



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



21st May 00:00 – 21st May 24:00 East Daylight Time (UTC -4)

1. Location

Position 40.8746°N, 70.2697°W @1200hrs EDT 21st of May
IODP-MSP borehole M0111A
Prospectus borehole MV-03C
Water Depth: 42m

2. Operations Report

Preloading of the LB Robert continued until 04:00 when dumping of water commenced. At 07:00 preloading was complete and the platform was jacked up to working height (working deck approximately 10m above wave height) by 07:15. Operations began at 07:15. The X501 team prepared the working containers and set up the container laboratories and were ready to receive core by 11:00. The drilling team ran casing between 09:30 and 11:00 and tagged seabed by 13:00. Hydraulic piston coring (HPC) commenced at 13:00 and the first core on deck was received at 14:35. 3 further cores were received, curated and sampled from the HPC prior to 24:00 with a total of 10.84m of core recovery.

3. Science Report

13 sediment samples were taking for interstitial water geochemistry, micropaleontology, and microbiology from the first four cores (8 sections). Further splits from these samples were taken for geochemical analyses. All sample details were recorded in the mdis system.

4. Core Recovery Details

Hole	M0111A
Cores recovered	4
Drilled length (Coring, m)	9.5
Drilled length (Open hole, m)	N/A
Recovered length (m)	10.84
Recovery (%)	112%
Depth at midnight (mbsf)	9.5

5. Time Breakdown

00:00 continued preloading
04:00 begin dumping preload water
07:00 preload complete
07:15 jackup to platform working height around 10m above wave height
07:15 operations commence
07:30 preparing science and working containers
09:30 running casing for 1.5h
11:00 Captain, contractor, ESO and CC meeting
12:00 X501 team crossover meeting
13:00 Coring operations commence with HPC
14:35 First core on deck. Core 1 - 1.5m recovered length
17:00 core on deck. Core 2 – 2.59m recovered length
22:00 Core on deck. Core 3 – 2.64m recovered length
22:55 Core on deck. Core 4 – 2.71m recovered length
23:00 Coring using HPC continued.

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

In port	0.0
Transiting	0.0
Operating	17h
Technical downtime	0.0

Weather downtime	0.0
Other downtime (specify)	7h 0m (preloading)

7. Weather

Wind 20-24mph from ENE at 12:00. Wave height ~1.1m from ENE. Overcast with good visibility to horizon.

8. Planned Activity for the next 24 hours

Continued coring using hydraulic piston core

Curation and sampling of cores

Monitoring of weather conditions as poor conditions forecast.

9. Health and Safety and Environmental

Poor weather conditions forecast for 22nd May 2025. Helicopter and OSV transfers delayed until the 23rd. Conditions to be monitored.

X501 team advised to take care while working outside and to be careful on stairs.

10. Photo of the day



First core on deck being measured by ESO curators Geprägs (left) and Birte Winkelhues.
STEWART@ECORD_IODP3_NSF_First_Core