



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



**24<sup>th</sup> July 00:00 – 24<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**

Coring proceeded until mid-morning when a potential aquifer sand was recovered. After proving sufficient depth it was decided to set the packer and attempt to extract water from the formation. The operation was completed in good time without any issues. The initial extraction of water from the drill string proceeded well until late in the evening when the pump failed. Rebound of the water level was recorded but after an hour it was noted there was no further increase in water into the string. Similar situations have been seen in previous tests at different sites. It was decided to recover the MP1 pump and packer assembly and abandon the pump test at this depth.

**3. Science Report**

20 sets of samples were taken for micropaleontology, sedimentology, microbiology, physical properties, paleontology and geochemistry. 27 core sections were run through the MSCL, a total of 20.89 m.

**4. Core Recovery**

<b>Hole</b>	M0113A
<b>Cores recovered</b>	14
<b>Drilled length (Coring, m)</b>	40.57 m
<b>Drilled length (Open hole, m)</b>	0
<b>Recovered length (m)</b>	35.67 m
<b>Recovery (%)</b>	87.9 %
<b>Depth at midnight (mbsf)</b>	256.56 m

**5. Time Breakdown**

00:00 – 09:45 Advance of the borehole using ALN corer.  
09:45 – 12:40 Borehole cleaned by flushing with mud before replacing this with fresh water.  
12:40 – 14:15 Rods tripped to packer depth, water level checked and MP1 pump lowered.  
14:15 – 21:53 MP1 pump switched on  
21:53 – 22:54 Monitor water level rebound  
22:54 – 00:05 Removal of MP1 pump from the CHD string and deck cleared in preparation for packer recovery.

**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>	
<b>Weather downtime</b>	
<b>Other downtime (specify)</b>	

**7. Weather**

Another sunny day with south-south westerly winds freshening from 7 to 14 kt through the day and very gentle south easterly swell of less than 1 m. Visibility remained clear to the horizon throughout.

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

Condition the borehole and advance to planned terminal depth.

## 9. Health and Safety and Environmental

A shackle fell to the deck from the main crane, landing initially on the ESO Curation container and then bouncing on a tarpaulin covering Main St. It is thought it had worked itself loose in the breezy conditions, at the end of a dangling strop. No one was hurt although ESO staff, scientists and Boart Longyear drillers were on deck at the time.

The ship's crew moved quickly to lower the crane hook, and remove all remaining strops and shackles. The crew were instructed to ensure no rigging is to remain attached when the crane is not in use. All ESO staff and Science Team were informed and reminded to observe PPE rules at all times when on deck.

The team were reminded to take precautions due to the strong sunshine.

## 10. Photo of the day



*Figure 1: The drilling team deploy the packer downhole in preparation for the pump test at Site M0113A (photo Brickell@ECORD\_IODP3\_NSF\_Packer\_install\_24.07).*