



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



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

1. Location

Position 40.8746°N, 70.2697°W @12:00 EDT 21st of May
IODP-MSP borehole M0111A and M0111B
Prospectus borehole MV-03C
Water Depth: 42m

2. Operations Report

From 00:00 to 04:00 continued attempts were made to fish the BHA out of the hole but this was not successful. At 04:30 the decision was made to instead pull the casing from the borehole. By 09:30, 36 m of casing was removed and assessed and preparations made to start Hole M0111B.

From 10:00 to 15:00 the drilling team ran casing from surface to 18 mbsf in Hole M0111B until hitting resistant lithologies, and the decision was made to begin rotary drilling and wash down to 62 mbsf. From 18:30 to 21:00 preparations for rotary drilling were made by hanging casing and installing the mud system. Rotary drilling (open holing) commenced at 21:00 and continued until 24:00 to a depth of 25 mbsf.

3. Science Report

Two samples were taken and processed on the 24th of May for interstitial water analyses. All sample details were recorded in the mdis system. A total of 0.62 m of core was run through the Multi Sensor Core Logger (MSCL) on the 24th of May, from Core 28 and Core 29.

4. Core Recovery

| | |
|--------------------------------------|--------|
| Hole | M0111A |
| Cores recovered | 0 |
| Drilled length (Coring, m) | n/a |
| Drilled length (Open hole, m) | n/a |
| Recovered length (m) | n/a |
| Recovery (%) | n/a |
| Depth at midnight (mbsf) | n/a |

| | |
|--------------------------------------|-----------|
| Hole | M0111B |
| Cores recovered | 0 |
| Drilled length (Coring, m) | n/a |
| Drilled length (Open hole, m) | 25 |
| Recovered length (m) | 0 |
| Recovery (%) | n/a |
| Depth at midnight (mbsf) | 34.6 mbsf |

5. Time Breakdown

00:00 Fishing continued
04:30 Pulling casing
09:30 36m of casing removed and assessed
10:00 Begin Hole M0111B
11:00 Ship meeting with captain, Matrix, CC, Ops, EPM
12:00 X501 team Crossover
10:00 to 15:00 Running casing from surface to 18 mbsf.
15:00 to 18:30 attempting to advance beyond 18 mbsf without success
18:30 to 21:00 installing casing hanger and mud return system
21:00 to 24:00 rotary drilling from 18 mbsf to 34.6 mbsf.

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

| | |
|---------------------------------|-----|
| In port | n/a |
| Transiting | n/a |
| Operating | 14h |
| Technical downtime | 10h |
| Weather downtime | n/a |
| Other downtime (specify) | n/a |

7. Weather

Wind 19mph from the W at 1200h. Wave heights 1.2 to 2m from SSW. Visibility good to horizon. Winds increasing during the day from the west.

8. Planned Activity for the next 24 hours

Rotary drill/wash down to 62 mbsf

Begin coring from 62 mbsf using HPC

Sampling and MSCL analysis to continue with cores from M0111B

9. Health and Safety and Environmental

Reminder to X501 team to be aware of non-standard operations on deck.

Drillers and crew to be washing mud from deck – X501 team to be aware of slippery conditions.

10. Photo of the day



Ellie Miller showing the X501 geochemistry team updates on splitting the Interstitial Waters in the Geochemistry container.
NICHONCHUBHAIR@ECORD_IODP3_NSF_GeochemSplits1.