



Daily Drilling and Scientific Report for IODP Expedition 313 New Jersey Shallow Shelf

12th July 2009 (0000-2400, local time)

1. Location

Hole MAT-3A (Hole M0029A).

Time zone: US Eastern Time, UTC -4

Position at midnight:

Latitude: 39° 31.1705' N

Longitude: 73° 24.7925' W

2. Activity summary

Continue logging operations at Hole M0029A (MAT-3A).

3. Science report

Today, we continued the logging operations started in the late afternoon of July 11th. The VSP (Vertical Seismic Profile) through pipe acquisition was stopped at 0100 due to a strong lightning storm. After a two hour break we resumed logging with the total Natural Gamma Ray (GR) sonde, also through the pipe. Total GR data acquisition ended at 1230 and we then started pulling up the pipes from 756m to 480 mbsf, to free up the first open hole logging interval for the next set of measurements.

The first processing, applied to the VSP data, shows a strong first arrival and weak sediment arrivals. This could be due to an imperfect contact between the pipe and the borehole. Nevertheless further analysis show up that some velocities may be extracted from the lower two hundred meters of the hole.

The total GR data appears very good with only limited attenuation by the steel of the pipe. The total GR signal can be separated into its K, U and Th components with enough quality to make it unnecessary to have to run an open hole gamma ray if we run out of time. We can identify the main lithologies and the main unconformities bounding stacks of progradational and retrogradational events. These data are important in helping to fill in the gaps in core recovery and to confidently tie the core data to the overall large scale geometry of the sediment bodies as observed on the seismic profiles.

4. Core recovery details

N/A

5. Weather

Sea swell ~4 ft in the morning, decreasing to ~1 ft by the evening; W winds 20 – 25 kt early morning decreasing to <5 kt by mid morning, increasing again to 5 – 10 by early afternoon, decreasing again to <10 kts by early evening; severe thunder and lightning storm early morning becoming sunny and humid with patchy cloud cover by late afternoon, with additional lightning storms in the distance mid / late evening; 25°C.

Next 24 hours: sea swell 2 - 3 ft; NW winds 5 – 10 kt becoming SW 10 - 15 kt with gusts up to 20 kt by early afternoon; chance of scattered showers and thunderstorms in the evening; 25°C.