



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

7th 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 pace slowed, as did core recovery rates, due to drilling through a set of hardgrounds interbedded with soft material. We recovered 10 cores and 24.5m of sediment between 620 and 648 mbsf. Four cores recovered were shorter than the usual 3m run, being cores 169R (1.90m), 172R (1.62m), 173R (1.62m) and 176R (1.22m). However, cores 172 R and 173R were only short drilling runs, and so recovery was still >90%.

The recovered sediment shows three main facies.

1- Dark, brownish-grey, burrowed, clayey silt with abundant micras, forams and fish scales (167R, 176R);

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 (169R, 170-171R, 173R)

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 silty matrix (168R, 172R, 174R, 175R).

The interbedding of soft sand and silt with hard sandstone is likely to represent the high amplitude reflector observed in the Oc270 529 seismic reference line, along the m5.3 Lower Miocene unconformity. The first occurrence of a glauconite sandstone hardground in core 172R at 636 mbsf could represent its lithological expression.

4. Core recovery details

Hole	M0029A
Cores recovered	167R – 176R (10 runs)
Drilled length	27.45 m
Recovered length	24.53 m
Recovery	89.36 %
Depth at midnight	651.26 mbsf

5. Weather

Sea swell 5 - 6 ft decreasing to 2 – 3 ft by late afternoon; SW 10 – 15 gusting to 30 kts ; cloudy with sunny periods; 22°C.

Next 24 hours: sea swell 2-4 ft; N winds 10-15 kt becoming NW 5-10kt by the afternoon; slight chance of thunderstorms and showers late morning; 23°C.