

16-18 July, 1979 PCOM Minutes

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ACTION ITEMS

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2	243	I, B, 2a	JOIDES Office	Funding for I.R. and ICD microfiche master
2	262	III, A	OCP/Cann	Prepare detailed data base for proposed geochemical transect by October PCOM meeting
2)	262	V, B	OPP	Prioritize interests and objectives with respect to Theide's arctic drilling proposal
2)	262	VI	SSP	Recommend plan to encourage holders of site survey data to submit it to central archives
2	262	XI, A	OGP	Contact NASA about methods for canning gassy samples
4	270	IV, B	DSDP	Supply PCOM with details of extra effort required to process HPC cores at both repositories
5	270	V	DSDP	Update "ship fitness" report
7	272	I, B	EXCOM	Panel Reorganization
7	272	I, B	EXCOM	Propose outside group to review JOIDES planning structure for EXPLORER planning
7	272	II, B	EXCOM	AAPG appointed person for JOIDES Safety Panel
9	272	IV	OPP, AMP, PMP	Give rationale behind Caribbean site and site combination priorities
9	272	V, A	IGP	Explain why an errata volume for corrections is necessary
12	272	VII	SSP	Review/recommend more effective approach to site survey coordination

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12	272	VIII, A	IHP	Address problem of enclosing Tertiary Data Base
13	272	VIII, B	Orr/NSF	Letter to PCOM Chairman stating NSF's wishes about the paleoreference center
13	272	VIII, B	Riedel	Investigate funding sources for paleoreference center with NSF and SI
13	272	VIII, C	EXCOM	R. Poore to SCP Chairmanship after next SCP meeting
16	274	IV	Salisbury	Expand reentry site-downhole instrumentation "mini-leg" proposal
16	274	V	DSDP/McTernan	Expand engineering "mini-leg" proposal and consult with DMP
18	274	VII	OCP, PMP, OPP	Redistribute time for Legs 68-82
20	275	II	OCP	Investigate the possibility of doing geochemical transect in eastern rather than western N. Atlantic
21	275	III	Brett	Investigate availability and feasibility of using EXPLORER during 1981-83
21	275	III	DSDP	Estimate daily cost of running EXPLORER, using it for piston coring and converting it for piston coring use
21	276	I, II	Problem Panels	Comments on site survey requirements for EXPLORER sites
22	276	II	All Panels	Comments on design of optimum analytical facilities and detail scientific requirements for the EXPLORER
22	278		Nikitin	Have individual letters of invitation sent to PCOM members, PCOM alternates, and spouses for Moscow meeting

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DRAFT MINUTES

JOIDES Planning Committee Meeting
16-18 July, 1979--Italy

PCOM Members:

Heirtzler, J. R. (Chairman, WHOI)
Bryant, W. (Texas A&M)
Creager, J. (U. of Wash.)
Dymond, J. (Oregon State)
Hayes, D. (LDGO)
Kobayashi, K. (Japan)
LePichon, X. (France)
Moberly, R. (HIG)
Moore, T. (URI)
Nikitin, L. (USSR)
Roberts, D. (UK)
Schlager, W. (RSMAS)
von Rad, U. (FRG)
Winterer, E. L. (SIO)

Moore, D. (DSDP)
O'Connell, S. (JOIDES Office)
Orr, W. (NSF)
Riedel, W. (SIO, Ex-Officio)

Guests:

Brett, R. (NSF)
Cita, M. (U. of Milan)
Jaccarino, S. (U. of Parma)
Johnson, D. (NSF)
Lancelot, Y. (France)
Premoli-Silva, I. (U. of Milan)

268 INTRODUCTORY REMARKS

The PCOM and guests were welcomed to the branch of the Instituto di Geologia, Universita Degli Stido Di Milano, in Bergamo. Logistics of the meeting were discussed and an agenda was adopted. Corrections to the March minutes were distributed. The minutes were approved by concensus.

269 ACTION ITEMS FROM PREVIOUS
PCOM MEETINGS

Item 243 I, B 2a

The initially quoted price of \$1,050 for microfiche masters was for one I.R. volume, not the complete set. The cost of producing all I.R.'s on microfiche is over \$50,000. JOI Inc. is investigating possible funding.

Item 262 III,A

A report on the use of diamond bit drilling was distributed (Appendix 1). Diamond drill bits were used on some of the early legs. The results were less satisfactory than the four-cone core bits now used. Poor recovery is often due to variations in bit weight caused by the vertical ship motion. DSDP is developing an extended core barrel to improve this situation. The extended barrel will have a diamond cutting edge and be shock mounted within the regular bit.

Item 262, VI

Information about data availability and distribution is now being included in the JOIDES Journal and will be listed separately in I.R.'s.

Items 262 III, A; 262 V, B; and 262 VI

No action taken.

Item 262 XI, A

A report from the chairman of the OGP regarding the canning of gassy samples was read and discussed. Cans provide the optimum containers for C₁-C₇ hydrocarbon analyses. The present canning method is not very efficient. The OGP was asked to contact NASA to see if the NASA canning method could be implemented aboard the GLOMAR CHALLENGER.

Item 262 XII--DSDP/SP4

Dave Moore has written a letter to the chairman of PCOM acknowledging receipt of the SP4/DMP recommendations and thanking the committees for them. For financial reasons it will not be possible to implement all of these recommendations. Moore also suggests that SP4 may wish to consider procedures relative to cores obtained by the Hydraulic Piston Corer.

270 REPORT FROM DSDP

I. LEG 67

A. HIG Downhole Seismometer

The HIG downhole seismometer was successfully deployed at Site 494 (G-16). On-site recording showed that earthquakes were recorded, but the background noise was higher than anticipated. Long-term data has not been analyzed.

B. Safety Consideration

Gas hydrates were encountered at sites 496, (G-8b); 497 (between G-8b and G-2c); and 498, (1.1 mi along strike from 494). They occurred without any evidence of a bottom simulating reflector on the seismic profiles and had variable methane/ethane ratios.

C. Site 494 (G-16)

Leg 67 co-chiefs requested permission to redrill Site 494, to a depth 200 m below the previously penetrated depth. Permission was denied because of possible entanglements with the HIG seismometer. A request to return to Site 494 before the Atlantic drilling was reviewed with other post-Leg 67 requests for time. (See Item 274, III.)

II. LEG 68 EXPERIMENTAL PROGRAM

A telephone report indicated that site CR-1 was drilled to basalt at 337 m sub-bottom. The packer was emplaced and some degree of pressure built up. A water sample was obtained. The hole was ready to be logged. Logging would include resistivity and magnetometer measurements. Subsequent reports indicated apparently successful deployment of the downhole magnetometer and electrical resistivity experiment.

III. CHALLENGER SCIENTIFIC EQUIPMENT

A computer system for organic chemical analysis on the gas chromatograph has been ordered, but the software for the system is not available yet. The computer can also be used for sound velocity and other data processing.

IV. HPC

A. Shipboard Measurements

Once the impact of the higher resolution HPC samples has been determined, modifications in shipboard measurements may be necessary. All HPC samples should be GRAPED since they yield much better information than rotary drilled cores. This may necessitate changes in GRAPING, such as increasing the speed.

To maintain uniformity, oriented HPC samples will be split N-S. The W side will be sampled and the E side archived.

B. Shore-Based Measurements

Continuous strip photographs were taken of the Leg 64 varved sediments. These as well as X-radiographs may be routinely taken on all HPC-samples. This increases the cost. In addition, the 1979-81 program will be recovering Atlantic cores which should go to LDGO. Funding may not be sufficient to set up these processes at both repositories. A decision should be made regarding which repository should do it. It was suggested that continuous strip photography be done on all cores from Leg 45 onward.

C. HPC Developments

In order to prevent hydraulic piston coring from slowing operations on the ship, two developments are being undertaken by DSDP. One is the development of an HPC device that will not require a special bit, and the other is to extend the length of the HPC stroke from 4.5 to 9.0 meters.

V. GLOMAR CHALLENGER PERFORMANCE

The new oil leak in the forward aft thruster prompted a lengthy discussion about the GLOMAR CHALLENGER's ability to carry out the tight schedule planned for the 1979-81 program and proposed for the 1981-83 program. Maintenance problems are discouraging and disrupt continuity. The CHALLENGER currently undergoes a major yard period every two years. In addition, in preparation for the Atlantic program several extensive modifications have been made. These include: deepening the draft, and rewiring of the electrical panels. It was suggested that maybe a longer yard period with major preventative measures at the beginning of the 1979-81 extension could eliminate or minimize the need for emergency yard work.

The leaky thrusters were replaced at the end of Leg 64 (January, 1979). It is not clear if the leaks are a result of defective thrusters, poor yard work, or a deteriorating ship. DSDP was asked to update the last "ship fitness" report to PCOM, with particular attention to fatigue in light of a future 2-4 year program. A full-scale study may be necessary in the near future pending the outcome of the DSDP report and funding. It was emphasized that abrupt cancellation of CHALLENGER operations due to ship malfunctions is extremely costly on science operations and demoralizing on scientists who have already had a difficult time making room in their schedule for CHALLENGER cruises.

271 NSF Report

I. NEW STAFF

The Ocean Sediment Coring Program is beginning to increase staff in preparation for the EXPLORER program. Two new positions have been filled. Tom Cooly, a biological oceanographer, is helping to write environmental impact statements, and Bill Sherwood, an engineer, will help with the engineering planning. Fritz Thayer from HIG will be the next Program Associate starting in September, replacing Bill Orr who is returning to the University of Oregon. Orr was thanked for his help during the past year.

II. ADVISORY COMMITTEE ON POST-INTERNATIONAL PHASE OF OCEAN DRILLING (IPOD) SCIENCE--("BLUE RIBBON PANEL)

The report of this panel has been completed and should be available in the near future. The panel endorsed the EXPLORER program. Resource implications were a significant factor in the justification. NSF was recommended as the lead agency. Interaction with other government agencies (e.g. DOE, USGS), industry, and non-U.S. countries (modeled along the lines of the current IPOD members) will be important.

III. COMMITTEE ON ENGINEERING CONSIDERATIONS FOR CONTINUATION OF DEEP SEA DRILLING FOR SCIENTIFIC PURPOSES--(NRC--HOCOTT COMMITTEE)

The NRC committee will meet again 10-12 September in Boulder. At that time the committee would like to see the general areas that are planned for EXPLORER drilling. More extensive knowledge of the physical parameters of proposed site locations will be required for EXPLORER drilling. Wind, current, and internal waves will effect the riser design. Site surveys may have to be expanded to measure these parameters. Current plans call for a 4 km riser and 10 km drill string.

The NRC Committee also addressed the question of EXPLORER management. They felt the top management should be small and flexible enough to respond rapidly to EXPLORER needs. This suggests that top management not be within a U.S. government agency.

IV. U.S. INTERAGENCY COOPERATION

A. U.S. Geological Survey

The U.S.G.S. has included a budget item for EXPLORER-related programs, such as site surveys. Although U.S.G.S. scientists are on most JOIDES panels (and chair several of them), there is little communication at the higher planning levels. This is a situation which needs attention for the EXPLORER program.

B. U.S. Department of Energy (D.O.E.)

D.O.E. has not maintained a consistent position with respect to its interest in the program. Their interest has variously centered on drilling technology, resource assessment, etc.

V. PLANNING DATES

NSF's complex time tables for Budget Planning for FY '81, and FY '82 and FY '83-86 Long-Range Planning Estimates were distributed. The FY '81 budget is already at the Office of Management and Budget (OMB). It is not clear what the time table for JOIDES decisions must be.

272 REPORT FROM COMMITTEES, PANELS AND WORKING GROUPS

I. EXCOM

PCOM had already received the last EXCOM draft minutes. A few highlights were discussed.

A. Action Items

The EXCOM approved a policy on symposia and delegated responsibility for implementing the policy to PCOM. They requested that an 81-83 proposal be prepared and mailed by August 1 for their August 15-18 meeting, at which time they will critique the proposal.

B. Panel Reorganization/EXPLORER Planning

EXCOM rejected the PCOM's reorganization plans and suggested a joint EXCOM-PCOM subcommittee to work on reorganization. This subcommittee has not met. PCOM expressed concern that, in light of the long lead time required for EXPLORER planning, that this committee act soon. PCOM also felt that EXCOM might not be aware of the time and consideration that was spent on the proposed reorganization plan.

It was also suggested that EXCOM ask an outside group to review the JOIDES planning structure and make recommendations for expediting an effective organization for EXPLORER planning. It is apparently difficult for EXCOM, PCOM, or other panels to objectively consider their own reorganization.

II. SAFETY PANEL

A. SIO Safety Panel

SIO has legal responsibility for the safety considerations of the CHALLENGER. The DSDP chief scientist is asked to seek advice on safety matters. This is done through the SIO and JOIDES Safety Panels. The SIO Safety Panel is primarily composed of petroleum geologists. They usually meet immediately following the JOIDES Safety Panel. Site advocates should be present for both Safety Panel meetings.

B. JOIDES Safety Panel

The Chairman of the JOIDES Safety Panel will meet with EXCOM to discuss safety-related problems. The panel currently does not have an AAPG appointed member. With the upcoming passive margin drilling and EXPLORER program, this position is critical. PCOM asks EXCOM to actively pursue finding someone to fill this vacancy.

III. DOWNHOLE MEASUREMENTS PANEL

A. Logging

The success rate for recent logging and the quality of the logs is increasing. The improved log quality was attributed to the Project having one logging contractor providing continuity, although on Leg 67 the logging

engineer required replacement in mid-Leg. The panel recommended that, if financially possible, DSDP further consider:

1. Having its own logging equipment and engineer;
2. Hiring a professional log analyst to interface between the raw log data and scientists.

Apparently the U.S.G.S. group in Denver and the hot rock project in Los Alamos are proceeding in this way.

B. Downhole Experiments

Realizing the importance of downhole experiments, the panel prepared a flow chart to aid potential experimenters through the JOIDES/DSDP maize. (This will be in the next JOIDES Journal.) They also suggested separating downhole experiments and measurements into separate mini-legs of about two weeks' duration. This would eliminate the need for experimenters to spend two months at sea for a few days of work and decrease the pressure on both laboratory and berth space for experimental and drilling oriented legs.

C. Hydraulic Piston Coring

The DMP recommended piston coring the upper sedimentary section of every hole. As presently run, the HPC takes twice as long as rotary drilling. The increased time at each hole for both HPCing and logging may detract from the program's overall scientific objectives. DSDP is taking steps to reduce the time for the HPC (See Action Item under Item 269).

IV. CARIBBEAN WORKING GROUP

Minutes of the Caribbean Working Group were distributed and discussed in light of the PMP action. The Caribbean W.G. recommended that CAR-3 in the Venezuela Basin and CAR-7 in the Yucatan Basin have additional site surveys. The U.S. Site Survey Panel, JOI Inc., and UTMSI are currently negotiating the contract for these site surveys.

Sites were prioritized by the Caribbean W.G. CAR-3 was of prime importance, but drilling could only be considered if further site survey information were available. Other first priority sites were CAR-1, 2, 4, 7, and 8. Three different arrangements for a Caribbean leg were given.

The PMP reviewed the Caribbean sites and priorities and agreed with the Caribbean Working Group's recommendation. The following site combinations were recommended as appropriate for a GLOMAR CHALLENGER leg:

1. CAR-3 followed by CAR-7 +/-or CAR-8
2. CAR-4 followed by CAR-7 +/-or CAR-8
3. CAR-1 followed by CAR-2.

PCOM requested that the rationale for these choices be given and that the selection also be reviewed by the OPP and AMP.

V. IGP

A. Data

The IGP recommended that Donnelly's data be put in the data bank and that Donnelly and Wedpohl synthesize the data. Concern was expressed about errors in the data bank, e.g. listing ppm vs. ppb. The IGP requested that an errata volume be published. PCOM requested IGP to write a statement to this effect and asked why the corrections could not be made directly into the data bank.

B. Equipment

IGP expressed concern that the pressure core barrel be operational and that water samples and temperature measurements be made on Legs 68/69.

The XRD has been ordered. It didn't arrive in time for Leg 68, but hopefully will be available for Leg 69.

IGP expressed interest in having the HPC used on Legs 68 and 69.

VI. PMP

A. HPC Mini-Leg

The PMP felt that the 30 days proposed for the HPC program be consolidated within the OPP's S. Atlantic program, and that the HPC should be tested and developed on the variety of sediments that will be encountered during routine drilling.

B. Logging

Severe financial constraints will exist in the upcoming program, particularly with the increased fuel costs. The PMP moved that every effort should be made to ensure adequate financial support for a full logging program and detailed the objectives that could only be met through logging.

C. Geochemical Transect

The PMP felt the necessary integration of geological/geophysical/and geochemical data was lacking to support the geochemical boundary; the problem was not adequately posed; and was not relevant to the PMP program.

D. ENA Program

Eastern North America sites were revised in light of preliminary safety review recommendations. ENA-9 and 10 in the Orphan Knoll have been deleted and ENA-12 and 13 in the Gulf of Mexico have been substituted. ENA-2 lies close to the COST B-3 well and within 40 km of a considerable hydrocarbon show, so ENA-2 has been downgraded.

Three U.S. institutions will be doing the ENA site surveys. WHOI will survey ENA 3 & 4, UTMSI will survey ENA 5 & 6, and LDGO will survey ENA 8 & 11. These site surveys are scheduled for summer 1980 together with an expanded spread three-ship seismic experiment. The USGS will also survey ENA-5 using 12-channel reflection. BRG will be conducting a 7500 km multichannel seismic survey of the N. American continental slope and rise this summer. The study will begin off the Nova Scotian Margin, include Georges Bank, and extend to New Jersey, tying in with the COST B-3 well. The work is being done in connection with the U.S. Geological Survey and the Bedford Institute's Atlantic Geoscience Center.

E. WNA Program

The following priorities were assigned to the proposed WNA sites together with weather limitations and drilling time requirements:

<u>Area</u>	<u>Weather</u>	<u>Drilling Time</u>	<u>Program</u>	<u>Priority</u>
Biscay	May-mid Sept	2 months	2R + 1S	1
Rockall	June-Aug	1 month	1R + 3S	2
Goban Spur	May-mid Sept	15 - 20 days	3S	3
Voring	June-Sept	2 months	2R	4
NW Africa	All Times	10 - 20 days	3S	5
Galicia-Vigo	May-mid Oct	1 month	3S	6
Faeroes	June-Aug	1 month	2R	

R = Re-entry
S = Single bit

Site surveys for Rockall, Biscay, and Goban Spur will be undertaken this summer. A two-ship seismic refraction/reflection experiment is planned for Biscay in July by IOS/IFP/COB.

Site surveys for NW Africa will begin in September, 1979. The data should be available by December. Deep refraction profiles will be undertaken February - April, 1980 to study the different types of crust and to look at the extension of the salt basin.

F. Arctic Drilling

Theide's Arctic drilling proposal was reviewed. The sites were considered possible for the 1981-83 or EXPLORER program, but were not considered high-priority sites for the NE Atlantic during 1979-81.

G. 1981-83 Proposal

The paper prepared by Sheridan was reviewed. The main PMP objectives for the 1981-83 proposal are sedimentary processes and margin paleoenvironments, including plate reconstructions. The HPC would be valuable for most of the studies.

H. Panel Membership

D. Bernoulli has resigned. Several names for additional members were suggested but no decision was reached. The question of rotation of membership was raised. France has nominated an alternate who will gradually assume the responsibilities of panel membership.

I. Panel Reorganization

The PMP disliked the target group approach to reorganization and felt that the problem panels should maintain the overall control for site selection.

VII. SITE SURVEY PANEL REPORT

The Site Survey Panel is often the last to learn about the location and occurrence of site surveys. Discussion developed concerning the role of the site survey panel. It should be one of coordination and quality control. Possibly some or all of the responsibility could be reassigned to the subject panel. The SSP might also consider meeting more frequently than once a year. The panel was asked to review these matters at their next meeting (November) and make suggestions for their implementation.

VIII. SCP

A. Data Base

The establishment of the Tertiary data base has been slow. Currently sites are being encoded selectively. Work has been completed through Site 175. The delay is primarily due to the lack of help in keypunching the information, a budgetary problem. The IHP was asked to address the encoding problem and make recommendations.

Creager moved, Von Rad seconded, that the Cretaceous data base is a valuable collection and PCOM urges DSDP to proceed as rapidly as possible to implement the Tertiary data base.

B. Paleo Reference Centers

The plan for paleoreference centers was conceived in 1975 to help industry with access to core information. These centers have been slow in getting started. NSF

asked that the process be accelerated. PCOM asked NSF to write a letter to the PCOM chairman stating NSF's wishes.

Reference centers are planned for Switzerland, Japan, U.S.S.R., Australia, and SIO. The Japanese reference center will be at the National Science Museum in Japan, but no person has been given the responsibility for it. Work with the Soviets for their reference center may be investigated at the October PCOM meeting in Moscow. In the U.S., SIO has set up a reference center with state funding. The Smithsonian Institution has also been suggested as a repository, but it does not have funds for establishment of a paleo reference center. It has stated its willingness to accept all of the other curatorial responsibilities. PCOM asked Riedel to investigate sources of funding with Smithsonian and NSF.

C. New Panel

Optimism was expressed about the composition and outlook of the new SCP. Members see the panel's role as being more service oriented, e.g. assisting with I.R.'s and maintaining shipboard reference collections.

Discussion developed about the possibility of making the SCP a working group of the OPP. This was generally not thought to be advisable at this time.

To assist cross-panel representations Creager moved, Bryant seconded, that Jenkins attend the next OPP and PMP meetings and Nigrini attend the next IHP meeting. Passed unanimously.

Creager moved, Winterer seconded, that R. Poore assume chairmanship of the SCP after their next meeting (May, 1980).

Creager moved, Bryant seconded, that the SCP be allowed to hold their next meeting at SIO. Passed unanimously.

273 Report from JOI Inc.

The IPOD Data Bank Catalogues are underway. The plan is now to produce a single volume of data for the Atlantic sites. Catalogues for the Pacific will come later. Additional data sheets for the location of site survey information were distributed. Corrections to the previously distributed data sheets have not been

received by the data bank. Heirtzler, Clotworthy, and Rabinowitz are to meet to discuss the status of the catalogues and the schedule for their publication.

274 Status of GLOMAR CHALLENGER
Plans for 1979-81

I. BACKGROUND

An oil leak in the forward aft thruster necessitated the CHALLENGER going into dry dock at the end of the experimental phase of Leg 68. The nearest dry dock is Curacao. Transit and repair time were estimated to take 30 days. PCOM reviewed CHALLENGER's schedule through the end of the 1979-81 program taking into account the delays and additional requests for shiptime. Additional requests for shiptime included:

1. Hydraulic Piston Coring "mini-leg" to sample two sites in the Equatorial Pacific and one in the Caribbean.
2. Return to Site 494 of Leg 67.
3. Downhole Instrumentation "mini-leg."
4. Engineering Transit "mini-leg."
5. Geochemical Transect.

Discussion developed concerning the allocation time, especially in view of the time lost because of the emergency yard work in Curacao and weather constraints. Arguments were made for leaving the schedule as planned, particularly in light of national interest; and for making major changes, because of time lost in transit and escalating fuel costs. Weather, staffing, and the readiness of site surveys could be taken into account in either argument.

II. HYDRAULIC PISTON CORING "MINI-LEG"*

The HPC allows a new type of record to be obtained of the deep ocean Cretaceous and Upper Tertiary unconsolidated sediments, and thereby knowledge of global climatic changes during those geologic areas.

A 35-day leg to piston core sites 83, EP I, 157 and CAR-8 was proposed. The inclusion of EP-1 was on HPC engineering developments, that would increase the speed of core recovery. These improvements will not be ready so EP-1 was dropped. These sites address the problems of:

1. The detailed record and spectral character of late Neogene and Quaternary climatic variations (all sites).
2. The biotic and volcanic history associated with the closing of the Isthmus of Panama and with long-term climatic change (CAR-8).
3. The development of detailed stratigraphy which relate magnetic stratigraphy to faunal and floral stratigraphies of all major microfossil groups and to the volcanic history of Central America (all sites).
4. The nature of change in the physical properties over the upper 200 to 250 m of sediments in calcareous rich, siliceous rich, and hemipelagic sedimentary sections, including an opportunity to compare cyclic lithologic changes with the acoustic reflection record (all sites).
5. The pattern of hydrothermal alteration and metaliferrous sediment deposition in the lower part of the sedimentary section (site 83).

A large segment of the ocean paleoenvironmental and sedimentological community expressed interest and helped to prepare a proposal for use of the HPC. Information from this proposal has been used in the 1981-83 CHALLENGER proposal and for the "mini-leg." Details of the mini-leg proposal were worked out at an ad hoc meeting of OPP members on 20-22 June.

T. Moore moved, Winterer seconded, acceptance of the HPC 30-35 day equatorial mini-leg as outlined in the proposal.

Roberts moved, LePichon seconded, that the motion be amended to read that the 35 days for the HPC mini-leg be taken from S. Atlantic drilling program. Vote: 4 for, 8 against, 1 abstain.
Amendment defeated.

Original motion: 9 for, 0 against, 4 abstain. Motion passed.

Hays moved, Winterer seconded, that 20 of the 35 days for the HPC mini-leg be taken from the S. Atlantic program. Vote: 9 for, 0 against, 4 abstain. Motion passed.

*Post-Meeting Note: This will be called Leg 70.

III. SITE 494

The Leg 67 scientific staff requested that they be allowed to return to Site 494 for an additional 200 m of penetration, in which they hoped to penetrate the toe of the accretionary zone on the landward side of the trench. During Leg 67 several holes on the upper trench slope had to be abandoned because of what appeared to be gas hydrates. These hydrates were not found at Site 494 but drilling 1.1 miles along strike from Site 494 encountered them. The shipboard request to redrill close to Site 494 was denied because the HIG downhole seismometer was in place.

The PCOM reviewed the Leg 67 request. There was discussion about the uneven along strike stratigraphy, safety considerations, the amount of information which could be gained from the additional 200 m, and the limited time available for a mini-leg. In favor of the proposal was the possible opportunity to show clear evidence of subduction at this location.

LePichon moved and Moberly seconded that fifteen days be allocated to redrill Site 494 before the CHALLENGER begins the Atlantic drilling. Vote: 5 for, 6 against, 2 abstain. Motion defeated.

IV. INSTRUMENTATION/DOWNHOLE EXPERIMENT LEG

A proposal to use a previously drilled re-entry hole (Site 395A) was submitted by several scientists who are currently involved with CHALLENGER downhole measurements. PCOM discussed the status and success of the previously performed measurements and the feasibility of the new experiments being proposed. The specific problem being addressed in this proposal and the general scientific rationale were not explicit.

Hays moved, Schlager seconded, that the proposal be expanded with more scientific rationale and then resubmitted. Passed unanimously.

V. ENGINEERING LEG

The outline of a program for an 8-9 day engineering leg was submitted. The work for this leg was intended to take place near Site 415 (off NW Africa) and would include a number of ongoing and new engineering tests. PCOM felt that this work should be coordinated with DMP plans. A decision on the engineering leg was withheld until more information on the program became available and until it is seen how it fits the new CHALLENGER schedule.

Winterer moved, Roberts seconded, that DSDP prepare a document detailing the purposes and priorities of the engineering leg. Passed unanimously.

VI. GEOCHEMICAL TRANSECT

The data base for discussing this addition will be prepared for the October meeting.

VII. SCHEDULE CHANGES

At this time the CHALLENGER was in transit to Balboa and the PCOM did not know if emergency repairs could be made in Balboa, or if yard work in Curacao would be necessary. The following two plans were adopted:

1. Plan A: Assumed Leg 68 was interrupted for yard work in Curacao. The HPC leg should then be done before the continuation of Leg 68, followed by Leg 69, a transit down the west coast of S. America with the first S. Atlantic drilling in the Falkland Plateau area. This plan would save 9 days of SA transit and 2 days in the canal over going to the S. Atlantic via the Caribbean. No additional site surveys are planned for the Falkland region. UTMSI agreed to process the site survey data in a sequence to accommodate PCOM's plans.
2. Plan B: Assumed that the necessary repairs could be done in Balboa. The HPC mini-leg would then be done after the completion of Leg 69.

The following schedules were proposed for the remainder of 1979-81 drilling, and evaluated with the assumption that Plan A would be in effect:

1. Reversing the previously planned east and west sequence in S. Atlantic (CCW around S. America)
 - 2 legs SW Atlantic
 - 3 legs NE Atlantic
 - 3 legs SE Atlantic
 - 4 legs NW Atlantic

This was considered good for weather and medium for expense.

2. Do all of S. Atlantic first (CCW around S. America)

5 legs S. Atlantic
7 legs N. Atlantic
Caribbean NW Atlantic before NE Atlantic

This was considered to be medium for weather and good for expense.

3. Sequence as presently planned

3 SE Atlantic
3 NE Atlantic
2 SW Atlantic
4 NW Atlantic

This is the currently proposed schedule and was considered to be bad for weather and fair for expense.

Considerable discussion developed evaluating the merits of the different schedules.

Hays moved, Winterer seconded, the adoption of a general plan to drill all of the S. Atlantic before going to the North Atlantic.
Vote: 9 for, 0 against, 4 abstain.

This motion was made and passed with the realization that all plans were subject to continual review.

Distribution of lost yard time was then addressed. (The distribution of lost time for the HPC mini-leg was already considered under Item 274 II.) It was estimated that the schedule would have to absorb 30 days for yard work. (This time estimate took into account the 9 + 2 days gained back by CCW transit of S. America) until the end of the contract period in October, 1981.

Moberly moved, Winterer seconded, that the 30-day potential loss of future drilling time be distributed on a ratio of 11 days OPP, 15 days PMP, and 4 days OCP. Vote: 10 for, 0 against, 3 abstain. Motion passed.

Roberts moved, Hays seconded, that in the event the time loss is less than 30 days, the additional time be preferentially distributed to the PMP. Vote: 11 for, 1 against, 1 abstain. Motion passed.

The Panels were asked to decide upon the best method to distribute the time loss.

VIII. CHALLENGER STAFFING

A. HPC Leg

Potential participants were discussed and recommendations were received from the ad hoc OPP-HPC meeting. Co-chiefs were considered:

J. Hays, R. Heath

should be given first refusal. If either of them is unable to participate, the following scientists should be asked, taking into account that one co-chief must be from the U.S. and one must have been on a previous CHALLENGER leg:

J. Imbrie, T. Moore, W. Rudiman, W. Prell

Other staffing suggestions from the OPP-HPC meeting, from national representatives were briefly discussed.

B. S. W. Atlantic

One of the co-chiefs recommended for the first SW Atlantic leg (Falkland Plateau) is V. Krasheminikov; W. Ludwig is recommended for the other co-chief positions on that leg.

Further staffing will await Panel recommendations and OPP's decision on the schedule sequence.

IPOD countries were urged to submit their nominees for the SW Atlantic legs.

275	1981-83	<u>GLOMAR</u>	<u>CHALLENGER</u>
	PROPOSAL		

I. SCIENTIFIC PROPOSAL

The current GLOMAR CHALLENGER extension goes into effect this October and runs for two years. If funds for the GLOMAR EXPLORER are approved, conversion will begin about FY '81 but the ship probably won't be on line until late 1983. If funds for the GLOMAR EXPLORER are not approved, the program would end in October, 1981.

There are still many important scientific problems which can be addressed by a CHALLENGER-type vessel. PCOM was asked by EXCOM to prepare an 1981-83 proposal by August. EXCOM will review the proposal, and if approved, it will be submitted to NSF in September. An ad hoc committee of PCOM members, Panel Chairmen, and a few other interested people met in Washington on May 30 to discuss scientific objectives and priorities for this proposal. It was agreed that work by the hydraulic piston corer should form the major scientific framework of the program with associated and compatible special programs being worked in as convenient.

Moberly agreed to prepare the next draft of the proposal and to send it to the JOIDES Office for distribution and submittal to EXCOM.

II. GEOCHEMICAL TRANSECT

In reviewing the different objectives, there were many EN Atlantic sites with OPP objectives. If the OCP's geochemical transect could be done in the eastern Atlantic, then both objectives could be met in a single transect. The OCP was asked to consider doing their transect in the eastern rather than western N. Atlantic.

III. CHALLENGER FUNDING--1981-83

Soliciting funds from other agencies (i.e. non-NSF) was discussed. It was strongly felt that programs from other agencies should only be incorporated if they had a good scientific rationale and could be fit into a coherent scientific program. The seabed waste disposal program was mentioned as a possible non-NSF source of funds which might fit into the program. They are interested in better generic and site specific studies, and obtaining long wide cores of undisturbed sediments. Many persons associated with these studies are already on JOIDES Panels.

Discussion also developed concerning the use of other less expensive ships during the 1981-83 program. The ALCOA SEAPROBE was mentioned but it is very unstable and the HPC requires a stable platform. It would also have to be outfitted with a long drill string. The political effect of going to a smaller vessel when asking for a larger vessel (EXPLORER) might not be favorable.

Starting two new ships in 1981 (EXPLORER conversion and another new ship) might give the impression that two completely new programs were being started. The CHALLENGER is not overly expensive for a drill ship.

It was also suggested that the EXPLORER might be available for part of this time while RFP's for conversion were out. It could be run with a minimum crew and be used for piston coring. Brett will look into the availability of the EXPLORER, and the feasibility of using it during part or all of the 1981-83 time frame. DSDP was asked to make an estimate to convert the EXPLORER for piston coring and to estimate its daily operating cost in that mode.

276 Status of EXPLORER Plans

I. REGIONAL/SITE SURVEYS

Site survey lead times (regional and site specific) of approximately 4 years are necessary to properly plan for EXPLORER drilling. If the EXPLORER comes on line at the end of 1983 as scheduled, site surveys should be beginning now. At their last meeting, the U.S. Site Survey Panel, urged the PCOM to submit locations and site survey requirements for the first EXPLORER sites. This subject should be discussed at the November U.S. Site Survey Panel meeting.

II. SCIENTIFIC PROGRAM

Concern was expressed about the lack of detailed EXPLORER planning. The Ocean Sediment Coring Office at NSF has begun to increase their staff in preparation for the EXPLORER. There is money in the FY '80 budget for EXPLORER planning. Brett will investigate using some of this money to increase the JOIDES staff for EXPLORER planning, including help with synthesizing scientific information, site survey requirements, and engineering problems. Other problems which must be addressed include staffing, and staffing changes for the long legs. It was suggested that PCOM, a sub-committee of PCOM, or a special EXPLORER Planning Committee meet more frequently to specifically address EXPLORER plans. With the present meeting schedule there is not enough time to devote to the long range plans necessary to prepare a viable EXPLORER program.

The Panels were also asked to continue their participation. They were asked to consider their EXPLORER scientific programs and site survey requirements for their proposed regions and sites, keeping in mind that it may not be possible to change locations as easily as it has been with CHALLENGER drilling.

All panels were also asked to suggest analytical facilities and scientific requirements for the EXPLORER, and to design optimum laboratory and reference spaces. These recommendations should take into account the distribution between shipboard and shorebased studies, especially in light of the increased ship space and time at sea. Until plans for the alterations of EXPLORER are initiated, it will be difficult to be specific but EXPLORER is a large vessel and should be able to accommodate major facilities.

277 Synthesis Volumes

U. Von Rad distributed an outline for a proposed synthesis volume on the NW African Passive Margin. It will include DSDP results, as well as structural, geodynamic evolution, and continental geologic information, and is being edited by Seibold, Von Rad, Hinz, Sarnthein, and Wiedmann. PCOM felt that this would be an important volume to synthesize drilling results off NW Africa.

Creager moved, Schlager seconded, that PCOM endorse The Geology of the West African Continental Margin Synthesis Volume. Passed unanimously.

278 Future Meetings

The next Planning Committee meeting will be in Moscow, 22, 23, and 24 October, with a two-day trip to Leningrad on 25 and 26 October. Nikitin agreed to have individual letters of invitation sent to all PCOM members inviting them and their spouses to visit the Soviet Union for this period. The letters will be addressed to both the PCOM member and his alternate with a copy to the JOI Inc. Office. The Soviet Union will cover hotel, per diem, and transportation costs within the Soviet Union for U.S. members.

The meeting schedule is then as follows:

25-29 February, 1980	Washington, D.C. Benson to arrange with JOI (Letter of Invitation already received.) This meeting to include Panel Chairmen.
02-04 July, 1980	Paris LePichon to arrange with JOI
Late October (Coordinate with Atlanta GSA)	T. Moore to investigate holding meeting at URI

It was also suggested that a meeting be held on or near the EXPLORER, so that PCOM could see the ship.

279 Closing Remarks

Special thanks were extended to Jerry Winterer, Isabella Premoli-Silva, and their colleagues for the field trips, and to Jerry Winterer, Isabella Premoli-Silva, Maria Cita, and the Instituto Di Geologia of the Universita Di Milano for the beautiful facilities for the meeting, and to guests for attending.

APPENDIX I
PCOM Minutes
17-20 July, 1979--Italy

USE OF DIAMOND DRILLING TECHNIQUES ON THE GLOMAR CHALLENGER

The near 100% core recovery in the recently drilled Iceland borehole prompted the question, "Can this drilling technique be used on the GLOMAR CHALLENGER?" The Iceland hole was drilled using a slim hole diamond drilling rig of the type routinely used for mining exploration.

Water depths encountered by the GLOMAR CHALLENGER, as well as total drill string length, preclude the use of exactly similar equipment.

It should be recognized that the formations cored in Iceland are similar to those in which core recovery is high on DSDP sites, i.e. massive basalt or well cemented pillow basalt.

Recent land based drilling for geothermal purposes* utilized diamond bits as well as four-cone bits of the type used by DSDP. Core recovery with the DSDP type bits was higher than that with diamond bits. In addition, the four-cone bit had a much longer bit life. This confirms DSDP experience.

Core recovery on land based holes is generally higher than for offshore floating drill operations in similar formations. A primary reason for this is that from a land drill rig it is much easier to keep the drill bit on bottom and maintain a constant bit weight. The vertical motion of a floating drilling vessel makes it extremely difficult to keep the bit on bottom with a constant weight on the bit. Downhole bumper subs and the surface heave compensator are devices used in an attempt to compensate for the vertical movement of the ship.

Unfortunately, little is known about vertical motion at the bit itself, especially in long unsupported drill strings. Recent computer analysis done by DSDP Engineering Department predicts that for relatively calm seas of 6 feet, the vessel heave would be 2.5 feet and the vertical motion at the bit for a 20,000 foot drill string would be 5 feet. An instrumented downhole sub is presently being developed within DSDP, with view to confirming the computer predictions. Hopefully, one of the end results will be increased core recovery on DSDP core sites.

*Drilling Technology Expanded in Geothermal Energy Test, Roland A. Petti and Donald W. Brown, Los Anamos Scientific Lab, Petroleum Engineer, September 1978.