

Daily Operational and Science Report
UT-GOM2-2 Coring Expedition
Terrebonne Basin, Gulf of Mexico Outer Continental Slope

1. DATE: 07-August-2023, 0000-2400hr

2. LOCATION:

2400 hr, 07-August-2023

Hole: *Helix D/V Q4000* was located over the location of Hole UT-GOM2-2-H003

Last Drill/Core depth: 6715 ft RKB

RKB to Mud line: 6506 ft on Drill pipe measurements

Water depth: 6454 ft (updated 05-AUG-2023)

Per Datum: 52 ft

Lat 26°39'46.50488"N, Long 091°40'33.82464"W

3. DESCRIPTION OF OPERATIONS:

0000-2400 At Hole UT-GOM2-2-H003

0000-0700 M/U drill string to TDS and RIH SLB Slickline w/ Geotek Center Bit

0700-0800 Move rig into position over WR 313 H003 and re-enter mudline at 6506 ft RKB

0800-1100 Wash and ream F/ 6506 ft RKB T/ 6659 ft RKB (TD)

1100-1300 Retrieve Geotek Center Bit

1300-1500 Prepare to run G-PCTB-CS

1500-1530 Acquire Core UT-GOM2-2-H003-08CS, 153.0 to 163.0 fbsf

1530-1700 POOH G-PCTB-CS and transfer to the Geotek pressure core processing van

1700-1825 Prepare to run G-APCT coring tool

1825-1930 Acquire Core UT-GOM2-2-H003-09H, 163.0 to 186.0 fbsf

1930-2030 POOH G-APCT coring tool and transfer to the Geotek pressure core processing van

2030-2158 Prepare to run G-APCT coring tool

2158-2028 Acquire Core UT-GOM2-2-H003-10H, 186.0 to 209.0 fbsf

2028-2400 POOH G-APCT coring tool and transfer to the Geotek pressure core processing van

4. OPERATIONAL PLAN (Next 24 Hours):

Continue conventional and pressure coring operations in Hole UT-GOM2-2-H003 from the current hole depth of 209.00 fbsf with the following planned core runs:

Core UT-GOM2-2-H003-011H, 211.0 to 236.0 fbsf

Core UT-GOM2-2-H003-012H, 236.0 to 261.0 fbsf

Core UT-GOM2-2-H003-13CS, 261.0 to 271.0 fbsf

5. DOWNHOLE LOGGING OPERATIONS:

Hole: NA

Wireline Totals (directional): NA

6. CORE OPERATIONS AND DATA:

Hole: UT-GOM2-2-H003

G-APC Coring Totals:

Core UT-GOM2-2-H003-09H: 28.62 ft recovered core (127% recovery)

Core UT-GOM2-2-H003-10H: 29.65 ft recovered core (118% recovery)

G-XCB Coring Totals: NA

G-PCTB-CS Coring Totals:

Core UT-GOM2-2-H003-08CS: 7.89 ft (81% recovery), 2075 psi

Coring F 6659 ft – T 6669 ft (RKB) at 60 rpm w/ 2-4 K torque circulating 8.6 ppg SW at 2 bpm w/ 63 psi standpipe. Maintaining 1-5K on bit.

G-PCTB-FB Coring Totals: NA

7. DOWNHOLE MEASUREMENTS

Hole: UT-GOM2-2-H003

Pressure and Temperature Tool Deployment (T2P): NA

Temperature Tool Deployment (APCT-3):

Core UT-GOM2-2-H003-09H – 10 min dwell time

Core UT-GOM2-2-H003-010H – 10 min dwell time

8. SCIENCE ACTIVITIES

Operations and science activities over the last 24-hours focused on tripping into Hole UT-GOM2-2-H003 from a depth of 6506 ft RKB (mud line) to the previously completed total depth of the hole to 6659 ft RKB by 1300 hr. Processing of pore water and microbiology samples from previous cores continued.

Pressure core section UT-GOM2-2-H003-05CS-2 was quantitatively degassed to calculate the dissolved methane concentration, and gas samples were collected. After quantitative degassing, core section UT-GOM2-2-H003-05CS-2 was sub-sectioned for porewater and microbiology samples in the Core Receiving Lab. Sections that are quantitatively degassed are processed section-by-section as conventionalized core in the Core Receiving Lab. Water from PCATS, spiked with a contamination tracer, is collected as a contamination control.

Core UT-GOM2-2-H003-08CS is currently being scanned in PCATS.

Core UT-GOM2-2-H003-09H and Core UT-GOM2-2-H003-10H were infrared scanned, sectioned and sampled for the standard sampling set in the Core Receiving Lab. Each section was measured with vane shear and pocket penetrometer. Both cores were expansive and were sampled for void gas.

Analysis of in-situ measurements derived from APCT-3 deployments continued. New temperature measurements at Core UT-GOM2-2-H003-09H and Core UT-GOM2-2-H003-010H were made. The interpreted temperature gradient is 21.6 deg. C per km and the seafloor temperature is 4.5 deg. C.

The Scientific Party continued to write methods and Hole H003 chapters of the Expedition Report.

9. ACRONYMS

bpm	Barrels per minute
Fish	The object to be recovered from the borehole/BHA
M/U	Make up
PCATS	Pressure Core Analysis and Transfer System
PCTB-CS	Pressure coring tool with ball-cutting shoe version.
POOH	Pull out of hole
psi	Pounds per square inch
RIH	Run in hole
RKB	Depth measured from the rig floor
SLB	Schlumberger
Slickline	Wireline used to deploy and recover core, etc.
TD	Total depth
TDS	Top drive system