

21<sup>st</sup> Oct 00:00 – 21<sup>st</sup> Oct 24:00 GMT

### 1. Location

15° 13.584' E 55° 43.262' N

BSB-5, Hanoe Bay

### 2. Activity Summary

Continue coring operations at M0064A, attempt to downhole log M0064A and then core M0064B and start operations at M0064C.

### 3. Science Report

Drilling of the first hole, M0064A, at Station BSB-5 in Hanoe Bay continued during the day, going through very compacted diamicton of sandy clay with some gravel. From 39 to 41 mbsf well sorted sand was collected. At 41mbsf the sedimentary bedrock was encountered and a short core of the chalk was sampled with some gravel and stones on top. Drilling of Hole M0064A was then terminated.

After the *Greatship Manisha* had moved c. 20 meters, Hole M0064B was started and the first core returned almost 3 meters of glacial clay without any detectable Holocene sediment on top. After having cored several metres of an increasingly coarse gravel, it was decided that the risk of the gravel caving in and getting the core barrel stuck was too great and the hole was terminated. The vessel moved 40 meters across to location M0064C. Here the upper 7 meters consisted of pure glacial clay but without any clearly visible varves.

It was realized that at a depth interval between 40 and 70 mbsf of the microbiology hole (M0063E) from the Landsort Deep, Station BSB-9, the upper section of each piston core was strongly disturbed. This conclusion came from interstitial water data in which the smooth profile of low salinity at that depth interval showed spikes of slightly higher salinity that deviated from the precedence set by the profiles from the earlier holes at the same site. In order not to risk potential contamination in the microbiology and geochemistry samples taken from core section 1 of runs 21 – 36, re-sampling of section 2 of each of these cores was carried out. The lower sections generally showed varving which was an indication that they had not been disturbed.

### 4. Core Recovery Details

Hole	M0064A	M0064B	M0064C
Cores recovered	22	5	7
Drilled length (Coring)	22m	10.2m	15.7m
Drilled length (Open hole)	0	3m	0
Recovered length	12.91m	7.14m	15.16m
Recovery	58.68%	70%	96.56%
Depth at Midnight	41.5 mbsf	10.2 mbsf	15.7 mbsf

### 5. Weather

Rain, often heavy, wave heights of 0.5 – 1.25 m; winds S – SW becoming NE, 6 - 18 kts, gusting to 22 kts; Max 15°C.

Next 24 hrs: Fair, with patchy mist / fog forecast for the evening, wave heights of 0.8– 1.2 m, winds S, 17 –13 kts, gusting to 26 kts. 12°C.

A strong low pressure in the North Sea and high pressure over Europe will persist, causing fresh to strong S – SW winds.

### 6. Planned Activity for the next 24 hours

Continue coring operations at BSB-5, Hanoe Bay and log either Hole M0064B or M0064C.

7. Photo of the day



Microbiology sample transfer  
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