

INTEGRATED OCEAN DRILLING PROGRAM MANAGEMENT INTERNATIONAL



1 October 2006 – 30 September 2007

Annual Report

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MANAGEMENT AND ADMINISTRATION

CONTRACTUAL ACTIVITIES

NSF-CMO Prime Contract

NSF issued seven (7) contract modifications during FY2007.

Modification #15 (October 2006) approved the FY2007 IODP-MI contract budget at the level of \$26,605,274.

Modification #17 (March 2007) approved carry-forward funds in the amount of \$361,451 from FY06 to FY07 and adjusted several reporting due dates.

Modification #21 (August 2007) fully funded the FY07 reduced contract budget at the level of \$23,944,945.

Advanced Earth Science & Technology Organization (AESTO)

AESTO maintains the IODP-MI office in Sapporo, Japan. All functions of this office are supervised by the IODP-MI Vice President for Science Planning (VP-SP) who is stationed at the Sapporo office. The Sapporo office continues to provide a full range of support functions to the Science Advisory Structure, including publications and data management.

During the reporting period, the parties agreed to two (2) subcontract modifications. Mod #5 (November 2006) authorized the FY07 subcontract budget at the level of \$1,153,647. Modification #6 approved AESTO's JP FY06 actual indirect cost rate at 18.8% and also reduced the FY07 budget by \$150,000 to the level of 1,003,647. IODP-MI determined that the revised rate is based on the subcontractor's actual direct cost experience for the period. The parties additionally agreed to set the subcontractor's US FY08 and FY09 indirect cost rates at 12% and 10%, respectively.

Bremen University

Bremen provides core repository services to IODP-MI. During the reporting period, IODP-MI executed bilateral modification #3 to its subcontract with the university which authorized the FY07 Bremen Core Repository (BCR) operations budget at the level of \$301,902 as set forth in the Annual Program Plan. This amount included \$45,903 for the subcontractor to continue work on the DSDP and ODP core redistribution project.

British Geological Survey (BGS)

Through its subcontract with IODP-MI, BGS (acting as the coordinator responsible for overall ECORD science operations) undertakes Mission-Specific Platform (MSP) science operations on behalf of the IODP as a project-based service that allows for both the planning of science operations and the ability to liaise within the extant IODP structure (including advising the science community) of the capabilities of MSP operations.

In FY07, IODP-MI executed bilateral modification #4 to its contract with BGS that authorized the FY07 subcontract budget at the level of \$2,925,200. This budget consisted of \$1,464,900 in SOC from the original FY2007 Annual Program Plan and \$1,460,300 in SOC from the deferral to FY2007 from FY2006 of offshore MSP activity for the New Jersey Shallow Shelf Expedition. Not included in the subcontract budget was \$193,000 in travel funding. All travel costs incurred by the subcontractor continue to be paid directly from the European Management Agency.

The parties executed Modification #5 in September, which revised the FY07 subcontract budget to \$1,657,200, representing a reduction of \$1,268,000 from the previous level. This revision reflected the deferral of offshore MSP costs associated with the New Jersey Shallow Shelf Expedition.

Japan Agency for Marine–Earth Science and Technology (JAMSTEC/CDEX)

JAMSTEC serves IODP as the Japanese Implementing Organization. Riser-equipped drilling capability, by way of the vessel *Chikyu*, is supplied by CDEX, part of JAMSTEC. CDEX also provides administrative services to the Kochi University Center for Advanced Marine Core Research (CMCR) repository. IODP-MI and JAMSTEC executed a multi-year subcontract (#IODP-MI-07-02) during the February–March 2007 time frame. This agreement provided JAMSTEC with \$4,632,430 in FY07 SOC funding.

Modification #1 soon provided an additional \$1,267,450 in SOC funds for the Long-Term Borehole Monitoring System engineering development project. Mod #3 approved a reprogramming request and revised the FY07 subcontract budget to the level of \$5,898,600.

Consortium for Ocean Leadership (COL)

In November 2006, IODP-MI executed bilateral modification #6 to its subcontract with the USIO that authorized the FY07 SOC subcontract budget at the level of \$9,856,438.

In March 2007, IODP-MI approved the USIO FY06 carry-forward request in the amount \$181,451. The subcontract budget thereby was increased to the level of \$10,037,889.

The parties executed modification #10 to the subcontract in July. This revised the FY07 subcontract budget to \$10,052,543, representing an increase of \$14,654 from the previous approved level. The increase reflected a minor scope increase associated with the USIO hosting the Sample Material Curation System server.

Modification #11 (September 2007) changed the subcontractor's name to Consortium for Ocean Leadership and revised the FY07 subcontract budget to \$9,032,543, representing a decrease of \$1,020,000 from the previous approved level.

Scripps Institution of Oceanography (SIO)

SIO at the University of California, San Diego, is the subcontractor providing the services to receive and archive scientific ocean-drilling-related electronic and digital data in support of the Site Survey Data Bank (SSDB). The IODP-MI Sapporo office oversees the technical work of the subcontractor and will provide support and quality control of previously archived samples and data from the Deep Sea Drilling Project and the Ocean Drilling Program.

In October 2006, IODP-MI and the SIO executed bilateral modification #4 to the subcontract, which authorized the FY07 SSDB budget at the level of \$414,808 as set forth in the Annual Program Plan.

In July, the parties ratified modification #5, which amended the scope of work and increased the FY07 subcontract budget to \$483,957, representing an increase not to exceed \$69,149 to augment the continued operation and development of the SSDB in accordance with the subcontractor's supplemental FY2007 proposal dated June 13, 2007.

FINANCE REPORT

The annual financial report is attached (see Appendix 1).

Total contract funds approved:	\$23,944,945	This reflects all modifications made during the fiscal year.
Funds obligated from FY06	\$ 1,830,048	
Total funds expended:	\$18,664,080	
Funds remaining:	\$ 7,110,913	

Of the remaining funds, \$5,166,507 has been obligated. The balance of \$1,944,406 is unobligated. An additional \$681,092 of unobligated funds is under consideration as a request for carry-forward.

PERSONNEL STATUS

All of the approved positions were filled in FY2007.

The Executive Program Associate position was eliminated in August 2007.

SUPPORT FOR SCIENCE ADVISORY STRUCTURE (SAS)

The IODP-MI Sapporo Office is headed by Vice President of Science Planning & Deliverables (VP-SP) Hans Christian Larsen. The Sapporo office is hosted by Hokkaido University at no rental cost for office space. All other Sapporo Office staff and associated activities are conducted through a subcontract with AESTO under the supervision of the VP-SP. The main tasks of the VP-SP and this IODP-MI office are overseeing: (1) the IODP science planning process and support of the Scientific Advisory Structure (SAS); (2) IODP scientific publications; and (3) IODP Data Management.

The VP-SP works with the chairs of SASEC and SPC on the broader issues of science planning, development of agendas for SPC and SASEC meetings, review of science achievements and approves all SAS meetings except SASEC (charge of IODP-MI President). In FY07, SASEC was supported by the Executive Program Associate in the IODP-MI Washington office; all other SAS entities were supported by the Sapporo office.

In FY07, the SPC chair was supported by the IODP-MI Sapporo Office in the following areas: meeting agendas, preparation of meeting agenda books, editing of material produced during the meetings and minutes of SPC meetings. IODP-MI also provides coordination of all other SAS meetings including confirmation and distribution of meeting rosters and logistics, support at meetings for panel chairs and panelist and updates of the IODP web site with all SAS related information. For two panels, SSEP and SSP, IODP-MI edited panel reviews, secured external reviewers, prepared and distributed proposal and site survey data packages in advance of meetings. The IODP-MI Sapporo office in FY07 also oversaw data submission to the IODP SSDB, received 48 drilling proposals submitted at the 1 October and 1 April deadlines, reviewed proposals for completeness and adherence to IODP rules, corresponded with proponents, secured and edited 33 external reviews applying to 7 proposals. The numbers of proposal packages distributed at each SAS meeting is as follows:

Meeting	Num.
#7 SSEP (Nov. 2006)	15
#7 EPSP (Jan. 2007)	5
#7 SSP (Feb. 2007)	19
#9 SPC (March 2007)	36
#6 SSEP (May 2007)	35
#8 EPSP (June 2007)	6
#8 SSP (July 2007)	18
#10SPC (August 2007)	46

TECHNICAL, ENGINEERING AND SCIENCE SUPPORT

IODP-MI

Technical, Engineering and Science Support

Operations Planning

The Operations Task Force continued updating schedules for FY08-09 platform operations as the completion date for the SODV conversion project was pushed farther back, as the FY08 budget decreased by 25 to 30%, and as the community learned more about new operational windows for the NanTroSEIZE expeditions associated with the Japanese fishing union restrictions.

To keep up with the frequently changing unavoidable circumstances and revise the operations schedule accordingly, the OTF met several times over the year. The January and March meetings were short impromptu meetings associated with other Science Advisory Structure Meetings (EPSP and SPC). The February and June meetings were one-day meetings. The IODP-MI Operations Task Force also met twice during the week of the August 2007 SPC meeting. The first meeting focused on the finalization of the FY2008/early FY2009 schedule. This schedule was presented to SPC for endorsement and then included in the final FY2008 IODP Annual Program Plan. The early portion of FY2009 was included in this discussion as long-lead items, and resources for planning these early FY2009 programs would need to be included in the IODP FY2008 Annual Program Plan. During the second day of meetings, the OTF examined the proposals residing at OTF (after the SPC reprioritization ---See SPC 07-08 minutes) to develop a complete FY09 schedule and look at FY10 and FY11 possibilities.

During the August meetings, discussions also transpired on developing a mechanism to deal with frequent schedule changes in a timely manner and still deliver high-priority science. The task force examined and proposed a tiered ranking model to the SPC that could accommodate needs for short-term scheduling flexibility, provide a new method of ranking and prioritizing IODP programs, and define roles and responsibilities of the OTF and SPC in the schedule-approval process.

Engineering Development

In close conjunction with the SAS, IODP-MI has continued and improved upon its role in facilitating, encouraging, and implementing engineering development projects to advance and expand science capabilities, while enhancing operations and technology success rates. Highlights of these activities include:

Engineering Task Force - The first meeting of the newly assembled Engineering Task Force (ETF) was held at the IODP-MI Washington, DC, office 2-3 October 2006. The focus of the ETF was the review of the FY2007 and FY2008 Engineering Development plans. Three feasibility studies were presented and evaluated – CDEX's Long-term Borehole Monitoring System (LTBMS), ESO's Subsea Down-pipe Camera, and the USIO's Pulse Telemetry Module (PTM). Due to the complex nature and scope of the LTBMS feasibility study, a large portion of the discussion was centered on this technology, resulting in peer-review document highlighting areas of the proposal that need strengthening and recommending pathways forward.

The second meeting of the Engineering Task Force (ETF) was held at the IODP-MI Washington, DC office 16-17 April, 2007. The focus of this ETF meeting was to evaluate the 10 engineering development proposals, received by 15 April, 2007, at a level of detail appropriate for determining which proposals to forward on to EDP for further consideration and evaluation. Additionally, status on current engineering developments was presented and assessed, as well as the FY2008 Engineering Development Plan. Other items discussed include: pathways toward industry collaboration/partnership, engineering best practices, and future responsibilities of the ETF.

Engineering Development Panel

The Engineering Development Panel #4 was held 17-19 January, 2007 in New York City. IODP-MI provided the panel with a summary of IODP's report to the Science Planning Committee, an overview of FY07 and FY08 Engineering Development projects, detailed explanation of the Engineering Development Proposal Process, engineering issues from the Operations Review Task Force, and an explanation of the Third-Party Tool Implementation Guide.

The Engineering Development Panel #5 was held 9-11 July, 2007 in Tokyo, Japan. IODP-MI presented the panel with Engineering Development Proposals submitted for FY2009 funding consideration. Prior to the meeting, watchdogs were assigned to each of the four proposals forwarded to EDP. During the meeting, the watchdogs led assessments of each individual proposal and assigned an overall ranking to assist IODP-MI in assembly of FY2009 engineering development plan. IODP-MI also discussed the status and path forward for third-party tools and possibilities for securing outside funding sources.

FY2009 Engineering Development Plan

Based on proposal ranking and discussion from the July 2007 EDP meeting, IODP-MI developed the FY2009 engineering development plan. This plan furthers the development of three proposals submitted last April: the Decoupled Penetrometer Delivery System, and two simple observatory designs: S-CORK and SCIMPI. The plan was submitted to SPC during the August 2007 panel meeting and received SPC endorsement.

Core Quality and Quantity Assessment

IODP-MI initiated an effort to understand the relationship between surface motion, downhole bit motion, core quality and core quantity. During FY2007, IODP-MI developed this initiative into a project plan included in the FY08 Annual Program Plan. Work will officially commence on this initiative October 1, 2007.

Offshore Technology Conference

Through personal interface, booth visuals, brochures, and other handouts, the IODP Engineering Development initiative was successfully promoted at the Offshore Technology Conference (OTC) held in Houston, Texas, 30 April–4 May, 2007. This was IODP's first official educational outreach appearance at the OTC.

Engineering Development Web Page — The Engineering web page, created toward the end of FY2006, was expanded and improved upon throughout the year in response to the needs of the IODP community. IODP-MI continually updates the web page, www.iopd.org/eng, as necessary with key dates, technology highlights, and the most recent engineering development documentation.

Engineering Development Proposal Process — The engineering development proposal process went through much iteration throughout the first quarter of FY2007 resulting in the document available at www.iopd.org/eng-dev. The final version incorporated valuable feedback from the ETF, from the SPC, and from EDP members, and was ready to guide proponents into IODP-MI's first engineering proposal development season, which began 1 January, 2007.

The first Engineering Development Proposal submission season ended successfully 15 April, 2007: 10 proposals were received. The Engineering Task Force (ETF) met 16-17 April to provide guidance to IODP-MI concerning the overall soundness of each proposal and the appropriate routing of each proposal (see Table below). For those proposals presenting a technology lying outside the purview of the IODP Engineering Development Mission, a response letter was sent to the proponent thanking them for their submission and providing a suggested pathway for steering the development idea. For the four proposals thought to meet IODP's present and future technological needs, a response letter was sent explaining the strengths and weaknesses of each proposal and providing a timeline of events to occur before the proposal could be selected and incorporated into the FY09 Annual Program Plan. Each proponent was given an opportunity to address the IODP-MI / ETF review comments prior to the July EDP meeting, where members evaluated each of the four proposals at a more detailed level and provided IODP-MI with advice.

Engineering Development Proposals						
Proposal submitted in 2007 by April 15th						
Proposal ID	Title	Lead Proponent(s)	Class	Duration	Status	Fwd. to EDP
EDP-2009-01-B	Wellhead Interconnection System (WHIC)	Ralph Stevens Tom Pettigrew Bob Pettitt	B	1 yr	Proposal originally submitted Jan06 - resubmitted in compliance with IODP guidelines Apr07.	yes
EDP-2009-02-B	Sediment Cork (SCork)	Earl Davis Keir Becker Tom Pettigrew	B	2 yrs	Proposal submitted in Apr07 with all necessary information.	yes

EDP-2009-03-B	Decoupled Penetrometer Delivery System	P. Flemings - Penn State	B	2 yrs	Proposal resubmitted Apr07 as a "Collaborative" proposal with PSU and USIO	yes
EDP-2009-04-A	Portable Seafloor Drill	M. Williamson – Williamson & Associates	A	3 mo.	Proposal submitted Apr07	
EDP-2009-05-B	Deepsea Wireline Automated Coring System (DWACS)	M. Williamson - Williamson & Associates	B	2 yrs	Proposal submitted Apr07	
EDP-2009-06	Portable Remotely Operated Drill (PROD)	Alan Foley - Benthic Geotech	NA	Ready	Proposal submitted Apr07 - Proposal is a service offer	
EDP-2009-07-A	Subsea Control of Drilling Feed (SCDF)	Andy Frazer - Fugro/Seacore	A	1 yr	Proposal submitted Apr07	
EDP-2009-08-B	SeisCORK	Ralph Stevens Tom Pettigrew Bob Pettitt	B	1 yr	Proposal submitted Apr07	
EDP-2009-09-A	Lockable Float Valve Redesign	S. Mrozewski-USIO	A	1 yr	Proposal submitted Apr07	
EDP-2009-10-B	SCIMPI	Kate Moran	B	3 yr	Proposal submitted Apr07	yes

Third-party Tool Policy Implementation: In order to track and stay informed of IODP third-party tools used in the past and those being developed, a chart was created listing third-party tools and associated information such as tool status, lead proponents, deployment histories, availability, etc. The chart is available online at www.iodp.org/eng.

Industry Collaboration/Partnership

IODP-MI joined DeepStar/JPSEA during the second quarter of FY2007. DeepStar is a joint-industry collaboration to produce oil in ultra-deep water led by Chevron, BP, Petrobras, Total, Kerr-McGee, Anadarko, Marathon, Statoil, and ENI. JPSEA, Research Partnership to Secure Energy for America, is a U.S. Department of Energy initiative. DeepStar/JPSEA is looking for opportunities to commit resources for engineering development. Efforts will continue through the next year to explore possible collaboration opportunities.

CDEX

Technical, Engineering, and Science Support

NanTroSEIZE

Since the acceptance of proposal 603 in 2002 as the first CDP for IODP, the current NanTroSEIZE Stage 1 expedition plans have been under almost constant development and revision. Preparations for the deployment of the world's most advanced deep-sea scientific drilling vessel were completed, and made ready for the inaugural NanTroSEIZE Stage 1 missions. Finally this year, the first of three Stage 1 expeditions was launched (Exp. 314) to perform an LWD transect of all six Stage 1 sites. This will be followed by a deep riser pilot study (Exp. 315) in preparation for Stage 2, and then the final *Chikyu* expedition in Stage 1, focusing on the thrust faults (Exp. 316), which is due to be completed in early 2008.

Prospectuses for each of the three expeditions were published in FY07, after the pre-cruise meetings held at the end of last year and the beginning of this year. They can be downloaded and reviewed at the IODP Expeditions website.

A commercial 3D seismic survey contracted last year finally provided the final pre-stack time migration of the 3D data set for CDEX to begin analysis. The results helped finalize the positioning of NanTroSEIZE drill sites, subsequently approved by the EPSP. The analysis results (published in the 16 November 2007 issue of Science) also showed that co-seismic slip along the Mega-splay fault rising from the plate boundary Mega-thrust between the Philippine and Eurasian Plates is the source for historical great tsunamis.

Expedition 314

Expedition 314 (21 September–16 November), planned as a Logging-While-Drilling (LWD) transect across the Nankai Trough, was the first of three IODP-CDEX expeditions begun during FY2007. As part of the NanTroSEIZE multi-stage Complex Drilling Project (CDP), the objectives of Expedition 314 were to define lithostratigraphy, physical properties and hydrological parameters, structural information such as stress, pore pressure, and sonic to seismic scale velocity data for core–log–seismic integration in advance of coring operations at all Stage 1 drilling sites.

During the preparation stage, the LWD tools study group was led by the Logging Staff Scientist in consultation with NanTroSEIZE Stage 1 Co-Chiefs and specialists who have long experience logging in the Nankai Trough. The priority list was used as the basis for considering tool selection at CDEX, guided by available budget.

At the same time, a pre-expedition meeting was held on 15-16 November 2007. A staffing process was initiated as part of the NanTroSEIZE Stage 1 pre-expedition meeting and the Scientific Prospectus was written by Co-Chiefs and Expedition, Logging, and Staff Scientists. Operational protocols were prepared in consultation with the USIO and approved by the EPSP in June. Due to the complicated nature of the expedition and some major changes in operational plans, the staffing process took longer than anticipated and was finalized by end of July. Upon completion of staffing, sample and data requests were announced and approval was made by the Sample Allocation Committee (SAC) of each expedition in consultation with Specialty Coordinators.

Due to Helicopter Underwater Escape Training (HUET) and sea-survival training requirements, scientists underwent one day of training at JAMSTEC headquarters prior to boarding *Chikyu* at Shingu port on 19 September. During the two-day port-call period in Shingu, a pre-spud meeting was held with the attendance of all onboard personal, and various tours and trainings were conducted with the science party to familiarize them with the working environment onboard. *Chikyu* officially began her first IODP Expedition on 21 September and drilled the pilot and geotechnical holes at NT2-03B.

Engineering Development

Long-Term Borehole Monitoring System (LTBMS)

The LTBMS telemetry system development project was unanimously approved by a JAMSTEC board meeting, and was made a priority. Development work at JAMSTEC/CDEX

by the LTBMS Project Team (PT) officially started 1 February 2007. Vender candidates were evaluated measured against the project's major technical requirements and qualifications. Schlumberger K.K. (SKK) was nominated as a single sub-contractor candidate, and referred to JAMSTEC's top management at a JAMSTEC Contract Meeting. SKK was approved as the sub-contractor, after intensive discussions regarding the sub-contract's fairness and practicality. A draft sub-contract agreement was written and forwarded to IODP-MI, which was subsequently approved in March, after some modifications. Official notice of the agreement was delayed until late April on account of internal SKK and JAMSTEC/CDEX signing procedures. The contract itself is dated 1 March 2007.

Engineering Requirements. The PT began a series of semi-weekly meetings (PT Meetings) with the participation of the NanTroSEIZE project team, scientists, the CDEX Drilling Operation group, and SKK, to define the engineering requirements. The scientific plans for the NanTroSEIZE observatory were reviewed to identify key areas needing specific attention, e.g. cement characteristics, system temperature limitations, temperature estimates during drilling, clamping methods for downhole instruments, and required borehole inclinations for sensors. After a review by Japanese experts on the Technical Committee (TC), and a report to the Engineering Task Force at IODP-MI, the final version of the Engineering Requirements was submitted on 1 May 2007 to IODP-MI.

Operational Requirements. These were defined by the PT through discussion with PT members and related companies, in regards to the operation of such critical elements as the holiday tree design, perforation scheme, cementing procedure, packer design, and sensor installation. The Operational Requirements draft was submitted to IODP-MI on 30 September 2007, and reviewed in parallel by the TC.

Engineering Specifications. The PT held meetings with the NanTroSEIZE project team and scientists to define the engineering specifications for the sensor interfaces, test facility, and test equipment. The PT also discussed the interfaces between the telemetry system and submarine cable network system with the Department of Oceanfloor Network System Development for Earthquakes and Tsunami (DONET), JAMSTEC. On 30 September 2007, the PT submitted a draft of the Engineering Specifications, which reflect changes made in response to comments by specialists. Final versions of both the Operational Requirements and Engineering Specifications will be submitted to IODP-MI on 30 October 2007 after reviewing comments from the TC.

FY08 Proposal. The PT submitted a draft of "Development Plan for US FY08" to IODP-MI on 12 June 2007, and finalized the development plan after receiving and incorporating comments from IODP-MI on 1 August 2007.

Other Items

- The PT reported LTBMS plan to the NanTroSEIZE PMT meeting held in Japan on 13 April 2007.
- The PT gathered information related to fault zone permeability, on-land borehole tests, sensor interfaces, and wireline logging using borehole sensor installations and the borehole observatories at the ICDP workshop "Drilling the North Anatolian Fault."
- The PT reported progress on the LTBMS project to the EDP meeting and had another meeting with IODP-MI Engineering and Operations Manager, Greg Myers, to report details.

- The PT submitted the holiday tree design requirements to the GE/VETCO Co. and discussed the SOW of holiday tree FS for LTBMS to be included in this Japanese fiscal year in the JAMSTEC budget.

ESO (BGS)

Technical, Engineering and Science Support

Expedition 310 Tahiti Sea Level

IODP-MI gave approval for the Expedition 310 second post-expedition meeting to be held in Tahiti in November 2007. The meeting will be held from 12-16 November, with a volcanic field trip on the 12th, and a modern reefs field trip on the 13th. Science Party members and their collaborators will give a series of presentations on the 14th-16th. Forty scientists will attend the meeting.

Expedition 313 New Jersey Margin

The Science Party was finalized early in FY07 and the start date of the onshore science party at BCR defined for January 2008. Prior to FY07, DOSECC had been chosen as the preferred contractor, and although substantial agreement was reached on contract details, three major aspects needed to be finalized before a contract could be signed:

1. A geotechnical survey needed to be carried out. Contracting the CPT geotechnical survey for the sites proved problematic due to the lack of suitable vessels on the east coast of America and the prohibitively high cost of quotes to bring in vessels from other regions of the U.S. However, further avenues continued to be sought. Following lengthy build-up, a contract was placed on 12 March with Alpine Ocean Seismic Survey Inc. to carry out a site survey involving boomer, magnetometer, swath bathymetry and vibrocoring. This survey began at the end of March. This survey was dogged by bad weather and was not completed until 5 May, with the final report delivered shortly afterwards. There were 21 days of weather down time.

Although it had not been possible to contract a CPT survey, the platform owners were entirely satisfied with the results of the Alpine survey which combined high resolution geophysics with vibrocores for ground-truthing the reflectors and for geotechnical measurements. This demonstrated the suitability of the drilling sites for the jack-up lift barge.

2. Permits needed to be obtained. Clearance was duly obtained from the U.S. Coast Guard to carry out the drilling for this scientific expedition; no permit was required from MMS for this scientific drilling.

An application was submitted to the NMFS to permit the use of air guns for VSP work. It took six months to deliver a positive outcome with the proviso that trained observers be on watch throughout VSP operations. Three ESO staff undertook training and night glasses were purchased to allow work to continue after dark.

3. The platform owners needed to confirm the availability of the lift boat. A platform working in the Gulf of Mexico had been identified for the expedition, and although its availability would not be known until November or December, planning progressed on the assumption that drilling would start in May 2007 and continue for up to 90 days. While waiting on availability, the rig in question was involved in a serious incident, the result of which was that the rig substantially submerged and subsequently sank. It was initially anticipated that the platform

could be salvaged and then made available in July. However, the salvage operation proved more problematic than expected and in early February it became clear that the rig could not be made ready in time for a 2007 operation in New Jersey.

At that time, an alternative larger rig became available, but at a greater cost beyond the ESO budget. However, ECORD Council agreed to increase the ESO budget such that employing the larger rig could be feasible, and contract discussions continued on the basis of using the new platform. Two meetings were held between ESO (A. Skinner) and DOSECC (D. Neilsen) in Iceland and at Rutgers University. The meeting at Rutgers was organized by Prof. Ken Miller to improve the drillers' understanding of ground conditions as well as for planning of the geotechnical survey. The meeting also was attended by C. Wilson, the staff scientist for the expedition. Contract negotiations were, at that point, approaching completion with a view to starting the contract in mid-May before a transit to New Jersey.

At this stage, a draft resource management plan for the New Jersey Expedition staff had been distributed to the Science Party, and following responses, the iterative process of modifying the plan continued.

Other logistical planning for the expedition also continued and ESO published informational web pages for offshore curation and laboratory facilities for MSP expeditions at: <http://www.eso.ecord.org/expeditions/msp/htm>

The subsequent period was characterized by delays in the availability of the chosen platform, and associated modification of the resource management plan. However, in early June there was reasonable certainty that the platform would be available in early July, although this soon slipped to mid-July. At this point it was decided that it was still acceptable to continue with the operation, but that the decision would need to be revisited should any further delay occur. This was the position at the time of the OTF meeting in Houston and during the SASEC meeting in late June.

Unfortunately, ESO was informed on 27 June—IODP Day—that the platform would not be available until mid-August, so that operations would have to continue into late November. On 28 June, a meeting was held at BGS Edinburgh to consider the implication of this news and it was decided not to carry out the operation in 2007. The Co-chiefs and IODP were immediately informed and the news relayed to the Science Party, PMOs, and others on 29 June before being posted on the ESO web site.

Following the decision to defer this expedition, subsequent work has involved following up the implications of this decision and taking steps with DOSECC to confirm a platform for 2008, if possible, with a contractually defined start time in early May. DOSECC received quotes from a number of operators; these had a varying price range, but none would agree to a defined start time.

The August OTF meeting confirmed the priority of New Jersey for 2008, and DOSECC was then asked to produce a structured proposal for 2008 work by the 1 October. At the end of September, DOSECC decided to withdraw from the contract and re-tender plans were put in place, including issuing an OJEU notice.

Great Barrier Reef

At the June 06 OTF meeting, it was agreed that planning should continue for the Great Barrier Reef Expedition subject to site surveys being carried out in a timely manner. A

meeting was held in Townsville, Queensland, Australia, on 15 February with the Great Barrier Reef Marine Park Authority (GBRMPA), following which ESO submitted an application, including an Environmental Impact Statement, to carry out the GBR Expedition in September-November 2008 or 2009. Following the submission, ESO provided additional information to GBRMPA in response to some concerns that could potentially lead to refusal of the application. The ESO has been greatly assisted in this task by Dr. David Falvey, Dr. Jody Webster, and other Australian scientists.

New England Hydrogeology

A New England Hydrogeology Scoping Group meeting was held during April in Washington DC, and informal discussions have taken place with the proponents of the Chicxulub Impact Crater proposal. At the end of the year, neither of these proposals, nor any MSP proposals other than New Jersey and the Great Barrier Reef, resided with OTF.

Engineering Development

A proposal for a Downpipe Camera system had been submitted to IODP-MI and approval for a feasibility study had been given by SPC in FY06. This feasibility study started in October with results delivered to IODP-MI in March 2007

USIO (JOI)

Technical, Engineering and Science Support

Budget constraints resulted in major revisions to the USIO FY08 expedition schedule, initially changing the Phase 2 operational start date from 1 November 2007 to 1 January 2008, changing the order of the expeditions, merging the original USIO NanTroSEIZE Expedition 1 (Subduction Inputs) and Expedition 2 (Kumano Basin Observatory) into one expedition without circulation obviation retrofit kits (CORKs), and reducing the Juan de Fuca expedition to a four-day operational activity to conduct remedial cementing of the observatories that were installed in 2004. Later in the year, SODV conversion schedule changes resulted in further revisions to the USIO expedition schedule, changing the Phase 2 operational start date to May 2008 and removing the NanTroSEIZE expedition from the schedule.

Pre-expedition meetings were held for the USIO NanTroSEIZE, PEAT, and Bering Sea Expeditions. Operational plans and Scientific Prospectus reports for NanTroSEIZE expeditions were originally revised and later put on hold. Operational plans and Scientific Prospectus reports for the PEAT and Bering Sea Expeditions were revised to fit the available time for each expedition, and draft clearance documents to occupy sites in Russian waters were prepared for the Bering Sea Expedition. Co-Chief Scientist assignments were completed for the PEAT and Bering Sea Expeditions. Final science party staffing for the PEAT Expeditions neared completion, and the call for applications was released for the Bering Sea Expedition.

An independent consultant completed an analysis of seismic data for shallow gas hazards for the Canterbury Basin proposal, and the information and data were reviewed by both the IODP Environmental Protection and Safety Panel and the USIO's Texas A&M University Safety Panel. Both panels concluded that some sites should be relocated, but that Canterbury was a viable proposal and could be slated as an expedition.

Engineering Development

The USIO participated in revising the IODP engineering technology roadmap and worked with IODP-MI to develop a program-wide quality assurance/quality control (QA/QC) plan. The USIO continued to work on engineering and analytical developments, and play a major role in ongoing IODP data management efforts in support of IODP Phase 2 operations.

Expedition-Related Tools. Design work continued on engineering developments for USIO Phase 2 expeditions, including a stacked advanced CORK/CORK-II, planned for installation in a single borehole during the USIO NanTroSEIZE Expedition 2 (Kumano Basin Observatory) that was originally scheduled for FY08, and a CORK-II to be deployed during the Juan de Fuca Hydrology 2 Expedition. A significant amount of time and effort were devoted to the design and development of these seafloor observatories before the installations were removed from the operations schedule.

Measurements and Testing. Three USIO-TAMU engineering facilities were developed or enhanced during FY07. The Metrology Laboratory was completed and made ready to calibrate temperature and pressure sensors for IODP Phase 2 downhole measurements from the *JOIDES Resolution* and the *Chikyu*. Construction of the Simulated Borehole Test Facility was completed, a first full test was run, and final modifications began. The move and reconfiguration of the engineering laboratory was completed to provide more space for tool maintenance, repair, development, and testing. The Environmental Qualification Facility at USIO-LDEO was upgraded with new equipment that will enable mechanical shock testing in line with industry standards for downhole logging tools.

Acquisitions. Among the notable technological acquisitions was the USIO/CDEX joint purchase of nine Advance Piston Corer Temperature Model 3 (APCT3) data logger electronic units, special APC cutting shoes to house the units, and data acquisition software. USIO staff members and a CDEX staff member visited Antares Datensysteme GmbH in Bremen, Germany, to launch the joint USIO/CDEX implementation of the APCT3, and USIO and CDEX worked together to develop procurement, loans, calibration, and testing plans. Of the six units purchased by CDEX, three were calibrated at the new USIO-TAMU Metrology Laboratory and prepared for shipment to CDEX for deployment on IODP Expeditions 315 and 316.

New Developments. USIO-TAMU participated in a Pennsylvania State University proposal to IODP-MI to develop a motion decoupled hydraulic delivery system designed to reduce the effect of drill string motion on downhole measurements that require motion-free contact with the formation. The USIO also had a feasibility study conducted for construction of a pulse telemetry module to transmit downhole measurement data in real time to the rig floor.

CORE CURATION

IODP-MI

IODP-MI personnel worked with representatives from the USIO and CDEX to develop shipboard and shore-based curatorial training plans for new Kochi Core Center curatorial personnel (see USIO–Curatorial Training).

DSDP/ODP Core Redistribution Project

IODP-MI personnel worked with curators from the USIO, Bremen, and CDEX to refine timelines for the DSDP/ODP Core Redistribution Project. These timelines are posted on the IODP website with regular core movement updates, provided by the curators. (<http://www.iodp.org/core-redistribution-plan/>).

Bremen Core Repository

Bremen Core Repository (BCR) experienced another busy year, with major activities, including regular sampling for scientists' requests, and the Core Redistribution Project. A total of more than 33,000 samples was taken at the BCR for 183 requests during this fiscal year. A summary of the sampling activity for this report period is given in table form. Table 1, below, provides an overview of all sampling operations, showing the numbers of requests, samples taken, and scientific visitors broken down by quarter and type of activity. As the table illustrates, we were able to carry on extensive sampling activities with very good results, although no sample/science party was scheduled.

Table 1: Summary of sampling activity

Quarter:	Operation Type:	#Requests	# Samples	# Sci. visitors
Oct-Dec '06	Normal	50	10,169	19
Jan-Mar '07	Normal	59	9,345	20
Apr-Jun '07	Normal	49	6,181	35
Jul-Sept '07	Normal	25	7,643	25
TOTALS:		183	33,338	99

In addition to the core redistribution shipping activity, BCR also sent the cores from IODP Expedition 310 (Tahiti) to the GCR in one container. As an MSP Expedition drilled in the Pacific, these cores were held at the BCR for the Science Party and for the duration of the one-year moratorium.

DSDP/ODP Core Redistribution Project

During FY2006 of the DSDP/ODP Core Redistribution project, BCR received three containers of core and one container of residues. During FY 2007, BCR received 18 additional containers of DSDP core material from the East Coast Repository (ECR). These cores have all been racked. The thousands of residue samples (received in FY 2006) required extensive work involving organization by leg and adaptation and input into BCR's existing residues database system.

According to the core redistribution scheme, the BCR will retain and receive cores from the Atlantic and Arctic Oceans and the Mediterranean Sea, the GCR will house cores from the

Caribbean Sea and Gulf of Mexico, eastern and central Pacific, and Southern Oceans, and the KCC will be the repository for western Pacific and Indian Ocean cores. The largest volume of transfer of existing core involves mostly Atlantic cores from the ECR to BCR, Pacific cores from the WCR to GCR and KCC, and western Pacific and Indian Ocean cores from the GCR to KCC. Preparations for the move were begun at all repositories during FY 2006. During this fiscal year BCR has received 18 containers with working halves of cores from DSDP Leg 41, Site 369 through Leg 94, Site 610, and archive cores from DSDP Leg 2, Site 8 through Leg 93, Site 603. The cores have all arrived in good condition and were well-sorted so that placing them into the racks in the correct order was carried out with relative ease. The overall proportion of sampling activity for the DSDP material is steadily increasing with the size of BCR's collection. Also as part of the redistribution project, four containers with all the cores from Legs 165 (Caribbean Sea), 178 (Southern Ocean), and 188 (Southern Ocean) have been sent from the BCR to the GCR.

Core Wrapping Project

With the shrink-wrapping machine purchased last year, BCR was able to complete the project of wrapping their collection in plastic foil to protect the cores from drying out and excessive mold growth. After completing the wrapping of the core collection, an additional several hundred sections were wrapped for shipping to the GCR under the core redistribution program (Caribbean and Southern Ocean Legs), as well as the Exp. 310 (Tahiti) cores, which were not part of the redistribution project.

CDEX

During U.S. FY07, one of the major tasks was to remodel the reefers at the Kochi Core Center (KCC) to accommodate the Legacy and IODP cores. This was finished by March, with the installation of mobile racks in three of the KCC reefers, providing a storage capacity of about 155,500 D-tubes or about 117 km of cores. Another task was to place the curatorial staff and related tools and consumables in a position to smoothly carry out all curation activities.

Four regular and two temporary staff have been appointed to perform curatorial work. The staff reviewed the IODP Sample, Data, and Obligations Policy (May 2007 version) and conducted hands-on training to familiarize themselves with the curatorial procedures. The staff also benefited from the first IODP curatorial meeting/training held at the BCR, Germany. Curatorial tools (e.g. plastic scoops & tubes, sample plugs, and stainless steel scoops), and office supplies have been ordered and delivered.

Air-conditioned and refrigerated reefer containers were installed in the KCC backyard lot. Just before the beginning of the NanTroSEIZE Stage 1 Expeditions, the refrigerated reefer containers were loaded on *Chikyu* for on-board curation of core samples, where they will be used to store residue samples and salt cores. Standard operating procedures for on-board curation were developed for the NanTroSEIZE expeditions. Sample and data requests for these expeditions, as well as the Legacy cores, have been received and evaluated.

The KCC website was substantially revised, publishing the Japanese version in September (www.kochi-core.jp). A manual for safe repository operations was prepared, and visits by curatorial advisors provided us with feedback for improving operations. An environmental survey of the repository conducted in summer and winter indicated that although high humidity promotes mold growth in the sampling room as compared to the reefers, there was no mold growth on the cores. Fire and safety issues were evaluated with the cooperation of the local fire station.

DSDP/ODP Core Redistribution Project

Details of the legacy core redistribution plan were worked out in consultation with the IODP-USIO curator. The first shipment of core samples arrived from the GCR on 6 September, followed by a shipment from the WCR (19 Sept.) and another one from the GCR (26 Sept.).

USIO

USIO curatorial staff worked with counterparts from the other IOs to plan and develop the IODP SMCS, a Web-based sample and data request and approval system. The first IODP Curators Meeting brought further exchange of information between the IOs and a review and discussion of standardized curatorial procedures and policies. USIO staff members also provided training to help prepare CDEX curatorial staff for receipt of legacy cores and assisted CDEX staff in preparing for the first *Chikyu* coring expeditions.

DSDP/ODP Core Redistribution Project

Work continued on redistributing DSDP and ODP legacy cores to follow the geographic distribution model recommended for the IODP core collection by the SAS. This geographic distribution model assigns cores to one of three IODP core repositories, according to the sample's origin regardless of which program acquired the sample. The DSDP/ODP Core Redistribution Project was divided into four main tasks:

- Purchasing supplies and equipment and securing labor at all repositories;
- Redistributing core to the Bremen Core Repository (BCR) at University of Bremen, Germany;
- Redistributing core to the Kochi Core Center (KCC) at Kochi University, Japan; and
- Redistributing core to the Gulf Coast Repository (GCR) at Texas A&M University, United States.

All of the supplies and equipment for the redistribution project were purchased, the East Core Repository (ECR) shipped almost 75% of its core containers to the BCR, and shipments from the West Coast Repository (WCR) to the GCR and from the WCR and the GCR to the KCC began. Core redistribution will be complete by the end of FY08.

The DSDP/ODP Core Redistribution Project schedule was routinely updated on the IODP web portal in order to keep the IODP science community informed of current and upcoming activity for the repositories that are closing, cores that are currently being packed or in transit, and cores that are ready for sampling at their new location.

DATA MANAGEMENT

The goal of IODP-MI data management activities is to create sustainable and well utilized IT solutions offering significant returns on investment by enabling actual integration of the IO data systems, increasing access to ocean drilling data, providing user-friendly interfaces for the IODP community, and fostering collaborative involvement by the IOs in taking ocean drilling sciences into the realm of 21st century IT systems development and information management. To further these aims, IODP-MI is planning for data management beyond the immediate fiscal year cycle and will coordinate efforts to preserve continuity of existing systems while leading the initiatives to improve data management, reduce redundancy, and

increase interoperability within IODP, as well as the broader Earth and ocean sciences community. IODP-MI is assisted by a Data Management Task Force (DMTF) in planning for new initiatives. The DMTF was consulted via e-mail in FY07, but had no physical meetings. The position as IODP Data Manager became vacant towards the end of FY07. It was filled by a new data manager, Jamus Collier by 1 October. The vacancy of this key data management position at IODP-MI caused limited interruption and delay of work.

Data Management Activities and Accomplishments in FY07

Data systems

Major IODP-MI data management activities during FY07 included managing the development of several new IODP-wide information systems for the administration of data, metadata, and proposals. Scientific Earth Drilling Information System (SEDIS) is an integrated solution to the challenge of providing a single point of access to the IODP scientific data held within the IOs disparate and distributed data systems. Development of Phase I of the SEDIS was started by the chosen subcontractor (MARUM, University of Bremen) in early FY07 and was almost completed by end of FY07. A meeting of the Data Management Coordination Group (DMCG) was held at the IODP core repository in Bremen in March 2007 to present IODP-MI implementation plans for metadata harvesting and standards for SEDIS metadata formats.

Based on previous project work, ESO had prepared metadata datasets compliant to the IODP ISO Metadata standard. Both the USIO and CDEX received from IODP-MI the technical information to assist in developing tools for creation of SEDIS-compliant metadata. Another key tool for managing sample data and sample materials requests also began development in FY07. Under the guidance of the DMCG, a functional requirements document for a sample materials management system was drafted. USIO-TAMU was designated for developing and hosting the system in conjunction with planned upgrades to their repository management system. The Sample Material Curation System (SMCS) has been developed and tested this year. It will be used to manage sample materials requests for upcoming expeditions.

Other data management activities in FY07

In summary, over the past fiscal year the following data management issues were addressed and projects were managed by IODP-MI:

- SEDIS I was largely completed and will be available for testing by IOs during FY08. SEDIS I provides a searchable web portal for the discovery of IODP and legacy program datasets based on searches of the harvested metadata. SEDIS metadata harvesting has not yet been implemented by all the IOs. IODP-MI will continue to provide guidance and technical support to the IOs to ensure integration with the SEDIS data portals. A DMCG meeting addressing this issue is planned for early FY08 pending IO availability. At the time of writing this report, the IOs (the USIO in particular) were not fully ready to deliver the metadata necessary for populating SEDIS I. Delay in metadata generation may impact the development of SEDIS Phase III.
- A basic operational web-based system for the SSDB was largely completed. The system has been used successfully at several site survey review meetings. SIO will continue to maintain and host the SSDB through FY08.

- Proposal Database (PDB) development was continued and no-cost modifications implemented based on pre-release testing. Final adjustments are still required and testing will be conducted before deployment in FY08. The software company developing the PDB has been very accommodating in developing a system which involves complex workflows related to the submission, review, and management of scientific drilling proposals, but it has had limited work resources, and therefore, been unable to deliver at the expected pace. The delay is not deemed to have budget implications.
- CDEX J-CORES has been successfully tested by the NantroSEIZE group during the Chikyu “shakedown” cruises. An e-mail list established by the DMCG was instrumental in providing CDEX with technical support in providing J-CORES metadata for SEDIS I harvesting.
- The DMCG met in Bremen to test the SMCS, discuss SEDIS Phase I, and to finalize release versions of key documents approved by the DMCG and STP related to IODP measurements terminology and Depth Scales.
- GoogleEarth file displaying all DSDP/ODP and IODP drilled sites and IODP proposed sites has been created internally by IODP-MI and demonstrated at conferences and meetings. Its success has led to inclusion in SEDIS I and the SSDB as utility functions.
- The SEDIS Phase II requirements document (detailing the publication catalogue with full text search engine and links to datasets) was developed by IODP-MI resulting in the public release of an RFP in late FY07.

Outlook for FY08

The development of technical and functional specifications for data management solutions will continue in FY08 with the continued development and ongoing maintenance of the SSDB, SEDIS I, SMCS, and the PDB. IODP-MI also has contracted to initiate development activities for new data management systems during FY08. The major systems development activities are SEDIS II, the IODP User Registry, post-cruise data capture, and SEDIS III, which will bring drilling data regardless of origin into a common user space for advanced searches and visualization. During FY08, IODP will also, for the first time, see data from all three platforms, two of which (*Chikyu* and *JOIDES Resolution*) will use new database systems. The development of the specifications for SEDIS III will be a major challenge in FY08. It will begin at a planned DMCG meeting in early February, but will require broader community input. Final specifications are expected by mid to late FY08.

Other and long-term IODP-MI data management activities include:

- Work towards a systemized coordination of scientific vocabularies and terminologies used within IODP.
- Promote the principles of open source software that allows sharing and reuse of successful IT solutions, topic-specific e-mail listservs, wiki-style technical resources, and possibly, formation of project-specific technical working groups.
- Provide entry-level access to the scope of IODP research activities through updates to and enhancements of the IODP Google Earth file displaying all DSDP/ODP and IODP drilled sites and IODP proposed sites

PUBLICATIONS

Publications activities in FY07 included: 1) publication of the program journal *Scientific Drilling*, 2) oversight and coordination of program reports and proceedings, 3) implementation of publication policies and procedures, and 4) planning and preparation for further integration of publications and data management through SEDIS II.

The bi-annual journal *Scientific Drilling* (SD) that was launched jointly with the International Continental Scientific Drilling Program (ICDP) in September 2005 features articles about ongoing and finished drilling projects, as well as reports on technical developments and program outlook. Two regular issues and one special issue of SD were produced by IODP-MI in 2007. In addition to IODP and ICDP activities, several smaller drilling projects have been featured, including an ice-coring project at Dome Fuji, Antarctica, which reports on new developments on scientific drilling platforms and several important scientific drilling workshops. New features of the journal were the publication of white papers that resulted from IODP/ICDP workshops on the Mission MOHO, the Deep Biosphere, and Continental Breakup.

Issues No. 4 and 5 of SD were published in March and September 2007; 7,100 copies were printed of No. 4 and 6,800 copies of No. 5. Most of these have been distributed to subscribers and at conferences. In addition, one Special Issue, including extended abstracts and the report from the IODP/ICDP Fault Zone Workshop held in Miyazaki, Japan, in May 2006, was produced and published. This issue is 120 pages long: roughly twice that of a regular *Scientific Drilling* issue. It will be printed in a 700-copy print run and available upon request from the IODP-MI office in Sapporo. Electronic versions of all journals are available for download in PDF form from the IODP web portal.

Since Issue 3, subscribers are required to update their addresses at least once every three years, otherwise their subscriptions expire. Issue 5 was the last one which will be sent out to people who didn't update their subscriptions. A final reminder will be sent out by mail in early 2008 before a subscription is discontinued. Preparations for regular issues No. 6 and 7 of *Scientific Drilling* are underway. These issues will be printed in March and September 2008, respectively.

During FY07, three IODP *Proceedings* volumes were published. All these publications are available online linked through the IODP web portal (Scientific Publications page). All scientific IODP publications were, upon request by IODP-MI, moved to a generic Web server (<http://publications.iodp.org>) in FY07. This server acts as a central publication repository effective from spring 2007. This simplified the publication process and presented the IODP publications in a completely uniform program layout. For all these publications, including the SD Journals mentioned before, DOIs have been registered (by IODP-MI) with Crossref. The *Proceedings* DVDs have been distributed free of charge to public and institutional libraries as clarified with the Lead Agencies.

Also in FY07 (ODP) TAMU-RF finished digitization of legacy volumes from DSDP and ODP legs, and made them available online. Registration of DOIs for these legacy publications has been done in cooperation with IODP-MI.

In FY07, IODP-MI also published five Scientific Prospectuses for expeditions scheduled for FY08. Three of these expeditions will be carried out by the Japanese IO, through CDEX. In preparation for publishing results from this new multi-operator activity, IODP-MI in FY07 organized coordination between CDEX operational staff and the IODP-TAMU publication department, to ensure that publication of expedition results will work seamlessly based on the joint agreement between IOs and IODP-MI to centralize publication production. Two meetings in October 06 and February 07 were initiated by IODP-MI and convened by CDEX in Yokohama, during which USIO publications staff demonstrated ODP/IODP publication schedules; various procedures, demands, and tools were discussed. In IODP Phase 2, final production of IO-generated program publications will continue to be done by the USIO-TAMU publications department based on IO-generated manuscripts.

Related to publication policies, the recommendations of the Expedition Science Communication Task Force, which completed its work early in FY07 and was subsequently abandoned, were implemented within the Sample, Data and Obligations Policy. The changes address issues related to publication during the expedition moratorium period of IODP findings in high impact, fast-tracking journals imposing temporary publication embargos on the program.

LOGGING

ESO (BGS)

Post-cruise processing of the Tahiti logging data has continued, particularly linking drilling parameters to the logging results. Preparation of logging data to present at the Expedition 310 (Tahiti Sea Level) second post-expedition meeting has been undertaken.

Planning for the New Jersey Sea Level Expedition continued and an advertisement was placed in the Official Journal of the European Union alerting potential contractors to this expedition; two expressions of interest were received and contractual discussions were approaching completion when the New Jersey Expedition was deferred. Planning for the New Jersey Sea Level Expedition has since continued, including discussion of tool requirements and time-tabling with a number of potential logging service contractors.

Progress was made towards putting procedures in place to the effect that logging data from MSP expeditions will be accessible via the USIO logging database (hosted by Lamont) post-moratorium.

The sudden and untimely death of ESO Petrophysics Manager Dr. Tim Brewer, the coordinator of the European Petrophysics Consortium has led to Dr. Sarah Davies from the same department being appointed as a permanent replacement. Also, Dr. Louise Anderson joined the Borehole Group at the University of Leicester and Marc Reichow has been appointed as a temporary lecturer with a remittance to provide support and guidance on IODP issues to the Borehole Group at Leicester.

USIO

The USIO and ESO continued discussions regarding archiving of logging data collected during mission-specific expeditions. Procedures were developed outlining responsibilities for all parties and guidelines for required formats and metadata for inclusion of ESO logging data in the USIO log database. Logging data from future mission-specific expeditions will be accessible from a common Web interface at the conclusion of the one-year moratorium

period, and logging data from the two completed mission-specific expeditions will also be accessible.

OUTREACH

Web Portal Development

- Achieved growth in IODP web portal visitation and volume of significant user interactions online:

TIMEFRAME	OCT 2006	OCT 2007
Number of hits to home page	131,374	208,447
Number of page views/impression	182,097	263,961
Number of user sessions	45,072	73,269
Number of unique users	12,764	17,460
Number of visitors who visit 10 times or more	n/a	1,446
Number of forms submitted successfully (search engine, applications, etc.)	54,388	13,976
Number of successful downloads	250	4,111
Length of average user session	12:26	9:32
Number of hits on least active day	8,365	11,655
Number of hits on most active day	67,822	34,984

- Content accessibility was improved through the addition of three new doorways targeted to the online needs of: scientists; media representatives; and new visitors. New links to IO education content were added in a Kids Corner on the New Visitors' entryway.
- Addition of two RSS feeds—for scientists and for the media-- enable visitors to subscribe for and receive new IODP web content as it is uploaded to the portal.
- Content was enriched with videos, new work rooms, Engineering Development pages, Workshop pages, and regular updates on news, calendar listings, panel membership, newsletters, news coverage, and more.
- More integrated content was achieved with the construction of NanTroSEIZE pages and links to CDEX/JAMSTEC content, i.e. daily and weekly reports, photos, bios, etc.

Outreach to Scientists

- IODP-MI sponsored or cosponsored informational IODP exhibition booths at six major international science conferences: AGU 06 (San Francisco), EGU 07 (Vienna), OTC 07 (Houston), JPGU 07 (Chiba, Japan), AOGS 07 (Bangkok), and ICP9 (Shanghai).
- Held Town Hall Meetings at AGU 06 and EGU 07 (the latter cosponsored with ICDP and ECORD). Each event attracted several hundred scientists/conference attendees.
- Produced and distributed the following collateral to inform scientists of IODP activities, or elicit input from community members:
 - Six issues of *IODP E-News*
 - Four topical special editions of *IODP E-News*

- 12 placement ads in *Eos* (call for proposals, expedition applications, workshop and symposium participants)
- DRILLS brochure announcing new international lecture series and soliciting host institutions.

Internal Communications

- Outreach Task Force convened in Bremen, Germany. Drafted communications plan for NanTroSEIZE expedition launch.
- As a result of the development of the Outreach communications plan, a NanTroSEIZE logo and brochure were developed, and activities determined to promote the launch of the expedition series (see External Outreach below).
- A meeting of Outreach managers, IO managers, and Lead Agencies convened in June to define each partner's roles and responsibilities and to clarify the membership of the Outreach working group, and how the working group can apply best practices to Outreach planning and coordination. Written agreements were finalized and circulated to all who attended.
- *The Pipeline*, a bimonthly newsletter to strengthen communication among IODP Outreach managers and other community members interested in Outreach began publishing in August.

External Outreach

- IODP issued seven news releases: 1) *Scientists Launch Seismogenic Zone Experiment to Study Mechanisms of Volatile Earthquake Zone* (9/21/07); 2) *Arctic Ocean History is Deciphered by Ocean-Drilling Research Team* (6/21/07); 3) *New Jersey Expedition Set for Summer* (4/26/07); 4) *Pushing Scientific Drilling Results to the Desktop* (4/25/07); 5) *Bigger, Better U.S. Scientific Ocean-Drilling Ship for IODP* (4/19/07); 6) *Ocean-Drilling Operations Are at Cutting Edge of Scientific Marine Research* (11/24/06); 7) *Global Strategy for Investigating Earth's Geodynamics Emerges From International Scientific Collaboration* (11/14/06).
- As a result of media relations efforts, stories about IODP were placed in notable media outlets: *Asahi Shimbun* (Japan) BBC-TV; *China's Journal of International Geoscience*; Danish Broadcasting Company; Discovery TV; *Encyclopedia Britannica*; *Focus China*; *Nature*; NHK (Japan TV); *Offshore Engineer*; *Popular Science*; *Science*; *Scientific American*; Spain Public TV; *Stern* (Germany) *The Leading Edge* (SEG); *The Sunday Telegraph* (London); UPI.
- Numerous other stories appeared in local news outlets in the aftermath of the NanTroSEIZE launch. Print media were monitored and news clippings archived online at the IODP web portal.
- A satellite video news release was produced and distributed to 147 TV stations and networks in North America. More than 3 million viewers saw news coverage of the NanTroSEIZE launch.
- Port call activities attracted media and the public to NanTroSEIZE outreach and educational activities in Japan.

- A news conference on Exps. 309/312 was held at AGU 06, resulting in numerous articles in scientific publications.
- Four video rough cuts on scientific ocean drilling were submitted to the Smithsonian National Museum of Natural History and approved for completion and exhibition in Ocean Hall, due to open Sept. 2008.
- A trifold brochure about IODP was produced. To date, roughly 3,000 copies have been distributed to individuals at scientific conferences; workshops and symposia; IOs, PMOs, and the media.
- A series of public lectures about IODP, NanTroSEIZE, and Exps. 309/312 was held at the Miraikan Museum in Tokyo in Aug. and Sept. 2007, prior to the expedition launch.

IODP-MI ANNUAL REPORT DISTRIBUTION LIST

J. Morris, NSF
J. Allan, NSF
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R. Batiza, NSF
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Appendix 1

Financial report