The U.S. DOE Methane Hydrate R&D Program

Publications and Presentations Resulting from DOE-Supported Methane Hydrate R&D

1999-2017

May 2017
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Section I: Publications Related to Methane Hydrate Fellowship Program

Papers Authored and Presentations Given by NETL Methane Hydrate Fellows

Papers Authored


http://dx.doi.org/10.1016/j.dsr2.2013.02.008


Presentations


Section II: Publications Related to the Program’s Major Field Projects

With private companies, state and local governments, universities, and research institutions

Alaska North Slope Gas Hydrate Reservoir Characterization (DE-FC26-01NT41332)

BP Exploration Alaska, Inc.

Peer-Reviewed Publications


**Government Reports**


Theses/Dissertations


Other Publications


**Presentations**


Gulf of Mexico Gas Hydrates Joint Industry Project (DE-FC26-01NT41330)


Peer-Reviewed Publications


**Government Reports**


Collett, T., “Gulf of Mexico Gas Hydrate JIP Drilling Program Downhole Logging Program.”

Conte, A., and Bloys, B. “Gulf of Mexico Gas Hydrates Joint Industry Project Operational Summary of 2005 Drilling and Coring Program.”

Dugan, B., “Geomechanical Characteristics of Sediments from Atwater Valley and Keathley Canyon, Northern Gulf of Mexico.”

U.S. DOE Methane Hydrate R&D Program Bibliography
Hippe, F., “Geotechnical Investigation, Chevron Gulf of Mexico Hydrates JIP, Results of Core Sample Analysis Standard and Advanced Laboratory Testing, Report No. 0201-5081, prepared by Fugro-McClelland Marine Sciences for Chevron Texaco Energy Technology Company.”


Ruppel, C., and Santamarina, J. “Preliminary Results: Georgia Tech Instrumented Pressure Testing Chamber Deployed on JIP Gas Hydrate Drilling Program in Gulf of Mexico, April-May 2005.”

Schultheiss, P., Holland, M., and Roberts, J. “Gulf of Mexico Gas Hydrates Joint Industry Project Pressure Coring and Core Logging.”

Snyder, G., Hubbard, L., Dugan, B., and Dickens, G. “Total iodine, bromine, and barium concentrations in pore waters from the Atwater Valley area, Gulf of Mexico: Preliminary results from the Gas Hydrates JIP Cruise.”


Theses/Dissertations


Other Publications


Presentations


ConocoPhillips Company

Government Reports


Other Publications


Presentations


Methane Hydrate Production from Alaskan Permafrost (DE-FC26-01NT41331)

Geological Survey

Peer-Reviewed Publications


Government Reports


Other Publications


Presentations


Planning of a Marine Methane Hydrate Pressure Coring Program for the Walker Ridge and Green Canyon Areas of the Gulf of Mexico (DE-FE0010175)

**Fugro GeoConsulting, Inc.**

**Government Reports**


Section III: Publications Related to the Program’s Efforts with Universities and Other Research Institutions

Gas Hydrate Characterization in the Gulf of Mexico (DE-NT0005668) and Mapping Permafrost and Gas Hydrate using Marine CSEM Methods (DE-FE0010144)

Scripps Institution of Oceanography, University of California – San Diego

Peer-Reviewed Publications


Government Reports


Other Publications


**Presentations**


Assessing the Efficacy of the Aerobic Methanotropic Biofilter in Methane Hydrate Environments (DE-NT0005667)

University of California – Santa Barbara

Peer-Reviewed Publications


Government Reports


Other Publications


Presentations


Characterization of Methane Degradation and Methane-Degrading Microbes in Alaska Coastal Waters (DE-NT0005666)

University of Delaware

Peer-Reviewed Publications


Book


Government Reports


Source Characterization and Temporal Variation of Methane Seepage from Thermokarst Lakes on the Alaskan North Slope in Response to Arctic Climate Change (DE-NT0005665)

University of Alaska Fairbanks

Peer-Reviewed Publications


Government Reports


*Other Publications*


*Presentations*


Remote Sensing and Sea-Truth Measurements of Methane Flux to the Atmosphere (HYFLUX project) (DE-NT0005638)

Texas A&M University - Corpus Christi

Peer-reviewed Publications


Government Reports


Other Publications


Presentations


Integrating Natural Gas Hydrates in the Global Carbon Cycle (DE-NT0006558)

University of Chicago

Peer-reviewed Publications


Government Reports


Other Publications

Global Assessment of Methane Gas Hydrates (DE-FE0003060)

Stiftelsen GRID-Arendal

Government Reports


Presentations


University of Texas at Austin

Government Reports


Theses/Dissertations


Other Publications


Presentations


**Other Publications**


**Government Reports**


**Theses/Dissertations**


**Presentations**


Chatterjee, S., (2012). “Lithologic heterogeneities and focused fluid flow governing gas hydrate distribution in marine sediments,” *1st International Conference on Upstream Engineering and Flow Assurance, American Institute of Chemical Engineers (AIChE)*, Houston, TX, April 1-5.


**Baylor University**

**Government Reports**


Presentations


Theses/Dissertations

University of Mississippi Center for Marine Resources and Environmental Technology

Peer-Reviewed Publications


Whelan, J., (2004). “When seafloor meets ocean, the chemistry is amazing: in more and more places, scientists are finding vast amounts of natural gas on the ocean bottom,” Oceanus, Volume 42, n. 2, pp. 66-71.


### Government Reports


Theses/Dissertations


Other Publications


**Presentations**


Short, R. T., Bell, R. J., Cardenas, A. M., Chaudhary, A., Toler, S. K., van Amerom, F. H. W., (2010). “Miniature Ion Trap Mass Spectrometers and Applications for In Situ Analysis of Seawater,” Annual meeting of the Center for Analytical Instrumentation Development at Purdue University, West Lafayette, LA.


**Presentations**

Georgia Institute of Technology

Peer-Reviewed Publications


**Government Reports**


*Other Publications*


*Presentations*


Characterizing Marine Gas Hydrate Reservoirs Using 3D Seismic Data and 4C OBS Data (DE-FC26-00NT41024) and (DE-FC26-06NT42667)

University of Texas at Austin Bureau of Economic Geology

Peer-Reviewed Publications


Government Reports


Theses/Dissertations


Other Publications


Presentations


Texas A&M University – Corpus Christi

Peer-Reviewed Publications


Theses/Dissertations


Other Publications


Presentations


University of Wyoming

Peer-Reviewed Publications


Other Publications

Stanford University

Peer-Reviewed Publications


Government Reports


Other Publications


**Clarkson University**

**Peer-Reviewed Publications**


**Presentations**


**Investigations into the Geomechanical Performance of Hydrate-Bearing Sediments in Offshore Environments (DE-FC26-05NT42664)**

**Texas Engineering Experiment Station of Texas A&M University, University of California at Berkeley and Lawrence Berkeley National Laboratory**

**Government Reports**


**Presentations**


**Investigation of Gas Hydrate Instability in the Southeastern Bering Sea (DE-FC26-05NT42665)**

**Woods Hole Oceanographic Institute**

**Presentations**


Evaluating the Controls on Gas Hydrate Formation and Dissociation in the Gulf of Mexico (DE-FC26-02NT41328)

Scripps Institution of Oceanography, University of California, San Diego

Other Publications


Presentations


In Situ Sampling and Characterization of Naturally Occurring Methane Hydrate During IODP legs 204 and 311 (DE-FC26-01NT41329)

Joint Oceanographic Institution (the National Science Foundation was the primary U. S. funder of these programs, but DOE contributed slightly more than $2 million to further hydrate-related field analysis technologies).

Peer-Reviewed Publications


Other Publications


Presentations


Comparative Assessment of Advanced Gas Hydrate Production Methods (DE-FC26-06NT42666)

Battelle Pacific Northwest Division, University of Alaska – Fairbanks

**Peer-Reviewed Publications**


**Presentations**


**Seismic Gas Hydrate Quantification by Cumulative Attributes (DE-FC26-06NT42961)**

**Rock Solid Images**

**Government Reports**


**Presentations**


**Petrophysical Characterization and Reservoir Simulator for Methane Gas Production from Gulf of Mexico Hydrates (DE-FC26-02NT41327)**

**Westport Technology Center International, University of Houston**

**Peer-Reviewed Publications**


**Presentations**


**Gas Hydrates Research Database and Web Dissemination Channel (DE-AI26-06NT42938)**

**National Institute of Standards and Technology (NIST)**

**Presentations**

Characterization and Qualification of the Methane Hydrate Resource Potential Associated with the Barrow Gas Fields (DE-FC26-06NT42962)

North Slope Borough, University of Alaska - Fairbanks

Other Publications


Presentations


Structural and Stratigraphic Controls on Methane Hydrate Occurrence and Distribution: Gulf of Mexico, Walker Ridge 313 and Green Canyon 955 (DE-FE0009904)

Oklahoma State University

Government Reports


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Development of a Scientific Plan for a Hydrate-Focused Marine Drilling, Logging and Coring Program (DE-FE0010195)

Consortium for Ocean Leadership

Government Reports


Ohio State University

Peer-Reviewed Publications


Government Reports


Other Publications


Presentations


Gas Hydrate Dynamics on the Alaskan Beaufort Continental Slope: Modeling and Field Characterization (DE-FE0010180)

Southern Methodist University, Oregon State University, U. S. Geological Survey

Peer-Reviewed Publications


Government Reports


Presentations


Application of Crunch-Flow Routines to Constrain Present and Past Carbon Fluxes at Gas-Hydrate Bearing Sites (DE-FE0010496) and Assessing the Response of Methane Hydrates to Environmental Change at the Svalbard Continental Margin (DE-FE0013531)

**Oregon State University**

**Peer-Reviewed Publications**


**Government Reports**


Presentations


Verification of Capillary Pressure Functions and Relative Permeability Equations for Gas Production (DE-FE0009927)

Wayne State University

Peer Reviewed Publications


Government Reports


Presentations


Other Publications


Presentations


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**THCM Coupled Model for Hydrate-Bearing Sediments: Data Analysis and Design of New Field Experiments (Marine and Permafrost Settings) (DE-FE0013889)**

**Texas A&M University**

**Peer-Reviewed Publications**


**Government Reports**


Other Publications


Presentations


Controls on Methane Expulsion During Melting of Natural Gas Hydrate Systems (DE-FE0010406)

University of Texas at Austin

Government Reports


Presentations


Fate of Methane Emitted From Dissociating Marine Hydrates: Modeling, Laboratory, and Field Constraints (DE-FE0013999)

Massachusetts Institute of Technology

Peer-Reviewed Publications


Government Reports


Presentations


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**Hydrate Evolution in Response to Ongoing Environmental Shifts (DE-FE0013565)**

**University of Oregon**

**Government Reports**


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**Deepwater Methane Hydrate Characterization and Scientific Assessment (DE-FE0023919)**

**University of Texas at Austin**

**Peer-Reviewed Publications**


**Government Reports**


**Presentations**


Mechanisms for Methane Transport and Hydrate Accumulation in Coarse-Grained Reservoirs (DE-FE0013919)

University of Texas at Austin

Peer-Reviewed Publications


Government Reports


Theses/Dissertations


Presentations


Characterizing the Response of the Cascadia Margin gas Hydrate Reservoir to Bottom Water Warming Along the Upper Continental Slope (DE-FE0013998)

**University of Washington**

**Peer-Reviewed Publications**


**Government Reports**


**Presentations**


Impact of Clays on the Compressibility and Permeability of Sands During Methane Extraction from Gas Hydrate (DE-FE0028966)

**Louisiana State University**

**Government Reports**


**Presentations**


A Multi-scale Experimental Investigation of Flow Properties in Coarse-grained Hydrate Reservoirs during Production

**University of Texas at Austin**

**Government Reports**

Section IV: Publications Resulting from Work with the Dept. of Energy’s National Labs

Additional publications produced by the National Labs in association with the Program’s major field projects are included within Section II.

Brookhaven National Laboratory

Peer-Reviewed Publications


Other Publications


Presentations


**Theses/Dissertations**

Peer-Reviewed Publications


**Government Reports**


**Other Publications**


**Presentations**


Peer-Reviewed Publications


Presentations


**Peer-Reviewed Publications**


**Government Reports**


Other Publications


Kneafsey, T. J. and Moridis, G. J., “Methane Hydrate Dissociation by Depressurization in a Mount Elbert Sandstone Sample: Experimental Observations and Numerical Simulations” OTC Paper Number 944097, LBNL-4936E, the Arctic Technology Conference, Houston, TX, February, 7–9.


Presentations


**Peer-Reviewed Publications**


Presentations


Peer-Reviewed Publications


**Government Reports**


**Other Publications**


Presentations


Peer-Reviewed Publications


Other Publications


Presentations


Inagaki, F., Nunoura, T., Suzuki, M., Takai, K., Nealson, K., Horikoshi, K., Delwiche, M., Colwell, F., and Jorgensen, B., (2003). “Microbial community structures in methane hydrate bearing deep marine sediments form the Peru Margin (ODP Leg 201) and the Cascadia Margin (ODP Leg 204),” American Geophysical Union Fall Meeting, San Francisco, CA, December 8-12.

**Peer-Reviewed Publications**


**Government Reports**


Other Publications


Presentations


Section V: Publications Resulting from Interagency Agreements

Additional publications by agencies are included under major field projects where appropriate.

Department of Defense, Office of Naval Research, Naval Research Lab

Peer-Reviewed Publications


**Government Reports**


Other Publications


Presentations


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*U.S. DOE Methane Hydrate R&D Program Bibliography*
Peer-Reviewed Publications


**Government Reports**


Boswell, R., Collett, T. S., McConnell, D., Frye, M., Shedd, B., Godfriaux, P., Dufrene, R.,

Boswell, R., Collett, T. S., McConnell, D., Frye, M., Shedd, B., Mrozewski, S., Guerin, G., Cook, A.,


Presentations


Brothers, L. L. et al., 2012, Mapping subsea permafrost in the US Beaufort Sea, City College of New York, USGS outreach, February.


Haines, S. S., (2013). Hot off the presses: Latest results from 2013 OBS and high-res 2D seismic acquisition at two gas hydrate study sites in the Gulf of Mexico, April-May 2013, July 11, 2013, Boise State University, invited talk.


Section VI: Programmatic Reports

**Peer-Reviewed Publications**


**Government Reports**


**Other Publications**


Presentations


