

UT-GOM2-1 Hydrate Pressure Coring Expedition Volume

Expedition UT-GOM2-1 of the vessel Helix Q-4000

from Brownsville, TX (USA), to Port Fourchon, LA (USA)

Sites GC 955 H002 (API # 608114068600) and GC 955 H005 (API # 608114068700)

2-May-2017 to 24-May-2017

<https://ig.utexas.edu/energy/genesis-of-methane-hydrate-in-coarse-grained-systems/expedition-ut-gom2-1/reports/>

Volume Authorship

Flemings, P.B., Phillips, S.C, Collett, T., Cook, A., Boswell, R., and the UT-GOM2-1 Expedition Scientists



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Publisher's notes

This work was supported by the U.S. Department of Energy under Contract No. DE-FE0023919 “This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.”

The bulk of the shipboard-collected core data from this expedition is accessible from the Institute for Geophysics, Jackson School of Geosciences, University of Texas at Austin (UT), at <https://ig.utexas.edu/energy/genesis-of-methane-hydrate-in-coarse-grained-systems/expedition-ut-gom2-1/>. Instruction on how to access the data are provided there.

Reports

<https://ig.utexas.edu/energy/genesis-of-methane-hydrate-in-coarse-grained-systems/expedition-ut-gom2-1/reports/> or search OSTI using the keyword UT-GOM2-1

Acknowledgements

The UT-GOM2-1 Expedition was conceived in the spring of 2014. Three years of scientific, engineering, and logistical planning culminated in its execution in spring 2017. Hundreds of individuals and many institutions created UT-GOM2-1: we thank you all.

The United States Department of Energy – Office of Fossil Energy funded this initiative and provided enormous logistical and technical support. DOE's National Energy Technology Laboratory (Rick Baker, Ray Boswell, Jared Ciferno, and Maria Vargas) provided careful counsel and technical guidance

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throughout the effort. The USGS was instrumental to the success of the expedition. Timothy Collett provided technical advice at all hours; he was (and is) a never-ending font of information on the details of exploring, drilling, coring, and logging methane hydrates. Bill Waite provided insight into methods of pressure core analysis and was a vital part of our pressure core analysis effort.

There were enormous logistical, technical and bureaucratic challenges to overcome to achieve the expedition. We acknowledge the enormous contributions of the leadership at the University of Texas: Dan Jaffe, Eric Agnew, Linda Shaunessy, and Steve Rosen played a pivotal role in contracting, insuring, and permitting this expedition with help from Judy Sansom (Senior Financial Analyst) and Jess Houghton (Project Manager). As a result of their efforts, UT is proud to be the only University 'Qualified Operator' conducting operations in deepwater Gulf of Mexico, United States.

The Bureau of Ocean Energy Management (BOEM) and the Bureau of Safety and Environmental Enforcement (BSEE) supported us through the complicated pathways necessary to drill in the Gulf of Mexico. At each new twist in the road, they helped determine the path and expedited the journey. We thank Michelle Picou, Michelle Evans, Teree Campbell, Bernadette Thomas, Jack Orion, and Jaron Ming (BOEM) and Bobby Nelson (BSEE). We also thank Sharon Angove (EPA), Jeff Harris (Louisiana Department of Natural Resources), Bill Shedd (BOEM), Stephen Palmes (BOEM), and Matt Frye (BOEM) were wonderful sources of insight into both technical challenges and regulatory processes.

Our drilling operations required the synergistic efforts of UT, Helix Well Ops, Schlumberger, Weatherford, MI-Swaco, VES Survey International, and Geotek Ltd, UK. All of the shipboard operational and technical staff of the Helix Q-4000 provided outstanding support and maintained a positive "can do" attitude throughout the expedition. Dhananjay Dhorje (DD) (Helix Well Ops Senior Project Engineer), Vish Subramani (Helix Well Ops Project Manager), Callum Cook (Helix Well Ops Senior Project Manager), Jamie Morrison (UT Marine Test Project Manager), Tessa Green (UT Project Manager), Peter Polito (UT Research Associate), Xander Ricardo Rodriguez (Senior Administrative Associate,) and Carla Thomas (UT Project Manager) successfully orchestrated the complex permitting, operational planning, and logistics and were on hand each step of the way as challenges arose. Darin Hilton (Helix Well Ops Commercial Manager) was a steady hand that supported this project from its initiation. Tom Pettigrew (Pettigrew Engineering) mixed his oilfield skills, mechanical engineering degree, and ocean drilling experience to serve ably as Company man. Geotek Coring, USA, and Geotek limited led the coring program and core analysis. The Geotek, Ltd. team was led by Peter Schultheiss, Mike Mimitz, and Melanie Holland.

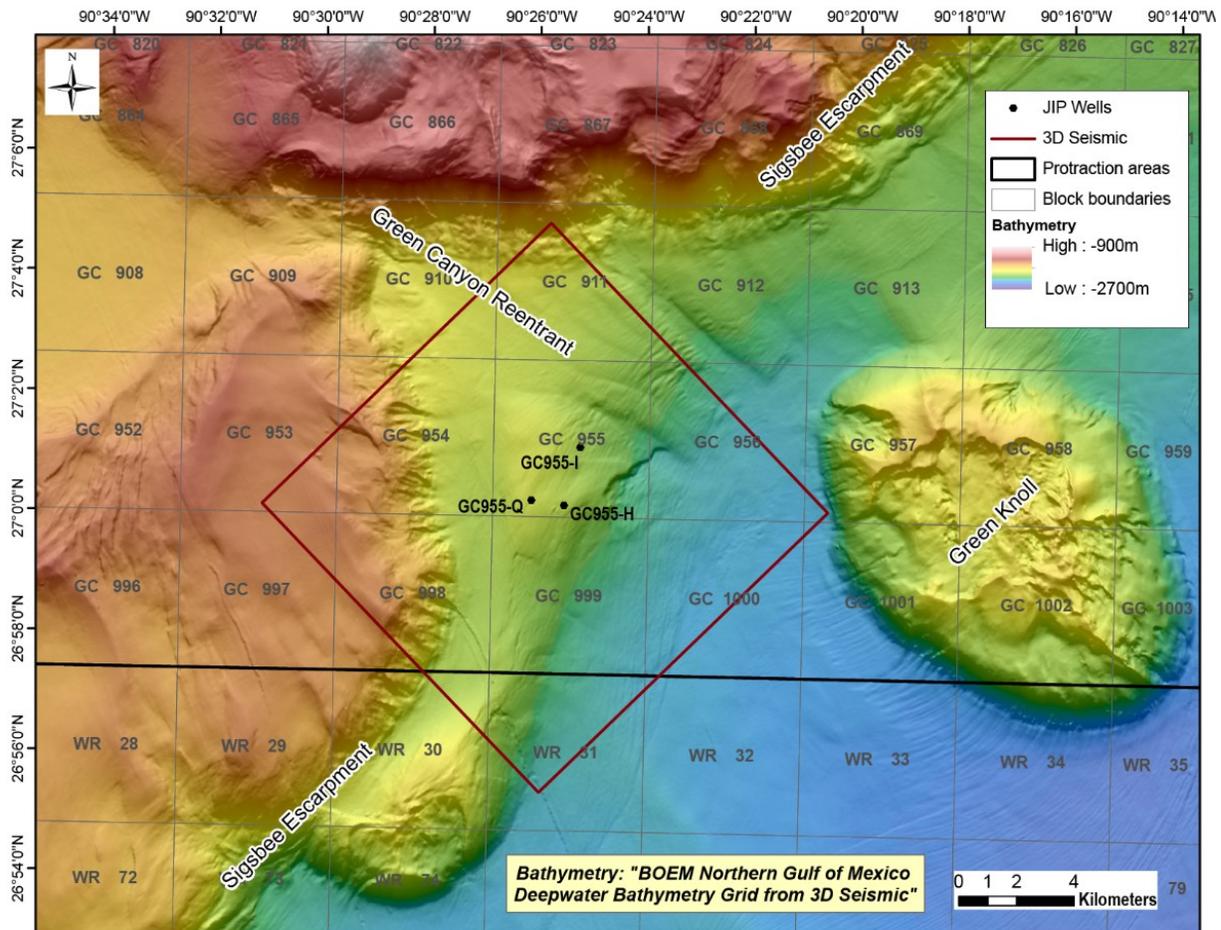
Foreword

From 2-May-2017 to 22-May-2017, the UT-GOM2-1 Hydrate Pressure Coring Expedition drilled two wells in Green Canyon Block 955 (GC 955) in the deepwater Gulf of Mexico: Hole GC 955 H002 (H002) and Hole GC 955 H005 (H005). 21 10 ft (3.05 m) pressure cores were attempted in and near the methane hydrate reservoir. In the first hole, H002, 1 of the 8 cores were recovered under pressure and there was 34% recovery of sediment (both pressurized and depressurized). In the second hole, H005, 12 of the 13 cores were recovered under pressure and there was 72% recovery of sediment. The pressure cores were imaged and logged under pressure. Samples were quantitatively degassed either on-board or on-shore to determine the hydrate concentration and the gas composition. Pore water analyses were

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performed on depressurized samples, and sediment samples were collected to enable characterization of the microbial community. 21 3.3 ft (1 m) vessels containing pressure core sections were returned to the University of Texas for storage, distribution, and further analysis. These cores will provide a foundation for scientific exploration by the greater hydrate research community.

Site Map



Expedition Bibliography

Please find the complete bibliography at <https://ig.utexas.edu/energy/genesis-of-methane-hydrate-in-coarse-grained-systems/expedition-ut-gom2-1/reports/>

UT-GOM2-1 Participants

On-Board Science Party

Peter B. Flemings

Chief Scientist

Institute for Geophysics

Jackson School of Geosciences

The University of Texas at Austin

2305 Speedway Stop C1160

Austin, TX 78712-1692

pflemings@jsg.utexas.edu

Stephen C Phillips

Staff Scientist

Institute for Geophysics

Jackson School of Geosciences

The University of Texas at Austin

2305 Speedway Stop C1160

Austin, TX 78712-1692

stevep@ig.utexas.edu

Tom Pettigrew

Company Man

Pettigrew Engineering, PLLC

479 Nine Mile Road

Milam, TX 75959

tom.pettigrew@windstream.net

Remaining scientists are alphabetical by last name:

Timothy S. Collett

Research Geologist

U.S. Geological Survey

Denver Federal Center, MS-939

Box 25046

Denver, CO 80225

tcollett@usgs.gov

Ann Cook

Assistant Professor

School of Earth Sciences

Ohio State University

317 Mendenhall Lab125

Oval Mall

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Columbus, OH 43210

cook.1129@osu.edu

Tiannong (Skyler) Dong

Graduate Student

Department of Geological Sciences

Jackson School of Geosciences

The University of Texas at Austin

2305 Speedway Stop C1160

Austin, TX 78712-1692

dongt@utexas.edu

Gilles Guerin

Research Scientist

Lamont-Doherty Earth Observatory

Columbia University

Route 9W

Palisades, NY 10964

guerin@ldeo.columbia.edu

Melanie Holland

Geochemist

Geotek

4 Sopwith Way

Daventry

Northamptonshire, NN11 8PB

United Kingdom

melanie.holland@geotek.co.uk

Kevin Mezell

Graduate Student

Department of Geological Sciences

Jackson School of Geosciences

The University of Texas at Austin

2305 Speedway Stop C1160

Austin, TX 78712-1692

kevin.mezell@gmail.com

Joshua O'Connell

Research Scientist

Jackson School of Geosciences

The University of Texas at Austin

2305 Speedway Stop C1160

Austin, TX 78712-1692

josh.oconnell@utexas.edu

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Ethan Petrou

Research Scientist
Jackson School of Geosciences
The University of Texas at Austin
2305 Speedway Stop C1160
Austin, TX 78712-1692
ethan.petrou@austin.utexas.edu

Peter Polito

Research Scientist
Jackson School of Geosciences
The University of Texas at Austin
2305 Speedway Stop C1160
Austin, TX 78712-1692
Peter.Polito@jsg.utexas.edu

Alexey Portnov

Postdoctoral Fellow
Ohio State University
317 Mendenhall Lab125
Oval Mall
Columbus, OH 43210
portnovalexey@gmail.com

Manasij Santra

Postdoctoral Fellow
Institute for Geophysics
Jackson School of Geosciences
The University of Texas at Austin
2305 Speedway Stop C1160
Austin, TX 78712-1692
manasij30@gmail.com

Peter Schultheiss

Chairman
Geotek, Ltd.
4 Sopwith Way
Daventry
Northamptonshire, NN11 8PB
United Kingdom
peter.schultheiss@geotek.co.uk

Yongkoo Seol

Lead Physical Research Scientist

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National Energy Technology Laboratory
Department of Energy
3610 Collins Ferry Road
P.O. Box 880
Morgantown, WV 26507-0880
yongkoo.seol@netl.doe.gov

On-Shore Science Party

Names are alphabetical by last name.

Ray Boswell

Geologist
National Energy Technology Laboratory
Department of Energy
626 Cochran Mill Road
P.O. Box 10940
Pittsburgh, PA 15236-0940
Ray.Boswell@netl.doe.gov

Frederick Colwell

Professor
College of Earth, Ocean, and Atmospheric Sciences
Oregon State University
104 CEOAS Administration Building
Corvallis, OR 97331-5503
rickcolwell@gmail.com

Sheng Dai

Assistant Professor
Strategic Energy Institute
Georgia Institute of Technology
North Avenue
Atlanta, GA 30332
sheng.dai@ce.gatech.edu

Hugh Daigle

Assistant Professor
Hildebrand Department of Petroleum and Geosystems Engineering
University of Texas
200 E. Dean Keeton St., Stop C0300
Austin, TX 78712-1585
daigle@austin.utexas.edu

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Tom Darrah

Associate Professor
School of Earth Sciences
Ohio State University
317 Mendenhall Lab125
Oval Mall
Columbus, OH 43210
darrah.24@osu.edu

David DiCarlo

Associate Professor
Hildebrand Department of Petroleum and Geosystems Engineering
University of Texas
200 E. Dean Keeton St., Stop C0300
Austin, TX 78712-1585
dicarlo@mail.utexas.edu

David Divins

Associate Director, Institute for the Study of Earth, Oceans, and Space (EOS)
School of Marine Science and Ocean Engineering
University of New Hampshire
Morse Hall, Suite 113
8 College Road
Durham, N.H., 03824
david.divins@unh.edu

Nicolas Espinoza

Assistant Professor
Hildebrand Department of Petroleum and Geosystems Engineering
University of Texas
200 E. Dean Keeton St., Stop C0300
Austin, TX 78712-1585
espinoza@austin.utexas.edu

Matthew Frye

Bureau of Ocean Energy Management
Resource Evaluation Division
Washington, D.C.
matt.frye@boem.gov

Jennifer Glass

Assistant Professor
School of Earth and Atmospheric Sciences, College of Sciences
Georgia Institute of Technology
North Avenue

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Atlanta, GA 30332

jennifer.glass@eas.gatech.edu

David Goldberg

Associate Director

Lamont-Doherty Earth Observatory

Columbia University

Route 9W

Palisades, NY 10964

goldberg@ldeo.columbia.edu

Meytal Higgins

Senior Researcher

ExxonMobil

Corp Strategic Research

New Jersey Research and Engineering Center

1545 US-22 #1

Annandale, NJ 08801

meytal.b.higgins@exxonmobil.com

Junbong Jang

Geoscientist

U.S. Geological Survey

Woods Hole Field Center

384 Woods Hole Rd.

Woods Hole, MA 02543-1598

jjang@usgs.gov

Joel Johnson

Associate Professor of Geology

School of Marine Science and Ocean Engineering

University of New Hampshire

Morse Hall, Suite 113

8 College Road

Durham, N.H., 03824

joel.johnson@unh.edu

Joel Kostka

Professor and Associate Chair of Research

Biological Sciences

Georgia Institute of Technology

North Avenue

Atlanta, GA 30332

joel.kostka@biology.gatech.edu

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Jung-Fu Lin

Associate Professor
Department of Geosciences
Jackson School of Geosciences
The University of Texas at Austin
2305 Speedway Stop C1160
Austin, TX 78712-1692
afu@jsg.utexas.edu

Steven Palmes

Geologist
Bureau of Ocean Energy Management
Gulf of Mexico OCS Region
1201 Elmwood Park Blvd
New Orleans, LA 70123-2394
stephen.palmes@boem.gov

John Pohlman

Biochemist
U.S. Geological Survey
Woods Hole Field Center
384 Woods Hole Rd.
Woods Hole, MA 02543-1598
jpohlman@usgs.gov

Derek Sawyer

Assistant Professor
School of Earth Sciences
Ohio State University
317 Mendenhall Lab125
Oval Mall
Columbus, OH 43210
sawyer.144@osu.edu

William Shedd

Regional Analysis Unit, Supervisor
Bureau of Ocean Energy Management
Gulf of Mexico Region
Office of Resource Evaluation
Resource Studies Section
1201 Elmwood Park Blvd
New Orleans, LA 70123
william.shedd@boem.gov

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Evan Solomon

Assistant Professor
School of Oceanography
University of Washington
1503 NE Boat Street
Box 357940
Seattle, WA 98195-7940
esolomn@u.washington.edu

Zara Summers

Research Associate
ExxonMobil
Corp Strategic Research
New Jersey Research and Engineering Center
1545 US-22 #1
Annandale, NJ 08801
zarath.m.summers@exxonmobil.com

Carla Thomas

Science/Technical Program Manager
Institute for Geophysics
Jackson School of Geosciences
The University of Texas at Austin
2305 Speedway Stop C1160
Austin, TX 78712-1692
carla.thomas@utexas.edu

Nicola Tisato

Assistant Professor
Department of Geological Sciences
Jackson School of Geosciences
2305 Speedway Stop C1160
Austin, TX 78712-1692
nicola.tisato@jsg.utexas.edu

William Waite

Geophysicist
U.S. Geological Survey
Woods Hole Field Center
384 Woods Hole Rd.
Woods Hole, MA 02543-1598
wwaite@usgs.gov

Cliff Walters

Senior Researcher

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ExxonMobil
Corp Strategic Research
New Jersey Research and Engineering Center
1545 US-22 #1
Annandale, NJ 08801
clifford.c.walters@exxonmobil.com

Kehua You
Research Scientist
Institute for Geophysics
Jackson School of Geosciences
The University of Texas at Austin
2305 Speedway Stop C1160
Austin, TX 78712-1692
kehua@ig.utexas.edu

Operational and Technical Staff

Names are alphabetical by last name.

Anisa Abdulkader
Institute for Geophysics
Jackson School of Geosciences
The University of Texas at Austin
2305 Speedway Stop C1160
Austin, TX 78712-1692

Eric James Agnew, CPCU, ARM
Office of Risk Management
The University of Texas System
504 Lavaca St., Suite 930, Austin TX, 78701
EAgnew@utsystem.edu

Richard Baker
Gas Hydrates – Project Manager
National Energy Technology Laboratory
Department of Energy
3610 Collins Ferry Road
P.O. Box 880
Morgantown, WV 26507-0880
Richard.Baker@netl.doe.gov

Miriam J Erengil
Executive Assistant
Institute for Geophysics

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Jackson School of Geosciences
The University of Texas at Austin
2305 Speedway Stop C1160
Austin, TX 78712-1692

Tessa Green

Project Manager
Institute for Geophysics
Jackson School of Geosciences
The University of Texas at Austin
2305 Speedway Stop C1160
Austin, TX 78712-1692

Jesse Houghton

Project Manager
Institute for Geophysics
Jackson School of Geosciences
The University of Texas at Austin
2305 Speedway Stop C1160
Austin, TX 78712-1692
jesse@ig.utexas.edu

Jamie Morrison

Project Manager
Institute for Geophysics
Jackson School of Geosciences
The University of Texas at Austin
2305 Speedway Stop C1160
Austin, TX 78712-1692
jmorrison@ig.utexas.edu

Katherine Perry

Administrative Associate
Institute for Geophysics
Jackson School of Geosciences
The University of Texas at Austin
2305 Speedway Stop C1160
Austin, TX 78712-1692
katie.perry@austin.utexas.edu

Xander Rodriguez

Senior Administrative Associate
Institute for Geophysics
Jackson School of Geosciences
The University of Texas at Austin

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2305 Speedway Stop C1160
Austin, TX 78712-1692
rikk@ig.utexas.edu

Steve Rosen

Associate Vice President for Legal Affairs
University of Texas
Flawn Academic Center, Suite 438 (G4800)
P.O. Box R
Austin, TX 78713
srosen@austin.utexas.edu

Linda Shaunessy, J.D., C.T.C.M.

Business Contracts Administrator
The University of Texas at Austin
110 Inner Campus Drive, Suite 106
Austin, Texas 78701
shaunessy@austin.utexas.edu

Judy Sansom

Senior Financial Analyst
Institute for Geophysics
Jackson School of Geosciences
The University of Texas at Austin
2305 Speedway Stop C1160
Austin, TX 78712-1692
judy@ig.utexas.edu

Education and Outreach

Names are alphabetical by last name.

Anton Caputo

Communication Director
University of Texas
Jackson School of Geosciences
The University of Texas at Austin
2305 Speedway Stop C1160
Austin, TX 78712-1692
anton.caputo@jsg.utexas.edu

Drew Ott

Principal
Desolate Films
10216 Talleyran Drive

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Austin, TX 78750

desolatefilms@gmail.com