

March 27, 2005

IODP EXPEDITION 306: NORTH ATLANTIC CLIMATE 2 WEEK 3 REPORT

OPERATIONS

STANDING BY: The drill ship remained in DP mode positioning in the lee of the Azorean Islands of Sao Jorge, Pico, and Terceira until 0630 hr Saturday, March 26, 2005. This location was located ~290 nmi from Prospectus Site IRD-3A. During this period a steady stream of low pressure cells transited across the IRD-3A/4A locations on approximately a 48 hr cycle, which was not enough time for the winds, seas, and swells to die down to acceptable levels before the next storm arrived. Essentially the entire North Atlantic was dominated by multiple low pressure cells cycling around the periphery in a counter clockwise direction. The strength and path of these lows generated highly confused sea states with high wind and multiple swells coming from different directions. Finding an optimum ship's heading was difficult to impossible. These storms varied in intensity from severe gale to storm force and even hurricane force. Weather and sea state conditions within our "sheltered" location were such that drilling operations could not even have been conducted there. While waiting-on-weather (WOW) we experienced winds in excess of 50 knots along with seas of 18 ft and swells of 25 ft. The JOIDES Resolution was rolling/pitching more than 4-5° during this period. Conditions on the IRD-3A location were much worse with the last storm bringing with it sustained winds in excess of 65 knots on the leading edge. All of these storms traveled from west to east across the IRD-3A location and then began to curve to the northeast and ultimately north. Research indicated that this has been the worst Atlantic storm season within the last 3 decades (since 1975).

Weather forecasts from NOAA, United Kingdom, Canada, and Europe were monitored several times daily looking for a window of opportunity to occupy and core at Site IRD-3A. Optional operations plans along with the latest weather forecasts were considered in daily meetings. Finally, by Thursday March 24, the cycle of low pressure began breaking down with several high pressure areas beginning to appear on the weather maps. Even with the slow and steady drop in wind velocity it took nearly 48 hours before sea states came down to a level that would allow us to transit to the IRD-3A location. At 0630 hr Saturday March 26, we ended WOW and got underway for Site U1313 (IRD-3A). Over 8 days of WOW time have been lost to date on Expedition 306.

TRANSIT TO SITE U1313 (Prospectus Site IRD-3A): The transit to Site U1313 began with sea state conditions still somewhat marginal but expected to improve continuously over time. Unfortunately our course to the drill site required us to steam directly into the wind and seas with multiple swells still causing an inordinate amount of vessel roll/pitch. Although somewhat uncomfortable for all aboard, the 277 nmi transit was ultimately completed at an average speed of 8.9 knots. At 1425 hr Easter Sunday, 27 March, positioning beacon SN2199, 15.0 kHz, 211 dB, was deployed officially beginning Hole U1313A.

HOLE U1313A: As of midnight 27 March, the drill string had been tripped to the seafloor, a PDR reading of 3431.4 mbrf had been obtained, and the APC core barrel had been deployed to bottom. Hole U1313A was ultimately spudded at 0005 hr, March 28, establishing a rig floor corrected sea floor depth of 3423.3 mbrf.

SCIENCE UPDATE

The pre-Site U1313 science meeting was held at the beginning of the week to introduce and

provide background scientific information on our next drilling location at Site IRD-3A (DSDP Site 607). Explanatory Notes and Site U1312 reports have been finalized and submitted to the Yeoperson. To better use the operational downtime caused by the severe weather conditions at the drill sites, the co-chiefs and staff scientist organized daily presentations by members of the scientific party, a comprehensive tour of the ship was given by the Operations Superintendent, and an imaging workshop taught by the Marine Image Specialist.

Normal coring operations were resumed on Easter Sunday and the first core from Hole U1313A was expected on deck in the early morning hours of Monday March 28.

TECHNICAL SUPPORT AND HSE ACTIVITIES

WOW presented an opportunity to initiate and complete the upgrade of the XRD, with a newer controller card and support software. The reoccurring errors generated by the AMST may now be eliminated with the re-installing of the software. Communication errors associated with the MST and PWL were attributed to a track value not be entered when the single control platform was installed. Some shore assignments were worked on.

Physical counts of inventoried items were conducted in all spaces.

HSE: Because of electrical work being done on Lifeboat 1, those assigned to the boat were directed to their alternate lifeboat. The life boat was lowered by IODP personnel to the embarkation level. Muster for the drill was a little more complicated with so many people in the area, high wind, and the concurrent racket of a Portuguese military helicopter, which was given permission to conduct "person in the sea" rescue practice utilizing the JR's helicopter deck.