

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

**1. DATE:** 05-August-2023, 0000-2400hr

**2. LOCATION:**

2400 hr, 05-August-2023

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

Depth Below Rig Floor (RKB): 6506

Air Gap: 52 ft

Water Depth: 6454 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.

0000-0130 Core UT-GOM2-2-H003-03H, 55.0 to 83.0 fbsf

0230-0830 Core UT-GOM2-2-H003-04CS, 83.0 to 93.0 fbsf

0930-1330 Core UT-GOM2-2-H003-05CS, 93.0 to 100.0 fbsf

1400-1655 Core UT-GOM2-2-H003-06H, 100.0 ft to 123.0 fbsf

2020-2309 Core UT-GOM2-2-H003-07H, 123.00 ft to 147.00 fbsf

**4. OPERATIONAL PLAN (Next 24 Hours):**

Continue conventional and pressure coring operations in Hole UT-GOM2-2-H003 from the current hole depth of 147.00 fbsf with the following planned core runs:

Core UT-GOM2-2-H003-08CS, 147.0 to 157.0 fbsf

Core UT-GOM2-2-H003-09H, 157.0 to 181.0 fbsf

Core UT-GOM2-2-H003-010H, 181.0 to 205.0 fbsf

Core UT-GOM2-2-H003-011H, 205.0 to 230.0 fbsf

Core UT-GOM2-2-H003-012H, 230.0 to 255.0 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-H003-03H: 32.79 ft recovered core (120% recovery)

Core UT-GOM2-2-H003-06H: 33.43 ft recovered core (149% recovery)

Core UT-GOM2-2-H003-07H: 27.79 ft recovered core (115% recovery)

**G-XCB Coring Totals: NA**

**G-PCTB-CS Coring Totals:**

Core UT-GOM2-2-H003-04CS: 10.40 ft (106% recovery), 0 psi

*Coring F 6595'- T 6605' (RKB) at 20 rpm w/ 1-2 K torque circulating 8.6 ppg SW at 1 bpm w/ 30 psi standpipe. Maintaining 1-5K on bit.*

Core UT-GOM2-2-H003-05CS: 7.35 ft (107% recovery), 3475 psi

*Coring F 6605"- T 6612' (RKB) at 60 RPM w/ 3K torque and cementer circulating 8.6 ppg SW at 3.5 bpm w/ 210 psi while 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-H003-03H – 5 min dwell time

Core UT-GOM2-2-H003-06H – 10 min dwell time

Core UT-GOM2-2-H003-07H – 10 min dwell time

## **8. SCIENCE ACTIVITIES**

The Science Party and Geotek fully processed and subsampled the three G-APC cores as acquired over the last 24 hours including Cores UT-GOM2-2-H003-03H, -06H, and -07H. In each case, after conducting a continuous infrared (temperature) scan of each of the recovered conventional cores, whole round core sections were collected for shipboard and post-expedition pore-water and microbiologic analysis. Headspace gas and micropaleontology samples were also collected from each of the recovered conventional cores. Core UT-GOM2-2-H003-03H was the last core to be sampled at the highest vertical resolution, with the acquisition of the standard set of whole round interstitial water, microbiological, and organic geochemical headspace gas samples from every 59 inch long core section.

The acquisition of the first pressure core during the GOM2-2 Expedition, Core UT-GOM2-2-H003-04CS, recovered 10.40 ft of core material; however, the ball valve failed to fully close. Visual inspection of the recovered G-PCTB-CS coring tool revealed that the lower ball valve assembly was packed off with a “sticky” clay debris that appears to have prevented the G-PCTB-CS from sealing. The decision was made to change the core plan to include an additional deployment of the G-PCTB-CS (i.e., Core UT-GOM2-2-H003-05CS) to obtain much needed information on the near-surface hydrocarbon gas concentrations and compositions. In the case of the Core UT-GOM2-2-H003-05CS, considerable effort was made to clean out the bottom of the hole before acquiring the pressure core by pumping 5 bbls of 10.5 ppg Hi-Vis sweep to clean the hole. Upon examination in the Geotek PCATS system, it was determined that Core UT-GOM2-2-H003-05CS recovered 7.35 ft of core and was sealed at an internal pressure of 3475 psi, which was near the pre-set G-PCTB-CS boost pressure. Near the end of the day, Core UT-GOM2-2-H003-07H was also recovered 27.79 ft of sediment.



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