



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



27th July 00:00 – 27th July 24:00 East Daylight Time (UTC -4)

1. Location

Position 40.618333°N, 70.136972°W @12:00 EDT 18th July
IODP-MSP borehole M0113A
Prospectus borehole MV-04C-A
Water Depth: 53.9m

2. Operations Report

An extremely successful water pumping test was completed: all samples requested were collected and consistent data recorded. The packer was recovered and the bit washed down to the bottom of the hole without incident. Coring progressed well until operations had to be suspended on safety grounds to allow a lightning storm to pass.

3. Science Report

25 sets of samples were collected from pumped groundwater and cored sediments for geochemistry, microbiology, micropaleontology, physical properties, geochronology and noble gas analysis. No cores were scanned on the MSCL.

4. Core Recovery

Hole	M0113A
Cores recovered	4
Drilled length (Coring, m)	4.78 m
Drilled length (Open hole, m)	0
Recovered length (m)	4.78 m
Recovery (%)	100 %
Depth at midnight (mbsf)	277.74 m

5. Time Breakdown

00:00 – 13:45 Run & complete water pumping test.
13:45 – 14:45 Clear deck of testing equipment and recover packer to the deck.
14:45 – 15:10 Replace water in the string with drilling fluid.
15:10 – 17:30 Add 6 rods and wash down to 272.96mbsf.
17:30 – 21:30 Advance the borehole using HPC and ALN tools
21:30 – 24:00 Clear deck for passing lightning storm

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

In port	n/a
Transiting	n/a
Operating	21.5
Technical downtime	0
Weather downtime	2.5
Other downtime (specify)	0

7. Weather

The day began pleasantly with light winds of 5 kt from the south and east south-easterly swell of < 1 m. However visibility steadily reduced during the day to 1.5 nm by 2300 hrs. Deck work was halted at 2130 hrs as a lightning storm approached. This passed over the vessel with extremely heavy rain and frequent lightning strikes nearby. The storm had cleared by midnight to allow work to recommence.

8. Planned Activity for the next 24 hours

Continue coring using the Hydraulic Piston Corer (HPC) and Alien assembly (ALN).

9. Health and Safety and Environmental

The decks were searched for seabirds at dawn. None were found.

The team were reminded of hazards associated with returning to coring work on deck.

10. Photo of the day



Figure 1: ESO Logging Scientist Linda Luquot controlling the pumping rate of groundwater from the borehole during the pump test (photo HEUER@ECORD_IODP3_NSF_P1090958).