



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



6th July 00:00 – 6th July 24:00 East Daylight Time (UTC -4)

1. Location

Position 40.99783°N, 70.33337°W @12:00 EDT 6th July
IODP-MSP borehole M0112B
Prospectus borehole MV-08AB
Water Depth: 41m

2. Operations Report

A day of highs and lows. Unfortunately, we had to stop the upper pump test early due to a hiatus in the borehole which caused the recovered water to change from slightly opaque to dark and sandy. The decision to stop sampling and progress to the next pump depth was taken and the equipment was recovered to deck without incident. The borehole was advanced to 138mbsf using the non-coring assembly (NCA) to tag the clay for packer installation and several good quality cores were recovered. The borehole was extended to 171.7mbsf again using the NCA. The hole was conditioned and the pump run in and we had started to displace the sea water in the drill string before midnight.

3. Science Report

29 samples were taken from the pumped aquifer water for analysis of geochemistry, microbiology and noble gas analyses. Data was collected from the pump testing sensors throughout pumping. 8.89 m of core was run through the MSCL.

4. Core Recovery

Hole	M0112B
Cores recovered	5
Drilled length (Coring, m)	13.07
Drilled length (Open hole, m)	27.18
Recovered length (m)	12.98
Recovery (%)	99.3
Depth at midnight (mbsf)	171.7

5. Time Breakdown

00:00 – 05:45 Completed sea water displacement and commenced aquifer water collection.
05:45 – 06:30 Change in recovered water quality; decision to cease pumping and advance to next test depth taken.
06:30 – 08:10 Water pump equipment recovered and removed from the deck. Deck cleared.
08:10 – 13:45 Conditioned the borehole at the test pump depth and progressed to 138 mbsf
13:45 – 16:55 Alien coring to identify clay zone (138mbsf to 151.07 mbsf).
16:55 – 20:25 NCA to 171.7 mbsf (to accommodate drill string positioning) and conditioned borehole up to 147 mbsf.
20:25 – 22:04 Install packer and rest the borehole whilst replacing water sampling equipment on the deck.
22:04 – 2400 Commence water displacement.

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

Winds at 13kts from the SW at 12:00. Wave heights around 1m. Intervals of fog, rain and poor visibility improving in the evening.

8. Planned Activity for the next 24 hours

Continue with the pump test and possibly drill/core on to the next test interval.

9. Health and Safety and Environmental

The vessel was searched for stranded seabirds at sunrise. None were found.

10. Photo of the day



Figure 1 Measuring the pumping equipment on the main deck. McIntyre@ECORD_IODP3_NSF_measuring..