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

1. DATE: 08-August-2023, 0000-2400hr

2. LOCATION:
   2400 hr, 08-August-2023
   Hole: Helix D/V Q4000 was located over the location of Hole UT-GOM2-2-H003

   Last Drill/Core depth: 6806 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
   0000-0100  Continue the recovery Core UT-GOM2-2-H003-10H as acquired on 07-AUG-2023
   0100-0330  Prepare and RIH the G-APCT coring tool
   0330-0345  Acquire Core UT-GOM2-2-H003-11H, 209.0 to 232.0 fbsf
   0345-0430  POOH G-APCT coring tool and transfer to the Geotek Core Processing Van
   0430-0645  Prepare and RIH the G-APCT coring tool
   0645-0700  Acquire Core UT-GOM2-2-H003-12H, 232.0 to 255.0 fbsf
   0700-1100  POOH G-APCT coring tool and transfer to the Geotek Core Processing Van
   1100-1530  Prepare and RIH G-PCTB-CS
   1530-1600  Acquire Core UT-GOM2-2-H003-13CS, 255.0 to 265.0 fbsf
   1600-1620  POOH G-PCTB-CS and transfer to the Geotek Pressure Core Processing Van
   1620-1716  Prepare and RIH the G-APCT coring tool
   1716-1726  Acquire Core UT-GOM2-2-H003-14H, 265.0 to 290.0 fbsf
   1726-1935  POOH G-PCTB-CS and transfer to the Geotek Core Processing Van
   1935-2000  Prepare and RIH G-PCTB-CS
   2000-2130  Acquire Core UT-GOM2-2-H003-15CS, 290.0 to 300.0 fbsf
   2130-2400  POOH G-PCTB-CS 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 300.00 fbsf with the following planned core runs:
   Core UT-GOM2-2-H003-016H, 300.0 to 321.0 fbsf
   Core UT-GOM2-2-H003-017H, 321.0 to 342.0 fbsf
   Core UT-GOM2-2-H003-018H, 342.0 to 364.0 fbsf
   Core UT-GOM2-2-H003-19CS, 364.0 to 374.0 fbsf
   Core UT-GOM2-2-H003-020H, 374.0 to 399.0 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-H003-11H: 30.31 ft recovered core (132% recovery)
   Core UT-GOM2-2-H003-12H: 32.28 ft recovered core (132% recovery)
   Core UT-GOM2-2-H003-14H: 30.20 ft recovered core (124% recovery)
   **G-XCB Coring Totals:** NA
   **G-PCTB-CS Coring Totals:**
   Core UT-GOM2-2-H003-13CS: 1.60 ft (16% recovery), 3531 psi
   Coring F 6761 ft – T 6771 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.
   Core UT-GOM2-2-H003-15CS: 11.3 ft (115% recovery), 0 psi
   Coring F 6771 ft – T 6796 ft (RKB) at 60 rpm w/ 1-3 K torque circulating 8.6 ppg SW at 2 bpm w/ 190 psi standpipe. Maintaining 1-3K 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-H003-012H – 10 min dwell time
   Core UT-GOM2-2-H003-014H – 10 min dwell time

8. SCIENCE ACTIVITIES
   Operations and science activities over the last 24-hours focused advancing Hole UT-GOM2-2-H003 from a depth of 209 fbsf (6715 ft RKB) to a total depth of 300 fbsf (6806 ft RKB) by the deployment of three conventional piston cores (G-APC) and two pressure cores (G-PCTB-CS). This combination of conventional and pressure cores targeted a prominent well log derived density transition that was identified in the logging while drilling (LWD) data as acquired in the WR313H-001 well during the 2009 Joint Industry Project Expedition II.

   Core UT-GOM2-2-H003-11H, -12H, and -14H were processed thorough the Geotek Core Receiving Lab using the standard approach developed for gas hydrate research expeditions that start with the full core infrared scan of the recovered core to identify cold sections of the core that often indicate the presence of dissociating gas hydrates. The core infrared scans were used to guide the collection of void gas samples, cutting of whole-round (WR) sample sets, collecting headspace sediment, collecting hydrate-bearing sediment samples, hand measurements of sediment strength, microbiological WR sub-coring, headspace gas sediment preservation, and processing of drilling fluid and PCATS water samples.

   Pressure core section UT-GOM2-2-H003-05CS-2 was quantitatively degassed to calculate the dissolved methane concentration, and gas samples were collected. Core UT-GOM2-2-H003-13CS is being scanned in PCATS.

   The Scientific Party continued to work on writing 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
X-ray, P-wave velocity, and density of Core UT-GOM2-2-H003-08CS from the Geotek Pressure Core Analysis and Transfer System (PCATS). The X-ray reveals thin interbedding throughout the entire core.