

# **Daily Operational and Science Report**

## **UT-GOM2-2 Coring Expedition**

### **Terrebonne Basin, Gulf of Mexico Outer Continental Slope**

**1. DATES:** 02-September-2023 to 17-September-2023

**2. DESCRIPTION OF OPERATIONS:** The Journey continues after departing the Q-4000! Many scientists got a few days off (or time to catch up on other duties) during this period. However, Geotek continued their 24-7 efforts to make this expedition a success. Conventional core was scanned in College Station and shipped to Salt Lake City (SLC). Some pressure cores were delivered to UT Austin and others were delivered to SLC. Preparations were made at Geotek's SLC facility for core analysis that will begin on Sept. 18. Details are below.

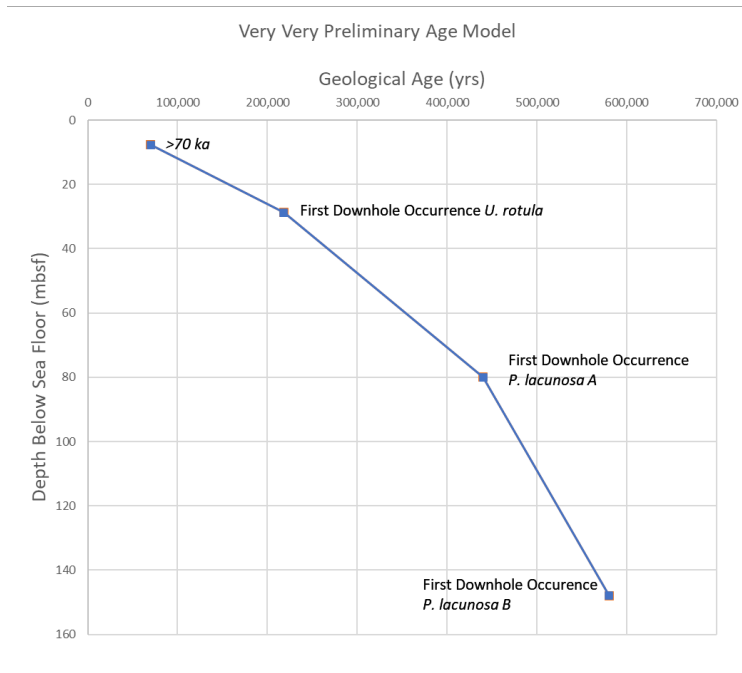
- The Q4000 was handed over at midnight on Sept. 1, 2023 (see daily report for 01-September 2023)
- Peter Flemings (UT) and Tim Collett (USGS) flew home on Sept. 1 after hitching a ride on the Harvey Hermes.
- On Sept 1., the Geotek team offloaded containers and other equipment from the Harvey Hermes to the Harvey Gulf port. Three containers with cores and samples were powered at the port.
- Steve Phillips (USGS) delivered microbiology subsamples to Caleb Boyd from Brandi Kiel Reese's laboratory for single cell genome analysis (microbiology), arranged for samples to be shipped to the University of Chicago for analysis of heterotrophic microorganisms, shipped fresh samples to Oregon State, shipped gas samples to Austin where they will be further shipped to USGS labs in Woods Hole. Phillips flew home on Sept. 4 with biostratigraphy samples which were used to produce a preliminary age model (see below).
- From Sept. 4-7 September Geotek shipped 8 container units, the heavy van, and tubulars to Salt Lake City
- From Sept. 4-8 conventional core was transported by Geotek Coring to College station for conventional core logging ((MSCL-S and XCT) initiated).
- Sept. 8: Port Fourchon was vacated
- Sept 9: Rented baskets were picked up by Trinity Rentals.
- Sept. 9: 13 pressure cores offloaded at UT for storage under pressure
- Sept. 12: All whole core logging and XCT was completed in College Station.
- Sept 13: Conventional core and MSCL-XZ scanner on route to SLC.
- 15 Sept. Conventional core and MSCL-XZ arrive SLC.
- 15 Sept: Geotek continued setting up facilities and laboratory spaces at SLC.

### **3. Forward Look:**

- On September 18, scientists will arrive at Geotek in SLC to begin an intensive two-week period of core analysis .
- On September 19, scientists will start processing the shallowest core sections starting with sections from core H003-01H.

### **4. Science:**

Paleontologist Marcie Purkey produced a preliminary age model from samples taken from the core catcher on each conventional core (see below). An initial age was interpreted for H003 only. The samples from H002 were sandy and did not contain microfossils. More samples will be collected in SLC to refine the age model.



Very preliminary aged model based on core catcher samples from the H003 well.



The Harvey Hermes docking in Port Fourchon on Sept.



On the ground at Harvey Dock, Port Fourchon.



Joey (Geotek) loading the 17 pressure from the GOM2-2 expedition into the PTRANS36. This 40' specialized Geotek unit, with 36 overpacks, is a DoT certified system for transporting pressure cores which contain flammable gas in hydrate form. Cores were transferred to UT on Sept 9 and then remaining pressure cores were delivered to Salt Lake City.



Left: Pressure cores stored at UT. Right: the Geotek and UT team that transferred to pressure cores at UT.



The final container unit with all the cores arrived at Geotek Coring in SLC