

**September 13, 2004**

**IODP EXPEDITION 301T: TRANSIT/COSTA RICA APL  
WEEK 3 REPORT**

**OPERATIONS**

SITE OPERATIONS: Attempt to position vessel for re-entry into Hole 1255A. First re-entry attempt lasted 9 hours. Ran in with core line, latched onto OsmoSampler string, retrieved, disconnected from CORK and laid out OsmoSampler on core receiving platform. Made up new OsmoSampler string and inserted same into drill pipe. Re-connect to CORK (1.75 hours) and lower OsmoSampler string to depth. Attempt to disconnect coring line from OsmoSampler string. Disconnect from CORK and discover that OsmoSampler shear pin did not shear as intended. Reconnect to CORK (0.5 hours) and try again. This time the OsmoSampler successfully deployed. Disconnect from CORK at Hole 1255A and move in DP mode back to Site 1253. Position vessel to latch CORK at Site 1253 (1.75 hours). Ran in hole with coring line to check that hole was empty of OsmoSampler string and to what depth the hole was open. Managed to go to 4920 meters and stopped. Attempted to pull coring line out of the hole and discovered that the coring line was stuck. Worked line up and down and managed to free wire line. Pulled coring line out of Hole 1253A, disconnect from CORK and made up OsmoSampler string for Hole 1253A. Ran back in the hole with the OsmoSampler string for Hole 1253A while maneuvering the vessel to hatch back on to Hole 1253A. Latched on after 1.5 hours and deployed OsmoSampler string. Successfully release OsmoSampler string and pulled coring line out of the hole. Unlatched from Hole 1253A CORK and began bottom survey to find OsmoSampler string which was dropped during first recovery attempt on arrival at Site 1253A. After systematically surveying the sea floor around Site 1253A for 7.5 hours, the OsmoSampler string was located. Stabilized position over OsmoSampler and pull underwater TV camera. Rigged up grapple assembly to underwater TV camera and ran back into hole (4270m) to fish for OsmoSampler. Made successful pass with fishing tool and started pulling underwater TV camera to surface. Camera and VIT frame arrived on surface with upper OsmoSampler, wireline jars, 500 meters of Spectra rope and other miscellaneous hardware left by submersible Alvin. Lower OsmoSampler was not recovered and it is unknown whether the lower sampler was left in Hole 1253A or remains on the seabed. After successful recovery of upper OsmoSampler from Site 1253, pulled drill string back to transition joint of the Bottom Hole Assembly. Recovered beacons from Site 1253 and Site 1255 during trip out of the hole. Rigged up Schlumberger for a test of Schlumberger's active heave compensating wireline logging winch. After concluding Schlumberger test, rigged down Schlumberger and pulled out of hole with BHA, laying out and securing all components for transit to Panama. Underway at 1130 hours on 8 September.

TRANSIT: Began transit to Panama at 1130 hours 8 September 2004. Total transit distance 522 nm. Arrived at Panama anchorage at 1200 hours 10 September 2004.

SITE SECURITY: During occupation of sites 1253 and 1255 and transit, the JR operated under a security level of MARSEC Level 1 (Yellow) and appropriate security measures were in effect.

**SCIENCE**

Recovered OsmoSampler string from Hole 1255A. Opened tool and removed samples to lab. Sub-sampled Hole 1255A fluids for shipboard measurements of alkalinity, ammonium and salinity. Sub-sampled for wide variety of post cruise analysis. Sub-sampled fluids from the flow meters for post cruise analysis to determine flow rates.

Recovered upper OsmoSampler string from Hole 1253A. Opened tool and removed samples to lab. Sub-sampled Hole 1253A fluids for shipboard measurements of alkalinity, ammonium and salinity. Sub-sampled for wide variety of post cruise analysis.

### **TECHNICAL SUPPORT AND HSE ACTIVITIES**

The technical staff has been assisting the scientific party as they prepare for the retrieval and replacement of two OsmoSamplers as part of the Costa Rica APL. There was a meeting of the technical staff and scientists to explain the planned activities and coordinate the staff in the sampling, labeling, analysis and packing of the retrieved water samples. There was also an operation meeting to explain the planned deployment and retrieval activities at both sites.

The new technicians have been training in their respective labs. The technical staff is also cross training in different labs during the transit. ET's resolved the problems with the towed magnetometer by rebuilding the towed fish. Training on the balance systems is continuing for the staff as they optimize the fine-tuning and calibration. Standards are being prepared to calibrate the analytical instruments in the chemistry lab.

The Computer System managers have been preparing for the videoconference test planned for later in the week. The inSORs multi-media conferencing and collaboration software will be tested, broadcasting voice and video over a number of different bandwidths. The ship recently switched satellites on the Vsat system as we transit through the Pacific and prepare to enter the Atlantic Ocean.

Two JOI personnel are sailing during the transit to photo document the labs and conduct interviews with personnel. Stereoscopic photos are being taken of various labs and locations on the ship and personnel are being interviewed and filmed.

The staff is preparing the shipments of microbiological samples from expedition 301 that will be offloaded when the ship arrives in Panama. Some of the samples are live cultures stored in refrigerated containers while other samples are deep frozen (-80 C) DNA studies.

Core recovery:	None
Samples collected:	None

HSE: A scheduled fire and boat drill was conducted 6 September. Those not involved proceeded to their lifeboats. At the conclusion of the drill the lifeboats were all lowered to the water and tested. Technical personnel are continuing to sign up for mandatory safety training courses developed to educate the sea-going staff and satisfy international marine safety requirements.