

April 17, 2005

## IODP EXPEDITION 306: NORTH ATLANTIC CLIMATE 2 WEEK 6 REPORT

### OPERATIONS

TRANSIT TO SITE U1315: During the remaining transit to Site U1315 we endured moderate to heavy rolling and pitching as the ship sliced through the large north northwesterly swells. Vessel speed fluctuated between 9.0 and 11.5 knots due to highly variable "eddies" of the North Atlantic Current. The captain set a course of 70° to Site U1315 via the eastern side of the Faroe Islands to minimize weather/wind effects and to take maximum advantage of the northerly current. Although this course was ~ 80 nmi longer, we actually made better time than had we taken the shorter more direct route up the western side of the islands. The ship completed the 1190 nmi transit at an average speed of 10.5 knots. The ship arrived at the target location April 15 and by 11:20 hr the positioning the beacon was deployed officially beginning operations at Site U1315.

SITE U1315 (PROSPECTUS SITE 642), HOLE U1315A: After verifying the seafloor depth with the TV/sonar system (1283.0 mbrf), the drill string was recovered back to the drill ship and preparations began for assembly and deployment of the "elevated" reentry cone assembly and 10-3/4" casing string. Following assembly, the drill string, with the reentry cone structure, 10-3/4" casing, and the mud motor and under reamer drilling assembly was tripped to the seafloor, spudding Hole U1315A at 21:30 hr 15 April. The base of the reentry cone reached the seafloor at 0515 hr the morning of 16 April, resulting in an average rate of penetration of 21.9 m/hr. The drill string was released from the reentry cone/casing assembly at 05:50 hr April 16 and then recovered back to the ship.

The drill string was reassembled with a cementing BHA and reentry cleanout bit, was tripped to the seafloor, and Hole U1315A was reentered at 2026 hr 17 April. A 5 barrel 15.8 ppg cement plug was displaced to bottom. The pipe was pulled clear of the seafloor/reentry cone and the vessel was offset 30 m south where the drill pipe was thoroughly circulated clean. After allowing the cement to set, we reentered the hole and lowered the pipe, tagging the top of the cement at ~164.2 mbsf or ~11.6 m above the casing shoe; within 1.6 m of our 10.0 m target height for the top of the cement column. After displacing the casing string with bentonite mud, the drill string was retrieved in preparation for the CORK deployment in Hole U1315A.

### SCIENCE UPDATE

A science meeting was held on Thursday afternoon to present and discuss the scientific results from Site U1314 (Prospectus Site GAR1B). By Sunday midnight, most Site U1314 reports had been submitted to the co-chiefs' office for review.

### TECHNICAL SUPPORT AND HSE ACTIVITIES

LABORATORY REPORT: Backlogged cores from Site U1314 were processed and finished during transit to Site U1315. All sections and samples were supported by all lab instrumentation. In the refrigerated storage space, a table has been set up for use by Expedition 307 microbiologists. The H<sub>2</sub>S alarm system has been serviced calibrated and is being re-installed. The O<sub>2</sub> sensors also are being installed.

The end of expedition schedule has been posted; shipping papers for off going shipments are being prepared.

HSE: Fire and Boat drill instructions again emphasized the importance of taking coats, proper shoes and survival suits into the lifeboats to survive Arctic conditions. The ship doctor explained how the survival suit could save one from succumbing to hypothermia. He also stressed the value of everyone taking seasick medication immediately after joining the lifeboat.