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UNCORRECTED DRAFT MINUTES

JOIDES Planning Committee Meeting
24-27 September 1984
Hawaii Volcano National Park, Hawaii

PCOM Members

J. Honnorez, Chairman (RSMAS, University of Miami)
J. Aubouin (France)
H. Beiersdorf (Federal Republic of Germany)
W. Bryant (Texas A & M University)
R. Buffler (University of Texas)
J. Cann (United Kingdom)
D. Hayes (Lamont-Doherty Geological Observatory)
K. Hsü (ESF Consortium)
M. Kastner (Scripps Institution of Oceanography)
K. Kobayashi (Japan)
R. Larson (University of Rhode Island, PCOM Chairman Designate)
J. Malpas (Canada)
R. McDuff (University of Washington)
R. Moberly (University of Hawaii)
H. Schrader (Oregon State University)
R. von Herzen (Woods Hole Oceanographic Institution)

Liaison Observers and Guests

R. Anderson (LDGO, Logging Services Contractor)
D. Appleman (Smithsonian Inst., Chairman Information Handling Panel)
G. Brass (NSF)
L. Carter (New Zealand)
J. Clotworthy (JOI)
L. Garrison (ODP/TAMU Science Operator)
M. de Aguiar Gorini (Brazil)
C. Hellsley (University of Hawaii)
R. Merrill (ODP/TAMU)
R. Price (Australia)
D. Rucker (JOI)
S. P. Srivastava (Canada)

JOIDES Office Liaison

D. Keith (University of Rhode Island)
D. Marszalek (RSMAS, Miami)
A. Mayer (University of Rhode Island)

OPENING REMARKS AND BUSINESS

C. Helsley (Director, HIG) welcomed PCOM members, observers, and guests to Hawaii.

The preliminary agenda was adopted after the addition of the following items for discussion: future COSOD meeting; site survey and IPOD Data Bank; and effectiveness of liaisons to ODP advisory panels.

Corrections to the minutes of the 21-23 May PCOM meeting in Paris, France:

-p. 14, item 475, motion (change vote from 8 for; 6 against; 1 abstain to read 8 for; 1 against; 6 abstain).

-p. 16, item 477 (change R. Buffler, TAMU, to read R. Buffler, UT).

The minutes were unanimously adopted as ammended by a motion introduced by R. Buffler (UT) and seconded by W. Bryant (TAMU).

OCEAN DRILLING PROGRAM REPORT

L. Garrison (ODP) reported.

Personnel:

R. Kidd has accepted the position of ODP Manager for Science Operations, beginning in November of this year. He will be assisted by A. Meyer (Asst. Mgr. Sci. Op.).

ODP Staff Scientists are:

- A. Palmer (micropaleontologist, Princeton Univ.)
- E. Taylor (physical properties, TAMU)
- C. Auroux (tectonics, Univ. Nice, France)
- A. Adamson (alteration petrology, UK)
- B. Clement (paleomagnetism, LDGO)
- G. Haase (downhole measurement, FRG)
- L. Gamboa (seismic stratigraphy, LDGO)

Three or 4 more staff scientists will be hired.

Marine technician, administration and other support positions have been filled. Publications staff will be hired when needed. About 80% of all non-science positions have been filled.

Key personnel and project organization are shown on the chart (Appendix A).

Sedco/BP 471 Conversion:

Conversion is proceeding on schedule. The work is being done by M & M Shipyards of Pascagoula, MS. Drydock is scheduled for Oct. and Nov.

Change orders are not anticipated because the conversion specifications are precise and consist of more than 200 engineering drawings and a voluminous text. Construction is expected to be completed by 1 November; instrumentation is to be installed during November.

Sea trials and two shakedown cruises will begin in early December. Two cruises are needed to train the two crews. The ship will then proceed to Galveston in late December. The priorities during the shakedown cruises are:

1. train the crews
2. test equipment
3. attempt to do some science in Gulf of Mexico - if convenient.

Engineering requirements will be tested by drilling two holes, a hole in about 1000 m water depth and another in about 3000 m water depth.

Project Plans:

TAMU's safety review panel met 30-31 Aug. to review ODP Legs 101, 102, and 103.

Leg 101, Bahamas: All sites approved except one (Eleuthera Fan). Staffing is about 75% completed. W. Schlager and J. Austin are co-chief scientists. Clearance from the Bahamian government is expected this week.

Leg 102, ENA-3 (603), 417D, 418A, 395A: No safety review necessary. Co-chief scientists are J. Schlee and M. Salisbury.

Leg 103, Galicia: The Galicia Bank sites were approved. G. Boillot will be one of the co-chief scientists.

Status of other legs: O. Eldholm and J. Thiede are co-chiefs for Leg 104, Norwegian Sea. Clearances will be requested in the near future via the U.S. State Department.

Leg 105 sites in Baffin Bay were presented to the safety panel by F. Gradstein; Labrador Sea sites will probably be reviewed in April. Of the 3 Baffin Bay sites reviewed, BB-1 was approved, BB-2 not approved, BB-3 not approved but 2 alternate sites (BB-3A and BB-3B) were recommended by the safety committee as substitutes for BB-3.

Ship track/schedule:

The port call at Bremerhaven for Leg 103 indicated on the schedule (Appendix B) may be changed to Hamburg. Otherwise the schedule is accurate.

Day rates:

Day rates for the SEDCO/BP 471 are:

Conversion \$7,849.	Fuel est. \$7500.
Shakedown \$16,317.	Catering \$21./day/person

	<u>RISERLESS</u>	<u>RISER</u>
Drilling	\$34,167.	\$37,343.
Cruising	33,167.	36,343.
Standby	32,167.	34,343.
Inactive	22,567.	23,243.

Drilling limits:

In response to a request of the PCOM at the previous meeting, the following data on drilling limits are presented:

- Working drill string - 5 1/2" and 5" diameter pipe to 30,000 ft.
- Practical water depth limit - 27,000 ft.
- Re-entry water depth limit - 20,000 ft.
- Derrick capability - 600 T

Twenty-seven thousand ft. is the effective operating depth of the navigation beacons. Availability of a GPS (global positioning system), however, would make the use of beacons obsolete.

SEDCO has been purchased by Schlumberger, but the SEDCO management team is expected to remain as is for at least two years.

ODP/TAMU will provide the following on request:

- a) Downhole tool report
- b) Preliminary drilling time estimates (will be available as a technical report in about 1 month).

Cost overrun:

Details of conversion costs are given in the minutes of the August 28-29, 1984 Interface Working Group (Appendix C).

Some cost saving can be achieved by trimming various components of the program. The major influence on the ODP budget, however, is the number of full partners in ODP.

In summary, ODP will have a \$1.5 M shortfall in FY 1985. This is not viewed as a serious problem. The major effects would be to remove some contingency funds, and to defer the purchase of shore based equipment.

Discussion:

R. Larson (URI) - How will NSF save \$1.3 M? Will half of that amount come from USSAC funds, thus affecting the U.S. science program?
J. Honnorez (PCOM Chairman) - The minutes of the Interface Working Group list how the savings will be made.

R. von Herzen (WHOI) - PCOM should make contingency plans if a sufficient number of partner countries do not join ODP as full members and the budget shortfall becomes serious. J. Honnorez - Such plans are not realistic until the exact number of partners is known.

R. Moberly (HIG) - The U.K., Canada and the ESF will decide before the next PCOM meeting.

C. Helsley (HIG) - There are three alternatives to consider, if two additional members join, the U.S. will pay the difference in the

cost of the program. If that membership is not realized then, either cancel the drilling program, or pay the difference out of the U.S. science program.

A general consensus among the PCOM members resulted in a motion introduced by D. Hayes (LDGO) and seconded by R. Larson (URI).

MOTION: Move that an emergency meeting of the Planning Committee be called if between now and January two or three candidates for full membership decide not to join the Ocean Drilling Program. If the membership remains uncertain, then the issue will be reviewed at the January PCOM meeting.

VOTE: 14 for; 0 against; 0 abstain.

Bare rock drilling:

L. Garrison continued the ODP report.

An engineering meeting was held to discuss 3 main topics:

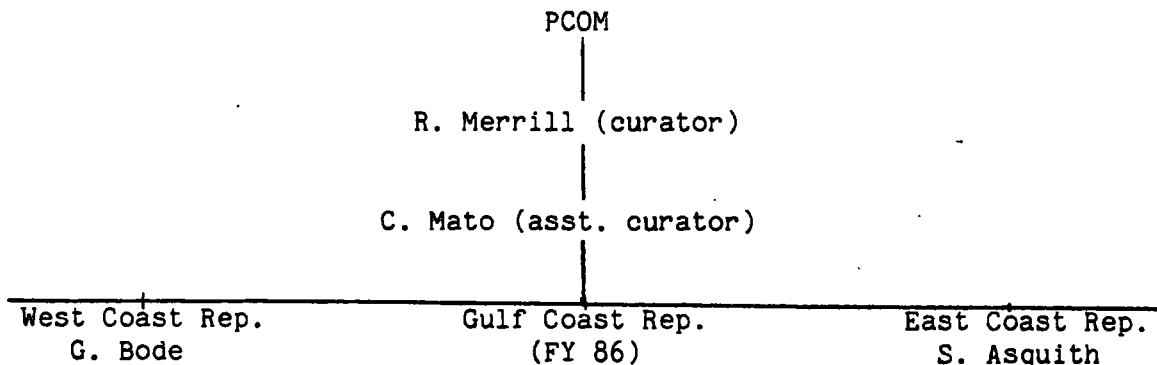
1. how to define the terrain required for bare rock drilling
2. how to "mark a spot" on the site survey
3. how the ship can return to the exact spot.

M. Purdy's group defined the bare rock drilling conditions as 2500-4000 m initial water depth (Kane FZ) and 3-6 km depth later in the program; penetration 0.5 to 2 km; sediment cover 0-40 m; terrain with less than 20° slope and up to 1 m random relief. The terrain must be specified before the "guide base" can be designed.

A spot will be marked during the SEAMARK survey in January by placing a beacon with a frequency that will be recorded on the survey and the reentry transponder. An imaging sonar system provided by Mesotech-Canada will image the bottom during placement of the guide base. An ODP engineer will attend the next Tectonics Panel meeting to advise on bare rock drilling.

R. Merrill (ODP Manager of Science Services) continued the ODP report.

ODP/TAMU has assumed managership of the DSDP-ODP repositories, effective 1 October. Management and personnel are shown in the diagram below:



G. Bode will be in charge of day-to-day curations; R. Merrill will be contacted if problems arise. The sample policy has been revised, reviewed by NSF, and appears in the October issue of the JOIDES Journal. The control over sample accounting has been tightened and the distribution policy has been broadened. In cases where duplicate core materials are available, some may be made available to educators.

Discussion:

J. Honnorez - Will frozen samples for organic geochemical studies be maintained? R. Merrill - Yes, although they may be stored in temporary facilities until ODP/TAMU freezers are ready.

M. Kastner (SIO) - Is this also true for samples retained for pore water studies? R. Merrill - Yes.

Shipboard computer system:

R. Merrill continued.

(A series of view graphs were shown, illustrating the computer system available on the SEDCO/BP 471. They are reproduced here as Appendix D.)

Discussion:

H. Schrader (OSU) - Is the system compatible with different software packages and will scientist spend a significant amount of time learning the system before they can use it? R. Merrill - The system can use a variety of software. It is designed for all user levels. We recognize that some scientists will not use it.

H. Schrader - What is the cost? R. Merrill - The cost of the entire system is \$1.4 M. It is state-of-the-art and will remain useful over the 10-year duration of the program.

Publications:

Eighty-one volumes of the Initial Reports have been shipped to date. Vol. 80 will be shipped in mid-October. Vols. 82-87 are FY 1985 publications. Vols. 88-93 are FY 1986 publications.

DSDP will have completed all remaining tasks in FY 1987.

A delay of 1 year is being considered to save the project about \$350 K. NSF plans to make publication funds available as they are needed, rather than committing all funds at the beginning of the fiscal year.

Discussion:

J. Aubouin (France) - The IPOD contract included publication of the drilling results; this condition must be satisfied before the new program can begin. It would be preferable to delay drilling rather than to delay the publication of past drilling results. What is the maximum publication delay anticipated? J. Clotworthy (JOI) - The maximum delay is one year, but it is likely to be less than a year.

Motion introduced by J. Aubouin, seconded by M. Kastner (SIO):

All IPOD/DSDP Initial Reports are to be published. Publication of completed volumes should not be delayed for more than one year.

(Amended by the proposers to read:)

MOTION: All IPOD/DSDP Initial Reports are to be published.

VOTE: 14 for; 0 against; 0 abstain.

WIRELINE LOGGING SERVICES CONTRACTOR REPORT

R. Anderson reported.

Wireline logging operations are on schedule and will be ready for logging on ODP Leg 101.

A significant savings on tool insurance costs has been realized. During DSDP, log tool insurance was covered by the Univ. of California. This situation does not exist for LDGO and Columbia University, so an insurance bid was solicited from Lloyds of London. The cost was astronomical. Schlumberger then stepped in with an insurance coverage used for land-based small logging outfits; the cost is only \$3,000./yr.

Tools offered to ODP by Schlumberger include:

1. standard suite of log tools
2. a nuclear array tool (gamma ray source, compensated neutron tool)
3. a well seismic tool (vertical profile)
4. tracer for flow rates (geiger counter).

The subcontract with U.S.G.S. is being shaped in part at Stanford University because M. Zobach has taken a position with Stanford.

Digital bore hole televiewer tools have been ordered from WDK of Germany.

The borehole viewers and 12 channel seismic tools have been land tested in a 700 ft. deep, 6" diameter hole.

Software for the display and analysis of Schlumberger logs is in place at LDGO.

We are seeking a hole suitable for calibrating the tools against Schlumberger data.

Wireline heave compensator:

Design and performance characteristics of a wave motion compensator are detailed in the handout (Appendix E). Total cost to purchase and assemble the unit is \$106,400. The problem is to sense and compensate for motion. Three options for detection of motion are:

1. accelerometer
2. altimeter
3. pressure.

The system we envision for use on board the drillship is based on a sheave-wheel system controlled by a hydraulic pump. The motion sensor will probably be an accelerometer. The piston will have a 10 ft. stroke.

Wireline packer:

The wireline packer is used to sample fluid pressures and pore waters. The packer is lowered into the drill hole, a series of collars are inflated to seal off sections of the tool within the hole, fluids are pumped out, and formation fluids are sampled and delivered to the surface in pressurized teflon coated sample containers.

Problems to be overcome include:

1. size (3 5/8" dia.)
2. licensing
3. time (to be operational by the Barbados Leg 109)

One of the key components is a small 1.5 hp motor to operate a pump at 5000 m depth. A system is available from Amoco (Appendix F). It will have to be miniaturized to fit ODP hole size.

Budget:

FY 1985 funds are for operations, not for tool purchases.

Seagoing staff:

We intend to have a "wireline scientist" on each leg, as well as the Schlumberger engineer and a LDGO engineer.

Discussion:

R. von Herzen (WHOI) - How much additional ship time is required for the tools which become part of the standard tool package (e.g. the vertical seismic profiles)? R. Anderson - The times for the various tools are given in the minutes of the recent Downhole Measurements Service Panel report.

NATIONAL SCIENCE FOUNDATION REPORT

G. Brass reported for NSF.

ODP membership:

Not much has changed since the Paris PCOM meeting.

United Kingdom - J. Bowman (U.K. EXCOM representative) recently called NSF and indicated that private industry is still seeking tax advantages which would affect some of the contribution to ODP. Industry is reluctant to contribute without some government accommodations.

Canada - Some action is expected after the recently elected government gets settled in office.

ESF - The ESF consortium now consists of the Netherlands, Italy, Switzerland, Norway, Sweden, and Spain. It will be difficult to increase membership further.

Discussion:

R. von Herzen (WHOI) - Are NSF funds available for downhole measurements experiments? G. Brass - Yes. USSAC oversees such work and at least two proposals relating to ODP are under review.

J. Honnorez - NSF has expressed concern that too many JOIDES meetings are being held outside of the U.S. Of 35 meetings between October 1983 and November 1984, only 13 were held outside the U.S. Two were in Europe (40% of panel membership was European), and 3 were the Mediterranean Working Group (80% European membership). G. Brass - NSF concern was for the NSF representatives.

JOINT OCEANOGRAPHIC INSTITUTIONS INC. REPORT

J. Clotworthy (JOI Vice President) reported.

Contract activities:

The RSMAS-Univ. of Miami JOIDES Office contract is being phased out and a new contract is in place with URI. The JOIDES Office moves to URI effective 1 October.

An administrative decision has been made to extend the LDGO Data Bank contract for a period of 6 months. It can be extended for a longer period.

Project management:

Monthly reports to NSF are behind. The form and substance of such reports has been agreed upon by JOI and NSF, so reports will be more timely from now on. The June report has been distributed to the PCOM; the July report was sent to NSF last week. We hope to be on schedule with the reports to NSF by December.

The minutes of the last Interface Working Group meeting have been distributed to the Executive Committee and are available at this meeting.

Discussion:

J. Honnorez - What is the status of the site survey RFP for the Chile Triple Junction? J. Clotworthy - Two responses to the RFP were received; both were considered unacceptable. Comments for improving the proposals were sent out, and institutions were encouraged to submit a proposal to NSF for a grant for regional surveys in the area.

D. Hayes (LDGO) - USSAC actions have effectively removed the Chile Triple Junction from the list of potential ODP legs. JOIDES appears to be hostage to the USSAC.

J. Honnorez - Are site survey funds available for 1984-85? J. Clotworthy - No site surveys have been identified for that time period. JOI cannot request the funds until the surveys have been identified.

D. Hayes - Site surveys should be 5 years ahead of drilling.

J. Aubouin (France) - The problem is that JOIDES lacks medium range planning. The PCOM is responsible for long range and medium range planning.

R. Buffler (UT) - What is the USSAC mandate? G. Brass (NSF) - USSAC is a U.S. panel and should not be discussed here. However, the Committee is responsible for U.S.:

1. downhole measurements

2. funding U.S. participation cruises
3. production and evaluation of site surveys.

C. Helsley (HIG EXCOM rep.) - PCOM should be reminded of the criticism in the "Bally report." More site surveys are needed so that drilling can be more selective. An excess of surveyed areas are needed.

J. Malpas (Canada) - Time as well as cost should be considered. Long lead time is essential if situations like the Chile Triple Junction are to be avoided.

J. Cann (U.K.) - PCOM has produced a general shiptrack to 1991. What is required now from the PCOM is a menu of sites within those areas.

EXECUTIVE COMMITTEE REPORT

J. Honnorez (PCOM Liaison to EXCOM) reported on the 19-21 June 1984 meeting.

The EXCOM has requested that JOI formulate an ODP procurement protocol and distribute the document to all EXCOM members (J. Clotworthy remarked that it has been distributed).

Another item of interest to the PCOM is that JOI will record and distribute a record of how important budgetary decisions are reached.

EXCOM has requested that the JOIDES Office publish a list of ODP proposals in the JOIDES Journal. The initial list will appear in the October issue of the Journal (mailed 27 Sept. 1984).

To date the Office has received about 150 proposals and "ideas for drilling." The regional distributions of proposals is as follows:

- 39 Atlantic
- 10 Central and East Pacific
- 3 Southern Oceans
- 19 West Pacific
- 50 Indian Ocean
- 17 Ideas
- 4 Engineering and Technical

Copies have been sent to the IPOD Data Bank.

INFORMATION HANDLING PANEL REPORT

D. Appleman (IHP Chairman) reported on the 6-8 June meeting.

The IHP met on June 6-8, 1984, primarily to discuss publication policy and format for the Ocean Drilling Program. In attempting to prepare recommendations for the PCOM, the panel began by considering the strengths and weaknesses of the current DSDP/IPOD publications program. This publications scheme, consisting of a single published volume for each leg (the "Initial Report"), does a great job of keeping all the results of a particular leg together. It also ensures that the co-chief scientists maintain interest and control in the preparation of the reports. However, it hampers timely publication of significant results, since publication awaits the last paper received. It lumps site-specific and data compilation reports with the more interpretive, peer-reviewed scientific papers. It has inflexible deadlines, hence cannot allow publication of significant work done after the deadline for a leg. Because it is totally leg-specific, it does not permit publication of syntheses involving data from many legs, or relevant papers by authors outside the shipboard party.

Based on information from interested scientists, the panel drew up a list of attributes desired in a publication scheme for the ODP, that should serve the needs of the shipboard scientific parties, the co-chief scientists, the outside scientific community of users of the results of the program, and the program operators and managers. The desirable attributes were prioritized, and various publication options were evaluated on how well they met all the priorities. Highest priority went to leg coherence (keeping all of the results of a given leg together); timeliness of publication; editorial scope (the ability to publish important results even when not tied to a particular leg); and editorial flexibility, so that good science need not be sacrificed to rigid deadlines.

After thorough discussion the panel recommended the following 3-part publications program.

- 1) A true Initial Report for each leg - Part A - containing the material ready at the post-cruise meeting, 8-10 months after the cruise. This hardbound volume would not require peer-review, would correspond with the front part of the present IR, and would appear 13-16 months post-cruise. Early publication of this true Initial Report would remove the necessity for the present Initial Core Descriptions (ICDs).

2) A Scientific Report for each leg - Part B - containing the specialty chapters and scientific reports which form the back part of the present IR. This hardbound volume would appear 37-39 months post-cruise, like the present IRs. It would have two sections: peer-reviewed, interpretive scientific papers in one section; technical and data reports, usually not peer-reviewed, in the second section.

3) A Journal of Ocean Drilling, appearing perhaps quarterly, containing only peer-reviewed scientific articles. This is a critical component of the publications scheme, because it provides the important elements of flexibility, scope and timeliness which are lacking in the current publications. The Journal would publish significant scientific results of the program not tied to a specific leg; important results from a specific leg obtained after the deadline for the Part B Report for that leg; syntheses, symposia and reviews based on ODP and DSDP science.

The details of these proposed publications are given on pages 8-10 of our report. We feel that the 3-part publications scheme suggested here will come closest to satisfying the scientific goals of the ODP; we have also suggested priorities for the different components. If ODP proceeds as planned, the first Part A Initial Report volume could appear in May, 1986; the first Part B Scientific Report volume in April or May, 1988; and the first issue of the Journal in late 1987 or early 1988.

The panel also recommended immediate attention to coordination between data bases accumulated and managed by the ODP Science Operator at TAMU, and those accumulated and managed by the Logging Operator at LDGO, as well as relevant site-survey data.

Discussion:

K. Hsu (ESF) - Point of information: At the recent International Conference on Paleoceanography about 95% of the papers presented dealt with DSDP results. The majority of participants felt that a "Journal of Paleoceanography" was needed. Several commercial publishers expressed interest in such a journal focused on drilling results. AGU has decided to go ahead and publish the Journal; J. Kennett (URI) will organize the efforts.

H. Beiersdorf (FRG) - An ODP Journal would have an undesirable effect. It would enhance the perception that the ODP community is a "closed" community.

L. Garrison (ODP) - An ODP Journal can be viewed in the opposite sense - it would be a highly visible product of the ODP, and make the project more known to the community.

(The majority of PCOM members favored a two-part, A and B, publication of initial reports, but were against the idea of an ODP Journal).

The following motion resulted as introduced by J. Aubouin and seconded by K. Hsu:

MOTION: The Planning Committee recommends against publication of an ODP Journal.

VOTE: 12 for; 1 against; 1 abstain.

The following motion was introduced by R. Moberly and seconded by W. Bryant:

MOTION: Move that a part of the publication structure of the ODP include a series of initial reports, to include a simple introduction, the site chapters with the ICD equivalents, and a simple summary, to appear about 1 year post-cruise.

VOTE: 14 for; 0 against; 1 abstain.

POLLUTION PREVENTION AND SAFETY PANEL REPORT

J. Honnoret reported for PPSP.

L. Garrison has already presented the results of the 30-31 August safety panel meeting.

PPSP has lost two members, Folger and Thompson. G. Claypool (PPSP Chairman) has requested that M. Ball (U.S.G.S.) be approved as a panel member. His expertise is in the Caribbean-Bahamas region.

PCOM Consensus: M. Ball should be invited to become a member of the PPSP.

TECTONICS PANEL REPORT

J. Cann reported for the panel.

The panel will not meet again until after the next PCOM meeting. The potential drill sites for Legs 111-113 were ranked using a score of 1 to 10 for each of the drill sites. The three high priority sites are:

- 1) Peru = 7.7, highest priority, extent of subduction erosion through time
- 2) Chile Triple Junction = 7.1, subducting ridges, lower slope erosion, metamorphism, etc.
- 3) Barbados South = 6.8, LAF 7 is first priority, to assess rates of deformation.

A telex from J. Leggett (Tectonics Panel Chairman) summarizing the meeting was distributed to PCOM (Appendix G).

Discussion:

J. Cann - The Tectonics Panel recommends establishment of a Sunda-Banda Arc working group. Regional panel jurisdiction is not clear.

PCOM Consensus: A Sunda-Banda Arc Working Group would be part of a regional panel, not a thematic panel. Wait until after the Western Pacific Regional Panel meets before making a decision.

J. Cann - J. Leggett needs some guidance from the PCOM on when the ratings of the Indian Ocean proposals are due. R. Larson (URI) - The PCOM will begin in January to plan for Antarctic and Indian Ocean drilling. The Tectonics Panel should begin to review the proposals soon, by mail if necessary.

R. Moberly (HIG) - Panel chairmen will attend the January PCOM meeting in Austin, TX. They should present their ratings at that time.

LITHOSPHERE PANEL REPORT

R. McDuff reported on the 11-12 June meeting of the Lithosphere Panel.

The panel recommends:

- 1) Leg 111 - EPR 10°-13° N
- 2) Leg 112 - 504B
- 3) Leg 113 - 504B or EPR

The panel felt that it had insufficient information to rate the other drill sites.

EPR 10°-13° N was the first priority because it would serve as the "active hydrothermal natural laboratory." The minimum effort should be three 300 m deep holes. More details are given in the panel minutes (Appendix H).

Discussion:

J. Honnorez - Proposals do not yet exist for either EPR 10°-13° N or for 504B.

R. von Herzen (WHOI) - A working group should generate the proposal for EPR drilling.

H. Beiersdorf (FRG) - A proposal exists for the EPR. It is contained in the French "Blue Book" of ODP proposals.

J. Aubouin (France) - France could do more on the EPR with SEABEAM and a submersible. PCOM advice is needed.

R. von Herzen - EPR drilling will require new technology. Perhaps the objectives should be reconsidered.

M. Kastner (SIO) - ODP is a new project for which new technology is required. PCOM should encourage "new" type drilling such as the EPR.

R. Anderson (Logging Services) - Some high temperature logging tools are available now and more will become available over the next 2-3 years. Someone should make contact with the continental drilling program (Salton Sea drilling).

G. Brass (NSF) - I am forming a liaison with I. MacGregor (NSF, Continental Drilling). Hopefully, ODP can benefit from continental drilling expertise.

L. Garrison (ODP/TAMU) - If bare rock drilling is successful in the Atlantic on the Kane FZ, then it will probably be successful in the Pacific. The problem would then be what to do with the hole. PCOM should advise on this matter.

(R. McDuff continued with the Lithosphere Panel report.)

The Lithosphere Panel feels that it should have a liaison member with the Downhole Measurements Panel. None exists now and the panel recommends K. Becker. Also, J. Sclater has not yet attended a Lithosphere Panel meeting. Should he be replaced?

PCOM Consensus: The issue of panel membership and liaison will be taken up later.

SEDIMENTS AND OCEAN HISTORY PANEL REPORT

J. Honnorez reported that the panel members were contacted by telephone and asked to note potential drill sites for Legs 111-113. The SOHP priorities are:

1. NW Africa (Mesozoic) deep hole
2. Peru slope and transect
3. Ionian Sea

ATLANTIC REGIONAL PANEL REPORT

J. Honnorez attended the 10-15 September meeting in Grenoble, France and reported for the panel.

The Atlantic Panel heard presentations from the Mediterranean Working Group, the Caribbean Working Group, and from some proposal proponents.

The Caribbean Working Group recommended that Barbados drilling be expanded to include the Lesser Antilles and the Venezuela Basin.

The Mediterranean Working Group recommends that drilling occur in the Tyhreanian Sea - not in the Ionian Sea.

After hearing the reports of the Working Groups, the Atlantic Panel recommended the following priorities:

1. Yucatan 2A
2. Barbados South
3. NW Africa - Masagan 8

J. Honnoret requested that S. Srivastava (Canada) make a presentation on Labrador Sea drilling.

S. Srivastava made a brief presentation using charts and maps. The objectives of the Labrador Sea Leg fall into two categories:

1. Paleoclimate, paleocirculation
2. Age of basement.

Petro Canada has released a large volume of site survey data on Baffin Bay. Three sites in Baffin Bay have been selected, based on the survey data.

The selected sites (5, 9, and BB3) will require 50 days drilling time, equalling a 72 day leg. (Site data are presented in Appendix I.)

Discussion:

W. Schrader (OSU) - The sites must be reviewed again by the Sediments and Ocean History Panel.

J. Malpas (Canada) - The additional 14 days drilling are a result of PCOM's decision to include Baffin Bay in the Labrador Sea leg.

PCOM Consensus: Send the proposal to SOHP. Instruct them to consider PCOM's recommendation that Baffin Bay is a higher priority than the Labrador Sea. They should a) determine the drilling priorities, and b) if SOHP decides to add 14 days to the Labrador Sea leg, they should recommend a cut of 14 days from other SOHP legs (Weddell Sea, etc.).

CENTRAL AND EASTERN PACIFIC REGIONAL PANEL REPORT

H. Beiersdorf reported on the 12-14 September meeting.

Short term plans:

The panel discussed 504B, EPR 13° N, Costa Rica, Chile and Peru. Recommendations were:

1. 504B - deepen to layer 2/3 boundary. Ranked relatively low because of lack of data.
2. Chile Triple Junction - was not considered for Legs 111-113 because the panel felt that insufficient site survey data exists.
3. EPR 13° N - high priority but the scope is too broad (12 holes). Either expand to 2 legs or drill a cluster of fewer holes near a hydrothermally active area.

Long range plans:

The panel viewed the Pacific as 4 regions:

1. NE Pacific natural laboratory
2. N Pacific plate evolution, accretion and destruction
3. Jurassic/Cretaceous plate tectonics, paleoceanography, and volcanism
4. Southern Oceans.

The panel requests that working groups be established for each of the four regions. JOIDES funds would not be involved.

(The PCOM discussed the request to establish working groups and in general, was not in favor of endorsing a particular working group or set of working groups. Some members felt that in principle, workshops are a good way to channel plans, proposals, ideas, etc. into the ODP, and that national or international groups should be urged to hold workshops.)

SOUTHERN OCEANS REGIONAL PANEL REPORT

K. Hsü (ESF) reported on the 3-5 September meeting.

The Weddell Sea proposal was rated in two parts. The Southern Oceans Panel felt that the Antarctic part should be given first priority; the Subantarctic part is second priority.

The panel also established a "wish list" for drilling during the second and third austral summers:

- Kerguelan Plateau
- Prydz Bay, Antarctica
- Agulhas Plateau

- Crozet Plateau
- Central Antarctica/Australian mid ocean ridge
- Adelie land coast

The Kerguelan Plateau and the Adelie coast were identified as highest priority drilling during the second austral summer.

Discussion:

Several PCOM members voiced the opinion that panel chairmen should be reminded that planning decisions are made by the PCOM.

R. Larson (URI) - Did the panel discuss logistics? K. Hsu - Yes, the weather window in the Weddell Sea is about 70 days, which is shorter than for the Kerguelan Plateau. They requested that all 70 days be used, which would mean two short legs. The problem is that 2 short legs would mean more steaming time.

J. Honnorez - The panel requested that it consider south of 40° S to be in the Southern Oceans region.

J. Cann - Remind the panel that all regional panel boundaries were intentionally made fuzzy by the PCOM.

PCOM Consensus: The Southern Oceans Regional Panel recommendations for drilling during the second and third austral summers are viewed as being unrealistic.

INDIAN OCEAN REGIONAL PANEL REPORT

J. Honnorez reported on the 5-7 September meeting.

The Indian Ocean reviewed about 50 proposals, many of which were an outcome of the USSAC Indian Ocean Conference held at LDGO in June.

The Agulhas Plateau was considered to be the highest priority site in the western Indian Ocean. The panel also considered the Red Sea as high priority and requested that a Red Sea Working Group be formed.

The panel has made drilling recommendations beyond Leg 114:

Mar. 87 Leg 115 - Agulhas Plateau and S. Somali Basin
 116 - Red Sea
 117 - Makran
 118 - Arabian Sea
 119 - Rodriguez Triple Jct. or Chagos/Laccadive Rdg.
Jan. 88 120 - Kerguelan Plateau
 121 - Central Indian Ocean Basin
 122 - SE Indian Ridge transect + Broken Ridge
 123 - NW Australia
 124 - East part of south margin of Australia
 Nov. 88 125 - Sites not drilled on Leg 119.

Discussion:

J. Cann (U.K.) - The above list can be used to identify high-priority sites for site surveys.

PCOM Consensus: PCOM does not support the above ship schedule, but welcomes advice from panels. PCOM will make all planning decisions.

DOWNHOLE MEASUREMENTS PANEL REPORT

R. McDuff reported.

The DMP discussed the LDGO logging services group and was pleased with R. Anderson and the logging program. The panel considered new tools and gave priority to the following:

1. wireline heave compensator
2. wireline packer
3. 12-channel sonic tool.

The DMP recommends shipboard space for one Schlumberger engineer, one LDGO logging staff person, one logging scientist and one LDGO logging trainee (for log staff). DMP also recommends that the logging scientist be acceptable to both LDGO and to ODP/TAMU.

Discussion:

L. Garrison (ODP/TAMU) - Does PCOM agree with a log scientist on board for each cruise?

PCOM Consensus: The logging scientist position should be filled by one of the shipboard scientists having an expertise in logging as well as another geological discipline.

MOTION: Introduced by K. Hsu and seconded by J. Aubouin.
Move that on each leg at least one scientist competent and interested in using logs for science be part of the scientific crew, and that other logging specialists on board should not be regarded as part of the scientific staff.

VOTE: 13 for; 0 against; 1 abstain.

SHORT TERM PLANNING

After reviewing the advisory panel reports, the PCOM attempted to rank each panel's recommendations of priority drilling to select targets for Legs 111-113. Panel recommendations were summarized:

TABLE A

<u>Tectonics P.</u>	<u>Lithosphere P.</u>	<u>SOHP</u>
1 Peru	EPR 10°-13°N	1a NW Africa deep hole
2 Chile TJ	1 504B	1b Peru Trench
3 Barbados S.	EPR or 504B	2 Ionian Sea
4 NW Africa		
5 Venezuela	<u>Atlantic RP</u>	
6 Ionian Sea	1 Caribbean, YB2A, Car 5, or YB 2C	
7 Costa Rica	2 Barbados S.	
8 Yucatan	3 NW African (Mesozoic)	
<u>Cent. & E. Pacific RP</u>		
1 Peru Trench, EPR 13°N		
2 EPR (another leg)		

(Crossed out Legs are initial PCOM rejections)

Discussion:

The PCOM then attempted a straw vote to see if there was general agreement on the three legs needed for Legs 111-113. Some members objected to a straw vote without at least some discussion. Other members felt that all of the proposed legs had been discussed thoroughly during previous PCOM meetings.

It was decided that each member would briefly state his basis for voting:

R. Moberly (HIG) - Active margin drilling has been neglected, as has the Pacific.

K. Kobayashi (Japan) - Active margins have been neglected and are best drilled in the Pacific.

J. Aubouin (France) - It is time for "new" drilling - EPR bare rock and along the Andes.

R. von Herzen (WHOI) - Follow panel recommendations (Peru Trench); "new" drilling (EPR and 504B).

J. Cann (U.K.) - Panel recommendations.

R. MacDuff (UW) - Pacific has been neglected; Peru Trench

H. Schrader (OSU) - Panel recommendations; Peru Trench

M. Kastner (SIO) - New science, EPR and Peru-Chile

H. Beiersdorf (FRG) - Panel recommendations; Pacific has been neglected.

R. Larson (URI) - Peru-Chile, EPR (hope technology is available); also likes NW Africa.

R. Buffler (UT) - Panel recommendations; Yucatan is important.

W. Bryant (TAMU) - Agree with consensus so far, also views Yucatan as high priority.

K. Hsu (ESF) - New science in the Pacific (EPR, Peru-Chile, Chile TJ).

D. Hayes (LDGO) - W. side of S. America, but concerned about technical problems.

The PCOM then had a straw vote for the sites for Legs 111-113 with the following results:

- { 1 Peru Margin
- { 2 EPR 13° N

- { 3 NW Africa (Mesozoic)
- { 4 Chile TJ

- { 5 504B
- { 6 Yucatan

Each of the two legs in a set received relatively close votes; with clear gaps being present between sets.

The PCOM considered that the first set (Peru Margin and EPR 13° N) as a clear choice. A motion was introduced by R. Buffler and seconded by R. Larson.

MOTION: The Peru Margin and the EPR 13° N are adopted as two of the three sites for Legs 111, 112, and 113.

VOTE: 14 for; 0 against; 1 abstain.

The PCOM then discussed selection of the third leg required to fill the Leg 111-113 gap. Several members felt strongly that earlier PCOM recommendations on site surveys were not followed, and that insufficient time may remain to get additional surveys of the Chile TJ. Selection of the third leg for the 111-113 gap was discussed. Certain sites were eliminated from Table A for various reasons, mostly lack of support among the advisory panels. Eliminated sites are Barbados S., Venezuela, Ionian Sea, and Costa Rica.

PCOM then discussed logistics of selecting one of the remaining sites (how each potential leg would effect the ship track, time, etc.). A general consensus was reached that if a leg is unsuccessful in a particular ocean, its alternate could occur in another ocean (Atlantic/Pacific). The Chile TJ was favored as the third leg required to fill the Leg 111-113 gap.

R. Moberly introduced and J. Aubouin seconded the following motion:

MOTION: Yucatan and 504B are alternates for Legs 111-113 (EPR, Peru Margin, Chile TJ).

VOTE: 14 for; 0 against; 1 abstain.

The relative importance of Yucatan, 504B and NW Africa (Mesozoic) as alternates for Atlantic and Pacific drilling was then discussed. A vote gave the following result:

	<u>504B</u>	<u>NW Africa</u>	<u>Yucatan</u>	
1st vote:	3	(6)	(6)	1st prior.
2nd vote (only NW Africa and Yucatan):		(7)	(8)	1st prior.

Results: 1st priority - Yucatan
2nd priority - NW Africa
3rd priority - 504B

SITE SURVEY SERVICE PANEL REPORT

H. Beiersdorf (FRG) reported on the 28-29 May meeting.

The Site Survey Panel discussed its role and requested that each of its members appoint an alternate so that all meetings are fully attended. Recommendations were made for future surveys, and guidelines were developed for surveys in specific environments; seven environments were recognized. The panel recommended that specific tools be used in each type of environment.

Working groups were established for the Indian Ocean and the Southern Oceans. E. Silver (UC) will be invited to the next meeting to represent the Western Pacific.

The meeting of the SS-SP went quite well. PCOM should wait until after the next meeting before reviewing the effectiveness of the panel. (J. Honnorez agrees.)

C. Brenner of the IPOD Site Survey Data Bank has formulated guidelines for the submission of data to the IPOD Data Bank (Appendix J).

PCOM Consensus: R. Larson (URI) and D. Hayes (LDGO) will decide on the most effective way to ensure the adequate site survey data are submitted with ODP proposals. The guidelines (Appendix H), however, will not be implemented.

Site survey staff position:

D. Hayes (LDGO) distributed a position paper on the need for a staff member to handle site surveys (Appendix K). That person will need support and can be located anywhere, but a location at the IPOD Data Bank would be logical.

Discussion:

R. Larson (URI) - What is the Data Bank staff at present? D. Hayes - A senior geophysicist (J. Ladd) at one month/yr.; C. Brenner (full time); archivist (full time); draftsman (part time); and a secretary (part time). They are supported by JOI.

J. Clotworthy (JOI) - Beginning in FY 1985, the IPOD Data Bank contract will supported by comingled funds (\$190 K/yr.).

R. Larson - Some or all of the staff work required for site surveys will be handled by T. Mayer (U.K.), now part of the JOIDES Office staff. (T. Mayer advised the PCOM that he would be able to perform many of the functions listed in the D. Hayes document, and that the remaining functions could be handled by the Site Survey Panel.)

D. Hayes - The problem with site surveys will not be solved until one person is assigned full time to site survey tasks.

PCOM Consensus: Examine the roles and workloads of the IPOD Data Bank staff, then decide if additional staff is needed.

J. Aubouin (France) - Who made the decision to pay for the IPOD Data Bank contract with comingled funds? J. Clotworthy - The ODP MOUs reflected changes in the way the ODP is supported. In the past, the U.S. paid for the Data Bank and JOIDES paid for travel for U.S. scientists. Changes in the new MOUs included the transfer of travel costs for U.S. scientists from JOIDES to JOI, and the transfer of IPOD Data Bank support from the U.S. to comingled funds. These changes were stated in the ODP management proposal to NSF, and were reviewed by the partner countries.

(Several PCOM members felt that the decision to pay for the IPOD Data Bank with comingled funds should have been made by the Executive Committee.)

PCOM Consensus: R. Larson will review Data Bank staff and workload and will report to the PCOM at the next meeting. T. Mayer (JOIDES/URI) will visit the Data Bank at LDGO to become familiar with its procedures.

ODP LEG STAFFING

L. Garrison (ODP/TAMU) requested that the PCOM recommend co-chief scientists for upcoming legs.

<u>Leg #</u>	<u>Co-chief Scientists</u>	
101	Schlager, Austin	} Invited by ODP & accepted
102	Schlee, Salisbury	
103	Boillet	

PCOM made the additional recommendations:

103	Winterer (alts. Watts, Ryan)
104	<u>Eldholm, Thiede (invited by ODP)</u>
105	Srivastava, Arthur (alts. Miller, Shore)
106	(Purdy, Silver, Cann, Juteau, Francis, Bryant, Robinson, Fox) PCOM will make final recommendations after consulting with the Lithosphere Panel.

SUPPORT FOR ADVISORY PANEL CHAIRMEN

J. Honnorez reported that the JOIDES Office has been asked by several panel chairmen for support to be used for costs incurred for JOIDES (xeroxing, secretarial, etc.).

PCOM consensus is expressed in the following motion introduced by R. Larson and seconded by J. Cann.

MOTION: Move that each thematic, regional, and service panel chairman receive up to \$1000./yr. from JOIDES for incidental expenses.

VOTE: 15 for; 0 against; 0 abstain.

PANEL LIAISONS

J. Honnoret reported that PCOM liaisons are needed for several panels.

PCOM Consensus: R. Larson will appoint a liaison to the next Site Panel meeting; PCOM will decide on panel liaisons at its next (Jan.) meeting.

COSOD MEETING

A PCOM subcommittee consisting of H. Beiersdorf, R. Larson, and R. Moberly reported that the optimum time for the next COSOD meeting is mid 1988. A report will be sent to PCOM members. The COSOD meeting may be held jointly with another meeting.

FUTURE MEETINGS

- 8-11 January, Austin, TX (will be attended by panel chairmen)
- 9-11 April, Norfolk, VA (visit drillship, dates to coincide with end of Leg 102)
- 25-27 June, Hannover, FRG
- 16-18 October, Rhode Island

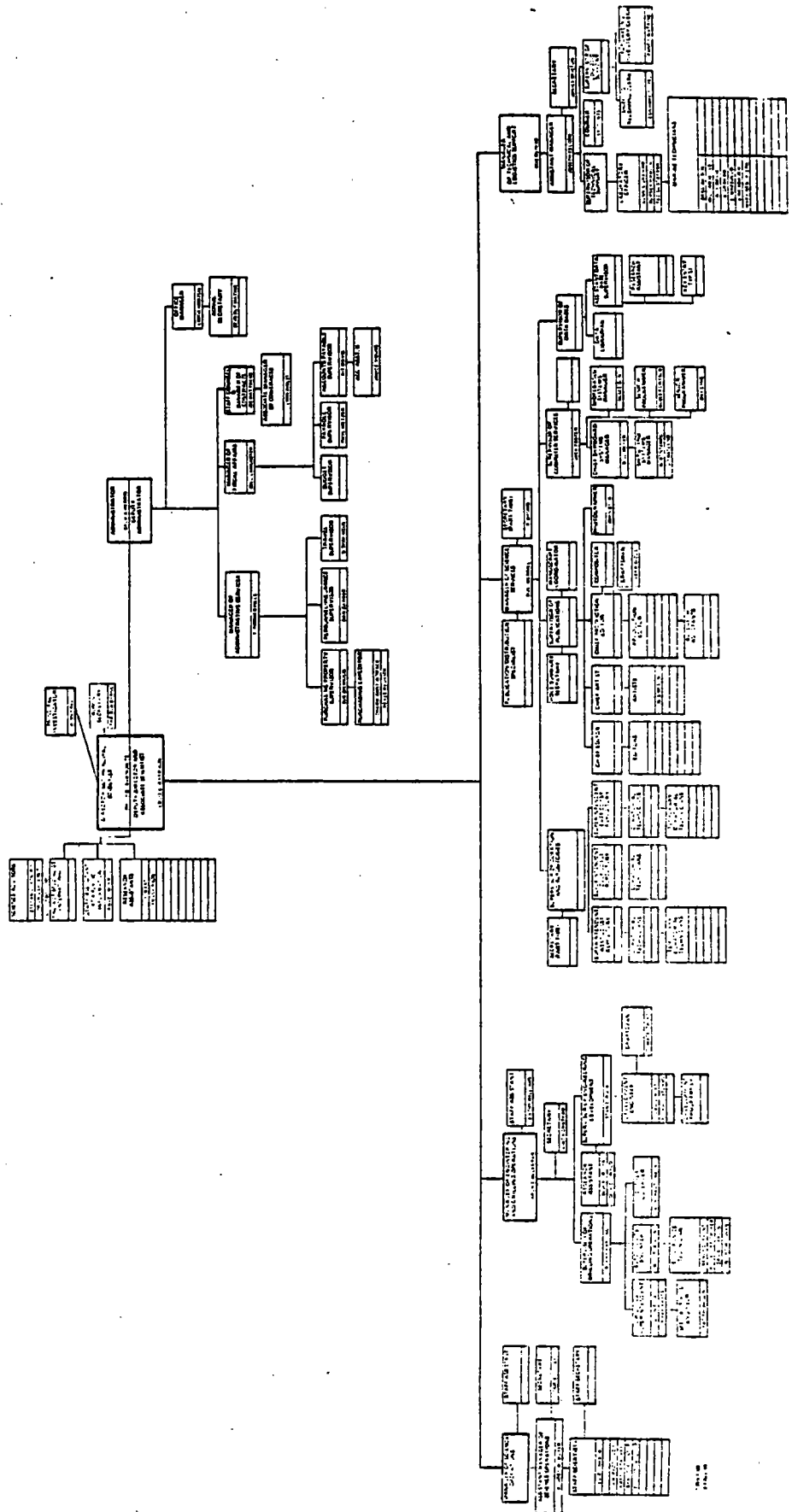
OTHER BUSINESS

The PCOM expressed its thanks to those involved in making the Ocean Drilling Program a reality during the past two years: J. Clotworthy, D. Rucker, and other JOI staff; L. Garrison, W. Merrill, P. Rabinowitz of ODP/TAMU; R. Anderson, Logging; NSF and others.

J. Aubouin, K. Kobayashi, and W. Bryant were thanked for serving on the Planning Committee.

The Planning Committee expressed their gratitude to J. Honnoret (outgoing PCOM Chairman) and welcomed R. Larson as the new chairman.

Appendix A



APPENDIX B

ODP SHIP SCHEDULE

	<u>Dates</u>	<u>Operating Days</u>	<u>Transit Days</u>	<u>Total Days</u>	<u>Port Days</u>	<u>Co-Chief Scientists</u>
LEG 101 (Bahamas)	01 Jan - 15 Feb	41	5	46		J. Austin, UT W. Schlager, UM
PORTCALL (Ft. Lauderdale)	16 - 20 Feb				5	
LEG 102 (ENA3 417, 418, 395)	21 Feb - 08 Apr	41	6 ^a	47		J. Schlee, USGS M. Salisbury, SIO
PORTCALL (Norfolk)	09 - 13 Apr				5	
LEG 103 (Galicia)	14 Apr - 09 Jun	42	15	57		G. Boillot, France
PORTCALL (Bremerhaven)	10 - 16 Jun				5	
LEG 104 (Norwegian Sea)	17 Jun - 03 Aug	42	6	68		
PORTCALL (Stavanger)	04 - 08 Aug				5	
LEG 105 (Labrador Sea)	09 Aug - 05 Oct	42	16 ^b	58		
PORTCALL (St. Johns)	06 - 10 Oct				5	
LEG 106 (Mid-Atlantic Ridge/KFZ)						
LEG 107 (Tyrrhenian Sea)						
LEG 108 (N.W. Africa/Cenozoic)						
LEG 109 (Barbados North)						
LEG 110 (MARK-2)						
LEG 111						
LEG 112						
LEG 113						
LEG 114 (Weddell Sea)						

^a Transit time depends on sites occupied.

^b Includes transit times to and from drillsites in Baffin Bay from Labrador Sea.

APPENDIX C

Conversion Costs
(In thousands of dollars)

	<u>BUDGET</u>	<u>ACTUAL</u>	<u>CHANGE</u>
A) DESIGN (Earl & Wright/SEDCO) \$	550	\$ 750	\$ 200 over
B) PROCUREMENTS	6,961	7,837(1)	876 over
C) CONVERSION (Shipyard)	2,100	5,100(2)	3,000 over
D) CONVERSION DAY RATES, (including engineering consulting, shakedown cruise, testing	1,437	1,437	0
	<hr/>	<hr/>	<hr/>
	\$11,048	\$15,124	\$ 4,076 over

(1) Includes \$375,000 for lab furnishing

(2) Includes \$200,000 for SEDCO

	<u>(\$ in millions)</u>
JOI ODP Operations & Management	\$30.210
SIO DSDP	2.775
DSDP Publications	0.360
NSF Miscellaneous	<u>0.075</u>
Total	\$33.420
Estimated overrun from FY 84	<u>4.100</u>
Grand Total	\$37.520

She then estimated the income for FY 1985 as follows:

	<u>(\$ in millions)</u>
NSF Contribution	\$21.100
FRG Contribution	1.875
France Contribution	1.875
Trust Funds	3.000
FY 84 Year End Funds	1.525
DSDP Carryover	<u>0.500</u>
Total	\$29.875
Plus two new members	<u>3.750</u>
Grand Total	\$33.625

With reductions and deferments of NSF programs in FY 1985, an estimated \$1.3M could be added to the ODP. As seen from the above, with the estimated request for FY 1985 totaling \$37.5M and the estimated income for FY 1985 totaling \$33.6M, there is an approximate \$3.9M shortfall. If NSF can add \$1.3M in FY 1985, there is a shortfall of \$2.6M.

Sandra then outlined the FY 1986 outlook (Dollars in Millions):

Estimated Funding Requests

JOI ODP	\$32.500
DSDP	2.200
Publications & Miscellaneous	<u>1.000</u>
Total	\$35.700

Estimated Funds Available

NSF Contribution	\$22.300
Five Members	12.500
	<u>\$34.800</u>
Sixth Member	<u>2.500</u>
Total	\$37.300

Summary

The following is a summary of the financial situation and things to consider.

Finance:

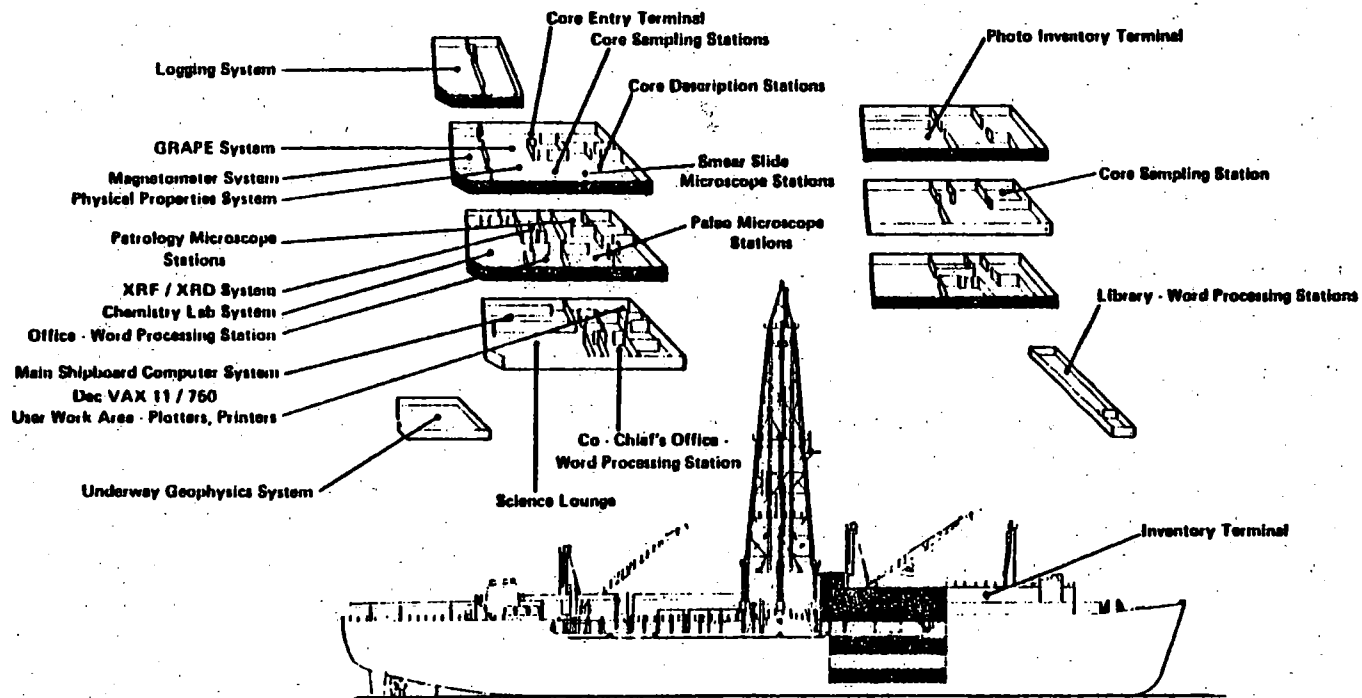
(\$ in Millions)

Needed for FY 1985	37.5
Available FY 1985	<u>33.6</u>
	- 3.9
Possible from NSF FY 1985	+ 1.3
	<u>- 2.6</u>
TAMU Savings FY 1984	+ 0.8
	<u>- 1.8</u>
JOI Savings FY 1984	+ 0.2
	<u>- 1.6</u>
JOIDES Savings FY 1985	+ 0.1
	<u>- 1.5</u>

APPENDIX D

COMPUTER SYSTEMS SUMMARY

NOTE: All Locations connected to main computer system via hardwired connections



Appendix D

APPENDIX E

INTRODUCTION / CONCLUSION

The purpose of this report is to summarise the present status in the evaluation of the proposed Wave Motion Compensator where no marine riser is present.

The hydraulics system has been reviewed in detail, and a design has been developed which should have the necessary sensitivity and durability to perform all the demands of this project. An outside vendor is prepared to produce this section as a complete package.

The various techniques of detecting wave motion have been reviewed, and three possible options emerge:

- Accelerometer
- Altimeter
- Pressure

At this time we feel that the accelerometer is likely to prove the most successful. However, we have not been able to locate any design of a somewhat similar system which is actually in operation. At this stage it must be considered as an experimental design - existing only on paper.

An approximate estimate of cost is as follows:

- Basic hydraulic package	\$ 50,900
- Accelerometer modified for digital readout	8,000
- Altimeter	5,500
- Comparator/Hydraulic control package	6,000
- Hydraulic cylinder encoder	2,000
- Special engineering time 3 mos. x 8,000	24,000
	<hr/>

ESTIMATED MINIMUM COST	\$106,400
------------------------	-----------

This is not the type of project normally undertaken by Field Support. However, we feel that it is within the capabilities of the group.

SYSTEM OVERVIEW

The Wave Motion Compensator is based on a sheave wheel system designed to compensate for the vertical motion of the drillship. All the sheaves are fixed except one - which is variable.

An outline of the system is illustrated below. A brief summary of the operation of the system is as follows:

The variable sheave wheel is controlled by a hydraulic piston.

The hydraulic piston is controlled by a reversible pump.

The pump is controlled by the output of a comparator.

One comparator input comes from an encoder on the cylinder.

The second comparator input is from the wave motion sensor.

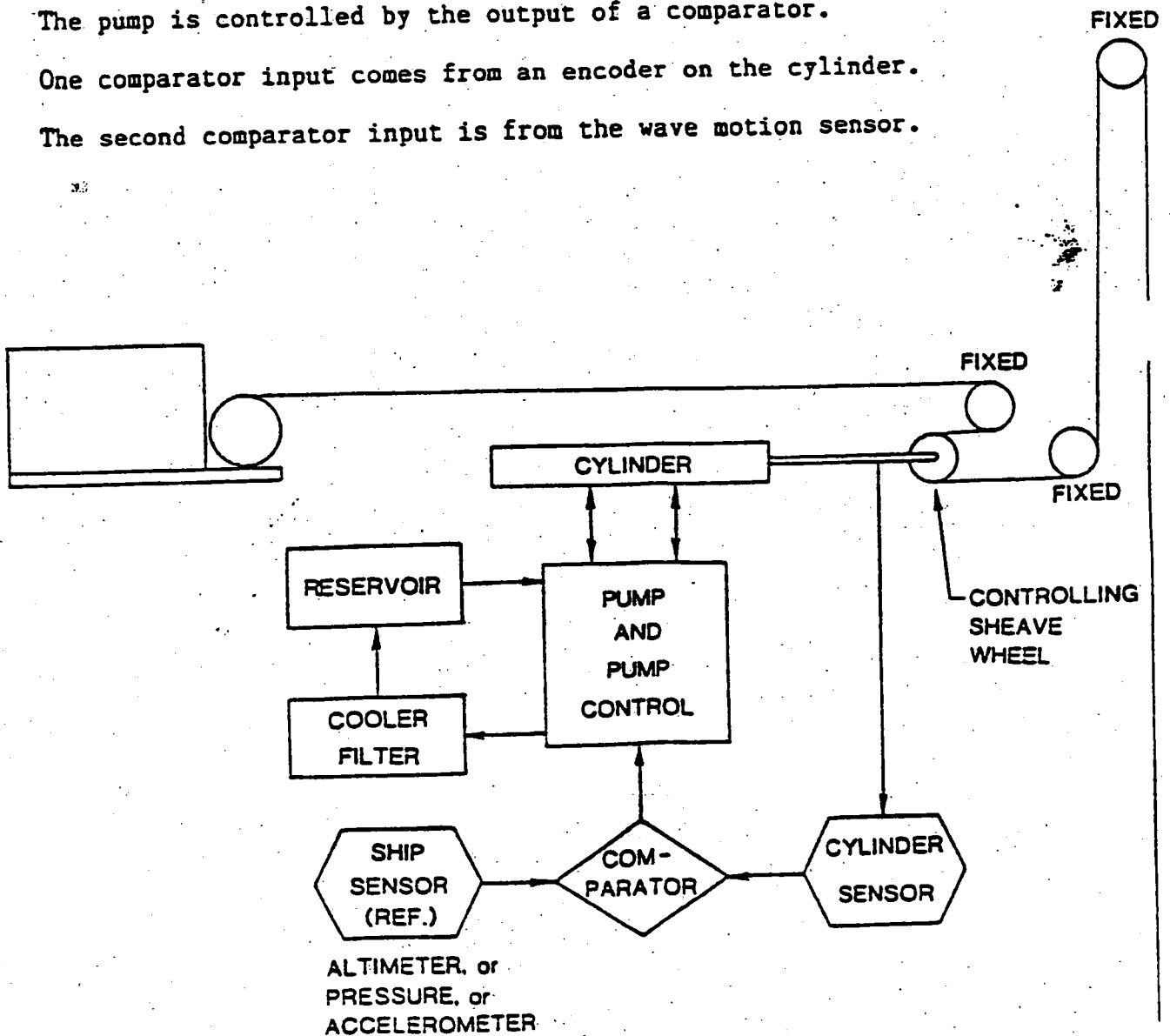


FIGURE 1.

HYDRAULIC SYSTEM

The pump selected is a Rexroth reversible pump. This was selected for the following reasons:

1. SENSITIVITY It has an infinite reversible output to a maximum of 110 GPM at 6000 psi.
2. DURABILITY This pump withstood a torture test of 4000 hours which is far in excess of our potential demands.
3. AVAILABILITY This pump is an "off the shelf" item and should be available quickly from any competent hydraulic dealer or the Rexroth factory. It is also the same basic design as used for the winch system.
4. SAFETY The working pressure of this pump is 6000 psi, and the maximum expected working pressure is 1818 psi, giving a margin of safety of 3.3. The maximum pressure of 1818 psi is based on a 15,000 lb. line pull.

The hydraulic cylinder has a 10 ft stroke, a working pressure of 5000 psi and a two year factory guarantee. The maximum line correction is 20'.

The pump would connect directly to the hydraulic cylinder, thereby eliminating any external plumbing or valving.

Cooling will be accomplished with a seawater heat exchanger, and fluid will be filtered twice during each trip through the system.

The whole system is protected by a number of internal relief valves in the pump itself.

The pump is controlled by an electro-mechanical unit attached to the pump. This unit is supplied control voltages from the output of a comparator.

The maximum stroke cycles per minute is 6.

The hydraulic unit will be on a skid and waterproof to normal electrical specifications for this type of operation.

ELECTRICAL SYSTEM

The heart of the electrical system is a comparator module. It has two inputs - one from a cylinder encoder on the hydraulic cylinder and the other from the wave motion sensor.

The difference between the two inputs is translated into an error signal representing the necessary correction. The correction signal is given as a + or - 200 - 600 milliAmps.

The vertical motion of the ship can be established by (at least) three different techniques:

1. ACCELEROMETER

A very accurate accelerometer may be used to monitor vertical movement and translate the gravity forces into displacement. The resolution is estimated at 0.5 ft. It is by far the most expensive system.

2. ALTIMETER

An extremely sensitive altimeter may be used, and internally corrected for barometric pressure. The cost of this system is moderate.

3. PRESSURE

It would be possible to suspend 350 ft of tubing below sea level and monitor the pressure changes with a very accurate pressure gauge. This system should be the cheapest, but it might be affected by the on-board thrusters which maintain the ship in place.

Ideally at least two of these systems should be designed. The output of each system could be standardised. It would then be possible for the operator to select either system.

The question of redundancy must also be finalised.

The overall sensitivity of the system should have a resolution of the order of 0.5 ft. Based on a pump full cycle time of 4 seconds it is calculated that the maximum response lag (behind the wave) would be 2 Secs. It may be possible to reduce this lag time.

APPENDIX F

AMOCO WIRELINE PUMP TESTER

11ft



← 3 7/8"
 ← INSIDES = 3 5/8"
 ELECTRONICS TO control valving, pump, sampling, data acquisition, transmission

VALVING SYSTEM AND DOWNHOLE Pump: 1 1/2 hp. downhole motor w/ hydraulic pump

2" max. diameter sample measurement chamber w/ 5 electrical outlets. (En, Ph, elect resist, P, T) at present

PACKER #1

SAMPLING ORIFACE

PACKER #2

SAMPLE SECTION

High pressure 150 ml sample chambers

this distance
 + variable
 subspace
 subs from
 1' to 6'

Pump sets packers, then
 dresses down ~ 100psi
 passing fluid through
 interrogation chamber. at
 surface, operator decides when
 to stop flushing & when to
 divert fluid to sample chambers.
 + Permeability + pore pressure meas

APPENDIX G

84-09-12 14:30

53654 UNINEX 6

5292 84-09-12 14:30

DR. J. HONNOREZ
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4. WE RANKED CANDIDATE FOR LEGS 111-113 IN THE FOLLOWING WAY. EACH OF THE TEN VOTING MEMBERS PRESENT AWARDED THE LEG, AND INDIVIDUAL TARGETS WITHIN THE LEG, A SCORE OF 0-10, USING 10 FOR HIGHEST PRIORITY. PROPOSAL PROPONENTS DID NOT VOTE FOR THEIR PROPOSALS. FIGURES REPORTED BELOW ARE AVERAGE SCORES:, THE SPREAD IS GIVEN IN PARENTHESISEA.
1. PERU, 7.7(5-10 SPREAD);, TRUNCATION, 7.8(5-10);, UPPER SLOPE DRILLING, 7.4(2-10). PERU IS OUR HIGHEST PRIORITY BECAUSE IT OFFERS AND EXCELLENT OPPORTUNITY TO DETERMINE THE EXTENT OF SUBDUCTION EROSION THROUGH TIME; EFFECTS OF THIS SUBDUCTION STYLE ON UPLIFT/SUBSIDENCE IN THE FOREARC, AND THE NATURE OF THE TRANSITION FROM ACCRETIONARY PRISM TO CONTINENTAL CRUST.
 2. CHILE TRIPLE JUNCTION, 7.1(4-9);, MODERN COLLISION AREA, 7.3(3-9);, OLDER COLLISION EFFECTS, 6.2(2-9);, PRE-COLLISION SITUATION, 5.4(1-8). WE CONSIDER THIS A VERY ATTRACTIVE OPPORTUNITY TO ASSESS THE EFFECTS OF A SUBDUCTING RIDGE, SUCH AS LOWER SLOPE EROSION, METAMORPHISM, NEAR TRENCH MAGMATISM, UPLIFT AND SUBSIDENCE.
 3. BARBADOS SOUTH, 6.8(2-10). FIRST PRIORITY IN THE GROUP OF TARGETS IS LAF-7 WITH 6.9(1-10), TO ASSESS RATES OF DEFORMATION, STRUCTURAL STYLES, AND PHYSICAL PROPERTIES WHERE A THICK TURBIDITE SEQUENCE IS ACCRETED; NEXT IS LAF-4 AND 5 WITH 6.4(1-10), TO STUDY POSSIBLE OUT-OF-SEQUENCE THRUSTS UPSLOPE. THE REMAINING TARGETS ARE NOT CONSIDERED AS IMPORTANT FROM A THEMATIC STANDPOINT: GRENADA BASIN 6.2(2-10);, INNER DEFORMATION FRONT 5.8(3-9);, OUTER STRUCTURAL HIGH 4.4(1-7);, TOBAGO TROUGH 4.5(1-8).
 - EQUAL 4. NW AFRICA 6.4(4-10);, MAZAGAN PLATEAU 5.7(2-9);, S-1 MAGNETIC ANOMALY 6.1(0-10). VENEZUELA BASIN 6.4(2-10). ALTHOUGH THE SCIENTIFIC PROBLEMS IN THESE TWO LOCATIONS WERE APPRECIATED, THERE WAS SOME CONCERN ABOUT THE AMOUNT OF DRILLING TIME THAT WOULD BE REQUIRED AT THIS STAGE OF THE PROGRAM.
 6. IONIAN SEA 4.3(1-9);, MEDITERRANEAN RIDGE 4.4(1-10);,

6. LONIAN SEA 4.2(1-9):, MEDITERRANEAN RIDGE 4.4(1-10):,
MALTA EXARMPMENT 4.3(2-8). NOT FAVOURED BECAUSE OF UNCERTAINTIES
AS TO WHETHER SHALLOW(HPC CAPACITY) HOLES COULD REALY ADDRESS THE
ORIGIN OF THE MEDITERRANEAN RIDGE , AND BECAUSE DRILLING ON THE
MALTA EXARMPMENT IS OF UNCERTAIN SIGNIFICANCE WITH REGARD TO
THEMATIC PROBLEMS IN GENERAL.
7. COSTA RICA 4.0(2-6):, UPPER SLOPE BASEMENT DRILLING 5.1 (2-7):,
TEST DUPLEX MODEL 2.5(0.7). DOWNGRADED BECAUSE OF WIDELY HELD
SUSPICION THAT DUPLEX MODEL BASED ON MISCONCEPTIONS ON THIS
MARGIN, AND BECAUSE THE MARGIN IS TOO SIMILAR TO GUATEMALA,
DRILLED ON LEGS 67 AND 84, TO JUSTIFY A NEW TRANSECT.
8. YUCATAN BASIN 2.8 (0-7), WE DO NOT CONSIDER THAT THE LEG AS
PLANNED ADDRESSED GENERAL THEMATIC PROBLEMS.

B. OTHER MATTERS

1. OUR PANEL STRONGLY FEELS THAT DRILLING DECISIONS SHOULD BE BASED
PRIMARILY ON PRIORITIES ESTABLISHED BY THEMATIC AND REGIONAL
PANELS, AND WE ARE CONCERNED THAT SITE SURVEY DECISIONS MAY BE
ARRIVED AT. PRIOR TO SCIENTIFIC DECISIONS FROM THEMATIC PANELS.
WE REQUEST CLARIFICATION FROM PCOM ON THE SEQUENCE OF EVENTS IN
DECISION-MAKING PROCEDURES.
2. WE RECOMMEND THAT A SUNDA-BANDA ARE WORKING GROUP BE ESTABLISHED
BECAUSE THE REGION HAS A VARIETY OF IMPORTANT TECTONIC PROBLEMS
AND CUTS ACROSS THE GEOGRAPHIC BOUNDARIES OF REGIONAL PANELS.
WE SUGGEST THE FOLLOWING MEMBERS: KATILI (INDONESIAN
REPRESENTATIVE), KARIG(USA), WANNESON OR LE PICHON (FRANCE),
JONGSMA(NETHERLANDS), BARBER(UK), CURRAY(USA), MEYER(ODP LIAISON).
3. REGARDING TYRRHENEAN SEA DRILLING, ARE AWARD HIGHEST PRIORITY
TO SITES IB, 3 OR 4, AND 5. IN OUR VIEW, THE MOST IMPORTANT
PROBLEMS TO BE ADDRESSED ARE THE NATURE OF PRE-RIFT AND
SYN-RIFT SEDIMENTS, AND THE NATURE AND AGE OF THE BASEMENT.
4. WE DO NOT CONSIDER THAT A DECEMBER MEETING IS URGENT. WE
ANTICIPATE CAN FIELD ANY IMMEDIATE PROBLEMS BY MAIL. WE
IF PCOM DISAGREES, WE PREFER THE FOLLOWING OPTIONS:
1) EACH COAST US, PREFERABLY LAMONT SO THAT WE CAN REVIEW
LOGGING FACILITIES.
- 2) WEST COAST US (PREFERABLY SAN FRANCISCO OF SCRIPPS-SO THAT
WE HAVE ACCESS TO PROPONENTS AFTER AGU AND/OR DURING THE
IORP. SUBSEQUENT MEETING PREFERRED AFTER 15TH MARCH, WHEN
K. HINZ RETURNS FROM SEA, IN TEXAS OR AT SCRIPPS.
5. WHEN DO PCOM WISH TO SEE OUR IORP PROPOSAL RATINGS? MOST OF
US ONLY RECEIVED THE LARGE BATCH OF US PROPOSALS AT THE
MEETINGS, AND SO COULD NOT CONSIDER THEM CAREFULLY, BUT WE
CAN IF NECESSARY USE OUR NEW VOTING SYSTEM BY MAIL WITHIN
THE NEXT FEW WEEKS.

IMPERIAL COLLEGE

53654 UNINEW 6
261503 IMPCOL 6

APPENDIX H

LITHOSPHERE PANEL MEETING 11-12 June 1984, WASHINGTON, D.C.

Summary of Principle Recommendations

1) Pacific Drilling

- a) Panel recommends:
 - Leg 111: EPR 10-13°N
 - Leg 112: 504B
 - Leg 113: 504B or EPR

Decision of Leg 113 should await results of Leg 111. If 111 is not successful then two legs on 504B would give real chance of sampling Layer 3. If 111 is successful then two legs on EPR would give a good start at Active Hydrothermal Natural Laboratory with added bonus of 500m further penetration into 504B. Either way exciting results are likely.

- b) Drilling on EPR 10-13°N should be start of long term 'natural laboratory' to study active hydrothermal processes. Minimum reasonable startup effort is three ~300m deep holes.
- c) Huge volume of new data collected on EPR 10-13°N makes considered choice of precise site difficult: recommend formation of working group to solve this.

2) Atlantic Drilling

- a) Leg 102: Panel recommends full scale downhole measurements leg carrying out complete suite of downhole experiments at 417 and 395 and deepening 603 to at least 50m into basement. Second choice would be to delete 395 (given it would be picked up on Mark I or Mark II). Third choice would be to delete 395 and possible extra pipe trip on 603 to achieve required basement penetration.
- b) Panel recommends French Goringe Ridge proposal as back up to any eastern Atlantic/Med drilling that may run into clearance problems. Priority is below that of MARK, 504 or EPR however.

A. INTRODUCTION

1. The next meeting of the Panel was tentatively scheduled for November 6 and 7 in either Miami or Lamont.
2. Russ McDuff reported on the last PCOM meeting in Paris:
 - i) Latest drilling schedule was presented. The panel needs information on Chile Triple Junction plans: Langmuir will get details from Cande in time for our next meeting.

gradients, physical and magnetic properties and changes in metamorphic grade through a significant portion of the oceanic crust. It remains one of our highest priorities for Pacific Drilling.

2. Drilling on an Active Hydrothermal Vent Area

This Panel places its highest priority on starting a focussed drilling program to study active hydrothermal processes at the earliest opportunity and specifically before the drilling ship goes south to the Weddell Sea.

- i. Delaney reviewed the major components of hydrothermal systems stressing both the three dimensionality and time-variable nature of the problem. Models of such systems are wildly unconstrained at this time: there exists a clear need for good basic measurements of permeabilities, flow rates and thermal gradients. An important required parameter that drilling will not provide is magma chamber size and shape.
- ii. MacDonald reviewed possible sites suitable for the focussed study of active hydrothermal processes. Criteria for site evaluation were availability of site survey data; magnetic latitude and clarity of anomaly pattern; spreading rate; simplicity of tectonic fabric and crustal generation processes; hydrothermal activity; logistics (proximity to port, clearance). It quickly became clear that the East Pacific Rise at 10-13°N most effectively satisfied these criteria. This region has been the subject of 3 U.S., 3 French and 2 German SEABEAM cruises, one SEAMARC cruise, 3 ALVIN and 3 CYANA cruises, 3 ANGUS, one Deep Tow and 2 RAIÉ, both French and U.S. hydrothermal studies, ROSE, RISE and multichannel seismic expeditions, gravity and 3-D magnetic studies. However, it needs more multichannel coverage for definition of magma chamber geometry and more off axis geophysical coverage in general.
- iii. To make optimum selection of specific site for 'Active Hydrothermal Processes Natural Laboratory' all this data needs to be assimilated quickly. Rather than a formal synthesis (probably take too long), Panel recommends formation of working group consisting primarily of those who have collected the data in this region. Possible names are:

Orcutt or Detrick or Mutter
Langmuir or Bryan or Batiza
Bougault
Francheteau or Baecker
Mottl or Edmond
MacDonald or Fox or Ryan
Delaney or Boulegue

The charge to this group would be to formulate a recommendation to the Lithosphere Panel on the basis of all available data for the optimum site location on the EPR between 10-13°N.

Decision of Leg 113 should await results of Leg 111. If 111 is not successful then two legs on 504B would give real chance of sampling Layer 3. If 111 is successful then two legs on EPR would give a good start at Active Hydrothermal Natural Laboratory with added bonus of 500m further penetration into 504B. Either way exciting results are likely.

Panel was painfully aware of its ignorance concerning objectives of proposed Chile Triple Junction leg.

C. ATLANTIC DRILLING

1. Leg 102: Salisbury presented various options and scenarios and these along with their priorities were discussed at length. An important conclusion was that the Lithosphere Panel supports deepening Site 603 (ENA3) providing time is taken (i.e. extra pipe trip if needed) to obtain >50m of basement. This would constitute first substantial sample of Jurassic crust in Atlantic, sampling the seafloor spreading process soon after its beginning, and perhaps providing one more data point for the mantle heterogeneity story.

Site 395: Because logging on Leg 78B was such a failure it is important to return to this site to carry out full suite of experiments identical to these in 504B to allow the two to be contrasted: The suite presented by Salisbury was:

- Schlumberger logs (obviously),
- Large scale resistivity,
- Magnetometer (Johnson plus BRG 3 component),
- Multichannel sonic log
- HPC
- HPC heatflow à la Dick Von Herzen
- Packer
- Televiewer - four arm caliper
- Deep water sampling
- VSP

Excluding VSP, time estimate for this on site was 5.5 days. Because of topography problems Purdy doubted OSE at this site was worthwhile but VSP was potentially very useful.

Concerns with uncertainties with respect to being able to re-enter 418 caused discussions to focus on 417D. Operations recommended by Salisbury at 417D were:

- Schlumberger log
- Large scale resistivity
- Magnetometer
- Multichannel sonic
- Packer
- Televiewers - four arm caliper
- Water sampling
- VSP and OSE.

through the observed contact between mantle derived serpentinites and gabbros in the saddle between Ormande and Gettysburg (Mevel's Site 2). The primary criticisms are the anomalous nature of Gorringe and lack of knowledge of tectonic setting in which the crust and mantle which would be sampled were formed. Nevertheless, the Panel recommends this drilling as a back-up in the E. Atlantic in case of, for example, clearance problems in the Med or at Galicia. It is a well defined problem with good existing site surveys. Its priority, however, does not exceed that of MARK, EPR or 504B.

D. INDIAN OCEAN DRILLING

1. Recent Indian Ocean Workshop: Langmuir brought seven formal proposals from this workshop which are to be distributed to members of our Panel for detailed investigation and review in time for our November meeting at which prioritization will be attempted. A panel member will act as a proponent of each of the proposals as follows.

<u>P.I.</u>	<u>Panel Proponent</u>
1. Brocher	Purdy
2. Bonatti and Ross	Juteau or Emmerman?
3. Natland	Saunders
4. Duncan	Juteau
5. Duncan	Juteau
6. Dick	Hawkins
7. Langmuir	Langmuir and Sinton

2. Kerguelen: The processes of formation and evolution of oceanic plateaus are a high Lithosphere Panel priority. Purdy will contact Kennett and Curray to get all existing drilling plans in this region and pass this on to Juteau who undertook to formulate by our November meeting a preliminary straw-man drilling plan to most effectively achieve Lithosphere Panel objectives.

E. WESTERN PACIFIC DRILLING

1. Purdy expressed strong desire to choose site of focussed drilling efforts to study back arc spreading processes in the W. Pacific at the earliest opportunity. In this way, the necessary planning and data collection could, for a change, be done in a timely and organized manner. The question was posed 'Given we have time what is the best process by which to involve the wider community in choosing the site of such a focussed effort?!
2. The panel was pleased to hear of Jim Hawkins existing intention of organize a workshop to address drilling in W. Pacific arcs.
3. The idea was discussed of using COSOD II as a forum for several specific workshops of the type needed to address questions like that posed in (1) above.

APPENDIX I

DRILLING TIMES

SITE 9

Water depth - 3950 m
Sediment thickness - approximately 800 m
Basement penetration - 50 m
HPC (200 m) and coring to basement

No re-entry cone

Drilling Time

13 days

Site 5

Water depth - 3350 m
Sediment thickness - 1425 m
Basement penetration - 50 m

HPC (200 m) and coring to basement

No re-entry cone

17 days

BB3B

Water depth - 2090 m
Sediment thickness - approximate 1420 m
to first continuous reflector

Basement penetration - nil

HPC (200 m) + coring, re-entry and casing

20 days

TOTAL

50 days

Transit times:

Stavanger to LA5	7.5
Between LA5 to BB3	3.5
Between BB3 to LA9	5.0
Between LA9 to St. John's	<u>2.0</u>

18.0

Total days = 50 + 18.0 = 68.0

Bad weather, etc. = 5% = 3.5 days

Total required days = 68.0 + 3.5 = 71.5 days

SEDCO Leaving Stavanger - Aug. 9

At present ETA St. John's - Oct. 5

Requested ETA St. John's - Oct. 19

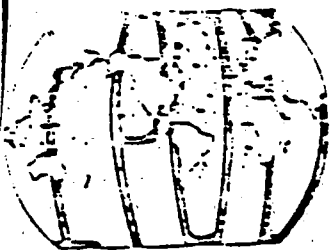
APPENDIX J

1-7 ppen 22 3 J

INTERNATIONAL PHASE OF OCEAN DRILLING

SITE SURVEY DATA BANK

Lamont-Doherty Geological Observatory



SITE SURVEY

Palisades, N.Y. 10964
Telephone: 914-359-2

Recent discussions at the July meeting of the JOI Site Survey Planning Committee have yielded the following guidelines on the submission of data to the IPOD Data Bank:

Initial data reports are to be submitted immediately following the site survey cruise. The minimum primary data set should include smoothed final navigation (in digital NGDC format) and reproducible copies of shipboard seismic reflection profiles. Also, large film negatives or sepia copies of any profiles that have been processed (CDP or otherwise) at this time should be submitted. The initial data sets will then be made available for the Safety Panel(s) as needed.

Final data reports should be submitted as the computer processed data become available. These should include:

- 1) A digital magnetic tape of underway geophysical data values (topography, magnetics, gravity) merged with smoothed final navigation.
- 2) A cruise report describing in detail the results of the survey.
- 3) Large copies, suitable for xeroxing, of the single channel seismic reflection profiles. The preferred format for 3.5 kHz records is on 35mm film negative.

If applicable, the final data reports should also include:

- 4) Large sepia copies (suitable for ozalid reproduction) of the processed multi-channel seismic reflection profiles.
- 5) Large ~~photographic~~ photographic negatives of any side scan sonar data (GLORIA, SeaMARC I or II) collected during the survey.
- 6) Large sepia copies (suitable for ozalid reproduction) of any SEABEAM data, presented at a contour interval deemed appropriate by the Principle Investigator of the site survey after consultation with the Chairman of the SSPC.
- 7) Large sepia copies (suitable for ozalid reproduction) of any "specialized" data sets (such as sediment thickness maps, bathymetry/magnetic contour charts, velocity analyses, etc.) that have been developed in the course of the cruise report. The format and nature of the presentation of these data will be variable and will be dependent upon the nature of specific interest at each site.

APPENDIX K

September 21, 1984

TO: PCOM

RE: Needed Site Survey Staff Support

FROM: D. E. Hayes

At the Paris PCOM meeting we agreed there was a clear and urgent need to provide substantial staff support to better deal with a number of persistent problems relating to site survey in support of scientific drilling. Just how to implement the additional support was left unresolved; the matter was deferred to Honnerez, Larson, and Mayer for further discussion and recommended action. The alternatives identified in Paris involved providing the staff support at the new JOIDES office at URI or at the JOIDES/ODP data bank at L-DGO.

Because there may still not be a full appreciation of exactly what work is required or how it would relate to the responsibilities of the JOIDES Site Survey Panel (present or future), I have attempted to summarize my views on this issue:

1. The definition of required vs. desired and pre-drilling vs. post-drilling site survey data in support of scientific drilling is often vague, seldom consistent, and sometimes strategically rather than scientifically motivated. For example, drilling proponents have been known to come full-circle during the decision-making process. They may start with the position that:
 - a) the proposed site(s) are adequately surveyed and therefore surveying should not be a factor in PCOM deliberations for allocating drilling time to the proposed programs.
 - b) Once the sites are tentatively or firmly assigned to a drilling schedule, proponents often reconsider and decide retrospectively that a variety of additional survey data is essential prior to drilling.
 - c) For various reasons, it may become impossible to get the essential data identified in b) and when this happens (threatening the scientific viability of the drilling leg), usually the needed data somehow loses its "essential" status.
2. The appropriateness of the existing data to the scientific drilling problem posed is often not addressed adequately or in a timely fashion, thereby pre-empting opportunities for long-range planning for site surveys and for drilling.
3. Even carefully planned and executed site surveys do not always yield results that identify any site location that is likely to resolve, by drilling, the scientific problem posed. Historically, in those cases we have proceeded with drilling anyway!
4. The total, pertinent MG&G data base that should be available for planning, site locating, and interpretation often is not available to the drilling project. Our PCOM policy (clarified at the Seattle '83 meeting) was designed to minimize this problem, but unfortunately, there has been little follow-through in enforcing that policy.

5. At its best, the JOIDES Site Survey Committee cannot be expected to deal with the above matters. They are all unpaid, busy scientists who are pressed to devote a few days/year to ODP matters. Therefore, neither the continued existence nor the possible demise of the JOIDES Site Survey Panel is particularly relevant to the issue.
6. We urgently need to establish day-to-day scientific oversight, advice, communication (between JOIDES advisory panels), and independent assessments of requisite MG&G site survey data in support of drilling. What we need is a well-qualified professional with training and experience in MG&G data acquisition, processing, and interpretation. Such a scientist is needed to deal with the problems cited earlier (and others) on a regular and continuing basis. I feel the amount of effort required is about 75% of one full-time person. It is particularly important to identify a person (or persons), both well qualified and interested in performing the needed service role. The additional financial support that would be required would also involve access to substantial travel funds, modest computer support, and some limited clerical and student assistance. The person(s) would be responsible to JOIDES and support should come from co-mingled funds. The proposed staff support would:
 - 1) Assist in identifying and compiling available site/specific and regional data pertinent to "official" drilling proposals.
 - 2) Assist in evaluating existing site survey data.
 - 3) Assist in defining additional site survey requirements.
 - 4) Provide communication between all pertinent JOIDES panels regarding site survey matters.
 - 5) Independently evaluate new site survey data and provide advice regarding its adequacy.
 - 6) Work closely with both the JOIDES/ODP data bank, the JOIDES office the JOIDES Site Survey Panel, and national site survey panels to acquire pertinent site survey data from all possible sources.

The function of the proposed site survey management staff would, among other things, supplement the ongoing work of the JOIDES/ODP Data Bank. At the moment, the data bank has the primary responsibility for archiving site survey data that it receives and generating data packages for safety panel review and for each drilling leg. The data bank in the past has also provided data to the JOI and JOIDES site survey panels upon request. However, the data bank has never been in a position to actively solicit site survey data nor has it ever attempted to make independent judgments as to the adequacy of data.

Unfortunately, we (the PCOM) once again find ourselves without adequate site survey lead-time for many of the proposed drilling legs in the first three years of the ODP program. Now is the time to consider the site survey issues pertinent to drilling beyond 1988--it is NOT too early.

I believe the type and level of scientific staff support advocated herein would make a major improvement in our ability to plan an effective long-term drilling program and would free us considerably to deal with other equally important planning issues.

D. E. H.