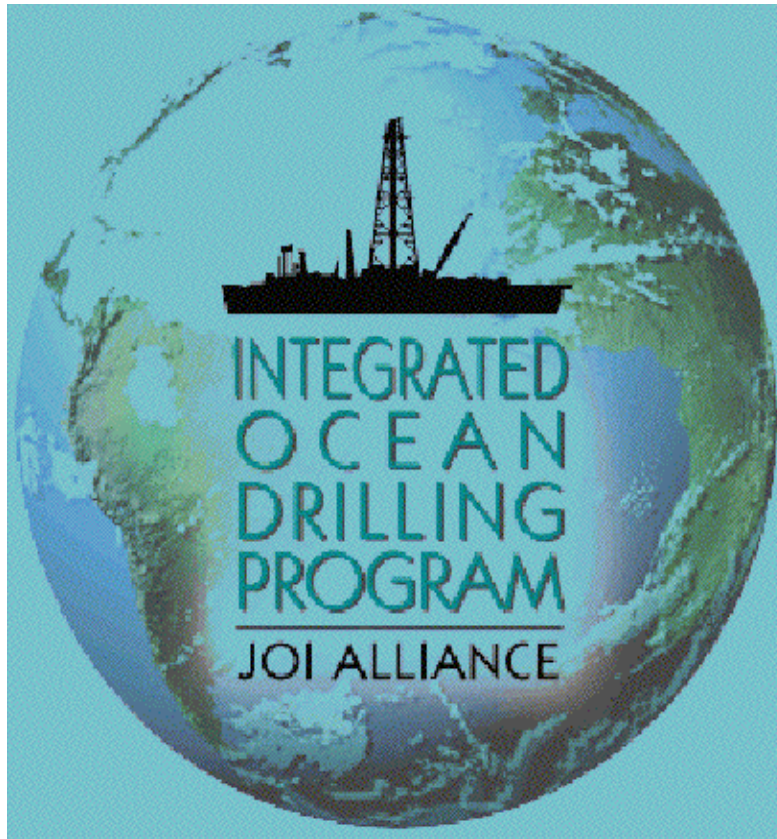


21 February 2004



1 October 2003–31 December 2003

Quarterly Report 1

Contract No. NSF OCE-0352500

Submitted by the JOI Alliance to

The National Science Foundation

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INTRODUCTION

The organization of this quarterly report reflects activities and deliverables that are outlined in the Program Plan as conducted by the JOI Alliance Teams during the first quarter of FY04.

EXPEDITION OPERATIONS

EXPEDITION SCHEDULE

	Expedition	Port (Origin)	Dates ^{1,2}	Total Days (Port/Sea)	Days at Sea (Transit/Ops ³)	Co-Chief Scientists	Alliance Contacts
	Transit	Pusan	1 ⁴ - 21 June '04	20 (2/18)	18/0	N/A	TBN
1	Juan de Fuca	Astoria	21 June - 29 August	69 (6/63)	11/52	TBN	A. Klaus
	Transit	Acapulco	29 August - 13 September	15 (1/14)	14/0	N/A	TBN
2	North Atlantic 1	Bermuda	13 September - 30 October	47 (2/45)	14/31	TBN	M. Malone
3	Core 1	Ponta Delgada	30 October - 18 December	49 (4/45)	8/37	TBN	J. Miller
4	Core 2	Ponta Delgada	18 December - 10 February '05	54 (5/49)	8/41	TBN	J. Miller
5	North Atlantic 2	Ponta Delgada	10 February - 5 April	54 (5/49)	15/34	TBN	P. Blum
	Transit	Reykjavik	5 April - 23 April	18 (3/15)	15/0	N/A	TBN
	Demobilization	Galveston ⁵	23 April - 15 May	22 (22/0)	0/0	N/A	TBN

Notes:

¹ Ship is scheduled to arrive 0600 hr on first day of port call.

² Initial cruise date reflects first day of port call; ship sails when ready.

³ Ops = Operations (includes both on-site and between-site times).

⁴ Actual start date needs to be finalized.

⁵ Demobilization port needs to be finalized.

The operational schedule was completed following Science Planning Committee (SPC) and Operations Committee (OPCOM) discussion in September 2003 and reflects the situation as of 30 October 2003. This schedule will be revised as the expedition implementation strategy is further resolved. Resolution is required for the following issues:

Location of drydock: The drydock is tentatively scheduled to occur in Pusan, Korea, but this could change based on responses to a Request for Quotation (RFQ) issued by Transocean.

Starting date: The starting date could shift several days depending on the drydock location.
Operational end date: The current schedule does not reflect 365 days of vessel operations. Verbal discussions between Texas A&M Research Foundation (TAMRF) and Transocean indicated that this was a condition for maintaining the Ocean Drilling Program (ODP) vessel day rate and inflation index for Phase 1.

Fuel costs: Current projections indicate potential fuel rates of \$380 M/T during FY04, compared to the budgeted rate of \$268 M/T. The schedule will be adjusted to accommodate a refueling in Balboa during the transit from Acapulco to Bermuda to take advantage of typically lower fuel rates in Balboa.

EXPEDITION PLANNING AND IMPLEMENTATION ACTIVITIES

The principal expedition planning activities during the reporting period were the Pollution Prevention and Safety Panel (PPSP) review of the sites proposed for Expeditions 1 through 5 and the development of operations requirements and related costs for incorporation into the FY04 and FY05 Program Plans. Most of the effort was devoted to the operationally complex Expeditions 1 and 3. Cost estimates continue to be refined as the operational requirements become better defined. The process has been hampered by the fact that Co-Chiefs were not appointed at the time budgets were required, and the proposals on which the expeditions are based left significant operational requirements undefined.

EXPEDITION 1 (PROPOSAL 545): JUAN DE FUCA

Expedition Planning: Proposed sites were reviewed and endorsed by the PPSP. PPSP indicated that the agreed-upon latitude/longitude represents a centerpoint with a 500-m radius for locating the sites. Requirements for a vertical seismic profile (VSP) during this expedition are being reviewed in conjunction with development of an environmental assessment. The SPC scheduled Proposal 553 as an alternate for Proposal 545 in the case that long-lead items prevented implementation of the primary program. Proposed sites for Proposal 553 were reviewed by PSPP. Given the current timelines, no further action is anticipated for this proposal, as the lead times should be adequate to deliver the Proposal 545 program. For the logging component, G. Iturrino (Logging Staff Scientist) had ongoing discussions with A. Klaus (Expedition Project Manager), proponents, and other involved parties regarding planning for this first cruise. Items under discussion include high-temperature operational plans, logging time estimates, potential use of X-ray CT scan technology, educational opportunities, and ultrahigh-temperature multisensor memory (UHT-MSM) tool deployments.

Pre-cruise Meetings: An operational planning meeting for Expedition 1 was held at Texas A&M University (TAMU) on 27–28 October 2003 to begin developing operations plans for this extremely challenging first expedition of the Integrated Ocean Drilling Program (IODP). This meeting was required to refine the operational and engineering specifics to achieve the proposed scientific objectives. The pre-cruise meeting is scheduled for March 2004.

Expedition Staffing: On 1 December 2003, a message was sent to the IODP member offices in Japan, the United States, Europe, and China, indicating that staffing for Phase 1 expeditions would begin in January 2004 and inviting nominees. Logging Staff Scientists were named, and logging trainee requirements were identified for Expeditions 1–5.

Clearance and Permitting Activities: The clearance package for Expedition 1 was completed and submitted to the State Department on 19 December 2003.

Technology: The multidisciplinary science requirements for Expedition 1 call for extending the technology used in ODP borehole installations. The primary hole requires four instrumented zones hydraulically isolated for chemistry, biology, and hydrogeology experiments. This requirement increases the complexity of the packers and the umbilical used to communicate with

the zones. IODP/TAMU Engineering Services is working with vendors to transform previous packer and umbilical designs to meet the challenging science needs. The borehole instrument hangers are being modified, and a new mechanical release mechanism for remotely operated vehicles (ROV) platform deployment is also being designed (to replace the acoustic release) for this expedition.

EXPEDITIONS 2 AND 5 (PROPOSALS 572 AND 543): NORTH ATLANTIC 1 AND NORTH ATLANTIC 2

The sites proposed in Proposals 572 and 543 are scheduled for completion during both Expeditions 2 and 5. Review of the proposed operations and resource requirements are under way. Sites were reviewed and endorsed by PPSP with some adjustments. Several new sites were proposed and also endorsed by PPSP. Two issues will need further resolution:

- The need to quadruple rather than triple core each site. This requirement was added during the SPC/OPCOM discussion, and
- The logging requirements at each site. Note that weather services will be required for this cruise, given the less than ideal operating window.

Proposal 543 was added to Expedition 5 (P. Blum, Expedition Project Manager). This proposal requires installation of a CORK system at previously cored Hole 642E. Discussion is under way concerning the specific requirements for this CORK replacement. The site was not reviewed by PPSP, given that no new coring is required. M. Malone (Expedition Project Manager) and S. Robinson (Logging Staff Scientist) began initial discussions regarding operational planning for Expedition 2.

EXPEDITIONS 3 AND 4 (PROPOSAL 512): CORE 1 AND CORE 2

The sites proposed in Proposal 512 will be completed during Expeditions 3 and 4. The current strategy is to use the SDS hammer system to establish cased reentry holes. A review of the proposed operations and the resource requirements is under way.

Technology—IODP/TAMU Engineering Services is responsible for design and procurement of the equipment, which includes the use of the Hard Rock Reentry System (HRRS) to install casing at two sites, along with the installation of a second 10-3/4-in casing string in each hole during Expedition 3. In addition, technical discussions and negotiations are being conducted with the hammer vendor (SDS Corporation Limited, Australia). The expedition will complete coring at proposed Site AMHW-01A, which is a >400-m penetration in the hanging wall in 2550 m water depth. J. Miller is the JOI Alliance contact for Expedition 3 until an Expedition Project Manager is named.

Most of the engineering work required for Expedition 4 (J. Miller, Expedition Project Manager) will be done during preparation for Expedition 3. Expedition 4 will complete coring at proposed Site AMFW-01A, which is a >700-m penetration in the dome (peridotite) in 1630 m water depth. The HRRS installation of ~24–36 m of 13-3/8 in casing will be set during Expedition 3. The 10-3/4 in casing string will be set if hole conditions require the casing string (estimated ~120 m).

EXPEDITIONARY ISSUES

CO-CHIEF AGREEMENT

The ODP Co-Chief agreement was revised (with input from IODP Management International, Inc. [IMI]) in December 2003 to better fit the needs of IODP. Further minor revision is expected later in the year once IMI is better established, but the current version will meet the needs of at least Expeditions 1 and 2.

PHASE 1 MOBILIZATION ACTIVITIES

PLANS FOR MOBILIZATION

TAMU and Lamont-Doherty Earth Observatory (LDEO) have jointly developed the IODP Phase 1 mobilization plan. No formal planning activities related to remobilization of the *JOIDES Resolution* were undertaken during the reporting period.

STATUS OF EQUIPMENT

INHERITED EQUIPMENT

After the FY04 physical inventory is completed, all remaining ODP equipment and other NSF tangible property will be officially transferred to the IODP contract via the October 2004 submission of an annual property report.

After ODP demobilization, practically all of the scientific equipment and scientific nonreportable property remained aboard the *JOIDES Resolution*. Downhole drilling items such as drill pipe and reamers were refurbished after the end of ODP, and those items, along with other bulky items such as casing that will be used in Phase 1 operations, were reloaded back on the *JOIDES Resolution* prior to its departure to Japan.

IODP/TAMU Information Technology and Data Services Support staff unpacked and inspected information technology (IT) equipment returned from the vessel. IT equipment that was determined to be capable of meeting the IODP U.S. implementing organization (USIO) Phase 1 objectives will be updated and put into service either on the Phase 1 vessel or on shore. Equipment that did not appear to be capable of Phase 1 operations is being excessed and replaced with new equipment.

LDEO has been servicing and repairing downhole equipment to be mobilized in Phase 1. All tools are presently functional. The CB-RMM (core barrel–retrievable memory module) is being upgraded and will be completed well before Phase 1 mobilization.

NEW EQUIPMENT ACQUISITION

We do not currently anticipate procuring new scientific equipment for Phase 1 operations. IODP purchase orders were issued for hammer drill running tools, casing hangers, and pups, rotary core barrel (RCB) core bit, and miscellaneous downhole tool components.

LDEO personnel have closely monitored the development of the new wireline heave compensator for Phase 1. Progress has been satisfactory, and the unit will be ready for installation in Astoria. All mission-critical components such as logging cable, spools, computers, and test equipment have been ordered and will be available for Phase 1. Other support equipment required to build and test tools either has been ordered or will soon be ordered.

INSURANCE AND INDEMNIFICATION

TAMRF solicited input to prepare a letter requesting government indemnification of U.S. IODP vessels; this letter will be submitted to Joint Oceanographic Institutions, Inc. (JOI) early in 2004.

LDEO began discussions with downhole tool underwriters. Gaining coverage for IODP USIO Phase 1 at rates similar to FY03 will be possible, and appropriate downhole tool coverage will be in place by Expedition 1.

HEALTH, SAFETY, AND ENVIRONMENT (HSE) PROCEDURES

A draft IODP statement about environmental policy was developed during discussions with members of the implementing organizations (IOs) and PPSP prior to the Nagasaki PPSP meeting in December 2003. A similar document will be created for health and safety activities. The vision is that, once created, these documents will provide the umbrellas for documents completed by each IO. JOI Alliance personnel discussed environmental assessment and health, safety, and environment plans and the Marine Mammal Protection Act (MMPA) issues, with input from the LDEO Office of Marine Affairs.

ENVIRONMENTAL ASSESSMENT

The JOI Alliance evaluated firms to conduct an environmental assessment (EA) for the U.S. IODP vessel's operations in Phase 1. There will also be a requirement for the preparation of an environmental impact statement (EIS) for Phase 2 operations. The EA will consist of updating the ODP 1985 EIS for use for in IODP Phase 1. This will require updating the existing document to ensure compliance with current policies and regulations. One area requiring specific attention is the use of seismic sources with respect to marine mammals. The issue of marine mammals will be included in the EA following discussions with the National Science Foundation (NSF), National Oceanic and Atmospheric Administration (NOAA), and appropriate consultants.

TECHNOLOGY DEVELOPMENT

PROJECTS AND OTHER ACTIVITIES

SIMULATED BOREHOLE TEST FACILITY

To expedite development of the Davis-Villinger Temperature-Pressure Probe (DVTPP) and Instrumented Water Sampler (IWS), a shore-based facility is required to test the penetration mechanics of different probe geometries and the effectiveness of filtering schemes for fluid sampling and pore pressure measurements. A simulated borehole test facility (SBTF) is being designed to simulate dynamic tool insertion in sediments under lithostatic pressure and hydrostatic pressure up to 3000 psi. The SBTF will be modular to accommodate the IWS, Davis-Villinger Temperature Probe (DVTP), DVTPP, Advanced Piston Corer Temperature (APCT) tool, and the Pressure Core Sampler (PCS). The insertion is accomplished using the APC "speed" pin concept, in which the hydraulic insertion force is set by the shear strength of a series of shear pins. The overriding purpose of the SBTF is to shorten the development cycle of downhole tools by testing prototypes under operational conditions without having to go to sea. The fabrication drawings and the bill of materials are complete.

DEAD-WEIGHT TESTER (PRESSURE TRANSDUCER CALIBRATION)

The dead-weight tester will provide in-house capability to calibrate pressure transducers used in downhole tools (PCS, APC Methane [APCM] tool, DVTPP, IWS, Downhole Sensor Sub [DSS])

and test hardware for the PCS and SBTF. A fully instrumented dead-weight tester, including software, is being evaluated.

ENGINEERING SERVICE CENTER

The purpose of the IODP/TAMU Engineering Service Center is to provide centralized support for the maintenance of state-of-the-art IODP/USIO rig instrumentation and downhole measurement tools. The Service Center has been created to provide centralized documentation control, inventory control, technical support, and orderly implementation of upgrades and changes. Nine downhole tools are included: the APCT tool, Water Sampling Temperature Probe (WSTP), DVTP, DVTPP, APCM tool, PCS Methane (PCSM) tool, PCS, DSS, and IWS. Rig instrumentation and some aspects of the active heave compensator are also supported.

APC Temperature (APCT) Tool: New electronics are being developed for the APCT tool to replace the obsolete electronics of Adara Systems. The new electronics, referred to as APCT2, will use a thermistor temperature sensor to replace the resistance temperature detector (RTD). Calibration procedures for the APCT2 tool will be the same as for all other IODP downhole temperature tools and will not require the special setup hardware and baths that are needed for the Adara System. Prototype electronics have been developed. Testing and refinement is ongoing with prototype deployment scheduled for Expedition 1.

Davis-Villinger Temperature Probe and Pressure Probe: The thermistor construction and packaging had been redesigned for both the DVTP and DVTPP to improve reliability and robustness. This upgrade will be implemented for Phase 1. There was no activity for this quarter.

APC Methane Tool (Temperature, Pressure, Conductivity): The APCM tool monitors the effects of gas loss in cores from the time the core is cut until it reaches the deck by recording temperature, pressure, and conductivity in the core headspace. Sensors are mounted in the APC piston. The APCM tool was a joint development between ODP/TAMU and Monterey Bay Aquarium Research Institute (MBARI). An upgrade to the electronics is to be implemented for Phase 1. There was no activity for this quarter.

Pressure Core Sampler (PCS): The PCS is a free fall-deployed, hydraulically actuated, wireline retrievable pressure coring tool for retrieving core samples maintained at bottom-hole pressures. After Leg 204, conceptual design changes were made to improve pressure retention and provide continuous temperature and pressure data during deployment and lab degassing. The changes include (1) adding a new ball valve pin with fixed stops to prevent overrotation, (2) making the temperature probe contact the core material, (3) repackaging the methane hardware to allow the data logger to remain on the tool during degassing, and (4) modifying firmware/software to display pressure and temperature data directly from the tool while in the gas manifold station. No work is anticipated for Phase 1. There was no activity for this quarter.

Drilling Sensor Sub (DSS) and Retrieval Memory Module (RMM): The DSS is an 8-1/4-in outside diameter (OD) memory sub with a 4-1/8-in through-bore to allow for core retrieval. It is positioned in the bottom-hole assembly (BHA) above the outer core barrel. The DSS records weight on bit (WOB), torque on bit (TOB), annulus pressure, pipe pressure, and annulus temperature near the bit. The RMM is an instrumented core barrel with an antenna, which is deployed along with a core barrel. The RMM lands in the BHA where its antenna is coincident with the DSS antenna. Data from the DSS are transmitted to the RMM via a wireless connection.

LDEO integrated the RMM with the DSA tool to provide the means to bring DSS data up with the retrieval of the core barrel. The vendor is currently refurbishing the two DSS tools, one of which is being upgraded to communicate with the RMM. Criteria for an acceptance test were provided to the vendor. The vendor is surveying land-based test facilities to perform the acceptance testing prior to additional sea trials.

Instrumented Water Sampler (IWS): Joris Gieskes of Scripps Institution of Oceanography, who had modified the hydraulic and mechanical elements of the Fisseler Water Sampler, performed the preliminary work on an improved water sampler. ODP Engineering took the Scripps concept and designed a new water sampler with feedback controls and additional sensors for measuring formation properties and recording diagnostic data. The feedback control software is being developed and debugged. The tool is expected to be operational in Phase 1.

Rig Instrumentation System (RIS): The RIS provides for real-time monitoring and electronic storage of drilling parameters and vessel motion. The RIS system is a PC-based data acquisition system with a master computer serving the driller's console while broadcasting the data to remote workstations in the office of the ODP Operations Manager and other offices throughout the ship. The WOB filter rig floor electronics and derrick-mounted electronics were returned to College Station after ODP demobilization. Design changes to the derrick-mounted electronics are being evaluated to address the chronic failures at the end of ODP operations. Component changes may require a new board layout. A hardened, reliable WOB filter will be reinstalled in Phase 1.

Planning for new tool fabrication and testing facilities at LDEO, including temperature chamber and temperature calibration equipment, has begun. Testing of this equipment will be conducted prior to Phase 1 to ensure that testing is completed before the equipment is shipped to Astoria for Expedition 1. Data acquisition equipment is being specified. We expect that this equipment will be purchased and configured for mobilization in Astoria.

ANALYTICAL TOOL DEVELOPMENT

Initial steps were taken toward the development of a strategic plan for improvements to shipboard laboratories during FY04, FY05, and Phase 2. A preliminary list of laboratory development projects was prepared and initial descriptions of high-priority projects were completed.

P. Blum (Staff Scientist) was sent to the December 2003 Science Measurements Panel (SciMP) meeting as a tools and analytical specialist to provide input to the meeting as requested. An informal IO meeting during that event proved useful in establishing working relationships among IO representatives. One laboratory instrumentation project and one scientific analysis project were reviewed, and initial planning developed. The preliminary design for the new core splitting system is 30% complete. Initial plans were developed to create an online, interactive gas analysis graphic report (scientific analysis project) for safety monitoring from shore to replace the Leg 210 ad hoc application. The project description for the visual core description (VCD) project was refined. The VCD project will be formally initiated in the second or third quarter of FY04.

IODP/LDEO began the redesign and manufacture of the battery holders for the core barrel-retrievable memory module (CB-RMM). The new design will completely immobilize the

batteries during impact between the core barrel and the bottom-hole assembly. This project will be completed well before Phase 1 mobilization.

INFORMATION TECHNOLOGY

SHIP-TO-SHORE COMMUNICATION STRATEGY

Plans for communications services for the Phase 1 vessel include services (voice and data) very similar to those that were available aboard the *JOIDES Resolution* during the final ODP legs.

USIO-IODP WEB SITE

The creation of the IODP USIO Web site was led by the TAMU Web Administrator with input from other JOI Alliance members; it went online in early December 2003. The goal was to have a portal with easy access to basic Alliance information, avoid duplication of content as much as possible, and provide a fairly seamless interface with the TAMU and LDEO Web sites.

The IODP/TAMU Web site went online in mid-November 2003. Since then, some existing content has been migrated from the ODP/TAMU Web site and new content is being added continuously.

REPORTS/PUBLICATIONS AND EDUCATION/OUTREACH

USIO-IODP PROGRAM PLAN FOR IMI

The JOI Alliance submitted the USIO-IODP FY04 Program Plan to IMI in November 2003 for review. The proposed FY04 budget meets the requirements of the NSF mission forecast for this year and stays within the funding level negotiated in the best and final offer (BAFO) with NSF. The Program Plan submitted to IMI does not include costs related to the mobilization of the *JOIDES Resolution* at the start of Phase 1. Initial preparations of the USIO-IODP FY05 program plan to IMI were begun. NSF will provide guidance on the issue of POC and SOC definitions for use in the FY05 budget development.

USIO-IODP PROGRAM PLAN FOR NSF

The JOI Alliance prepared the USIO-IODP FY04 Program Plan to NSF for submission in January 2004. The proposed USIO-IODP FY04 budget stays within the funding level negotiated in the BAFO. Initial preparations of the FY05 program plan were also begun in response to a request from NSF. NSF will provide guidance on the issue of POC and SOC definitions for use in the FY05 budget development.

USIO-IODP POLICY MANUAL

IDOP/TAMU and IODP/LDEO provided input to JOI on the areas of the ODP policy manual that need updating for IODP. JOI will coordinate the revisions to this document.

JREPORT

The JREPORT team held several meetings to plan educational activities for the coming year. JOI staff members met with potential museum exhibit developers to discuss the potential for partnerships. The Alliance conducted outreach efforts to educators at the Geological Society of America (GSA) meeting in Seattle. The JOI Alliance also presented posters during the American Geophysical Union (AGU) Fall Meeting, one on education and outreach activities available in

IODP, providing visibility to this new portion of the program, and one on electronic publishing in ocean drilling. Discussions were also initiated among the JOI Alliance regarding potential educational activities that could be conducted during Expedition 1.

USIO-IODP SUPPORT ACTIVITIES

INTERACTIONS WITH OTHER IODP IMPLEMENTING ORGANIZATIONS

Informal discussions with other IOs indicate that IO meetings among staff at various levels of the organization need to occur in order to establish continuity and consistency in IO deliverables. Areas identified for future discussion include science operations, tool enhancements, database management, curation, and publications, among others. Informal discussions also focused on the need for the IOs to meet prior to Science Advisory Structure (SAS) meetings to review the agenda items and identify areas of commonality and to review presentation material. JOI Alliance staff members continued to prepare responses to several action items that were identified at the IMI/IO meeting in Bozeman, Montana. These responses will be used to guide discussion at the next IMI/IO meeting in Edinburgh, Scotland, in February 2004.

APPENDIX A: CONTRACTUAL ACTIVITIES

JOI

JOI CONTRACT WITH NSF OCE-0352500

This contract was signed on 30 September 30 2003 at a total estimated cost of \$626,217,308 over ten (10) years.

Two modifications were issued during this quarter. Modification 01 provided incremental funding of \$10M to cover operations through 24 March 2004. Modification 02 was negotiated and signed on 31 December 31 2003. This modification approved F. Rack, Director, Ocean Drillings Programs as Contract Officer Technical Representative (COTR) for IODP; deleted the requirement to report sensitive property under \$25,000 and changed the Rights in Data provision to give JOI and its subcontractors rights to data first produced in the performance of the contract.

JOI SUBCONTRACT WITH TAMRF JSC 4-02

JOI signed a letter contract with TAMRF on 30 September 2003 to initiate the foundation's immediate support to IODP. This letter contract was signed on 31 December 2003 at an estimated cost of \$449,287,064. Primary areas of negotiation were format and reporting procedures, government property/reporting issues, relaxation of the Rights in Data requirements, and specific reference to institutional commitments in the subcontract. TAMRF is currently funded at \$8,950,000 through 24 March 2004.

JOI SUBCONTRACT WITH LDEO JSC 4-03

JOI signed a letter contract with LDEO/Columbia on 30 September 2003 to initiate the organization's immediate support to IODP. Primary areas of negotiation were government property/reporting issues and relaxation of the Rights in Data requirements. The final subcontract was forwarded on 15 January 2004 for LDEO/Columbia review and signature. JSC 4-03 has an estimated cost of \$63,548,129. LDEO is currently funded at \$375,000 through 24 March 2004.

LDEO

LDEO SUBCONTRACT WITH SCHLUMBERGER

D. Goldberg (Director, Science Services), M. Reagan (Deputy Director, Science Services), and G. Myers (Manager, Engineering and Technical Services) met with Schlumberger Houston representatives on 24 October 2003 to review mobilization activities for Phase 1 operations on the *JOIDES Resolution*. Personnel, equipment, and cost plans were developed. Contracted activities will commence approximately 30 days prior to Expedition 1.

TAMRF/TAMU

TAMRF SUBCONTRACT WITH ODL

A draft subcontract for the Phase 1 vessel was completed and is being reviewed internally in preparation for negotiations. Negotiations with ODL are expected to commence March 2004.

CONTRACTS/PROCUREMENT ACTIVITY (100K OR GREATER)

Purchase Order to Dril-Quip on 08 October 2003, \$131,690 for casing hangers and pups.

MISCELLANEOUS ACTIVITIES

Invitation to Tender: Sent to 10 vendors on 15 December 2003, expecting seven responses.

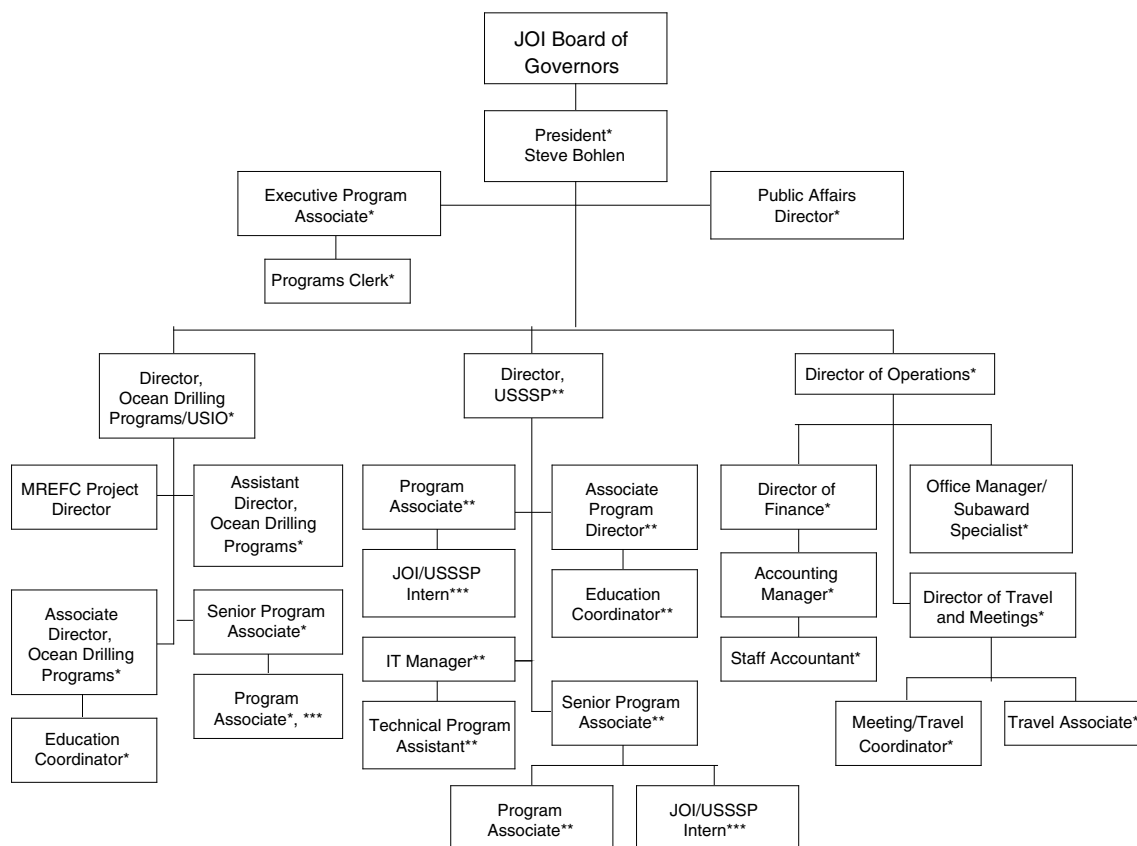
Travel Policy: Worked with IODP Travel Supervisor in review and update of travel policy for IODP.

APPENDIX C: PERSONNEL STATUS

JOI

F. Rack was named Director of Ocean Drilling Programs (ODP and IODP) in November 2003. He replaces N. Piasis, Interim Director of ODP for nearly 2 years. Rack will be responsible for the overall leadership and management of the U.S. drilling vessel and science activities for IODP and will lead ODP phaseout activities. Rack brings many years of experience with ODP to the Director position. He has worked at JOI since 1998, as Assistant Director, Ocean Drilling Programs, where he has been responsible for program management and oversight of existing JOI contracts and cooperative agreements with NSF and projects related to gas hydrates with the Department of Energy and Chevron Texaco. While at JOI, Rack has provided leadership in developing proposals for new ventures related to scientific ocean drilling, cyber-infrastructure, ocean observing systems, and technology development.

Joint Oceanographic Institutions



* The percentage of effort for IODP is less than 100% for these positions

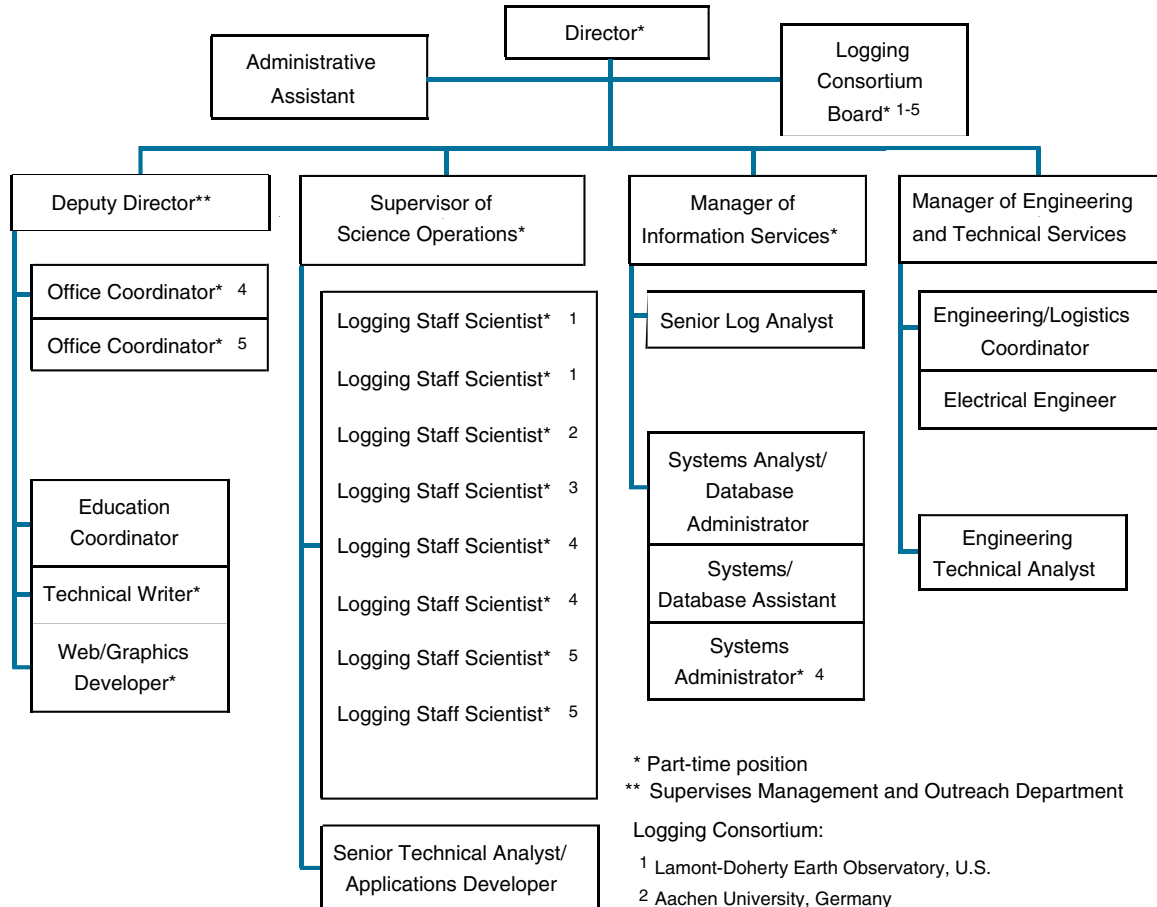
** Not part of IODP management.

*** Part-time position.

LDEO

Two open engineering positions (electrical engineer and technical analyst) at LDEO-BRG were advertised. Applicants will be reviewed and selected in the next quarter.

Science Services, LDEO



* Part-time position

** Supervises Management and Outreach Department

Logging Consortium:

1 Lamont-Doherty Earth Observatory, U.S.

2 Aachen University, Germany

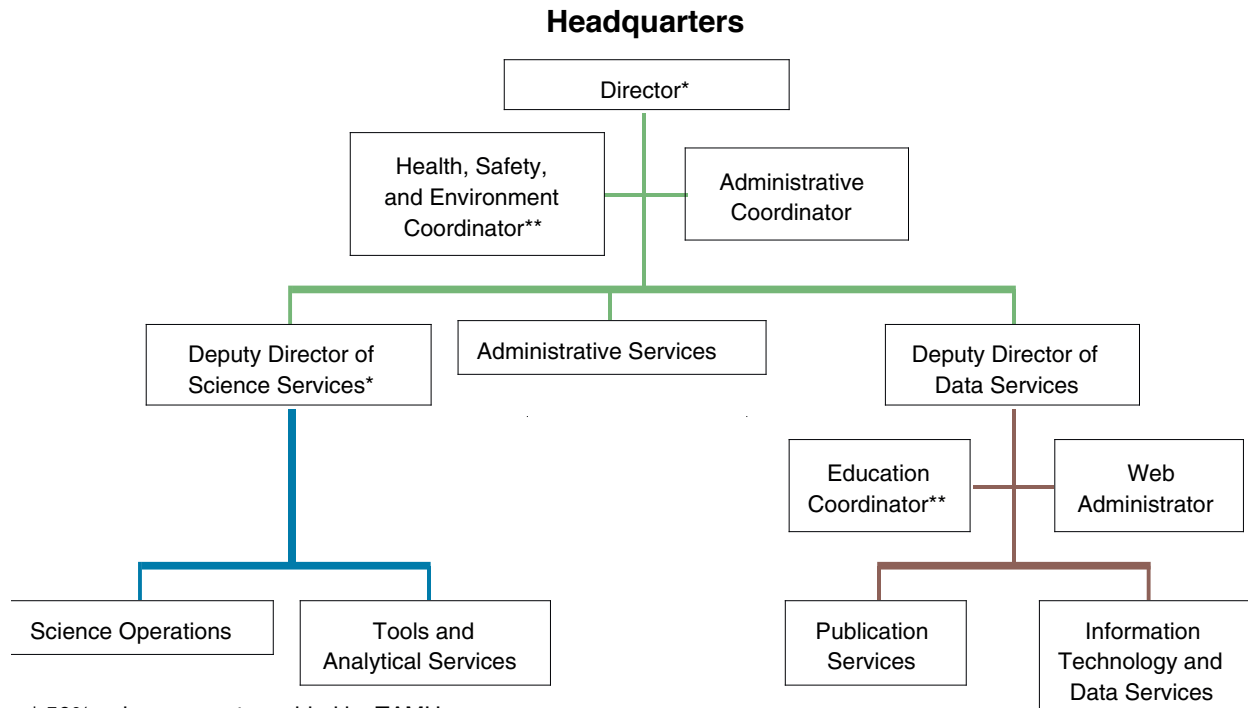
3 Ocean Research Institute, Japan

4 Laboratoire de Geophysique et Hydrodynamique en Forage, France

5 University of Leicester Borehole Research, U.K.

TAMU

The following organizational chart reflects the new IODP structure:



* 50% salary support provided by TAMU

** IODP funded in FY04.

All other positions funded by both ODP and IODP in FY04.

As of 31 December 31 2003, there were 116 ODP employees that were assigned to IODP positions.

During this quarterly period the following positions opened and were advertised:

- Supervisor of Science Support
- Senior Project Administrator
- Supervisor of Analytical Services
- Supervisor of Operational Support
- Staff Scientist
- Research Specialist

APPENDIX D: CONFERENCE AND MEETING SCHEDULE

GSA Fall Meeting	2–5 November 2003	Seattle, WA
SSEP	20–23 November 2003	Boulder, CO
SPPOC	5–6 December 2003	San Francisco, CA
AGU Fall Meeting	8–12 December 2003	San Francisco, CA
SciMP	15–18 December 2003	Nagasaki, Japan
PPSP	15–17 December 2003	Nagasaki, Japan

APPENDIX E: TRAVEL

Institution	Personnel	Purpose	Location/Dates
JOI	M. Cortes, A. Henderson, M. Niemit, K. White	GSA Meeting	Seattle, WA/2-5 November 2003
JOI	S. Bohlen, N. Pias, J. Farrell, F. Rack, K. White, M. Cortes	AGU Meeting	San Francisco, CA/8-12 December 2003
JOI	F. Rack	SciMP Meeting	Nagasaki, Japan/15-18 December 2003
JOI	S. Bohlen, F. Rack	SPPOC Meeting	San Francisco, CA/5-6 December 2003
TAMU	R. McPherson, J. Fox, J. Baldauf, Ann Klaus, L. Schulze, B. Lancaster	JOI Alliance Meeting	Washington, D.C./20-22 October 2003
TAMU	J. Firth	IO Meeting	Bremen, Germany/22-26 October 2003
TAMU	J. Fox, J. Baldauf, Ann Klaus	JOI Alliance Meeting	Palisades, NY/17-20 November 2003
TAMU	M. Malone, J. Miller	SSEP Meeting	Boulder, CO/17-24 November 2003
TAMU	R. McPherson	Meeting with underwriters and brokers on IODP insurance issues	London/20-26 November 2003
TAMU	J. Baldauf	NSF and NOAA Meetings	Washington, D.C./4-5 December 2003
TAMU	J. Fox	SPPOC Meeting	San Francisco, CA/4-6 December 2003
TAMU	J. Fox, Adam Klaus, D. Becker	AGU Meeting	San Francisco, CA/8-12 December 2003
TAMU	R. Wheatley, C. Bennight	Meet with Dionex representative	Houston, TX/15 December 2003
TAMU	J. Baldauf	PPSP Meeting	Nagasaki, Japan/13-17 December 2003
TAMU	D. Becker, Ann Klaus, P. Blum, J. Baldauf	SciMP Meeting	Nagasaki, Japan/15-18 December 2003
LDEO	D. Goldberg, M. Reagan	JOI Alliance Meeting	Washington, D.C./21 October 2003
LDEO	G. Iturrino	SSEP Meeting	Boulder, CO/19-24 November 2003
LDEO	D. Goldberg	SPPOC Meeting	San Francisco, CA/4-6 December 2003
LDEO	D. Goldberg	Logging IO Meeting	San Francisco, CA/7 December 2003
LDEO	S. Robinson	AGU Meeting	San Francisco, CA/7-12 December 2003
LDEO	D. Goldberg	PPSP Meeting	Nagasaki, Japan/13-17 December 2003
LDEO	D. Goldberg, S. Robinson	SciMP Meeting	Nagasaki, Japan/15-18 December 2003

APPENDIX F: DATA REQUESTS

No activity.

APPENDIX G: SAMPLE REQUESTS

No activity.

APPENDIX H: PUBLIC AFFAIRS

JOI

The JOI office has been working to ensure a smooth transition from ODP to IODP for the media and public. Booths, press releases, and inquiry responses have emphasized that ocean drilling did not end in September with the end of the active phase of ODP and that IODP will herald a new era in technology and science possibilities. Although emphasis is placed on the U.S. portion of IODP, the JOI staff has become the contact for many members of the media on general questions about IODP. Press releases are distributed to more than 100 science journalists worldwide, as well as to member country offices. Press releases distributed during this time include

- NSF Awards Contract for Start of Integrated Ocean Drilling Program (30 September 2003)
- Dr. Frank Rack Named Director of Ocean Drilling Programs (1 November 2003)
- Ocean Drilling Program Scientists will Unveil New Research Results at the Geological Society of America's Annual Meeting in Seattle (1 November 2003)
- Ocean Drilling Program Scientists to Reveal New Research Results at AGU Meeting (1 December 2003)
- Media Advisory Integrated Ocean Drilling Program Town Meeting (1 December 2003)

At the GSA meeting in Seattle, JOI staff represented ODP and IODP in the pressroom and distributed a press release highlighting some of the talks on scientific ocean drilling and providing an update on IODP activities. The ODP/IODP booth was well attended by scientists and educators.

At the AGU Fall Meeting, JOI staff prepared and distributed press releases on the Town Hall meeting and highlighted some of the more than 200 abstracts presented on research related to ODP, the Deep Sea Drilling Project (DSDP), and IODP. JOI staff also talked to many members of the press during the meeting, resulting in a high turnout at the town meeting and booth and interest among journalists in IODP. The JOI Alliance also presented a poster at the AGU meeting on education and outreach activities available in the new program, providing visibility to this new portion of the program.

The JOI staff continues to respond to constant requests for information from the public, educators, and journalists. Stories on IODP published during this time include

- "Same Crew to Run New Program," *Science*, Vol. 302, 10 October 2003, p. 213.
- BBC Broadcast on Ocean Drilling http://www.bbc.co.uk/radio4/science/thematerialworld_20031106.shtml, 6 November 2003.
- "Joint Oceanographic Institutions Awarded IODP Contract," *Sea Technology*, November 2003, p. 69.
- "Digging In," *Nature*, Vol. 426, 4 December 2003, pp. 492–494.
- "Arctic is First Call for New Global Program," *Science*, Vol. 302, 12 December 2003.

APPENDIX I: PUBLICATIONS

No activity.

APPENDIX J: WEB

JOI

In December 2003, a temporary IODP umbrella site was implemented. In the coming months, JOI will work with other Alliance partners to develop a new Web site for IODP. Initial discussions have focused on the need for a seamless site, with content management shared among the Alliance partners.

TAMRF/TAMU SITE USE STATISTICS

Statistics for the IODP/TAMU site should be available starting in January or February 2004.

NEW TAMU CONTENT

Information for participants: <http://iodp.tamu.edu/participants/>

Science Operations

Expedition schedule: <http://iodp.tamu.edu/scienceops/>

Maps: <http://iodp.tamu.edu/scienceops/maps.html>

Tools & Labs

Proposed drafts are being reviewed by TAMU staff members.

Data & Samples

Proposed drafts are being reviewed by TAMU staff members.

Public & Media: <http://iodp.tamu.edu/publicinfo>

Photo highlights: <http://iodp.tamu.edu/publicinfo/gallery/highlights/>

Drillship history and virtual tours: <http://iodp.tamu.edu/publicinfo/drillship.html>

Meetings & Travel: <http://iodp.tamu.edu/travel/>

Travel arrangements and forms: <http://iodp.tamu.edu/travel/travel.html>

Expense instructions and forms: <http://iodp.tamu.edu/travel/expenses.html>

Visitor information: <http://iodp.tamu.edu/travel/visitors.html>

Employment: <http://iodp.tamu.edu/employment/>

Information for Employees: <http://iodp.tamu.edu/employees/>

Help desk form: <http://iodp.tamu.edu/employees/helpform.html>

Human Resources policies: <http://iodp.tamu.edu/employees/humanres.html>

Information Technology policies: <http://iodp.tamu.edu/employees/infotech.html>

Administration policies: <http://iodp.tamu.edu/employees/admin.html>

Alliance intranet: <http://iodp.tamu.edu/internal/>

Search: <http://iodp.tamu.edu/search.html>

Site map: <http://iodp.tamu.edu/sitemap.html>

People (staff directory): <http://iodp.tamu.edu/staffdir/>

APPENDIX K: CORE REPOSITORY CONSOLIDATION

The IODP core repository consolidation plan was presented to the December 2003 meeting of SciMP in Nagasaki, Japan. D. Becker (Manager of Information Technology and Data Services) gave the presentation with only a few questions from panel members. One member asked about the total cost of the consolidation, which was reported at around \$1 million.

The highlights of the plan include

- Long-term cost savings of ~\$361,000 U.S./year.
- All core from same region will be stored together; less travel expense for scientists.
 - Gulf Coast Repository (GCR)—Indian and Pacific Oceans and peripheral seas, Gulf of Mexico, and Caribbean Sea; total DSDP/ODP core = ~181,000 m.
 - Bremen Core Repository—Atlantic Ocean, Southern Oceans (>60° S), and peripheral seas; total DSDP/ODP core = ~138,000 m.
- All core will be located adjacent to core-related science laboratories.
- Core will be protected from damage during consolidation.
- Core will be shrink-wrapped to secure material during transit.
- Voids will be filled with foam packing inserts; top sheets will be added to rubbly, heavily sampled, and fragile material before shrink-wrapping.
- Temperature recorders will be inserted in each shipping container to monitor refrigeration.
- >20 years of experience with packing and shipping cores.
- Working halves and archive halves will be shipped separately.
- Reduce the time that cores are not available by shipping one to four containers at a time.
- Allow scientists to track core by posting shipping status/schedule on the Web.
- Consolidation plan is fully endorsed by all repository institutions.
- University of Bremen is building a new repository with capacity of 200 km.
- University of Bremen is building core-related science laboratories adjacent to the new repository.
- University of Bremen will provide to IODP free of charge building rent and refrigeration.
- TAMU will build a new core repository to increase capacity to 400 km.
- TAMU will build core-related science laboratories adjacent to the GCR facility.
- TAMU will provide to IODP free of charge building rent and refrigeration.
- Estimated consolidation duration:
 - East Coast Repository: 56–60 weeks
 - West Coast Repository: 40–44 weeks

After a brief discussion, the panel voted in support of the consolidation plan.

APPENDIX L: MAJOR RESEARCH EQUIPMENT AND FACILITIES CONSTRUCTION

MARKET SURVEY STATUS

The market survey was distributed on 17 November 2003 to seven drilling equipment vendors. A copy was sent to an eighth vendor at the request of the vendor. Because of various mergers, six have indicated they are responding. The return date for the data is close of business on 6 February 2004.

INVITATION TO TENDER STATUS

The Invitation to Tender (ITT) for the Phase 2 vessel was sent to 13 drilling contractor vendors on 15 December 2003. The return date for the data is close of business on 17 March 2004. Of the 13 vendors contacted, eight are responding to the bid request. In addition, several drilling contractor vendors have made presentations to the IODP/TAMU Director to describe their company and the ships available.

PROJECT EXECUTION PLAN STATUS

IODP/TAMU managers reviewed a draft document of the Project Execution Plan (PEP) and provided comments to J. Baldauf (Deputy Director of Science Services) to integrate the comments and forward to JOI.

LDEO personnel reviewed ITT and PEP documents from the JOI Alliance Platform group.

APPENDIX M: USIO-IODP QUARTERLY REPORT DISTRIBUTION LIST

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