

JOIDES PLANNING COMMITTEE ANNUAL MEETING
27-30 November 1989
Woods Hole Oceanographic Institution
Woods Hole, Massachusetts

MINUTES

Members:

- J. Austin - University of Texas at Austin
- G. Brass - University of Miami
- M. Cita-Sironi - University of Milano, ESF Consortium
- D. Cowan - University of Washington
- A. Crawford - University of Tasmania, Australia (alt. for J. Malpas)
- R. Duncan - Oregon State University
- H. Jenkyns - Oxford University, United Kingdom
- M. Kastner - Scripps Institution of Oceanography
- M. Leinen - University of Rhode Island
- C. Mevel - Université Pierre et Marie Curie, France (alt. for Y. Lancelot)
- R. Moberly (Chairman) - Hawaii Institute of Geophysics
- A. Taira - Ocean Research Institute, Japan
- B. Tucholke - Woods Hole Oceanographic Institution
- U. von Rad - BGR, Federal Republic of Germany
- J. Watkins - Texas A&M University
- J. Weissel - Lamont-Doherty Geological Observatory (alt. for M. Langseth)

Liaisons:

- L. Garrison - Science Operator (ODP-TAMU)
- R. Jarrard - Wireline Logging Services (ODP-LDGO)
- E. Kappel - Joint Oceanographic Institutions, Inc. (alt. for T. Pyle)
- B. Malfait - National Science Foundation

Panel, Committee and DPG Chairmen:

- M. Ball - Pollution Prevention & Safety Panel
- R. Batiza - Lithosphere Panel
- I. Dalziel - Tectonics Panel
- R. Detrick - Sedimented Ridges DPG
- R. Kidd - Site Survey Panel
- T. Moore - Information Handling Panel
- K. Moran - Shipboard Measurements Panel
- D. Rea - Central & Eastern Pacific DPG
- N. Shackleton - Ocean History Panel
- C. Sparks - Technology & Engineering Development Committee
- E. Suess - Sedimentary and Geochemical Processes Panel
- P. Worthington - Downhole Measurements Panel

Guests and Observers:

J. Baker - Joint Oceanographic Institutions, Inc.
B. Harding - ODP-TAMU Engineering
A. Meyer - Science Operator (ODP-TAMU)
J. Natland - Scripps Institution of Oceanography
M. Storms - ODP-TAMU Engineering

JOIDES Planning Office:

L. d'Ozouville - Executive Assistant and Non-US Liaison
G. Waggoner - Science Coordinator

Monday, 27 November 1989

812 Introduction

PCOM Chairman Ralph Moberly called the 1989 Annual Meeting of the JOIDES Planning Committee to order. Brian Tucholke welcomed everyone to the Woods Hole Oceanographic Institution. Tucholke explained logistics including two dinners, the first hosted by Woods Hole and the second by JOI. Moberly welcomed the alternates standing-in for this meeting, A. Crawford, C. Mevel and J. Weissel. Introductions were then made starting with the JOIDES Planning Office, PCOM members, panel chairmen, liaisons, invited guests and observers.

813 Minutes of 22-24 August 1989 Seattle PCOM Meeting

Moberly called for comments, corrections and approval of the previous minutes.

U. von Rad asked that on page 8, Bochum be corrected to Bosum.

PCOM Motion

PCOM approves the minutes of the 22-24 August 1989 Planning Committee meeting with amendments. (Motion Kastner, second Brass)
Vote: for 16; against 0; abstain 0

814 Approval of Agenda

Moberly called for additions or revisions, and then for adoption of the agenda for the meeting. Several minor additions and modifications were requested in the Agenda.

PCOM Motion

PCOM adopts the agenda for the 27-30 November 1989 Planning Committee meeting with amendments. (Motion Brass, second Leinen)
Vote: for 16; against 0; abstain 0

815 ODP Reports By Liaisons to PCOM

EXCOM

R. Moberly reported on the 3-4 October 1989 EXCOM Meeting in Amsterdam. Summaries of the principal results of importance to PCOM included:

- Conferences. PCOM's mandate calls for sponsoring and convening COSOD-type conferences at appropriate intervals. One plan had called for COSOD III in mid-1992. After discussion, EXCOM leaned toward both (a) a small series of international science-focused meetings in the summer or fall of 1991, partly retrospective ('distinguished past') and partly forward-looking ('exciting future'), with timing, venues, and organization largely decided by the country or countries for which these will be partly 'marketing exercises' for MOU renewal; and (b) COSOD III in perhaps 1993, with a focus on means of implementation of plans in the renewed program.
- Mandate changes. EXCOM accepted, and the JOI Board of Governors ratified, the changes PCOM proposed for panel membership statements and reinstatement of working groups.
- Global geoscience initiatives. EXCOM accepted the JOI proposal (which PCOM had endorsed) of formal initiatives with international advisory bodies of large global geoscience programs. There were, however, considerable reservations about the direct contact once a year between the liaison groups and PCOM, because of the possibility of short-circuiting the JOIDES advisory panel structures. That reservation also led to the proviso that PCOM and EXCOM members shall not be members of the liaison groups.
- Budget Committee. J. Austin of PCOM was appointed to BCOM.
- Data Dissemination. PCOM is to recommend to JOI any action about dissemination of ODP data, including action concerning the group that prepared the CD-ROM of DSDP data.
- Future Structure of PCOM. The PCOM resolution about non-JOI membership on PCOM was passed from EXCOM to the JOI Board of Governors. Supposedly, the BOG will decide their course of action at their late winter meeting. Letters from persons in non-JOI institutions, received in answer to the PCOM inquiry, were attached to the Agenda book and additional letters were distributed at the meeting.
- Future Structure of ODP. EXCOM will assist JOI in setting up and charging the next (third) Performance Evaluation Committee (PEC). The review is to include the broader structural aspects of the program as well as the performance of the subcontractors. EXCOM will advise JOI regarding procedures to select the post-1992 subcontractors.

- Miscellaneous. In a discussion related to performance evaluation, PCOM was cautioned that the JOIDES advisory panels must be independent; they must not become unduly influenced by organizations they are to monitor or evaluate. In a discussion of the Long Range Plan, comments were made about the Executive Summary, and the statement about a possible second vessel; JOI is to work the comments into a consensus statement. EXCOM reviewed ODP results in terms of COSOD I objectives. PCOM's motion that TAMU shall develop the capability to run the BRG's suite of logging tools at sites drilled with the DCS, led to discussion of the budgetary and time-delay implications of some of the possible methods.

Discussion

Duncan asked how the tables from the EXCOM agenda book concerning ODP results in terms of COSOD I objectives was prepared. Moberly said that the goals of the legs came from the cruise prospectus and were matched against COSOD I statements; the results came from the cruise reports. Duncan suggested that the document could be used more formally if it were prepared with the help of the Co-Chief Scientists and JOIDES panels. Kidd said that the document could be especially valuable outside the ODP community if it were prepared in a more formal manner. Moberly said that it must be remembered that the document was prepared quickly and intended only for the use of EXCOM in evaluating how well COSOD I goals had been attacked. von Rad said that there are some mistakes in the list and it needs to be checked by the Co-Chiefs and thematic panels. Cita cautioned that more subjective input might distort the picture about what has truly been accomplished. Brass was concerned that the document as it now stands should not be widely disseminated for PR purposes. Kastner said that PCOM needs to know what has not been accomplished because of technological problems. Shackleton said that the accomplishments cannot be evaluated solely on the basis of what comes off the ship; post-cruise laboratory work also needs to be taken into account. Leinen thought that it was naive to think that this document would not go beyond EXCOM, PCOM and JOIDES panels; because it is a valuable document it needs to have more input from panels before it gets wide distribution. It was the consensus of PCOM that letters go out to Co-Chief Scientists asking them to evaluate their legs in terms of COSOD I themes and if the objectives in the cruise prospectus were achieved in full, in part, or not at all. This evaluation is to take into account the results of the post-cruise science. The JOIDES Office with input from the Co-Chiefs and the thematic panels will revise this document. PCOM members should also submit any corrections that they have.

NSF

B. Malfait reported that the FY90 budget for NSF is still unknown. The Foundation is planning on a modest increase. The FY90 ODP budget has

preliminary approval at \$37.7 M, with final approval at \$38 M expected in January pending JOI resolution of some differences with TAMU. The contribution by the international partners will be \$16.5 M (\$2.75 M per partner) for FY90. The original NSF target for FY91 is \$39M. BCOM estimates are \$40M, with support for technological development a major concern. The final target will probably lie somewhere between \$39 and \$40 M.

Potential new members for ODP are being pursued. There will be a re-examination concerning Soviet participation. There is preliminary interest from the International Oceanographic Commission (IOC) about developing a consortium of developing countries. There may be more to report on this at the April PCOM meeting.

There is strong support within NSF for continuation of ODP after 1993. MOU discussions have begun with international partners with the same timetable as presented at the Seattle PCOM. The Long Range Plan will be an important document for discussions about renewal and is anticipated to be published in early 1990. Issues related to plans for the program after 1993 include: Access to additional capabilities (shallow-water and atoll drilling, additional sediment-coring capabilities, Arctic coring); Interaction with other programs; Tool and instrument development; Long term experiments and occupation of drill sites.

NSF Science Program support of ODP-related field programs for 1990 are: 1) Miller/Christie-Blick MCS survey with the *Bernier* of the US Mid-Atlantic Margin; 2) Overpeck/Arthur coring and seismic study of the Curiaco Trench using the *Thomas Washington*; 3) Delaney/Spiess study using Deep Tow and dredging of the Kane Transform using the *Melville*, possibly in early 1991; 4) Purdy/Fryer near bottom refraction experiment on the East Pacific Rise possibly in early 1991. The 1991 Field Program will accept proposals for projects in any ocean, using the PCOM 4-year plan for evaluation. Proposals are due either 1 February or 1 June 1990.

Discussion

Kastner asked about plans for the NEREIS project. Mevel distributed a circular about the NEREIS European Workshop planned for 29-30 January 1990 in Brussels. Mevel said that around 80 scientists will be participating in this workshop. von Rad said that the FRG does not foresee having funds to participate in both ODP and NEREIS.

von Rad then discussed the problems being caused for the non-US partners by the exclusion of the Soviets from ODP. He said that the letter from J. Thiede suggests that time is becoming a pressing matter, since the Soviets have the money available at this time, but may not, if the decision continues to be put off. The Europeans are concerned that they keep hearing the message that something is in the works, but nothing substantial has been done. von Rad

asked that PCOM make an endorsement for further Soviet participation in ODP. Von Rad said that other European programs are being hurt by the decision to exclude the Soviets from ODP, for example Thiede's work in the Arctic. Brass said that permission for the *Polarstern* to work in Soviet territorial seas has also been affected by this decision. The international partners are involved in this decision. von Rad and Brass volunteered to prepare a resolution for PCOM approval (see Minute 826).

Taira asked if the Koreans were being approached about participating in the International Oceanographic Commission consortium. Malfait said that it is unclear at this time how the IOC is proceeding with developing a consortium, but more information should be coming soon. Garrison said that the Koreans had expressed a strong interest in forming an East Asia Consortium to P. Rabinowitz during his visit.

JOI

E. Kappel reported that FY89 is being closed out at JOI. Approval of the full \$38M ODP budget level for FY90 has been pending resolution of questions about TAMRF administrative fees and ODP/TAMU salaries. JOI has not received an official target budget from NSF for ODP for FY91. JOI is concerned that a \$39M budget will cause problems with technological development and may not cover increases in the PPI.

The Long Range Plan is being worked on at JOI, where it is in the final editing stages. An executive summary has been completed and reviewed by EXCOM. Bids have been received from printers. Distribution is anticipated to be around February. The method of distribution is not certain, perhaps something similar to what was done for COSOD.

JOI has a formal response from Bob Ginsburg of the Global Sedimentary Geology Program agreeing to form a liaison group. Ginsburg has forwarded the names of three GSGP representatives for this liaison group. PCOM needs to nominate members for this group (see later Minute 828). T. Pyle has briefed the RIDGE Steering Committee about the liaison groups and a formal response is expected shortly. The new chairman of FDSN, Adam Dziewonski, has been briefed by Pyle and a response is expected soon. A positive response is also anticipated from the Nansen Arctic Drilling group. The Continental Science Drilling Program has not yet been sent a formal letter, but the recent ODP/CSDP high-temperature tools workshop provided an opportunity to explore ways with which to interact with them. JOI has also been talking to NSF Earth Sciences Division about their MOU with KTB, which could provide a tie in between ODP and KTB.

A RFP for Micropaleo Reference Centers has been distributed by JOI. Announcements have been sent to all ODP member countries. Deadline for

proposal submission to JOI is January 15, 1990. Money for these centers is not in the budget as it stands now.

J. Weissel is the new chairman of USSAC. The CD-ROM which was funded by USSAC has been distributed to PCOM members. A new Fellowship brochure has been prepared and copies were distributed at the meeting. USSSP has funded F. Spiess for a wireline reentry project. USSAC is supporting the upcoming Geochemical Logging Workshop of Brass and Kastner.

Discussion

Leinen asked if there had been a response from JGOFS about the liaison groups. Kappel said that Pyle has written IGBP, but there has been no response at this time.

N. Shackleton said that he is involved in the IGBP and will talk to them about responding to JOI.

Science Operator

L. Garrison reported on the Sea of Japan Legs which were completed in mid-October (Appendix A). These appear to have been successful legs, with the major objectives achieved. On Leg 127, the age and nature of the acoustic basement was determined at 3 of 4 sites. Ages for the dolerite sills cored at these sites range from 14-19 m.y. The site on the Okushiri Ridge did not reach basement because of loose sands, but, dating of the sands suggests convergence of the plates began at 1.8 m.y. At Site 794 on Leg 127, the drill pipe became stuck and could not be jarred loose. The pipe was backed off and the tools left in the hole. The cased hole into basement for subsequent experiments on Leg 128 was not achieved. Therefore, 10 days were added to Leg 128 to either fish the tools out of the hole or to drill a new hole for these experiments. Leg 128 started drilling at Site 798 on the Oki Ridge, where at a total depth of 518 m a show of gas caused drilling to be terminated for safety reasons. This site was where the third-party, ¹⁴C-labelling, bacteriological experiment by scientists from the UK was planned. The cores for this experiment were transferred to another vessel chartered by the UK, transported to shore and flown to the UK. The samples appear to have arrived in good condition and the results are now being worked up. Site 799 drilled 1084 m in the failed rift in the Yamato Trough, where metallogenic deposits were expected. A sharp decrease in the C₁/C₂ ratios near the bottom of the hole and fluorescence of the fluid caused drilling to be stopped for safety reasons. The hole is good for lower Miocene paleoceanography. The experiments at Site 794 depended on a rendezvous with ORI ships, therefore the site was reoccupied. Fishing was not successful, therefore a second hole with a reentry cone offset 167 m from the first, was drilled at least 80 meters into true basement, and the hole was then cased. The OBS experiment was

successfully conducted at this site. For the electrical resistivity experiment another uncased, uncased, 400-m-deep hole was quickly drilled. This experiment also appears to have been successful.

Following Leg 128, the *Resolution* went into Pusan, Korea for a quick offloading and change of crew. The ship then transited to Singapore, where along the way they had to deal with two medical evacuations and a typhoon. The ship arrived in Singapore on time and the dry-dock was carried out. During the transit from Singapore to Guam the ship encountered another typhoon through the center of which it safely passed. While at anchor in Guam, new drill pipe was made up. The ship departed Guam one day early on November 22 and that extra day has been added to Leg 129.

At the last meeting of PPSP, several of the sites for Leg 129 were left unreviewed since new data for these sites was forthcoming. PPSP has given latitude to drill along any of the seismic tracks (Appendix A), since no safety problems are anticipated in 6000 m of water and 300-400 m of sediments. Leg 129 is underway and has begun drilling at FIG-1.

Current plans for drilling on Leg 130 are to drill the holes in the order OJP-4, OJP-3, OJP-2, OJP-1 and OJP-5, with 10 meters of basement penetration at OJP-4 and 50 meters of basement penetration at OJP-5 (Appendix A). This will allow some work to begin on basement samples early in the cruise without endangering the Neogene Transect.

There have been no changes for Leg 131. At the last PCOM meeting there was a discussion about running the wireline packer in perforated casing. Further consideration has shown this to be useless for getting samples of fluids for scientific purposes. The sole purpose of this test will be to check the operation of the wireline packer. There will be two other packers available for running outside of the pipe. The Geoprops probe will probably not be ready. The Navi-drill can be used to make a hole for probes in advance of the drill bit.

L. Garrison distributed an updated operations schedule (Appendix A). Engineering Leg 132 has had 4 days added so that it is now 59 days. The transit from Guam to Port Moresby has been eliminated and has the effect of increasing Leg 133 by 6 days, but saving transit time. The length of Leg 134 remains unchanged, but the port dates are advanced one day. The port for the end of Leg 135 is probably Papeete.

Personnel changes at ODP-TAMU include the move of Sylvia DeVoge to the UK and her replacement as Administrator by Rick McPherson. Ray Silk has retired as chief production editor and his experience will be missed. Ray has served DSDP and ODP for 17 years.

B. Harding reported on the drydocking of the *Resolution*. Both the SEDCO projects and the ODP-TAMU projects went well and was within the budget.

The ship was one day late going off the blocks and back into the water, but did not effect the overall schedule. The underway geophysics lab was rearranged and modified; it had the floor raised and more space was made available by rearranging the racks. It got a separate air conditioning system to compensate for being over the engine room. The sonar dome was removed and the 12 separate 3.5 kHz transducers were replaced by a single 3.5 kHz transducer. A motor-generator set for standby power was added to provide more reliable, regulated power. New lab furniture was added to the lab deck. New counter tops and stainless steel coving were put into the core splitting room. A new air conditioning unit was put in the computer-user room which also freed up a little space. The floors on the lab deck were regraded to provide better drainage. A new rub-rail was put on the moon pool for better protection for the TV cable. A new doppler sonar unit was installed. The Lamont BRG removed the Schlumberger CSU unit and overhauled it, and rearranged racks in the downhole measurements lab. The hull was found to be in good shape and clean. Some hull plates were replaced in the starboard aft thruster well. This was only the second drydock for the vessel. The rules provide for a dry dock every 4 years unless there is an underwater inspection. The next drydock will probably come up in 1994.

A. Meyer reported on staffing and publications. The science staffing is almost complete through the NE Australia Leg 133. Two scientists are needed on the Engineering Leg 132. Five scientists are needed on NE Australia Leg 133 and ODP-TAMU is looking to the non-US partners to fill these slots. Legs 134 and 135 should be staffed by Christmas. Meyer discussed the shipboard participant tally for Legs 101 to 128 (Appendix A). Prospectuses have been published for Legs 129, 130, 131 and 132 plus an addendum to Leg 129 based on the results of the *Suroit* cruise. Sites for NE Australia Leg 133 will be reviewed at the February meeting of PPSP and the Co-Chief pre-cruise meeting will be in early March. The pre-cruise meetings for the Vanuatu and Lau Legs will also happen prior to the next PCOM meeting and if there are to be liaisons to these three meetings they should be appointed now. There is a new staff scientist, John Firth a nannofossil paleontologist, who will be sailing on the Nankai Leg. A vacant staff scientist position will be advertised in January.

Publications were discussed next. Currently there are two post-cruise meetings, an initial meeting and the scientific meeting. Legs 125 and 126 have had their initial meetings and Legs 127 and 128 have scheduled initial meetings in January 1990. Normally 6 people have been attending these meetings which are about 4 months after the cruise. The scientific post-cruise meeting at about 12 months are being requested for venues other than College Station: Leg 125 in Menlo Park; Leg 126 in Hawaii; Legs 127 and 128 jointly in Japan. In some cases field trips are being requested to be held along with the meeting. E. Kappel said that JOI has budgeted assuming the meetings are held in College Station. JOI is willing to try the system of meeting elsewhere but the expenses have to stay within the budget. The

policy on field trips is the same as for PCOM and other JOIDES meetings, it is permissible to hold them, but USSAC cannot pay for them. USSAC will consider this question further at their January meeting.

Meyer showed the scheduled distribution dates for publications of Initial Reports and Scientific Results (Appendix A). Publication of the Part A Initial Reports volumes 12-13 months after the cruise should be accomplished next year. An experiment is being tried on Leg 129 by sailing an illustrator on the cruise to help draft the barrel sheets onboard. It is anticipated that the barrel sheets and some illustrations will be finished when they come off the ship. The editorial review boards and the overall review process results in less control over speeding up publication of the "Scientific Results" volumes. The goal is to have the publication of these volumes at 38-40 months post-cruise sometime soon and to approach the 30-32 month goal in the next few years.

Discussion

Kastner wanted to know what is being done about automation of the barrel sheet preparation. Meyer said that ODP is rethinking what the barrel sheets are supposed to accomplish. Use of computers to speed up the process are also being worked on and TAMU suggestions will be reviewed by SMP and IHP. Moore complimented Meyer/ODP/SMP for their quick action to help speed up publications. Moore asked how the possible addition of another partner and additional persons such as the illustrator would effect the number of berths available. Meyer said this is a complex problem, it not only effects the number of bunks needed but also how to manage the large number of persons onboard. This issue may require changes in the staffing policies. Weissel asked about the change in the number of applications by persons from non-JOI institutions. Meyer said that there appears to be a general increase in the number of applications from persons from non-JOI institutions since Leg 118. Moore commented that there is often a remarkable naivete by some shipboard scientists about marine geology and sedimentation. He suggested that a short course be offered before a leg for shipboard participants. Brass said that this should be done just after leaving port. Cowan suggested that there is no better short course than participation with the science done onboard the vessel. Kastner said that it is the responsibility of the Co-Chiefs to present the goals of the cruise at the start. Mevel asked about participation by graduate students. Meyer said that the average has been about 20% of the shipboard science party being graduate students close to finishing their degrees.

Wireline Logging Services

R. Jarrard presented the Wireline Logging Services report for the Lamont Borehole Research Group. He distributed a prospectus for Downhole Measurements for Year 1 of CEPAC. He discussed logging results from Legs

127 and 128 in the Japan Sea (Appendix B). The generally poor hole conditions on Leg 127 caused problems for logging. The SES was used at only one site on Leg 127 because of the danger of losing the BHA. The new SES design would have allowed more deployments of logging tools. On Leg 128, better hole conditions were encountered and multiple strings of tools could be deployed. The FMS was used in 7 of 9 logged holes and is proving to be a popular logging tool. At site 799B the FMS records reveal cumulate layering in basalts. The FMS has also proved useful in soft sediments for correlations between cores and estimating core recovery. Third-party downhole experiments were successfully carried out as part of Leg 128. Logging has been useful in defining diagenetic features such as dolomite stringers and the opal A/opal CT and opal CT/quartz transitions as well as indicating sediment interbeds between basalt flows and sills. Current plans are to use the geochemical logs and XRF data on cores from Site 798 to do a further evaluation of geochemical logging techniques after improvements such as the introduction of the boron sleeve. The geochemical logs can be used to establish a 41,000-year periodicity and with reprocessing may show a 23,000-year periodicity.

Discussion

Shackleton wanted to know if FMS can be used in real time to evaluate time series studies and core recovery rates during drilling. Jarrard said that the raw data from the FMS can be used to evaluate core recovery with the HPC, but since logging is done after drilling is completed, the FMS data is not usually available during the actual drilling. The processing of the logging data for time series work is too time consuming to be done onboard the vessel.

von Rad commented that Bosum has been funded to develop a gyro-oriented, three axis magnetometer for vertical magnetic field susceptibility measurements in a borehole. This tool could be used for 504B, Chile Triple Junction or Sedimented Ridges. Jarrard said that this is good news for the logging program since the magnetometer that the BRG uses is not gyro-oriented and was going to be removed from use since there are no back-up parts.

816 Annual Reports By Service Panels

DMP

P. Worthington presented the annual report for the Downhole Measurements Panel. During 1988, DMP worked towards the goal of making the ODP community aware of the scientific benefits of logging. During 1989, DMP focussed on improving the quality of logging data. During 1990, DMP will continue with efforts to improve data quality; will propose a downhole measurements program to characterize oceanic lithosphere; work towards high-temperature (slimhole) technology; and contribute to the overall profile

of ODP. DMP would like to see FMS data available on board ship at the earliest possible time, since FMS images are important for orienting and positioning cores and indicating gaps in recovery. The feasibility of processing FMS images while on board needs to be established.

DMP is concerned about the fast-approaching need for high-temperature slimhole logging tools in mid-1991. DMP thinks that the highest priority logging measurements established by LITHP should be divided between the BRG at Lamont (temperature, borehole fluid resistivity, formation resistivity, natural gamma, and sonic) and TAMU (permeability, pore pressure, pore fluid sampling). DMP suggests a short-term strategy of repackaging existing tools, but there are anticipated problems because of the 4-inch hole diameter and problems cooling tools at 350-400°C in small holes. DMP recommends that tests be conducted on the upcoming Engineering II Leg to see what kinds of problems will be encountered for logging tools in the 4-inch diameter hole. DMP recommends the immediate commitment of funds to solving these problems.

Discussion

Suess asked if DMP would include the use of downhole fluid tracers as part of their proposed downhole measurements program to characterize oceanic lithosphere. Worthington said that this could be included, but DMP was mainly concerned with establishing the representability of crust at one location. Brass asked what was being done by ODP to tie in core samples to logging measurements. Worthington said that very little is being done with cross-scale tie-in from cores and logs. Brass asked if DMP had any suggestions for initiating these kinds of studies. Worthington said that the physical separation of the ODP repositories for cores and logs makes this sort of study difficult. Kastner suggested that DMP also have joint meetings with SGPP and OHP.

IHP

T. Moore presented the annual report for the Information Handling Panel. IHP deals with many tasks, although publications has received most of their attention over the past year. Other areas that have been dealt with by IHP include: cuts in funds for the Repository have slowed sample distribution; IHP has recommended that the Software Development group add a shipboard systems manager; IHP has commended the Data Base Group for their efforts in keeping the data base updated but are concerned with the amount of work needed to enter the visual core description and that some of the quantitative data appearing in the "Scientific Results" volumes does not get put in the data base; IHP recommends that the ODP Data Base be placed on CD-ROM with the help of the expertise at NGDC.

During the past year IHP, conducted a survey of ODP participants and panel members concerning publications and forwarded the results to PCOM. IHP recommends several changes to the publications policy approved by PCOM; namely clearly spelling out the duties of the authors in regards to informing editors of outside journals how their manuscripts are being treated within the ODP system, and in obtaining proper waivers of copyrights or permissions to publish as reprints in the "Scientific Results" volumes. IHP recommended wording for the ODP Publications Policy is given in Appendix C.

Moore presented the proposed publication schedules for "Initial Reports" and "Scientific Results" volumes (Appendix C). ODP is striving to achieve the mandated target of 12 months post-cruise for the "Initial Reports" volumes and 30 months post-cruise for the "Scientific Results" volumes. For the "Scientific Results" volumes this means that the scientific research and writing of the results must be accomplished within 18 months and may result in a reduction in the amount of research included in these volumes. The tightening of the schedule should result in publication of "Scientific Results" volumes 33-36 months post-cruise by FY93. The loss of critical manuscripts to the "Scientific Results" volumes due to late submission has incurred the wrath of some Co-Chief Scientists.

IHP has made some recommendations to help speed publications: 1) Get samples to investigators as quickly as possible by shipping cores at the end of every leg (Cost ~ \$60K); 2) Make editorial decisions as rapidly as possible by enhancing ODP publications staff and returning the function of editorial management of the "Scientific Results" volumes to ODP management (Cost ~\$180K); 3) Enhance the drafting staff at ODP-TAMU for drafting barrel sheets in time for 12 month post-cruise production of the "Initial Reports" volumes (Cost ~ \$24K). If editorial control is returned to ODP-TAMU, IHP recommends that the Editorial Review Boards have their responsibilities reduced to that of reviewing reviews (i.e. decide on accepting or rejecting) and possibly reviewing synthesis papers.

Discussion

Brass was concerned that DSDP post-cruise data and data from publications outside of ODP was not put into the data base or on the CD-ROM. Brass suggested that a survey needs to be made about what data should be included and a recommendation to include these data needs to be made by PCOM. Moore said that IHP felt that this was not an ODP problem. Brass said that it is important to preserve these data in a useable way. Shackleton asked if the data in tables in manuscripts submitted on computer disks could be read directly into the data base. Meyer said that this is done when possible, but not all authors are submitting their data in this manner. Moberly suggested that the panel chairmen be approached about what post-cruise data should be included and that this matter be placed on the agenda for the next panel

chairmen meeting. Moore said that IHP will be making some further recommendations. The matter was tabled until IHP does more work on this.

Since the size of the present ODP data base is close to filling up a CD-ROM, PCOM discussed the initiative to place the ODP data on a CD-ROM while NGDC still has the group that developed the software for producing the DSDP CD-ROM. The cost was estimated to be approximately \$50-80K.

PCOM Motion

PCOM forwards a favorable response to JOI to continue with the development of a CD-ROM containing the ODP data base. (Motion Brass, second Leinen)

Vote: for 16; against 0; abstain 0

PCOM thanks JOI and in particular Ellen Kappel for their efforts towards making the DSDP data available on CD-ROM.

PCOM approved by acclamation the resolution of IHP thanking Ray Silk for his efforts on behalf of ODP.

PCOM discussed the response to the new publication policy. The problems associated with parallel submission of similar papers close to the deadline was a concern. Moore said that it is the responsibility of the authors of these papers to make it clear that the paper is going to be published in ODP, and to not do anything underhanded. Leinen said that the present policy does what PCOM intended, it gets the results published outside of ODP more quickly and speeds up publication of the ODP volumes. Kastner questioned the scientific benefits of publications within 30 months as opposed to 36 months. Brass said that the intention was to get things out quicker and 30 months seems a reasonable time to aim for publication of results. von Rad said that the synthesis papers are very important to these volumes, but the Co-Chiefs have many responsibilities and get only 3 months to write the synthesis. Some flexibility is needed to ensure that the syntheses get included, possibly allowing submission during the paste-up stage. Meyer said that the pagination of the volumes cannot be delayed beyond a certain point without stopping publication. These concerns led to the motion shown below. During the discussion about the motion these points were made. Tucholke said that all of this was discussed in Oslo and there are no new arguments made that should cause PCOM to relax the publications schedule adopted. Watkins also endorsed the 30 month post-cruise publication schedule as a goal, but said TAMU needs to be given some leeway to make the process work. PCOM should avoid micromanagement. Cowan said that the shipboard participants need to face up to their responsibilities and submit their manuscripts within 16 to 18 months as required in the present schedule.

PCOM Motion

PCOM will keep the time-frame previously approved for the "Initial Reports" volumes, but move the post-cruise scientific meeting to 14-16 months and endorse publication of the "Scientific Results" volumes within 36 months post-cruise. (Motion Kastner, second Mevel)

Vote: for 3; against 13; abstain 0 (Failed)

PPSP

M. Ball presented the annual report for the Pollution Prevention and Safety Panel. During 1989 PPSP reviewed proposed sites for: Legs 127 and 128 in the Sea of Japan; Leg 129, Old Pacific Crust; Leg 130, Ontong Java Plateau; and Leg 131, Nankai Trough. 25 drill sites were approved of which 5 were moved to avoid structurally high positions. During 1989, PPSP reviewed all oil shows and source rocks encountered in DSDP and ODP drilling. The oil show in cap rock recovered off Challenger Knoll, a salt dome on the floor of the Sigsbee Deep in the central Gulf of Mexico, was mature migrated oil and slightly degraded. This discovery of oil at site 2 of DSDP drilling was instrumental in the establishment of the JOIDES-PPSP. Other oil occurrences were typically anomalous. The show in the Gulf of California was related to occurrence of an igneous sill that provided a local, rapidly activated, contact heat source and hydrothermal cell. The shows encountered in the Tyrrhenian Basin resulted from that region's anomalously high heat flow on the organic-rich sediments of that region. The hydrocarbons encountered at site 535 in the eastern Gulf of Mexico-Western Florida Straits consisted of rich but immature potential source rocks in basinal carbonate slope deposits with degraded mature tar in fractures and undegraded mature oil stains in carbonate sands. This oil probably migrated laterally, up to 100 km, in a fractured zone extending out of the deep Gulf of Mexico basin. Some reported oil shows (site 627 north of Little Bahama Bank) could not be confirmed, perhaps because of failure to seal and freeze the sediments bearing the light, volatile oil.

Clathrates are being studied in the context of the presence of a bottom simulating reflection in the vicinity of the Nankai drill sites and the Vancouver accretionary prism. PPSP's official interest in this subject stems from the safety limitation the presence of clathrates imposes on ODP drilling below the clathrate zone for other scientific objectives. PPSP has agreed to review proposals for drilling clathrates but has no commitment to approve such proposals.

A critique of Exmouth Plateau drilling was done. It was concluded that advice from PPSP played an important role in the safe and successful drilling of Sites 762 and 763 adjacent to commercial wells. Some members, however, expressed misgivings about drilling in known hydrocarbon-generating and producing provinces. PPSP will compile these summaries to provide a guide for future decisions about drilling in similar situations.

SMP

K. Moran presented the annual report for the Shipboard Measurements Panel. During this first year of SMP's existence, the panel has been concerned with: making modifications to current practices, with 70% of the recommendations pertaining to TAMU; suggesting upgrades for the Underway Geophysics and Physical Properties laboratories; integrating sample and downhole measurements (joint with DMP); requests concerning guidelines for use of radioisotopes and special measurements of fluids; specifications for such new technologies as the Pressure Core Barrel sample handler and digital color scanner. SMP recommended improvements in underway geophysics include data acquisition (borrow LDGO high-speed streamer), data processing, real-time navigation, and VSP. SMP recommended improvements in the Physical Properties Lab include a standard-methods document, and a workshop of physical properties scientists. SMP is examining suggested improvements in the Sedimentology-Visual Core Description Lab including upgrades to barrel sheets, digital color scanner, and a bench-top XRD.

The Physical Properties working group within SMP has recommended that for each parameter measured downhole, there should be a corresponding laboratory measurement. SMP will be preparing a technology document on available instruments to meet this goal, and after a joint meeting with DMP next fall, a report will be prepared. Since the request by PCOM that SMP establish guidelines for the use of radioisotopes onboard the *Resolution*, SMP has been examining concerns related to: contamination of laboratories; safety; cost vs. scientific benefit; space for vans. SMP has concluded that even with guidelines, it will be very difficult to maintain isolated areas in routine practice. SMP will be preparing guidelines based on: status of the ship's "cleanliness"; thematic panel input about requirements for their use; results of the UK biological experiment conducted on Leg 128; and UNOLS and member-country guidelines.

SMP has made some specific recommendations for purchase of equipment for the Paleomagnetism Lab (\$20K), Petrology Lab (\$10-13K), Geochemistry (non-plastic squeezers - titanium), and is evaluating the color scanner, XRD and additional physical properties measurements.

Discussion

Brass wanted to know why SMP is looking at improving underway geophysics since this has not been given a high-priority by PCOM. Moran said that SMP thinks it is negligent of ODP to not collect data while transiting vast areas of the ocean that are not well covered. The cost associated with improving the ability of the vessel to collect this data is negligible.

Brass commented that UNOLS Operation SWAB can check the vessel for radioisotope contamination. Suess said that SGPP will be considering the scientific uses of enriched stable and radioisotope tracers on the *Resolution* at their next meeting. Garrison said that policies must also be established for any third-party radioisotope experiments concerning who pays for the vans as well as costs associated with checking and decontaminating the vessel. Brass and Kastner also said that this question will be considered at their workshop. Moberly asked that a report be prepared as quickly as possible.

Brass wanted to know why a bench-top XRD was being considered, when there is a good XRD already onboard. Moran said that a more convenient bench-top XRD will provide quantitative data more rapidly than the model now available onboard. Shackleton asked what recommendations had been made concerning the micropaleontology reference collection. Moran said that SMP had recommended that this collection be put back together. von Rad suggested that whole-core radiography would be a useful and not very expensive tool onboard.

SSP

R. Kidd presented the annual report for the Site Survey Panel. SSP provides advice on the adequacy of site-survey data so that there is flexibility to change drilling sites due to different contingencies. SSP also provides advice on the adequacy of data used in the packages that the Data Bank sends to PPSP for safety evaluations.

SSP held two meetings during 1989 at which WPAC and CEPAC programs were evaluated. SSP is concerned that the Old Pacific Leg was scheduled without having all the necessary site survey data available. At the last SSP meeting in Hannover, Old Pacific was reviewed but still did not have the new MCS data processed. Final sites were going to be chosen while the leg was underway. Some important questions about the windows through the cherts and basalt sills were left unresolved. Insertions of sites for both the Nankai and Ontong Java Plateau legs were also somewhat out of order since they went to PPSP before SSP. There is a need to have longer lead times before drilling if SSP is to do its job. Looking towards future legs; SSP has approved sites for E. Equatorial Pacific, Sedimented Ridges and Lower Crust at 504B. For the upcoming meeting at Menlo Park, the attendance of proponents and additional data has been requested for the Oregon and Vancouver parts of Cascadia Accretionary Prism, Atolls and Guyots, N. Pacific Neogene, and Hawaii Flexure. Reviews for Chile Triple Junction and EPR Bare Rock are anticipated for the meeting at Menlo Park.

In order to provide proper advice, SSP needs to know the prioritization of the thematic panels (*i.e.* send copies of the minutes directly to Kidd). SSP is also supposed to look at only those proposals that are "favored" by PCOM, which is not always clearly defined. Other SSP concerns are: proper lead times for

MCS data processing, data package preparation, and detailed near-site survey data; real-time navigation and underway geophysics on the *JOIDES Resolution*; recent lack of a TAMU liaison to SSP; and lack of a post-drilling review to comment on the adequacy of site survey packages to help improve performance. SSP also requests that thematic panel prioritizations take into account the readiness of the program (e.g. site surveys, drilling technologies, downhole measurements). From a SSP perspective, legs from the WESPAC prospectus are more ready than many now under consideration for drilling.

Discussion

Austin asked about the adequacy of the data package for the Oregon portion of the proposed Cascadia Accretionary Prism drilling. Kidd said it was mainly a problem of presentation of the near-site data. Suess said that it may not be practical to have thematic panels rank their themes in terms of "readiness". Shackleton disagreed and thought it would be possible.

TEDCOM

C. Sparks presented the annual report for the Technology and Engineering Development Committee. TEDCOM sees itself as being a consultative committee that has a different triangular relationship between TAMU and PCOM. TEDCOM has suggested an additional change in mandate to define its role better from the committee's viewpoint. TEDCOM helped initiate the Engineering Leg trial of the DCS, but had only 1 member onboard the *Resolution* during these tests. On the next Engineering Leg TEDCOM would like to have 2-3 members on the ship. A major drawback of the present system configuration is the time required to remove the platform before tripping the drill string. TEDCOM has recommended that for the next test: 1) Immobilization of the lower end of the API string during all phases of DCS operation; 2) Water depth should be close to 1500 meters to minimize any vibrational problems; 3) Form a subcommittee to advise TAMU on mining drilling; 4) Ask A. Skinner of B.G.S. to be a consultant to the subcommittee on mining drilling from vessels.

TEDCOM also recommends : that the timing of Engineering Legs should suit the engineering developments and not the drilling schedule; superlegs are not suitable; cleaning of the junk in 504B should not be combined with an engineering development leg; the DCS should undergo supplementary land tests; high temperature drilling research should not be duplicated by TAMU since it is being pursued at Sandia and Los Alamos; a workshop on high temperature slimhole logging; increases in the budget for engineering development to take place.

TEDCOM examined the Long-Range Plan in terms of the technological developments that are required. Some problems are under study at present including: chert-chalk sequences; improved core recovery, increased bit life,

and pore-water sampling and pressure core sampler. TEDCOM notes that two important problems are not being addressed: orientation of all core samples; and vibracoring in sandy sequences. Hole stability in difficult drilling terranes is not likely to improve significantly. Very deep drilling of Phase 1 and 2 objectives are realistic but depend on manpower commitment and budget increases. Phase 3 objectives including a MOHO objective may not be realistic and TEDCOM recommends the organization of an International Symposium to address these concerns. Deep drilling with circulation and safety control may be possible if the DCS can be transformed into a mini-riser system.

Discussion

Weissel asked if ODP will be able to do a better job of drilling at the EPR than was done at the MARK area in the Atlantic. Harding said that the DCS should improve the ability to drill there. Storms said that at the MAR the problem was in part due to bigger hole size and the need to change drilling bits. The plan is now to leave the BHA in place and continue drilling with the DCS.

817 Annual Meeting of the Panel Chairmen

T. Moore presented the recommendations that came out of the meeting of the panel chairmen on 26 November 1989 (Appendix D). The panel chairmen recommend that their meeting no longer be held on Sunday of the weekend of the Thanksgiving holiday but rather be changed to Tuesday of the week following Thanksgiving, so that travel would not generally have to begin until the Monday following this holiday weekend. This will necessitate the moving of the start of the Annual PCOM meeting to Wednesday and continuing through Saturday. This schedule will still allow individuals to attend the Fall AGU meeting held during the week following the Annual Meeting. PCOM approved this change in scheduling for the Annual Meeting.

There is a need for groups to do both long-range planning and detailed planning for drilling programs in addition to the thematic panels. The role of Working Groups is seen as providing long-range, broader scale planning, addressing specific thematic problems for which the thematic panels do not have the time or the necessary expertise to accomplish. This planning includes determining both the objectives of drilling a particular high-ranked theme and the criteria that must be met to address this theme successfully by drilling. Working groups can also be constituted to evaluate a theme that cross-cuts the interests of multiple thematic panels (*e.g.* Sealevel change) as well as problems that concern both the thematic panels and service panels. It was deemed appropriate that drilling proponents serve on these working groups since they are often experts on the themes being examined and the main job of the group is to set the criteria for successfully addressing the theme. These groups may also need to evaluate which area best meets the

criteria established. This does result in a conflict with having proponents on working groups, but, such conflicts were not perceived to be a great problem as long as a significant number of non-proponents are included and the selection criteria are objectively established. Conflicts of interest must be weighed against the loss of the proponent's expertise if they are excluded. An alternative, and probably unsatisfactory solution, would be to have the thematic panels or PCOM select the best area for addressing the theme.

Detailed Planning Groups do the more focussed planning concerned with selection of sites for a particular drilling program. These groups may be constituted from the working group with addition of proponents, if not already included, and others whose expertise is desired. The Sedimented Ridges Detailed Planning Group was suggested as a model for such groups, since it was originally constituted (more or less) as a working group to establish the criteria and then evolved into a detailed planning group to plan the drilling.

The panel Chairmen emphasized the point that a 4-year general plan is needed to keep the system functioning and this is on the shoulders of PCOM to put together. Some drilling themes in the Long-Range Plan require that there be advanced planning of technological developments to ensure that the necessary engineering developments are ready when needed, TEDCOM needs to continue its role advising TAMU about these developments but with additional direct input from the thematic panels. A working group may be needed to provide advice on this matter.

Problems arising from the new ODP Publications Policy were discussed. Options for handling papers that are not of sufficient quality or submitted too late for inclusion in volumes were recommended, these include publication as data-only papers, inclusion as appendices in later volumes, and outside publication of synthesis papers. The accommodation of the required scientific sampling of cores to carry out the objectives of a drilling leg within the framework of the present sampling policies was discussed; it was recommended that these requirements be specified in the prospectus for the leg and that IHP can then accommodate these requirements.

Inter-panel liaison is important for communication between panels and should be continued. Joint, back-to-back, and overlapping meetings also facilitate interpanel communications. Drilling proposal reviews are adequate and do not need to be sent out for review outside of JOIDES. Proposals under active consideration for drilling should be available to anyone who requests them. The representation on PCOM and EXCOM of non-JOIDES US Institutes is unnecessary. There is an important need for disciplinary balance on PCOM.

Discussion

Brass was concerned that since the prospectus of a leg comes out relatively late, IHP might not have a chance to move on any special sampling requirements before a leg is drilled. Kidd suggested that in these cases the decision could be made by the chairman of IHP. It was also suggested that a request could be made just after the pre-cruise meeting. Kastner was concerned that the current sampling procedures were established many years ago during DSDP, while now ODP is doing different kinds of science. Perhaps a new policy is needed which will take into account these changes.

Tucholke suggested that the recent Workshop on Sealevel Change may fulfil the need for a working group on sealevel. Watkins said the report for this meeting will be published soon.

Austin asked if the panel chairmen thought there was an adequate flow of proposals for highly ranked themes or do the panels need to write their own proposals for some themes. Suess said that for SGPP there are many good proposals per theme, the challenge is to concentrate them to get the best. The response of the community has been strong. Dalziel said that TECP has a spectrum from many proposals per theme to no proposals for important themes. Batiza said that in general LITHP is in the same situation as SGPP and has adequate proposals for important themes. Shackleton said that OHP has a more than adequate flow of proposals, but there are a few instances where stronger proposals are needed.

Tuesday, 28 November 1989

818 Annual Reports By Thematic Panels

LITHP

R. Batiza presented the annual report of the Lithosphere Panel. Important events during 1989 for LITHP included: 1) Approval by PCOM and EXCOM of the ODP Long-Range Plan which spells out a staged, long-term strategy for understanding the origin and evolution of ocean crust and lithosphere; 2) The JOI-USSAC sponsored workshop on drilling the oceanic lower crust and mantle which provided a detailed and logical approach for implementing the deep crustal and mantle phased drilling plan; 3) LITHP reaffirmed its commitment to the following themes for scientific drilling: penetration of normal oceanic crust into mantle; establishing oceanfloor seismic and ridge-crest observatories; investigation of magmatic and hydrothermal processes of crustal accretion at a variety of spreading rates; improved understanding of off-axis volcanism.

LITHP is concerned that implementation of the ODP Long-Range Plan will require detailed planning to ensure that engineering capabilities are brought

on-line in a timely fashion. LITHP suggests that a Deep Drilling Detailed Planning Group is needed to help identify and prioritize the engineering developments that will be needed. The Deep Drilling DPG will also assess deep crustal drilling proposals in the Atlantic and Pacific, set guidelines, and formulate a drilling program. LITHP also recommends that a DPG for the East Pacific Rise Bare Rock Drilling be formed and meet as soon as possible.

LITHP feels that a better disciplinary balance on PCOM is important for promoting the best possible scientific drilling decisions. This will in part help to prevent problems such as that which occurred with Geochemical Reference Sites. LITHP will continue to support drilling at Geochemical Reference Sites, and views this program as very important for the thematic integration of drilling in the Western Pacific (e.g. Legs 125 & 126). LITHP urges that the basement objectives on Leg 130 (Ontong Java Plateau) be assigned a high priority for drilling. Continued erosion of these objectives jeopardizes the overall success of multi-objective drilling programs which OJP represents.

Logging of high-temperature holes and/or slim DCS holes is essential for the scientific success of many LITHP drilling programs in CEPAC and beyond. The following prioritized list of logging capabilities was established by LITHP after its joint meeting with DMP on September 11, 1989:

1. Temperature (0°-400°C; 1-2° error)
2. Fluid Resistivity (6% sensitivity; ≤ 5% error)
3. Formation Resistivity (to 1%; standard values)
4. Natural Gamma
5. Sonic
6. Caliper
7. Flow-rate (spinner)
8. Pressure in well-bore

Of the above measurements, temperature is the most essential. Other desirable measurements (not in priority order) are:

Ca²⁺, pH, resistivity and temperature on wireline packer
Permeability
Fluid Sampling
Porosity
V_P, V_S
Televiewer
Seismic Anisotropy
Full VSP
Magnetic Susceptibility and Intensity
H₂S Detector

For the eventual success of global seismic arrays, LITHP urges that more re-entry cones be routinely deployed by ODP.

LITHP rankings of the 6 CEPAC programs under consideration for FY91 drilling are: 1) Lower Crust at 504B; 2) Sedimented Ridges; 3) EPR Bare Rock; 4) Chile Triple Junction, 5) Cascadia Margin; 6) East Pacific Neogene.

Discussion

Brass and Sparks asked about the composition of the Deep Drilling DPG. Batiza said that the membership would come largely from TEDCOM, LITHP, TECP, SGPP and possibly from the community outside of ODP with interests in deep drilling. Moberly suggested that at the next TEDCOM meeting, the issues concerning planning for deep drilling be placed on the agenda and that the thematic panels with interests in deep drilling send a representative. TEDCOM will then make recommendations about formation of a group to deal with these problems. Kidd suggested that a working group might be more appropriate than a DPG. Natland asked who would be deciding the best location to implement a drilling program to the mantle. Batiza said that this would be the job of a DPG.

OHP

N. Shackleton presented the first annual report for the Ocean History Panel. For the most part OHP approved the mandate for the new panel with only minor suggestions for improvement. The only item of concern is Sealevel. This major scientific problem is at present the responsibility of both OHP and SGPP and receives fragmented attention. The OHP portion of the SOHP White Paper was written in anticipation of the splitting of the panel and OHP regards this White Paper as valid for present purposes. During 1989, OHP reviewed about 25 new proposals that have some significant OHP interest.

At the next OHP meeting, at least 15 proposals will be prioritized in order to assist PCOM in developing a 4-year tentative route for the *Resolution*. It is anticipated that several Pacific proposals previously highly ranked by the former SOHP panel will remain very high on the OHP list. Both the Bering Sea and the Norwegian Sea are areas that must be drilled to help focus future Arctic work. Within the high-priority Neogene theme, the Eastern Equatorial Pacific Neogene Transect is an exceptionally good program and OHP unanimously recommends its inclusion in the FY91 drilling.

The purpose of Neogene (High Resolution) Paleooceanography is to understand how the present surface and deep circulation (and its variability in response to Milankovich forcing) have evolved as a result of changes in the external boundary conditions. The approach used is to drill transects of sites in key areas across important gradients. These transects are designed to capture the limits of the relevant features of the ocean and to measure their

anticipated variation. The tools used are: micropaleontology, stable isotopes, geochemistry, sedimentology, etc. The output of these experiments is the history of the system investigated, including: surface and deep temperatures, currents, productivity, atmospheric circulation, changes in ocean elemental budgeting, etc.

OHP spent some time in considering the planning of upcoming Leg 130 (Ontong Java Plateau) which was scheduled at the last Annual PCOM meeting. OHP favors drilling OJP-3 (deeper) rather than OJP-6. The Co-Chiefs may reverse this on the basis of their findings in the other sites. If for some reason time becomes available unexpectedly, OHP advocates returning to drill OJP-6 as well as OJP-3. At OJP-1 time should be devoted to double-XCB work in the Miocene section. The APC part of the hole essentially would duplicate DSDP Site 586 which already well-covers this section.

Discussion

Austin asked if deep stratigraphic tests are still an approach that is of interest to OHP. Shackleton said that it continues to be of interest. von Rad wanted to know if the two proposals for Atolls and Guyots could be combined into one leg. Shackleton said that this is unlikely. There is interesting paleoceanography in both proposals. Kastner asked about the impact of sampling policies on the science in high resolution studies. Shackleton said that as long as the prospectus spells out the sampling needs, they should be accommodated.

In regards to drilling on the Ontong Java Plateau, Jarrard suggested that the FMS might be useful in determining gaps in recovery at OJP-1 since it has been successfully deployed in soft sediments. A discussion ensued about what to do if time becomes unexpectedly available for drilling after OJP-3; whether to use it to deepen drilling into the basement beyond 50 m at OJP-5 or to drill a hole at OJP-6. After a lengthy discussion the following consensus was reached.

PCOM Consensus

- 1) If more than 6 days are available at the end of completing the proposed drilling at sites OJP-4, -3, -2, -1, -5, the latter 50 m into basement, then that time should be spent transiting back to OJP-6 and coring at this site;
- 2) If less than 6 days are available at the end of completing the proposed drilling, then that time should be spent deepening OJP-5 further into basement;
- 3) If drilling is 4 days ahead of schedule after drilling at OJP-4 and OJP-3, then OJP-6 should be drilled before continuing with the program in the prospectus.

It was pointed out that OJP-6 had not been reviewed by the safety panel. Garrison and Ball agreed to take care of a quick review of this site.

SGPP

E. Suess presented the first annual report for the Sedimentary and Geochemical Processes Panel. During 1989, reviews of proposals was the single most time-consuming and generally overwhelming agenda topic. SGPP reviewed more than 48 proposals, with about 75% within the realm of thematic interests of the panel. Of the six programs under consideration for drilling in FY91, SGPP was concerned with those involving convergent margins and hydrothermalism. SGPP rankings of these programs were: 1) Sedimented Ridge Crests; 2) Cascadia Accretionary Prism; 3) East Pacific Rise Bare Rock Drilling; 4) Eastern Equatorial Pacific Neogene Transect; 5) Lower Crust at 504B; 6) Chile Triple Junction.

SGPP has examined its mandate as well as the parts of the SOHP White Paper within the panel's mandate and has drafted a new version of the White Paper. Chapter headings defining areas of SGPP thematic interest are: Sediment Fluxes; Sealevel; Fluids & Gases; Metallogenesis; Paleocean Chemistry; Technology. Proposals are generally being grouped to match the chapters of the White Paper; this should ensure optimal functioning of the panel.

Technological developments are needed in the areas of sand recovery, pressure core barrel phase II, and pore-water and gas sampling. SGPP is concerned that a TAMU engineer was unable to attend their meeting. SGPP has suggested that D. Stow or W. Normark serve as *ad hoc* liaisons to TEDCOM to track developments in sand drilling, for which there is a renewed interest and requirement for addressing important panel themes. Part of the SGPP mandate is fluid circulation in the lithosphere.

Technological and scientific advances since the time of DSDP require a major overhaul of fluid and gas sampling and analytical procedures. SGPP is preparing fluid sampling recommendations for SMP concerning: minimizing artifacts, optimizing PCB-II, high temperature regimes, packers, instrument holes, and sampling policy. For the PCB Phase II, SGPP is recommending the following features: multiple lock-on chambers, physical properties of clathrates, imaging of internal structures, controlled sub-sampling, microbial rate-experiments with incubation and injection of poison, P-T phase stability experiments, calibration of logging parameters. For the PCB Phase III, SGPP suggests: titanium construction, thermal history during recovery, self-squeezer. To help eliminate artifacts due to the present shipboard sampling procedures, SGPP recommends titanium squeezers, *in situ* temperature squeezing, inert atmosphere squeezing, and flexible sample frequency policy.

SGPP is concerned that sealevel gets fragmented attention in ODP. Sealevel is of thematic interest to several panels. There has been a large number of proposals concerned with this topic. It is of interest to a wide spectrum outside of ODP as part of the Global Change Program of the International

Geosphere Biosphere Project. Sealevel change provides high visibility for ODP. SGPP recommends that a Working Group be formed to define an ODP plan for studying Sealevel change by drilling.

SGPP has been discussing the thematic needs for the use of radioisotope experiments on the *Resolution*. SGPP sees several important studies which will require their use on the vessel, these include: microbial rates, fluid flow, cross-well tracers. SGPP will be discussing this matter further at the next meeting and will then give its input to SMP and DMP.

SGPP is still in need of additional panel members in the area of ocean floor petrology, sedimentary processes and would like to retain M. Goldhaber for an additional year on the panel. SGPP recommends the formation of a DPG for the Cascadia Accretionary Prism. Both proposals are of high thematic interest to SGPP, although Oregon has greater fluid-dominated aspects.

Discussion

Storms said that TAMU was not able to send the person working on vibracoring to the SGPP meeting. Garrison said TAMU does recognize that engineering input is necessary for developing the science plan but time constraints and limited travel budgets put restrictions on the number of meetings to which representatives can be sent. Rea said that the visit of the TAMU engineer to CEPAC was very helpful and led directly to the recommendations around which the next Engineering Leg was planned. He said that these visits should be encouraged. Garrison said that a special invitation outlining the panel concerns would be helpful. Leinen suggested that more meetings at College Station might be necessary. In this way a variety of expertise is available without putting much strain on the TAMU engineer's time and the travel budget. Shackleton said that TAMU input is important for all panels. Moberly said that Leinen's suggestion is good; questions concerning technological developments should be concentrated into one meeting close to TAMU.

Cowan asked if outside reviews of drilling proposals would help ease the burden placed on thematic panels. Suess said that he does not see outside reviews as being a solution, the panels will still have to review the proposals themselves. One possible solution would be to spend time at meetings reviewing only those proposals of high thematic interest. Moore said that more working groups and detailed planning groups are needed to carry out the detailed work. Brass and Detrick agreed with Moore.

Leinen said that the Sedimented Ridges Program recommended by the DPG consists of two drilling legs; should PCOM commit to scheduling both legs or is one higher priority than the other? Suess replied that the program is not a question of leg 1 vs. leg 2, the plan is to drill leg 1 then wait an appropriate time to get the results necessary for drilling the second leg. If the program is

limited to only one leg, then it would have to be completely redesigned. The program is highly recommended the way it now stands.

TECP

I. Dalziel presented the annual report for the Tectonics Panel. Highlights for 1989 include: publication of the TECP White Paper in the JOIDES Journal, transition in planning from a regional mode to the thematic mode, Japan Sea downhole electrical resistivity and seismometer experiments, and interpanel planning. TECP has overlapping interests with the other thematic panels which include: accretionary prisms with SGPP; paleogateways and climate change with OHP; and structural evolution of oceanic lithosphere and hydrothermal circulation with LITHP.

TECP ranked the six programs under consideration for drilling in FY91 in the order: 1) Chile Triple Junction Leg #1; 2) Cascadia Margin Leg #1; 3) Chile Triple Junction Leg #2; 4) East Pacific Rise Bare Rock; 5) Sedimented Ridge Crests Leg #1; 6) Cascadia Margin Leg #2; 7) Lower Crust at Site 504B; 8) Sedimented Ridges Leg #2; 9) Eastern Equatorial Pacific Neogene Transect.

TECP recommends that a working group to address strategies for drilling accretionary prisms needs to be formed in cooperation with SGPP. Another working group or a workshop is recommended to formulate strategies for studying continental breakup and the associated volcanism. This should include continental geologists to help integrate models based on ocean margin and on-land studies. TECP also supports the formation of a Deep Drilling Working Group.

TECP no longer supports the Hawaii Flexure proposal strongly, but a hole to study secondary igneous activity and for placement of a downhole seismometer off of Hawaii receives strong panel support. TECP recommends that ODP make holes available for the placement of downhole seismometers. TECP is concerned that proposals for making stress measurements, for studying plate dynamics, may not appear until the general track of the ship is known.

Discussion

Moberly suggested that a workshop would be a more appropriate setting than a working group for formulating strategies to study continental breakup and associated volcanism. Someone needs to take the lead in approaching JOI/USSAC concerning this. Austin said that there have been a large number of ODP drilling proposals for studying these processes in the Atlantic; perhaps a DPG is needed to sort them out since we are changing the way we approach these things.

von Rad posed the question of whether the Deep Drilling Working Group would be primarily scientific or technological in nature. He said that volcanic-margin drilling will also require deep penetration. Dalziel replied that the strategy for volcanic margin drilling would be to avoid having to penetrate 5 km of basalt and sediment. There is a need for technological planning if ODP is to develop the capability to conduct these kinds of studies.

Because of a concern that TECP has some themes that have not been addressed by drilling proposals, Kastner suggested that TECP do something similar to LITHP and place an ad soliciting proposals for its high priority themes. Austin thought that this might be a good idea for ODP in general after establishing the 4-year general track of the vessel.

819 Non-JOIDES Representation in Planning Process

J. Baker president of JOI discussed the reasons for the recent initiative to place someone from a non-JOIDES Institution on PCOM. There had been some questions about the openness of the planning process in the PEC I & II reports. There was a concern that institutional appointments may not always provide the best science advice to ODP. USSAC was formed to widen the advice to the program. Members of USSAC come from both JOIDES and non-JOIDES institutions. Institutional appointments were discussed by the JOI Board of Governors. The initial suggestion would have replaced one of the JOIDES institutions for a 4-year period. The latest proposal would leave a JOIDES Institution out of PCOM for only 1 year in every 8 years. The JOI Board of Governors have given a mixed to negative response to the last proposal. JOI is examining other mechanisms for including non-JOI advice in the planning structure at the request of the JOI Board of Governors.

Discussion

Moberly said that scientific advice does come, from the one-half of the panel members from non-JOIDES institutions. Baker said that there is a sense that since non-JOIDES members cannot serve on PCOM, they cannot make decisions about where the ship goes. Rea suggested that this was the feeling of only a few individuals and not a large community. Moore said that the panel chairmen addressed this question and there is good broad scientific input and advice; JOIDES, however, should strive to maintain the present balance with about half of the advisory structure from non-JOIDES institutions. Brass suggested that there is no real problem since PCOM is planning what the community wants drilled. Brass questioned whether the individual chosen would be a true outsider or someone at a non-JOIDES institutions with many ties and involvements with JOIDES institutions and ODP. Austin said that it is important that PCOM maintain a disciplinary balance. Baker said that the balance question should be examined when a member rotates. Moberly said that C. Helsley had asked EXCOM to address the balance question.

Leinen asked if the initiative was an attempt to sell the program as a part of the renewal process. Baker said that the initiative is to try and make the program stronger by gathering a larger community behind ODP. Kidd thought that ODP does not need to defend itself by changing the structure that works since the evidence is that the program is open to advice. Rea and Moore said that interested faculty at their non-JOIDES Institution discussed the question and do not see any reason to change the present structure.

Kastner said that if another partner is added to ODP, that would be the time to make adjustments in the structure of PCOM and possibly JOIDES. Dalziel asked if another US institution could join JOIDES. Baker said that the original concept of JOI was a small group of oceanographic institutions which met certain requirements concerning faculty size and research programs. Additions to the membership could be considered.

Weissel asked what the prospects were for adding new international partners. Baker said that the prospects for having the USSR join are improving. The new administration appears to be more open to USSR participation. Other possibilities include a consortium including South Korea and one formed by the International Oceanographic Commission. Brass said that members of PCOM could help with the IOC. von Rad asked if adding new members would provide more funds for technological development. Baker said that there is no guarantee that the \$2.75M would go to ODP.

820 Status of Engineering and Technological Developments

Slimhole & High-Temperature Logging Meeting

B. Harding of TAMU-Engineering talked about the joint meeting of drilling and logging personnel associated with both the Continental Science Drilling Program (CSDP) and ODP held on November 17 1989 in College Station, Texas, to discuss the present status of logging tools compatible with running in both 4-inch diameter holes and in holes in which the equilibrium temperature is $\geq 300^{\circ}\text{C}$. The following items were discussed and agreed concerning joint cooperative efforts by the CSDP and ODP: 1) Drilling (DCS in particular) and logging must be viewed as integrated systems and both considered in achieving the optimum solutions; 2) The entire present logging suite of tools currently run by both CSDP and ODP do not conform to a 4-inch outer diameter (O.D.) hole and will not achieve even 200°C in hole temperature; 3) Cooperative efforts between the various agencies of the Interagency Coordinating Group (ICG) and ODP should be pursued in order to pool both human and fiscal resources regarding logging tool repackaging for slimhole and hothole conditions; 4) Since the majority of present day logging tools cannot meet more than 200°C as well as a 4-inch O.D. hole, reasonable goals should be established for the short term (18 months), medium term (2-5 years), and long term (> 5 years) in defining the priorities for tool repackaging, dewatering or new tool development; 5) Letters proposing joint logging tool

efforts should be written to the Interagency Coordinating Group, and also proposed to ODP's PCOM.

Kappel said that T. Pyle has sent out the letter to the ICG participating agencies. Kastner asked what the next step should be if \$1M is available for developing these tools. Worthington said that ODP will see what can be done with existing tools in regards to the limitations imposed by temperature and hole size. There will be a focus on measurements which cannot be made from core. Batiza was asked about LITHP priorities for logging measurements and he presented the list given previously (see Minute 818). Brass asked why fluid resistivity was so important when the borehole fluids will be drilling fluids unless the hole is flowing. Fluid resistivity measurement are important for identifying zones of fluid inflow. Detrick said that pore fluid sampling is very important but has been given low priority because the technological feasibility is low and fluids can be sampled from cores.

Storms said that E. Davis has visited TAMU to discuss the possibility of placing a plug in the reentry cone with feed-through connectors into the hole for sampling and monitoring. TAMU thinks that a simple plug is feasible and that the plug could be removed by the *Resolution*. Third-party development of the plug is most desirable. ODP-TAMU will review the design, operation and technological compatibility. The sensor and data package will have to be done by outside parties, but the seal can be constructed by TAMU. Detrick said that Davis is taking the lead in development of a recording package and Becker is looking into sensor development. Harding said that TAMU needs input on the importance of this plug, since there must be a commitment of time and resources to have it available.

Tucholke said a list needs to be prepared spelling out what is needed based solely on scientific desirability, what will be possible, and when these tools will be available. The list of scientifically desirable measurements needs to be prepared by the thematic panels (done for LITHP; needed from SGPP). DMP will need to evaluate which are possible and when they might be available.

R. Jarrard of the LDGO Borehole Research Group discussed slimhole and hothole logging developments. A prospectus for downhole measurements for CEPAC programs was distributed. ARCO has given the BRG a suite of slimhole logging tools that is of a mid-1970's technology. A review has been prepared of what tools exist. Hole cooling models have been run to simulate conditions in a 4-inch DCS hole and in a standard RCB hole. Using a cooling strategy with circulation and logging using the Side Entry Sub, the temperature in a RCB hole should not exceed 150°C, while in the DCS hole the temperatures approach the equilibrium profile and are too hot for the current suite of logging tools.

The *Atlas Formation Scanner* can be used to measure temperature, pressure and flow in 4-inch holes. Two of these tools would cost about \$625K and

require about one year lead-time for their purchase. These tools can be leased for about \$10K per day. These tools are quite reliable and are heavily used by industry. It is not reasonable to expect Sandia to lend ODP their high-temperature tools continuously for 2 years.

The BRG now recommends that a caliper tool be used in the DCS hole on the Engineering II Leg, to test the ability to deploy slimline tools if there are caving and bridging problems. Harding said that the caliper tool and another dummy tool can be run on this leg. Natland said that the caliper and natural gamma would be useful to have at Shatsky and should be tried there if time is available. Storms said that the caliper measurements would be useful in evaluating drilling tests.

Jarrard said that BRG will not receive the \$180K requested for slimhole and hothole logging until October 1, 1990. It is unlikely that these tools can be ready in 6 months. Watkins asked how critical these tools are to the success of the leg. Batiza said that temperature is critical, but other measurements can be done on core or logging can be done at a later time. Brass said that this assumes about 95% core recovery.

Engineering Developments

B. Harding then presented the status of various engineering developments. A handout giving the details of their status was distributed. The developments discussed were: Navidrill Core Barrel (NCB3) which is to be constructed and then land tested sometime in mid-1990; Sonic Core Monitor (SCM) has been shown to work and will be tested further on Leg 130; Drilling and Straddle Packers (TDP & TSP) are ready for use on Leg 131 (Nankai) and manuals are being prepared; Advanced Piston Corer-Design Upgrade (APC) is being worked on and will be available on Leg 130; APC Breakaway Piston Head (BPH) is almost completed and will be field tested on Leg 130; Pressure Core Sampler (PCS) is ready for use on Leg 131 (Nankai) and the Phase II is awaiting input from SMP and SGPP; Vibra-Percussive Coring (VPC) is under design and a pre-prototype model is scheduled for completion by December 1990. Technical support of third-party developments continues to be a significant role of ODP engineering, these include the new Side Entry Sub (SES) of the Lamont BRG which is undergoing further design work and should be ready for sea trials around Leg 133 (NE Australia); Reentry Cone Plug which is under discussion with E. Davis and others; the Geoprops Probe being developed by Dan Karig and still in the design phase and probably will not be deployed before Leg 134 (Vanuatu) well after Leg 131 at Nankai; Lateral Stress Tool (LAST) being developed by K. Moran and should be ready for use at Nankai; and the Pressure Meter also being developed by K. Moran which should be tested by late January 1990 but is not scheduled for use at Nankai. The Development Engineering schedules (Appendix E) were shown.

Discussion

Kastner asked why there was no anticipated completion date for the Navidrill. Storms said that until there is another field test of the Navidrill the amount of work needed to complete the design is unknown. Kidd asked about the availability of funds to work on these projects. Harding said that the 4000-m DCS system cost more than estimated, but there appears to be adequate funding for the present developments. One problem is the loss of two visiting engineers will mean that no new major projects can be undertaken although minor projects will be handled.

Detrick asked if the sealable plug for reentry cones needed to have PCOM approval to have the work begin on construction. Harding said that manpower can be put towards the planning but money for the material to build it must be put into the FY91 budget. The sensor and data package will have to be designed and constructed by third-parties, but the seal can be constructed by TAMU. Detrick said that it is important that a seal be ready regardless of whether or not there is an instrument package available for deployment at the time of the drilling. The seal will be essential for the hydrothermal programs at Sedimented Ridges, EPR Bare Rock, and Cascadia Accretionary Prism. Moberly summarized the consensus of PCOM that the seal should be ready for the drilling of these three hydrothermal programs and TAMU should be asked to have the seal ready for the drilling at these sites.

Shackleton asked if the DCS would be available for drilling reefal limestone on the NE Australia Leg. Harding said that there would be a problem with degradation of the system if it was simply stored on the *Resolution* and not used on the rig. There would also be a problem storing the mining drill rods because of space limitations. Storms said that there would also be other problems such as having experienced drilling personnel and having the proper hardware such as guidebases on board. This is a proto-type system and cannot be used routinely at this stage.

Operational Plans for Second Engineering Leg

M. Storms distributed the Leg 132 Prospectus as well as a handout on Phase II of the DCS. He reviewed the improvements that have been made in the system since Leg 124E which include: redesigning the secondary heave compensator; switch to an electric top drive and wireline winch; modifications to platform and mast, improvements in drill rod string; new core barrel assembly; wider selection of cone bits; mini-hardrock guidebases; and back-off sub. The Phase II of the DCS will be tested in mid-January at the DRECO yard in Clearlake, Utah. Another land-test in fractured rocks is planned at the Kennecut Copper open pit mine in Salt Lake City, Utah sometime in February 1990. The DCS will be shipped to Pusan, Korea sometime in March 1990 for sea-tests on Leg 132. The drilling crew on this leg

will not be the same as was on Leg 124E, and will have to be trained in the use of the DCS. Storms next went through the plans for Leg 132 as given in the prospectus. Storms said that the vendors have also put in a lot of engineering time and effort in developing the system. The science support from JOIDES is also expected to improve this test of the DCS.

Discussion

Kidd requested that the *Resolution* collect site survey data on its way to Shatsky Rise since this region is poorly surveyed. Storms said that there was no time planned for surveying other than during the approach to the site.

Kastner was concerned that the proposed drilling on MIT Guyot was not sited in the reefal facies, which was the intention of drilling at this site. Natland said that the extent of the reefs is uncertain and the plan was to drill where it would be easier to start a hole. Tucholke said that the intent was a real test of the ability of the DCS to recover the karst reef and not the lagoonal sediments. Natland said that the test of the DCS should not be determined by our ability to place the guidebase. Tucholke and Kastner said that the test should be done on the reef. Moberly said that the challenge is to drill and recover both reef rubble and other sediments. Brass said that since the plan is not for deep penetration, the siting should ensure that the reef is not missed and therefore should be sited on the reef. Moberly said that the consensus of PCOM is that the DCS test on MIT Guyot should be sited on the reef.

Future Engineering Legs

Harding said that preliminary plans are being made for two additional Engineering Development Legs. Engineering III will be devoted to cleaning 504B and setting the hardrock guidebases and spudding-in at the EPR Bare Rock Drilling sites. Engineering IV (Appendix E) will test: new developments of the DCS; various tool developments including the sonic core monitor, feasibility of drilling a 3 km-deep hole in sediments; vibracoring of sediments; new generation of drilling packers; and high-temperature tools.

821 Issues Related to Community Concerns

Members of the JOIDES Community have raised the following issues with the JOIDES Office. In one form or another they have also been on the mind of the PCOM Chairman. Necessary action should be taken to solve, if possible, those considered by PCOM and the Panel Chairmen to be serious problems. If not a specific action now, there might be an *ad hoc* committee formed to report its advice at a later meeting.

1. Planning for long-range technological developments. The Long Range Plan is divided into phases, to allow engineering developments in advance of drilling. At present a major effort aimed at better core recovery is maturing

with the development and testing of the diamond coring system. Another major effort is evolving towards high-temperature drilling and logging. Deep drilling is planned for later phases of ODP. LITHP wants to penetrate to the mantle; TECP and SGPP want to learn about the deep parts of accretionary prisms; OHP wants deep stratigraphic tests near the margins of continents. Who or what group will begin the task of evaluating what needs to be done, and the timetable? Should there be special working groups? Should TAMU be charged with the scheduling? If so, from what parts of JOIDES will they receive advice? Should this wait for COSOD III?

This matter came up during several previous discussions and the decision was that TEDCOM needs to continue its role advising TAMU about these developments but with additional direct input from the thematic panels. A clearly defined and prioritized set of objectives is required from the thematic panels. A working group may be needed to provide advice on this matter and this will be decided after TEDCOM makes its recommendations.

2. Weight of PCOM decisions. Can there be a mechanism to make it more difficult for PCOM to change its decisions? Or, if a problem does exist, is it because decisions are made without careful consideration of the issues? During the days of DSDP, including IPOD, more than a bare majority was needed at PCOM for a decision. Admittedly, there were some procedural problems when members had to leave a meeting early if they did not leave a proxy with someone. Should PCOM follow the example of EXCOM, which "shall reach its decisions by the affirmative vote of at least two-thirds of all members, including members from at least three non-US members"? Will this, or some other way, ensure careful consideration of issues?

This matter was deferred to the next PCOM meeting.

3. Mix of activities of DPGs and thematic panels. Thematic panels have the best view of the thematic importance of a particular program or leg. To what extent, if at all, should thematic panels be used for detailed site selection and calculation of drilling times? A DPG might be ideally constituted to judge proposals from from other areas on the same theme. To what extent should a DPG be used to evaluate proposals?

This matter was discussed extensively by the Panel Chairmen who have made recommendations for the formation of DPG's and Working Groups (see Minute 817).

4. Final planning (or, cramming it all into a leg). Every group or person wants to be the last one to plan or comment about a leg. Thematic panels who had no earlier interest in a leg want to add work after a leg is accepted. Thematic panels who did have earlier interests in a leg are unhappy when a DPG reaches a compromise that is less than all of the wishes of all of the panels. DMP and BRG are unhappy when all of their logging

recommendations cannot be fit into the time available. PCOM wants to send liaisons to the pre-cruise meetings to ensure that its objectives are covered. Can we be kinder and gentler? Are we missing something in communications? Or is it the nature of a multi-million dollar project to bring out so much unhappiness when one's own project is not completed to the degree one had hoped?

During the earlier phase of DSDP (based on regional panels) and in the later IPOD phase (based on thematic panels), PCOM took the advice of its panels and of its liaison to DSDP, and PCOM planned the legs (which sites, what objectives, what transit times, and so on). PCOM then nominated Co-Chief Scientists to carry out what they had planned. With rare exceptions it seemed to work.

5. JOIDES closed to peer review of new ideas. We have heard the expression that greatest obstacle to a continuation of ODP is neither a shortage of funding in the various countries nor non-JOI participation in high level decision-making. Rather, some have pointed to the lack of outside peer review of proposals. The case is presented that a small community of scientists on JOIDES panels leads conferences, writes white papers, receives proposals, and judges them against the themes they established. Further, this community, by virtue of nominating their successors, perpetuate their ideas (now, indeed, panels can write their own proposals!). The allegation has been made that it is exceptionally difficult to get a fair review of new scientific ideas. A single leg is more than a \$3M project, counting all parts of its planning, operations, and data interpretation. Should not there be outside reviews of such expensive proposals, especially of ones that do not fit within the top themes of panels? Should there be outside reviews of such major planning documents as the Long Range Plan, panel white papers, and the COSOD reports?

We have tried to bring in "fairness" into the decision-making process by establishing a particular process (proposals matched to published thematic objectives; proposals placed in programs; programs ranked regardless of location). Is this the proper process?

This matter was also discussed by the Panel Chairmen (see Minute 817) and was not judged to be a major problem. PCOM does upon occasion solicit advice from outside of JOIDES concerning proposals.

6. Publications: quality, speed, and costs. The JOIDES Office continues to receive comments from IHP, TAMU, Co-chiefs, and leg participants about publications. Different countries and different disciplines view ODP publications from different perspectives. Not all of the proposals in the IHP minutes seem to reflect the desire of the EXCOM and PCOM to speed publications and to get publications into the open literature. Co-chief scientists of two legs, who have long histories of service to JOIDES, are not

pleased that cruise synthesis manuscripts are so vulnerable in the schedule. Is the Editorial Review Board a solution or part of the problem?

This matter was discussed by both the Panel Chairmen (see Minute 817) and during the annual report of IHP (see Minute 816).

7. Shared advice and shared decisions. Occasionally JOIDES advice is needed before a regular PCOM meeting. In the case of ship operations and budget matters, simple and rapid procedures are in place. Requests from the ship regarding unexpected operations, changed sites or drilling and logging programs, etc. go from the ship to Lou Garrison to the PCOM Chairman and, if necessary, the JOI Program Director, or for safety matters, the PPSP Chairman. In the case of budget matters, the 5-member BCOM can act for both PCOM and EXCOM. In many other matters, the PCOM Chairman can and does contact panel chairs and PCOM members for advice. There have been questions about how adequate these procedures are. Should there be a small subcommittee of PCOM to join on a conference call before decisions that cannot be put over until a regular PCOM meeting? If so, should it be formally established as a "management council" or "crisis committee" or whatever (size?; how constituted?), or always be on an ad hoc basis? Should there be a formal requirement to contact thematic chairs or other chairs before certain kinds of decisions? If so, what kinds?

After discussion the general consensus of PCOM was that the PCOM Chairman should make these decisions and there was no reason to have a special subcommittee formed. In the event that R. Moberly is not available to make an immediate decision, J. Austin will stand in if necessary.

Wednesday, 29 November 1989

822 Detailed Planning for Easternmost Pacific Drilling

D. Rea reported the results of the three meetings by the Central and Eastern Pacific Detailed Planning Group during 1989. An update of the CEPAC Prospectus was distributed. The CEPDPG recommends the formation of both a Cascadia DPG and an East Pacific Rise DPG. The CEPDPG should meet one more time to prepare a Third CEPAC Prospectus. In addition to the six programs under consideration for drilling in FY91, the following programs are also being considered: Downhole Seismometer Off Hawaii; North Pacific Neogene; Bering Sea; Shatsky Rise; Atolls and Guyots; Hawaii Flexure; and Loihi. The North Pacific Neogene has received new impetus since carbonate fossils are now known to be preserved. Pelagic windows through the turbidites are found on seamounts in the Gulf of Alaska. There are multiple objectives for the proposed drilling including: Paleogene and Cretaceous paleoceanography; atmospheric circulation; and plate kinematic objectives. The Atolls and Guyots program has two separate and distinct proposals, both of which are good and address important themes. Loihi Bare Rock would

require a hardrock guidebase but is otherwise ready to go to study the early phase of ocean island volcanism. Hawaii Flexure is not receiving much support these days. Shatsky Rise will have some drilling during Leg 132 Engineering II. The status of the six CEPAC programs under consideration for drilling in FY91 are given in the CEPAC Prospectus Update.

Cascadia

The Cascadia Margin has two competing proposals. The proposal for the Oregon portion of the margin has been updated after several recent cruises. More is known about fracture control of the venting of fluids and the locations of active vents. The proposal for the Vancouver portion of the margin has evolved from a deep hole into more of a hydrological and deformation processes study. Several recent Canadian cruises have indicated that the fluid expulsion is not controlled by fractures. A DPG is needed to sort out these two programs, since CEPAC lacks the adequate expertise.

Discussion

There was a general concern expressed by PCOM that the objectives for drilling at Cascadia are not well-defined. Suess said that SGPP views the drilling as being important for understanding the global geochemical cycling of elements in the ocean. The Oregon proposal is favored by SGPP because the relationship between fluid flow and tectonic structure is better understood. The fluid flow aspects of the Vancouver proposal would be better understood after drilling. Dalziel said that with the present technology, TECP favors drilling the Oregon part of the margin to understand the fluid flow aspects. Crawford said that in terms of fluid flow from accretionary prisms, the Vancouver margin appears to represent the diffusive end of the spectrum, while Barbados represents the focussed end. Oregon appears to lie between the two ends.

PCOM expressed a general concern about whether drilling at Cascadia would require one leg or two legs and if so, what would be included in these legs. Cowan was concerned that estimates for drilling are around 90 days for five holes, but more holes may be needed to do the job. Measurements of pore pressures and permeabilities will be important aspects of these legs, but packers are not recommended for making these measurements; How will this be accomplished? Kastner said that from a thematic viewpoint, PCOM should commit to one leg of drilling. Watkins said that until some information from drilling is available, the question of how many legs cannot be answered. Tucholke said that there is still some uncertainty about the best places to drill accretionary prisms; Is Cascadia the best area to answer these kinds of questions? Dalziel said that a Working Group on Accretionary Prisms was requested over one year ago to develop the strategies for drilling in accretionary prisms. TECP supports one leg of drilling at Cascadia and recommends that a DPG be formed to choose between the two proposals.

Suess said that there was no lack of long-term planning to address accretionary prism drilling in a world-wide context. Long-term goals have been set out in the Long-Range Plan with a strategy involving drilling various end-members of sediment type, convergence rates, and structural styles; Cascadia is part of this planned drilling.

Sedimented Ridges

R. Detrick presented the plan for drilling to understand Hydrothermal Processes at Sedimented Spreading Centers, prepared by the Sedimented Ridges DPG after its June 13-15, 1989 meeting in Ottawa. The detailed plan can be found in the CEPAC Update. The SRDPG examined competing proposals for drilling at the Guyamas Basin, Escanaba Trough, and Middle Valley. The criteria used for selection of the drilling location was based on the Sedimented Ridges Working Group Report which established two objectives for drilling of sedimented ridges: 1) A 3-D characterization of fluid flow and geochemical fluxes within a sediment-dominated hydrothermal system; and 2) A systematic investigation of the processes involved in the formation of sediment-hosted massive sulfide deposits. The Middle Valley area on the northern Juan de Fuca Ridge was selected as the site of the hydrologic study based on the simplicity of its tectonic setting, the level of current hydrothermal activity, and the completeness of site survey information.

An array of seven holes is proposed. Objectives for drilling include: 1) the size of the geothermal reservoir; 2) where does recharge occur; 3) what controls the localization of fluid discharge; 4) how does fluid move through the system; 5) what controls the fluid chemistry; etc. The highest priority is a single basement reentry hole drilled into the high-temperature reaction zone of the active system. Complementing this hole is an array of six shallower holes to define the pattern of fluid flow over a 100-200 km² area of Middle Valley. At all seven holes an extensive program of logging, fluid sampling, and borehole experiments is recommended, including hydrologic sealing and *in-situ* monitoring of temperature and pore pressure as the holes re-equilibrate after drilling is completed.

The SRDPG selected two sites in Middle Valley and a third area in Escanaba Trough along the southern Gorda Ridge for a sulfide drilling program. These deposits display differences in the level of current hydrothermal activity, the size and maturity of the deposits, and sulfide composition and fluid-rock interactions. The closely-spaced shallow holes and deeper drilling recommended in these three areas have been carefully integrated with the hydrologic study and will provide important constraints on the three-dimensional structure of these actively forming deposits, the effects of differing hydrothermal fluids and source rock interaction on their

composition, and the nature of post-depositional alteration within the sulfide mounds.

A total of about 115 days is required for drilling, logging and sampling, exclusive of transit times. Thus nominally two legs will be required to carry out the program recommended by the SRDPG. Ideally, these legs should be separated by about one year to allow hydrologic modeling of the initial drilling results to guide selection of the deep reentry holes; to monitor the re-equilibration of holes that have been hydrologically sealed after the first leg, and to provide additional time to develop the tools needed to drill into the hottest parts of the hydrothermal system. The SRDPG strongly recommends that two legs of drilling be devoted to sedimented ridges in the 1991-1992 time frame.

SRDPG concluded that PCOM needs to clearly identify responsibilities, funding and a timetable for the high-priority drilling and logging developments required for high-temperature drilling, both at the EPR and at sedimented ridge crests. SRDPG, LITHP and DMP have made several recommendations on which PCOM can act. These include: 1) LDGO Borehole Research Group be given responsibility for developing high-temperature logging capabilities for ODP, while TAMU should have responsibility for high-temperature drilling systems; 2) The \$300K now allocated for tool hire in FY91 and FY92 should be redirected for the development of high-temperature logging capabilities; 3) The Barnes-Uyeda tool be modified for higher temperatures (up to 200°C) and made stronger; 4) A slimline self-contained probe be developed or acquired to measure temperatures up to 350°C; 5) A combination logging tool be developed for use in conventional diameter holes (possibly using a modified side-entry sub to cool the hole while logging) to incorporate as many measurement requirements of SRDPG and LITHP as possible (temperature, fluid resistivity, formation resistivity, natural gamma radiation, sonic velocity, caliper, flow velocity, and borehole fluid pressure in order of priority); 6) A method of hydrologically sealing reentry holes be developed to monitor *in-situ* temperature and borehole fluid pressure as the hole re-equilibrates.

The approach of a working group to define objectives followed by a detailed planning group, as used for sedimented ridges has been very successful. The SRDPG has completed its job and should now be dissolved. A watchdog group is needed, however, to monitor progress on the engineering developments required for these legs and to review new site survey data as it becomes available. The SRDPG recommends this *ad-hoc* watchdog group consist of the four Sedimented Ridge Crest Co-Chief Scientists and a PCOM representative.

Discussion

Brass asked why it was important that the second leg of drilling fall within the 12 to 18 month period following the first leg. Detrick said that if the time period between the legs is too long, the venting may stop, but there must also be a period of time to learn from the first leg, which locations are best to drill on the second leg. Leinen asked if there were only one leg, would that translate into a choice of a hydrology vs. a sulfide program. Detrick said that the inter-dependent two-leg approach is the best for studying these problems. Leinen asked why two different sites were chosen for the sulfide drilling. Detrick said that the DPG wanted the drilling effort concentrated in one area if possible, but in order to study both the temporal aspects of the deposits and other controls such as sediment interaction and volcanic intrusions, two different types of deposits need to be studied. Brass asked if Middle Valley is the best place in the world to study these processes. Detrick said it was the opinion of the Sedimented Ridges Working Group that this is the best place, at this time, to study the hydrological aspects. The sulfide studies need to be done in a number of different settings, but the best combined study of the relationships between sulfides and hydrology will be in Middle Valley. Dalziel asked what is known about the tectonic controls on the hydrological systems. Detrick said that there appear to be some tectonic controls but the present seismic imaging is insufficient to understand them. Batiza said that LITHP has given its full support to the two-leg drilling program planned by the SRDPG. Suess said that SGPP has also given its full support. SGPP thinks sampling of fluids from the borehole is critical and also endorses the development of the plug for the reentry cone. Moberly said that natural laboratories such as the ones proposed for the Sedimented Ridge program were endorsed by both COSOD I & II, and committing ODP to two legs of drilling at this location is appropriate.

Chile Rise Triple Junction

The Chile Rise Triple Junction program will examine the intersection of the Chile Ridge with the Chile Trench. Drilling sites are designed to decipher the nature of the intersection of the ridge axis and the margin and to examine the margin both before and after its intersection with the spreading center. The Prospectus Update includes the new data gathered in that region and will be included in the Third Prospectus. The entire Chile Rise Triple Junction program including the pre- and post-collision aspects and fluid studies, will require two full legs of drilling to complete (estimates are about 105 days plus transit time). The most optimum way to design the drilling program is two back-to-back legs. TECP has given this program its highest rank. The best weather window for this program appears to be between December and April, but others suggest that it might be drilled at any time during the year. Clearances will not be a problem.

Discussion

Taira asked what the most important processes that will be studied at this location. Dalziel said that the processes associated with subduction of a ridge crest will be most important. Ridge crest subduction has a profound effect on the evolution of the Western America Cordillera and may also be related to the breakup of super-continents. Many processes are related to ridge crest subduction including: horizontal compression, stress in the upper plate, high thermal gradients, tectonic erosion, large vertical motions, anomalous trench volcanism, ophiolite emplacement, etc. Taira asked what the focus of the study would be. Dalziel said that TECP has endorsed two legs, with the first devoted to the zone of present ridge collision and the second on the history of the margin before and after the collision. Austin observed that this is probably the best site in the world to study the processes associated with ridge subduction. Cowan expressed a concern that hydrothermal aspects were ignored in the present proposal. Kastner agreed that fluids deserve more attention. [Note: Fluids are an objective of the revised proposal submitted just after the PCOM meeting and have resulted in a high ranking by SGPP.] Brass asked if this location would be a good place to look at the problem of the driving mechanisms of plate motions using stress measurements. Dalziel said this was true. Shackleton suggested that the top part of the sections should be cored with the APC rather than the RCB.

Eastern Equatorial Pacific Neogene Transect

Two transects of hydraulic-piston-cored holes will be placed to obtain continuous undisturbed sedimentary sections for studies of paleoceanography of the Late Cenozoic in the eastern equatorial Pacific Ocean. The proposed sites focus on the evolution of climates when the earth changed from an essentially non-glacial world to one dominated by extensive glaciation in the high latitudes. The objective of paleoceanographic measurements along latitudinal gradients represents a long-standing theme of the former SOHP and is highly ranked by the present OHP.

Knowledge of the development and the evolution of the equatorial circulation system in the eastern equatorial Pacific during the late Cenozoic is still limited. Previous sites have been located along east-west transects and have failed to monitor north-south shifts of the complex equatorial current system. Furthermore, existing holes are located in areas of reduced sedimentation with many hiatuses and lie at similar water depths, making it impossible to resolve vertical changes of the water mass.

The results of the cruise of Pisias and co-investigators to map, profile and piston core the proposed drilling sites along the latitudinal profiles at 110°W and 95°W have significantly strengthened this program. The changes have been incorporated into a revised prospectus chapter.

Discussion

Kidd said the site survey package is generally in good shape, but there is a concern with the watergun records for WEQ-2 (48 m thickness of sediments) which are virtually useless. Basement depths are poorly constrained. SSP suggests that the *Resolution* collect 3.5 kHz profiles as it approaches the drilling sites.

Leinen said that there is some question about the drilling time estimates. The time requirements may be too optimistic and one of the sites might have to be dropped if they are wrong. Elimination of the requirement of a third APC core, which is dictated by the present sampling policy, would save time. Moore said that IHP will make exceptions to the sampling policy when the scientific requirements are spelled out in the cruise prospectus. The ODP sampling guidelines are designed to protect the cores for scientific studies.

Leinen also pointed out that the time required for logging is inflated by the addition of stress measurements in basement using the BHTV, something that was not included in the original proposal. Jarrard said that the logging policy, concerning stress measurements, is to make them in targets of opportunity when recommended by TECP. It was suggested that a proposal may be necessary to justify these measurements when they require an additional two days per site. Dalziel said that TECP will need to discuss this matter to decide how important a stress measurement would be in this location. Kastner said that there is a difference between a target of opportunity and creation of the opportunity, and in this case the measurements may jeopardize the success of the leg. Moberly said that conventional logging should be done for this leg. The stress measurements need to be justified by a proposal and not endanger the success of the main objectives of the leg.

EPR Bare Rock Drilling

The investigation of magmatic and hydrothermal processes at mid-ocean ridge crests as part of the broader problem of crustal generation is an important thematic objective of LITHP. The East Pacific Rise displays many signs of vigorous hydrothermal activity and shows well-developed axial seismic reflectors interpreted as axial magma chambers. Thus the study of the high-temperature reaction zone above a magma chamber can best be done in the axial region of the East Pacific Rise. A drilling strategy for addressing the scientific objectives outlined above requires a suite of eight holes. There are two competing proposals for this program on the EPR, one focussed in the vicinity of 12°50'N and the other set near 9°40'N. Site surveys appear to be adequate for either location. A DPG needs to be formed to choose between the competing proposals so that the guidebases can be placed during early 1991 on the Engineering III leg.

Discussion

Batiza said that the EPR Working Group established the strategy and criteria to be used for selecting and planning drilling on the EPR. LITHP endorses the formation of a DPG to make the choice and do the detailed planning. Kastner said that the DPG should include proponents of both sites. Kidd said that SSP is waiting to see the data for the two areas, but it should be adequate.

Lower Crust at 504B

A primary objective of JOIDES and the Ocean Drilling Program is to core as deeply as possible beneath the ocean floor to constrain seismic and petrologic models of the structure and evolution of the oceanic crust. At the present time, the highest ranked program of LITHP is deepening Hole 504B through the oceanic layer 2/3 transition into layer 3 gabbros. Without remedial work, scientific drilling cannot continue at Hole 504B. Part of an engineering leg is required to clean out and recase 504B. The engineers have decided that an attempt to mill and fish the junk in the hole will be the most efficacious method of cleaning the hole. The engineers say that they will know within the first 10 days of operations if the fishing will work. The bottom of the hole will be cemented and then milled. A new hole can be drilled in 37 days with no coring, but LITHP has said that another site should be considered before re-drilling at Site 504. Time estimates for engineering operations at 504B and at the EPR are around 79 days at sea. Current operational plans are to divide the leg into a part A at Site 504B and a part B at the EPR. From the end of Leg 135 (Lau Basin) until the start of the next science leg (Leg 137) about 92 days will pass without scientific drilling. This is due in part to the long transit time (~16 days) to Site 504B from Papeete following Leg 135 and the necessity of a port call in Panama during the engineering operations.

Discussion

Detrick asked if the DCS works for drilling and recovering fractured rocks on Leg 132, why not start the scientific drilling on the EPR instead of having an engineering leg? Storms said that even assuming everything works successfully on Leg 132, more time will be needed on the third engineering leg to test drilling deeper into fractured rocks and to test high-temperature drilling equipment. Time must also be devoted to setting two hard-rock guidebases and drilling the BHA into bare rock to start the holes for the DCS.

823 Drilling Plans for 1991

At the Spring PCOM meeting in Oslo PCOM voted to schedule the ship track for 1991 from among the following list of programs given high priority by the thematic panels: Cascadia Accretionary Prism; Chile Triple Junction; Eastern Equatorial Pacific Neogene Transect; East Pacific Rise Bare Rock Drilling; Hydrothermal Processes at Sedimented Ridge Crests; and Lower Crust at Site

504B. Because of unexpected transits to the dry-docking of the *Resolution* in Singapore and some other delays the ship will not arrive for Engineering III at Site 504B in the Eastern Pacific until sometime in March 1991, much later than planned. PCOM had intended to schedule 10 months of scientific drilling from these six programs. PCOM has also committed itself to global thematic planning after 1992. It was noted many times during this meeting that the lack of sufficient long-range planning is beginning to have serious repercussions for ODP. Therefore after a prolonged discussion about the time period for which PCOM should be planning the ship track at this meeting, the following motion was passed.

PCOM Motion

PCOM will schedule legs through the end of calendar year 1991. PCOM acknowledges the earlier commitment to global planning after 1991, but the immediate need for technical developments (i.e. high-temperature, slimhole tools) makes it prudent to plan tentative additional legs through the spring of 1992. PCOM will evaluate these tentative legs at the April 1990 meeting based on the global drilling priorities from the thematic panels. (Motion Leinen, second Brass)

Vote: for 16; against 0; abstain 0

At its 1990 Annual Meeting PCOM will also re-evaluate the schedule when it formulates the FY92 Science Plan.

The readiness of the six programs in terms of tools needed for successful drilling or scientific measurements was reviewed. Cascadia, Sedimented Ridges Leg #1, Chile Triple Junction, and Eastern Equatorial Pacific Neogene have the necessary tools. EPR Bare-Rock drilling requires successful development of the DCS and high-temperature slimhole logging tools. Drilling at 504B requires that the hole be cleaned of junk. The desirability of scheduling drilling at 504B and the EPR in view of the questions about their readiness for drilling was discussed. PCOM has previously committed the *Resolution* to an Engineering Leg to prepare for drilling at 504B and the EPR as soon as the ship comes to the Eastern Pacific in 1991. Scheduling of drilling at 504B or the EPR should be done as soon as practical after the Engineering Leg. Jarrard said that this should not be any earlier than July 1991 to have any hopes for tool development. These legs need to be scheduled simply to ensure that money will be allocated for the necessary tool development. Since the drilling at 504B and the EPR has been such a long-standing priority of LITHP and in addition ODP has spent considerable funds to develop the technology in preparation for this drilling effort, PCOM agreed that drilling of at least one of these programs should occur in 1991. PCOM next discussed the merits of Cascadia vs. Chile Triple Junction. There was no strong consensus that one program was better than the other; both would appear to require two legs of drilling; both require some additional detailed planning; they are both appealing to TECP and SGPP and to wider earth science communities. Taking

into consideration the rankings of the thematic panels, weather windows, transit constraints and tool development schedules, PCOM passed the following motion.

PCOM Motion

PCOM schedules the following legs for drilling in calendar year 1991: Hydrothermal Processes at Sedimented Ridges I, Eastern Equatorial Pacific Neogene Transect, Lower Crust at 504B. In the event that Lower Crust at 504B cannot be drilled, East Pacific Rise Bare Rock Drilling will be substituted. (Motion Leinen, second Brass)

Vote: for 14; against 2; abstain 0

The Science Plan for the FY91 Program Plan will include the purposes, sites, and drilling plan for each of these legs, as developed by the appropriate DPG.

Because there is an immediate need for technical developments (i.e. high-temperature, slimhole tools), PCOM tentatively planned additional legs through the spring of 1992 which will be re-evaluated at the April 1990 PCOM meeting based on the global drilling priorities from the thematic panels.

PCOM Motion

PCOM tentatively schedules the following legs for drilling after Lower Crust at 504B: 2 legs of drilling at Chile Triple Junction, East Pacific Rise Bare Rock Drilling I, Cascadia Accretionary Prism I, and Hydrothermal Processes at Sedimented Ridges II. (Motion Leinen, second Mevel)

Vote: for 13; against 1; abstain 2

824 Planning Requirements for 1990 Meetings

The JOIDES Office prepared the following as a basis for PCOM discussion and decisions.

1. Spring meeting

- Review of procedures involving PCOM, JOIDES Office, thematic panels and DPGs.

The main purpose of the 24-26 April meeting is for PCOM to decide the general direction of the vessel for the 4-year period to spring 1994.

Therefore by 10 April PCOM members must receive in their Agenda briefing books annotated lists by each of the four thematic panels of their current ranking of programs.

Therefore by 3 April the JOIDES Office must receive the lists from the thematic panels.

Therefore in winter no later than mid-March the thematic panels will have had to (a) review new as well as appropriate older proposals from

any ocean, in terms of published thematic objectives and the probability of actual drilling (related to the scientific and technical maturity of a proposal, including existing or anticipated surveys, engineering developments, safety, and perhaps other factors), (b) assemble the thematically acceptable proposals into programs, (c) rank and list the programs, and (d) briefly annotate each program with its thematic objectives and other appropriate comments to guide PCOM.

At their late winter meetings, thematic panels will also have the opportunity for panel-wide comments of the November 1989 updated CEPAC-DPG prospectus.

- Is this satisfactory and clear? * Does PCOM want to adjust any part?

2. Summer meeting

- Agreement on procedures involving PCOM and possibly other parts of the JOIDES structure.

One important purpose of the 7-9 August meeting is preparation for the 1990 Annual Meeting at which the FY92 drilling program will be set.

Therefore PCOM should receive and discuss watch-dog reports, DPG reports, reports from the co-chairs of the liaison groups to other international geoscience programs and other information pertaining to possible candidate programs for FY92 drilling. Presumably, programs that might be in regions visited by the ship early in its 4-year general progress would be examined most closely, but even the potentially later ones must be discussed.

Therefore at its April meeting, as soon as PCOM sets the 4-year general direction, PCOM must assign its watch dogs for each highly ranked program likely to be a candidate in the 4-year period.

- Watch dogs: After considering carefully the purposes and dates of the various meetings it appears to the PCOM Chairman that reports of its own watch dogs are most needed at the August meeting. An exception is the set that should have been presented this morning (at this present meeting) to assist the evaluations of the candidate programs for easternmost Pacific drilling in FY91. Under routine business tomorrow, watch dogs of the former WPAC and CEPAC regions can up-date us on the status of those programs. If we are, however, pressed for time the PCOM Chairman will request that these be quite brief or even eliminated.

In the case of the April meeting it seems presumptuous to guess in advance that the weight of high-ranking programs will indeed be in the Pacific where we have watch dogs. The majority of our mature proposals are there; we have heard from our panels that many highly ranking themes can best be addressed in the Pacific; and through FY91 we will not

have completed a minimum of 18 months of scientific drilling in the CEPAC region. Nevertheless, in fairness we point out that our notice to the community was that the direction of the vessel after 1991 will be based on thematically reviewed proposals from any ocean, we will not have the annotated rankings of programs by panels until April, and almost certainly we will not have assigned watchdogs to all of the high-ranked programs.

Therefore the Chair recommends that April watch-dog reports be given late in the meeting, after the decisions about the 4-year general direction of the vessel.

The Chair also recommends, that in April after the 4-year decisions, watch dogs be assigned to all high-ranking candidate programs not already covered. All watch dogs should be prepared to report at the August meeting.

3. Annual Meeting

- Review of procedures involving PCOM, thematic panels, and other parts of the JOIDES structure.

One important purpose of the 26-29 November meeting is preparation of the Science Program (drilling plan) for the FY92 Program Plan.

Therefore PCOM members must receive within early November 1990 the equivalent of a "prospectus", with several candidate programs for FY92 presented in leg form with their objectives, thematic-panel comments and rankings, and wherever possible, their specific sites, drilling and logging times, and whatever else is needed for PCOM's evaluation and decision.

The prospectus should include programs (and perhaps a candidate engineering leg) totaling about 7 to 10 legs, from which 6 will be selected for FY92. The prospectus should have received thematic-panel review and comments before the November Annual Meeting.

Therefore PCOM (a) at this present meeting should decide how the prospectus will be prepared and what group or groups will be responsible to prepare it, and, (b) at its April meeting after knowing what the range of possible candidate programs will be, should establish and charge the group(s) to prepare it.

- Preparation of prospectus for 1990 Annual Meeting.

Some possibilities are:

If the general direction of the ship will be only in the Pacific in the early part of the 4-year period, CEPACDPG can be asked to prepare the prospectus. The DPG will need some augmentation (or proper replacement of retiring members) for such a task.

advantages: CEPACDPG exists; most of its prospectus is already up to date.

disadvantages: CEPACDPG not be well constituted for a 1992 theme-driven program. No preparation for the eventuality that sooner or later the ship will be elsewhere (Atlantic, Western Pacific, or wherever).

If the direction is outside or largely outside the Pacific, the CEPACDPG might be dissolved or inactivated, and an appropriate new DPG formed (perhaps with some transferred CEPAC personnel). Its title might be non-regional ("1990 DPG") or it could indicate the general direction that was selected (for example, "South Atlantic-Southern Ocean DPG").

advantage: By the proper rotation of personnel and periodic changes in title, this could become an open-ended, long-term DPG (corporate memory; efficiency, etc).

disadvantage: Difficult to have a single group of efficient size that would have the regional plus thematic expertise, and not be merely advocates of the members' own proposals. Generally difficult to assemble altruistic volunteers.

If there are mixed kinds of detailed planning, the JOIDES Office might assemble a prospectus. For example, collect within one volume (a) the reports of a number of program-specific DPGs that must be established, (b) the applicable parts of any existing prospectus, (c) appropriate panel and working-group reports, (d) and single-site legs like 504B that would need little additional attention. At the minimum, there are the proposals themselves and the notations with the thematic-panel rankings.

advantages: Truly detailed planning will mainly be performed by one-time DPG meetings of the most-competent persons. The JOIDES Office can have good knowledge at all times of the status of the various parts of the prospectus.

disadvantages. Unevenness of contributions. Additional workload on JOIDES Office (but summer is the lightest time)

Combinations of the above (CEPAC-DPG, other DPGs, direct thematic input, etc., assembled perhaps by a 1990 DPG or perhaps by JOIDES Office)..

advantage: Least effort

disadvantages: Lack of coordination; unevenness of contributions.

- * As a point for discussion and action, the Chair recommends that PCOM now adopt the concept that it will, before adjournment in April, establish, fill, and charge new DPGs appropriate for those programs needing detailed planning before the Annual Meeting. PCOM will also charge the JOIDES Office to prepare a prospectus for the highly ranked programs and general direction of the vessel for the early part of the 1990-1994 period.

- * For discussion purposes, the Chair presents but does not recommend the alternative: that PCOM now adopt the concept that it will, before adjournment in April, establish, fill, and charge a new DPG appropriate to prepare a prospectus for the highly ranked programs and general direction of the vessel for the early part of the 1990-1994 period.

Discussion

Leinen said that because of the heavy burden placed on the thematic panels, both to review proposals and to prepare global thematic rankings, the panels should have the option of extending their winter meetings to help them get their information in shape. Tucholke agreed that they may need more time to accomplish their tasks. Brass said that the 4 thematic panels must send PCOM in the fall a list of their top ranked programs. Moberly said that this number should not exceed 4 or 5. Austin said that this will translate into many legs of drilling. Leinen said that the number should remain small so that ODP drills the best programs.

Austin said that PCOM must appoint some DPGs at this meeting to plan for drilling at Cascadia and the EPR, and perhaps some working groups also need to be formed to establish directions for certain kinds of drilling such as accretionary prisms. von Rad said a workshop on conjugate passive margins is important. Moberly said that workshops might be the appropriate setting for establishing directions for future ODP drilling.

Kastner thought that it would be appropriate for the JOIDES Office to prepare a prospectus for the potential drilling programs. von Rad said that a prospectus is very important and thought that it should be prepared by a small panel. Batiza suggested that a DPG is the best way to get realistic programs in the prospectus. Moberly said that the DPG could be formed to meet only once to establish the prospectus for that year's PCOM Annual Meeting. Austin was concerned that these will appear to be regional panels. Moberly said that it is possible that the drilling might be in more than one ocean. Batiza said that the group should be multi-disciplinary and not regional in its scope. Rea said that staffing is critical and it is important to have regional expertise when putting together a prospectus. Another critical factor in putting together a prospectus is to have a limited number of good proposals.

The general consensus of PCOM was that after establishing the general 4-year direction for the *Resolution* at the Spring PCOM meeting, a DPG will be formed to prepare a prospectus for the next fiscal year of drilling. If the general direction is in the Pacific, then the nucleus of the DPG will be formed from the CEPAC-DPG with appropriate additions as necessary. If the direction is elsewhere, then an appropriate DPG will be formed. In either event, the prospectus should contain more programs than can be accommodated by 5 to 6 legs of drilling to ensure competition for the selection of the best drilling

programs. The DPG will have to meet in sufficient time for the thematic panels to review, comment, and make program-rankings of the prospectus at their fall meetings.

PCOM thanked Dave Rea, Bob Detrick and the members of their respective DPGs for their efforts during 1989.

Thursday, 30 November 1989

825 Meeting of Former IOP and Co-Chief Scientists

At the Annual Meeting in Miami last year, PCOM committed itself to a final meeting of the Indian Ocean Panel (IOP) and Indian Ocean Drilling Leg Co-Chief Scientists. The JOIDES Office failed to interest the last chair of the IOP to organize a meeting. At the Woods Hole meeting, a 5-person *ad hoc* Indian Ocean sub-committee (R. Duncan, R. Kidd, D. Rea, U. von Rad, J. Weissel) recommended and PCOM accepted the following suggestion for the convening of the meeting. The purpose of this meeting would be to: 1) discuss and synthesize the results of the nine-leg Indian Ocean Drilling Program in light of COSOD I objectives; 2) assess both the successes and short-falls of this drilling; 3) emphasize unexpected achievements; and 4) highlight the direction for future studies. A further purpose is to assemble synthesis and review papers for publication as a volume outside of ODP. Attendance at the meeting will include former IOP members, Indian Ocean Co-Chiefs and selected shipboard participants. The location and time of the meeting will probably be at the University of Cardiff (Wales) in June 1991, in conjunction with a planned meeting of UK Indian Ocean Participants, which will be hosted by R. Kidd. The format for the meeting will be limited summary talks and posters, plus draft manuscripts from participants, all organized along thematic lines. Participants will work on jointly authored papers on multi-leg subjects. These papers will be submitted to the conveners within 6 weeks of the end of the meeting. AGU will be contacted to publish the volume and asked to supply editorial and reviewing assistance. It is hoped that these publications can be done as part of a monograph series on Ocean Drilling. Funds for organizing the meeting, some editorial assistance, and for the travel of US participants will be sought from USSAC. Other member countries would have to support participation by their respective IOP panel members, Co-Chief Scientists, and any other participants.

Discussion

Austin thought this was a good idea for all the regional panels and suggested that the former Western Pacific Panel chairman B. Taylor be asked to start planning a similar meeting.

Kastner suggested that a summary of the meeting be prepared for EOS; Moberly suggested Geotimes and Episodes and Brass suggested Nature as well.

von Rad said that a 10 page overview of the drilling would be helpful for ODP as a whole.

Brass said it is time that ODP consider committing to a Monograph Series, and he will undertake exploration of this possibility with AGU. The publications can be along both thematic and regional topics.

Duncan said that for the IOP meeting, an editor for the volume will have to step forward. For the present, Duncan volunteered to be the point of contact for getting the meeting organized. He will supply a letter requesting the meeting and Moberly will approve the meeting. Other arrangements concerning funding will have to worked out with JOI/USSAC.

826 Resolution Regarding Soviet Participation in ODP

Because of concerns expressed previously about problems being caused for the non-US partners by the exclusion of the Soviets from ODP, a sub-committee consisting of Brass and von Rad volunteered to draft a resolution (see Minute 815). The following motion and resolution was approved.

PCOM Motion

PCOM adopts the following resolution. (Motion Brass, second Kastner)
Vote: for 16; against 0; abstain 0

PCOM Resolution

The JOIDES Planning Committee recommends scientific and technological goals for the Ocean Drilling Program and includes representatives from each of the international partners and the ten JOI Institutions. The Committee has recently learned that failure to permit the Soviet Union to participate in the Ocean Drilling Program has begun to cause difficulties for scientific cooperation in other non-ODP programs. Marine Science is inherently international and relies on the cooperation of many nations and access to territorial seas of great scientific interest. The unilateral US decision to deny ODP membership to the Soviet Union who participated effectively in the Deep Sea Drilling Program, the ODP predecessor, has involved the international ODP members without consultation and without their concurrence. In recent months the Soviet Union has indicated that their rejection by the program inhibits their desire to cooperate fully in other international programs. The ODP Planning Committee urgently recommends that an invitation to join the Ocean Drilling Program be extended to the Soviet Union early in 1990.

[The resolution was immediately forwarded by EXCOM Chairman Charles Helsley to Dr. Eric Bloch, Director of NSF, and to Dr. Allan Bromley, Assistant to the President for Science and Technology. A positive response has been received from Dr. Bromley. In his letter Bromley states that he agrees that it would be in the best interest of all concerned to have the USSR once again

participate fully in the drilling program and has communicated that conclusion to President Bush.]

827 Membership Changes on JOIDES Panels

PCOM has a general concern about ensuring that the JOIDES advisory structure is open to participation by all US Institutions. Therefore in the future PCOM admonishes all JOIDES panels to provide at least two nominees to cover each requested appointment and that these nominations should include "new blood". PCOM wants to see a balanced mixture of scientists in the advisory structure, including both scientists with experience in the Ocean Drilling Program and those that are new to the program. Membership on the various JOIDES panels was reviewed and the following actions were taken.

LITHP There were no requests for new members. A. Taira said that T. Fujii (Japan) will be going off the panel. LITHP should indicate what kind of expertise they would like, so that Japan can appoint an appropriate new member

OHP The panel had requested that a particular new member be appointed to replace both A. Droxler and member-at-large L. Mayer, with interests in both shallow-water carbonates and deep-ocean seismic stratigraphy. Because of concerns about appointment of a drilling proponent at this particular time, a decision was put off until the next PCOM meeting. A. Droxler and L. Mayer are asked to continue through the next meeting of OHP. The panel is requested to make more than one nomination to cover appointments in a particular expertise. Nominations of "new blood" are to be included in future requests. This applies to all panels. A. Taira said that T. Saito (Japan) will be going off the panel. Ken Konishi will probably be appointed (expertise in shallow-water carbonates).

SGPP Roger Flood is asked to join the panel to cover the area of deep-sea sedimentation. Jeff Alt is asked to join the panel to cover the area of crustal alteration. Martin Goldhaber is asked to continue his membership on SGPP for another year.

John Parkes of the Department of Geology, University of Bristol who conducted the microbiology experiment on the cores from Leg 128 will attend the next meeting of SGPP to discuss microbiology; Jenkyns said that his expenses will be covered by the UK.

M. Kastner suggested that the panel be allowed to have 16 members for one year, while it is still sorting out its mandate.

TECP Tanya Atwater is asked to join the panel to cover the area of plate kinematics. Casey Moore is asked to join the panel to cover the area of accretionary prisms.

DMP No action taken since the panel is still soliciting new nominations.

IHP No action taken. The appointment to IHP of two recent Co-Chief Scientists (a US and a non-US) was discussed. The Co-Chiefs would provide input to IHP on publication as well as other shipboard matters. This will be an Agenda Item for the next PCOM. Nominations of Co-Chiefs for this appointment are to be sought.

PPSP No requests and no actions taken.

SMP No requests and no actions taken. More visitors are needed to discuss problems with shipboard measurements.

SSP No requests and no actions taken. A. Taira said that K. Suyehiro (Japan) will be going off the panel.

TEDCOM Earl Shanks (Mobil) and Howard Shatto, Jr. (Consultant) are asked to join the panel.

PCOM Motion

PCOM accepts the slate of persons nominated to serve on panels. (Motion Kastner, second Weissel)

Vote: for 16; against 0; abstain 0

Confirmations of PCOM Liaisons to upcoming panel meetings are:

LITHP - Duncan or Natland	IHP - Watkins
OHP - Brass	PPSP - Moberly
SGPP - Brass	SMP - Leinen
TECP - Tucholke	SSP - Watkins
DMP - Cowan	TEDCOM - Brass

828 Liaison Groups With Other Global Geoscience Programs

EXCOM has accepted the JOI and PCOM proposal for the formation of Liaison Groups with other international geoscience programs with the proviso that PCOM and EXCOM members shall not be members of the liaison groups. When the Co-Chairs attend PCOM meetings they will be treated as guests and will have to leave the room when sensitive matters are discussed. Wording for the mandate and terms of reference for the groups was presented and the following motion was passed.

PCOM Motion

PCOM recommends and forwards to EXCOM for approval the following proposed mandate and terms of reference for Liaison Groups.

- 1.1 Liaison Groups may be established between JOIDES and other international geoscience programs having a strong interest in ocean drilling.
8. **Liaison Groups: Mandate.** As a formal means of communications, and especially to facilitate the exchange of beneficial information, JOIDES may establish a Liaison Group with any international geoscience program that has a strong interest in ocean drilling. Such groups may be approved by PCOM on the nomination by JOI, Inc. For each Group, typically a Co-Chairman and one additional member will be appointed by an international program to represent it, although with mutual consent the membership of a Group may be larger. PCOM and EXCOM members will not be members of Liaison Groups. Typically, Co-Chairmen will be invited to meet with PCOM at the summer PCOM meeting.

(Motion Brass, second Watkins)

Vote: for 12; against 0; abstain 4

A formal response has been received from Bob Ginsburg of the Global Sedimentary Geology Program (GSGP) agreeing to form a Liaison Group. Ginsburg has forwarded the names of three GSGP representatives for this liaison group (Erle Kauffman Co-Chairman; David Bottjer; Michael Arthur). PCOM approved the following JOIDES members for this Liaison Group: Tim Bralower Co-Chairman (Alternates: Dave Scholl, Wyllie Poag, Robert Garrison) and Judy McKenzie, of the ESF (Alternate: Jurgen Thurow, FRG).

Although a formal response has been received from RIDGE concerning the formation of a Liaison Group, PCOM did not nominate any members because RIDGE is not yet an international program. When RIDGE does become international, JOIDES members will be named.

829 Nominations For Co-Chief Scientists

PCOM recommended Co-Chief Scientists for the following drilling legs:

Eastern Equatorial Pacific Neogene Transect

- | | |
|-----------------|------------------------|
| US Co-Chief | 1. N. Pias |
| | 2. A. Mix |
| | 3. M. Lyle |
| | 4. R. Embly |
| Non-US Co-Chief | 1. L. Mayer (C-A) |
| | 2. T. Pederson (C-A) |
| | 3. H. Beiersdorf (FRG) |

Hydrothermal Processes at Sedimented Ridge Crests

US Co-Chief 1. M. Mottl
 2. R. Zirenberg
 3. M. Langseth
 4. J. Morton

Non-US Co-Chief 1. E. Davis (C-A)
 2. F. Albarede (France)
 3. J. Cann (UK)
 4. H. Baecker (FRG)

PCOM adjures that a balance be maintained between the expertise of the Co-Chiefs such that if Davis is chosen, the ideal pairing would be with Mottl, Zirenberg or Morton. Similarly if Mottl is chosen the ideal pairing would be either Davis or Baecker.

Lower Crust at 504B

US Co-Chief 1. J. Alt
 2. H. Dick
 3. K. Becker
 4. J. Sinton
 5. S. Humphris
 6. M. Mottl

Non-US Co-Chief 1. J. Erzinger (FRG)
 2. J. Honnorez (France)
 3. J. Kinoshita (Japan)
 4. R. Emmerman (FRG)

PCOM adjures that a balance be maintained between the expertise of the Co-Chiefs.

East Pacific Rise Bare-Rock Drilling

US Co-Chief 1. C. Langmuir
 2. R. Detrick
 3. D. Fornari
 4. G. Thompson

Non-US Co-Chief 1. J. Francheteau (France)
 2. J. Cann (UK)
 2. R. Hékinian (France)
 3. J. Erzinger (FRG)
 4. F. Albarede (France)
 5. H. Bougault (France)

830 Formation of Cascadia and EPR Detailed Planning Groups

Based on the recommendations of various panels, PCOM established a Cascadia Accretionary Prism Detailed Planning Group and an East Pacific Rise Detailed Planning Group.

PCOM Motion

PCOM establishes a Cascadia Accretionary Prism Detailed Planning Group and an East Pacific Rise Detailed Planning Group. (Motion Brass, second Leinen)

Vote: for 15; against 0; abstain 0; absent 1

PCOM made the following nominations and mandates for the two DPGs.

Cascadia DPG

Non-Proponents

- L. Cathles (US) 1st Choice for Chairman
- G. Westbrook (UK) 2nd Choice for Chairman
- J. Behrmann (FRG)
- S. Dreiss (US)

Vancouver Proponents (3 of 4) to be chosen

- R. Hyndman (C-A)
- V. Wall (C-A) [Australian Alternate for Hyndman on FPAP, proponent?]
- B. Bornhold (C-A)
- C.J. Yorath (C-A)

Oregon Proponents (3 of 4) to be chosen

- V. Kulm (US)
- G. Moore (US)
- B. Carson (US)
- E. Suess (FRG)

PCOM Liaison: NEEDS TO BE APPOINTED

Only one member from the FRG should be appointed. Other non-US members may appoint members to the DPG if they wish, but it is suggested that they avoid proponents in order to maintain a balance.

Charge to the Cascadia DPG

The DPG is to examine the competing Cascadia Accretionary Prism drilling proposals and provide a prioritized plan for drilling. If the highest priorities cannot be accomplished in one leg, the DPG should make suggestions for later drilling.

[L. Cathles has accepted the chairmanship of the DPG. The proponents have recommended that the membership include the persons with the greatest overall knowledge of the scientific objectives and of the data. Thus the three

Vancouver proponents will be R. Hyndman, E. Davis, and M. Brandon, and the Oregon proponents will be V. Kulm, C. Moore and B. Carson.]

East Pacific Rise Bare Rock Drilling DPG

Non-Proponents

E. Davis (C-A) 1st Choice for Chairman

P.J. Fox (US) 2nd Choice for Chairman

J. Delaney (US)

R. Von Herzen (US)

ODP-TAMU Engineer (S. Howard suggested)

9°40' N Proponents

D. Fornari (US)

K. Macdonald (US)

12°50' N Proponents

J. Francheteau (France)

R. Hékinian (France)

PCOM Liaison: J. Natland

Other non-US members may appoint members to the DPG if they wish, but it is suggested that they avoid proponents in order to maintain a balance..

Charge to the East Pacific Rise DPG

The DPG is to choose which of the two active proposals for the two areas on the East Pacific Rise, at 9°40' N and 12°50' N, best meets the criteria established by the EPR Working Group. The DPG is then to fix the drilling template to the actual sites and prepare a drilling plan.

[E. Davis accepted the chairmanship of the DPG on the condition that a full-range of the necessary expertise be provided. Moberly has approved the following additions to the membership: K. Van Damm, non-proponent; M. Purdy, 9°40' N proponent; F. Albarede 12°50' N proponent. The DPG is scheduled to meet 5-7 April 1990 in Vancouver.]

PCOM Motion

PCOM accepts the slate of members and mandates suggested for the Cascadia Accretionary Prism Detailed Planning Group and East Pacific Rise Detailed Planning Group. (Motion Brass, second Watkins)

Vote: for 16; against 0; abstain 0

830 Miscellaneous Business

PCOM Motion

PCOM adopts the following resolution. (Motion Watkins, second Kastner)
Vote: for 16; against 0; abstain 0

PCOM Resolution

The JOIDES Planning Committee receives with sadness the news of the death of F.G. Walton Smith, one of the founders of JOIDES and first Dean of the University of Miami's Rosenstiel School of Marine and Atmospheric Science. The Planning Committee extends their sympathies to Walton Smith's family, friends and colleagues.

The following statement was read into the Minutes by U. von Rad for consideration by PCOM and IHP:

PCOM is concerned about the fact that some of the recent Scientific Results volumes of the Proceedings of the Ocean Drilling Program will not contain synthesis chapters from the Co-Chief Scientists. Without these summary chapters a very important part of the most visible results of ODP will be lost to the general detriment of the program. It is therefore requested that TAMU urge Co-Chief Scientists to include summary papers and apply as much flexibility as possible (e.g. acceptance during the paste-up stage) to allow co-chiefs to write these papers after their editorial duties have been finished, with the provision that the accepted publication deadlines are not compromised.

This topic will be an Agenda Item at the next PCOM meeting.

831 Future Meeting Schedule

The next meeting will be the 1990 Spring PCOM meeting to be held in Paris France from 24-26 April, 1990. A two-day field trip down the Rhone Valley is planned to follow the meeting.

The 1990 Summer PCOM meeting will be hosted by Scripps in La Jolla from 14-16 August 1990. There will not be a joint meeting of US PCOM members with USSAC.

The 1990 Annual PCOM meeting will be hosted by the Hawaii Institute of Geophysics in Kailua-Kona, Hawaii from 28 November to 1 December 1990. The PCOM meeting will be preceded by the Panel Chairmen's meeting on Tuesday, 27 November. A field trip is possible if there is sufficient interest.

The 1991 Spring PCOM meeting will be hosted by the University of Texas at the Thompson Conference Center on the Austin campus from 23-25 April 1991.

The 1991 Summer PCOM meeting will be hosted by the FRG in Hannover from 20-22 August 1991. There will be a field trip after the meeting.

The 1991 Annual PCOM meeting will be hosted by the University of Rhode Island from 4-7 December 1991. The PCOM meeting will be preceded by the Panel Chairmen's meeting on Tuesday, 3 December.

832 Conclusion of the Meeting

The Planning Committee thanked Brian Tucholke for his efforts towards making this meeting both productive and enjoyable. Thanks were also forwarded to the Director, Craig Dorman, as well as Janet Johnson and others at Woods Hole Oceanographic Institution.

This was the last meeting for Miriam Kastner since she is stepping down from PCOM. The Planning Committee expressed its appreciation of her efforts on the behalf of ODP by acclamation.

The 1989 PCOM Annual Meeting adjourned at 2:00 PM.

APPENDICES TO 27-30 NOVEMBER, 1989 WHOI PCOM MINUTES

- A Items Related to the Science Operator's Report
- B Items Related to the Wireline Logging Operator's Report
- C Items Related to IHP Report on Publications
- D Report of the Panel Chairmen's Meeting
- E Development Engineering Schedules

HANDOUTS DISTRIBUTED AT THE WHOI PCOM MEETING

Additional Letters Concerning Non-JOIDES Institution Participation on PCOM
Circular about the NEREIS European Workshop
JOI/USSAC Fellowship Brochure
Prospectus for Downhole Measurements for Year 1 of CEPAC
Notes on 17 November 1989 Slimhole & High-Temperature Logging Meeting
Leg 132 (Engineering II) Cruise Prospectus
Engineering Development Status Report
Description of ODP Diamond Coring System - Phase II - 4500 Meters
Description of Breakaway Piston Head (BPH)
Summary Statement SS-0300 on Unconsolidated Formation Recovery
Preliminary General Description of Vibra-Percussive Corer (VPC)
General Description of Sonic Core Monitor (SCM)
Minutes of the 16-17 November 1989 CEPAC Meeting
Update of CEPAC Prospectus

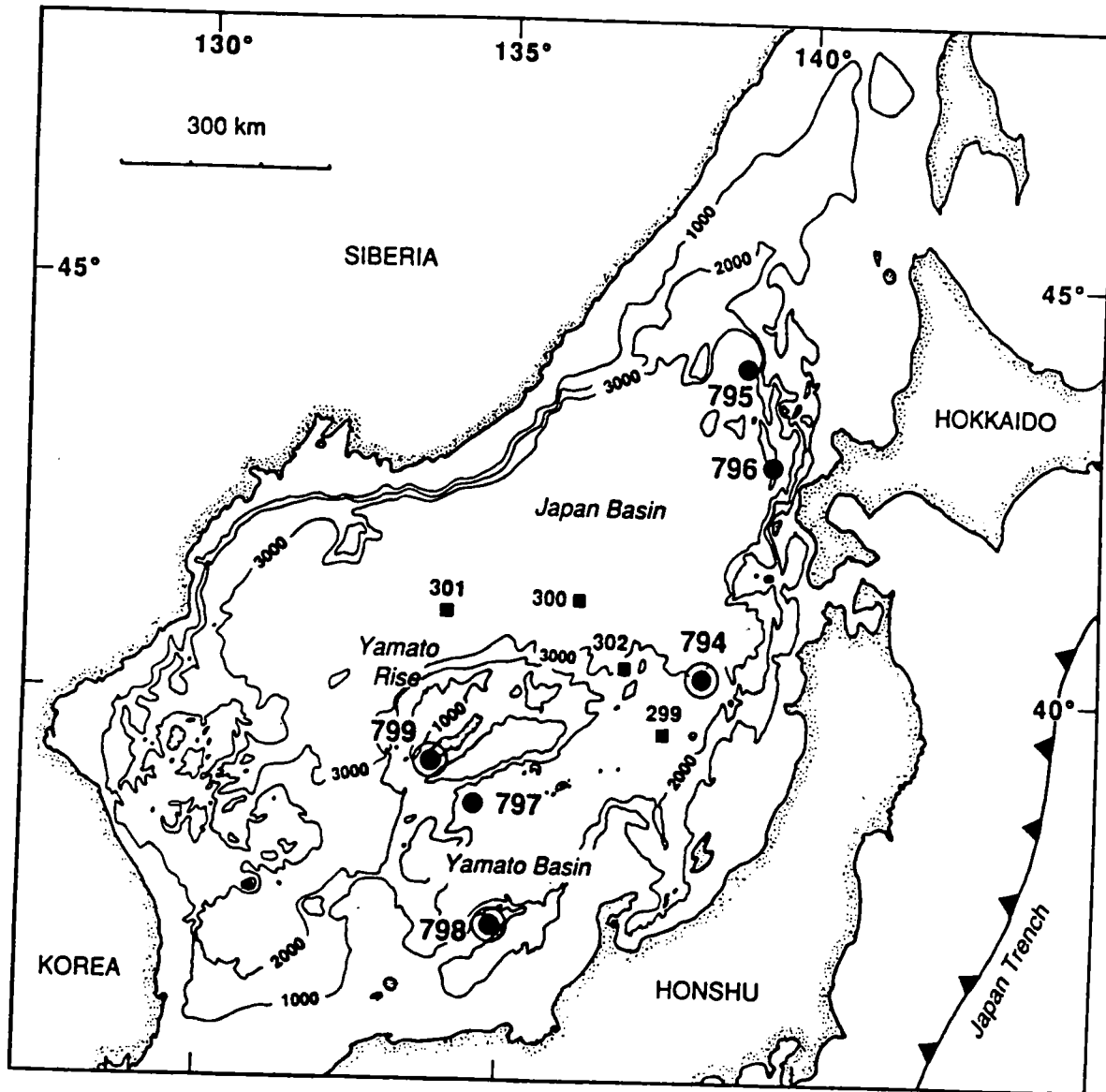
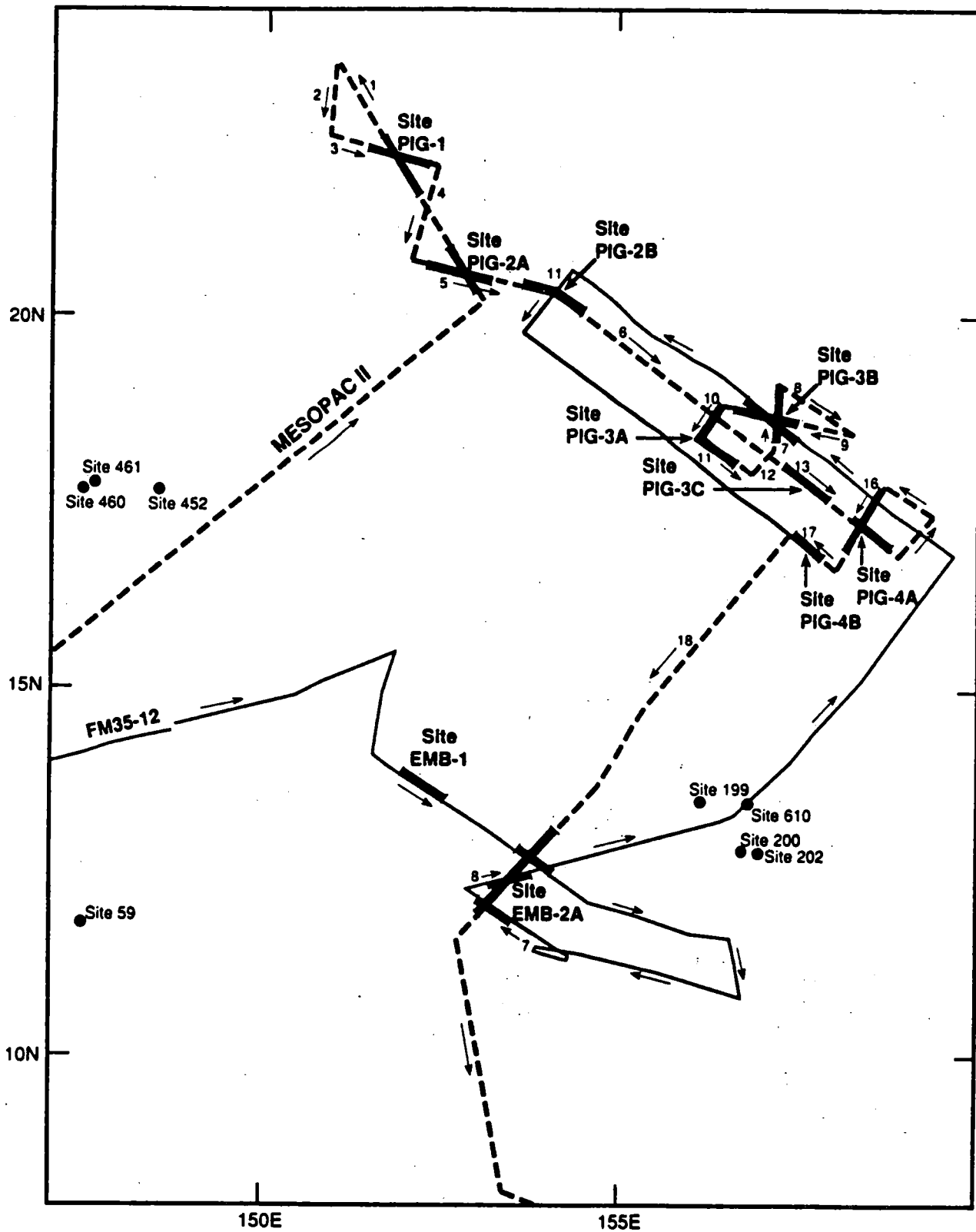


Figure 1. Map of the Japan Sea showing locations of ODP Leg 127 sites (dots), Leg 128 sites (circled dots), and DSDP Leg 31 sites (squares). ODP Site 794 was occupied on both Leg 127 and Leg 128. Bathymetry in meters.



Leg 130 Scientific Prospectus
page 14

Table 2. Leg 130 drill sites

Site #	Latitude Longitude	Water Depth (m)	Penetration (m)		Time Estimate (days)		
			sed	bsmt	Drill	Log	Total
OJP-4	02°26.0'N 160°32.7'E	3400	780	10	9.7	1.5	11.2
OJP-3	01°06.3'N 162°35.7'E	4200	250	---	4.4	---	4.4
OJP-2	01°13.5'N 160°31.8'E	3200	500	---	5.6	1.5	7.1
OJP-1	00°19.2'N 159°21.9'E	2600	600	---	5.6	1.4	7.0
OJP-5	03°34'N 156°36'E	2820	1350	50	17.7	3.6	21.3

ALTERNATE SITES

OJP-6	00°59.0'N 161°35.8'E	3920	250	---	4.2	---	4.2
OJP-4a	02°26.0'N 160°33.3'E	3400	250	10	1.5	---	1.5

Drilling Plan:

OJP-1	Double APC to 250 mbsf, Third APC to 50 mbsf XCB to 600 mbsf
OJP-2	Double APC to 250 mbsf, Third APC to 50 mbsf XCB to 500 mbsf
OJP-3	Double APC to 250 mbsf, Third APC to 50 mbsf
OJP-4	Double APC to 250 mbsf, Third APC to 50 mbsf XCB to 500 mbsf, RCB to 790 mbsf
OJP-4a	Wash to 250 mbsf, RCB to 260 mbsf
OJP-5	APC to 220 mbsf, XCB to 600 mbsf, Set reentry cone and RCB to 1400 mbsf
OJP-6	Double APC to 250 mbsf, Third APC to 50 mbsf

Logging Plan: 2 Schlumberger runs at OJP-1, 2, 4, 5 and FMS/(BHTV ?) at OJP-5

ODP OPERATIONS SCHEDULE

<u>Leg</u>	<u>Port Dates</u>	<u>Sailing Date</u>	<u>Days at Sea</u>	<u>Terminates</u>
129 - Old Pacific	Guam, 11/22-23(89)	11/24	56	Guam, 1/19(90)
130 - Ontong Java	Guam, 1/19-23	1/24	62	Guam, 3/27
131 - Nankai	Guam, 3/27-31	4/1	62	Pusan, 6/2
132 - Engineering II	Pusan, 6/2-6	6/7	59	Guam, 8/5
133 - NE Australia	Guam, 8/5-9	8/10	62	Brisbane, 10/11
134 - Vanuatu	Brisbane, 10/11-15	10/16	56	Suva, 12/11
135 - Lau Basin	Suva, 12/11-15	12/16	62	Papeete, 2/16(91)
136 - Engineering 3A*	Papeete, 2/16-20	2/21	37	Panama, 3/30
Engineering 3B*	Panama, 3/30-4/3	4/4	42	San Diego, 5/16
137 - Sed. Ridges 1	San Diego, 5/16-20	5/21	62	Victoria B.C., 7/22
138 - E. Equat. Pac.	Victoria, 7/22-26	7/27	60	Panama, 9/25
139 504B or EPR-1	Panama, 9/25-29	9/30	60	Panama, 11/29

DATES AND PORTS AFTER LEG 132 ARE TENTATIVE

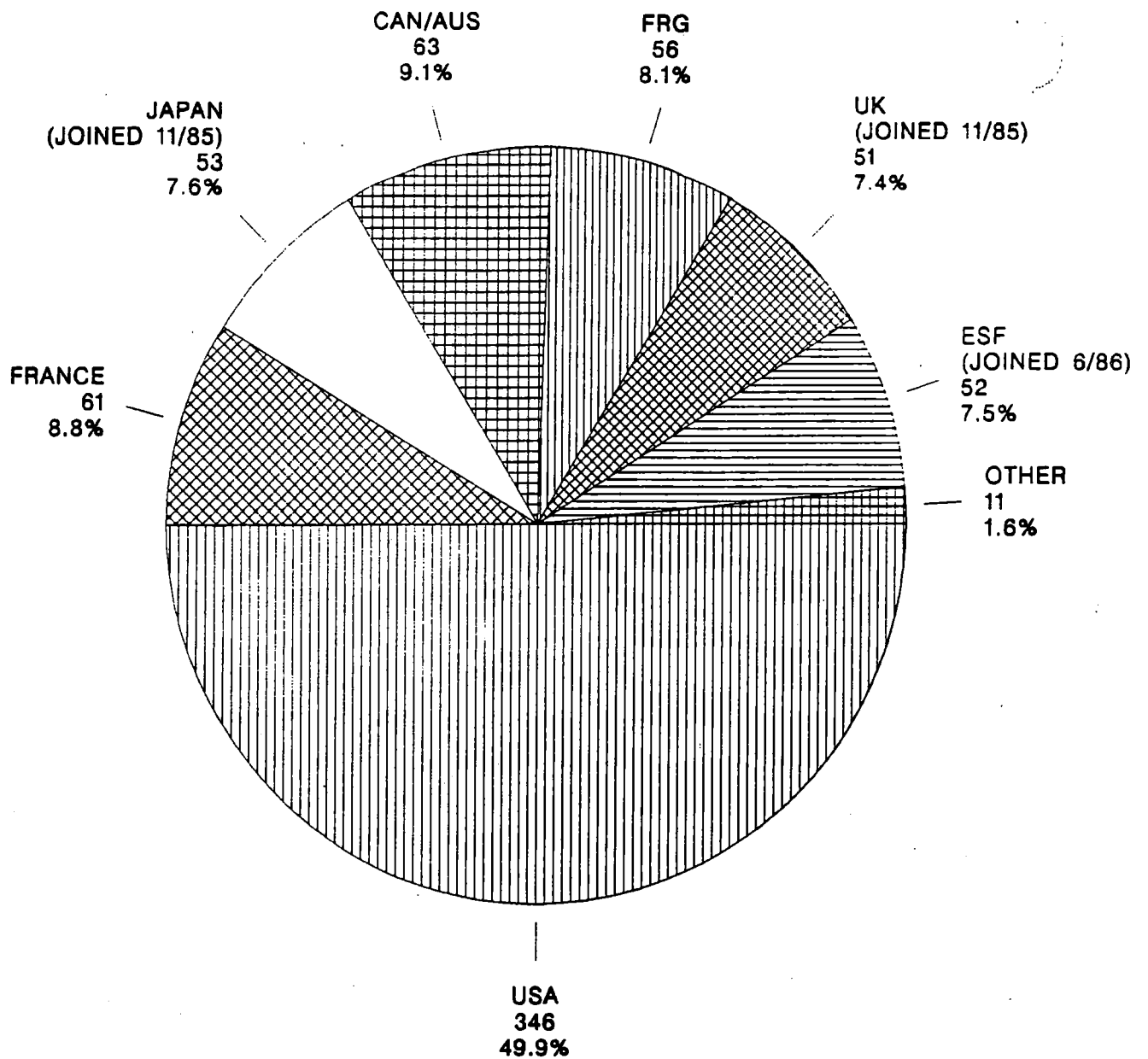
*3A - Hole 504B

*3B - East Pacific Rise

Revised 12/12/89

SHIPBOARD PARTICIPANT TALLY LEGS 101 - 128

(January 1984 - October 1989)



TOTAL 693 PARTICIPANTS
(Does not include scientists on Leg 124E)

Distribution Dates of ODP Volumes - Fiscal Year 1990

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Volume Initial Reports												
120		◇ ₁₉										
121		◇ ₁₇										
122					◇ ₁₇							
123					◇ ₁₆							
124/124E						◇ ₁₃						
125								◇ ₁₃				
126										◇ ₁₃		
127												◇ ₁₃
Volume Scientific Results												
104	◇ ₅₀											
105	◇ ₄₈											
106/109				◇ ₄₃								
107				◇ ₄₇								
108			◇ ₄₄									
110						◇ ₄₃						
111			◇ ₃₈									
112								◇ ₄₀				
113										◇ ₄₀		
114											◇ ₃₉	
115												◇ ₃₈

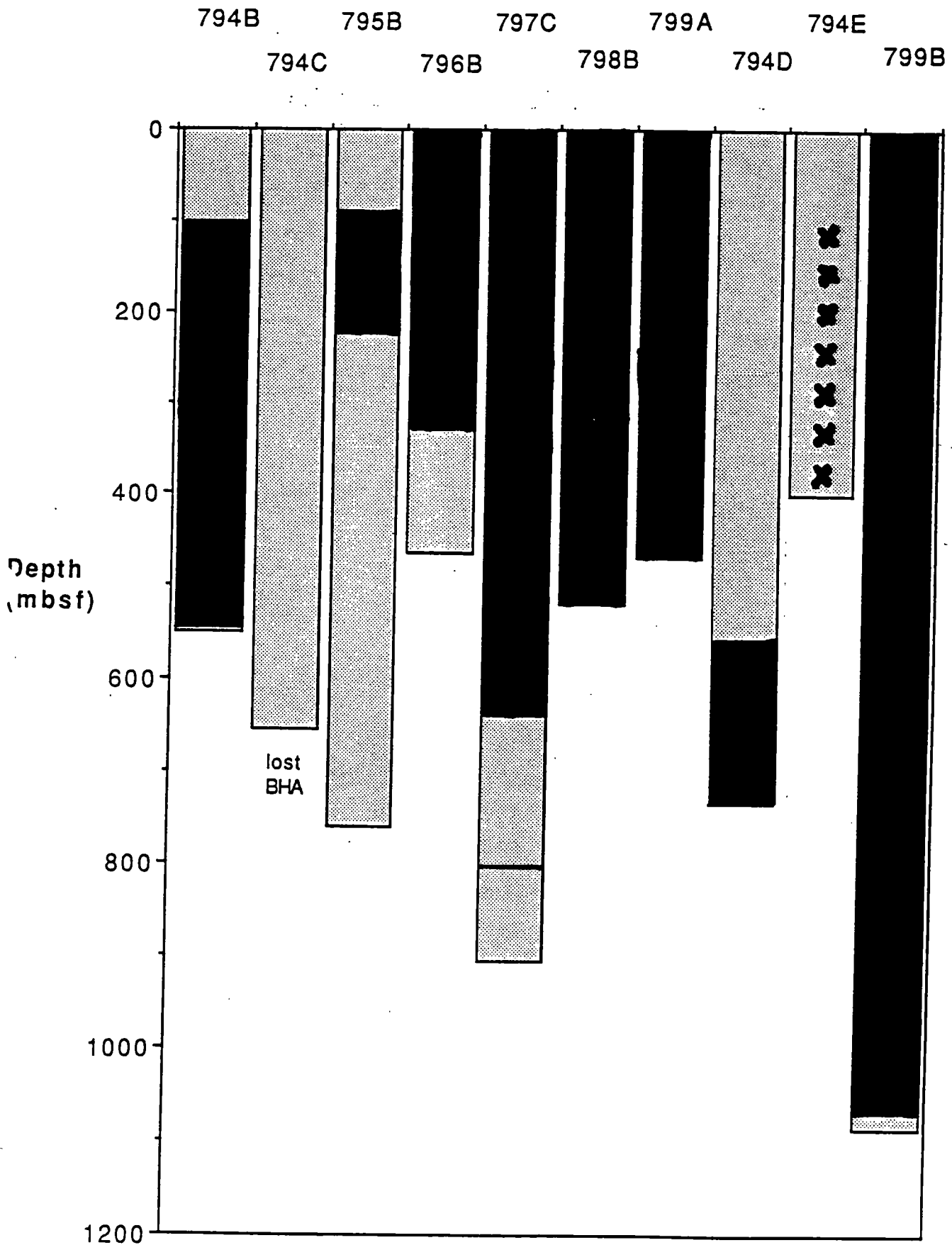
Initial Reports, distribution 49 days (less proofing time) after receipt of final copy.
 Scientific Results, distribution 33 days (less proofing time) after receipt of index material.

Numbers indicate months post cruise.

Appendix B

Leg 127

Leg 128



CEPAC Slim/hot Logging: Proposed Strategy and Timetable

1990 Jan } receive ARCO tools; begin part-time evaluation
Feb } FY91 budgeting: seek \$180K for slim/hot logging
Mar }
Apr } Nankai: first use of new SES
May }
Jun } Eng. 2 tests: is logging feasible in ODP DCS holes?
Jul } receive German hi-T televiewer
Aug } decisions: slimhole for DCS or just hothole?
Sep } modify, build new, or lease?
Oct } receive \$180K? start construction of T & GR, design of
Nov } resist. or sonic
Dec }
1991 Jan } FY92 budgeting: seek \$120K for slim(?)/hot logging
Feb } 504B: poss. last chance for flowmeter permeability &
Mar } wireline packer. Borrow Sandia T & flow tools if
Apr } possible; ours not ready.
May } Cascadia? OK
Jun }
Jul } Sed. Ridge 1? use new T & GR; hole cooling for full-
Aug } sized holes; no logging of DCS holes (if any)
Sep } 504B? use new T & GR; hole cooling for standard tools
Oct } receive \$120K for further High-T development?
Nov } Neogene? OK
Dec }
1992 Jan } EPR? DCS: use new T, GR and poss. resist. or sonic (if
Feb } slimhole); risk tool loss.
ream or 2nd hole: hole cooling for standard tools

Slimhole/hothole: Recent progress

- Review of commercial high-T & slimhole equipment
- LITH/DMP high-T tool priorities
- Hole cooling models
- Commitment from ARCO to give BRG slimhole logging equipment
- Hothole logging workshop

Hole Cooling Models

Region	Hole Depth	Equilibrium T		T when logging*	
		S.F.	Bottom	RCB	DCS
Middle Valley	500m	0°	400°	77°	239°
	1000m	0°	400°	111°	309°
East Pacific Rise	500m	350°	350°	74°	256°
	1000m	350°	350°	118°	326°

* : circulate 8 hours at maximum pump rate, then no circulation for 2 hours while tripping tool to bottom.

Conclusions:

- SES cooling strategy could work for **RCB** holes <3000 mbsf
- **DCS** holes cannot be effectively cooled
- Active upwelling would present special problems
- Effect of major cooling on hole integrity not analyzed

Status of the ODP Computerized Database

11/10/89

CORRELOG	LSD SITE NO.	SEDIMENTARY ROCK				METAMORPHIC ROCK				PHYSICAL PROPERTIES						CHEMISTRY				PALEOMAGNETICS		AGE PROFILE	PALEONTOLOGY	DOWN HOLE TOOLS	UNDERWAY GEO-PHYSICS		
		Visual Core Description	Stratigraphic This Section	Visual Core Description	This Section Description	XRF	G.R.A.P.E.	Thermal Conductivity	P-Wave Logger	Compressional Shear Wave Velocity	Index Properties	3 Minute GRAPE	Shear Strength	Radiation	Carbon/Carbonate	Inorganic Water	Gas Chromatography	Intensity and Direction	Remanence								
94				ND	ND	ND	ND		ND											ND					Processed	94	
95	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND								ND	ND	ND					95
96																				ND							96
97																				ND							97
98																				ND							98
99																				ND							99
100																				ND	ND	ND					100
101																				ND							101
102																				ND							102
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123																				ND							123
124																				ND							124
125																				ND							125
126																				ND							126
127																				ND							127

Data entered onshore into S 1022
 Data entered on the ship into S 1022
 Direct capture, but not in S 1022
 No data collected

Initial Reports Publication Schedule

POST-CRUISE (MONTHS)	TASKS
4 - 5	Initial Post Cruise Meeting (selected sub-group of shipboard party)
7 - 9	Complete editing, prod. artwork
8 - 10	Complete typesetting
9 - 11	Complete Co-chief review, paste-up & corrections
10.5 - 12.5	Print I. R. volume

Scientific Results Volume Publication Schedule

POST CRUISE (MONTHS)	TASKS
4-5	Initial post-cruise meeting (materials for I.R.)
10 - 12	Science post-cruise meeting (workshop to present & discuss papers)
16 - 18	Initial submission of manuscripts (prelim. editorial review)
17 - 21	Review Manuscripts
18 - 24	Author revision
19 - 25	Resubmission (rereview)
20 - 26	Pre-production (editorial markup)
21 - 27	Typesetting
24 - 30	Indexing
26 - 32	Printing

Distribution Dates of ODP Volumes - Fiscal Year 1990

(Prepared by J. Hall, 28 Sep. 89)

	INITIAL REPORTS				SCIENTIFIC RESULTS			
	Volume	Date to printer	Distributed	Months post-cruise	Volume	Date to printer	Distributed	Months post-cruise
OCTOBER					104	7-17-89	10-30-89	50
					105	8-7-89	10-30-89	48
NOVEMBER	120	9-29-89	11-17-89	19				
	121	9-14-89	11-10-89	17				
DECEMBER					108	10-6-89	(12-89)	44
					111	9-29-89	(12-89)	38
JANUARY					106/109	10-89	(1-90)	43
					107	11-89	(1-90)	47
FEBRUARY	122	11-89		17				
	123	12-89		16				
MARCH	124/124E	2-90		13	110	12-89	(3-90)	43
APRIL					112	1-90	(4-90)	39
MAY	125	4-90		13				
JUNE					113	3-90	(6-90)	39
JULY	126	6-90		13				
AUGUST					114	5-90	(8-90)	39
SEPTEMBER	127	8-90		13	115	6-90	(9-90)	38

A volumes, distribution 49 (less proofing time) after receipt of final copy.

B volumes, distribution 33 days (less proofing time) after receipt of index material.

Due to the heavy load of material shipped in September and October, it is possible that there will be some production delays with the printer. The contract is written to have a maximum of fourteen volumes printed per year. In fiscal year 1990, twenty volumes are planned.

JOIDES PANEL CHAIRMEN MEETING
26 NOVEMBER 1989
Woods Hole, Massachusetts

Panel, Committee and DPG Chairmen:

M. Ball - Pollution Prevention & Safety Panel
R. Batiza - Lithosphere Panel
I. Dalziel - Tectonics Panel
R. Detrick - Sedimented Ridges DPG
R. Kidd - Site Survey Panel
T. Moore - (Chairman) Information Handling Panel
K. Moran - Shipboard Measurements Panel
D. Rea - Central & Eastern Pacific DPG
N. Shackleton - Ocean History Panel
C. Sparks - Technology & Engineering Development Committee
E. Suess - Sedimentary and Geochemical Processes Panel

Absent

P. Worthington - Downhole Measurements Panel

Guests and Observers:

L. Garrison - Science Operator (ODP-TAMU)
E. Kappel - Joint Oceanographic Institutions, Inc.
B. Malfait - National Science Foundation
A. Meyer - Science Operator (ODP-TAMU)
R. Moberly - PCOM Chairman

JOIDES Planning Office:

L. d'Ozouville - Executive Assistant and Non-US Liaison
G. Waggoner - Science Coordinator

The first item of discussion was about the general dissatisfaction with the present date of the Panel Chairmen's Meeting on the Sunday of the Thanksgiving Holiday weekend. It was suggested by that this meeting should be changed to Tuesday of the week following Thanksgiving, so that travel would not generally have to begin until the Monday following this holiday weekend. This will necessitate the moving of the start of the Annual PCOM meeting to Wednesday and continuing through Saturday. This schedule will still allow individuals to attend the Fall AGU meeting.

Reports by the Chairmen of the panels were presented. The main items of concern brought up and discussed are outlined below.

There is a need for groups to do both long-range planning and detailed planning for drilling programs in addition to the thematic panels. The role of Working Groups is seen as providing long-range, broader scale planning, addressing specific thematic problems for which the thematic panels do not have the time or the necessary expertise to accomplish. This planning

includes determining both the objectives of drilling a particular high-ranked theme and the criteria that must be met to successfully address this theme by drilling. Working groups can also be constituted to evaluate a theme that cross-cuts the interests of multiple thematic panels (e.g. Sealevel change). as well as problems that concern both the thematic panels and service panels. It was deemed appropriate that drilling proponents serve on these working groups since they are often experts on the themes being examined and the main job of the group is to set the criteria for successfully addressing the theme. These groups may also need to evaluate which area best meets the criteria established. This does result in a conflict with having proponents on working groups, however, such conflicts were not perceived to be a great problem as long as a significant number of non-proponents are included and the selection criteria are objectively established. Conflicts of interest must be weighed against the loss of the proponent's expertise if they are excluded. An alternative, and probably unsatisfactory solution, would be to have the thematic panels and/or PCOM select the best area for addressing the theme.

Detailed Planning Groups do the more focused planning concerned with selection of sites for a particular drilling program. These groups may be constituted from the working group with addition of proponents, if not already included, and others whose expertise is desired. The Sedimented Ridges Detailed Planning Group was suggested as a model for such groups, since it was originally constituted (more or less) as a working group to establish the criteria and then evolved into a detailed planning group to plan the drilling.

The question of the necessity of liaisons between disparate thematic panels such as LITHP and OHP was discussed. It was felt by Batiza that these liaisons provide an important path for insuring that a thematic panel's interest in a particular multiple-objective leg, of common interest to both panels, is effectively conveyed to the other panel. This is not always accomplished via panel minutes. In the past the interests of the various thematic panels were integrated by the regional panels, such as CEPAC, but in the future this may not occur if there is not a DPG. Additionally, the panel chairmen endorsed the continued joint or overlapping meeting of thematic and service panels to help foster improved communications.

Suess was concerned that sea-level change gets fragmented attention because of the splitting of SOHP into OHP and SGPP. The panel chairmen suggested that there needs to be a working group with members from all four thematic panels to address this theme, since there are aspects of this problem that involve all thematic panels.

Rea, Kidd, Ball all expressed specific concerns about the lack of a 4-year plan for the general track of the vessel. The weather window at high northern latitudes cannot be effectively used without having this plan. Planning of site surveys and the orderly advance towards maturity of a proposal is impeded.

Without adequate site survey packages, the safety aspects of programs cannot be properly evaluated. There was a general concern by all panel chairmen that ODP lacked adequate long-range planning for the track of the vessel.

Moore discussed problems of the new publications policy caused by the tightening of time requirements for the submission of manuscripts in order to get publication of the "Scientific Results " volume 30 months after a cruise. One problem is that important data and syntheses are not getting published. Shackleton suggested that these papers be published in later volumes. Rea suggested that some of these papers could be included as data papers in an appendix. Suess suggested that synthesis papers could be published in the open literature. The consensus of the panel chairmen was that if a manuscript falls beyond the volume deadline but contains critical data, it should be published in future volumes as an appendix. If the paper has been submitted in time but is not of sufficient quality for inclusion, it should be published as a data paper in the volume. Synthesis papers should go into the open literature if they are not included in the volume.

The current ODP policies on sampling of cores were discussed. The panel chairmen feel that the sampling requirements of a drilling leg, necessary for accomplishing the scientific objectives of that leg, need to be specifically stated in the prospectus. In that way IHP and SMP can determine if an exemption from the standard sampling policy is required to accomplish the scientific goals of that leg.

The panel chairmen feel that the current methods for reviewing proposals and developing rankings of programs is sufficient. Proponents should be informed about the reviews of their proposals and furnished with an abstract of the review. It was suggested that drilling proposals should be supplied to anyone who requests them.

There was a concern about who keeps track of how the technical requirements, necessary for accomplishing long-range goals of thematic panels, are being addressed by ODP. It was established that it is the responsibility of TEDCOM, via PCOM, to inform TAMU about and track the development of the technical requirements. Eventually a Working Group may be required to help develop a specific capability.

Finally the panel chairmen discussed items from the PCOM Agenda Book listed under Item I - Issues Related to Community Concerns. Many of these items were covered in the discussions above. The panel chairmen did not feel that outside reviews of drilling proposals are necessary, however, JOIDES drilling proposals should be available to anyone who wishes to examine them. The panel chairmen do not see any reason to place persons from non-JOIDES institutions on PCOM. They felt that a disciplinary balance should be required of PCOM, just as it is of thematic panels.

DEVELOPMENT ENGINEERING 'GENERIC' TECHNOLOGY REQUIREMENTS

YEAR	1990							1991					1992
TENTATIVE LEG NO.	129	130	131	132	133	134	135	136	137	138	139	140	141
MONTH	DEC	FEB	APR	JUN	AUG	OCT	DEC	MAR	MAY	JUL	SEPT	NOV	JAN
OPERATING AREA	OLD PACIFIC CRUST	ONTONG JAVA	NANKAI	ENGINEER II	N.E. AUSTRALIA	VANUATU	LAU BASIN	ENGINEER III	JUAN DE FUCA I	CASCADIA	JUAN DE FUCA II	EPR I	504B I
FRACTURED CRUSTAL CORING				DCS			DCS(?) X	DCS				X	
INTERBEDDED CHERT/CHALK CORING	X	X		DCS									
INTERBEDDED SEDIMENT / VOLCANICS CORING	X					NCB(?) X	DCS(?) X						
UNCONSOLIDATED FORMATION CORING (LOOSE SAND / TURBIDITES, ETC.)			X			VPC X		VPC(?)	X	X	X		
DEEP CRUSTAL PENETRATION (1500 - 3000 m)								504B REPAIR				X	X
DEEP SEDIMENTARY PENETRATION (1000 - 3000 m)		X	X		X	X				X			
HIGH TEMPERATURE CORING (>250°C)							X	DCS	X		X	X	
ATOLL/GUYOT CORING				DCS									
PRESSURE CORE SAMPLING			PCS X							X			
BARE ROCK SPUD REQUIREMENT				MINI HRB				MINI HRB				X	
HARD ROCK ORIENTATION	X	X				SCM X	RCB	DCS	X		X	X	X

SYSTEM DEVELOPMENT TEST

X REQUIREMENT

DEVELOPMENT ENGINEERING 'PROJECT' SCHEDULE

DATE NOV. 22, 1989

YEAR	1990							1991					1992
TENTATIVE LEG NO.	129	130	131	132	133	134	135	136	137	138	139	140	141
MONTH	DEC	FEB	APR	JUN	AUG	OCT	DEC	MAR	MAY	JUL	SEPT	NOV	JAN
OPERATING AREA	OLD PACIFIC CRUST	ONTONG JAVA	NANKAI	ENGINEER II	N.E. AUSTRALIA	VANUATU	LAU BASIN	ENGINEER III	JUAN DE FUCA I	CASCADIA	JUAN DE FUCA II	EPR I	504B I
NAV-DRILL CORE BARREL						T(?)				T			
DIAMOND CORING SYSTEM	L	L		T			■?	T					
VIBRA/PERCUSSION CORER				L	L	T				T			
DCS HIGH TEMP CORING (>250°C)								T	■?				
HARD ROCK CORE ORIENTATION						T _{RCB}	T _{RCB} DCS	T _{DCS}	■?				
SONIC CORE MONITOR		T _{RCB} XCB			L	T _{RCB}	T _{RCB}		■				
MINI HARD ROCK GUIDE BASE				T			■?	■					
PRESSURE CORE SAMPLER (PHASE I)			T										
DRILLING PACKER			T										
WIRELINE PACKER (BRG)			T										
SIDE ENTRY SUB (BRG)					T								
GEOPROPS PROBE (KARIG)						T(?)				■?			
LATERAL STRESS TOOL (MORAN)			T				T(?)						
PRESSURE METER (MORAN)	L	L					T(?)						

L LAND TESTING

T DEVELOPMENT SEA TRIALS

■ ANTICIPATED OPERATIONAL

ENGINEERING LEG NO. 4 (1992)

POTENTIAL FUTURE TOOL DEVELOPMENTS

DIAMOND CORING SYSTEM - PHASE IV

- * DRILL PIPE AS MINI RISER - (RETURNS TO RIG?)
- * RISER TENSIONER SYSTEM/ELIMINATION OF PLATFORM
- * DEEPER 6-7K DEPTH CAPABILITY ?

SONIC CORE MONITOR

(WITH REAL TIME CORE ENTRY MONITORING CORED CAPABILITY)

3 KILOMETER DEEP SEDIMENTARY TEST HOLE

SECOND GENERATION VIBRA-CORER

(DESIGNED FOR XCB OR NCB DEPLOYMENT)

NEW GENERATION DRILLING PACKER

- * SHROUDED PACKER ELEMENT
- * HIGH TEMPERATURE CAPABILITY
- * STATE-OF-THE-ART FLUID SAMPLER

HIGH TEMPERATURE ENVIRONMENT FOR TOOL TESTING