



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

3rd 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

Coring operations at Hole M0029A (MAT-3A).

3. Science report

Today we achieved the highest drilling rate and recovery (95%) for MAT-3A. We drilled 42 m of sediment and collected 15 cores (114R to 128R, c.468-511 mbsf). Two cores were significantly shorter than the others, being core 118R (1.18m at 480 mbsf) and core 119R (0.37m at 481 mbsf). These two cores recovered, at the base of 118R and the top of 119R, 0.45m in total of carbonaceous siltstone with micas, and rare fine grained size quartz sand. This carbonaceous bed is overlain by a fining upward sequence of sediment from clean, well-sorted, medium-grained sand to clayey, fine to very fine grained silty sands with forams, traces of lignite and micas. The carbonaceous bed is underlain by a coarsening upward sequence of sediment from alternations of massive silty clay with unsorted, very fine to fine grained, silty sands to dark greenish, well sorted, fine to medium grained, glauconitic and quartz sand with forams, mica and opaque heavy minerals. The latter shows significant changes in faunal diversity and abundance as well as some irregular inputs of sub-angular coarse size quartz grains. The carbonaceous siltstone probably corresponds to the very high amplitude reflector that marks the m5 unconformity on seismic reference line Oc270 529 and the Lower-Middle Miocene boundary (Burdigalian/Langhian).

4. Core recovery details

Hole	M0029A
Cores recovered	114R-128R (15 runs)
Drilled length	42.7 m
Recovered length	40.62 m
Recovery	95.13 %
Depth at midnight	510.96 mbsf

5. Weather

Sea swell 1-3 ft increasing to 5; variable winds swinging to predominantly W 10-15 kt gusting to 20 kt; sun with patchy cloud mid morning; 22°C. Next 24 hours: sea swell ~2 ft; W winds 10-15 kt gusting to 20kt by the afternoon; 25°C.