IODP EXPEDITION 308 DAILY SCIENCE REPORTS
5 June–4 July 2005

TO: Tom Davies
FM: Cédric John

JA Daily Science Report for Expedition 308, 05 June 2005

LOCATION: in transit to Site U1319

SCIENCE UPDATE: The day has been used in final preparation of the labs, writing of the "methods" chapters of the Expedition reports, and preparation of the sampling plan. An introduction on the geological significance and the operation planned at Site U1319 was given, as well as a sampling class to the scientists.

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JA Daily Science Report for Expedition 308, 06 June 2005

LOCATION: Site U1319

SCIENCE UPDATE: We arrived at the location of Site U1319 (proposed Site BT4-4A) at 1315 on June 6th. Preparations were then made for the deployment of the T2P probe, an experimental probe measuring in-situ temperature and pressure in the formation. Pressure and temperature were measured continuously from the surface to the mudline, with two stops (500 meters and 1000 meters below rig floor) to calibrate for pressure. After recovering the probe, pressure at 1390 mbsl read 2026 psi and temperature was about 4 C, and the test was considered a success. As of 2400 no core was on deck.

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JA Daily Science Report for Expedition 308, 07 June 2005

LOCATION: Site U1319

SCIENCE UPDATE: The lithologies recovered at Hole U1319A included mainly hemipelagic clays (ranging from greenish gray to brown), with minor intercalations of fine sand and silt. Frequent cm-scale sandy layers in core U1319A-2H (between 4.5 and 14 mbsf) were interpreted as a series of distal turbidites, and a 2 cm thick white ash layer was recovered at 22.7 mbsf in core U1319A-3H, section 6. This ash layer could provide a useful regional stratigraphic marker. The T2P probe was deployed in the hole for the first time, but due to the fact that the formation was stiffer than anticipated, the tip of the probe was bent and the data may not be reliable. Since all scientific objectives for the site were fulfilled, a decision was made to stop coring operations when the last seismic unit was penetrated (at 150 mbsf). As of 2400, core U1319A-5H was being described and the vessel was steaming to the location of Site U1320.

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JA Daily Science Report for Expedition 308, 08 June 2005

LOCATION: Site U1320

SCIENCE UPDATE: The main lithology recovered at Hole U1319A between Core U1319A-5H and U1319A-18X (last cored interval for the hole, 156 mbsf) is a greenish-gray mud mixed with discreet intervals rich in organic matter. The preliminary interpretation for this interval (35-156 mbsf) is an intercalation of very fine-grained distal turbidites and hemipelagic deposits (Td and Te in Bouma terminology). Micropaleontology indicates that sediments above 30 mbsf in this hole were deposited in a time-window between Isotopic Stage 1 and Isotopic Stage 5 (MIS 1 to MIS 5). Below the 30 mbsf depth marker and staring in Core U1319A-4H, the preliminary interpretation is that sediments are at least as old as MIS 6, but could be older. As of 2400, no core from Hole U1320A were analyzed. Based on drilling operation is appears that the top-cored interval of Hole U1320A was predominantly sandy, but a 3rd T2P probe deployment was attempted as soon as a suitable, clay-rich interval was identified (126.3 mbsf, top of Core U1320-16X). The thickest available needle was used at the tip of the probe, but formation stiffness again forced the probe to slightly bend. Temperature and pressure were successfully recorded and these data are currently being analyzed.

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JA Daily Science Report for Expedition 308, 09 June 2005

LOCATION: Site U1320

SCIENCE UPDATE: The major lithology in Core U1320A-1H is a greenish gray clay with rare sponge spicules, interbedded with small sandstone layers. This clayey lithology can still be observed downhole at Site U1320, but it is interrupted by three sandy horizons (7-26 mbsf, 42-56 mbsf, and 67-69 mbsf) interpreted as a series of sandy turbidites. As expected prior to drilling, all sedimentary features of Hole U1320A point to a very dynamic sedimentation regime characterized by frequent sediment reworking. The T2P probe was deployed for the fourth time at 213 mbsf in Hole U1320A. For this run, the bottom hole assembly (BHA), was placed only 1 meter above the sea floor. This allowed us to better center the probe and resulted in the tip of the T2P not being bent. Data from this deployment are still being analyzed, but data analysis from the third T2P run (126.3 mbsf, June 8th) yielded an in-situ temperature of 7.2 degrees C and indicated that in-situ pressure dissipated from 2520 to 2067 psi over a 45 minute period. Since all science objectives were fulfilled at Site U1320, a decision was made to stop drilling operations at 300 mbsf and preparation were made for wireline logging. Logging operations started shortly after 2400.

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JA Daily Science Report for Expedition 308, 10 June 2005

LOCATION: Site U1320

SCIENCE UPDATE: The lithologies between Core U1320A-11X and Core U1320A-15X consist of mud mixed with meter-scaled intervals of sandy turbidites. The lithologies become progressively finer-grained downhole, mainly consisting of mud with minor

intercalations of silt from Core U1320A-15X to Core U1320A-17X (193 mbsf), and then dominated by clays and mud below 193 mbsf. The coarsening-upward sequence in Hole U1320A is interpreted as an increase in the frequency of sandy turbidites through time and is tentatively linked to periods of lower sea-level. Downhole logging of Hole U1320A was undertaken with 3 tool strings: the triple combo, FMS-sonic, and well seismic tool (WST). All tools reached the bottom of the hole, and the logs obtained were good. A contact between the turbidite fan sediments and the stiffer hemipelagic mud unit was clearly identified at 174 mbsf. Logs in the shallower part of the section (turbidite fan) show alternations between sand and mud, whereas the trends are monotonous in the hemipelagic mud unit. This confirms sedimentologic observations and seismic interpretations. Well seismic measurements were undertaken, but in accordance to the IODP Marine Mammal Safety protocols, these operations were interrupted when a bottle nosed dolphin was spotted. After no more marine mammal sightings were reported for 45 minutes, the soft start protocol was started again and 12 WST stations were completed without further incidents.

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JA Daily Science Report for Expedition 308, 11 June 2005

LOCATION: Site U1320

SCIENCE UPDATE: The main lithology in the last cores at Site U1320 was a brownish to greenish gray clay interpreted as a hemipelagic unit. An effort was made to identify Ash Layer Y8, a regional marker dated at 84 000 years BP. Based on projections for the depth of this marker at Site U1320, sedimentologists revisited key cores and finally identified the layer at 143.5 mbsf, in Section U1320A-17X-6. The layer is a discreet, very thin grayish horizon, but analysis of a smear slide confirmed its volcanic origin. The position of the layer and preliminary results from micropaleontology confirm that Site U1320 has a more expended sediment cover than the more proximal Site U1319. One of the unexpected discoveries was the amount of sand at Site U1320, which was greater than anticipated. Hole U1320B was dedicated to MWD/LWD, and these operations went well. The logs were good and should be analyzed shortly, and the major trends identified in wireline logging were also observed in MWD/LWD logs.

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JA Daily Science Report for Expedition 308, 12 June 2005

LOCATION: Site U1321

SCIENCE UPDATE: MWD/LWD operations in Hole U1320B were terminated at 0330, and the vessel was moved in DP mode to Site U1319. Hole U1319B was dedicated to MWD/LWD, and these operations started at 0945 and were terminated at 2215. In view of the operation time left in the Brazos-Trinity Basin, we decided to pursue MWD/LWD operations at one contingency site (proposed site BT4-3A) situated in between sites U1319 and U1320. The scientific rational for drilling this MWD hole (U1321A) is to trace the lateral variations in thickness of sandy turbidites. As of 2400, the JR was in transit to Site U1321. The real time pulse data obtained for Holes U1319B and U1320B is of good quality from 30 mbsf to the target depths. The LWD data still needs to be downloaded, but preliminary data from the MWD gamma ray and resistivity highlight alternating sequences of shale and sand in Holes U1319B

and U1320B. These results are consistent with wireline logging and visual examination of the cores.

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JA Daily Science Report for Expedition 308, 13 June 2005

LOCATION: Site U1321

SCIENCE UPDATE: MWD/LWD operations in Hole U1321A began at 0130 and were terminated at 1500 on June 13. The logged interval at this site ranged from 13 to 140 mbsf, and it was drilled at a rate of 30 m/hour. MWD logs were of good quality, and show trends similar to what was observed at Sites U1319 and U1320. The high-resolution LWD data needs to be downloaded and analyzed before stratigraphic correlations between sites U1319, U1320, and U1321 can be established. As of 2400, the vessel was sailing towards the Ursa basin where MWD/LWD operations will begin on June 14 at a projected time of 1800.

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JA Daily Science Report for Expedition 308, 14 June 2005

LOCATION: Transit to Ursa basin (Site U1322)

SCIENCE UPDATE: The day was spent transiting from the Brazos-Trinity IV minibasin to the Ursa basin. The transit time was used to download data stored in the MWD/LWD tools, and to proceed with a preliminary interpretation at Site U1320. The gamma ray data in Hole U1320B indicate intercalated layers of sand, silt, and mudstone in the upper part of the hole (65 to 170 mbsf). This zone corresponds with alternating sand, silt, and mud layers described in the lithostratigraphic units of Hole U1320A. The variations between these lithostratigraphic units are evident in the FMS images, which show irregular resistivity patterns. Sand-dominated layers have lower gamma ray and resistivity values than layers dominated by clay, and the largest variation is observed in density (1.1 to 2.05 g/cm3) and neutron porosity (40 to 70%). Wash out zones ~3 m thick were encountered at 110 mbsf and 170 mbsf, and correspond to sand-rich layers. Data retrieved from 170.0 mbsf to 299.6 mbsf in Hole U1920B are very homogenous, and correlate with a lithostratigraphy characterized by mud and clays and the absence of sand layers. As of 2400, the vessel had reached the location of Site U1322 (prospectus site URS-3C), and MWD/LWD operations were about to begin.

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JA Daily Science Report for Expedition 308, 15 June 2005

LOCATION: Site U1322

SCIENCE UPDATE: Hole U1322A was spudded at 0045 on June 15, and then drilled with an MWD/LWD drill string from 3.8 to 238 mbsf. Operations proceeded smoothly down to the target depth, and resistivity and gamma ray data indicated that as predicted before drilling the lithology was a mud. For the first time in the history of IODP, a hole was logged before being cored, and MWD/LWD was tested as a viable

tool to monitor real time pressure in a hole. Additionally, the stored LWD data for Hole U1319B was analyzed. Based on this data, it appears that Hole U1319B is a relatively homogeneous mud-prone section with a normal compaction trend. Deviations from this trend exist at 25 mbsf where gamma ray has a step decrease, from 30.5-31.5 mbsf where gamma ray increases, and from 78-93 mbsf where bulk density decreases. These intervals are consistent with intervals rich in foraminifers (25 mbsf) or bearing fine silt laminae (30.5-31.5 mbsf), and with intervals of low densities as measured on discreet sediment samples (78-93 mbsf).

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JA Daily Science Report for Expedition 308, 16 June 2005

LOCATION: Site U1323

SCIENCE UPDATE: The day was spent in MWD/LWD operations at Hole U1323A. The first lithologies encountered consisted of mud, and MWD progresses were good until 207 mbsf. At 207 mbsf, a 1.5 m layer of sand was encountered, and pressure readings on the MWD tool suddely increased by 150 psi. Following the safety protocol, drilling was stopped and pressure was monitored. Since the pressure did not go down, we pumped 50 barrels of 10.5 ppg mud to control it. Once the pressure was controlled, we drilled down to 247 mbsf where a second sand layer was encountered. Although no increase in pressure was recorded, we decided that to maximize the amount of science we could gain and to conserve our mud, we should move to the URSA-1B location. The hole was filled with 13.5 ppg mud, and cemented from 40 to 140 mbsf. A VIT survey confirmed that no flow was present at the surface. Drilling in Hole U1323A has provided two important conclusions: 1) IODP has successfully applied "Controlled Riserless drilling" to prevent flow out of overpressured pockets of sand at shallow depth, and thus proved that the technique was valid for this and future expeditions, and 2) sand layers or pockets at URSA basin are overpressured at sediment depths shallower than previously thought.

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JA Daily Science Report for Expedition 308, 17 June 2005

LOCATION: Site U1324

SCIENCE UPDATE: After finishing cementing Hole U1323A and performing a VIT survey, we transited to the location of prospectus Site URSA-1B (IODP Site U1324). The beacon was deployed on Site U1324 at 1040 hr, and preparations were made for MWD/LWD operations. The sea floor was tagged at 1066.0 mbrf and Hole U1324A was spudded at 1610 hr. After washing the hole down to 5 mbsf, we started drilling with the MWD/LWD tools. As of 2400 hr, the MWD/LWD operations had advanced down to 160 mbsf, the gamma ray and resistivity tools from the MWD string indicated the presence of mud only and no sand unit was penetrated.

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JA Daily Science Report for Expedition 308, 18 June 2005

LOCATION: Site U1324

SCIENCE UPDATE: The day was dedicated to MWD/LWD operations at Hole U1324A, and the hole was deepened from 160 mbsf to 545 mbsf. The rate of penetration varied between 20 to 30 m/hour. The lithologies encountered were mainly mud with some intervals of silty material or sand. However, no over pressured zones were encountered, and operations proceeded without any delay. The targeted depth for Hole U1324A is 612 mbsf, after which coring operations at Hole U1324B should begin.

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JA Daily Science Report for Expedition 308, 19 June 2005

LOCATION: Site U1324

SCIENCE UPDATE: MWD/LWD operations at Site U1324 were continued down to the targeted depth of 612 mbsf, which was reached at 0430 hr on June 19. The lithologies encountered were mainly mud, with some intervals of coarser sediments (sand or silt). No over pressured pocket or unit were penetrated, and operations proceeded smoothly. It was decided in view of the hole condition that wireline logging with the sonic tool, WST tool and gamma ray tool would be attempted in Hole U1324A. Before wireline logging operations could begin, the MWD/LWD assembly had to disassembled, a free fall funnel was emplaced, and the hole was re-entered with a logging/cementing BHA. As of 2400 hr, the logging string was at 534 mbsf in Hole U1324A and wireline logging was underway.

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JA Daily Science Report for Expedition 308, 20 June 2005

LOCATION: Site U1324

SCIENCE UPDATE: Wireline logging operations in Hole U1324A continued with the gamma ray and sonic tools from 534 mbsf to the seafloor. This operation was completed at 0430 hr after two passes. A mammal watch was organized at 0545 hr, and the well seismic tool (WST) was deployed to obtain a vertical seismic profile (VSP). VSP operations were completed at 1245 hr, after which the vessel's position was offset and preparations were made for coring operations at Hole U1324B. Results from the VSP experiment show velocity variations in the shallower section. This data will be useful for interpretation of the seismic data. Sonic logs were of good quality but show little variations, whereas gamma ray data confirmed the trends already observed with the MWD/LWD string. As of 2400 hr, no core was yet on deck.

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JA Daily Science Report for Expedition 308, 21 June 2005

LOCATION: Site U1324

SCIENCE UPDATE: Coring operations at Hole U1324B proceeded smoothly from 0 to 144 mbsf. Four T2P and four APCT deployments took place in this interval, and the data obtained is currently being analyzed. The lithologies encountered at Hole

U1324B include a grayish-green clay from 0 to 32 mbsf (down to Core U1324B-3H). This lithology is interpreted as a Holocene hemipelagic drape deposit. From Core U1324B-4H down to Core U1324B-9H (79.8 mbsf), the major lithology remains a grayish-green clay, but minor silt layers and traces of organic matter are present. This new lithology is tentatively interpreted as a hemipelagic deposit mixed with very distal turbidite deposits, and perhaps some intervals of levee deposits. As of 2400 hr, coring operations were down to Core U1324B-16H, and Core U1324B-10H was being described.

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JA Daily Science Report for Expedition 308, 22 June 2005

LOCATION: Site U1324

SCIENCE UPDATE: The major lithology of Hole U1324B between 79.8 to 207.5 mbsf (Cores U1324B-10H to U1324-24H) is a greenish to brownish gray clay with minor layers of silt. Black, organic-rich mottling is also observed throughout most of this interval. Normal faults are present between 106 to 117.8 mbsf (in Cores U1324B-12H and U1324B-13H), and their orientations could be measured. Mud becomes present as a minor lithology in core U1324B-20H. Based on sedimentological data, the whole interval from 79.8 to 207.5 mbsf is interpreted as a hemipelagic deposit interfingered with very distal turbidites. T2P and DVTPP pressure measurements from the previous day were analyzed, and we noted that some readings indicative of pressures below hydrostatic were consistent between both tools. Comparing these abnormal readings with the deformation seen at the base of the APC cores, we inferred that the suction applied to retrieve the piston cores deformed the material sufficiently to influence pressure readings in the formation. We are currently working on a strategy to overcome this problem. The initial idea would be to take measurments only when using the XCB coring system, or in a hole dedicated to tools deployment with no coring.

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JA Daily Science Report for Expedition 308, 23 June 2005

LOCATION: Site U1324

SCIENCE UPDATE: The major lithology of Hole U1324B between Core U1324B-24H (200.4 mbsf) and Core U1324B-43H (352.7 mbsf) is a greenish gray clay interbedded with very fine silt layers. This interval is interpreted as a hemipelagic deposit mixed with distal turbidites. A 1.2 meters interval of sand in Core U1324B-37H (from 305.6 to 306.8 mbsf) was recovered, and preliminary interpretations suggest that these could be turbidic sands deposited in a channel levee. Large quantities of methane (up to 500'000 ppm) were detected in some cores, but ethane never exceeded trace amounts. This methane is thus considered to be biogenic in origin. The DVTP-P and T2P probes were deployed twice each that day. As of 2400 hr, coring operations had advanced to Core U1324B-55X (453 mbsf).

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JA Daily Science Report for Expedition 308, 24 June 2005

LOCATION: Site U1324

SCIENCE UPDATE: Between Core U1324B-44H and Core U1324B-51X (from 352.7 to 396.8 mbsf), the major lithology of Hole U1324B is a greenish gray clay. The major difference with the previous intervals is that starting in Core U1324B-46X (364 mbsf) the amount of silt material increases. Between Cores U1324B-52X and U1324B-54X (396.8 to 419 mbsf), the major lithology is a sandy silt. From Core U1324B-54X to Core U1324B-59X, the lithology is again a greenish gray clay. Visual core description has revealed that the intervals of coarser-grained lithologies observed during MWD/LWD logging were mainly composed of silt-sized sediments, not sand. Work on the DVTP-P probe was continued, and an explanation for the sub-hydrostatic pressure readings was found when it was discovered that the tool was leaking. The DVTP-P was repaired by the IODP technical staff, and is now working properly. As of 2400 hr, coring operations were down to Core U1324B-67X at 541.2 mbsf.

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Daily Science Report for Expedition 308, 25 June 2005

LOCATION: Site U1324

SCIENCE UPDATE: From 473 to 583 mbsf (Cores U1324B-60X to U1324-70X), the lithology of Hole U1324B is dominated by clay and mud intercalated with silt layers. Starting with Core U1324B-71X, sand becomes more abundant. The sandier inerval last until the last core for this hole, Core U1324B-74X, at 608 mbsf. Overall, it appears that the sedimentary succession at Hole U1324B indicates a fining upward sequence from sand to silt-rich intervals, and ultimately to hemipelagic clays. At the bottom of Hole 1024B, a successful deployment of the DVTP-P was performed. After penetrating the sediment, a peak pressure of 21.26 MPA was recorded. After one hour of dissipation, the pore pressure decreased to a final pressure of 18.93MPA. This is equivalent to a lambda* value of 0.6: the pore pressure lies 60% of the way between the hydrostatic pressure and the overburden stress. Further analysis will be required to determine how close the final dissipation pressure is to the actual in-situ pressure.

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JA Daily Science Report for Expedition 308, 26 June 2005

LOCATION: Site U1324

SCIENCE UPDATE: Hole U1324C was tagged and spudded at 0345 hr on Sunday June 26. Hole U1324C is dedicated to geotechnical coring and in-situ measurements. The 50 first meters of sediment were drilled, after which we deployed the T2P probe and took an APC core. The plan is to follow with that strategy down to 400 mbsf, drilling by 50 meter increments and alternating between T2P and DVTP-P measurements. After each measurement, an APC core was taken in order to sample the formation penetrated. Visual description of the cores revealed lithologies dominated by clay and mud, similar to what was described in Hole U1324B. Preliminary analysis of the T2P and DVTP-P data indicate that we have recovered an excellent dataset in Hole 1324C and that the probes are working well. The formation pressure at Ursa are in

between lithostatic and hydrostatic, which is in agreement with the model of overpressured basin being tested by Expedition 308. As of 2400 hr, Core U1324C-4H was being cored at 200 mbsf.

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JA Daily Science Report for Expedition 308, 27 June 2005

LOCATION: Site U1324

SCIENCE UPDATE: Cores U1324C-3H to U1324C-8H (505 mbsf) are characterized by greenish gray mud equivalent to the lithology described in Hole U1324B. Four new deployments of the T2P and four deployments of the DVTP-P in Hole U1324C resulted in good temperature and pressure data. Temperatures in Hole U1324B and U1324C range from 5oC at 50 mbsf to 17.5oC at 600 mbsf. The calculated geothermal gradient is 19°C/Km. This result is reasonable in view of the very high sedimentation rates in the Ursa basin. Pressures measured in both Holes U1324B and U1324C fall in between hydrostatic and lithostatic, thus confirming that the formation is overpressured. This data provides the first evidence that the model on which Expedition 308 was based is correct, and the pressures measured are only slightly less than what was predicted.

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JA Daily Science Report for Expedition 308, 28 June 2005

LOCATION: Site U1322

SCIENCE UPDATE: Hole U1322B was spudded at 1145 hr on Tuesday June 28. Coring operations began shortly after, but were delayed for several hours due to electrical problems. The main lithology in Cores U1322B-1H (0 mbsf) to U1322B-3H (23 mbsf) is a greenish gray laminated mud. Only the first 1.5 meter of Core U1322B-1H bears foraminifera, the rest of the interval appears barren when observed in the cores. From the top of Core U1322B-4H (23 mbsf) to Core U1322B-7H, section 5 (58.6 mbsf), numerous deformation structures such as contorted beddings, faults and S-shaped folds are visible. The interval between 23 to 58.6 mbsf is thus interpreted as a slump, and this horizon can be easily traced on the seismic lines. Below 58.6 mbsf in Core U1322B-7H, lamination in the sediment resumes and no structures are visible. This marks the base of the slump.

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JA Daily Science Report for Expedition 308, 29 June 2005

LOCATION: Site U1322

SCIENCE UPDATE: Lithologies from Core U1322B-8H to Core U1322B-10H (61 to 91 mbsf) are characterized by clay with minor amounts of silt. From Core U1322B-11H (91 mbsf) to Core U1322B-14H (124 mbsf), clay is still the dominant lithology but many signs of faulting and folding suggest that the interval represent a slump or a series of slump deposits. The dominant lithology in Core U1322B-15H is again a clay, but no evidence of slumping is visible. The DVTP-P and T2P probes were deployed in

Hole U1322B, but only one good result for pressure was obtained with the T2P. Based on the observation that the only good pressure readings at Site U1324 were obtained in the dedicated geotechnical hole, we decided to quit deploying the probes in Hole U1322B, and drill a Hole U1322C dedicated to geotechnical measurements. AS of 2400 hr, drilling operations were down to Core U1322-23H at 189 mbsf in Hole U1322B.

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JA Daily Science Report for Expedition 308, 30 June 2005

LOCATION: Site U1322

SCIENCE UPDATE: Lithologies from Core U1322B-16H (143.3 mbsf) to Core U1322B-29H (234 mbsf) are characterized by clay, with intercalations of mud and fine laminae and pockets of silt. Several intervals in these cores show deformed bedding, folding and faulting; the deformed intervals are interpreted as slumping events, whereas the more homogeneous and laminated mud and clay intervals are interpreted as a mixing between hemipelagic and turbidite deposits. After completion of Hole U1322B, operations began on Hole U1322C which is a hole dedicated to deployments of temperature and pressure tools. Several problems with the probes complicated their deployment, and it appears that some of the readings are not reliable. Therefore careful examination of the dataset will be required before any conclusions can be drawn. As of 2400 hr, drilling operations were down to 100 mbsf in Hole U1322C and the DVTP-P probe was being deployed.

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JA Daily Science Report for Expedition 308, 1 July 2005

LOCATION: Site U1322

SCIENCE UPDATE: We spent most of the day drilling Hole U1322C from 100 mbsf down to 236 mbsf, and we deployed the T2P and DVTP-P probes twice each (at 100 mbsf, 150 mbsf, 200 mbsf and 236 mbsf). For various technical reasons, many deployments of the probes in this hole did not give accurate results, with the exception of the DVTP-P deployment at 236 mbsf and a T2P deployment at 150 mbsf. Based on these results, we decided to spend the 36 hours of operation time remaining drilling a new geotechnical hole. This decision was also motivated by the fact that our revised authorized depth of penetration at Site U1323 (174 mbsf) meant that the interval of major scientific interest could not be penetrated. The purpose of Hole U1322D was to deploy the pressure and temperature probes and spot core after each deployment. The cores obtained were to be sampled for geotechnical analysis, and then processed through the onboard laboratories. Between 2100 hr and 2330 hr a first successful T2P deployment was made at 40 mbsf in Hole U1322D, and as of 2400 hr Core U1322D-1H was being taken.

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JA Daily Science Report for Expedition 308, 2 July 2005

LOCATION: Site U1322

SCIENCE UPDATE: We spent the day drilling Hole U1322D from 40 mbsf to total depth of 175 mbsf. We deployed the T2P probe 4 times (at 40, 70, 100, and 134 mbsf) and the DVTP-P probe once at 175 mbsf. The first two T2P deployments were successful. The third T2P deployment had a partially successful reading: the tip read hydrostatic pressures, while the shaft read elevated pressures. On the fourth T2P measurement the shaft was bent and the data was poor. The final DVTP run was very successful. Cores, taken largely for whole round geotechnical analyses, were taken at 40, 70, and 100 mbsf. The lithologies encountered were mainly greenish clays, similar to what was described in Hole U1322B. Science operations were terminated at 16:00 hr, and as of 2400 hr, the *JOIDES Resolution* had left the location of Site U1322 and was steaming on its way to Panama.

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JA Daily Science Report for Expedition 308, 03 July 2005

LOCATION: On our way to Panama

The ship is steaming towards Panama, and science activities are limited to report writing.

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JA Daily Science Report for Expedition 308, 04 July 2005

LOCATION: On our way to Panama

The ship is steaming towards Panama, and science activities are limited to report writing. One science meeting was organized at midnight to discuss the results of MWD/LWD operation at Site U1323.