



**Daily Drilling and Scientific Report for  
IODP3-NSF Expedition 501  
New England Shelf Hydrogeology, 2025**



**21<sup>st</sup> June 00:00 – 21<sup>st</sup> June 24:00 East Daylight Time (UTC -4)**

**1. Location**

Position 40.9976°N, 70.3334°W @12:00 EDT 21<sup>st</sup> of June  
IODP-MSP borehole M0112A  
Prospectus borehole MV-08A  
Water Depth: 41m

**2. Operations Report**

The bentonite plug was drilled through and coring at Hole M0112A continued using the Alien corer which was changed to the hydraulic piston corer when the formation strength reduced sufficiently. Despite issues with crushed liner tube the HPC was used until the last core of the day when the formation again became too strong. A total of 13 cores were recovered.

Expedition 501 team members transferred on and off the vessel from 04:40 to 06:00 by the OSV Gaspee. 12 team members left the vessel and 7 came on.

**3. Science Report**

25 samples were taken on the 21<sup>st</sup> of June, with 45 subsamples for interstitial water, geochemistry, microbiology and paleontology. A total of 9.22m of core from Hole M0112A was run through the MSCL

**4. Core Recovery**

<b>Hole</b>	M0112A
<b>Cores recovered</b>	13
<b>Drilled length (Coring, m)</b>	17.63
<b>Drilled length (Open hole, m)</b>	n/a
<b>Recovered length (m)</b>	15.53
<b>Recovery (%)</b>	88%
<b>Depth at midnight (mbsf)</b>	77.24 mbsf

**5. Time Breakdown**

00:00 - 02:00 Complete setting of the bentonite plug.  
02:00 - 06:15 Run CHD string and drill through the plug.  
06:15 - 24:00 Advancing borehole by combination of Alien and hydraulic piston corers.

**6. Hours (inc. cumulative total) – no contractual implications can be made from these figures**

<b>In port</b>	n/a
<b>Transiting</b>	n/a
<b>Operating</b>	24
<b>Technical downtime</b>	0
<b>Weather downtime</b>	0
<b>Other downtime (specify)</b>	0

**7. Weather**

Easterly wind 12mph at 12:00. Wave height 1 to 2m. Visibility improving, good to horizon at 12:00.

**8. Planned Activity for the next 24 hours**

Continue coring to TD for Hole M0112A.

## 9. Health and Safety and Environmental

Reminder of safety protocols and PPE for X501 team arriving to the LB Robert. X501 team members new to the LB Robert completed ship and expedition safety debriefing.

High winds expected on the 22<sup>nd</sup>, reminder to X501 team to be cautious.

## 10. Photo of the day



*Figure 1: Expedition 501 team members transferring off the LB Robert onto the OSV Gaspee by Billy Pugh basket (LEBER@ECORD\_IODP3\_NSF\_transfer1)*