

JOIDES PLANNING COMMITTEE MEETING  
11-15 August 1986  
Corner Brook, Newfoundland, Canada

MINUTES

Members:

R. Larson (Chairman) - University of Rhode Island  
K. Becker - University of Miami (alternate for J. Honnorez)  
J-P. Cadet - France  
W. Coulbourn - University of Hawaii  
O. Eldholm - ESF Consortium  
T. Francis - United Kingdom  
S. Gartner - Texas A&M University  
M. Kastner - Scripps Institution of Oceanography  
M. Langseth - Lamont-Doherty Geological Observatory (alternate for  
D. Hayes)  
R. McDuff - University of Washington  
N. Piasias - Oregon State University  
P. Robinson - Canada  
T. Shipley - University of Texas  
A. Taira - Japan  
R. von Herzen - Woods Hole Oceanographic Institution  
U. von Rad - Federal Republic of Germany (alternate for H. Beiersdorf)

Liaisons:

G. Brass - National Science Foundation  
J. Clotworthy - Joint Oceanographic Institutions Inc.  
L. Garrison - Science Operator (ODP/TAMU)  
R. Jarrard - Wireline Logging Services (ODP/L-DGO)

Guests/Observers:

W. Bryan - Leg 109 Co-chief Scientist  
D. Butler - Memorial Univ. of Newfoundland  
E. Kappel - Joint Oceanographic Institutions, Inc. (alternate for T. Pyle)  
L. Horne - Canadian ODP National Committee  
J. Malpas - Memorial Univ. of Newfoundland

JOIDES Office:

D. Keith - Science Coordinator

## 606 INTRODUCTION AND OPENING REMARKS

R. Larson, PCOM Chairman, convened the 11-15 August 1986 meeting of the JOIDES Planning Committee which was held in Corner Brook, Newfoundland, Canada. Meeting participants were welcomed by P. Robinson (Canadian PCOM representative) and L. Horne (Coordinator of the Canadian National Committee for ODP).

After the opening remarks, Larson introduced and welcomed the following people to the meeting: K. Becker - Univ. of Miami (substituting for J. Honnorez), W. Bryan - WHOI (Leg 109 Co-chief), O. Eldholm - ESF Consortium, R. Jarrard - Borehole Research Group at L-DGO, E. Kappel - JOI, Inc. (substituting for T. Pyle), M. Langseth - L-DGO (substituting for D. Hayes), U. von Rad - Fed. Rep. of Germany (substituting for H. Beiersdorf). In closing this section of the meeting, Larson reported that in response to a request from EXCOM during their January 1986 meeting, the responsibility for the printing and distribution of the JOIDES Journal has been transferred from the JOIDES Office at URI to JOI Inc. in Washington, D.C.

## 607 ADOPTION OF MEETING AGENDA

Larson requested that an item entitled "PCOM's Role in the Budget Review Process" be added to the discussion of the FY 87 Budget. Larson also proposed that, during the presentation of "General Issues Arising from Panel Reports", only general panel topics be discussed and that specific planning questions be withheld until the planning phase of the meeting.

After discussion of the proposed amendments to the agenda, M. Kastner moved that the agenda be adopted. The motion was seconded by S. Gartner.

Vote: 15 for, 0 against, 0 abstain (1 absent)

## 608 NATIONAL SCIENCE FOUNDATION REPORT

### NSF BUDGET

G. Brass (NSF Liaison) reported that the NSF Budget for FY 87 has been examined by the US House of Representatives with the recommendation for full funding. However, the budget has not been examined by the US Senate. In closing, Brass commented that although the budget has been favorably received it is still subject to reductions which are the result of Gramm-Rudman-Hollings legislation.

### PROGRAM PLAN FOR FY 87

Brass also reported that JOI, Inc. has delivered to NSF a detailed program plan for FY 87 which is much improved over that presented earlier this year at the April EXCOM meeting.

## RED SEA POLITICAL SITUATION & RED SEA OPERATIONS PROGRAM (Appendix A)

After conferring with the US Dept. of State on conducting a drilling program in the Red Sea area, NSF received correspondence from W. Erb, the tone of which was discouraging. The Dept of State has indicated that should ODP could continue to plan to operate in the Red Sea those plans should be able to be changed at very short notice. Erb recommended that if equally good work could be done elsewhere then he would opt for that. In closing, Brass commented that the Dept. of State is not overly optimistic for ODP operating a program in the Red Sea and that French, German and British site survey cruises to the Red Sea have been stopped because of clearance problems. Brass suggested that at some point, perhaps at this meeting, JOIDES should make a decision to either continue Red Sea planning or eliminate it from the schedule.

### AVAILABILITY OF FUNDING FOR SEAFLOOR REFERENCE BEACONS ON SWIR SITE SURVEY

The Science Operator has asked NSF to provide funding for seafloor reference beacons to be deployed during the site survey of SWIR since TAMU had no funding for their purchase. This request was made after the 1 August deadline for funding requests and NSF was not able to provide funding. However, arrangements have been made through USSAC.

### CO-CHIEF DISTRIBUTION

In closing the NSF Report, Brass noted that the division of non-US co-chiefs through Leg 114 shows the following: 4 France, 2 FRG, 1 Canada, 1 UK, 1 Japan and 1 ESF Consortium. Brass cautioned that a more even distribution is desired under the contractual terms of the MOU and ODP should attempt to even out the situation. Brass closed by stating that this was his last meeting and that at the next meeting R. Buffler would represent the NSF.

### Discussion:

von Herzen: What are the contractual arrangements under the MOU?

Brass: Under the MOU each partner is allowed 1 co-chief/yr on average.

Robinson: How do the MOU arrangements coincide with the right of the Science Operator to choose scientific personnel?

Brass: There is a moral but not contractual obligation on the behalf of the Science Operator to see that over the period of a year the numbers average out.

### 609 JOINT OCEANOGRAPHIC INSTITUTIONS REPORT

J. Clotworthy reported that JOI had received comments from the EXCOM Budget Subcommittee in response to the 2 July memo from T. Pyle concerning the FY 87 Program Plan. The Program Plan was completed and delivered to NSF on 1 August where it is under review. The program plan will be printed and

distributed generally after the NSF review and after JOI has had time to respond to the review.

After examining the program plan, the EXCOM Subcommittee requested that at this meeting, PCOM examine and prioritize the proposed enhancements, to be added as more funds become available. The base budget for FY 87 as set by NSF was \$34.25M and this is an increase of \$1.745M over FY 86. The increased costs are attributable to three items: engineering and logging, start-up of publications at ODP/TAMU and the operation of RESOLUTION in the more remote parts of the globe. JOI considers the base budget to be a conservative minimum level that will deliver basic program elements over the long term. The philosophy used to develop the budget was to establish a base budget and to divide the enhancements into three categories: (I) those which provide program improvement (i.e. do it better), (II) future development and (III) contingencies. At TAMU, the enhancements total \$3.25M and involve all three categories. At L-DGO, the enhancements total \$184,000 and include back-up logging tools. At JOI, the enhancements total \$119,000 and consist of Category I enhancements (e.g. increasing the hiring of personnel at the Data Bank and hiring of an international project specialist at JOI).

The base budget was developed after discussions with the subcontractors in which each was asked for their best estimates, with no target figures in mind. The discussions on the development of the base budget between JOI, TAMU and L-DGO required that all items outside the target figure were either added as enhancements or dropped completely from the program. In reviewing the base budget of TAMU Clotworthy noted that the most important reduction taken to accommodate the increased program costs at TAMU (\$1.52M over FY 86) was the reduction in the number of SEDCO shipboard personnel. An analysis of this reduction is found in the meeting papers under FY 87 Program Plan Draft Budget Overview. In examining the base budget of JOI, the ODP budget was reduced by \$25,000 relative to FY 86, however, these costs are covered elsewhere through an increase in JOI's involvement with NASA and USSAC. Further, JOI has maintained the FY 86 level of funding in view of increased funding for the ODP Databank, funding the JOIDES Office at Oregon State Univ. and the JOIDES Office move from Univ. of Rhode Island, and is committed to fund COSOD-II in FY 87. The proposed FY 87 base budget for L-DGO reflects an increase of \$250,000 over FY 86 with the major increase in the purchase of permanent equipment (i.e. the Wireline Packer).

In reviewing the Enhancements, Clotworthy requested that the PCOM label each enhancement with a ranking so that as additional funds become available they can be restored in the order of their importance to the program. NSF supported the suggestion and requested that in the future a list of priorities covering 4-5 pages with specific recommendations be provided with the Program Plan. This request was supported by a number of PCOM members. TAMU indicated that they feel they can operate within the base budget although unforeseen problems will require additional monies.

#### Discussion of Base Budget:

Kastner: Why is the reduction in shipboard personnel occurring now in these relatively healthy fiscal times and will the reduction lead to a decrease in lab services?

Garrison: The extra people initially were put on board by SEDCO at no cost to TAMU and their removal may be the result of a change in management driven by the present oil situation or acquisition by Schlumberger. In addition, there may be a reduction in lab services if extra funds become available then the reductions may be minimized.

A number of members indicated that more information concerning the base budget was needed (i.e. information on the Navidrill and on a high pressure core barrel) in order to evaluate the enhancements.

#### Discussion of Pressure Core Barrel Development:

Several members felt that the pressure core barrel was critical to the program in order to conduct geochemical analysis and that its development would allow for the measurement of volumes and in situ pressures for organics and gas geochemistry. In discussing the lead time and costs for development, the Science Operator had no idea at present of the time and costs involved but would confer with ODP engineers. M. Kastner indicated that G. Claypool (USGS-Denver) has expressed a willingness to confer with TAMU engineers and that perhaps a committee should be established to oversee the design and development of a pressure core barrel before the Leg 112 sailing date.

#### PCOM Consensus:

The PCOM agreed that a committee be established to confer with the ODP/TAMU engineers on the design of a new pressure core barrel with the meeting to be held before the Leg 112 sailing date. The committee will consist of G. Claypool (USGS-Denver), K. Kvenvolden (USGS-Menlo Park) and W. Bryant (TAMU).

#### INCLUSION OF NAVIDRILL ON LEG 115 (SWIR)

The development of the Navidrill has been discussed between W. Bryan (WHOI) and S. Howard (TAMU) while both were on Leg 109. These discussions indicated that the present motor is too light for the stresses involved. Although the Navidrill was used on Leg 104, it has had to be modified and upgraded and it might not be ready for Leg 115. Land tests are scheduled in December 1986 with sea trials set for Leg 114. It was pointed out in discussion that if successful, the Navidrill will significantly aid in the recovery of alternating hard and soft lithologies, land tests indicate 80-90% recovery rates. W. Bryan indicated that recovery rates in mid-ocean ridge (MOR) environments rock will probably increase if coring could be done with a smaller diameter hole which would yield a smaller probability of sticking and disturbance. Further, he believes that a Navidrill with a thick walled core barrel will operate much better in MOR areas. It was pointed out that for Leg 115 two solutions to spud-in in an MOR environment

existed either use a coring motor with a standard rotary bit or use the redesigned Navidrill.

When asked if the PCOM agreed that planning/funding for Leg 115 was in accord with the objectives planned or should be redirected, a number of members indicated that objectives should be specifically known, and before the objectives can be specified the committee needed more information from TAMU. In response, the Science Operator indicated that the drilling of one or more deep holes could be done, however, he was not confident in the proposed "pogo" drilling operations until site survey information is available. Several members then asked the Science Operator if more money was needed for engineering development to ensure better recovery at MOR areas. TAMU responded that additional money would translate into more people for the development of future projects (TAMU also indicated that Engineering Developments in also short on manpower) but the biggest hurdle at this time is the lack of experience in spudding into MOR environments. It is hoped that more experience will be gained at other areas. It was then asked if the PCOM should, in planning future hard rock legs in the Indian Ocean, require that specific tests be done to gather as much information as possible in order to more fully evaluate drilling in MOR environments? It was generally agreed that as much information as possible should be gathered to evaluate MOR environments before engineering tests begin.

Several members expressed concern that Engineering Developments has not been adequately allotted sufficient funds in the base budget to develop several programs that in the near future will be important (e.g. riser drilling, high temperature drilling) to the program. Several members agreed that a report is needed from TAMU which covers the resources specifically needed to accomplish engineering developments and requested that this report be presented at the next PCOM meeting. Piasias indicated that LITHP has promised to produce a "white" paper to specifically address problems anticipated during hydrothermal drilling. Discussion indicated that this was a good start but the report should also cover the guidelines for hydrothermal drilling as well as the engineering requirements.

PCOM Consensus:

It was agreed that at the next PCOM meeting, TAMU should present an explanation of the \$135,000 budgeted in the base budget for hydrothermal drilling and a report, to be distributed beforehand and presented at the meeting by an ODP engineer, on long range engineering and development plans based on present resources. At this meeting, the LITHP "white" paper on hydrothermal drilling will also be presented.

PCOM Consensus:

It was agreed that the three thematic panels, TEDCOM and DMP be requested to present their priorities for long term engineering development. These will be presented with the results of the TAMU Engineering Workshop as background information.

## PRIORITIZATION OF BUDGET ENHANCEMENTS (Table 1)

The enhancements were divided into 4 categories of high priority items, medium priority items, low priority items and those items that were not applicable to prioritization, starting with a draft list devised by the PCOM Chairman.

PCOM initially considered those items which were not applicable to prioritization (e.g. day rate increases, fuel and port call increases and contingencies) and questioned why these were not in the base budget. TAMU indicated that these items may or may not occur and to put them in the budget would potentially tie up funds that could be used elsewhere in the budget. However, the Science Operator did indicate that if these monies were needed they would have to come from somewhere in the budget. JOI suggested that the adjustments could be made within the lowest priority enhancements. Several PCOM members expressed concern that there was no planned contingency fund and that any major problem (e.g. loss of the drill-string) could potentially result in significant losses/delays to the program. NSF, on the other hand, indicated that within a program at the level of \$35M, \$1M could be shifted about to cover contingencies. This sentiment was supported by TAMU who cautioned the committee to wait and see if contingency funds are needed (i.e. these are "forced measures" to be dealt with as the situation arises), otherwise the base budget may be affected. It was agreed that under this plan any changes in the budget would have to be dealt with immediately and that a mechanism was needed to make decisions quickly.

### PCOM Consensus:

PCOM will ask JOI, Inc. to consult with the PCOM Budget Subcommittee before significant adjustments occur to the budget because of contingencies that might arise.

After this discussion, the PCOM proceeded to prioritize the high priority items (Table 1). In considering the SEDCO personnel, their effectiveness and salary. PCOM agreed to place a minority of the SEDCO people (i.e. the electronics techs) in the high priority category with an increase to the budget of \$150K. The remainder of the SEDCO people would remain in the medium and low categories. A number of PCOM members and the L-DGO logging liaison expressed support for keeping the back-up borehole televiewer (BHTV) and the digital televiewer as a package and as a high priority item. PCOM then internally prioritized the high priority items. In considering the medium priority item, PCOM moved \$150K of the low priority SEDCO people to medium priority. PCOM then internally prioritized the list. The low priority list was not internally prioritized.

## ROLE OF PLANNING COMMITTEE IN BUDGET REVIEW PROCESS

In reviewing the situation agreed to by JOI and NSF for FY 87, the PCOM Chairman indicated that in Fall 1985 JOI agreed to produce an initial budget for review by NSF. After this review, this draft budget would be passed to the EXCOM for comment and if EXCOM thought appropriate, to ask the PCOM to review all or parts of the draft budget. The budget would then

be referred back to EXCOM. Larson indicated that he feels the Planning Committee's role in the process should be more definitive and that the PCOM should enter into the budgetary process sooner than that agreed upon by NSF and JOI. He proposed that at the PCOM winter meeting, the committee develop a science plan and any additional prioritization statements necessary to describe potential budget items for the upcoming FY. This would be used by JOI who would then confer with the subcontractors and develop a budget to be reviewed by NSF. After NSF review, the budget would be simultaneously forwarded to EXCOM and PCOM for independent review. In addition, under this process the PCOM would have the flexibility/freedom to consult the JOIDES panels for advice. That advice would be forwarded to EXCOM for transmittal to NSF.

**Discussion:**

The Committee generally agreed that the proposed plan was a good idea as long as the level of detail in the draft program plan is sufficient to satisfy the PCOM and EXCOM. However, NSF noted, while supporting the plan, that the Foundation's obligation is to supply a draft program plan to EXCOM and that EXCOM and PCOM will have to decide how PCOM gets the information. Further discussion did indicate that some of the membership were concerned that PCOM will spend too much time doing budgetary matters of the program. In response to this sentiment other members indicated that PCOM has the right and obligation to review the Program Plan and that without PCOM input major program goals will not be accomplished.

Discussion was ended with the following motion, proposed by Larson and seconded by Kastner:

**PCOM Motion:**

It is moved that the following sequence of events be adopted and recommended to the EXCOM as PCOM's role in the ODP Budget Review process. At the Winter PCOM meeting, generally held in December or January, PCOM proposes its goals and priorities for the upcoming fiscal year in a science plan and any additional prioritization statements needed to describe potential budget items. This information will be used by JOI and the ODP subcontractors in developing an initial fiscal year program plan. After review and initial approval by NSF, this initial draft program plan will be simultaneously transmitted to EXCOM and PCOM in time for their deliberate reviews. PCOM may call upon other specific expert advice to focus its review on the program plan's potential to accomplish PCOM's science plan and priorities as originally proposed at their Winter meeting and as they have subsequently evolved. This review is then transmitted to EXCOM for use in the formulation of the final program plan.

Vote: 16 for, 0 against, 0 abstain



## 610 SCIENCE OPERATOR REPORT

### LEG 109 REPORT

#### Drilling Operations:

W. Bryan (Co-chief) reported that the prime goal of Leg 109 was re-enter and deepen Hole 648B and recover core. In summarizing operations during the cruise, Bryan indicated that the first 2 weeks were spent fishing two broken drill-strings out of the drill hole due both times to broken drilling jars. The hole was eventually deepened 50 meters before running out of drilling jars. The drilling jars proved to be a weak link in the drilling operation as four were used and four ultimately failed. Also the drill-string was afflicted with severe sticking problems that were hard to overcome. However, the crew felt that significant technological advances had been made at this site and geologically, the science party believed they sampled ponded lava that underlies an upper zone of pillow lavas. Leg 109 then traversed to Site 669 (near the Kane Fracture Zone) to conduct drilling operations. This area was selected because an ALVIN field program, coincidentally conducted with Leg 109, had indicated 2 km of gabbroic outcrops, the water depth was the minimum necessary to drill Layer 3 and speed up pipe trips, and the site would provide an opportunity to test the possibility of spudding into material that may be encountered on Leg 115 (SWIR). However, once on station, troubles began after 4 meters of drilling into the sediment/rock rubble cover because the core barrel buckled and jammed. The roller bits were quickly worn away and the gear was not adequate for spudding into the hard plutonic rocks. Bryan strongly emphasized that a guidebase was needed to drill in this environment. Also near the Kane Fracture Zone, the ALVIN dive program reported an outcrop of serpentinized peridotite on the western wall of the median valley. Leg 109 drilled this area (Site 670) with no spud-in problems through 5-6 m of sediments to the peridotite. Although drilling operations were successful until the core barrel jammed, core recovery was very poor (8-10%). Drilling did show that as depth increased the amount of serpentinization decreased while that of fresh peridotite increased. The hole was later reentered with no reentry cone.

In summarizing the main lessons learned from Leg 109, Bryan stated that the guidebase could be redesigned to be smaller and more simply constructed with the same capability for re-entry and casing. A guidebase is not necessary at all times because the natural proclivities of some MOR rocks actually aid the spudding-in process. In addition, drill bits and core barrel designs need additional work but the coring motors, the Navidrill concept and diamond drill bits are all promising ideas that need to be integrated into the operations program. In closing, Bryan noted that the ODP engineers and the SEDCO personnel were very responsive and co-operative and are anxious to innovate. Bryan closed by stating that at the beginning of Leg 109 the XRF did not work well because the machine had parts that had deteriorated over the past year due to sporadic use and he was not optimistic for the at-sea potential for the XRF. Bryan emphasized that there is a need for a duplicate XRF at the shore-based lab at TAMU.

## Logging Operations:

K. Becker reported on the logging and downhole measurements program that was conducted on Leg 109 at DSDP Site 395A. The results of this section of the cruise are found in Appendix B.

## LEG 110 REPORT

L. Garrison reported on the progress of Leg 110, which was at sea at the time of this meeting. Garrison indicated that the prime site objective of the leg was to drill the decollement at the Barbados forearc. At the prime site (IAF-1A, Site 671), the soil test was drilled to a depth of 44 m at an area north of DSDP Site 542. At Site 671B operations cored through the decollement down to 691 m depth, the decollement is located at 500 m depth. However, there were no indications of water flow or back pressures. The upper section of the hole which passed through the accretionary wedge contained Pleistocene age material and was logged but not to total depth. A bridge was encountered at 424 m depth and logging operations were terminated as the hole was not in condition for logging. At Site 671C the TAM packer was used and 2 cores were taken from 495 to 514 m. The packer experienced problems as it would not seat properly. Current theory is that the packer inflated before it was set and the mudline HPC core is thought to be the culprit that prematurely activated the inflation mechanism. Logging operations were abandoned due to a bridge. At Site 672 (IAF 2), an oceanic reference hole was drilled and cored to 493 m. Heat flow was measured at three intervals and water samples were taken. The hole was logged to 350 m until the logging tool failed. A second logging tool was dropped downhole but it too failed at the same spot. Site 673 (IAF 3A) drilled to Miocene age material which are thought to be associated with thrust faults and an overturned sequence. Site 674 (IAF 3) reached Oligocene-Eocene sediments before the bottom hole assembly was lost at the base of the non-magnetic drill collar.

## 611 WIRELINE LOGGING SERVICES OPERATOR REPORT

R. Jarrard reported that the logging effort had greatly increased since the May PCOM meeting with logging scheduled for Legs 109, 110, 111, and 112. In the future the Borehole Research Group anticipates a decrease in activities on Legs 113, 114, 116, and 117. An increase is expected on Leg 115. Jarrard further reported that past experience has shown that the standard tool suite has evolved to 3 combinations of tools with 2 types of combinations mainly used, a seismic-stratigraphic combination and a geochemical combination. The third combination, a mineralogical combination is used less often.

In addition, after an internal organization evaluation, L-DGO concluded that for the first nine legs, the 400 m rule was observed when it was applicable, the full Schlumberger suite was seldom used, the program is losing 23% of loggable hole to bridge problems and 16% of loggable hole is skipped because of not logging in the drillpipe. Lastly, the BRG indicates that much more logging effort and success has occurred at the basalt sites

compared to the sediment sites. In order to solve the problem of bridges, the BRG will revise the mud program on Leg 110 to include the use of freshwater mud salted with KCl to minimize swelling in clays in the borehole. In addition, the BRG intends to use the Side Entry Sub to solve the bridging problem. A prototype sub was tested on Leg 108 and a standard sub was made for Leg 110. However, the tool to be used on Leg 110 was below specifications and will have to be rebuilt. The tool could be ready for the second half of Leg 111 and will be routinely used as of Leg 112.

Jarrard closed this section of the report by stating that the Al clay tool used on Leg 109 will on Leg 111 and that the Repeat Formation Tester is completed and in the testing phase. This tool will be available for Legs 111, 112 and 115.

#### TAM WIRELINE PACKER AND ODP MEMORANDUM OF UNDERSTANDING.

R. Larson opened discussion of the potential patent problem that may result from the purchase of the TAM wireline packer by indicating that R. Anderson misstated the problem at the May PCOM meeting. Larson stated that the PCOM is not faced with an MOU violation if the instrument is an off-the-shelf item when it is purchased. A violation would occur if a manufacturer built the packer for ODP, obtained a patent on it and then sold the design for profit, having used ODP funds for research and development to generate a patentable item in which ODP participants did not share in the patent rights. Larson noted that the possibility also exists that patents will occur from development of the tool with ODP responsible for their costs. If patents already exist then there is no problem but if additional patents are forthcoming then MOU problem exist. It was the position of L-DGO that ODP is buying the first instrument and that its cost would include developmental costs and not include profit. Therefore there is a difference between letting a contract for development and the actual purchase of an item off-the-shelf. This position was supported by several PCOM members. It was also stated that TAM will continue to develop and sell the instrument regardless if ODP purchases it or not. Some members thought that this was an EXCOM matter and should be decided on by them. Discussion closed with the following consensus:

#### PCOM Consensus:

It is agreed that the Wireline Logging Subcontractor should get written assurance from TAM International that ODP is not allocating development funds and that once the wireline packer is available it will be sold openly at a price fixed at the ODP purchase price. Furthermore, Wireline Logging will confer with the PCOM chairman. After these discussions, the issue will be presented to the EXCOM Chairman for discussion and a decision for more discussion or purchase. This decision will be forwarded to NSF.

612 JOI PERFORMANCE EVALUATION COMMITTEE REPORT - PCOM COMMENTS

CHANGES TO ITEM 4.3

R. von Herzen suggested that the text be more strongly worded to emphasize that petrophysics is already being conducted within the ODP logging program.

CHANGES TO ITEM 6.1

S. Gartner requested that following be added: "further attempts will be made to fine-tune the panel structure in the near future."

CHANGES TO ITEM 6.4

Larson proposed this addendum: and PCOM has not found an unfinished target with sufficient priority to justify the elimination of an entire leg.

CHANGES TO ITEM 6.10

At their last meeting, IHP proposed that the logging and barrel sheets should be juxtaposed in the Volume A series. The PCOM accepted this proposal in the following statement:

PCOM Consensus:

The PCOM accepts the combined advice of the Borehole Research Group, TAMU and IHP that logging data be printed after the lithologic information (i.e. the barrel sheets) in the Volume A ODP Reports. The logs will be keyed to the barrel sheets by core numbers and will be unprocessed. This sequential rather than juxtaposed format for the lithologic and logging data will allow additional data to be displayed for ready visibility without encouraging spurious correlations between the two data sets.

PCOM Consensus:

It was agreed that the PCOM Chairman will produce a final draft of the Terms of Reference for distribution to the EXCOM for comment and that they should respond by the next meeting. The Chairman will include the cover letter to EXCOM an explanation that the PCOM feels that in the future it should be presented with the entire PEC report and not portions thereof.

613 RATIFICATION OF NEW ODP SEDIMENT CLASSIFICATION

PCOM Consensus:

It is agreed that the ratification of the new sediment classification scheme will be deferred to SOHP for review and revision. In addition, SOHP is free to solicit additional or outside expertise if needed.

614 GENERAL ISSUES ARISING FROM PANEL REPORTS

LITHOSPHERE PANEL

Pisias indicated that LITHP is concerned about a long-term engineering solution to sampling the earth's crust at spreading centers.

INFORMATION HANDLING PANEL

Gartner indicated that a major effort presently at DSDP is the indexing process. This procedure has led to the development of 2 volumes of material that are approximately the size of 2 DSDP Initial Report volumes. Gartner also indicated that IHP believes there is no clear statement on the publications program and that a written statement should be produced. Brass also indicated that EXCOM is waiting for a report on publications by PCOM.

It was agreed that the Publications Report presented at the May meeting should be mailed to EXCOM members (Appendix C).

S. Gartner proposed the following motion, which was seconded by M. Langseth:

PCOM Motion:

The Planning Committee endorses the report on publications by R. Merrill and urges that the publications program proceed according to the plan presented therein.

Vote: 16 for, 0 against, 0 abstain

Gartner also indicated that IHP is aware of the efforts at DSDP and requested that an expression of gratitude be made to those at DSDP. Gartner proposed the following motion which was seconded by von Herzen.

PCOM Motion:

The PCOM wishes to express its gratitude to L. Musich, P. Woodbury, J. Blakeslee, T. Wood for their faithful and efficient efforts at DSDP and during ODP.

Vote: 16 for, 0 against, 0 abstain

615 SHORT TERM PLANNING

LEG 111

K. Becker reported that Leg 111 is on schedule with no problems at this time. Current plans are to drill and core for 30 days and to conduct 10 days of logging. 5 days will be devoted either during/or after initial activities at 504B for sediment coring, with heatflow and double APC coring to basement, at a site near 504B. Current plans do not call for the sidewall entry sub but if it is needed L-DGO will shuttle it to the ship. The leg will include a set of high-temperature logging tools with logging

scientists from the UK, US, Japan and France. Also, USSAC is funding the rental of a downhole seismometer. Leg 111 will also try to improve recovery rates by using new diamond rotary drill bits and will attempt heat flow measurements using the von Herzen heat flow tool and pressure measurements using the new Barnes tool.

M. Langseth reported that a detailed survey in May 1986 produced a grid for heat flow surveys which focused on areas of anomalous heat flow. In relation to the drill hole, which is located in the center of the grid, there is a systematic and controllable distribution of heat flow of below average (170 mW/m<sup>2</sup>) values in topographic troughs and above average (230 mW/m<sup>2</sup>) values on ridges. The average heat flow value is 200 mW/m<sup>2</sup>. These values can be further correlated with upwelling water (with flow rates approaching 5 mm/yr). In the low areas detailed temperature measurements (particularly in the lower part of the hole) indicate hydraulic "drawdown" effects. At the ridges, the high temperatures are thought to be associated with fractures in the basement. Basement temperatures along the highs were 85 degrees C compared to 55 degrees C in the troughs.

#### Discussion:

Kastner: What are the XRF plans for Leg 111 and what are the long-range plans for the machine?

Garrison: At this time the XRF is functional and the software problem has been solved. A continuing problem has been the training of technicians. At the end of Leg 110, one tech will go to school at ARC for training and another will go to Massachusetts for training in Mike Rose's XRF lab. Currently there are 2 techs that are well-trained and 2 techs that are partially trained. For the future there are no plans to replace the unit because of finances.

#### LEG 112

Garrison reported that staffing is complete for Leg 112. Clearances are pending but TAMU is confident they will be granted. Garrison also reported that the ship schedule has been amended. RESOLUTION will now arrive in Barbados at the end of Leg 110 on 16 August and leave on 17 August. The ship will then transit to Panama arriving on 23 August with a 3 day portcall. 2 extra days previously assigned to Barbados were carried to Leg 112. Leg 112 will begin sometime between 24-26 October in Callao. At the last PCOM meeting, TAMU was asked to add 5 days to Leg 112. This has been added in the body of the cruise and not as a mini-leg after Christmas. If the ship leaves on 24 October, it should arrive back in Callao on 15 December. If the ship leaves on 26 October, it should arrive on 17 December. The ship will arrive in Punta Arenas on 2 January 1987 to begin Leg 113.

On Leg 112, the shallow water SOHP sites will be done initially, and then to the deeper TECP objectives will be attempted. However, the shallow water nature (less than 100 m) of the SOHP sites may cause positioning problems for the drillship. If the ship is more than 3% of water depth off

the hole then damage may occur to the drill-string and the bottom hole assembly may break. If this is the case, Garrison indicated that the crew will fallback to options at deeper water sites.

R. Larson reported that PPSP gave the go-ahead at all the prime sites (including Site 3) on the Lima Basin and Yaquina Basin transects but warned of bottom simulating reflectors (BSRs). PPSP extensively discussed the gas hydrate problem and concluded that if small amounts of gas hydrates are recovered and if there were no BSRs below, drilling could proceed cautiously if subsequent gas hydrate recovery was minimal.

#### Discussion:

In discussing options for Leg 112, Larson stated that R. von Huene had acquired a very good seismic section from Shell Oil parallel to the Lima Basin transect. A site on this line called 7A is near Sites 6 and 7, and contains an expanded lower sedimentary section, relative to Site 7. von Huene would like to first drill Site 7, and if the upper sequence at that location is not well represented, default to Site 6, where it is expanded. If the lower sequence is not well represented at Site 7, he would default to Site 7A. von Huene has asked the PCOM for approval of this site as an alternate due to time limitations, although this request bypasses the normal review process. Several members were uncomfortable with this request.

#### PCOM Consensus:

The PCOM agreed that the request should be approved subject to review by the TECP Chairman and that he is free to consult outside sources if needed.

#### LEG 113

Garrison reported that the ship will leave Punta Arenas on 4 January 1987 and arrive in the Falkland Is. on 10 March. 24 days for transit and an increase in operation time have been added to the previously scheduled 61 days to give a maximum of 65 days. The co-chiefs meeting resulted in an operations schedule (Table 2). Garrison also showed the proposed ship track (Figure 1) with the locations of W1, W2, W4, W5, W6, W7, W8 and W-10. Ice problems, particularly pack ice, are anticipated at Site W4 but no pack ice problems are indicated for W5 or W6-8. However, at W10 there is a BSR. PPSP has reviewed W10 and restricted drilling to 200 m of APC coring or to APC refusal. SOP has proposed an APC site at W11 as an alternate and W12. However W12 is not a serious consideration because of location.

#### Staffing:

Ten invitations have been issued and staffing is almost complete although a second paleomagnetism person and a palynologist are needed. Canada indicated that it will try to fill the paleomagnetism slot and the ESF Consortium indicated that it will try to fill the palynologist slot.

#### Support Vessel for Leg 113:

Garrison indicated that ODP has contracted with AP Moeller in Copenhagen for an ice support vessel, either the MAERSK MASTER or the MAERSK MARINER. These vessels are 1600 gross tons with 15-16K horsepower in 2 main engines and 4 thrusters. The vessel is also capable of dynamic positioning. The vessel can carry a crew of 8-9 with bunks for approximately 20 people and there is emergency space for the entire RESOLUTION drilling crew. The ice support vessel crew has also been trained in survival techniques and to respond to an emergency within 3 minutes of receiving an alarm. TAMU is confident in the support vessel and an option exists for its use on Leg 114. An ice observer will be on board and ODP has purchased a Neil Brown current meter to collect data for input into the ice drift program. Finally, the day rate is \$6100/day without fuel.

TAMU also reported that applications were received for use of the support vessel for science. 3 prime suggestions were a study by D. Biggs (TAMU) to conduct plankton biology studies, a proposal to run a series of magnetometer lines by P. Barker (UK) and L. Lawver (UT) and a proposal to run a series of seismic lines by A. Maldonado (Spain). The final decision was made by the co-chief scientists and the science operator who favored the magnetometer and plankton studies. Garrison proposed that the scientists on the support vessel be considered part of the Leg 113 science party so that the data collected would be integrated into the total data set and also for financial considerations. This proposal was supported by the PCOM.

#### PCOM Consensus:

It is agreed that the shipboard scientists on the ice support vessel will be considered as members of the Leg 113 science party.

#### Portcall in the Falkland Islands:

Garrison reported that the arrangements for the portcall look favorable and permission has been obtained from the Falklands and the UK. Travel arrangements for the crew change are not yet complete and TAMU is looking for a charter to carry air freight cargo and 120 people. These arrangements are expected to become more firm in the next 2 months although first indications are that a DC-10-sized aircraft will be necessary for the supplies and the range necessary to fly from Ascension Island to the Falklands. Presently, plans call for a 1 day turnaround due to logistical limitations of the area (i.e. no hotels to accommodate 120 people). The support vessel contractor has indicated that they will share space on the support vessel for the transport of cargo and fuel.

#### Relocation of W5 (Weddell Sea):

At the May meeting, PCOM recommended that Site W5 be relocated to an area with thinner turbiditic beds or justified at its present location. The co-chiefs (Barker and Kennett) reviewed the recommendation and state that while alternates exist, they lie at deeper basements depths than W5 and this jeopardizes the Paleogene objectives. Therefore they wish to keep the



original location for W5.

Also at the May meeting, the PCOM requested an explanation of how the scientific objectives would be attained. P. Barker responded that W5 is the only basin site of all the proposed sites that potentially holds a complete record of paleoclimate and is free of shelf erosion. The site is critical to the understanding of Antarctic Bottom Water evolution. Barker contended that the post-Paleogene stratigraphy at this site (distal turbidites and hemipelagics with ice rafted debris) would be dated by examination of the reworked biota, magnetic remanence measurements and Sr isotope ages from fish teeth. This stratigraphy he maintained will contain a record of Antarctic vegetation, glaciation and young slope sedimentation, as well as the onset of Antarctic Bottom Water formation.

Request to Omit Logging at all sites except W4-W5 and to discontinuously core the upper 500m of W5:

Larson indicated that this request was made by the Leg 113 co-chiefs but the reasons for the request differ. Both agree to log W5 but Kennett would like to conduct discontinuous coring in the upper 500 m of the hole in order to preserve time for the So Orkney transect. Barker would like to core all of W5 and also log W7.

Discussion:

von Herzen pointed out that DMP proposed that logging be conducted at six sites (W1, W4 and 5, and W6-8) for 3 days total, now the schedule calls for 3.7 days to do 3 sites. Jarrard responded that estimated times are more than that actually needed. Further discussion indicated that the co-chiefs consensus was to log W4 and W5 and if additional time is available, then follow the DMP recommendation and log W6-8 and abandon the 400 meter rule if there is insufficient time. It was generally agreed that logging of W4 and W5 was important and that there would either be no time to log W6-8 or all three sites would have to be logged. Since W1 and W2 are less than 400 m perhaps they should be absolved from logging.

PCOM Consensus:

The PCOM agrees that logging requirement for W1 and W2 (Maud Rise) should be waived.

PCOM Consensus:

The PCOM agrees that the logging requirement should not be waived for W7 (So. Orkney). In addition, PCOM agrees that although the logging of W6 and W8 (So. Orkney) is desirable, the decision to do so will reside with the co-chiefs.

It should be noted that a minority of the membership argued for logging either W6,7 or 8 because of the prospect of logging in high latitude sediments.

PCOM Consensus:

It is agreed that continuous coring should be required at all sites, including W5 (Weddell Sea).

Sites W6, W7 and W8:

The PCOM rearranged the order of drilling of Sites W6-8 to follow the recommendation of SOHP, that is (1) W7, (2) W6, and (3) W8.

LEG 114

Garrison reported that Leg 114 is scheduled to be 56 operations days with a 24 day transit from the Falkland Islands to Mauritius. The Co-chiefs are J. LaBrecque (L-DGO) and P. Ciesielski (Univ. of Fla.). Leg 114 is scheduled to leave the Falklands on 15 March 1987. Otherwise no additional planning will occur until site surveys are completed.

Discussion:

von Herzen: At the May PCOM meeting, the possibility of including into Leg 114 sites not drilled on Leg 113 (i.e. W4, W6-8) was left open. Do we want to exercise this option?

Larson: The 114 co-chiefs and the Science Operator probably do not think that this is logistically or financially a good idea.

During further discussion several members queried whether Leg 113 objectives were strong enough to reorient the Leg 114 program. If W6-8 could not be done on Leg 113 should low priority objectives on Leg 114 be dropped in favor of their inclusion on 114. It should be noted that the PCOM established the primary objectives for Leg 114 at the May meeting.

PCOM Consensus:

The PCOM agrees that SOP, SOHP and the co-chief scientists for Legs 113 and 114 should be asked for their views on the scientific and logistical tradeoffs of devoting 15 days of drilling time on Leg 114 for the accomplishment of those objectives not achieved on Leg 113. It is also agreed that a report on these views should be presented at the next meeting. In addition TAMU should also present at the next meeting the logistical and operational costs of conducting the tradeoffs.

PCOM Consensus:

The PCOM agrees that if a tradeoff is made the present co-chiefs on Leg 114 should be asked if they wish to remain so and if so, could they assemble a crew for Leg 114?

PCOM Consensus:

It is agreed by the PCOM that the above consensus is contingency planning that will only be implemented if none of W6, W7, or W8 is done on Leg 113.

It was then pointed out by Larson that the next PCOM meeting was too late in the planning process to decide on this potential trade-off. The

decision must be made now on the information available so that Legs 113 and 114 can plan their drilling strategies and staff their scientific parties with this potential trade-off either definitely included in the program or definitely excluded. The trade-off discussion was then re-opened with an explanation by Garrison of the additional support vessel costs which were implied.

Garrison reported that the support vessel would probably be required anyway for the start of Leg 114 because floating ice is normally a problem in the Southern Atlantic in mid-March and later. The support vessel would certainly be required on Leg 114 if they were to initially go to W6-8 and then return to their track at SA2. If, by chance, the Southern Atlantic were ice-free in mid-March but we required Leg 114 to return to W6-8 the total excess cost would be approximately \$6100 X 20 days, plus fuel, totaling approximately \$140K. If the boat is released at the end of Leg 113, the support vessel will cost a total of \$800K. Garrison does not anticipate any other logistical problems, however, a decision must be made in January to release the boat at the end of Leg 113 or to retain for W6-8 drilling.

The trade-off option was then debated with those favoring the previous PCOM position that all objectives on Leg 113 are more important than any objectives on Leg 114. Arguments against indicated that it is unfair to the Leg 114 scientific party to impose Leg 113 objectives on them at the last minute in their plans. A compromise was considered by agreeing that W7 was the most important site on the So. Orkney transect and that Leg 113 should attempt the So. Orkney sites in priority order of W7, W6 and W8. If none of the So. Orkney objectives were achieved by Leg 113, PCOM should ask Leg 114 to return and achieve at least W7, but PCOM could not expect them to complete the entire transect.

Kastner proposed the following motion which was seconded by von Herzen:

PCOM Motion:

The PCOM recommends that if Leg 113 does not achieve the objectives of W7 (a high priority site which should be drilled first on the So. Orkney transect) then they should be accomplished on Leg 114. If they are achieved on Leg 113 then Leg 114 should proceed as planned with Southern Atlantic sites.

Vote: 15 for, 1 against, 0 abstain

Kastner then proposed the following motion which was seconded by Francis:

PCOM Motion:

The PCOM recommends that if Leg 114 returns to do the So. Orkney transect then W7 should be done first (with the logging program) with a maximum of 10 days spent on site at W7.

Vote: 15 for, 1 against, 0 abstain

## 616 MEDIUM RANGE PLANNING

### LEG 115

It was reported, by Brass and von Rad, that IOP is concerned that site surveys, as planned, will not locate the kinds of sites necessary for drilling and suggests that photographic surveys, piston cores and seismics are needed before drillholes are sited. W. Bryan expressed concern over the lithology that drilling will spud into since the sediment troughs may have to deal with substantial amounts of rubble. IOP also suggests that the vertical seismic experiment be done another time due to time and the lack of a "shooting" ship. It was suggested that a re-entry cone be left on the seafloor. Pisiias reported that LITHP also concurs with IOP and is also concerned on the "pogo" drilling technique, the limitation of the TV camera system (they suggest that operations be done in shallower water) and that if gabbro is present, then the guidebase should be on the ship. Robinson reported that DMP has strongly recommended a full suite of downhole logging similar to that conducted at DSDP 395A in a 500 m deep hole and the oblique seismic experiment.

#### Use of Second Guidebase:

In discussing the use of the bare-rock guidebase on Leg 115 some members felt that with the number of objectives proposed there would be no time to set the guidebase. Conversely, several members supported giving TAMU as much experience as possible with the guidebase system but thought that the 47 days operations days is not much to do this and to accomplish other objectives. PCOM members generally favored deployment of the guidebase for gaining experience and to drill a deep stratigraphic hole.

#### PCOM Consensus:

The PCOM agrees that the second guidebase should be available on RESOLUTION for use on Leg 115 (SWIR), pending site survey results.

#### Oblique Seismic Experiment on Leg 115:

In discussing the oblique seismic experiment, it was suggested that the results will illustrate the seismic character of the uppermost crust along with physical properties and seismic structure. Discussion further indicated that in order to obtain results, the experiment would have to be conducted with one deep hole and at several levels within the hole and that the time involved would be approximately 10 days. It should be noted that there was a general feeling that this was too detailed an operation for a first-pass in the area and that perhaps a deep hole should be drilled and a re-entry cone dropped for a later oblique experiment.

#### PCOM Consensus:

It is agreed by the PCOM that we are not ready for an oblique seismic experiment on Leg 115.

In discussing the downhole logging program several members supported logging operations as it would provide a unique opportunity for deep hole logging, if a deep hole is drilled.

PCOM Consensus:

The PCOM supports the downhole logging program for Leg 115 if the hole is at a depth considered reasonable for logging to be conducted.

Co-chief Recommendations:

The following names were forwarded to the Science Operator:

<u>LITHP</u>	<u>IOP</u>	<u>TECP</u>	<u>DMP</u>	<u>PCOM</u>
Cann	Bostrom	von Herzen	Hyndman	Malpas
Dick	Dick		Olhoeft	Robinson
Hyndman	Malpas		Stephen	von Herzen
Nicolas	Natland		von Herzen	
Robinson	Robinson			
Salisbury	von Herzen			
von Herzen				

RED SEA

Garrison reported to PCOM that it is critical that a decision be made at this meeting concerning the Red Sea. Garrison indicated that for most of the sites at least 2 clearances will be needed with clearances needed from Saudi Arabia and Egypt for the northern sites and clearances from Saudi Arabia and Sudan needed for the southern sites. Garrison stated that the committee could plan as scheduled but there is no guarantee that ODP would hear of a result, in terms of clearances. Garrison requested that, if planning continued, he be allowed to set a deadline around the end of January 1987 to hear about clearances. After that time, if there is no word or at least one refusal the program would automatically default to Intraplate Deformation and N. 90 E Ridge. Brass also reminded the PCOM of the State Dept.'s feeling that operations there are a "risky proposition" with security and clearance problems and the suggestion that if the science could be done elsewhere then it should be done so.

Site Surveys:

Francis reported that DARWIN is not doing site survey work in the Red Sea because the UK failed to get clearance permission from Saudi Arabia. Cadet reported that France has not received an answer for the site surveys and IFREMER has decided to cancel both of their campaigns for this year and will try next year. Garrison recommended asking for the clearances but with a deadline in mind. He said that although he was pessimistic, the possibility of doing the Red Sea program was worth the prolonged uncertainty.

The PCOM next reviewed the Red Sea science program, site surveys and discussed the political situation.

Discussion of Science Plan:

31 days of drilling and logging can be planned for Site Surveys already in hand according to SSP Chairman John Peirce.

Kastner reported that after conferring with Cochran, he is less optimistic that the main objectives will be achieved. Cadet and Langseth on the other hand reported that they thought Cochran has more positive attitude. Robinson agreed with Kastner and added that perhaps the importance of a Red Sea program has diminished in the past year as its uniqueness has diminished because of the discovery of hydrothermal and metallogenic areas elsewhere. On the other hand, several members expressed support for a Red Sea program as the program is still very important and unique from the focus of rifting and stretching a passive margin and the possibility that the new METEOR could still get to the area in time to conduct a seismic line in the Sudan waters. Discussion closed with following motion proposed by Robinson and seconded by Cadet.

PCOM Motion:

The PCOM proposes to reiterate the plans outlined for the Red Sea hoping that a site survey will be conducted at 17.5 deg. N. If these data are not obtained then the PCOM will then devise a leg based on present site survey information and will not attempt to set up a natural laboratory in the area. The Committee will ask that TAMU continue to seek permission to operate in the area with a deadline set for late January 1987. The FRG is also advised to continue attempts to obtain site survey clearance for METEOR.

Vote: 15 for, 0 against, 0 abstain

Co-chief Recommendations:

<u>IOP</u>	<u>LITHP</u>	<u>TECP</u>	<u>PCOM</u>
Backer	Backer	Backer	Backer
Bonnatti	Bonnatti	Bonnatti	Cochran
Cochran	Cochran	Cochran	Guennoc
Guennoc	Pautot	Pautot	
Pautot			
Whitmarsh			

INTRAPLATE DEFORMATION - N90°E RIDGE

Larson reported that the N90°E Ridge was surveyed successfully by J. Curray but no results have been presented. Concerning the Intraplate program, the site survey was successfully done and indicated areas with high heat flow, however, SSP has required additional bottom navigated heat flow data. It was agreed that site survey results are needed before further planning could occur.

Co-chief Recommendations:

<u>IOP</u>	<u>LITHP</u>	<u>TECP</u>
Curry	Currie	Curry
Herb	Duncan	Peirce
Peirce	Peirce	Sclater
Scrutton	Sclater	
Weissel	Whitmarsh	

NEOGENE I

Larson reported that Prell had conducted a successful site survey cruise with the results presented at the last IOP meeting.

Discussion of Science Program:

Presently 53 days are planned with 45 on site days. 3 sites have been selected for 200 m penetration with double HPC coring on the Oman margin. 2 sites have been selected on the Owen Ridge, one to be drilled to the Miocene, 2 sites have been sited on the distal portion of the Indus fan and 2 Hominid sites have been located in the Gulf of Aden or in the Somali Basin. TAMU requested that priorities be established in order to trim the drilling time from the 45 proposed to 34 days available. PCOM then reviewed the SOHP priorities for Neogene I. These were: 1) Oman Margin 2) Owen Ridge 3) Indus Fan 4) Gulf of Aden and 5) E. Africa.

PCOM Consensus:

It was agreed that the IOP needs to explain their estimated drilling time of 45 days when only 34 days are available. Further IOP needs to prioritize their drillsites, in a manner similar to SOHP.

Co-chief recommendations:

<u>IOP</u>	<u>SOHP</u>	<u>PCOM</u>
Cochran	Prell	Kelts
Kenyon		Mayer
Prell		McCave
		Niitsuma

MAKRAN

Francis reported that DARWIN is scheduled to conduct a site survey of the Makran area (with R. White as chief sci.) in Nov/Dec 1986 with multi-channel seismics (MCS), seismic refraction, and heat flow. In addition, a GLORIA survey is scheduled in Jan/Feb 1987. Francis closed by stating that the processed MCS data will be available in time for drilling.

It was reported that IOP believes that Makran can be drilled in a half leg and proposed as alternates an attenuated Makran program, a Carbonate Saturation Profile program and Mascarene Plateau basement drilling. The PCOM was asked to choose two. IOP also had reservations on the quality of

the Makran data and which of the proposed 7 holes were actually needed. Larson indicated that the problem with the Makran program is that the main target is to drill thrust faults on the deformation front, however, those faults are not observed on the single channel seismic data. Also, BSRs are observed on the SCS data limiting Makran drilling to less than 400 m holes. Francis cautioned against prejudging the data and suggested that the IOP should consult J. Leggett rather than R. White if questions exist. Some PCOM members were skeptical of this as White is one of the proponents and the one most familiar with marine seismic data.

#### Discussion of IOP Alternates:

##### Carbonate Saturation Profile:

The plan consists of 4 short holes (max. 300 m) with double HPC and XCB coring. The objective is to study carbonate saturation in a depth transect in an equatorial setting. This site was chosen because of better depths, higher fertility in the water column, and less mass wasting and disturbance than on 90° East Ridge. Larson emphasized that the Carbonate Saturation Profile is not an extension of the Neogene package.

Discussion indicated that SOHP had not reviewed in detail the Carbonate Saturation Profile at their last meeting for SOHP interests, however, SOHP has indicated that this area is a better place to do a carbonate saturation experiment rather than 90° East Ridge.

##### Mascarene Plateau:

This program is a hard rock program based on the Duncan proposal. It is intended to study petrologic and geochemical variations associated with the Reunion hot spot and compare them with Deccan trap flood basalts. A subsidiary program would be to study the subsidence of the Mascarene Plateau in the overlying sedimentary record. It was pointed out that both the Carbonate Saturation Profile and the Mascarene Plateau are scheduled for site surveys by DARWIN. LITHP indicated that if given a choice between Mascarene Plateau and 90° East Ridge, they would prefer 90° East.

##### PCOM Consensus:

It was agreed to eliminate Mascarene Plateau as an alternate since the program to address the age of a hot spot trace in the Indian Ocean is duplicated at 90° East Ridge. The remaining alternates will consist of the Carbonate Saturation Profile and Makran.

At this time, J-P. Cadet requested that his abstention be reflected in the above consensus.

Robinson proposed the following motion which was seconded by Shipley:

##### PCOM Motion:

It is moved that the PCOM follow the advice of the IOP for the Makran with 4 sites and the carbonate saturation program and the times proposed.



Vote: 6 for, 8 against, 1 abstain

Several members expressed reservations on mixing a tectonics program with paleoenvironmental objectives and others expressed support for the IOP program. Further discussion of the Makran program as a full leg indicated that several members thought it a mistake to make a full leg without further knowledge on age, seismic structure, and gas deposits. However, it should be left on the prime drilling plan as a full leg at present. Francis proposed the following motion which was seconded by Robinson.

PCOM Motion:

The PCOM recommends that a full leg with 35 days of drilling be devoted to the Makran program. The Committee also recommends that the site survey chief scientists contact the IOP and TECP Chairmen to discuss the Makran situation and present a report to PCOM at the next meeting.

Vote: 8 for, 6 against, 1 abstain

TECP was also asked to address the IOP priorities and to review the site survey data with a view presenting their results at the next PCOM meeting.

Co-chief recommendations:

<u>IOP</u>	<u>TECP</u>	<u>PCOM</u>
Hesse	Cowan	Haq
Leggett	Leggett	Moore
White		Niitsuma
		Suyehiro
		Tauxe

KERGUELEN I AND II

At the May meeting, PCOM asked IOP and SOP to organize a working group of six members (3 from each panel) to provide a detailed drilling program and to establish priorities for the legs. This was established and consists of R. Schlich (IOP), D. Falvey (IOP), W. Prell (IOP), J. Anderson (SOP), P. Ciesielski (SOP) and D. Elliott (SOP). Prell is the chairman. The working group will meet in late October (27-28) and will report to PCOM at the next meeting either through correspondence or with a representative. PPSP has also reviewed a seismic profile from the Prydz Bay are and sees no problems.

Logistics:

PCOM asked, at the May meeting, that the issue of finances for a crew change in Kerguelen vs. Mauritius be re-examined by TAMU and reported on this meeting. The results of comparing the crew using the M. DUFRESNE vs. JOIDES RESOLUTION are in Figure 2. During this discussion, Cadet indicated

that the crew transport by M. DUFRESNE should be reduced by \$50K to a total of approximately \$550K. In considering these costs, PCOM indicated that even with the \$50K reduction, the cost of using M. DUFRESNE would still be \$475K more than if JOIDES RESOLUTION were used to conduct the crew transfer. Therefore, based on these figures the cost of using M. DUFRESNE was deemed to be too expensive. von Rad also indicated that the IOP considered the Kerguelen program to be very important since it was a COSOD objective and therefore the 15 days that may be gained using the RESOLUTION for the crew change are very important to the program. Based on the comparison, Robinson proposed the following motion which was seconded by Kastner.

PCOM Motion:

The PCOM recommends that the crew change between Kerguelen 1 and Kerguelen 2 be conducted using the JOIDES RESOLUTION around a normal port call.

Vote: 14 for, 2 against, 0 abstain

BROKEN RIDGE - 90<sup>0</sup>e RIDGE

Larson reported that site surveys are funded and are occurring. The issue of co-chief recommendation was deferred until the next meeting.

ARGO/EXMOUTH

Larson reported that IOP was asked to consider an extension of the leg up to a two leg program with SOHP objectives for stratigraphic deep hole tests. Larson recommended that planning be deferred until SOHP has met to consider the IOP recommendations. He indicated that he had presented the proponents prime site data to PPSP in a preliminary fashion and that there were no obvious problems, although complete documentation will eventually be necessary on Exmouth Plateau.

617 LONG RANGE PLANNING

WEST PACIFIC (9 leg drilling plan)

Larson reported that WPAC made some minor revisions of their drilling package and brought together a viable, reprioritized program. The resulting priority list consists of:

1. Bonin-1
2. Japan Sea
3. Sunda Backthrusting
4. Banda-Sulu-So. China
5. Bonin-Mariana-2
5. Great Barrier Reef
7. Nankai
8. Lau Basin
9. Vanuatu

10. Zenisu Ridge (1/2 leg)
11. Sulu Transect

The main change from the first 9 leg listing was that the So. China Sea, justified by WPAC on tectonic grounds, was not seen as viable by TECP. In the revised listing, deep basin holes are proposed in the Sulu, Banda and So. China Sea Basins for this leg and the Sunda Backthrusting proposal, by E. Silver, for the Sunda Timor region was inserted into the program. This proposal will investigate the accretionary processes at the wedge front, backthrusting processes behind the front and the vertical history of Timor island. TECP requested more collisional experiences in drilling and this satisfies that request. WPAC has recognized that the most unfocused program is Lau Basin drilling and has asked that a working group be established to develop a drilling plan.

Discussion:

Kastner expressed concern that there is a lot of overlap between the Sulu Transect and the Banda-Sulu-So. China program and suggested that WPAC merge them into a unified/uniform program. This sentiment was supported by Cadet who indicated that France feels the West Pacific drilling program is too dispersed and should be reviewed by TECP to make sure that COSOD objectives are being addressed in the most effective fashion. France feels the program should be concentrated to address more geographically focused objectives. Several other members, while commending WPAC on an excellent job, supported Kastner and Cadet and suggested that the drilling plan be concentrated on thematic interests and not spread over a wide geographical area.

PCOM Consensus:

The PCOM commends the WPAC for their excellent job in developing the revised drilling plan and accepts the plan as an operational document but is referring it to the 3 thematic panels for their views on how successfully this plan addresses the thematic objectives for the region.

It was proposed by von Herzen that DMP be asked at their next meeting to address the drilling plan with a view towards establishing a natural laboratory in the western Pacific.

WESTERN CENTRAL PACIFIC PLANNING

At the May meeting, CEPAC was asked to develop a drilling plan from the standpoint of interweaving it with western Pacific legs for logistical reasons. CEPAC, at their last meeting, responded to this Request with 2 potential programs. These are an Ontong-Java Plateau leg to investigate the age of nature of the plateau and SOHP objectives in the sedimentary section and an atoll drilling leg in the Marshall Islands area. It should be noted that CEPAC and TECP are not interested in Ontong-Java as a collision zone.

Discussion:

Francis indicated that he would like to see the interweaving occur on a scale grander than just the west Pacific and perhaps this should be an agenda item at the next meeting. Several members supported this sentiment and suggested that maybe the panels should be asked to provide PCOM with specific programs that include potential problems and techniques and specific recommendations. Discussion closed with the suggestion that at the next meeting the panel chairmen present their views on which specific programs are needed to accomplish future plans and that this information be relayed to TAMU. TAMU would then report to PCOM on their feasibility and a time table of development.

GENERAL LONG TERM PRIORITIES FOR THE PACIFIC BASIN

Tectonics Panel (TECP):

Robinson reported that TECP has developed the following major themes for the western-central Pacific:

1. Dating ocean crust
2. Plate motion and kinematics
3. Hot spots and guyots
4. Age and vertical relations
5. Lithosphere flexure
6. Oceanic plateaus

Robinson also reported that TECP has not yet dealt with the central Pacific.

Sediments and Ocean History Panel (SOHP):

Gartner reported that SOHP has only generally considered general long term priorities but has developed 2 objectives. These are:

1. High latitude vs. low latitude sedimentation problems with comparisons from the Jurassic to Neogene in the Bering Sea vs. Ontong-Java.
2. Sea level influences on sedimentary processes using guyots as general indicators.

Lithosphere Panel (LITHP):

McDuff reported that LITHP thematic objectives for the Central and Eastern Pacific are:

1. Magmatic, tectonic and hydrothermal processes at MORs
2. Deeper structure and composition of oceanic crust and upper mantle
3. Lithospheric flexure and rheology
4. Intraplate volcanism-magmatism, tectonic history
5. Crustal structure and origin of oceanic plateaus
6. Crustal and lithospheric aging
7. Mantle heterogeneity
8. Global geochemical fluxes

Central and Eastern Pacific Panel (CEPAC):

Shiplee reported the CEPAC sees itself in the role of stimulating interest in the form of workshops. Therefore they have arranged their objectives into "packages" to combine parts of proposals into single thematic objectives. From the "packages", they tried to make a tentative ranking which resulted in many objectives. CEPAC will closely examine these rankings to reduce the drilling time and will strongly favor those that accomplish thematic objectives. This more complete review will occur at the next meeting. The listing is as follows:

1. EPR 13 deg.
2. Ontong-Java Plateau (excluding collision)
3. No. Pacific Paleoplate reconstructions
4. Atolls and guyots
5. NE Pacific (INPAC) convergence
6. Juan de Fuca Ridge
7. No. Pacific paleocean-envir-climate
8. Bering Sea paleocean-envir and tectonics
9. Eq. Pacific paleocean-envir
10. Crustal flexure- Hawaiian moat
11. Old Pacific crust and seds
12. Gulf of Calif.
13. NE Pacific (INPAC) paleocean-envir
14. Aleutian convergence
15. Chile triple junction
16. Costa Rica convergence
17. Calif. margin
18. Gulf of Alaska seds and tectonics

Discussion:

Discussion indicated that fracture zone drilling was falling between the cracks and it was suggested that LITHP and TECP combine their efforts to produce a "white" paper on fracture zone drilling. The committee was also concerned that there was no mention, by SOHP, of drilling on deep sea fans, margins and other clastic problems. POOM urged SOHP to develop a more defined and specific program from this first attempt. It was generally agreed that all panels should be specific on how the problems/questions they propose in their drilling programs will be answered.

## 618 ODP SAMPLING POLICY

At the April EXCOM meeting, B. Biju-Duval (France) requested that the current ODP sampling policy be reviewed, especially the impact of the policy on the long term scientific goals of the Program. This matter was referred to the IHP for consideration (Appendix D).

Gartner reported that IHP undertook a general review of shipboard and shorebased sampling at their 10-12 July 1986 meeting. At this meeting the IHP reviewed the ODP "Shipboard Scientist's Handbook" which contained present policy and guidelines. The review indicated some of the problems encountered to date due to this policy:

1. The perception on the part of the co-chiefs that they are subordinate to the curatorial representative in sampling policy and that the Cruise Sampling Plan is rigidly enforced. (While such a problem did occur on Leg 109, mostly through a lack of communication, TAMU indicated that this is generally not true.)
2. The sampling policy is often violated with far more samples taken than could be used for study and preparation of Parts A and B of the ODP Proceedings. (Occurred on Leg 108)
3. The sample-intensive nature of some cruises (e.g. paleo-oceanographic legs) poses a problem.
4. The deferral of inordinate numbers of sample requests to post-cruise sampling at the repositories during the 12 month moratorium. (As an example, Gartner noted that after Leg 108, the East Coast Repository at L-DGO was overwhelmed by sample requests, totalling 17K, which were deferred by the scientific party until after completion of the cruise.)
5. The need to emphasize to co-chiefs that the Cruise Sampling Plan must carefully constructed to accomplish the best science without overtaxing personnel and budgets.

After discussion, IHP proposed the following guidelines:

1. Co-chiefs are urged to formulate the sampling strategy for their cruises to avoid overloading the core repositories, so that delays to sample requestors will be minimized, and overloading the shipboard scientists with sampling which degrades both the scientific experience of the individual and return on the community's investment in the cruise.
2. The scientific party should note there is an upper limit of 20K soft sediment samples that can be taken per leg. The marine techs will be occupied with routine analytical and other unassigned tasks that preclude them from sampling. It should be noted that the 20K may be raised to 35K with the activation of a second core-lab sampling station, however, with this activation a science

berth will be occupied by a second curatorial tech and the assignment of an additional 2 scientists, 24/day to sampling. This reduces that number of berths available to active (non-sampling) scientists by five.

3. The Panel also notes that the limits on hard rock sampling remain 3000/cruise with 100/individual scientist/cruise.

IHP and the curator have emphasized that sampling is not a completely rigid business and that the co-chiefs have the responsibility for changes during the cruise.

#### Discussion:

Cadet indicated that he felt that although Duval's letter had been answered, the feeling in France is that although much time is devoted to planning the science for a cruise there is no long term policy for sample distribution. He suggests that the most competent labs should be in charge of samples regardless of their size. He indicates that this would avoid duplication of studies, encourage collaboration between groups with labs that operate using specialized techniques. Further, he suggested that a special invitation be issued to special individuals/labs to perform specific studies and that the JOIDES structure and panels should be included in the process to make sure that the best labs will receive the samples. Kastner expressed support for the expressed views but indicated that sample management is not a function of PCOM and that the task of leg management lies with TAMU and the co-chiefs. Other members expressed support for the present sample policy and indicated that the 1 yr moratorium is a privilege for those who participate in the cruise and the higher quality labs will have to wait during that period to receive their samples. Several members strongly disagreed with doing sampling for the "best" labs because it will result in constant disagreements and arbitration over who gets samples.

#### PCOM Consensus:

The PCOM agrees that the response of the IHP is a reasonable statement of ODP Sampling Policy and adequately addresses the Biju-Duval concern. PCOM requests that a compilation of post cruise data distribution be produced by TAMU and L-DGO for review of the long term use of the primary information of ODP.

#### 619 COSOD II STEERING COMMITTEE PROGRESS REPORT

Larson reported that all the prime candidates for the COSOD-II Steering Committee have accepted their nominations and X. Le Pichon has accepted the Chairmanship post. Le Pichon, ESF Consortium and France have been briefed on the meeting arrangements and first meeting of the steering committee will occur on 30 September - 2 October 1986 in Strasbourg, France. At that meeting the following additional people will be invited:

- R. Larson - COSOD-1 Chairman/PCOM Chairman
- R. Anderson - Logging Program Subcontractor
- L. Garrison - Science Operator
- D. Heinrichs - NSF Representative
- D. Hammitt - Long Range Riser Drilling Plans
- B. Dennis - High temperature Hydrothermal Drilling Plans

Larson indicated that the ESF (including UK, France and FRG) is attempting to raise \$40-50K to cover the cost of the meeting and the publication of the results. The budget for the Secretariat will be covered by co-mingled funds from the ODP Budget.

PCOM Consensus:

The PCOM requests that LePichon address the committee at the next meeting to present an interim report.

620 PANEL MEMBERSHIPS AND PCOM LIAISONS

PANEL LIAISON STRUCTURE

In responding to the positions of SOHP and TECP concerning the general panel liaison structure as agreed at the May meeting, the PCOM reached the following consensus:

PCOM Consensus:

The PCOM recommends that an ad hoc system should be established for regional panel liaison attendance at thematic panel meetings and that each panel chairman should determine specific areas of discussion before his meeting and then invite the appropriate regional liaisons.

PANEL CHAIRMANSHIPS

Central and Eastern Pacific Panel:

Votes tabulated at the JOIDES Office indicate a preference for S. Schlanger with E. Davis as a back-up, which was confirmed at the meeting.

Southern Oceans Panel:

In view of the future resignation of J. Kennett, the PCOM agreed that P. Barker (UK) should be asked to chair the panel.

Information Handling Panel:

In view of the future resignation of D. Appleman and to fill vacancies, PCOM agreed that R. Ingersoll be asked to join the panel. PCOM also agreed that T. Moore (Exxon) be asked to join, if he refuses then J. Hayes (L-DGO) will be asked. If Moore accepts the invitation, the PCOM recommended that he be appointed as panel chairman. If Moore refuses the chair then R. Ingersoll will be asked to be chairman.



Pollution Prevention and Safety Panel:

PCOM agreed that M. Ball (USGS) should be asked to chair the panel.

Downhole Measurements Panel:

In view of the future resignation of M. Salisbury, PCOM held a straw vote, proposed by Robinson, to approve the prioritized list of nominations. Results were: 1. Worthington

2. Becker
3. Oldhoef

Results of the straw vote were: 15 for, 1 against, 0 abstain

RESIDUAL PANEL MEMBERSHIP ISSUES

Lithosphere Panel:

- J. Cathles refused invitation to join
- A. Saunders replaced by J. Pearce (UK)
- M. Leinen rotated off

PCOM Consensus:

It is agreed that the panel membership for LITHP is out-of-balance and that LITHP should be asked to revise their membership with a view of including a sediment geochemist. It is agreed that J. Mutter should be asked to join the panel to replace M. Purdy.

Sediments and Ocean History Panel:

PCOM agreed to confirm R. Garrison as a member. The PCOM also requested that SOHP propose an organic geochemist replacement at the rotation of L. Tauxe off the panel. PCOM also expressed concern that the panel lacks an oceanographer and requests an addition of one with the rotation of W. Ruddiman off the panel.

For a clastic sedimentologist, PCOM proposed W. Normark as the prime candidate and A. Shor as the back-up.

Tectonics Panel:

PCOM confirmed D. Davis as a new member.

Central and Eastern Pacific Panel:

PCOM was informed that H. Schrader will serve as the ESF Consortium representative as of 1 Jan. 1987. Until that time, C. Sengor (the official alternate) will be the representative.

PCOM suggested that M. Flower be asked to join the panel with D. Clague as the back-up.

Indian Ocean Panel:

PCOM proposed that L. Keigwin (WHOI) be the first priority replacement for L. Tauxe.

Technology and Engineering Development Committee:

PCOM agreed to accept the following new people to TEDCOM:

M. Chenevert (UT)  
K. Millheim (AMOCO)  
D. Wilson (Chevron)  
C. Sparks (France)  
A. McLerran

INTERPANEL LIAISONS

Central and Eastern Pacific Panel:

to SOHP= W. Slider  
to LITHP=E. Davis (preferred) or M. Flower (back-up)

Western Pacific Panel:

to LITHP= S. Scott

Indian Ocean Panel:

to SOHP= W. Prell  
to LITHP=R. Duncan  
to TECP= J. Curray

DISBANDMENT OF RED SEA WORKING GROUP

Action postponed until the next meeting.

ESTABLISHMENT OF LAU BASIN WORKING GROUP

Several members were against its formation until specific targets have been established and because it is not a high priority program for WPAC. However, other members favored its establishment due to the geographic distance involved for data evaluation and site determination. Others suggested that instead of a full working group, an ad hoc working group could be established or that WPAC encourage a proponents meeting to consolidate ideas. It was agreed that such a meeting should not be supported by JOIDES funds. Voting yielded the following:

Vote to establish a formal Lau Basin WG: 3 for, 9 against, 2 abstain

ESTABLISHMENT OF PHYSICAL PROPERTIES WORKING GROUP (as requested by DMP)

Action postponed until the next meeting.

621 FUTURE MEETING SCHEDULE

Planning Committee Meeting with Panel Chairmen  
19 - 23 January 1987  
Honolulu, Hawaii

622 OTHER BUSINESS

ODP MANAGER PRESENTATIONS AT PCOM MEETINGS

L. Garrison reported that the managers at TAMU feel that direct communication with PCOM may enable them to better understand committee decisions and enable them to get their points across better. Garrison asked PCOM if they are willing to schedule one extra day/year so that ODP Managers could interact directly with PCOM. Several on the committee responded that Garrison is an effective liaison and there was no need for any additional interface. The PCOM suggested that they continue to invite ODP managers as problems arise on an ad hoc basis.

PCOM Consensus:

The PCOM agrees that attendance to PCOM meetings by ODP Managers will be on an ad hoc basis at PCOM's invitation and not on a regular schedule. The PCOM will always welcome the views of the managers communicated through Lou Garrison.

In closing the meeting, Larson thanked P. Robinson and L. Horne for hosting the meeting and the strawberry picking adventure, and J. Malpas and D. Butler for conducting the field trip. Larson also thanked J. Honnorez, R. von Herzen and D. Hayes for their service to the PCOM. During the closing, the PCOM thanked R. Larson, T. Mayer, M. Burdett and D. Keith for their service over the past two years and welcomed N. Piasias as the new PCOM Chairman.