

## Gulf of Mexico Hydrates Research Consortium publications: 2000 - 2011

### **Publications and Presentations** (\*indicates peer reviewed)

#### **2000**

\*McGee, T.M., 2000: A single-channel seismic reflection method for quantifying lateral variations in BSR reflectivity. *Marine Geology*, 164/1-2, 29-35.

\*McGee, T.M., 2000: Pushing the limits of high resolution in marine seismic profiling. *Journal of Environmental and Engineering Geophysics*, 5, 43-53.

\*McGee, T.M., 2000: High-resolution seismic profiling on water. Majorana Center of Scientific Culture School of Applied Geophysics, 10th Course: Development of Geophysical Methods with Application to Shallow Targets, *Annali di Geofisica*, 43, 1045-1073.

McGee, T., and Lowrie, A., 2000: Impact of hydrates on planetary evolution. *Proceedings of the 31st International Geological Congress, Rio de Janeiro, Brazil.*

\*McGee, T.M., and Woolsey, J.R., 2000: A remote station to monitor gas hydrate outcrops in the Gulf of Mexico. *Annals of the New York Academy of Science*, 912, 527-532.

Roberts, H., J. Coleman, J. Hunt, Jr., and W. Shedd, 2000: Improving interpretation of sea floor geology, biology from remote sensing. *Offshore*, Volume 25, n. 9, p. 126-128.

Rogers, R., and M. Lee, Micellar solutions promote gas-hydrate formation, 2000, Los Angeles, CA, Annual Meeting of American Institute of Chemical Engineers, Nov.

\*Zhong, Y., and R. Rogers, 2000: Surfactant Effects on Gas Hydrate Formation. *Chemical Engineering Science*, Volume 55, n. 19, p. 4175-4187.

#### **2001**

Hvozدارa, L., 2001: Long-term Observation in the Marine Environment using Mid-Infrared Spectroscopic Techniques and Quantum Cascade Lasers. Montpellier, France, Fourth International Conference on Mid-Infrared Optoelectronics Materials and Devices, April 2-4.

Hvozدارa, L., 2001: Quantum Cascade Lasers in Mid-Infrared Spectroscopy. Turku, Finland, 1st International Conference on Advanced Vibrational Spectroscopy, August 19-24.

Janotta, M., and B. Mizaikoff, 2001: Organically Modified Sol-Gels – Novel Recognition Layers for Infrared Optical Sensors. Blarney, Ireland, Fifth Euroconference on Environmental Analytical Chemistry: The Impact of Biosensors and Bioanalytical Techniques on Environmental Monitoring, September 8-12.

Lapham, L., D. Albert, J. Chanton, and C. Martens, 2001. Light hydrocarbon distributions and sulfate reduction rates in sediment porewaters near exposed gas hydrates. *American Society of Limnology and Oceanography Annual Meeting.*

Lee, M.S., 2001, The effects of biosurfactants on gas hydrate formation in ocean sediments. M.S. Thesis, Mississippi State University.

McGee, T.M., Lutken, C.B., Goebel, V.S. and Woolsey, J.R., 2001: Seismic images of structures associated with gas hydrates near the sea floor: initial results. *Proceedings of the 63rd Conference of the European Association of Geoscientists and Engineers, Amsterdam, The Netherlands.*

McGee, T.M, and Woolsey, J.R., 2001: Pushing the limits of seismic resolution in deep water. Proceedings of the Eleventh International Offshore and Polar Engineering Conference, Stavanger, Norway.

Mizaikoff, B., 2001: Mid-Infrared Fiberoptic Chemical Sensors – From the Lab into the Field. Blarney, Ireland, 5th EuroConference on Environmental Analytical Chemistry, The Impact of Biosensors and Bioanalytical Techniques on Environmental Monitoring, September 8-12.

\*Roberts, H., 2001: Fluid and gas expulsion on the northern Gulf of Mexico continental slope: Mud-prone to mineral-prone responses. in C. Paull and W. Dillon, eds., Natural Gas Hydrates: Occurrence, distribution, and detection, American Geophysical Union, Geophysical Monograph, Volume 124, p. 145-161.

Roberts, H., R. Sassen, and A. Milkov, 2001: Seafloor expression of fluid and gas expulsion from deep petroleum systems, continental slope of the northern Gulf of Mexico. Houston, TX, GCSSEPM Research Foundation 21st Annual Research Conference, Petroleum Systems of Deep-Water Basins, December 2-5.

Rogers, R.E., and Lee, M.S., 2001: Biosurfactant from Microbial Activity in Ocean Sediments Enhances Gas Hydrate Formation. Presented at The Geological Society Earth System Processes- Global Meeting, Sponsored jointly by the Geological Society of London and Geological Society of America, Edinburgh, Scotland, June 24- 28, 2001.

Rogers, R.E., Lee, M.S., and Kothapalli, C.R., 2001: Biomolecules' Effects on Gas Hydrate Formation at Sand/Clay Interfaces. Presented at 2001 AIChE Annual Meeting, Reno, NV, Nov. 4-9, 2001.

Sassen, R., 2001: Seafloor vents, seeps, gas hydrate: Relation to flux rate from the deep Gulf of Mexico petroleum system. Houston, TX, GCSSEPM Research Foundation, 21st Annual Research Conference, December 2-5.

\*Sassen, R., S. Losh, L. Cathles III, H. Roberts, J. Whelan, A. Milkov, S. Sweet, and D. DeFreitas, 2001: Massive vein-filling gas hydrate: relation to ongoing gas migration from the deep subsurface in the Gulf of Mexico. Marine Petroleum Geology, Volume 18, p. 551-560.

\*Sassen, R., S. Sweet, A. Milkov, D. DeFreitas, M. Kennicutt II, and H. Roberts, 2001: Stability of thermogenic gas hydrate in the Gulf of Mexico: Constraints on models of climate change. in C. Paull and W. Dillon, eds., Natural Gas Hydrates: Occurrence, Distribution, and Detection, American Geophysical Union, Geophysical Monograph, Volume 124, p. 131-143.

Wang X.-C., R. F. Chen, J. Whelan and L. Eglinton, 2001: Contribution of "old" carbon from natural marine hydrocarbon seeps to sedimentary and dissolved organic carbon pools in the Gulf of Mexico. Geophysical Research Letters, 28, 3313-3316.

## **2002**

Abrams, M., and J. Whelan, 2002: Near-Surface Hydrocarbon Migration: Mechanisms and Seepage Rates. Vancouver, BC, Canada, The American Association of Petroleum Geologists Hedberg Research Conference, April 7-10.

Cathles, L., C. Dofu, and H. Roberts, 2002: Estimation of the hydrate gas content of the Bush Hill vent site, Green Canyon Block 185, Gulf of Mexico. The American Association of Petroleum Geologists Annual Meeting, March 10-13, Houston, TX.

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\*Geresi, E., Lutken, C., McGee, T., and Lowrie, A., 2002: Complex geology and gas hydrate dynamics characterize Mississippi Canyon Block 798 on the upper continental slope of the northern Gulf of Mexico. GCAGS Transactions, 52, 309-321.

\*Hvozدارa, L., N. Pennington, M. Kraft, M. Karlowatz, and B. Mizaikoff, 2002: Quantum Cascade Lasers for Mid-Infrared Spectroscopy, Vibrational Spectroscopy. Volume 30, p. 53-58.

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Kothapalli, C.R., 2002, Catalysis of gas hydrates by biosurfactants in seawater-saturated sand/clay. M.S. Thesis, Mississippi State University.

\*Lowrie, A., Carol Lutken, Erika Geresi, Richard H. Bennett, Richard Faas, Tom McGee, 2002: Natural Gas Hydrates: Permanent Earth Constituents Impacting Sediment Strength and Continental Margin Evolution. Canadian Recorder: Natural Gas Hydrates, v. 27, n. 8, p. 13-27.

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Mizaikoff, B., 2002: Mid-Infrared Sensor Technology for Liquid Phase Analysis. Annapolis, MD, Fifth International Conference on Mid-Infrared Optoelectronics Materials and Devices, September 8-11.

Mizaikoff, B., 2002: Optical Sensor Technology. Minneapolis, MN, Technology Awareness Forum, March 14.

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\*Rogers, R., C. Kothapalli, and M. Lee, 2002, Influence of microbes on gas hydrate formation in porous media, *Proceedings of the Fourth International Conference on Gas Hydrates*, Yokohama, Japan, p. 547- 552.

\*Roberts, H., 2002: Surficial gas hydrates, part of the fluid and gas expulsion response spectrum: Identification from 3D seismic data. *Proceedings of the 2002 Offshore Technology Conference*.

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Vogt, F., 2002: Chemometric Data Evaluation for Improved Seawater Monitoring of Chlorinated Hydrocarbons by Mid-Infrared Evanescent Wave Sensors. New Orleans, LA, The Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy (PITTCON), March 17-22.

\*Vogt, F., M. Kraft, and B. Mizaikoff, 2002: First Results on Infrared Attenuated Total Reflection Spectroscopy for Quantitative Analysis of Salt Ions in Seawater. *Applied Spectroscopy*, Volume 56, p. 1376-1380.

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\*Whelan, J.K. eds, *Near-Surface Hydrocarbon Migration: Mechanisms and Seepage Rates*. Marine and Petroleum Geology Theme Volume based on 2002 AAPG Hedberg conference.

### **2003**

Dobbs, G., N. Pennington, F. Vogt, and B. Mizaikoff, 2003: Investigating the Influence of Pressure on IR-ATR Spectroscopy for Underwater Spectroscopic Sensing Applications. Atlanta, GA, Southeast Meeting of the American Chemical Society, November.

\*Gallager, S. and J. Whelan, 2004, The Next Generation of in situ Biological and Chemical Sensors in the Ocean, Workshop report and Executive summary of workshop held at Woods Hole Oceanographic Institution, Sept 2003, 18pp.

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\*Janotta, M., A. Katzir, and B. Mizaikoff, 2003: Sol-gel Coated Mid-Infrared Fiberoptic Sensors. Applied Spectroscopy, Volume 57, p. 823-828.

Janotta, M., and B. Mizaikoff, 2003: Sol-gel Based Mid-Infrared Evanescent Wave Sensors for Detection of Nitro-Compounds in Aqueous Solution. Orlando, FL, The Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy (PITTCON), March 9-14.

Johnson, Jeff, M.S. thesis, Physical Oceanography, University of Southern Mississippi, 2003, Passive microwave remote sensing of sea surface salinity: application of the scanning low frequency microwave radiometer in a coastal zone environment

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Lapham, L., J. Chanton, C. Martens, H. Scheafer, R. Chapman, and J. Puhlman, 2003: Innovations in Sampling Pore Fluids From Deep-Sea Hydrate Sites. San Francisco, CA, EOS, Transaction, American Geophysical Union, Volume 84, Fall Meeting Supplement, Abstract OS52D-05, December 8-12.

Lapham, L. L., Martens, C. S. and Coffin, R. B. 2003: Controls on the isotopic composition of dissolved methane in the pore waters of sediments containing disseminated gas hydrate off of Cascadia Margin. American Society of Limnology and Oceanography annual meeting program, p. 82.

\*Lutken, Carol, Allen Lowrie, Erika Geresi, Richard Bennett, Richard Faas, Bradley Battista, and Tom McGee, 2003: Interpretation of high resolution seismic data from a geologically complex continental margin, northern Gulf of Mexico, GCAGS/GCSSEPM Transactions Volume 53, pp 504-516.

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Lutken, C.B., Woolsey, J.R., McGee, T.M., and Geresi, E.J., 2003: Geologic interpretation of the shallow subsurface within the gas hydrate stability zone, northern Gulf of Mexico, EGU-AGU Joint Conference, Nice, France.

McGee, T.M., Geresi, E.J., and Gossett, A.S., 2003: Imaging the hydrate stability zone using a vertical array: First results. Proceedings of the Offshore Technology Conference, Houston, Texas.

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\*Rogers, R.E., Dearman, J.L., and Roberts, H.H., 2003: Enhancement of Gas Hydrate Formation in Gulf of Mexico Sediments. Presented at the Offshore Technology Conference, Houston, Texas, May 5- 8, 2003.

\*Rogers, R.E., Kothapalli, C., Lee, M.S., and Woolsey, J.R., 2003: Catalysis of Gas Hydrates by Biosurfactants in Seawater-Saturated Sand/Clay, Canadian J. Ch.E., 81, No. 5, pp.973-980.

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\*Sassen, R., A. Milkov, H. Roberts, S. Sweet, and D. DeFreitas, 2003: Geochemical evidence of rapid hydrocarbon venting from a seafloor-piercing mud diapir, Gulf of Mexico continental shelf. Marine Geology, Volume 198, p. 319-329.

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Woolsey, J.R., McGee, T.M., Lutken, C.B., and Geresi, E.J., 2003: A sea-floor observatory for studying the hydrocarbon system within the gas hydrate stability zone of the northern Gulf of Mexico. EGU-AGU Joint Conference, Nice, France.

## **2004**

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\*Chen, D., L. Cathles, and H. Roberts, 2004: The geochemical signatures of variable gas venting at gas hydrate sites, *Marine and Petroleum Geology*. Volume 21, p. 317-326.

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Geresi, Erika, Ross Chapman, Tom McGee and J. R. Woolsey, 2004: Seismic calibration of the proposed DOE/JIP drill site in Atwater Valley 14. AAPG Annual Convention, Dallas, TX, Abstracts Volume, pA51.

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## **2005**

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