



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

8th 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, drilling continued at a slightly faster pace than yesterday, continuing through the set of hardgrounds interbedded with soft material. We started the day with a slipped core (core 177R), and a few cores that were <90% recovery. However, we still recovered 11 cores and 26m of sediment between 648 and 675 mbsf.

The recovered sediment shows three main facies similar to the ones observed yesterday:

1- Dark, brownish-grey, burrowed, clayey silt with abundant diatoms, some forams and micas (179R, 182R);

2- Dark greenish-brown, silty clayey sand, with detrital medium to coarse grained glauconite (c.30%), quartz (c.10%), and glauconite aggregates (c.20%) in a brownish sideritic clayey silt matrix (178R, 183R, 186R-188R)

3- Dark greenish grey, coarse to very coarse grained sandstone with subrounded glauconite grains (c.40-60%), and subangular quartz grains (c.10%), in a pyritized, sideritic and dolomitic silt matrix (184-185R).

One of the latter hardgrounds is capped by a thin algal mat (core 185R) that may indicate a long period of sediment starvation. It is a good candidate for representing the m5.4, Burdigalian/Aquitania, boundary unconformity, characterized on the Oc270 529 seismic reference line by a very high amplitude reflector.

By midnight on the 8th of July, we had reached the depth of 678.71. Holes M0027A and M0028A were closed at 631.01 and 674.34m respectively, making M0029A the deepest hole drilled on this expedition, and indeed the deepest hole cored with an ECORD mission specific platform and we are still going on!

4. Core recovery details

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|--------------------------|---------------------|
| Hole | M0029A |
| Cores recovered | 177R-188R (12 runs) |
| Drilled length | 27.45 m |
| Recovered length | 26.3 m |
| Recovery | 95.81 % |
| Depth at midnight | 678.71 mbsf |

5. Weather

Sea swell ~5 ft early morning, reducing to ~2 ft by mid afternoon; NE 10 – 15 gusting to 20 kts ; cloudy in the morning becoming clear by late morning; 28°C.

Next 24 hours: sea swell 2 - 4 ft; NE winds 10 - 15 kt with gusts up to 20 kts; 22°C.