W. J. and McVay, D.A. 2008. Quantification of Uncertainty in Reserve Estimation from Decline Curve Analysis of Production Data for Unconventional Reservoirs. *J. of Energy Resources Tech*, Vol. 130, No. 4, 6 pages, December.
11. Bickel, J.E., Gibson, R.L., McVay, D.A., Pickering, S., and Waggoner, J. 2008. Quantifying the Reliability and Value of 3D Land Seismic. *SPE Reservoir Evaluation & Engineering*, Vol. 11, No. 5, pp. 832-841, October.
12. Cheng, Y.*, Lee, W. J. and McVay, D.A. 2008. Improving Reserves Estimates from Decline-Curve Analysis of Tight and Multilayer Gas Wells. *SPE Reservoir Evaluation & Engineering*, Vol. 11, No. 5, pp. 912-920, October.
13. Cheng, Y.*, McVay, D.A., Wang, J.*, and Ayers, W.B. 2008. Simulation-Based Technology for Rapid Assessment of Redevelopment Potential in Marginal Gas Fields – Technology Advances and Validation in Garden Plains Field, Western Canada Sedimentary Basin. *SPE Reservoir Evaluation & Engineering*, Vol. 11, No. 3, pp. 521-534, June.
14. Holmes, J.C.*, Mendjoge, A.V.*, and McVay, D.A. 2006. Quantification of Oil Price Uncertainty in Economic Evaluation Using Sequential Gaussian Simulation. *Petroleum Science and Technology*, Vol. 24, No. 7-8, pp. 943-962, July-Aug.
15. Guan, L.*, McVay, D.A., and Jensen, J.L. 2006. Parameter Sensitivity Study of a Statistical Technique for Fast Infill Evaluation of Mature Tight-Gas Reservoirs. *Journal of Canadian Petroleum Technology*, Vol. 45, No. 5, pp. 55-59, May.
16. Akilu, N.Y.*, McVay, D.A., and Lee, W.J. 2006. Inverted Hockey Stick Method Quantifies Price Uncertainty in Petroleum Investment Evaluation. *Petroleum Science and Technology*, Vol. 24, No. 2, pp. 167-185, Feb.
17. McVay, D.A., Lee, W.J., and Alvarado, M.G.* 2005. Calibration Improves Uncertainty Quantification in Production Forecasting. *Petroleum Geoscience*, Vol. 11, No. 3, pp.195-202, August.
18. Cheng, Y.*, Lee, W.J., and McVay, D.A. 2005. Fast-Fourier-Transform-Based Deconvolution for Interpretation of Pressure-Transient-Test Data Dominated by Wellbore Storage. *SPE Reservoir Evaluation & Engineering*, Vol. 8, No. 3, pp. 224-239, June.
19. Cheng, Y.*, McVay, D.A., and Lee, W.J. 2005. BEM for 3D Unsteady-state Flow Problems in Porous Media with a Finite-Conductivity Horizontal Wellbore. *Applied Numerical Mathematics*, Vol. 53, No. 1, pp. 19-37, April.
20. Cheng, Y.*, McVay, D.A., and Lee, W.J. 2005. A Practical Non-Linear Regression Technique for Horizontal Well Test Interpretation. *Petroleum Science and Technology*, Vol. 23, No. 3-4, pp. 341-369, Mar.-Apr.

21. Alvarado, M.G.*, McVay, D.A., and Lee, W.J. 2005. Quantification of Uncertainty By Combining Forecasting with History Matching. *Petroleum Science and Technology*, Vol. 23, No. 3-4, pp. 445-462, Mar.-Apr.
22. Guan, L.*, McVay, D.A., Jensen, J.L., and Voneiff, G.W. 2004. Evaluation of a Statistical Method for Assessing Infill Production Potential in Mature, Low-Permeability Gas Reservoirs. *J. of Energy Resources Tech*, Vol. 126, No. 3, pp. 241-245, Sept.
23. McVay, D.A. and Spivey, J.P. 2001. Optimizing Gas Storage Reservoir Performance," *SPE Reservoir Evaluation & Engineering*, Vol. 4, No. 3, pp. 173-178, June.
24. Lee, W.J., Kuo, T.B.*, Holditch, S.A., and McVay, D.A. 1999. Estimating Formation Permeability From Single-Point Flow Data. *SPE Reprint Series: Gas Reservoir Engineering*, No. 52, pp. 116-126.
25. Moridis, G.J., McVay, D.A., Reddell, D.L., and Blasingame, T.A. 1994. The LaPlace Transform Finite Difference (LTFD) Numerical Method for Simulation of Compressible Fluid Flow in Reservoirs. *SPE Advanced Technology Series*, Vol. 2, No. 2, pp. 122-131, April.
26. McVay, D.A., Bastian, P.A., and Epperson, B.D. 1991. Interactive Reservoir Simulation. *SPE Computer Applications*, Vol. 3, No. 6, pp. 7-11, Dec.
27. Al-Kaabi, A.U.*, McVay, D.A., and Lee, W.J. 1990. Using an Expert System to Identify the Well Test Interpretation Model. *Journal of Petroleum Technology*, Vol. 42, No. 5, pp. 654-661, May.
28. McVay, D.A., Hill, N.C., and Lancaster, D.E. 1988. Interactive Well Test Analysis Using Microcomputers. *Journal of Petroleum Technology*, Vol. 40, No. 9, pp. 1227-1231, Sept.

Journal Papers Submitted (* indicates student or post-doc co-author)

1. Wang, J.*, Abiazie, J.*, McVay, D.A. and Ayers, W.B. 2010. Evaluation of Reservoir Connectivity and Development Recovery Strategies in Monument Butte Field, Utah. *SPE Reservoir Evaluation & Engineering* (under review).

Conference Proceedings (* indicates student or post-doc co-author)

1. Tien, C.-M.* and McVay, D.A. 2010. Quantifying the Uncertainty in Estimates of World Conventional Oil Resources. Paper SPE 130196 presented at the SPE Hydrocarbon Economics & Evaluation Symposium, Dallas, Texas, 8-9 March.
2. Liu, C.* and McVay, D.A. 2009. Continuous Reservoir Simulation Model Updating and Forecasting Using a Markov Chain Monte Carlo Method. Paper SPE 119197 presented at the SPE Reservoir Simulation Symposium, The Woodlands, Texas, 2-4 February.
3. Wang, J.Y.*, Holditch, S.A. and McVay, D.A. 2009. Modeling Fracture Fluid Cleanup in Tight Gas Wells. Paper SPE 119624 presented at the SPE Hydraulic Fracturing Technology Conference, The Woodlands, Texas, 19-21 January.
4. Wang, J.*, McVay, D.A. and Ayers, Jr., W.B. 2008. Compositional Simulation and Optimization of Secondary and Tertiary Recovery Strategies in Monument Butte Field, Utah. Paper SPE 117775 presented at the SPE Eastern Regional/AAPG Eastern Section Joint Meeting, Pittsburgh, Pennsylvania, 11-15 October.
5. Old, S.*, Holditch, S.A., Ayers, Jr., W.B. and McVay, D.A. 2008. PRISE: Petroleum Resource Investigation Summary and Evaluation. Paper SPE 117703 presented at the SPE Eastern Regional/AAPG Eastern Section Joint Meeting, Pittsburgh, Pennsylvania, 11-15 October.
6. Wang, Y.*, Holditch, S.A. and McVay, D.A. 2008. Simulation of Gel Damage on Fracture Fluid Cleanup and Long-Term Recovery in Tight Gas Reservoirs. Paper SPE 117444 presented at the SPE Eastern Regional/AAPG Eastern Section Joint Meeting, Pittsburgh, Pennsylvania, 11-15 October.
7. Wang, J.*, Abiazie, J.*, McVay, D.A. and Ayers, W.B. 2008. Evaluation of Reservoir Connectivity and Development Recovery Strategies in Monument Butte Field, Utah. Paper SPE 116695 presented at the SPE Annual Technical Conference and Exhibition, Denver, Colorado, 21-24 September.
8. Dickins, M.I.*, McVay, D.A. and Schubarth, S.K. 2008. The Impact of Gravity Segregation on Multiphase Non-Darcy Flow in Hydraulically Fractured Gas Wells. Paper SPE 116748 presented at the SPE Annual Technical Conference and Exhibition, Denver, Colorado, 21-24 September.

9. Gibson, R.L., Bickel, J.E., McVay, D.A. and Pickering, S. 2008. Model-based Uncertainty Quantification and Implications for Value of Seismic Data. Presented at the SEG Development and Production Forum 2008, Austin, Texas, 27-31 July.
10. Gibson, R.L., Bickel, J.E., McVay, D.A. and Pickering, S. 2007. Model-Based Uncertainty Quantification and Seismic Information Value. Paper presented at the SEG Annual Meeting, San Antonio, Texas, 23-28 September.
11. Cheng, Y.* , Lee, W. J. and McVay, D.A. 2007. Quantification of Uncertainty in Reserves Estimation from Decline Curve Analysis of Production Data for Unconventional Reservoirs. Paper OMAE2007-29694 presented at the International Conference on Offshore Mechanics and Arctic Engineering, San Diego, CA, 10-15 June.
12. Salazar, J.* , McVay, D.A. and Lee, W.J. 2007. Development of an Improved Methodology to Assess Potential Unconventional Gas Resources. Paper SPE 107974 presented at the SPE Rocky Mountain Oil & Gas Technology Symposium, Denver, Colorado, 16-18 April.
13. Holmes, J.C.* , McVay, D.A. and Senel, O.* 2007. A System for Continuous Reservoir Simulation Model Updating and Forecasting. Paper SPE 107566 presented at the SPE Digital Energy Conference and Exhibition, Houston, Texas, 11-12 April.
14. Cheng, Y.* , Lee, W. J. and McVay, D.A. 2007. Improving Reserve Estimates from Decline Curve Analysis of Tight and Multilayer Gas Wells. Paper SPE 108176 presented at the SPE Hydrocarbon Economics and Evaluation Symposium, Dallas, TX, 1-3 April.
15. Cheng, Y.* , Lee, W. J. and McVay, D.A. 2007. A New Approach for Reliable Estimation of Hydraulic Fracture Properties in Tight Gas Wells. Paper SPE 105767 presented at the SPE Hydraulic Fracturing Technology Conference, College Station, TX, 29-31 Jan.
16. Pickering, S., Bickel, J.E., Gibson, R.L., and McVay, D.A. 2007. Measuring the Value of Seismic Information in E&P Workflows. Petrotech 2007 Conference and Exhibition, New Delhi, India, 15-19 January.
17. Pickering, S., Bickel, J.E., Gibson, R.L., and McVay, D.A. 2006. The Value of Seismic Information. PETEX 2006 Conference and Exhibition, London, United Kingdom, 21-23 November.
18. Bickel, J.E., Gibson, R.L., McVay, D.A., Pickering, S., and Waggoner, J. 2006. WesternGeco Uses Decision Analysis to Communicate the Value of Seismic Surveys to Potential Clients. 2006 INFORMS Annual Conference, Pittsburgh, Pennsylvania, 5-8 November. **Winner of the INFORMS Decision Analysis Society 2006 Practice Award.**
19. Cheng, Y.* , McVay, D.A., and Lee, W.J. 2006. Optimal Infill Drilling Design for Marginal Gas Reservoirs Using a Simulation-Based Inversion Approach. Paper SPE 104574, SPE Eastern Regional Meeting, Canton, Ohio, 11-13 October.
20. Bickel, J.E., Gibson, R.L., McVay, D.A., Pickering, S., and Waggoner, J. 2006. Value of Seismic with Multiple Drilling Targets. 2006 SEG Annual Meeting, New Orleans, Louisiana, 1-6 October. **Appeared in a special session entitled "The Best of the SBGf Conference."**
21. Bickel, J.E., Gibson, R.L., McVay, D.A., Pickering, S., and Waggoner, J. 2006. Quantifying 3D Land Seismic Reliability and Value. Paper SPE 102340, SPE Annual Technical Conference and Exhibition, San Antonio, Texas, 24-27 September.
22. Bickel, J.E., Gibson, R.L., McVay, D.A., Pickering, S., and Waggoner, J. 2006. Value of Seismic with Multiple Drilling Targets. SEG/SBGf/ULG Development and Production Forum, Rio de Janeiro, Brazil, 7-11 August. Selected to appear in a special session at the 2006 SEG Annual Meeting entitled "The Best of the SBGf Conference."
23. Bickel, J.E., Gibson, R.L., McVay, D.A., Pickering, S., and Waggoner, J. 2006. Value of Seismic Information with Multiple Drilling Targets. Paper B012, SPE Europe/EAGE Annual Conference and Exhibition, Vienna, Austria, 12-15 June.
24. Ogele, C.* , Daoud, A.M.* , McVay, D.A., and Lee, W.J. 2006. Integration of Volumetric and Material Balance Analyses Using a Bayesian Framework To Estimate OHIP and Quantify Uncertainty. Paper SPE 100257, SPE Europe/EAGE Annual Conference and Exhibition, Vienna, Austria, 12-15 June.

25. Aprilia, A.W.*, Li, Z.*, McVay, D.A., and Lee, W.J. 2006. Quantifying Uncertainty in Original-Gas-in-Place Estimates With Bayesian Integration of Volumetric and Material Balance Analyses. Paper SPE 100575, SPE Gas Technology Symposium, Calgary, Alberta, Canada, 15–17 May.
26. Cheng, Y.*, McVay, D.A., Wang, J.*, and Ayers, W.B. 2006. Simulation-Based Technology for Rapid Assessment of Redevelopment Potential in Stripper Gas Well Fields – Technology Advances and Validation in the Garden Plains Field, Western Canada Sedimentary Basin. Paper SPE 100583, SPE Gas Technology Symposium, Calgary, Alberta, Canada, 15–17 May.
27. Hernandez, G.*, Bello, R.O.*, McVay, D.A., Ayers, W.B., Rushing, J.A., Ruhl, S.K., Hoffmann, M.F., Ramazanov, R.I.* 2006. Evaluation of the Technical and Economic Feasibility of CO₂ Sequestration and Enhanced Coalbed Methane Recovery in Texas Low-Rank Coals. Paper SPE 100584, SPE Gas Technology Symposium, Calgary, Alberta, Canada, 15–17 May.
28. Ogele, C.*, McVay, D.A., and Lee, W.J. 2006. Quantifying Uncertainty in Original-Oil-In-Place Estimates From Volumetric and Material Balance Methods (abs.). American Association of Petroleum Geologists, presented at the Annual Convention and Exhibition, Houston, 9-12 April.
29. Ayers, W. B., Jr., S. K. Ruhl, M. F. Hoffmann, J. A. Rushing, D. A. McVay, and R. I. Ramazanov.* 2005. Low-Rank Coals of the Wilcox Group, East-Central Texas: Potential for CO₂ Sequestration and Enhanced Methane Production. In P. H. Lufholm and D. Cox, eds., Unconventional Reservoirs, Technology, and Strategies – Alternative Perspectives for the Permian Basin: West Texas Geological Society, Publication 05-115, Proceedings, Fall Symposium, Midland, TX, October 25-28, p. 43-65.
30. Cheng, Y.*, Lee, W.J., and McVay, D.A. 2005. Application of Fast Fourier Transforms to Deconvolution of Multirate Well Test Data. Paper SPE 96032, SPE Annual Technical Conference and Exhibition, Dallas, Texas, 9-12 October.
31. Cheng, Y.*, Lee, W.J., and McVay, D.A. 2005. Determination of Optimal Window Size in Pressure-Derivative Computation Using Frequency-Domain Computations. Paper SPE 96026, SPE Annual Technical Conference and Exhibition, Dallas, Texas, 9-12 October.
32. Cheng, Y.*, Wang, Y.*, McVay, D.A., and Lee, W.J. 2005. Practical Application of a Probabilistic Approach to Estimate Reserves Using Production Decline Data. Paper SPE 95974, SPE Annual Technical Conference and Exhibition, Dallas, Texas, 9-12 October.
33. Ayers, W.B., Ruhl, S.K., Hoffmann, M.F., Rushing, J.A., McVay, D.A., and Ramazanov, R.I.* 2005. Assessment of resource characteristics and methane content of low-rank coals, Wilcox Group, East-Central Texas (abs.). American Association of Petroleum Geologists Official Program, 2005 Annual Convention, Calgary, Abstracts Volume 14, p. A8, June.
34. Olsen, G.T.*, Fariyibi, F.L.*, Lee, W.J., and McVay, D.A. 2005. Price Uncertainty Quantification Models Advance Project Economic Evaluations. SPE Paper 94610, SPE Hydrocarbon Economics and Evaluation Symposium, Dallas, Texas, 3-5 April.
35. Olsen, G.T.*, McVay, D.A., and Lee, W.J. 2005. Inverted Hockey Stick Method Reveals Greater Uncertainty in Petroleum Investment Evaluations. SPE Paper 93999, SPE Western Regional Meeting, Irvine, California, 30 March-1 April.
36. Lolon, E.P.*, Chipperfield, S.T., McVay, D.A., and Schubarth, S.K. 2004. The Significance of Non-Darcy and Multiphase Flow Effects in High-Rate, Frac-Pack Gas Completions. SPE Paper 90530, SPE Annual Technical Conference and Exhibition, Houston, Texas, 26-29 Sept.
37. Gao, H.*, and McVay, D.A. 2004. Gas Infill Well Selection Using Rapid Inversion Methods. SPE Paper 90545, SPE Annual Technical Conference and Exhibition, Houston, Texas, 26-29 Sept.
38. Guan, L.*, McVay, D.A., Jensen, J.L., and Voneiff, G.W. 2004. Parameter Sensitivity Study of a Statistical Technique for Fast Infill Evaluation of Mature Tight Gas Reservoirs. Paper 2004-164, 5th Canadian International Petroleum Conference, Calgary, Alberta, 8-10 June.
39. Ayers, W.B., Garduño, J.L.*, Morand, H.*, McVay, D.A., Ramazanov, R.I.*, and Jensen, J.L. 2004. CO₂ sequestration potential of Texas low-rank coals (abs.). American Association of Petroleum Geologists, 2004 Annual Convention, Dallas, Abstracts Volume 13, p. A8, April.

40. Ramazanova, R.I.*, Ayers, Jr., W.B., Jensen, J.L., Gibson, R.L., and McVay, D.A. 2004. Modeling Reservoir Heterogeneity in the Cut Bank Oil Field, Montana. Abstract No. 69228, Geological Society of America South-Central Sections Meeting, Abstracts with Programs, Vol. 36, No. 1, p. 10, March.
41. Lolon, E.P.*, McVay, D.A., and Schubarth, S.K. 2003. Effect of Fracture Conductivity on Effective Fracture Length. SPE Paper 84311, SPE Annual Technical Conference and Exhibition, Denver, Colorado, 5-8 Oct.
42. Aniekwena, A.U.*, McVay, D.A., Ahr, W.M., and Watkins, J.S. 2003. Integrated Characterization of the Thin-Bedded 8 Reservoir, Green Canyon 18, Gulf of Mexico. SPE Paper 84051, SPE Annual Technical Conference and Exhibition, Denver, Colorado, 5-8 Oct.
43. Garduño, J.L.*, Morand, H.*, Saugier, L.D.*, Ayers, Jr., W.B., and McVay, D.A. 2003. CO₂ Sequestration Potential of Texas Low-Rank Coals. SPE Paper 84154, SPE Annual Technical Conference and Exhibition, Denver, Colorado, 5-8 Oct.
44. McVay, D.A. and Lee, W.J. 2003. Calibration Improves Uncertainty Estimation Through the Reservoir Life Cycle. OTC Paper 15083, Offshore Technology Conference, Houston, 5-8 May.
45. Alvarez, C.H.*, Holditch, S.A., and McVay, D.A. 2002. Effects of Non-Darcy Flow on Pressure Transient Analysis of Hydraulically Fractured Gas Wells SPE Paper 77468, SPE Annual Technical Conference and Exhibition, San Antonio, 29 Sept.-2 Oct.
46. Guan, L.*, McVay, D.A., Jensen, J.L., and Voneiff, G.W. 2002. Evaluation of a Statistical Infill Candidate Selection Technique. SPE Paper 75718, SPE Gas Technology Symposium, Calgary, Alberta, 30 April-2 May.
47. McVay, D.A., Valkó, P.P., Lee, W.J., Jensen, J.L., and Bowman, C.H. 2001. A Relational Database for Engineering Curriculum Management. Paper presented at the 2001 ASEE Gulf-Southwest Section Annual Conference, College Station, Texas, 28-30 March.
48. Yao, C.Y., Hill, N.C., and McVay, D.A. 1999. Economic Pilot-Floods of Carbonate Reservoirs Using a Pump-Aided Reverse Dump-Flood Technique. SPE Paper 52179, SPE Mid-Continent Operations Symposium, Oklahoma City, 28-31 March (highlighted in January 2000 *JPT*).
49. Hill, N.C., McVay, D.A., Illiassov, P.A., Morris, B.E., and Dickson, D.L. 1998. Integrated Reservoir Study Optimizes Development for a Communicating Gas, Volatile-Oil and Black-Oil Reservoir Complex. Paper presented at the International Petroleum Conference and Exhibition of Mexico, EXITEP 98, Mexico City, 15-18 November.
50. McVay, D.A., Illiassov, P.A., Ayers Jr., W.B., Martin, R.B., Diyashev, I.R., Hunt, E.R., Lopez, A., Parra, N., Chacartegui, F., and Escorcia, F. 1998. Potential for Increased Oil Recovery in the Lower Misoa (Eocene Age) Formation (C-4 and C-5 sands) VLE 196 – Lamar Field Block V, Lake Maracaibo, Venezuela. Paper presented at the International Petroleum Conference and Exhibition of Mexico, EXITEP 98, Mexico City, 15-18 November.
51. Bastian, P.A., Gulick, K.E., Forrest, J.K., McVay, D.A., Mora, C.N., and Arguello, M.L. 1998. A Case History of an Integrated Study of a Mature Carbonate Waterflood. SPE Paper 39841, SPE International Petroleum Conference and Exhibition of Mexico, Villahermosa, Mexico, 3-5 March.
52. Martin, R.B., Ayers, Jr., W.B., Hunt, E.R., Pursell, D.A., Diyashev, I.R. and McVay, D.A. 1997. An Integrated reservoir model of the Early Eocene age Misoa formation (C-4 and C-5 sands) VLE 196/Lamar Field, Block V, Lake Maracaibo, Venezuela. Paper presented at the La Sociedad Venezolana de Geólogos (SVG) VIII Congreso Geológico Venezolano y I Congreso Latinoamericano de Sedimentología, Porlamar, Isla de Margarita, Venezuela, 16-19 November.
53. Moridis, G.J. and McVay, D.A. 1993. The Transformational Decomposition (TD) Method for Compressible Fluid Flow Simulations. SPE Paper 25264, 12th SPE Symposium on Reservoir Simulation, New Orleans, LA, 28 Feb.–3 Mar. (later published in *SPE Advanced Technology Series*, Vol. 3, No. 1, pp. 163-172, 1996).
54. Al-Kaabi, A.U.*, McVay, D.A., and Lee, W.J. 1990. Supplement to SPE 18158, Using an Expert System to Identify the Well Test Interpretation Model. SPE Paper 20396, available from SPE Book Order Dept., Richardson, TX.

55. Holditch, S.A., Gatens III, J.M., McVay, D.A., and Lancaster, D.E. 1984. An Automated Method of Matching Production Performance Using Dimensionless Solutions. SPE Paper 12846, SPE/GRI/DOE Symposium on Unconventional Gas Recovery, Pittsburgh, PA, 13-15 May.

Research Reports for Sponsors (* indicates student or post-doc co-author)

1. McVay, D.A., W.B. Ayers, Jr., and J.L. Jensen. 2007. CO₂ sequestration potential of Texas low-rank coals: Texas Engineering Experiment Station, Final Technical Report for the U. S. Department of Energy, National Energy Technology Laboratory, under Contract DE-FC26-02NT41588, 127 p.
2. McVay, D.A., Ayers, W.B., Jr., Cheng, Y.*, and Wang, J.* 2006. Advanced technology for infill and recompletion candidate well selection – Garden Plains gas field: U.S. Department of Energy, Contract DE-FC26-04NT42098, Subcontract No. 2772-TAMU-DOE-2098, Final Technical Report, 52 p.
3. McVay, D.A., Holmes, J.C.*, and Senel, O.* 2006. Development of a Simulation-Based Real-Time Reservoir Management System. Final Report for eProduction Solutions, Houston, Texas, 72 p.
4. McVay, D.A., Ayers, W.B., Jr., Gibson, R.L., and Jensen, J.L. 2004. Advanced technology for infill and recompletion candidate well selection – Cut Bank oil field: U.S. Department of Energy, Contract DE-FC26-00NT41025, Subcontract No. 2284-TAMU-DOE-1025, 41 p.

Invited Lectures

1. “Advances in Unconventional Resources Technology: Assessment Methodology,” EMGI/SPE Unconventional Reservoir Symposium III, Dallas, Texas, 17 July 2007.
2. Bickel, J.E., R.L. Gibson, D.A. McVay, S. Pickering, and J. Waggoner: "Quantifying 3D Land Seismic Reliability and Value," SPE Gulf Coast Section Reservoir Study Group, Houston, Texas, 24 October 2006.
3. “The Advancement of Quantifying Uncertainty Using Decline Curve Analysis,” IQPC Production Forecasting in Upstream Oil and Gas Conference, Houston, September 29-30, 2005.
4. “Assessing Potential Unconventional Gas Resources,” SPE Advanced Technology Workshop: Risks and Uncertainty Analysis in Unconventional Reservoirs, Park City, Utah, September 13-14, 2005.
5. “Interactive Reservoir Simulation,” SPE Gulf Coast Computer Applications Group, Houston, 1991; SPE Microcomputer Study Group, Dallas 1992; Indonesian Petroleum Association, Jakarta, Indonesia, 1992.
6. "Reservoir Engineering Aspects of Underground Gas Storage," Gulf Coast Section (Houston) SPE Reservoir Study Group, 1989.

Commercial Software Developed

- Led and supervised the development of commercial reservoir simulation software, SABRE and Simulation Manager, during previous employment with S.A. Holditch & Associates, Inc. and later Schlumberger Holditch-Reservoir Technologies. These applications are still in limited use in industry.

Honors and Awards

- Mike and Heidi Gatens Development Professorship in Unconventional Resources, 2008-present.
- Distinguished Member, Society of Petroleum Engineers, 2007.
- ConocoPhillips Faculty Fellow, 2007.
- 2006 Practice Award from the Decision Analysis Society of the Institute for Operations Research and the Management Sciences (INFORMS) to Bickel, J.E., Gibson, R.L., McVay, D.A., Pickering, S.C., and Waggoner, J.R. for “WesternGeco Uses Decision Analysis to Communicate the Value of Seismic Surveys to Potential Clients.”
- Ford Fellow, January 2001, \$10,000; January 2002, \$10,000. As a Ford Fellow, served in a college-wide effort sponsored by Ford Motor Company to enhance the teaching of design across the engineering curriculum.
- Amoco Foundation Award for Distinguished Service to Students, 1983.

External Research Projects

Title	Sponsor	PI	Co-PI	No. Grad Students	Dates	Sponsor Award (\$)	Industry Cost-share (\$)	Total Award (\$)	McVay Value (\$)
Improving Production Data Analysis Techniques for Multilayer Commingled Tight Gas Wells	Shell Exploration & Production Co.	Cheng (WVU)	Lee, McVay	1	June-Dec. 2009	130,000		130,000	15,000
Optimizing Development Strategies to Increase Reserves in Unconventional Gas Reservoirs	DOE RPSEA	McVay	Bickel	2	2008-2010	314,606	104,000 Pioneer, UGR and Crisman	418,606	230,004
Quantifying Uncertainty in Shale Gas Resource Estimates	Crisman Inst. for Petroleum Research	Ayers	McVay	1	2008-2009	38,000		38,000	19,000
Quantifying Unconventional Gas Resources in N. America	Total (Crisman Inst)	Holditch	Ayers, McVay	1	2006-2008	76,000		76,000	25,333
Smart Reservoirs: Continuous Model Updating and Forecasting	Crisman Inst. for Petroleum Research	McVay		2	2006-2009	142,000		142,000	142,000
Modeling Fracture Fluid Cleanup in Tight Gas Wells	Crisman Inst. for Petroleum Research	Holditch	McVay	1	2006-2008	86,000		86,000	43,000
Infill Drilling Evaluation, Monument Butte Field	Newfield Expl. (Crisman Inst)	Jensen	McVay, Ayers	4	2005-2008	304,000		304,000	101,333
Probabilistic Assessment of Potential Unconventional Gas Resources	Burlington Resources (Crisman Inst)	Holditch	Lee, Ayers, McVay	4	2005-2007	270,000		270,000	67,500
VOI Quantification	WesternGeco	Bickel	McVay, Gibson	1	2005-2006	175,000		175,000	30,101
Real-Time Reservoir Management System	eProduction Solutions	McVay		2	2004-2006	150,000		150,000	150,000
Advanced Technology for Infill and Recompletion Candidate Well Selection	DOE Stripper Well Consortium	McVay	Ayers	2	2004-2005	98,064	16,000 Quicksilver Resources	114,064	57,032
CO2 Sequestration Potential of Texas Low-Rank Coals	U.S. Department of Energy	McVay	Ayers, Jensen	2	2002-2006	360,000	116,560 Anadarko Petroleum	476,560	158,853

Advanced Technology for Infill and Recompletion Candidate Well Selection	DOE Stripper Well Consortium	McVay	Ayers, Jensen, Gibson	2	2002-2003	125,277	54,000 Quicksilver Resources	179,277	44,819
Natural Gas Reservoir Characterization and Management	Joint Industry Project	McVay		2	2002-2005	160,000		160,000	160,000
Oilfield Glossary – Production Modules	Schlumberger	McVay		1	2002-2003	27,000		27,000	27,000
An Intelligent Model for Rapid Assessment of Infill Drilling Potential	MGV Energy	McVay		1	2001	19,500		19,500	19,500
Integrated Reservoir Investigations Research	IRIG JIP	Watkins	McVay, Ayers	3	2001-2002	100,000		100,000	25,000
An Integrated Investigation of Facies Distributions and Production Mechanisms in Stacked Turbidite Reservoirs of the GOM	Burlington Resources Foundation	McVay		1	2000	15,000		15,000	15,000
Totals						2,590,447	290,560	2,881,007	1,330,475

Internal Research Projects

Title	Sponsor	PI	Co-PI	No. Grad Students	Dates	Total Award (\$)	McVay Value (\$)
Reservoir Modeling Investigation of Compartmentalization in the Pabst Field, Offshore Gulf of Mexico	Integrated Reservoir Investigations Group	McVay		1	2000-2001	16,000	16,000
An Integrated Investigation of Facies Distributions and Production Mechanisms in Stacked Turbidite Reservoirs of the Gulf of Mexico	TAMU Interdisciplinary Research Initiatives Program	McVay	Ahr	3	2000-2002	21,400	10,700
Creating a Faculty Incubator Group to Encourage Distributed Water Processing and Recycling (DWPR) in Oil and Gas Operations	TAMU Texas Water Resources Institute	Burnett	Koseoglu, Anthony, Barrufet, McVay, Batchelor, Holditch	1	2000-2001	14,500	2,070
Totals						51,900	28,770

Graduate Students Supervised

A. Masters

Name	Relation	Thesis Title	Grad. Date	Current Position
Jackeline Urdaneta	Co-Chair	Analysis of Reservoir Performance and Forecasting for the East Area of the C-2 Reservoir, Lake Maracaibo, Venezuela	May 2001	Exploitation Engineer with Canadian Natural Resources
Cesar Alvarez	Co-Chair	Effects of Non-Darcy Flow on Pressure Buildup Analysis of Hydraulically Fractured Gas Reservoirs	Dec 2001	Production Enhancement Engineer with Schlumberger
Linhua Guan	Chair	Evaluation of a Statistical Infill Candidate Selection Technique	May 2003	Reservoir Simulation Engineer with ChevronTexaco
Anthony Aniekwena	Chair	An Integrated Investigation of Facies Distributions and Production Mechanisms in Stacked Turbidite Reservoirs of the Gulf of Mexico	Aug 2003	Unknown
Luke Saugier	Co-Chair	Economic Analysis of CO ₂ Sequestration in Low Rank Texas Coals	Aug 2003	Engineer with Hilcorp Energy (Title Unknown)
Shahebaz Mulla	Chair	The Effects of Incorporating Dynamic Data on Estimates of Uncertainty	Dec 2003	Thermal Engineer with Furnace Improvements
Luis Chavez	Chair	Rapid Assessment of Redevelopment Potential in Marginal Oil Fields, Application to the Cut Bank Field	Dec 2004	Petroleum Engineer with Ecopetrol
Chile Ogele	Chair	Quantification of Uncertainty of Material Balance Estimations	Aug 2005	Petr. Engineer, Chevron Nigeria
Asti Aprilia	Co-Chair	Quantification of Material Balance Uncertainties in Gas Reservoirs	Dec 2005	Unknown
Job Roy Ginting	Co-Chair	Uncertainty Quantification in Gas Reservoir Management	May 2005	Unknown
Emeline Chong	Co-Chair	Development of a 2-D Black-Oil Reservoir Simulator Using a Unique Grid-Block System	Dec 2004	Unknown
Yuhong Wang	Co-Chair	Practical Application of a Probabilistic Approach to Estimate Reserves Using Production Decline Data	May 2006	Unknown
Gonzalo Hernandez	Chair	Technical Feasibility of CO ₂ Sequestration in Texas Low-Rank Coals	Aug 2006	Unknown
Festus Fariyibi	Chair	Price Uncertainty Quantification Models Advance Project Economic Evaluations	Aug 2006	Unknown
Jay Holmes	Chair	Real-Time Reservoir Management	Dec 2006	Unknown

		Improves Uncertainty Quantification		
Jesus Salazar	Chair	Assessment of Potential Unconventional Gas Resources	May 2007	Reservoir Eng. with Petronas
Joseph Abiazie	Chair	Infill Drilling Evaluation, Monument Butte Field	May 2008	Geologist with Hess Corp.
Ozgur Senel	Chair	Real-Time Reservoir Management	May 2008	Unknown
Mark Dickins	Chair	The Impact of Gravity Segregation on Multiphase Non-Darcy Flow in Hydraulically Fractured Gas Wells	Aug 2008	Engineer with Bass Expl. And Prod. Co.
Chang Liu	Chair	Continuous Reservoir Simulation Model Updating and Forecasting Using a Markov Chain Monte Carlo Method	Dec 2008	PhD student at Texas A&M
Chih-Ming Tien	Chair	Quantifying the Uncertainty in Estimates of World Conventional Oil Resources	Dec 2009	Unknown
Gulcan Turkarslan	Chair	Optimizing Development Strategies to Increase Reserves in Unconventional Gas Reservoirs (tentative)	Aug 2010 (est)	N/A
Rubiel Ortiz	Chair	Optimizing Development Strategies to Increase Reserves in Unconventional Gas Reservoirs (tentative)	Aug 2010 (est)	N/A

B. Doctorate

Name	Relation	Dissertation Title	Grad. Date	Current Position
Amr Kenawy	Co-Chair	A Reservoir Study of the Badri Field, Gulf of Suez, Egypt	Aug 2001	Business Devel. Manager, Syria, with DCS Schlumberger
Guohong Zhang	Chair	Estimating Uncertainties in Integrated Reservoir Studies	Dec 2003	Engineer with Landmark Graphics (Title Unknown)
Hui Gao	Chair	Rapid Simulation-Based Method for Infill Candidate Well Selection	Dec 2004	Reservoir Engineer with Schlumberger
Elyezer Lolon	Chair	Optimizing Hydraulic Fracture Conductivity – Effects on Fluid Production, Effective Fracture Length, and Gas Productivity	Dec 2004	Sr. Staff Engineer with CARBO Ceramics
Yilin Wang	Co-Chair	An Improved Cleanup Simulator for Hydraulically Fractured Wells	Dec 2008	Assistant Professor at Penn State University
Jianwei Wang	Co-Chair	Advanced Technology for Infill and Recompletion Candidate Well Selection	Dec 2008	Reservoir Engineer with Schlumberger
Fuyong Yan	Chair	Reserve Estimation and Uncertainty Analysis for Tight Gas Reservoirs	Dec 2012 (est)	Reservoir Engineer with

				Weatherford International
Mubarak Aldossary	Chair	Quantification of Uncertainty in Production Forecasting (tentative)	Dec 2012 (est)	N/A
Xinglai Gong	Chair	Rapid, Probabilistic Reserves Estimation Methods for Hydraulically Fractured Horizontal Wells in Shale Gas Reservoirs (tentative)	Dec 2012 (est)	N/A
Chang Liu	Chair	Continuous Reservoir Simulation Model Updating and Forecasting Improves Uncertainty Quantification (tentative)	Dec 2013 (est)	N/A

TEACHING

Educational Development

New Courses

- PETE 400, Reservoir Description. I led the development of this multi-disciplinary course, which involves the integration of geophysics, geology and petroleum engineering curricula. It is a senior capstone design course taught to integrated teams of geophysics, geology and petroleum engineering students
- PETE 401, Reservoir Development. This senior design course was originally taught as the second part of the two-semester course sequence on integrated reservoir studies, following PETE 400. After the sequence was scaled back to one semester, I redeveloped PETE 401 as a new design course in Applied Reservoir Simulation taught to petroleum engineering students only.

Courses Taught

A. Graduate

Course Number	Course Title	Credit Hours	Semester Taught
PETE 611	Application of Petroleum Reservoir Simulation	3	2000B, 2001C, 2002C, 2004C, 2007B
PETE 603	Advanced Reservoir Engineering I	3	2000C
PETE 685	Integrated Reservoir Studies	3	2002A, 2004A, 2005A
PETE 689	Integrated Reservoir Studies	3	2003A

B. Undergraduate

Course Number	Course Title	Credit Hours	Semester Taught
PETE 400 (coord.)	Reservoir Description (aka Integrated Reservoir Studies)	2 3	1998C, 1999C 2001A, 2002A, 2003A, 2004A, 2005A, 2006A, 2007A, 2008A, 2009A, 2010A
PETE 401 (coord.)	Reservoir Development (aka Applied Reservoir Simulation)	2 3	1999A, 2000A, 2000C 2001C, 2002C, 2003C, 2004C, 2005C, 2006C, 2007C, 2008C, 2009C
PETE 403 (coord.)	Petroleum Project Evaluation	3	2006A, 2007A, 2008A(2 sections), 2009A
PETE 335	Technical Presentations I	1	2008C
PETE 435	Technical Presentations II	1	2008C
PETE 417	Petroleum Engineering Numerical Methods	3	1982A, 1982C, 1983A
PETE 309	Rock Properties Laboratory	1	1981C

Industry Short Courses Taught

1. "Applied Reservoir Engineering," PetroSkills public course, London, July 23-Aug. 3, 2007, 11 students.
2. "Reservoir Simulation Strategies," PetroSkills public course, Houston, May 21-25, 2007, 15 students.
3. "Applied Reservoir Engineering," PetroSkills public course, London, July 24-Aug. 4, 2006, 21 students.
4. "Integrated Reservoir Studies" presented to Sibneft, Moscow, Russia, May 16-21, 2002.
5. "Integrated Reservoir Studies" presented to Tomskneft, Reading, UK, Feb. 1-5, 1999.
6. "Waterflooding and Applied Reservoir Simulation" presented to GUPCO, College Station, TX, Oct. 19-23, 1998.
7. "Applied Reservoir Simulation" presented to GUPCO, College Station, TX, Sept. 14-18, 1998.
8. "Natural Gas Reservoir Engineering," Calgary, Alberta, May 25-29, 1998.
9. "Reservoir Simulation Using SABRE and SIMULATION MANAGER," presented to Core Labs, Inc., Houston, December 11-12, 1997.
10. "Applied Reservoir Simulation," presented to Samedan Oil Corp. and China National Petroleum Corp., Houston, Aug. 29-Sept. 11, 1997.
11. "Applied Reservoir Simulation," presented to Sichuan Petroleum Administration, Chengdu, China, July 7-16, 1997.
12. "Applied Reservoir Simulation and SABRE/SIMULATION MANAGER Training," presented to CNG Transmission Corp, Clarksburg, WV, April 21-22, 1997.
13. "Gas Reservoir Engineering," Midland, TX, Nov. 20-22, 1996.
14. "Water Control Simulation," presented to Schlumberger Dowell, Aberdeen, Scotland, Feb. 1995; Houston, March 1995.
15. "Advanced Gas Reservoir Engineering," Virginia Indonesia Co., Jakarta, Indonesia, 1991, 1992.
16. "Basic Gas Reservoir Engineering," Virginia Indonesia Co., Jakarta, Indonesia, 1991.
17. "Basic Reservoir Engineering," Western Atlas International, Houston, 1989.

SERVICE

Professional Service

- Society of Petroleum Engineers, Member of Reservoir Description & Dynamics Award Committee, Appointed, International Scope, October 2009-present.
- Technical Editor, SPE Reservoir Evaluation & Engineering Editorial Review Committee, Appointed, Member 2007-present.
- Review Panelist, Merit Review of Methane Hydrate R&D Program, U.S. Department of Energy, Golden, Colorado, 18-20 September 2007.
- Unconventional Gas Subgroup, Technology Task Group, Committee on Global Oil and Gas, Appointed, Member, 2006-2007. This committee produced the July 2007 report of the National Petroleum Council “Facing the Hard Truths about Energy.”
- Society of Petroleum Engineers, Education and Professionalism Committee, a Subcommittee of the SPE International Program Committee, Appointed, Member 2001-04, Chairman 2002-03.
- ASEE, Gulf Southwest Annual Meeting Planning Committee, Appointed, Member 2000-01.
- JPT Gas Technology, 2001: Worked with SPE staff to help select papers on Gas Technology featured in the April 2001 issue of *Journal of Petroleum Technology*.
- JPT Reservoir Management, 1999: Worked with SPE staff to help select papers on Reservoir Management featured in the December 1999 issue of *Journal of Petroleum Technology*.
- SPE Editorial Review Committee, SPERE, Appointed, Member 1993-94.
- SPE Petroleum Computer Conference Program Committee, Appointed, Member 1993-95.
- SPE Career Guidance/Student Development Committee, Appointed, Member 1994-96.

University and Community Service

- Co-Chair, Christian Faculty Network, Texas A&M University, 2008-present.
- ABET Coordinator, Dept. of Petroleum Engineering, Appointed, 2007-present.
- Director, Petroleum Engineering Student Paper Contest, Appointed, 2007-present.
- Petroleum Engineering Scholarship Committee, Appointed, Member, 2006-present.
- Petroleum Engineering Undergraduate Curriculum Committee, Appointed, Member, 2001-present: Initiated and led the effort in developing an innovative database system to track the structure and performance of the undergraduate PETE curriculum. This included the supervision of multiple graduate students in the construction of the database, which was used to organize data for the department’s ABET accreditation review.
- Petroleum Engineering Computer Committee, Appointed, Member, 2003-present.
- Science, Technology and YOUTH Symposium, Co-presented workshop “How Geoscientists and Engineers Find and Produce Oil and Gas,” March 2001.
- Petroleum Engineering Faculty Search Committee, Appointed, Member, 1999-2000.

INDUSTRY EXPERIENCE

S.A. Holditch & Associates, Inc. (1982-1999)

1. As a Technology Specialist, oversaw the company’s application of reservoir modeling technology worldwide, to ensure the use of state-of-the-art technology in its projects and problem solutions.
2. Supervised the Reservoir Studies Group until 1997. The group was involved in most aspects of reservoir engineering, with an emphasis on the application of sophisticated computer simulators to reservoir engineering problems. This group was also responsible for the development and support of the company’s commercial reservoir simulation software.

3. Conducted and supervised integrated reservoir studies involving multi-disciplinary teams of geophysicists, geologists, petrophysicists, production engineers and reservoir engineers with the objective of determining the optimum depletion plan. Studies include:
 - Multi-year study of a 300-well, billion barrel oil reservoir operated by a Latin American state oil company,
 - Multi-year study of a complex, 600-million barrel, water-drive reservoir located in Venezuela,
 - Multi-year study of several large, hydraulically-communicating structures containing volatile oil and retrograde condensate fluids, located in Argentina.
4. Conducted many other reservoir simulation studies for clients, including the design of a pressure maintenance program for the Alabama Ferry Field, a 100-million barrel volatile oil reservoir in central Texas.
5. Presented industry short courses in applied reservoir simulation, basic reservoir engineering, gas reservoir engineering, and integrated reservoir studies.
6. Presented expert witness testimony at Regulatory Agency hearings for tight gas applications and unitization applications.
7. Commercial petroleum engineering software development:
 - Led and supervised the development of the company's 3-D, 3-phase finite-difference reservoir simulator,
 - Led the design and supervised the development of the company's reservoir simulation pre- and post-processor,
 - Assumed a major role in the development of a two-phase naturally-fractured reservoir model for Lewin & Associates, Inc. in a DOE-sponsored project,
 - Developed the company's first version of pressure transient test analysis software.
8. Performed fracture treatment design, transient well test analysis, formation evaluation, and prediction of future performance, primarily in low permeability gas reservoirs, for clients.

Consulting

1. Sibneft and Enpetro Research & Design Company (May 2002). Provided mentoring to Sibneft and Enpetro engineers and geoscientists on integrated reservoir studies. Provided reservoir engineering consulting services as part of the evaluation of two oil fields in Western Siberia.
2. Bass Enterprises Production Company (1999-2000). Assisted in the evaluation of a large central-Texas volatile oil reservoir for potential acquisition.