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

12th June 00:00 – 12th June 24:00 East Daylight Time (UTC -4)

1. Location
Position 40.8746°N, 70.2697°W @12:00 EDT 8th of June
IODP-MSP borehole M0111C
Prospectus borehole MV-03C
Water Depth: 44m

2. Operations Report
Two Alien cores were recovered just after midnight, and the string was filled with sea water in readiness for water pumping. The packer was installed and pumping commenced to purge the string of sea water. A steady flow of approximately 6 L/min was achieved. Samples were collected for geochemistry and microbiology, with the noble gas sampling regime ready to commence after midnight.

3. Science Report
31 samples were taken and analyzed for interstitial water geochemistry, micropaleontology, physical properties and microbiology. 8 Cores were run through the MSCL with a total length of 10.96 m.

4. Core Recovery

Hole	M0111C
Cores recovered	3
Drilled length (Coring, m)	7.47 m
Drilled length (Open hole, m)	0
Recovered length (m)	3.03 m
Recovery (%)	40.5
Depth at midnight (mbsf)	163.89 m

5. Time Breakdown
00:00 - 03:11 3 ALN samples from 163.89 – 171.36 mbsf.
03:11 - 07:15 Displace drilling fluid in string with sea water, deploy and set packer.
07:15 - 24:00 Commence pumping to extract sea water and prepare for pump water tests.

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

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

7. Weather
Steady west south-westerly breeze of 16 kt with a 1.5 m swell from the south south-west. Clear skies and temperatures in the low twenties out of the wind.

8. Planned Activity for the next 24 hours
Continue with water sampling, specifically for the noble gas team. On completion of this we will advance the borehole by coring and non-coring methods towards the next water pump test.

9. Health and Safety and Environmental
No issues related to health and safety and environmental reported

10. Photo of the day

Figure 1: Water sampling during the pump test (ARNHARDT@ECORD_IODP3_NSF_pumptest_sampling)