



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



26th May 00:00 – 26th May 24:00 East Daylight Time (UTC -4)

1. Location

Position 40.8746°N, 70.2697°W @12:00 EDT 26th of May
IODP-MSP borehole M0111B
Prospectus borehole MV-03C
Water Depth: 42m

2. Operations Report (edited)

Operations on the 26th of May started well with 11 cores and 80% recovery by 10:30. At that time progress was halted due to bit balling and bit clogging. While troubleshooting, potential issues with the casing were also observed. Attempts to run back in-hole were made, without success. An optical logging tool was run inside the cased hole down to the shoe depth (14 mbsf) and identified a potential break in the casing. The decision was made to run PQ rods back in hole down to 120 mbsf, using them as casing, and to continue coring operations with smaller diameter HQ rods and BHA. At 21:00 the HQ BHA was run and coring began at a depth of 121 mbsf. At 23:50 Core 34R was recovered to deck with a length of 1.58m.

3. Science Report

47 samples were taken and analysed on the 27th of May for interstitial water geochemistry, micropaleontology and microbiology. 7 cores were run through the MSCL with a total length of 15.07m.

4. Core Recovery

Hole	M0111B
Cores recovered	12
Drilled length (Coring, m)	27.68
Drilled length (Open hole, m)	n/a
Recovered length (m)	22.95
Recovery (%)	83%
Depth at midnight (mbsf)	127.04

5. Time Breakdown

00:40 Coring operations stopped in order to extract core 23H from its barrel.
02:00 Switch to rotary coring
02:30 core 24R on deck
03:25 Core 25R on deck
03:25 to 10:40 Rotary coring to 127.04m
11:00 CC, Ops, EPM, Matrix, Captain meeting
12:00 mid-day X501 team crossover
10:40 to 13:00 Pull out of hole and assess bit
13:00 – 24:00 attempting to remedy clay swelling and borehole stability issues

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

In port	n/a
Transiting	n/a
Operating	10h40m

Technical downtime	13h20m
Weather downtime	n/a
Other downtime (specify)	n/a

7. Weather

Wind 4mph from NNW. Wave height 0.5-0.8m. Clear with good visibility to horizon.

8. Planned Activity for the next 24 hours

Assessing and remedying clay swelling and borehole stability issues

Continue coring Hole M0111B

Continued sampling and MSCL protocol

9. Health and Safety and Environmental

Care to be taken when opening reefer doors as they are sticking. Matrix to remedy.

Reminder to X501 team to be aware of non-routine work while assessing borehole issues.

10. Photo of the day



Antonio Ferreira and Ni Chonchubhair squeezing samples for Interstitial Water in the Geochemistry Container. MILLER@ECORD_IODP3_NSF_squeezecake2