



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



**23<sup>rd</sup> May 00:00 – 23<sup>rd</sup> May 24:00 East Daylight Time (UTC -4)**

**1. Location**

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

**2. Operations Report**

Coring operations continued from 00:00 with Core 14 on deck at 00:50. Coring continued using the HPC to return 15 cores until 15:25 when Core 29 was received on deck. Total advancement was from 33.35 mbsf to 63.65 mbsf with a total drilled depth of 30.3 m.

7 new expedition team members arrived on the LB Robert: 6 by helicopter transfer between 10:50 and 18:00 and 1 by Offshore Supply Vessel (OSV).

While trying to recover Core 30H, the drilling crew encountered a stuck core barrel. At 17:30 the decision was made to cut cable and pull out of hole. Fishing commenced at 19:00 with successful retrieval of cable at 20:00. Attempts to recover the core BHA continued until 24:00 alongside assessment of casing condition.

**3. Science Report**

Fifty-two samples were taken from the cores for interstitial water geochemistry, micropaleontology, and microbiology. Splits from these samples were taken for additional geochemical and microbiological analyses. As part of the microbiological analyses, microspheres were successfully deployed in Core 25 to allow assessment for potential contamination. All sample details were recorded in the mDIS system.

A total of 25.68 m of core, from Core 13 to Core 27, was run through the Multi Sensor Core Logger (MSCL) .

**4. Core Recovery**

<b>Hole</b>	M0111A
<b>Cores recovered</b>	16
<b>Drilled length (Coring, m)</b>	30.3
<b>Drilled length (Open hole, m)</b>	n/a
<b>Recovered length (m)</b>	28.68
<b>Recovery (%)</b>	95%
<b>Depth at midnight (mbsf)</b>	63.65

**5. Time Breakdown**

00:00 Coring using HPC continued  
00:50 Recovered Core 14 – 2.45m  
00:50 – 15:25 Coring using HPC continued to 63.65 mbsf  
15:25 Recovered Core 29 to deck  
16:30 Encountered issues with casing movement  
17:00 Issues with stuck core barrel  
17:30 Cut cable and pull out of hole  
19:00 Fishing commences  
20:00 Removal of cable successful  
20:00 – 24:00 Continued fishing for core BHA

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

<b>In port</b>	n/a
<b>Transiting</b>	n/a
<b>Operating</b>	15h25m
<b>Technical downtime</b>	8h35m
<b>Weather downtime</b>	n/a
<b>Other downtime (specify)</b>	n/a

## 7. Weather

Wind 13mph from the W at 1200h. Wave height around 1.5. Visibility good to horizon. Some cloud cover.

## 8. Planned Activity for the next 24 hours

Continued fishing for drill rod.

Assessing casing condition.

Assessing operational strategies for second borehole.

## 9. Health and Safety and Environmental

Reminder to staff to take care where deck is still wet from rain.

Keep clear of starboard deck while crew and cargo coming aboard from OSV.

Helicopter safety briefing to be organised for staff transferring off the vessel on the 31<sup>st</sup> of May

## 10. Photo of the day



Expedition 501 Outreach Officer Andrea Vale and crew members coming onboard via Billy Pugh transfer from the Offshore Supply Vessel. STEWART@ECORD\_IODP3\_NSF\_OSV\_Transfer