



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



**26<sup>th</sup> July 00:00 – 26<sup>th</sup> 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**

Water was successfully extracted from the borehole all day, initially to replace the water that had been flushed into the string with water from the borehole formation. Once it had settled the water was replenished at a constant rate and there was little need for us to adjust the pump speed to maintain the flow. Sampling commenced at 19:00 and continued through the night

**3. Science Report**

42 sets of groundwater samples were taken for noble gas analysis, geochemistry, microbiology and geochronology. Four calibration sections were run on the MSCL for QA/QC.

**4. Core Recovery**

<b>Hole</b>	M0113A
<b>Cores recovered</b>	0
<b>Drilled length (Coring, m)</b>	0
<b>Drilled length (Open hole, m)</b>	0
<b>Recovered length (m)</b>	0
<b>Recovery (%)</b>	0
<b>Depth at midnight (mbsf)</b>	272.96 m

**5. Time Breakdown**

00:05 – 19:00 Pump water from the drill string (whilst being replenished by formation water).  
19:00 – 24:00 Sampling water from the formation.

**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>	24
<b>Technical downtime</b>	0
<b>Weather downtime</b>	0
<b>Other downtime (specify)</b>	0

**7. Weather**

A much more pleasant day with sunshine but cooler temperatures and a steady 12 kt breeze from the NE. Light swells of c. 1 m from the South south-west and visibility up to 10 nm, but becoming increasingly hazy over the day.

**8. Planned Activity for the next 24 hours**

Complete the pump test and 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.

A Science Team member slipped and fell on the lower deck, badly bruising their knee. Ice was applied and the scientist took every opportunity available to rest and elevate the knee.

The X501 team were reminded to stay hydrated and wear sunscreen in hot conditions.

## 10. Photo of the day



Figure 1: Science Team member Alizé Longeau filling vacuum flasks with samples for analysis of noble gases Argon, Krypton and Xenon (photo [GEPRAEGS@ECORD\\_IODP3\\_NSF\\_Noble\\_Gas\\_Sampling](mailto:GEPRAEGS@ECORD_IODP3_NSF_Noble_Gas_Sampling)).