

JOIDES PLANNING COMMITTEE MEETING  
19-22 April 1988  
College Station, Texas

MINUTES

Members:

N.Pisias (Chairman) - Oregon State University  
G.Brass - University of Miami  
H.Beiersdorf - BGR, Federal Republic of Germany (for U. von Rad)  
J.P.Cadet - France  
D.Cowan - University of Washington  
W.Coulbourn - Hawaii Institute for Geophysics  
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  
R.Larson - University of Rhode Island (for M.Leinen)  
P.Robinson - Canada (for J.Malpas)  
T.Shipley - University of Texas Institute for Geophysics  
A.Taira - Ocean Research Institute, Japan  
B.Tucholke - Woods Hole Oceanographic Institution

Liaisons:

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

Guests / Observers:

X.Le Pichon (COSOD II Steering Committee Chairman), Ecole Normal  
Superieure, France  
L.D'Ozouville (CCOP/SOPAC, Fiji)  
R.Anderson - Borehole Research Group (ODP/LDGO)  
E.Kappel - JOI, Inc.  
L.Stevens - JOI, Inc.

TAMU Staff:

R.Merrill - Sciences Services  
A.Meyer - Science Operations  
B.Harding - Engineering and Drilling Operations  
M.Storms - Engineering Development  
D.Huey - Engineering  
S.Howard - Engineering  
T.Pettigrew - Engineering

JOIDES Office:

M.Wiedicke  
S.Stambaugh

MEETING HANDOUTS

1. WPAC Executive Summary for 11-13 April 1988 meeting (J)
2. Notes on WPAC Logging/Downhole Measurements Program (from DMP/Jarrard)
3. Nankai drilling scenario (from R.Jarrard) (K)
4. Letter from Leg 122 co-chiefs to PCOM Chairman
5. FY88 NSF Budget (B.Malfait) (A)
6. Viewgraphs from JOI, Inc. report (T.Pyle)
7. Arctic Drilling Five-Year Plan for 1989-1994 (from L.Johnson, ONR, through T.Pyle)
8. Shipboard Participation Tally, Legs 101-123 (A.Meyer) (C)
9. Viewgraphs from TAMU Engineering Presentation (Barry and the Engineers) (D)
10. Letter re: proposed S.China Sea Margin program (from D.Hayes through Langseth)
11. Final East Pacific Rise WG Report (E.Davis)
12. Wireline Logging Services Report (R.Jarrard) (E)
13. Operations Times, Legs 122 and 123 (L.Garrison)
14. ODP Operations Schedule (revised 4/25/88 from L.Garrison) (G)
15. Memo from T.Francis on August PCOM meeting arrangements
16. Summary of COSOD II discussions (prepared at meeting) (F)
17. Proposed outline for ODP Long-Range Planning document (prepared during meeting) (M)
18. CEPAC Mesozoic Paleoceanography Objectives (from Brian Tucholke, PCOM watchdog for this CEPAC program)

Tuesday, 19 April 1988

710 INTRODUCTIONS AND WELCOME

N.Pisias, PCOM Chairman, welcomed members and guests. M.Friedman, (Dean of the College of Geosciences at Texas A&M University and meeting host, welcomed PCOM to TAMU and expressed appreciation for PCOM's dedication toward making DSDP and ODP outstanding scientific programs.

The Chairman welcomed PCOM returning retirees, R.Larson and H.Beiersdorf (alternates for M.Leinen and U.von Rad respectively), and introduced D.Cowan, new PCOM representative from U.Washington. Pisias welcomed COSOD II Steering Committee Chairman, Xavier Le Pichon and introduced Laurent D'Ozouville, the non-U.S.liaison for the University of Hawaii JOIDES Office rotation beginning October, 1988. Pisias also introduced Lee Stevens, new clearance specialist based at JOI, Inc.

L.Garrison introduced TAMU/ODP staff members: P.Rabinowitz, B.Harding, R.Merrill and A.Meyer. Pisias sent regrets from Leg 117 Co-chief, Warren Prell, and announced that Leg 119 and 120 co-chiefs would report at the next meeting.

## 711 ADOPTION OF THE AGENDA

Pisias said that the agenda item "Short-Range Planning" would be rearranged to reflect the planning impact of extending Leg 120 for four days. B.Tucholke asked if Proposal 300/B (Return to SWIR) would be discussed in detail. As TECP and LITHP did not endorse the present proposal, no specific agenda item for PCOM review was added.

### PCOM Consensus:

PCOM approves the agenda for the 19-22 April 1988 meeting.

## 712 APPROVAL OF PREVIOUS MINUTES

### PCOM Motion:

PCOM adopts the minutes of the 30 November - 4 December Annual meeting of the Planning Committee.

Vote: 16 for; 0 against, 0 abstain

## 713 NSF REPORT

### FY88 Budget Update and FY89 Projections

B.Malfait reported for the National Science Foundation (written report attached as Appendix A). Malfait presented an update on the FY88 budget which was approved by Congress shortly after PCOM's December meeting (Appendix A.1). The U.S. deficit has impacted NSF increases; basic science is being supported, but funding for several major initiatives as well as academic fleet upgrades is being delayed. ODP received a 2.2% increase for FY88 (\$.6M); the requested increase was 4.3% of the FY87 budget (\$1.3M). For FY89, ODP has requested a steady-state level of funding (\$1.4M or 4.6% increase, Appendix A.2).

### FY 89-92 Program Plan and Long-Range Planning

Details on the 4-year ODP program plan, currently being prepared by JOI, PCOM and the subcontractors, are shown in Appendix A.3. This plan will be presented to the U.S. Science Board in August.

Malfait provided PCOM with details for a long-range planning document which will be the blueprint for post-1993 ODP activities (Appendix A.4). This document, prepared by PCOM/EXCOM, must be ready for NSF review by early 1989; it will be used to negotiate new MOUs and evaluate funding levels.

Program Plan Status

T.Pyle opened the report for JOI Inc with an update on the FY89-92 Program Plan. The final draft is scheduled to be completed by 1 May, with NSF Panel Review, EXCOM review (25-27 May meeting) and National Science Board review to follow. Pyle noted that for future program plans, PCOM should be more involved in writing up sections of the plan which highlight ODP scientific achievements.

Pyle presented a budget summary for FY89-92, comparing BCOM's recommendations (breakdowns and totals listed in Appendix B.1) with NSF targets. An increase in international partner contributions was budgeted for FY90. BCOM recommendations exceed NSF targets in FY 91 and 92.

He reviewed the Special Operating Expenses (SOE) for FY89. BCOM had recommended that some of the 4% special operations budget be applied to anticipated overruns in the standard operating budget for FY89. PCOM input on approximately \$335K of uncommitted SOE for FY89 is needed (Appendix B.2) PCOM advice on SOE expenditures is needed for FY90-92 (Appendix B.2) Development of the mining-type diamond coring system (DCS) and hard-rock guidebases for the EPR drilling consumes much of the SOE in these years.

PCOM Discussion

It was noted that the projected budgets would not cover engineering objectives outlined at COSOD II. G.Brass pointed out that ODP has had to demonstrate a "lean" program in order to justify substantial increases to NSF; BCOM's requests are still greater than NSF targets if planned scientific objectives are to be achieved. PCOM discussed potential loss of non-U.S. partners if significant technology developments are not pursued.

PCOM budget recommendations for uncommitted Special Operations Budget were discussed after presentations by the subcontractors and results appear below (Minute 717).

Other JOI Issues

T.Pyle discussed several other issues for PCOM consideration, including:

- \* Potential problem with DCS incompatibility with ODP logging tools (will require slimming of Schlumberger tools)
- \* Cost alternatives to Part A publications (suggested by the PEC and currently under review by the Information Handling Panel)
- \* Shipboard computing capacity and requirements for processing the new formation microscanner (FMS) data

Highlights of recent JOI, Inc activity included:

- \* ODP Policy Manual will be presented to EXCOM in May.
- \* Favorable TAMU administrative cost review by Trowbridge committee appointed by JOI Board of Governors.
- \* Lesser Developed Countries initiative (Indian scientist participation

on Leg 116 and visiting Saudi scientist at Lamont Borehole Research Group) and recent hire of Lee Stevens, clearance specialist, who will assist JOI and TAMU on clearance and LDC participation.

- \* Second Performance Evaluation Committee (PEC) review. [Site visits completed; draft report by late June. Comments by the PEC have focussed on tightening up the JOIDES advisory structure and the fact that ODP publications are regional rather than thematic in nature.]

## 715 SCIENCE OPERATOR'S REPORT

### Leg 118

P. Robinson, Leg 118 co-chief, provided an overview of the scientific and operations results from the Southwest Indian Ridge/Atlantis II Fracture Zone drilling.

He discussed site survey operations and spud-in attempts as well as the HRGB deployment (2-day operation) at a shallow site (Hole 735B) on the wall of the fracture zone. In 17 days of drilling, 500 meters of massive Layer 3-type gabbros were penetrated, with average recovery of 87%. The logs from Hole 735B will be important for "groundtruthing" ODP logs to cores.

Robinson commented on the need for excellent camera surveys for future hardrock drilling, as SSP has recommended. He commended the TAMU engineering staff on their contributions to the success of the leg. He added that fracture zones represent potentially productive sites for achieving long-term goals of deep crustal penetration.

### Leg 119 and 120 Updates

L. Garrison provided updates of the Kerguelen Plateau/Prydz Bay drilling, and discussed the impact of weather and safety issues on these legs. Leg 120 in particular has experienced heavy sea conditions. Due to a medical emergency, the JOIDES RESOLUTION made a 17-day transit and portcall to Fremantle during Leg 120. The Leg has been extended four days to 1 May in order to accommodate drilling at SKP3C and SKP2D. The extension of time to Leg 120 impacts future leg scheduling.

Cherts and limestones at SKP3D (Site 750) slowed drilling times, as did weather conditions. Chert at SKP3C was less massive and penetration with constant weight on bit was no trouble, but wash out of sediment interlayers caused drilling problems. Although basement objectives were affected by the loss of time to Leg 120, basalt was penetrated at Holes 747C and 750B.

Garrison explained the decision to release the MAERSK MASTER when it was no longer needed for ice support on Leg 119. The contract was extended as far as possible. The higher than anticipated fuel costs were recovered by reprogramming funds out and the support boat was available for as long as needed. No safety problems were posed for the remaining time on Leg 119 without ice support. A. Meyer briefly reported on the third party plankton tow studies on the MASTER.

T. Francis asked whether scientific objectives for the leg were achieved considering that the Cretaceous section was not recovered. Piasias responded that the recovered Oligocene section showed signs of compaction, possible evidence of load from extensive ice sheets. These results, in conjunction with the drilling on Legs 113 and 114, are significant in that the E. Antarctic ice sheet may have developed earlier than previously reported (early Oligocene?).

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ODP Operations Superintendent, Lamar Hayes, suffered massive heart failure and died during Leg 120. The Planning Committee expressed its sympathy to Lamar's family and friends with the following motion, written by Roger Larson, and seconded and unanimously affirmed by the Planning Committee:

PCOM Motion:

The JOIDES Planning Committee acknowledges the debt and gratitude that the scientific ocean drilling community owes to ODP Operations Superintendent, Lamar Hayes, who died at sea aboard the JOIDES RESOLUTION on March 27, 1988. Lamar first joined the Deep Sea Drilling Project in August, 1970, and sailed with many of us on Glomar Challenger between Legs 18 and 35, and more recently on the JOIDES RESOLUTION.

From his earliest days with DSDP, Lamar served as a leader, teacher, mediator and father to those around him. For those of us who do science at sea in what is often a hostile and unforgiving environment, the presence of even one of these personages for advice and console is a rare and welcome sight. These memories of Lamar form the basis of our gratitude. The debt we owe him is to continue our conduct of the Ocean Drilling Program in a manner befitting of that memory. Whether grappling with complex planning decisions in committee or with a difficult and remote site at sea, we should seek to bring to bear all of the technical and scientific expertise, coupled with the sensitivity and good humor, that Lamar always brought to the job.

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Staffing of ODP Cruises

A. Meyer reported on staffing of upcoming ODP cruises and presented a tally of participation by member country for Legs 101-123 (Appendix C). M. Kastner pointed out that with the nomination of Patricia Fryer for Leg 125, the percentage of women ODP co-chiefs was raised to 3%. L. Garrison added that both women co-chiefs are from the U.S.

A. Meyer discussed staffing for Leg 124E, which is expected to have a scientific advisory party of 4-6 members. ODP is looking for scientists with prior shipboard experience (especially with ODP) to describe core, physical properties, and core deformation and to work with the engineering staff on 124E.

## ODP Science Services Report

### PUBLICATIONS

R.Merrill reported for TAMU with updates on publication target dates and the Part B editorial review boards (with external reviewers confirmed through Leg 115). Post-Leg 106 Part B publication schedules reflect the PCOM-approved changes to production. Part A volumes as of Leg 111 will include the approved volume citation.

### COMPUTER FACILITIES

Merrill discussed the requests by shipboard scientists for improved computing capabilities, and TAMU has written a proposal to JOI, Inc for the addition of a MicroVAX 3000 onboard the RESOLUTION at an estimated cost of \$151K. (The additional computing capability will interface with the planned additional processing for the Formation Microscanner requested by LDGO). DEC Pro350s onboard will be, for the most part, replaced by IBM compatibles at the next portcall.

### "GERIATRIC CORE STUDY"

Merrill reported on the TAMU study of ODP cores to study the integrity of physical properties and faunas over time and to see the effects of ODP storage methods. A core from Leg 124E will be dedicated to this study.

## ODP Engineering Report

B.Harding reported for the TAMU Engineering Group, with assistance from TAMU engineers assigned to specific engineering projects.

### ENGINEERING TEST LEG 124E: STATUS REPORT

B.Harding and M.Storms gave an update on plans for Leg 124E; a prospectus of the leg will be available to PCOM before its August meeting. The summary of highest priority tests (Appendix D.1) estimated that a total of 35 days are required. (The current ship operations schedule calls for a 30 day leg.)

Shallow water testing of the diamond coring system (DCS), estimated at approximately 2 weeks (dependent on Navidrill results from Leg 121), is a top priority in response to the timetable of engineering needs for the program (Appendix D.2). XCB testing is scheduled in side-by-side test holes in order to monitor and modify drilling parameters. A dedicated hole for testing of downhole measurements is planned.

TAMU has planned a 3.5 day deepwater test (25-30K ft WD) to test all systems, run bending tests, and positioning. PCOM discussions of this pointed to better use of the engineering time to test chert drilling during Leg 124E.

R.Anderson discussed plans for testing logging and downhole measurement tools on 124E. The following 7 days of testing have been recommended by DMP:

- Wireline packer (2 days)
- Wireline heave compensator (1 day)
- Formation Microscanner (1 day)
- GST through-wiring (1 day)  
(necessary to reduce standard runs from 3 to 2)
- Geoprops probe (0.5 days, assuming test of Navidrill)
- ODP rotatable packer (1.5 days)
- Side entry sub (circulating while logging)

Harding reviewed alternate tests proposed for 124E, if time permits or if primary tests are not achievable (Appendix D.3).

Testing of the Kevlar sandline presumes the purchase of this equipment (about \$100K), which PCOM felt was not a high priority purchase at this time.

Harding reviewed anticipated costs for Leg 124E (Appendix D.4), with the major cost (\$600K) for rental of the diamond coring system (although the possibility of off-loading the equipment early may cut rental costs). Funding for the leg (Appendix D.4) assumes that \$300K of the FY89 Special Operating Expenses will be available.

TAMU Engineering Staff presented development updates on major engineering priorities: the prototype diamond coring system (S.Howard), Navidrill Core Barrel and improved XCB (D.Huey), pressure core sampler and Vibracore (T.Pettigrew).

Items of concern to PCOM during these presentations were:

- \* At present the engineers have estimated the capability for the DCS drilling is 5500m water depth. This satisfies targets for drilling on the East Pacific Rise, but will not satisfy long-term crustal penetration objectives.
- \* The redesigned Navidrill has successfully drilled laboratory mock-ups of soft/hard interbedded materials, with diamond-impregnated piloted bits. If results from Leg 121 are not promising, the Navidrill may not be ready for Leg 124E.
- \* The plans for the Pressure Core Sampler call for completion of a Phase I design by Leg 124. Some PCOM members were concerned that samples will not be accessed under in situ conditions and fluids will be contaminated if sampled with a tool at this phase of design. A commitment to full Phase II design (access to core under pressure) is necessary for a useful tool for in situ sampling. PCOM and TAMU agreed that Phase I will refer to an engineering milestone and Phase II would represent a scientifically viable tool.

At the conclusion of the engineering presentation, N.Pisias thanked the engineering staff for their responsive reports. PCOM further discussed Leg 124E on 20 April. PCOM supported the deep-water tests, but thought



interbedded chert drilling the higher priority. R.Larson proposed Leg 124E drilling in the vicinity of the westernmost Marianas basin, where chert lithologies were known from Leg 60 drilling.

PCOM Motion:

The TAMU Engineering Group will include adequate time in Leg 124E for testing soft formation recovery capabilities in a deep water, interbedded chert sequence by reoccupying DSDP Site 452A in 4872m of water in the westernmost Mariana Basin at 17° 40.17'N, 148° 37.75'E, or at an equivalent adjacent site. (Motion, Larson, second Brass)

Vote: 16 for, 0 against, 0 abstain

PCOM did not exclude the deepwater test with this motion, but further clarified priorities and time assigned to 124E with the following motion:

PCOM Motion:

For Leg 124E, 35 days of operation time will be scheduled. The interbedded chert drilling tests are of higher priority, than the deep water hangout test. (Motion, Kastner, second Larson)

Vote: 16 for, 0 against, 0 abstain

PCOM Consensus:

PCOM welcomes the initiative shown by the TAMU Engineering Group on the mining-type diamond coring system and supports this potentially important development for ODP.

#### DEVELOPMENT ENGINEERING PROJECT SCHEDULE

M.Storms presented the engineering schedule through FY90 (Appendix D.2) and the 'generic technology requirements' schedule (Appendix D.5 ), the results of advanced engineering planning since the Oregon PCOM meeting. Storms asked that the PCOM Chairman filter any changes to the schedule, which calls for testing of equipment before critical scientific need (Navidrill testing prior to WPAC programs, e.g.).

Because of other program needs, continued work on high temperature drilling has focussed on preliminary steam flash studies. TAMU will monitor land-based tests (Sandia caldera drilling and Los Alamos projects) and asked for temperature parameters for possible drill sites (Juan de Fuca Ridge e.g) to continue development work for high temperature drilling. The TAMU engineers will consult the EPR Working Group report for descriptions of anticipated drilling conditions. M.Kastner, as LITHP liaison, agreed to summarize information for TAMU. M.Langseth added that high heat flow values have recently been measured on a Japanese survey near BON-1, and high T drilling may impact the WPAC program.

20 April 1988

## 716 WIRELINE LOGGING SERVICES REPORT

### Leg 118 Results

R. Jarrard reported for the LDGO Borehole Research Group and a written report is attached (Appendix E). Jarrard reviewed results of Leg 118 logging, discussing the contribution of logging to the science on the leg and the ability of calibrating the logs to the well-recovered core from Leg 118. The initial review of the logs do not show evidence of repetition of section. Although PCOM scheduled 8 days for logging on Hole 735B, it was completed in only 6. The geophysical logs indicated crustal velocities near Moho values (7 km/sec) and the vertical seismic profile experiment show a major reflector about 500m beneath the bottom of the hole.

### Evaluation of ODP logs/Review of Specialty Tools

Jarrard discussed evaluations of logging success through Leg 119. Substantial decreases in holes lost to bridging problems have occurred since Leg 111 (90% of planned logging completed) but stuck XCBs have been responsible for lost holes in recent legs (see figure, Appendix E). Jarrard reported that an increase in tool failures on first runs on recent legs has not encouraged co-chiefs to send down back up tools.

Jarrard reviewed the deployment schedule for logging/downhole specialty tools through tentative Leg 135 (see figure Appendix E). Jarrard was disappointed that the BHTV has been deployed only at SWIR during the Indian Ocean campaign, and said that stress measurements from Leg 121 with the BHTV would be valuable for continuing the DMP recommendations for a world stress map. The FMS should help fulfil stress measurement objectives when it is on line for WPAC.

### Improvement of ODP Logging Programs

In order to more fully exploit the scientific value of ODP logs, the JOIDES shipboard logger may be asked to help with cruise and post-cruise processing for future legs. Acquisition of user software is scheduled for later this year to speed up processing. Jarrard asked for increased awareness of logging objectives at pre-cruise meetings; increased awareness from operations superintendents that three logging strings are standard; and possible increase of logging through pipe. LDGO and JOI will address tool breakdown with Schlumberger.

Specific action items suggested to PCOM from the logging group were:

- 1) Should every XCB hole with greater than 750m of penetration have standard logs run in two stages? [With deeper drilling, the XCB is pushed to the limit and circulation deteriorates. LDGO would like to ensure that at least the top 750m are logged before the hole is deepened and possibly lost.]
- 2) Should logging plans include 10% contingency time?

Discussion:

Harding said that good results from tests of the lockable flapper valve indicate that two-stage logging will be possible after final Leg 121 testing. P. Robinson, as a recent co-chief, supported adequate time for logging and good faith efforts by co-chiefs to stick to the logging plan. L. Garrison said that the contingency time scheduled at PCOM's request for ODP legs includes contingency time for logging. PCOM agreed that realistic time estimates for logging would be more advisable than scheduling contingency time.

PCOM Consensus:

For holes planned deeper than 750m, TAMU and LDGO will schedule time for two-stage logging. Logging at 750m will ensure logs for that interval. PCOM asks for a review of this procedure by LDGO and TAMU in 6-8 months.

717 PCOM FY89 BUDGET RECOMMENDATIONS

In the JOI, Inc presentation, T. Pyle asked PCOM for recommendations for approximately \$335K of uncommitted Special Operations Expenses for FY89 for the priority projects listed below:

- \* Rental of the diamond coring system from TONTO for Leg 124E (\$300K)
- \* Rental and engineering time for percussive drilling (Vibracore) system (\$85K)
- \* Hardware enhancement to shipboard VAX for FMS processing (\$45K)

R. Anderson noted that the upgrade for the shipboard VAX (MicroVax 3000) will not handle the array processors needed for the FMS. B. Harding said that engineering feasibility for the Vibracore system would continue under present budget funds, but without additional funding, no equipment rental or testing would be possible.

PCOM Motion:

Uncommitted special operating expenses for FY89 (\$335 total) will be devoted to diamond coring system development for Leg 124E (\$290K) and to a VAX enhancement for processing the formation microscanner data (\$45K). (Motion, Brass, second Francis)

Vote: 16 for, 0 against, 0 abstain

718 COSOD II AND LONG-RANGE PLANNING

Chairman N. Piasias opened the discussion on long-range planning and outlined the procedure to begin at this meeting:

- 1) An introduction on COSOD II by X. Le Pichon, Steering Committee Chairman.
- 2) An open discussion of the COSOD II Working Groups led by the assigned PCOM watchdogs.

- 3) Prioritize/adopt COSOD II recommendations and other input (COSOD I, JOIDES panels) into a series of options reflecting:
  - i) increasing funding levels
  - ii) order of engineering development as a function of funds
  - iii) decision points: what happens if a technological development is too costly or unfeasible?
- 4) Identify the level which is essential for a scientifically exciting ODP program beyond 1993.

#### INTRODUCTION BY XAVIER LE PICHON

Le Pichon thanked PCOM for the invitation to attend the meeting and for PCOM and JOI's input to COSOD II. His impressions from COSOD II included:

- \* The twenty years of success of ocean drilling, based on sound management and extension to the international community, may be jeopardized without evidence of continued progress.
- \* Need to involve Lesser Developed Countries in ODP - how to include the scientific contributions of countries not able to join ODP.
- \* Need to open the program to new scientific constituencies such as global seismic networks and global change programs.
- \* Need for new technologies as stated in the COSOD II chapter on technology.
- \* Need to make ODP an experiment-oriented program.

Le Pichon advocated setting up short-lived working groups to design drilling experiments and have more outside review of them. He recommended that before 1992, ODP should develop a technology outline, possibly funded by a separate budget, and identify one experiment (EPR, e.g) that demonstrates that the program is moving into a new mode.

#### Discussion:

PCOM discussed the strengths of the program versus merely providing a scientific facility. Balancing an experimentally-driven program with opening it to new constituencies may pose special problems. G.Brass pointed out that ODP already has a major role in NSF global change programs, and that coordinating with global seismic networks is impossible without a downhole seismometer.

T.Francis said that even without major advances in technology after 1992, ocean drilling will continue. Losing even one member country over this issue, however, would constitute a financial crisis for ODP. P.Robinson said that there is broad support for ODP in Canada, but did not advise "diluting" the program by tacking on other programs.

PCOM also discussed the perception by the scientific community that ODP is still in reconnaissance mode, without the driving force of testing the plate tectonics theory that DSDP enjoyed. H.Beiersdorf added that paleoceanography and global climate change, disciplines "created" by DSDP,

are exciting results of ODP. D.Cowan said that an exciting result of COSOD II is global themes that integrate fluid studies, composition of the mantle, hydrothermal systems etc. into projects that will bring together earth scientists from many disciplines.

PCOM briefly discussed potential new sources of funding for ODP such as more industry involvement. ODP engineering developments have commercial drilling potential, but sections of the existing MOUs regarding patent rights would need modification.

#### REVIEW OF COSOD II WORKING GROUP THEMES

Assigned PCOM watchdogs gave overviews of the five COSOD II Working Groups. The watchdogs were:

<u>COSOD II Working Groups(s)</u>	<u>PCOM Watchdogs</u>
I. Global Environmental Changes, & V. Evolution and Extinction of Oceanic Biota	N.Pisias W.Coulbourn, S.Gartner
II. Mantle-Crust Interactions	Robinson (Canada), R.Larson
III. Fluid Circ. and Global Geochem. Budget	M.Kastner, A.Taira
IV. Stress and Deformation of the Lith.	O.Eldholm, M.Langseth

#### COSOD II AND LONG-RANGE PLANNING

PCOM discussions on the importance and impact of COSOD II were summarized and the outline circulated for PCOM review at the meeting (Appendix F). This outline will serve as a basis for further integration of COSOD II objectives into long-range planning documents.

PCOM acknowledged the leadership of X.Le Pichon in organizing COSOD II and ESF's role in coordinating the conference and final report with the following:

#### PCOM Motion:

The JOIDES Planning Committee expressed its thanks to those responsible for the success of the Second Conference on Scientific Ocean Drilling and, in particular, for the energetic leadership of Xavier Le Pichon, its Chairman. We are also very grateful to the European Science Foundation for the publication of the report. The Planning Committee, in constructing its long-range plans, will rely on the guidance and advice so ably presented in the COSOD II report. (Motion, Brass, second Kastner)

Vote: 16 for, 0 against, 0-abstain

21 April 1988

719 SHORT-TERM PLANNING

PCOM had previously been informed by the Science Operator that the 4-day extension of the Leg 120 would impact scheduling. Options for reassigning leg time included: taking 2 days each from Legs 122 and 123, and extending Leg 124 to 56 days to avoid disruptive Christmas season portcalls. PCOM decided to review the science programs on Legs 122 and 123 in detail to study the impacts of recent safety reviews before automatically extending Leg 124.

LEG 122 PLANNING

Leg 122 (Exmouth Plateau):

Co-chiefs: U.von Rad (FRG), B.Haq

Sites: EP-7, EP-10A, EP-12, EP-2A; [if EP-12 is not advisable the priority is: EP-7, EP-10A, EP2A, EP-6]

Pisias reviewed the PPSP safety decisions effecting Leg 122 and 123 and site priorities for Leg 122 as previously defined by PCOM (see above). Sites EP-6, EP-7F, and EP-12 were rejected; Sites EP-2A and EP-11B were approved. Site EP-9F was approved to 1300m; Sites EP-9E and EP-10A were approved with certain restrictions. PPSP again reviewed the program and suggested drilling holes near existing industry wells where hydrocarbon potentials are known. The current program does not address the syn-rift basement objectives planned at EP-12. SOHP has indicated that the program, even with the loss of Jurassic sediments penetration, is still scientifically viable.

L.Garrison reviewed the drilling times for the leg (Appendix G) and relocation of the sites. Pisias reviewed the relocation of EP-12 and noted that Leg 122 has safety impact on Leg 123 as EP-9 drilling is contingent on safely drilling EP-10 on this leg. PCOM discussed the merit of drilling where industry logs are available at the twin sites; ODP drilling would provide continuous core of similar sections, however. Robinson asked that the co-chiefs' preference for drilling EP-7 and EP-12 over EP-2A be considered. Ample contingency time and enough time for EP-10 drilling were PCOM priorities in these discussions.

PCOM Motion:

In view of the PPSP safety review, Leg 122 drilling at the Exmouth Plateau will include, in priority order, Sites EP-10A, EP-2A and either EP-7 or EP-12, depending on co-chief option. Operational time for the leg is set at 38.5 days, 14 days of transit and 2 days contingency time, for a total leg length of 55 days. (Motion, Brass, second Larson)

Vote: 16 for, 0 against, 0 abstain

(Note: The ODP operations schedule, updates 4/25/88 and attached as Appendix H indicates a total of 56 days at sea for Leg 122.)

LEG 123

Leg 123 (Argo Abyssal Plain):

Co-chiefs: F.Gradstein, J.Ludden (both Canada)

Sites: (EP-9E), AAP-1B

Pisias reviewed a letter from Leg 123 co-chiefs. circulated at this meeting, which requests minimum penetration of 200m at Site AAP1B and outlines the logging priorities for the leg. Time estimates for the leg are listed in Appendix G.

Robinson urged deeper penetration at AAP1B (500m) and asked for additional time for the leg to achieve this objective. Brass, as SOHP liaison said that SOHP has long advocated this site as a deep stratigraphic test hole, and that VSP experiments at the hole are essential. Jarrard said that the Leg 123 shipboard party includes D.Buffler, who can process VSP data; Jarrard estimated that one extra day would be needed for the experiment. He also recommended substituting the standard susceptibility tool with the French magnetic susceptibility tool on the leg, as it can be used in both sediments and basement.

PCOM Consensus:

Leg 123, with a total of 60 days, will include a VSP experiment at Site AAP1B. PCOM accepts the use of the French magnetic susceptibility tool on the leg. PCOM restates the priority that AAP1B will be drilled to as deep a level in the oceanic crust as possible.

PCOM rejected the request of the co-chiefs for a 200m minimum penetration with the above consensus.

(Note: See Appendix H for new departure and arrival dates for Leg 123.)

## 720 JOIDES PANEL STRUCTURE

At the last PCOM meeting, the subcommittee to evaluate the present panel structure met and prepared initial recommendations, which were briefly introduced to PCOM by T.Francis. The subcommittee consisted of: T.Francis, M.Langseth, A.Taira, M.Leinen (written comments only), and R.Heath (EXCOM). N.Pisias sat in on the initial meeting of the subcommittee.

M.Langseth presented the conclusions of the panel and overheads of their recommendations are attached as Appendix I.

Discussion:

PCOM discussions on the recommended changes to the advisory structure focussed on:

- \* Spitting SOHP into two panels: how to ensure that fluid circulation, now a LITHP hydrothermal circulation theme, is handled in the new structure.
- \* The need for a hierarchical structure where input from the Detailed

Planning Groups (DPGs) goes through the thematic panels and not directly to PCOM. Some members thought the "path" of information should be clearly stated in the mandate of each DPG and thematic working group.

- \* The current East Pacific Rise Working Group is a good model for how the thematic subgroups should operate as it provided needed expertise and flexibility to a priority drilling program.
- \* The role of proponents on DPGs must be balanced with other outside expertise to avoid conflict of interest.

M.Langseth pointed out that the key to a thematically-driven program is long-range planning, which will be primarily the responsibility of the thematic panels and of PCOM. Francis added that proposals are not unsolicited as long as long-term plans are identified to the community. Piasias said that the thematic panels are being asked to provide PCOM with an outline of long-range themes and a map of where best on the globe to drill these problems. LITHP has updated its "White Paper" and the other thematic panels will soon respond. [Note: The thematic panels have been asked to hold special meetings or to circulate position papers to all members before the August PCOM meeting, so that PCOM has thematic input for the long-range planning document.

PCOM Motion:

PCOM accepts the recommendations for the JOIDES Advisory Structure as forwarded by the Panel Structure Subcommittee and summarized by subcommittee member, M.Langseth, to be used as a framework for the JOIDES panel structure. (Motion Robinson, second Eldholm)

Vote: 16 for, 0 against, 0 abstain

Subsequent discussion by PCOM centered on life-time of and mechanism for setting up the DPGs, proposal review processes, and how panels like CEPAC and SOHP will operate during the transitional phase of the current panel structure. Appointing members of the new "split" SOHP panels [(1) Ocean Paleoenvironment and Biological Evolution, and (2) Diagenesis and Sediment Processes] and new Shipboard Measurements Panel was also a concern. B.Tucholke suggested that the SOHP Chairman be consulted on membership.

M.Langseth said that DPGs should be set up once drilling targets are a component of the long-range ODP plan. He said that CEPAC should operate through the transitional phase and the DPGs should be set up once ODP plans beyond the Pacific are known. PCOM discussed how drilling prospectuses would be written without regional panels. Although the exact reporting structure and mandates for DPGs were not defined, PCOM agreed that their plans would be evaluated by the thematic panels.

PCOM Motion (amended):

At the August meeting, PCOM will discuss drafts of the mandates of the JOIDES Advisory Structure. The Chairman of PCOM will appoint two-person committees for reviewing the four proposed thematic panels and the new shipboard measurements panel. (Motion as amended: Brass, second Kastner)



Vote: 16 for, 0 against, 0 abstain

The following PCOM members were assigned to review and draft mandates responsive to the proposed JOIDES structure:

<u>Panel</u>	<u>PCOM Drafting Committee</u>
Sediment Processes and Diagenesis	M.Kastner, A.Taira
Ocean Paleoenvironment/Biology	G.Brass., S.Gartner
Tectonics Panel	D.Cowan, B.Tucholke
Lithosphere Panel	J.Malpas, T.Francis
Shipboard Measurements Panel	M.Langseth, M.Leinen

[Note: Leinen and Malpas, who will represent URI and Canada respectively at the August meeting, were nominated by PCOM members for their expertise to cover the assigned panels.]

Pisias also recommended that the liaison structure for PPSP be improved. Specifically, exchange between PPSP and SSP should be early enough in a program so that late safety reviews such as the one for Exmouth Plateau are not repeated for potentially risky drilling areas such as the NE Australia Margin and Japan Sea.

Finally, in response to some of the panels, PCOM discussed possible lengths of time for members to serve on JOIDES panels and committees. Most members agreed that three years was a compromise for "learning curve" and "new blood." PCOM also discussed panel "no-shows." H.Beiersdorf recommended that two unexplained absences should be cause to dismiss a panel member.

#### 721 WESTERN PACIFIC PLANNING

PCOM referred to the Executive Summary of the recent WPAC meeting (Appendix ) for drilling objectives and times for the Western Pacific program. A leg-by-leg review followed.

#### LEG 124 (SE ASIA BASINS)

(Banda-Sulu-Celebes-S.China Seas):  
Co-chiefs: E.Silver, K.Hinz (FRG)

Status: Approximately 41 days operational time assigned. Not all six sites can be addressed in a first leg. PCOM therefore developed the following two options depending on availability of clearances:

- Option 1: Sites BNDA-1, BNDA-2, SCS-5;
- Option 2: Sites CS-1, SUL-5, SCS-5;

Pisias opened the discussion of Leg 124 with a status review . A recent SCS analog survey did not image basement at BNDA-1. L.Garrison said that TAMU is generally optimistic that clearances will be granted for the Celebes, Sulu and S.China Sea sites, but Indonesian clearance for Banda looks doubtful. L.Stevens mentioned that SCS-5 lies in waters claimed by both China and Vietnam.

G.Brass, PCOM watchdog for the leg, reviewed the microplate tectonics objectives. The original drilling plan of the leg was to sample several of the basins, especially the magnetically anomalous "zipper" opening in the S.China Sea. The Sulu Sea is a potential anoxic basin site. D.Cowan mentioned that drilling only two basins would diminish the tectonic objectives of the leg. Piasias presented the option of extending the leg in order to achieve the priority basement drilling at BNDA-2 or other basement site if Banda clearances are not forthcoming. [Note: TAMU deadline for clearance has been set for 3 June.]

L.Garrison reviewed logistics for the leg, for which 39 days were available after scheduling Legs 121 - 123. TAMU would like to avoid a disruptive Christmas port call on Leg 124, if possible. He mentioned potential safety problems at the Sulu site.

PCOM discussed the objectives of the Celebes Sea site (CS-1) and schemes for drilling which would allow basement recovery (RCB/XCB, wash down, then rotary core, e.g). The time extension would primarily ensure that basement objectives are achieved.

PCOM Motion:

Leg 124 will be extended to 60 days, in order to reach the prime objective of drilling basement in the SE Asia basins region. Primary basement sites are in the Celebes Sea (CS-1 or equivalent), Sulu Sea (Site SS-1 or equivalent) and Banda Sea (BNDA-2 or equivalent).  
(Motion Tucholke, second Shipley)

Vote: 8 for, 4 opposed, 4 abstain

Discussion:

Before voting, PCOM discussed additional targets for the leg if time permits. SCS-9 presents no clearance problems and could be drilled as well as a SOHP-recommended additional site in the Sulu Sea, although the present SS-1 (formerly Sulu Site 5A) was a compromise site accepted by SOHP. Langseth mentioned that having two basins for comparison in the region would be extremely important. The additional time could be used for additional paleoceanographic objectives and downhole programs such as stress measurements.

Piasias noted that at WPAC's recent meeting, drilling times were calculated to be much longer and the entire program expanded whereas the original drilling times (APC) for a 41-day program seemed reasonable (See Appendix J).

PCOM discussed the consequences of extending the leg, specifically thematic input from SOHP on Sulu site priorities. Brass suggested APC/XCP coring at Sulu 4 and then XCB coring, which would achieve high priority objectives if BNDA-2 clearance does not come through. TAMU will continue to ask for clearances on the S.China Sea 10 and 11 sites as back up.

PCOM Consensus:

Priority order for Leg 124 contingency sites is SULU-4 and SCS 10-11.

The new departure and arrival dates for Leg 124 are listed in Appendix H.

#### LEG 125

##### Leg 125 (Bonins & Mariana Diapirs):

Co-chiefs: P.Fryer, J.Pearce (UK)

Status: Two sites are planned on Conical Seamount (MAR-3, MAR-3A); two sites of the Bonin transect will be drilled (BON-6, BON-7). BON-7 is lowest in priority.

N.Pisias gave an update on the program. New drilling time estimates may not leave enough time in the current 56-day program to complete BON-6 (see Appendix J), the last site scheduled.

PCOM agreed to leave 21 operational days for BON-6 (drilling, logging and re-entry) to ensure its completion. Dates and ports for Leg 125 are listed in Appendix H.

#### LEG 126

##### Leg 126 (Bonin Transect):

Co-chiefs: B.Taylor, T.Ui (J)

Status: Four sites are planned (BON-1, BON-2, BON-5, BON-5A), completing the Bonin arc transect, begun on Leg 125.

PCOM discussed possible high temperatures at BON-1, and the increased drilling times estimated for BON-1 and BON-2 (see Appendix J). 57.4 days are needed but only 54 scheduled. New MCS data show a possible basement reflector (sill?) at BON-2 which may have to be drilled to reach the sediments.

##### PCOM Consensus:

Leg 126 (Bonin Transect) will remain a 56 day leg. The co-chiefs are asked to justify the drilling depths for all sites. PCOM flags the need for heat flow measurements at BON-1 (anticipated from an upcoming Japanese heat flow survey) and notes the possibility of changing drilling plans there if necessary.

M.Langseth agreed to monitor information from the Japanese survey.

#### LEG 127

##### Leg 127 (Japan Sea I):

Co-chiefs: K.Tamaki (J), tba.

Status: Sites J1B, J1D, J1E and J3A are scheduled for ca. 54 operational days.

PCOM agreed to rearrange the WPAC drilling schedule and put Nankai drilling (formerly scheduled for Leg 127) later in the program. Weather windows for the Japan Sea programs are not affected and more time will improve the

potential for engineering success and optimal weather window for Nankai. N.Pisias reviewed the current program for Leg 127. There is strong potential for a safety problem at J1D and no satisfactory back-up site. WPAC recommends moving J3A to an alternate site in a simpler tectonic setting (See Appendix I).

PCOM forwarded the following names for the second co-chief to the Science Operator:

Paul Baker (Duke), Gerhardt Einsele, Jim Ingle, Carolyn Isaacs (USGS), Hugh Jenkyns (Oxford), Kerry Kelts, Judy McKenzie, Joe Morley, Kenneth Pisciotto (San Francisco), and Hans Schrader

An early safety review by PPSP is recommended for this leg. New dates for Leg 128 are listed in Appendix H.

#### LEG 128

##### Leg 128 (Japan Sea II):

Co-chiefs: K.Suyehiro (J), tba.

Status: 30 days of drilling for sites J2A and JS2 are scheduled.

Pisias reviewed the status of Leg 128 (above). The drilling plan recommended by WPAC calls for a return to Site J-1b drilled during Leg 127 to deploy a downhole seismometer. The updated logging program for the leg is listed in Appendix J. A.Taira mentioned that the schedule for the downhole tools for this leg will not be impacted by the earlier departure date.

The new schedule for Leg 128 is shown in Appendix H. PCOM forwarded the following names to TAMU for consideration for the remaining co-chief slot:

Paul Baker (Duke), Steve Calvert (UBC), Gerhardt Einsele, Jim Ingle, Carolyn Isaacs (USGS), Hugh Jenkyns (Oxford), Kerry Kelts, Judy McKenzie, Joe Morley, Kenneth Pisciotto (San Francisco), Alastair Robertson (Edinburgh) and Hans Schrader

#### LEG 129

##### Leg 129 (Nankai):

Co-chiefs: A.Taira (J), I.Hill (UK)

Status: Two sites are planned (NKT-1 and NKT-2) for a total estimated time of 57 days. An extensive geotechnical program at Nankai has been separated from this leg to be done at a later time if downhole tools are ready (Nankai Geotechnical leg).

Pisias reviewed the status of Leg 129. R.Jarrard has devised a scenario for Leg 129 downhole programs which is not dependent on the GEOPROPS probe availability (Appendix K). Jarrard explained that testing the probe early in the leg (and running only one-half of the possible measurements) as well as logging fresh holes were the main concerns. The logging program and times recommended by WPAC (Appendix J) are compatible with plans outlined in Appendix K. 20 days of logging are recommended at NKT-1 and NKT-2.

PCOM recognized that incorporation of the GEOPROPS probe into the Nankai leg would alleviate the need for a special Nankai Geotechnical leg. L.Garrison remarked that TAMU drilling times did not include contingency time for possible unstable hole conditions at NKT-2 or use of drill-in casing.

PCOM Consensus:

The Leg 129 Nankai program is extended to a full 60 days. TAMU Engineering is asked for input regarding possible unstable drilling conditions. DMP is asked to comment on the drilling strategy as it affects logging.

T.Shipley urged an early safety review of this program at the July PPSP meeting as gas hydrates may be a problem.

A.Taira reviewed the planned Japanese downhole temperature and OBS experiments for NKT-2. A Japanese engineer is coordinating with ODP engineers on the tool design.

The new dates for Leg 129 are listed in Appendix H.

FY90 PROGRAM IN THE WESTERN PACIFIC

Additional Nankai Programs (e.g. geotechnical, hydrogeology)

T.Shipley, TECP liaison, reported that TECP reviewed the current proposals for additional Nankai programs at its last meeting and is not overly enthused at this stage. G.Brass, SOHP liaison, said the panel wants to see how this drilling is preferable to the proposed Cascadia Margin accretionary prism sites for fluid studies. Shipley said that TECP did not view that the existing hydrogeological proposal is an integrated experiment. Shipley added that seamount subduction in the area may affect system equilibria in the Nankai region.

Pisias noted that CEPAC has recommended a working group to study accretionary prism drilling and hydrogeology as they have similar questions about the Cascadia programs. Sufficient expertise in this area does not exist in the current panel structure.

PCOM Consensus:

Additional Nankai programs (e.g. geotechnical and hydrogeological studies) are to be further reviewed by SOHP and TECP. The fluids and accretionary prism problems are not adequately addressed by the available proposals.

This input is to be returned to panels and proponents in order to develop an improved proposal.

PCOM Consensus:

A working group on accretionary prisms will be established by the August PCOM meeting, with membership to be drawn from suggestions from and members of JOIDES panels.

### Geochemical Reference Sites

Pisias said that the thematic panels were asked to discuss other scientific objectives that could be addressed by sites that also address objectives of geochemical reference holes. Several regions have been proposed (see map in Appendix L). G.Brass reviewed the many problems SOHP sees with the concept (heterogeneity, need for complete section in a single hole, fluid interactions, regional variation in sedimentation, etc.). SOHP continues to recommend old Jurassic crust sites with the geochemical reference sites a secondary priority.

M.Kastner reported that LITHP has changed its original recommendation of BON-8 as a reference site and now recommend a two stage strategy: shallow sites MAR-4, 5 and 6 in the FY90 WPAC program and a deep hole (A2-2) in M-18 crust, to be drilled during the CEPAC program.

Shiple reported that TECP (P.Vogt) has proposed four sites for the CEPAC program for this theme , but would agree with LITHP's approach and sites.

R.Larson recommended drilling sites in the JJ3 region on M-38 crust (see map in Appendix L) as this would yield first-order plate reconstruction data. Site surveys in this region are lacking, however.

P.Robinson remarked that LITHP has clearly identified geochemical reference sites as a important first step to understand the nature of subducting crust, but that other objectives should be addressed with this drilling, if possible. Brass pointed out that with massive alteration in old crust, drilling to 500m would merely scratch the surface. Drilling in cherts in these regions was also of concern to PCOM members.

Pisias summed up the discussions with the observation that the proposed geochemical reference sites clearly impact WPAC and CEPAC drilling schedules. The thematic panels are converging on the Marianas sites, but site survey data is lacking. If significant basement penetration is required, then these programs may face serious reappraisal, possibly moving them later in drilling program when new technology may improve sediment and crustal recovery.

### PCOM Consensus:

LITHP will be asked to review the Mariana sites (MAR-4, 5 and 6) for geochemical reference site objectives and evaluate their importance if basement cannot be achieved. Should this program await assurance of drilling and recovery capability in the chert sequences known to be present in this area? SSP will be asked to identify where site surveys will be needed.

### South China Sea Margin:

At its last meeting, PCOM asked TECP to reevaluate this program in light of the new survey data. Shiple reported that TECP reviewed the program, and though favorable to the concept of drilling in this back arc setting, did not endorse the proposal, as the plate kinematics and extensional tectonics are not well constrained in it.

Brass reported that SOHP is interested in the region for comparison to the NE Australia margin, but were pessimistic about dating the siliciclastic sediments.

PCOM Consensus:

Due to the lack of JOIDES thematic panel support, the South China Sea Margin program is no longer scheduled for the Western Pacific drilling program.

22 April 1988

ADDITIONAL WESTERN PACIFIC PROGRAMS

Pisias reviewed the medium-range Western Pacific program. The NE Australia Margin program is unchanged, although early SSP review is urged. The Vanuatu program may require a spud-in test. The Lau program is unchanged since PCOM's last review. Pisias said that PPSP will be asked to assign "watchdogs" for WPAC programs.

L.Garrison reviewed scheduling of the medium-range WPAC program, which currently ends in mid-July 1990, and is a 9-leg program, excluding the geochemical reference sites and a proposed second engineering leg.

722 CENTRAL AND EASTERN PACIFIC PLANNING

N.Pisias called upon the PCOM thematic panel liaisons to report on CEPAC thematic programs designated at the last PCOM meeting.

LITHP OBJECTIVES IN CEPAC

M.Kastner reported on LITHP's response. The panel reviewed its highest-priorities for CEPAC drilling and came up with the following core program, which requires about 6.5 legs.

- 1.5 legs Deepening 504B
- 2 legs EPR
- 2 legs Juan de Fuca/Escanaba
- 1 leg Young hot spot volcanism (Loihi, Marquesas etc.)

Kastner said that LITHP would like a working group similar to the EPR-WG, to review sedimented ridge-crest drilling (Juan de Fuca, Gorda Ridge). LITHP has suggested a one-half leg engineering effort at 504B to condition the hole and test recovery there before further drilling is recommended.

PCOM discussed the results of the EPR-WG. Pisias said that with some change in membership and a new Chairman (current chairman, E.Davis, is a proponent), the same group could review the sedimented ridge drilling strategies.

Pisias said he would instruct CEPAC to include the following priority LITHP themes in their prospectus: EPR, 504B and sedimented ridge crest drilling. PCOM discussed the hot spot drilling in detail but wondered if the problems

addressed by the Loihi drilling could be solved through dredging and land-based studies on Hawaii. LITHP was asked to respond specifically to this concern. LITHP will also be asked to reevaluate atoll/guyot drilling to see if some Loihi objectives might be achieved by other atoll drilling. The possibility of hotspot drilling as a back-up to an unsuccessful redrilling of 504B was also discussed by PCOM.

Pisias remarked on the challenge to long-range planning posed by assigning legs contingent upon engineering results. Enough time must be assigned, for example, between EPR efforts, to fully evaluate the results. This will impact any regionally based drilling programs.

#### SOHP OBJECTIVES IN CEPAC

G.Brass, SOHP liaison, reported on SOHP's four priority themes for CEPAC:

Neogene paleoceanography: needs at least three transects:

- a. W-Equatorial transect: proposal 142/E
- b. E-Equatorial transect: proposal 221/E
- c. N-Pacific transect: Sites Meiji 1 and 2 (259/E); NW-1, 3 and 4 (199/E); PM-1A (247/E).

Mesozoic-Paleogene paleoceanography & sealevel - atolls and guyots:

Sites OS-3 (260/D); Allison, Menard and Wilde Guyots (203/E); Sylvania and Harrie Guyots (202/E); Enewetak (202/E). (also SHAT-1 and SHAT-3, see below).

Anoxic events: Sites SHAT-1 and SHAT-3 (253/E)

Brass remarked that not much paleoceanographic data exist from the Central and Eastern Pacific Ocean and all transects would be valuable. He said that black shales and anoxic events are important problems, although Hess Rise might give better recovery than the proposed Shatsky Rise. Larson added that if soft sediment/chert recovery is improved, Shatsky is the preferred site.

The PCOM watchdogs for the Neogene paleoceanographic transects reported on these programs. (N.Pisias, a proponent, was absent from this discussion; G.Brass served as PCOM Chairman pro tem.)

S.Gartner reviewed the paleoclimate objectives in the high productivity equatorial transects. He said that about 90% of the proposed programs would be required to achieve the lateral variability needed for the paleocurrent parameters. He remarked that DSDP cores that complete the transects may have degraded and may not be usable for these high resolution studies, however. H.Beiersdorf added that these studies fit well as components of global climate studies, especially the recent ODP paleoclimate legs.

Brass reported on the northern Pacific transect program, which combines sites from many proposals into about one leg in order to get sites with good fossil preservation. Gartner added that SOHP needs to provide better site information for this proposal. Brass reiterated the need for LITHP to re-evaluate guyot drilling as part of global sea level studies if SOHP recommendations for this drilling are accepted by PCOM.



Brass reiterated his concerns voiced during the COSOD II discussions, that more emphasis be placed on Mesozoic paleoclimate objectives, as the climate dynamics varied considerably from the Cenozoic ones (See Appendix F).

Pisias returned as Chairman and requested instructions from PCOM for the CEPAC prospectus. CEPAC will be asked to develop all SOHP themes with additional input from LITHP on guyot drilling.

#### TECP OBJECTIVES IN CEPAC

T.Shipley, TECP liaison reviewed TECP's priority programs in the CEPAC region.

1. M-Series dating (combined with Geochem.Ref.Sites?)
2. Lithosphere flexure (Hawaiian moat preferred; also LITH topic)
3. Ridge-trench interaction (Chile T junction)
4. Pre-70 MA plate motions (combined with Geochem.Ref.Sites?)
5. Deformation in accretionary prisms (Oregon margin of highest immediate interest)

Shipley said that further definition of accretionary prism drilling would depend on the Nankai results. Coulbourn, the PCOM watchdog for the lithosphere flexure program, reported that biostratigraphic resolution was still a problem. Also location of the transect may have to be changed after review of the recent GLORIA cruise in the area. Comparing this program with Marquesas drilling (an alternate site for this program), Coulbourn said that dating may be better there, but MSC coverage, now lacking, is essential.

O.Eldholm, watchdog for the Chile Triple Junction program said that the new survey data must be reviewed by the proponents soon. With regards to the TECP pre-70 MA plate motion priority, Larson mentioned that core orientation problems will have to be addressed. Garrison responded that TAMU engineers are aware of possibilities for oriented core, but no engineers are currently assigned to this task. Larson said that the JJ sites (see map in Appendix L) would be important ones for the pre-70 MA studies.

Because TECP has not ranked their priority programs, PCOM was not as clear on instructions to CEPAC for tectonics themes. PCOM recognized that TECP themes such as M-series dating and pre-70 MA plate motion overlap with other thematic programs (e.g. geochemical reference sites).

#### PCOM Consensus:

CEPAC is instructed to continue developing the major themes identified by TECP for the prospectus. Multiple drilling objectives with other thematic programs should be recognized. TECP is instructed to contact proponents for better site definition for their priority programs.

PCOM discussed long-range planning throughout the meeting and consolidated their recommendations in an outline for the NSF long-range planning document (Appendix M).

A major concern was how to interpret and incorporate the COSOD II technology development budget recommendations into a realistic framework for the next four years and beyond. M.Kastner suggested that the following guidelines be forwarded to EXCOM:

PCOM Motion:

The following two drilling programs, which address the main scientific objectives proposed by COSOD II, to be reached over the next decade, should be presented to EXCOM:

- 1) Looking forward beyond 1992, to achieve the COSOD II objectives, the ideal flexible program will require a 50% increase in the level of effort, to begin in 1993.
- 2) The minimum acceptable, although less flexible program, will require a 10% increase in the level of effort.

(Motion Kastner, second Taira)

Vote: 14 for, 1 against, 1 abstain

Discussion:

Before voting, PCOM discussed the worst case scenario: budget cuts. B.Malfait pointed out that a steady-state program requires budget increases for the same level of effort due to inflation. PCOM agreed that to implement the full COSOD II program (multiple drilling platforms, ultradeep drilling, etc.), then Option 1 in the above motion would be a reasonable cost estimate.

Pisias explained that in the long-range planning outline (Appendix M) he was trying to overcome what he viewed as a shortcoming of the COSOD II document: It did not provide an overview of priorities which circumvented the boundaries defined by the COSOD II working groups. After 1992, and hopefully successful drilling at the East Pacific Rise, availability of a new drilling technology may impact all long-range planning. The updated position papers from the thematic panels and COSOD I will figure into these plans. PCOM agreed that the long-range program plan should focus on science, not budget constraints.

PCOM discussed the special meetings of the thematic panels for addressing long-range planning, and the importance of identifying and putting their "White Papers" themes on maps, i.e. identifying best places to drill priority themes.

PCOM Consensus:

PCOM endorsed the suggestions by the Panel Structure Review Subcommittee, as presented by M.Langseth at the April 1988 PCOM meeting, as guidance to PCOM and the thematic panels on planning science responsive to COSOD II.

M.Langseth asked that the thematic panels in particular respond to those global programs such as stress, climate and fluids and hydrothermal circulation identified in COSOD II and how WPAC and CEPAC drilling will contribute to their understanding. S.Gartner pointed out that under the new panel structure, there will be four thematic panels. Piasias said that the current SOHP panel will be asked to address the areas to be covered by the new panels. M.Langseth paraphrased a R.Anderson remark that "the worst criticism of ODP is that it is an energetic application of a methodology in a timely manner." He asked that ODP focus away from applying a tool, the drillship, and focus on completing thematic objectives.

Piasias remarked that the PEC review had focused on flexibility in the program. He said that PCOM's decision to allow extra time for Leg 124 for basement drilling was a good example of that flexibility. Despite flexibility, PCOM must make a statement on the direction of ODP beyond the Pacific no later than the December PCOM meeting this year. The rational way to approach this is through long-range plans from the thematic panels.

PCOM Consensus:

With regards to long-range planning for ODP: exciting science, as identified by the thematic panels, is the vector which points the ship.

PCOM discussed the suggestion by the Panel Review Subcommittee to "publish widely" the ODP long-range drilling plans. B.Tucholke wondered if a "request for proposals" for drilling at EPR should be circulated to the community. Piasias responded that the LITHP White Paper, published in the JOIDES Journal, identified slow-spreading centers as a priority drilling target, as did COSOD I. The scientific community should be encouraged to submit proposals responsive to major themes.

T.Francis, coordinator of the technology development chapter in the COSOD II document, asked that the idea of a permanent support vessel for on-station drilling not be abandoned so readily, as his figures (based on Legs 101-114) showed it could be cost effective. H.Beiersdorf supported this and suggested that a small working group investigate the continued use of support vessels.

723 OTHER PCOM ACTION ITEMS

SAMPLE REQUESTS

G.Brass reported that SOHP would like clarification from TAMU on a recent sample request denial. R.Merrill has responded that this request was made while the "one-year" rule was still in effect for those materials, not because a TAMU scientist was working on the problem, as reported by SOHP.

S. A. ...  
College ...

## ODP ARCTIC DRILLING

T.Pyle and G.Brass have been asked to participate in an upcoming Arctic drilling symposium in Canada and have asked for PCOM's perspective for their presentations. An Arctic drilling plan for 1989-1994 from L.Johnson (ONR) was circulated, but not reviewed, at this meeting. PCOM (at least Olav Eldholm) expressed its continued interest in Arctic drilling and Tom was left in the cold on this matter.

## THIRD PARTY TOOL DEVELOPMENTS

PCOM has requested that DMP monitor the development of third-party tools, which are of interest to ODP or are planned to be deployed in ODP. M.Langseth, DMP liaison reviewed DMP's response.

DMP recognized two types of tools:(a) instruments under development, such as GEOPROPS and (b) mature tools (such as HPC temperature probe, USGS susceptibility tool). DMP also recognized the difference between tools under development which will eventually become standard ODP tools, and those from individual investigators for "one-time" use on the JOIDES RESOLUTION.

DMP drafted a detailed plan on how ODP should approach the question of third-party tools in ODP for PCOM review. As an immediate step each DMP member agreed to collate a list of known third-party tool developments in his country. Science operator and logging contractor also will prepare a list of planned or proposed deployment of third-party tools in future legs.

Langseth reviewed the problematic areas in the document such as land-testing of third-party tools, provisions for spare parts for non-ODP tools, etc. He said that the DMP document needs to more fully separate the types of tools and recommendations for their use. R.Jarrard added that DMP's document principally addressed those tools which are intended for routine ODP use. Langseth said that DMP should be PCOM's watchdog for downhole tools outside of ODP development.

### PCOM Consensus

PCOM commends DMP on its first effort to develop a policy on third-party downhole tools for ODP. PCOM suggests that the document more clearly differentiate the categories of tools under development (single investigator developments, e.g.) and outline approaches for each of these cases.

PCOM affirmed the need for acceptance testing by ODP to ensure that downhole tools can be deployed safely. Last minute requests by PIs to put tools on a cruise are not acceptable. M.Langseth suggested that a TAMU staff scientist be identified to monitor third-party tool developments and interact more with DMP.

## OTHER DMP RECOMMENDATIONS

In fulfillment of his role of DMP liaison, M.Langseth forwarded additional DMP recommendations:

- \* For the first run of the formation microscanner, a dedicated scientist should be identified (Jarrard says its in the plan.)
- \* DMP 88/2 :ODP/TAMU should develop display capabilities to automate barrel sheets so that logging data can be integrated with the core descriptions.
- \* DMP 88/4: For Leg 121, holes NNER-9, NNER-10, 90ER-2, DMP recommended BHTV deployment in basement and over limited section in sediment in sediment as long as the data remain useful.
- \* DMP 88/8: DMP requests that TAMU respond to "processing bottlenecks" aboard the RESOLUTION. PCOM asks DMP to be more specific, and see if the planned processing upgrades for the FMS will address this issue.

#### JOIDES PANEL MEMBERSHIP

##### PCOM Consensus:

With regards to panel rotations for SOHP, PCOM recommends that the current membership be retained until this thematic panel is split. SOHP may request that guests attend meetings, if necessary, to supplement present panel expertise.

Other panel rotations considered were:

	<u>Rotating Off</u>	<u>Suggested Replacement</u>
LITHP:	J.Malpas (C) N.Peterson (FRG)	J.Franklin (C) J.Erzinger (FRG)
TEDCOM:	J.Jarry (F) J.Kasahara (J) [J.Lowe will be replaced by W.Cotten]	J.Bonasse-Gahot (F) H.Fujimoto (J)
	Ch.Sparks (F) recommended as new TEDCOM chairman	
CEPAC:	U.von Stackelberg (FRG) H.Jenkyns (UK)	H.Beiersdorf (FRG) P.Floyd (UK)

H.Beiersdorf noted that with the rotation of Peterson, LITHP no longer has a paleomagnetist. It was suggested that LITHP consider a paleomagnetist for its next panel rotation.

PCOM endorsed TEDCOM's selection of Charles Sparks as new Chairman.

WPAC: Jim Eade (SOPAC) will be invited to replace J.Recy as WPAC member-at large. If he cannot serve, J.Daniel (ORSTROM) will be invited.

#### NEW PCOM LIAISON ROTATIONS

LITHP: Malpas will replace P.Robinson  
 DMP: D.Cowan will replace R.McDuff and help out M.Langseth  
 CEPAC: M.Leinen was volunteered to replace R.Larson

PCOM Consensus:

PCOM thanks its departing colleagues, R.Larson and P.Robinson, (and in his absence, R.McDuff) for their outstanding service to ODP as PCOM representatives for their institutions and countries.

Robinson expressed his thanks and his hopes that the long-range planning will be fruitful. Larson said, "Take this job and shove it."

There being no further business to consider, the meeting was adjourned at 1:30 PM.