

Daniel M. Jarvie
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Dan Jarvie is an analytical and interpretive organic geochemist. He has studied or been involved in evaluation of conventional petroleum systems around the world, but is most noted for his ongoing work in unconventional shale-gas exploration particularly the Barnett Shale of the Fort Worth Basin, Texas. His specialties include source rock characterization especially for shale-gas and shale-oil resource assessments, but also detailed source rock characterization for conventional petroleum systems analysis including bulk and compositional kinetic determinations, high resolution light hydrocarbon and fingerprinting analysis, and pyrolysis studies.

He founded Humble Instruments and Humble Geochemical Services in 1987, which were sold to Weatherford International in 2007. Prior to starting Humble, Dan worked for Delsi, Inc., the manufacturer of the Rock-Eval instrument and then with Wallace Dow at DGS. Dan is now president of Worldwide Geochemistry, LLC, working as a consultant to industry. Worldwide has also established a research lab to evaluate various aspects of unconventional shale-gas and shale-oil petroleum systems as well as conventional petroleum systems.

Mr. Jarvie just returned from a one year visiting scientist position at Institut Francais du Petrole (IFP) in Rueil-Malmaison, France, where he worked on compositional kinetic modeling with Françoise Behar and shale resource systems in Europe. Dan is also an adjunct professor at Texas Christian University (TCU) and a member of the Energy Institute Advisory Board. In his affiliation with the Energy Institute, he has initiated a research laboratory to provide routine and detailed geochemical analysis. This lab will be located in Humble, Texas. He also is an affiliate or adjunct professor at Oklahoma University. These associations will include specific research projects with professors and students at these institutions.

Dan earned a B.S. from the University of Notre Dame and was mentored in geochemistry by Wallace Dow and Don Baker of Rice University. He is a member of American Association of Petroleum Geologists, Rocky Mountain Association of Geologists, West Texas Geological Society, American Chemical Society-Geochemistry Division, Society of Petroleum Engineers, The Society for Organic Petrology, and European Association of Organic Geochemists.

Awards

EMD Best Poster Award, 2004, "Characterization of thermogenic gas and oil in the Ft. Worth Basin, Texas", AAPG National Convention, April 18-21, 2004, Dallas, Texas.
Levorsen Best Paper Award, 2005, "Hydrocarbon Generation and Storage in the Barnett Shale, Ft. Worth Basin, Texas", AAPG Southwest Section Meeting, April 10-12, 2005, Fredericksburg, Texas,
A. L. Cox Award, 2007, for poster entitled "Unconventional Shale-Gas Resource Systems and

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Processes Affecting Gas Generation, Retention, Storage, and Flow Rates”, at AAPG Southwest Sectional Meeting, April 22-24, 2007, Wichita Falls, Texas
Top Ten Oral Award, for one of the top ten oral papers at the AAPG National Convention, Long Beach, California, 2007, with Frank Mango entitled “Catalytic Gas in Deltaic Basins”.
EMD Best Poster Award, 2008, Qualification of Thermal Maturity Indices and Relationships to Predicted Shale Gas Producibility: Gate-way visualization and attribute Technique, Mike Cameron, Frank Walles, and Dan Jarvie

Activities

Theme Chair, AAPG ACE 2011
Chairman, Hedberg Research Conference on Shale Resource Plays 2010
Session Chair, AAPG National Convention 2010
Technical Committee, AAPG National Convention 2009
Session Chairman, Unconventional Shale Resource Plays, AAPG National Convention 2008
Chairman, Strategic Research Institute Shale-Gas Symposium, Dallas 2007
Session Chairman, Unconventional Shale-Gas Systems, AAPG National Convention 2007
Session Chairman, Unconventional Gas Systems, AAPG National Convention 2006
Session Chairman, Kinetics, IMOG Meeting, Nancy, France 2001
Session Chairman, Hydrocarbon Generation Session, Gordon Research Conference, 1998
Advisory Board, Energy Institute, Texas Christian University

Recent Publications

Jarvie, Daniel M., 2010, Geochemical Characteristics of Worldwide Shale Resource Systems, AAPG Bull., *submitted*.

Behar, Françoise, Daniel M. Jarvie, Stephanie Roy, and Laurent Mazeas, 2010, Artificial Maturation of a Type I Kerogen in Closed System: Mass Balances and Kinetic Modeling, *Org. Geochem.*, *submitted*.

Robert G. Loucks, Robert M. Reed, Stephen C. Ruppel, and Daniel M. Jarvie, 2009, Morphology, Distribution and Genesis of Nanometer-Scale Pores in the Mississippian Barnett Shale, *Journal Sed. Res.*, v. 79, pp. 848-861.

T. J. Kinley, C. W. Cook, J. A. Breyer, D. M. Jarvie and A. B. Busbey, 2008, Hydrocarbon Potential of the Barnett Shale (Mississippian), Delaware Basin, West Texas and Southeastern New Mexico, AAPG Bull., v. 92, no. 8, pp. 967-991.

Jarvie, Daniel M. and Brian M. Jarvie, 2008, Thermal decomposition of various carbonates: kinetic results and geological temperatures of conversion, *submitted*.

Jarvie, Daniel M., Ronald J. Hill, Tim E. Ruble, and Richard M. Pollastro, 2007, Unconventional shale-gas systems: The Mississippian Barnett Shale of north-central Texas as one model for thermogenic shale-gas assessment, AAPG Bull., Vol. 91, No. 4, pp. 475-500.

Hill, Ronald J., Daniel M. Jarvie, Richard M. Pollastro, Mitchell Henry and J. David King, 2007, Oil and gas geochemistry and petroleum systems of the Fort Worth Basin, AAPG Bull., Vol. 91, No. 4, pp. 437-444.

Pollastro, Richard M., Daniel M. Jarvie, Ronald J. Hill, and Craig W. Adams, 2007, Geologic framework of the Mississippian Barnett Shale, Barnett-Paleozoic total petroleum system, Bend arch-Fort Worth Basin, Texas, Vol. 91, No. 4, pp.405-436.

Wei, Zhibin, J. Michael Moldowan, Daniel M. Jarvie, and Ronald J. Hill, 2006, The Fate of Diamondoids in Coals and Sedimentary Rocks, *Geology*, Vol. 34, No.12, pp. 1013-1016.

Wei, Zhibin, J. Michael Moldowan, Jeremy Dahl, Theodore P. Goldstein and Daniel M. Jarvie, 2006, The catalytic effects of minerals on the formation of diamondoids from kerogen macromolecules, *Org. Geochem.*, Vol. 37, No. 11, pp. 1421-1436.

Wei, Zhibin, J. Michael Moldowan, Shuichang Zhang, Ronald Hill, Daniel M. Jarvie, Huitong Wang, Fuqing Song and Fred Fago, 2007, Diamondoid hydrocarbons as a molecular proxy for thermal maturity and oil cracking: Geochemical models from hydrous pyrolysis, *Org. Geochem.*, Vol. 38, No. 2, pp. 227-249.

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- Ehinola, O. A., O.O. Sonibare, A. M. Falana, and D. M. Jarvie, 2006, Organic geochemistry and biomarker evaluation of shale units of the Maastrichtian Patti Formation, Bida Basin, Nigeria, *NAPE Bull.*, Vol. 19, No. 1, pp. 78-88.
- Sonibare, Oluwadavo O., Taofik Adedosu, A.O. Ekundayo and Daniel M. Jarvie, 2006, Geochemical significance of aliphatic and aromatic biomarkers distributions in Coals from Benue Trough, Nigeria, *Mar. and Pet. Geol.*
- Montgomery, Scott L., Daniel M. Jarvie, Kent A. Bowker, and Richard M. Pollastro, 2005, Mississippian Barnett Shale, Fort Worth Basin, North-Central Texas: Gas-Shale Play with Multi-Tcf Potential, *AAPG Bull.*, E&P Note, Vol. 89, No. 2, pp. 155-175.
- Akinlua, A., T. R. Ajayi, D. M. Jarvie, and B. B. Adeleke, 2005, A re-appraisal of the application of Rock-Eval pyrolysis to source rock studies in the Niger Delta, *J. Pet. Geol.*, Vol. 28, No. 1, pp. 1-12.
- Killops, Steve, Dan Jarvie, Richard Sykes, and Rob Funnel, 2002, Maturity-related variation in the bulk-transformation kinetics of a suite of compositionally related New Zealand coals, *Marine and Pet. Geol.*, Vol. 19, pp. 1151-1168.
- Canipa-Morales, Nora K., Carlos A. Galán-Vidal, Mario A. Guzman-Vega, and Daniel M. Jarvie, 2002, Effect of Evaporation on C₇ Light Hydrocarbon Parameters, *Org. Geochem.*, Vol. 34, No. 6, pp. 813-826.
- Jarvie, Daniel M., Alejandro Morelos, and Zhiwen Han, 2001, Detection of Pay Zones and Pay Quality, Gulf of Mexico: Application of Geochemical Techniques, *Gulf Coast Assoc. of Geol. Soc. Transactions*, Volume LI, 2001, pp. 151-160.
- Jarvie, Daniel M., 2001, Williston Basin Petroleum Systems: Inferences from Oil Geochemistry and Geology, *The Mountain Geologist*, Vol. 38, No. 1, pp. 19-41.
- Jarvie, D. M. and L. L. Lundell, 2001, Chapter 15: Amount, type, and kinetics of thermal transformation of organic matter in the Miocene Monterey Formation, *Columbia University Press*, New York, 553 p.