Daily Drilling and Scientific Report for IODP Expedition 347, Baltic Sea Paleoenvironment

30th Sep 00:00 – 30th Sep 24:00 GMT

1. Location
11° 40.229’ E   56° 37.204’ N (M0060B)

BSB-1 – Anholt
Water Depth: 31.2 m

2. Activity Summary
Continue operations at M0060B.

3. Science Report
The microbiology hole, Hole M60B, at the Anholt station BSB-1 was initiated just before midnight. The first piston core had retrieved well sorted sand. The second core came up empty. The following cores were somewhat disturbed with free water around the core. Cores improved rapidly in quality, however, over the following 10 m as the sediment gradually changed from clayey sand to clay. The clay content is clearly of importance to microbiology as it makes the sediment coherent and less permeable, thereby reducing the risk of contamination from drilling mud and seawater. Drilling mud was used down to 30 mbsf to stabilize the upper sandy part of the hole. Sea water only was used below 30 mbsf. After the first problematic cores at the top of this hole, the large sampling program for microbiology and geochemistry progressed well. The clayey sediment gave a good return of pore water from the Mannheim squeezer. Due to the instability of the lower part of hole M0060A it was decided not to drill the microbiology hole deeper than 100 mbsf. The depth intervals of requested samples for microbiology and geochemistry were therefore reduced in order to provide a sufficient number of samples.

4. Core Recovery Details

<table>
<thead>
<tr>
<th>Hole</th>
<th>M0060B</th>
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<tbody>
<tr>
<td>Cores recovered</td>
<td>24</td>
</tr>
<tr>
<td>Drilled length (Coring)</td>
<td>76.3 m</td>
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<tr>
<td>Drilled length (Open hole)</td>
<td>N/A</td>
</tr>
<tr>
<td>Recovered length</td>
<td>78.84m</td>
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<tr>
<td>Recovery</td>
<td>103.3 %</td>
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<tr>
<td>Depth at Midnight</td>
<td>85.7 m</td>
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5. Weather
Fair, wave heights of 0.4 - 0.6 m; winds ESE - E, 10 - 14 kts, gusting 12 - 17 kts; 7°C.
Next 24 hrs: Fair, wave heights of 0.4 – 0.7 m, winds E-ESE, 11 –15 kts, gusting 13 - 19 kts. 8°C.
High pressure centre drifting into the southern Baltic Sea, interacting with the low in the west to increase winds.

6. Planned Activity for the next 24 hours
Carry out logging at M0060B and commence transit to M0061, via Copenhagen anchorage.

7. Health and Safety and Environmental
Alex Wulbers left the vessel.