



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

**11<sup>th</sup> 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**

Complete coring operations and begin logging operations at Hole M0029A (MAT-3A).

### **3. Science report**

Today was the last day of coring at MAT3 (Hole 29A) and for the New Jersey shelf expedition. The aim was to achieve our goals by tagging the base (the downlap surface) of the second and basal set of clinoforms of the Miocene margin. We are confident that we had drilled through this surface by the last core recovered at 18:20. We recovered 8 cores and 20 m of sediment between 736 and 756.65 mbsf (cores 210R to 217R). Recovery was highly variable with cores as short as 0.26m (core 213R), 0.53m (core 214R) or a completely slipped core (core 216R), and as long as 3.49m (core 217R, the last one!). The recovered sediment shows two main packages:

1- The upper sediment package is comprised of, like yesterday, light brownish grey, micaceous, massive or micro-laminated clay with organic debris, pyrite and calcareous nodules, almost barren of fossils (cores 210-211R, 736-742 mbsf).

2- The lower package of sediment shows a roughly fining upward sequence of dark greenish-grey, fine grained (4-20%) glauconitic sand and glauconitic sandy clayey silt alternations, with a quite diversified fauna (forams, diatoms, shell debris, fish scales), pyrite and lignite (cores 212-216R, 742-756.65 mbsf). The sandy lower part overlies, in the last core, strongly expanding glauconitic sandy clay horizons.

The boundary between the two sediment packages is thought to represent the downlap surface of the basal set of clinoforms of the Miocene margin (m5.8)

and concludes very successful coring operations on Expedition 313...  
although logging operations still continue!

#### 4. Core recovery details

##### Daily:

<b>Hole</b>	M0029A
<b>Cores recovered</b>	210R-217R (8 runs)
<b>Drilled length</b>	24.4 m
<b>Recovered length</b>	20.28 m
<b>Recovery</b>	83.11 %
<b>Depth at midnight</b>	756.65 mbsf

##### Summary of all holes:

<b>Hole</b>	M0027A	M0028A	M0029A	<b>Total</b>
<b>Latitude</b>	39° 38.04606 N	39° 33.94279' N	39° 31.1705' N	
<b>Longitude</b>	73° 37.30146' W	73° 29.83481' W	73° 24.7925' W	
<b>First core</b>	02/05/09 at 00:10	26/05/09 at 15:15	21/06/09 at 17:05	
<b>Last core</b>	18/05/09 at 22:10	16/06/09 at 02:40	11/07/09 at 18:20	
<b>Core runs made</b>	1H to 224R (224 runs)	1R to 171R (171 runs)	1R to 217R (217 runs)	<b>612 runs</b>
<b>Drilled length</b>	547.01 m	476.97 m	609.44 m	<b>1633.42 m</b>
<b>Recovered length</b>	471.59 m	385.5 m	454.31 m	<b>1311.4 m</b>
<b>Core recovery</b>	86.21 %	80.82 %	74.55 %	<b>80.29 %</b>
<b>Final depth</b>	631.01 mbsf	674.34 mbsf	756.65 mbsf	
<b>Hole recovery</b>	74.74 %	57.17 %	60.04	

#### 5. Weather

Sea swell 1 – 2 ft in the morning, building to 5-6 by mid afternoon; W to SW 5 - 10 kt increasing to 15 – 20 by early afternoon, with gusts up to 25 – 30 kt early evening onwards; sunny with patchy cloud cover by late afternoon; 20°C.

Next 24 hours: sea swell 3-4 ft; W winds 10 – 15 kt with gusts up to 20 kt; 27°C.