

JOIDES EXECUTIVE COMMITTEE and ODP COUNCIL MEETING  
31 May - 1 June 1989  
Lamont-Doherty Geological Observatory, Palisades, NY

DRAFT MINUTES

Executive Committee:

- C. Helsley, Chairman - Hawaii Institute of Geophysics
- C. Barnes - Geological Survey of Canada (Canada-Australia Consortium)
- B. Biju-Duval - IFREMER (France) \*
- J. Briden - NERC (United Kingdom) \*
- D. Caldwell - Oregon State University
- R. Duce - University of Rhode Island
- H. Dürbaum - BGR (Federal Republic of Germany)
- C. Harrison - University of Miami
- B. Lewis - University of Washington (for R. Heath)
- A. Maxwell - University of Texas Institute of Geophysics
- W. Merrell - Texas A&M University
- M. Moss - Scripps Institution of Oceanography (for E. Frieman)
- T. Nemoto - ORI (Japan) \*
- B. Raleigh - Lamont-Doherty Geological Observatory
- D. Spencer - Woods Hole Oceanographic Institution (for C. Dorman)
- J. Stel - ESF Consortium for Ocean Drilling \*

\* Also representative for ODP Council

ODP Council Members not included on EXCOM:

- D. Heinrichs, Chairman - National Science Foundation
- K. Babcock - Geological Survey of Canada (Canada-Australia Consortium)
- M. Frata - European Science Foundation
- D. Maronde - Deutsche Forschungsgemeinschaft (FRG)
- B. Munsch - European Science Foundation
- R. van Lieshout - ESF Consortium on Ocean Drilling
- R. Vernon - Australian Research Council (Canada-Australia Consortium)

Liaisons:

- R. Anderson - LDGO Borehole Research Group
- J. Baker - Joint Oceanographic Institutions
- R. Moberly - JOIDES Planning Committee, Hawaii Institute of Geophysics
- P. Rabinowitz - Science Operator, Texas A&M University

Guests/Observers:

- R. Corell - National Science Foundation
- C. Drake - Dartmouth College
- W. Erb - US State Department
- J. Ladd - National Science Foundation

B. Malfait - National Science Foundation  
P. Peters - Joint Oceanographic Institutions  
N. Pias - Oregon State University  
T. Pyle - Joint Oceanographic Institutions  
L. Stevens - Joint Oceanographic Institutions  
A. Sutherland - National Science Foundation

JOIDES Office

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

**Wednesday, 31 May 1989**

**Joint Session of ODP Council and JOIDES EXCOM  
(D. Heinrichs and C. Helsley, Co-Chairmen)**

**460 INITIAL BUSINESS**

C. Helsley called the meeting to order and welcomed all participants. Introduction of the JOIDES Office was made by C. Helsley. D. Heinrichs introduced the NSF personnel present. Introductions were then made by all participants. B. Raleigh welcomed everyone to Lamont and explained the logistics for the meeting. He thanked Penny Peters for making arrangements.

**ADOPTION OF AGENDA**

The EXCOM business session was moved to the afternoon of Thursday June 1 1989. C. Helsley explained that the joint meeting agenda is divided into three parts: Long Range Planning for the Future; Near Term Planning; and Present Status of ODP.

**EXCOM Motion**

EXCOM adopts the agenda for the 31 May-1 June 1989 Joint ODP Council and Executive Committee Meeting. (Motion Briden, second Maxwell)

Vote: for 16; against 0; abstain 0

**461 LONG-TERM SCIENTIFIC OBJECTIVES FOR ODP**

D. Heinrichs explained the time frame for ODP renewal (Appendix A). There is a heavy concentration on long-range planning. The Long-Range Science Plan needs to be ready in 1989. The science plan builds on the COSOD documents and the thematic panel white papers. The last COSOD was in 1987 and a new COSOD should occur in 1993. 1989 is a critical year for beginning discussions with the international partners. 1990 will be a critical year for science and budget planning. 1992 is when the discussion of new MOUs will begin. While 1993 seems a long way off, for budget and science planning it is very close.

R. Moberly discussed the status of scientific recommendations to JOIDES. Drilling is based on scientific proposals by groups or individuals from the international science community. The list of proposals for ODP drilling received by the JOIDES Office is given in the Agenda Book. Proposals are evaluated using the scientific objectives of COSOD I & II, although not all COSOD objectives can be matched to the capabilities of the drilling vessel. The thematic panel white papers plan the themes and objectives which are within the present and proposed drilling capabilities. The Agenda Book also shows a matrix of COSOD I objectives and ODP drilling legs. Not all objectives have been met, but a good attack has been made on many of them. COSOD I is the basis for the current phase of ODP but we are now moving the program towards meeting COSOD II objectives. Since ODP is a proposal-driven program, the status of planning at any one time depends on the nature of proposals received and their thematic rankings. There is a good backlog of proposals for meeting COSOD I & II objectives at the present time, with a tendency to focus on problems that might be addressed in the Pacific..

### Discussion

H. Dürbaum asked if more use of the drillholes for downhole experiments is planned. R. Moberly said that there are some proposals for these types of experiments. Both the Japan Sea and Nankai drilling legs include downhole experiments, plus there have been proposals to put broadband seismometers in drillholes as part of the international global seismic network and to establish various seafloor observatories. These are areas of development for upcoming drilling plans. Dürbaum thought that downhole experiments should also be included as a line item in the COSOD matrix.

B. Biju-Duval wanted to know if the thematic panels and their white papers address downhole experiments. R. Moberly said that the Downhole Measurements Panel has a thematic component that is concerned with downhole experiments and has been a strong advocate as well. Both the Lithosphere and Tectonics Panels are concerned with the need for various downhole instruments for long-term monitoring, and measurement of stress in the lithosphere.

D. Heinrichs commented that the outline of the thematic objectives given on page 30 of the Agenda Book for the three thematic panels clearly require long-term monitoring of drillholes. N. Pisiyas pointed out that ODP does not develop long-term monitoring, this function requires outside proposals and development of equipment. R. Moberly said that ODP provides ship time for the experiment but cannot buy the instruments or propose the work. J. Briden wanted to know whether the case was that ODP can't or doesn't buy the equipment. B. Malfait and D. Heinrichs agreed that there was no prohibition against ODP buying the equipment, but allocation of resources based on a priority for drilling had led to this guideline. Briden asked about the VSP experiments. C. Helsley said that the equipment for these

experiments comes from outside the program. N. Pias also pointed out that only a relatively small amount of time is necessary for the VSP, but seafloor observatories require long-term commitment of ship time which will take away from time available for drilling. C. Helsley observed that this function would be at the expense of other parts of the drilling program.

### LONG-RANGE PLANNING DOCUMENT

N. Pias presented the LRP which had been distributed prior to the meeting. Two new figures and a page with corrections were distributed at the meeting. N. Pias acknowledged the contributions of the thematic panel chairmen, L. Mayer, R. Detrick, I. Dalziel, E. Suess and N. Shackleton, as well as from PCOM members G. Brass, D. Cowan and J. Malpas.

The framework of the LRP comes from COSOD II. The Earth is viewed as nested cells of circulation, with interactions between these cells. ODP, using new theoretical and technological approaches, will contribute in a unique way to our understanding of these components of the Earth circulation system by addressing four major themes: 1) Structure and composition of the crust and upper mantle; 2) Dynamics, kinematics and deformation of the lithosphere; 3) Fluid circulation in the lithosphere; 4) Cause and effect of oceanic and climatic variability. In order to be technically achievable, the scientific objectives require the ability to drill deep holes into sediment and basement, the use of high-temperature downhole instruments, and improved recovery of alternating hard and soft lithologies and coarse, sandy sediments. In addition an alternate drilling platform, such as a jack-up rig, may be required on a contractual basis to drill some objectives.

The implementation and focussing of the next stage of ocean drilling will be a three phase program (Appendix B). Estimates for the cost of this phased development are given in Appendix B. It was noted that additional money beyond the \$42M per year currently estimated for beyond 1993 will be needed for both special engineering and operational costs to undertake this program properly.

### Discussion

W. Merrell wanted to know why additional money is needed for Borehole Seismometers when the IRIS program is developing them. N. Pias said that this is the operational costs to ODP for deploying the seismological observatories. C. Helsley asked if this was based on 10 days per year for deploying seismometers. This was a general estimate for deploying seismometers over a 4-year period.

H. Dürbaum wanted to know why additional money is needed for developing high-temperature systems. N. Pias said that both drilling tools and logging tools need to be developed for high-temperature, high-pressure, corrosive

hydrothermal environments that are to be drilled in the future. C. Helsley noted that the bottom line is that the technological development costs required for Phase II of drilling are not covered by the present program's assumed increase to \$42M. B. Malfait wanted to know what was covered by the present program's increase. N. Piasias said hopefully the \$5.4M in column 1, but not the \$11M needed to accomplish deeper drilling objectives. C. Helsley observed that a doubling of the engineering development funds is necessary to go from Phase I to Phase II. C. Barnes wanted to know if these estimates were for the real development costs or only the deployment costs. For some items such as the DCS it is total development cost, for others such as the borehole seismometers, it is the deployment cost.

Both C. Harrison and J. Briden were concerned that the cost estimates, which had been prepared by TAMU, might be too low. TEDCOM has suggested this as well. TAMU Engineering, however, has traditionally been able to do development for less money than industry estimates.

B. Lewis commented that the LRP reads well. He noted that there is an apparent change of emphasis in the program to deep crustal drilling targets. He was concerned that some of the objectives such as lower crust and mantle may not be achieved successfully, but are a major thrust of the proposed science. The future of the program may therefore depend on the success of the technological developments. N. Piasias said that the thrust is not necessarily to go for deep basement, but this is where the engineering development is needed to take the program beyond where it is already. B. Lewis wanted to know if it was the intention of the LRP to change the direction of the program to deep hard-rock drilling. N. Piasias said that the LRP drilling estimates came from what the thematic panels thought was required to achieve high priority objectives, and since crustal drilling takes greater amounts of time it may appear to be more dominant. There is no priority to the list. B. Lewis said that the number of legs associated with paleoceanography is not as large as those associated with hard rocks. N. Piasias said that the scientific effort cannot be equated to drilling effort alone, since high-resolution studies of sediment cores is time consuming. C. Barnes was also concerned with the balance between hard-rock drilling and sediment drilling, as well as the remarkably small biological component in the plan.

B. Biju-Duval was concerned that six years ago the new drilling ship was chosen because it had a riser, however the riser is still not being used. D. Heinrichs wanted to know what plans were being made for using a riser. N. Piasias said a slimline riser needs to be developed for drilling continental margin deep-holes. A total of one year of time needs to be devoted to this drilling.

N. Piasias said that a dedicated alternate platform for APC coring could not be recommended since this would exhaust the drilling community both financially and scientifically.

B. Biju-Duval was concerned that the section on educational opportunities was largely US oriented and was not appropriate for France. N. Pias said that he used all the information that was supplied to him and if the non-US partners want to add to the section on educational opportunities they need to prepare something in writing.

B. Biju-Duval said that the LRP was an important document. The section on ODP achievements will be helpful for program managers in maintaining interest in the drilling program. He noted that the future thrust of the drilling program will be in coring, logging, and use of the drillholes for long term experiments. A larger community must be brought into the drilling program. The European community is looking to develop a new complementary vessel, to be used within the JOIDES framework, which will involve a larger community of scientists.

C. Helsley said that the COSOD I objective that needs more emphasis is the detailed understanding of the Earth's magnetic field over the last 200 m.y., which can only come from drilling. This objective has become lost in the present thematic panel structure and needs to be emphasized in the program. J. Briden agreed that paleomagnetism and the history of the Earth's magnetic field has gone hand-in-hand with the development of the drilling program.

J. Briden observed that the document itself does a good job of putting forward the future scientific basis of ODP. It does not, however, win funding for the program. The achievements of ODP needs a glossy, punchy, sexy format. It also reads like a US document and is somewhat patronizing. Emphasis on natural resources and global environment will win support from larger groups. A balanced science program is less likely to win support.

W. Merrell said the document is a science plan and should not have to be exciting and sexy. What to put in the drillholes for long-term monitoring may not be appropriate concerns for ODP; the holes will be available for experiments after ODP. The question of alternate platforms is another question that needs careful consideration. The *Resolution*-type drill ships are now fully utilized and ODP could not get one at the price in the current contract which extends to 1999. ODP should be making full use of the *Resolution* during this period.

H. Dürbaum suggested that the assumption that more money will solve all the technological problems may be incorrect, since some technology problems may be beyond ODP's capabilities to solve. The capabilities of other groups associated with ODP or working on similar problems needs to be utilized. Funds outside of ODP may be available for technology development. There needs to be a more international focus to technology development.

J. Baker said that the drilling program can continue to be successful in funding based on the science being proposed. The management of ODP is a

real plus. It has a simple structure that does not involve large cumbersome international organizations. The community has direct input to the management. The appearance of the LRP can be improved with a new cover figure and other editorial work.

D. Heinrichs wanted it emphasized that the purpose of the LRP is to outline the science plans. Other documents should be produced to cover the other aspects of proposing successful continuation of the program.

#### 462 RESPONSES TO PEC II REPORT

##### Publications

R. Moberly discussed the problems that have been associated with ODP publications. PCOM has adopted a new publications policy. The intent of this policy is to maintain the integrity of the sets of volumes being produced but at the same time speed up the process. The "Initial Results" volumes will now be essentially what comes off the drill ship. The policy is designed to get the "Scientific Results" volumes published more quickly, and while maintaining cooperation onboard the ship, speed up publications in the outside literature. The main post-cruise meeting will be devoted to science issues. The question of copyrights for material reprinted in the "Scientific Results" volumes can be handled by a standard letter to publishers. There is also a concern over site survey related publications and the extent to which ODP has control of them as well as the rights of the collectors of this data.

##### Discussion

C. Harrison wanted to know if there would be a problem with getting papers published in the IR or SR before the science journals. R. Moberly said that the problem has been the delay of publishing in the open literature.

H. Dürbaum said there is a perception that there has been nearly no publications in ODP phase. Part C of the PCOM publication policy should be left to the Science Operator rather than IHP. N. Piasias disagreed with that there are no publications, since over 18 Part A and Part B volumes are published. The "Scientific Results" may take over 3 years to publish, but they present important primary data and interpretations. P. Rabinowitz said that the PEC report was concerned that there were no Part B "Scientific Results" at that time. By the time of the renewal of the program there will be 60 volumes published, 39 Part A and 21 Part B volumes. Publication of papers outside of ODP that use information derived from the drilling program is very extensive. D. Heinrichs said that it is the perception that there is a lack of publications that is the problem. The depth of understanding of basic science that has been contributed by the drilling program needs to be communicated more broadly.

J. Briden said that in addition to the permanent record provided by the Part A and Part B volumes, the "fruits of ODP" need to be highlighted in publications. He suggested a collection of papers similar to the Allan Cox book which presented the "fruits of paleomagnetism". C. Helsley, C. Harrison and J. Briden all emphasized the need for open publication of thematic papers.

### Technology Development

R. Moberly said that technology development has been covered in the LRP discussion. A phased development schedule has been suggested. PCOM has endorsed continued engineering development legs, however, scientific advise will come from JOIDES. There is a need, as EXCOM has recommended, for an increase in the FY91 and FY92 budget of \$2M for technology development.

### JOIDES Advisory Structure

The advisory structure has been modified to the extent possible. The 4 thematic panels are ranking drilling proposals, with regional panels eliminated or made into detailed planning groups. A new service panel, the Shipboard Measurements Panel, has been formed. The Terms of Reference problems have been corrected by EXCOM. The question about bringing non-JOIDES representation into PCOM has yet to be decided.

### Discussion

J. Briden wanted to know why the panel memberships for the Site Survey Panel (7.2), Pollution Prevention and Safety Panel (7.3) and Information Handling Panel (7.4) were not given in the Terms of Reference as they were for other panels. N. Pias said that these panels were intended to be small groups to handle specific problems and remain flexible. R. Moberly said that each member or consortia has the right to a member on each panel or committee. W. Merrell suggested that PCOM write some general statement.

C. Helsley said that a data base is needed to know what percentage of individual COSOD I & II objectives has been achieved. R. Moberly said that this will be prepared.

J. Baker said that it has been suggested to the JOI Board of Governors that the US representation on PCOM be changed from the present 10 JOI members to 8 JOI members and 2 non-JOI members.

## 463 NEAR-TERM PLANNING

### FY90 SCIENCE PLAN

In early May, PCOM changed the plan from the one prepared in December 1988 because of the need for additional time to prepare for the Nankai geotechnical experiments. Because of weather constraints, tool development, and coordination with a Japanese research vessel, the Nankai program had to be delayed until March 1990. Moreover, TAMU Engineering did not want the next engineering development leg for at least a year from the last one. Although proposals were put forward at the PCOM meeting to delay the Nankai and Engineering legs and make better use of drilling time (cut transit time) by the insertion of two highly ranked additional programs (Old Pacific and Atolls and Guyots), the general intention of PCOM remained to move the vessel to the Eastern Equatorial Pacific by Winter 1991. In order to delay the Nankai and Engineering legs and yet stick to the intention of a transit to the East Pacific to prepare for drilling there, a reshuffling of proposed legs was required. The end result of this was that the Old Pacific program was added at the expense of the Geochemical Reference program.

### Discussion

B. Raleigh said that he had received several letters about the substitution that were concerned that LITHP was not represented at the meeting and had no direct input. He questioned whether there should be some provision for thematic panels to have a direct input into PCOM meetings. He said he was disturbed by this substitution. R. Moberly agreed that the rescheduling is of significant concern. Panel advice reaches PCOM in the form of panel minutes and through liaison members, which PCOM had. He explained, however, that not having a lithosphere expert present at PCOM was a problem, but it was not known that J. Malpas would not attend the meeting until the last moment. EXCOM members had been asked previously, if possible, to replace retiring PCOM members with appointees with expertise in petrology or seismology, and also to lengthen the tenure of PCOM members to improve corporate memory.

R. Moberly explained that in terms of its thematic ranking, Geochemical Reference did not make the list of high priority legs for SOHP or TECP and that according to the available records, it ranked behind 5 other legs on the LITHP ranking. N. Pias pointed out that at the December 1988 PCOM meeting Old Pacific did not have complete surveys and there was a question about reaching old crust. In May 1989, however, Old Pacific was highly ranked and surveys had shown that it could be achieved and was therefore the better proposal. N. Pias also observed that other strong thematic proposals will be drawing the ship back to the Western Pacific area; Geochemical Reference will get drilled if the thematic rankings justify it.

## RESOURCES NEEDED

T. Pyle from JOI first discussed the activities of JOIDES over the past 3 years, including: preparation of 3 program plans covering 7 years; 2 program evaluations by outside committees; administrative review committee evaluation; COSOD II, NSB review of program, outside review by accounting management firm; publication of policy manual; and writing of the Long Range Science Plan.

T. Pyle reported on how the ODP FY90 budget (Appendix C) was produced based on the FY90 Science Plan. The budget includes \$1.5 M in SOE which meets the EXCOM target of 4% for SOE. He explained how the subcontractors made adjustments to meet the budget. Lamont had to postpone the purchase of a sidewall entry sub and take out contingency funds for the insurance deductible.

SOE have been used to add two copy editors at TAMU to help reduce delay time for publications. Lamont is using SOE to lease the Borehole Televiewer. JOI has designated \$53K of the SOE for publishing the LRP, producing an ODP "highlights" brochure and includes "seed money" for thematic publications.

### Discussion

C. Helsley questioned the use of SOE to cover insurance costs, which are normal operating expenses. T. Pyle explained that because of the surprise at the size of the increase it was necessary to cover this cost using SOE for this one time.

W. Merrell commented that there is little flexibility if the vessel has problems with the bottom hole assembly or drillstring; a major reshuffling of money will be required. The PPI that the ODP contract with SEDCO uses is the slowest moving index, but there will almost certainly be an increase in the day-rate.

C. Harrison questioned the use of SOE to hire the two temporary copy editors at TAMU since in the BCOM report the statement is made that they are needed regardless of any change in the publications policy and therefore are needed on more than a temporary basis. T. Pyle explained that the backlog of papers required immediate action, and BCOM viewed this as a temporary solution to the problem. N. Pias said that at the time BCOM met, it was not known what actions PCOM would take. If the editors are needed on more than a temporary basis, SOE should not be used.

H. Dürbaum wanted to know why the total budget for TAMU has gone up about \$1.5M from 1989 to 1990 if costs are constant. T. Pyle said that this was mainly in salaries. Technicians are now required to return to TAMU rather than take compensatory time, and now must get paid for this time. There are also increases in salary that are beyond inflation. P. Rabinowitz said that in addition TAMU also has a real SOE of about 4% this year, while last year it was around 1.5%.

C. Barnes wanted to know if the Micropaleontology Reference Center had been entirely deleted from the program. T. Pyle said that a request for proposals had been issued for wider competition for the center. There had been a concern that there had not been an open competition. J. Briden said that there was also a concern that MRC was not in an equal competition with other line items in the FY90 budget.

D. Heinrichs wondered why there was no estimate of day-rate increases in the base budget and if it is simpler to estimate the increase and include it in the base budget. T. Pyle said that if this money is cut out in anticipation of the increase there is less flexibility in the overall budget and part of the program gets cut out. By saving money in some areas such as port calls or fuel costs, money may be shifted to cover the increases. Both D. Heinrichs and C. Harrison said that we know that there will be an inevitable day-rate increase. P. Rabinowitz said that during the first two years of the program there was no increase. M. Moss suggested that it could be specified that the day-rate increase will come from a certain area. J. Briden said that BCOM felt that it best to let JOI and the Science Operator work this out when needed.

C. Helsley noted that if a 4% SOE is not maintained, program enhancement such as technological development cannot be sustained. If the SOE is used to cover normal program costs, we should acknowledge that the future of the program is being robbed. J. Briden was concerned that the only time that the 4% SOE has been reached in the past, current and next two years of planning was when there was a \$2M increase in the budget and even then the increase in insurance rates places this level in danger.

D. Heinrichs was concerned with the 14% overall increase in salary at a constant FTE. A. Sutherland said that the salary increase is 8% if the increase due to the change in technician compensatory time is left out. N. Pias said that salary increases will be a problem for future years with only a \$1M per year increase in the program budget.

**B. Lewis discussed the BCOM Report.** A copy of the report was included in the Agenda Book and since items of note were included in the previous discussion, there was little new to add. PCOM has accepted the BCOM recommendations.

**Bruce Malfait from NSF discussed the resource constraints** provided by NSF for a four year program plan. Target funds were \$36M for this year, \$38M for 1990, \$39M for 1991, and \$40M for 1992. NSF has taken under consideration the recommendation of EXCOM to reevaluate the out-year increases of \$1M. This year's budget has been increased by \$250K by NSF resources. The Long Range Plan provides constraints for increased technological development costs.

## Discussion

C. Barnes asked if the \$5M technological development costs for the next four years was already built into the budgets. C. Helsley said that those costs are predicated on the \$1M increase, but are still \$3M short under current plans. C. Barnes thought that EXCOM should establish second priority items that can be left out of program if there is not enough money. D. Heinrichs said that the management style that has been adopted is for the contractors to recommend cuts, then any serious shortfalls in the program are examined by NSF to see if they can be covered by US sources.

## FY89-FY93 PROGRAM PLAN

**R. Moberly presented the scientific objectives.** He noted that in a proposal driven program, with 4 times more proposals received since early 1988 for the Pacific than for the Atlantic or other oceans, drilling through 1991 will continue to be in the Pacific. PCOM has decided that high ranking programs in the easternmost Pacific will be drilled in 1991. The general track of the ship through 1993 will be determined at the Spring 1990 PCOM meeting after the thematic panels have ranked proposals without regard to ocean. The thematic panels have been asked to develop a scheme for the common ranking of proposals. Pacific drilling will continue to dominate the program because of the large number of high-ranking maturing proposals. The thematic panels felt that setting an arbitrary limit on time allotted to Pacific drilling was a political decision.

## Discussion

B. Malfait wanted to know if all existing proposals would be examined. R. Moberly said that all proposals submitted within the past year and a half will be examined by the thematic panels. In addition, several panels have asked to examine older high ranking proposals that were not drilled. Revised proposals are also being encouraged by both a direct mailing to proponents and notices in the JOIDES Journal.

C. Harrison wanted to know if specific dates had been assigned for the 18 months of CEPAC drilling. R. Moberly said the time begins to accumulate when the drilling is actually done. N. Piasias said that the decision was that 18 months would be allotted for high priority CEPAC drilling.

D. Heinrichs said that the perception of the thematic panels expressed on page 15 of the Agenda book that EXCOM has warned about political considerations is incorrect; EXCOM has reaffirmed that ODP is a proposal driven program. Several EXCOM members have suggested during their country reports that thematic interests could be met equally well in the Atlantic. R. van Lieshout discussed a statement suggesting that it could happen that some European countries might not be as interested in continuing participation in drilling, as

they would be if the vessel returned to the Atlantic sometime soon. The way to solve this problem is the approach taken, which is to evaluate proposals on a thematic basis and if Atlantic proposals warrant drilling to do so. C. Barnes suggested that it is somewhat naive to think that science alone will justify the continuation of the program for all participants. PCOM makes decisions based solely on science while EXCOM may have to consider whether the program can continue if there is a loss of members. J. Briden indicated that what is being said is that there is merely danger ahead on this path. J. Baker said that this is a warning to scientists that good proposals from the Atlantic are needed to help insure the continuation of the program. B. Biju-Duval said that there is no problem in France with science keeping the ship away from the Atlantic, good science is done by French scientists in all oceans.

C. Helsley noted that the perception of where the program will be drilling influences the location of the proposals submitted. H. Dürbaum also suggested that because of the effort required to produce a mature proposal, perception of the likelihood of drilling influences submission. He said that good proposals will be forthcoming now that drilling is open. W. Merrell said near the end or perceived end of even a science-driven program, politics inevitably play a part. The way to avoid these problems is to avoid having a distinct end to the program by agreeing to continue it through 1999, the end of the contract for the *Resolution*. In that way the strong and good science in the present mode can continue. D. Heinrichs agreed that brinkmanship should be avoided. B. Raleigh said that in order to keep proposals coming in, a clear intent to extend the program beyond 1993 needs to be given. R. van Lieshout said that to go beyond 1992 the money suppliers need to see a benefit for continued participation in the program and this may be a problem if the ship is far away.

R. Anderson from Wireline Logging Services distributed two handouts and discussed near-term technological development constraints. Logging tools are technologically advanced and use industry designs. A major problem is that the 4-inch DCS hole is incompatible with the modern logging tool suite. The tools available for use in the 4-inch hole are generally not designed for high pressures or high temperatures. If the Schlumberger HEL logging tools are used, modern geochemical and geophysical logging data cannot be attained. The problem of repackaging the present suite of tools for a smaller hole is that dewaring them for high temperatures makes them too big for the 4-inch hole. A possible solution, which has been used by the oil industry, is to cool the hole by circulation of drilling fluids. With a small-diameter hot hole, however, there is not enough of a heat sink to keep the temperatures from quickly rebounding and the hole can only be cooled 20%. This has led to a box for the logging of small-diameter holes. The loggers suggest that the only way out of the box is to make bigger holes by: deploying a larger diameter DCS on the ship; reaming of the smaller diameter hole to a larger diameter (however, the problems peculiar to reaming usually results in loss of 50% of

the hole); or drilling two offset holes, one for core recovery and the other for logging.

### Discussion

N. Piasias wanted to know if the situation of loss of logging will occur anyway for very deep crustal drilling, where stepping down of the drill rod size will be necessary. R. Anderson agreed this will cause problems.

T. Pyle from JOI presented clearances, day-rates and other operational constraints (Appendix D). He reported there are no problems not already discussed.

**Tuesday, 1 June 1989**

**Joint Session of ODP Council and JOIDES EXCOM  
(D. Heinrichs and C. Helsley, Co-Chairmen)**

### 464 PRESENT STATUS

P. Rabinowitz distributed copies of the Science Operators Report and discussed science operations since the last EXCOM meeting. He reviewed Legs 123 to 125, the details of which can be found in the report. A highlight for Leg 123 was the casing of the 1200-m deep hole at Site 765 to produce the deepest cased hole and provide an excellent natural laboratory for future downhole experiments. One of the surprises was the lack of Jurassic sediments. About 75% of the leg was spent on-site. Leg 123 was the last of the Indian Ocean Legs. Leg 124 was the first of the Western Pacific Legs. A highlight for Leg 124 was the drilling of a single bit hole to 1271 mbsf. Again, about 75% of the leg was spent on-site. Leg 124E was to test engineering developments, primarily the Diamond Coring System. It proved the concept of using a mining coring system for drilling core from the *JOIDES Resolution*. Leg 125 was located in the Mariana and Izu-Bonin forearc regions, where it successfully drilled serpentinite diapirs. Again, about 75% of the leg was spent on-site. The historical average for the drilling program has been about 60% of the time on-site. The 2 knots higher average speed of the *JOIDES Resolution* compared to the *Glomar Challenger* has led to more time on-site even though the transit distances have been somewhat longer. In the 4 years of ODP there have been 120 more days on-site, which translates into about 3/4 of a drilling leg per year. Co-Chief Scientists have been chosen through Leg 133 and staffing has been completed through Leg 128 plus Leg 131. Clearances do not appear to be a problem for the upcoming drilling legs.

### Discussion

J. Ladd asked why the hole was cased so deeply at Site 765. P. Rabinowitz said that problems with hole stability made it necessary. There were 12 legs without a loss of Bottom Hole Assemblies (BHA) and the optimism generated

by the success of the two deep holes on Legs 123 and 124 may have contributed to the present problem with not setting casing or reentry cones and the 8 losses of BHA in 3 legs.

**R. Anderson presented the Wireline Logging Services report** on present status. He distributed two reports. Logging of total depth of well is now very good (~90%). Early problems in program of bridging and caving-in of holes have been overcome, in part by changing the drilling mud and by use of the side entry sub (SES). Education of Co-Chief Scientists about the importance of logging has been successful. The planned logging tests on Leg 124E needed a deep hole in a hot environment, which was not available. WLS now requests that logging tests be conducted on the scientific drilling legs with extra time given as the holes and tools are available for testing.

The increased cost of insurance for the logging tools has been a big budget problem. The history of tool losses has involved problems in excentered tool design, which previously used bow springs (which are susceptible to getting hung up) but now use hydraulics. There is a new policy on "fishing" for lost tools and better equipment has been purchased for this purpose. The loss of four tools resulted in ODP being put in a higher risk insurance pool and increased the rates. There is now a lid on coverage set at \$275K per tool loss. The next tool loss will cause three problems: 1) premium will increase; 2) deductible will increase; and 3) the difference between the cost of the tool and \$275K will have to be covered. In response to a question by C. Harrison about the necessity of insurance at such high rates, R. Anderson said insurance is needed to preserve the logging program, since the loss of three tools without any insurance would shut down the logging program. WLS is looking to see if a lower rate for logging tool insurance can be obtained as part of the TAMU insurance policy. Steps have been taken to stop tool losses. Insurance is not intended to be an SOE for next year.

Logging schools have played an important part in educating the community in the value of scientific logging. Two schools have been held in the US, one in Denver at the GSA meeting (28 attendees) and another in San Francisco at AGU (100 attendees). Outside the US a logging school has been held in Canada and there are schools scheduled for September in the UK and for October with the KTB Group in the FRG. There will also be a logging school next year in Australia and sometime in the future in Japan. The number of scientists requesting logs to do science is increasing. Persons that have completed the logging schools are being asked to participate on ODP legs as JOIDES logging scientists. Logging is vital even when there is 100% core recovery for measurements that cannot be obtained in the laboratory.

Stress measurements are a vital element of the logging program. Stress measurements in ODP boreholes are important for determining the global patterns of stress and constraining the mechanisms of plate tectonics. The formation microscanner provides an order of magnitude higher resolution

than the other tools for determining breakout directions, fault orientations, dips, etc.

**T. Pyle from JOI presented the present status of the budget.** The 1989 program plan budget has had an \$150K increase by NSF funds to help cover the PPI day-rate increase. Significant changes in the budget also resulted from the \$138K increase in the insurance. This was covered by taking \$40K from the BRG's SOE and \$98K came from NSF. The logging insurance is being paid out of the JOI office to save the overhead otherwise due to LDGO. The day-rate increase was \$480K which was adsorbed by TAMU. The end of FY89 will be a very lean stage. In an additional item, the Arts and Entertainment Cable Network has plans to use film footage from ODP in one of their education programs and some money will be paid to ODP.

#### Discussion

C. Helsley wanted to know what effect the loss of BHAs have had on the program budget. T. Pyle said that in the past unneeded drilling supplies have been used as an extra source of funds and this flexibility may be lost. T. Pyle also said that money saved on port calls and fuel costs has also been a source of extra funds. P. Rabinowitz said that the last port call in Japan ran more than \$100K over the average.

**R. Moberly presented the present status of PCOM planning** which was given in the Agenda Book on pages 11-13, 18 and 111-120. Points emphasized from the last PCOM meeting included in addition to the FY90 Program Plan: the relative costs to attain compatibility between the DCS and the present suite of modern logging tools; policies for future joint science and engineering development legs; the dropping of the "E" designation for the joint science and engineering development legs; the general area for drilling in 1991; the need for sufficient time for submission and ranking of proposals before planning for drilling after 1991; the policy banning enriched stable and radioisotope tracers onboard the *JOIDES Resolution*; the policy on publications recommended by PCOM; minor changes in the wording of the mandates for TEDCOM, SMP and OHP; and concerns over the procedures used for selection of Co-Chief Scientists.

#### Discussion

A. Maxwell commented that UNOLS has developed guidelines for the use of radioactive tracers onboard research ships. R. Anderson said that life may be introduced into the drilling environment by the drilling mud and that special care will need to be taken to avoid contamination. J. Briden was concerned that innovative science which would broaden the scientific community involved with ODP was being deterred. He wanted the appropriate panels to be charged with making this experiment possible quickly. C. Helsley observed that there are definite procedures to be followed for drilling-related proposals

and this proposed work has not gone through the JOIDES structure. PCOM has encouraged innovative science. J. Briden said that ODP needs to remain flexible to respond to new opportunities when they arise.

The PCOM chairman brought to EXCOM's attention the PCOM concern that the Co-Chief Scientist selection sometimes left the proponents of a project out of the endeavor due to a strict reading of the MOUs concerning "average" participation by Co-Chiefs from each of the participating countries. P. Rabinowitz said that the Science Operator does take into consideration the advice given by PCOM when selecting Co-Chief Scientists. H. Dürbaum wanted to know about the policy now in effect. R. Moberly said that in ODP, PCOM makes nominations to the Science Operator, but these nominations do not have to be taken. D. Heinrichs said that in general the staffing policies are working well, although it is not always possible to satisfy everyone. H. Dürbaum said that the policy does not need to be changed.

#### 465 MEMBER COUNTRY REPORTS

##### **Canada-Australia Consortium**

K. Babcock and C. Barnes presented the ODP report for the new consortium. Copies of The Resolution Report, v. 5, no. 1, January 1989 which covers the formation of the consortium and the organizational structure were distributed. K. Babcock replaces R. Price as chairman of the Canadian ODP Council. I. Gibson replaces S. Scott as chairman of the Canadian National Committee. The secretariat at Memorial University is fully staffed. Canada will be applying the \$1M saved by forming the consortia to site surveys and technological development related to ODP. These include funding seismic surveys of the Cascadia Accretionary Prism in September 1989. Technological development efforts include the LAST Tool and Deep ROV. The ODP Evaluation report is now published and available from the ODP Secretariat.

R. Rutland is the chairman of the Australian ODP Council. D. Green is chairman of the Australian National Committee. The Australian ODP Secretariat is established at the University of Tasmania in Hobart, and is currently seeking a director. Canadian and Australian representation on JOIDES panels have been established in a 2:1 ratio.

A workshop has been planned in Australia for February 1990 to cover sedimentology. In Canada there has been a recent Logging School, and workshops are planned for June 1989 to cover Atlantic drilling proposals and the Sedimented Ridges detailed planning group meets to plan hydrothermal system drilling. In February 22-24, 1990 a Second National Workshop on Scientific Ocean Drilling (NOSOD II) will be held in Waterloo.

J. Briden asked about the Canadian-Australian members on EXCOM and PCOM. R. Rutland will be the EXCOM member with C. Barnes as alternate; J. Malpas will be the PCOM member with D. Falvey as alternate.

#### **ESF Consortium for Ocean Drilling (ECOD)**

J. Stel presented the ODP report for the consortium. He expressed a general concern that the EXCOM/ODP Council meeting documents arrive too late for distribution to the consortium members before the EMCO meeting held just prior to the EXCOM/ODP Council meeting.

By the first of July the ESCO Secretariat will be transferred from Oslo Norway to Milan Italy. As a consequence for PCOM, Olav Eldholm will be replaced by Maria Cita-Sironi with Jan Bakman as alternate. The secretariat of the management committee EMCO will remain in Strasbourg, but Bernard Munsch will be replaced by Michelle Frata. On EXCOM, J. Stel will be replaced by Leif Westgaard (Norway) with J.L. Almazan (Spain) as alternate. Matts Ola Ottossen (Sweden) will succeed R. van Lieshout as EMCO chairman. The designation of an ESF representative-at-large for the ODP Council is not yet finalized, but P. Fricker (Switzerland) most likely will take over this position.

A meeting organized by J.E. van Hinte was held 7-8 November 1988 in Amsterdam for the purposes of forming regional thematic working groups, bringing together various national databases, and developing Atlantic drilling proposals. A mechanism for generating Atlantic drilling proposals is now installed. There is concern with the deadline of 1 August 1989 for submission of proposals.

R. Moberly explained that all proposals are sent out to the thematic panel chairmen immediately after they are received, but if proposals are received after approximately August 15 they will probably not get reviewed at the fall meeting of the thematic panels. There will be another meeting of these panels early next year before the spring PCOM meeting where the general track of the vessel will be planned for the next four years based on highly ranked mature proposals. If proponents want to be able to revise their proposals, they need to submit them in time for the fall meetings of the thematic panels.

M. Frata explained that the rules of the ESF require a review of the program which has just been done. The overall impression is that the panel is fairly satisfied with the program. A report will be forthcoming and will be circulated to interested parties.

B. Munsch talked about the polar-related activities of the consortium. ESF also has a commitment towards WOCE.

## **Federal Republic of Germany**

D. Maronde presented the ODP report for the FRG. A colloquium was held 8-10 March 1989 in Tübingen and coordinated by H. Beiersdorf with approximately 120 participants including guests from several European countries. The meeting included a discussion of the draft of the long range planning document and formation of working groups for further activities in the Atlantic region. There was a positive reaction to the LRP and possible renewal of the FRG participation in ODP.

The 1989 science budget had a disappointing 3.3% increase which more or less corresponds to the inflation rate. The outlook for 1990 is uncertain; the ministers for research and technology have proposed a 5% increase while the ministers for finance have proposed only a 2.5% increase. There continues to be a growing interest in the FRG to participate in ODP as shown by the increasing number of funded projects with 40 applications funded in 1989.

New initiatives related to ODP include: a special collaborative program in Bremen to study the Late Quaternary history of the South Atlantic; filling of open positions at GEOMAR in Kiel (E. Suess, R. von Huene); Kiel proposal to study the response of oceanic circulation to the onset and development of Northern Hemisphere cooling (J. Thiede); formation of the Atlantic working group; French-German expeditions in the Pacific including studies of the Lau Basin. A detailed planning study to consider replacement of the R/V "*Sonne*" are under discussion.

D. Maronde was glad to note that international cooperation was mentioned in the epilogue of the LRP, but thinks it could be intensified. Cooperation with other global Earth Science Programs include the German KTB continental drilling program whose director H. Rischmüller is a member of TEDCOM. The pilot hole has reached 4000 meters in April 1989. Preparation for the main hole will begin in the middle of 1990, provided budget problems are solved. There is an effort to intensify connection with the International Sedimentary Geology Program, International Geosphere-Biosphere Program, International Lithosphere Program and International Geological Correlation Program.

## **France**

B. Biju-Duval reported on French ODP activities. Pierre Papon is the new director of IFREMER. Yves Lancelot is the new chairman of the scientific committee and PCOM representative replacing Jean-Paul Cadet. The news about the science support budget for 1989 is not as good as previously expected. The rapid change in the exchange rate has been a problem.

There have been two colloquia related to ODP activities. In March there was a colloquium in Paris on the circumnavigation of the globe over the past four

years by the *Jean Charcot*, which included the contributions to ODP site survey studies. This was a successful meeting. There is talk of another expedition, possibly with the new vessel. The second was a European workshop on intraplate processes. Unfortunately due to the short notice there were few participants from other countries, but it was very successful.

IFREMER has acquired equipment to do modern seismic work and is working on an agreement with CNRS to do the seismic processing.

In the Pacific there have been two multichannel seismic surveys in support of ODP drilling. There is also survey work occurring in the Atlantic.

There has been extensive submersible activity in the Atlantic last year in the Vema Fracture Zone and in the "Snake Pit" area. In the Pacific, French-German studies have been made of the Polynesian hotspots and in the Lau Basin. There has also been a cruise along the Vanuatu collision zone in support of ODP drilling. There are two cruises underway in cooperation with the Japanese; one to the Fiji basin and the other to Nankai which is related to long term monitoring of experiments on the seafloor. With the success of the experiment reoccupying Site 396-B last year, two new proposals have been received to use the *Jean Charcot* to do studies in IPOD drillholes. One is proposed by GEOSCOPE to deploy a downhole seismometer.

The new ship to replace the *Jean Charcot* has been started, and is scheduled to be completed August 1990 with the first cruise in the fall of 1990. The new ship will be equipped with a new large swath multibeam system. A brochure was distributed about the proposed NEREIS European ship for light drilling and on-station experiments. ESF has been asked by IFREMER to look at the European scene to see what kind of support is available.

B. Munsch discussed the ESF exploratory seminar to advise on the features which the relevant parts of the scientific community in Europe would like to have available on a research vessel for light drilling and on-station experiments. There is general interest and in some instances it is quite considerable. Further exploratory meetings including one later this month are scheduled as well as a major workshop next year. A cautious approach has been taken since the project does not want to appear to be a threat to ODP, and neither should ODP be a threat to this project.

## Japan

T. Nemoto reported on behalf of the Japanese ODP scientific community, who expressed their appreciation at having the *JOIDES Resolution* operating in the waters about Japan for the first time since ODP started. Nearly 700 scientists and engineers visited the ship in addition to roughly 50 publicity people and 30 invited guests when it stayed at the Harumi Pier in Tokyo. Results of the recent drilling in the Izu-Bonin regions on legs 125 and 126 are impressive.

Further achievements are anticipated to result from the drilling in the Sea of Japan and Nankai Trough including the downhole experiments.

Preparations for two long-term experiments scheduled in 1989 have progressed. The downhole seismometer in the Japan Sea and the ONDO temperature string project in the Nankai Trough are both in very good shape due to the aid and consultation with ODP engineers. Some of the instruments were tested at sea on cruise KT88-21 of the Japanese Research Vessel *Tansei-Maru*. Further trials of the sonic communication device is scheduled for cruise KH 89-1 of the new research vessel *Hakuho Maru*.

11 Japanese scientists have participated on legs 119 to 124. Especially noteworthy has been the contribution of the 4 Japanese paleomagnetists.

Two site survey cruises have been conducted by the Japanese Research Vessel *Tansei-Maru* in 1988; one (KT88-9) in the sea of Japan and the other (KT88-21) in the Nankai Trough. Seismic reflection profiles obtained during KT88-9 were used for further detailed site selection and priority evaluation for the Japan Sea drilling program. Heat flow measurements conducted in the Nankai Trough during KT88-21 were used for site selection for the Nankai drilling.

A new research vessel, the *Hakuho Maru*, was completed 1 May 1989. The vessel is equipped with Seabeam, Seamark R and multichannel-seismic profiler.

Four symposia were held relevant to ODP: geoscience of the Sea of Japan; geology and geophysics of the Izu-Ogasawara (Bonin) arc; accretionary prism research; and scientific highlights of ODP. The last symposium held at the occasion of the annual meeting of the Geological Society of Japan in Okinawa was attended by 300 persons. Enthusiastic participation of the audience in the discussion of reports by onboard scientists and future vision of the Ocean Drilling Program was reported to be impressive.

### United Kingdom

J. Briden reported on the ODP-related activities in the UK. In terms of shipboard scientific party participation, the UK remains very active. In the matter of proposals, 5 proposals are in the mill and will be forthcoming. The UK will be participating in the meeting in Paris related to formulating Equatorial Atlantic drilling proposals. J. Briden said his participation in the Tokyo port call was useful and informative and he wanted to thank everyone involved. The interest level of the UK scientific community in ODP is high, including the microbiology community.

A special research program on the geology of the last glacial/interglacial has been instituted. This ties in nicely with ODP activities and the polar research activities of the European Science Foundation.

Hugh Jenkyns has replaced Tim Francis on PCOM.

The Research Vessel *Charles Darwin* will be completing its second circumnavigation next year. It will be working on site surveys in the Atlantic after coming through the Panama Canal. A major development in oceanography in the UK is the relocation of the IOS from Surrey to Southampton. Building of a new Antarctic vessel has been approved. Participation in JGOFS and WOCE is going well, including the possible stretching of the Research Vessel *Discovery* related to WOCE participation.

There has been a helpful review at the central government level of the UK participation in international programs in general. Their review of how ODP is run was quite favorable. How this can be translated into funds for future participation in ODP remains to be seen.

#### **United States National Science Foundation**

B. Malfait presented the US country report. He distributed a handout that summarized budget information and ODP-related science support by NSF. There has been a reaffirmation by the new administration to double the NSF budget on a 5-year time scale. There has not been as quick a matching commitment from congress. Overall the 1989 NSF budget has increased by 9.8%. The 1990 request working its way through congress is for a 13.9% increase. Within the Ocean Sciences Division this translates into a 4% increase in 1990. The increases in the Ocean Sciences Division are for some major new initiatives such as GOFs and WOCE. 1989 overall budget for NSF/ODP related programs is \$31.4M. US ODP science support is divided between unsolicited proposals \$5.1M and US Science Support/USSAC \$4.3M.

B. Malfait discussed changes in the US research fleet. The *Conrad* has been retired. The *Knorr* and *Melville* will be stretched. The keel has been laid for the AGOR-23 which will replace the *Thompson* operated by the University of Washington. The Division of Polar Programs is proceeding to acquire services of an Antarctic research vessel.

The Division of Polar Programs and NSF/ODP Program are jointly supporting a workshop at Woods Hole in late September to plan for future US geology and geophysics work in the Arctic.

T. Pyle discussed some of the work supported by the JOI/US Science Support Program (Appendix E). Workshops supported by this program that helps to broaden the science base of ODP include the Downhole Seismometer Workshop held by M. Purdy and A. Dziewonski and the Links Between

Geoscience Programs organized by N. Pias. The Chapman Conference on the causes of changes in sealevel was also important for forming links to other groups. JOI/USSAC also supports Survey Augmentation and Downhole Instrumentation programs.

D. Heinrichs discussed some potential new members for the Ocean Drilling Program. There have been some low-level discussions initiated with South Korea about forming a consortium of Asian nations which could include Taiwan, People's Republic of China and South Korea. Further discussions may occur in September. EXCOM's resolution of last fall concerning participation of the USSR has been presented up the chain at NSF. There has been some low-level discussion with the new administration, but active discussion awaits the installation of Dr. Allan Bromley as science advisor.

#### 466 PERFORMANCE EVALUATION COMMITTEE REPORT

C. Drake discussed the evaluation of ODP made by the committee he chaired. Overall they were impressed with the ODP operations. The suggestions concerning timeliness of publications has been addressed. Publications do not, however, reflect the objectives of the COSOD reports, they remain more problem oriented than thematic.

JOI, LDGO and TAMU were examined in the area of management and found to work reasonably well. JOIDES committees and panels are advisory and report to EXCOM and PCOM who set the policies that run the program. There is a concern that some advisory committees are too closely tied to TAMU, which can foster a microenvironment management style where particular aims are pushed over larger goals of the program. PEC thought that BCOM should not deal directly with the Science Operator, but rather make their suggestions to JOI.

PEC thought that it was time to begin looking towards the future and the continuation of the drilling program. It will not be as easy to get the program continued this time, since other large programs are starved for money and will be in direct competition.

#### Discussion

A. Maxwell agreed that concerns about the future of the program needs to be taken seriously. The program gets its support by doing good solid science, which has to be published and given higher visibility. The political problems caused by no guarantee of a quick return to the Atlantic must be faced now and a decision needs to be made. C. Drake said that ODP is a showcase of international cooperation in science, however, it depends on the enthusiasm of its members and this interest needs to be maintained.

C. Barnes observed that the other groups that are in competition with ODP are at immature stages in their development while ODP is at a mature stage. This means that ODP will constantly need to show the benefits of the program. The advances that have been made and will be made in the future need to be highlighted. The technological developments may need to be delayed while the program is defined relative to other programs. Politics are part of the renewal process and rumors about the ship not returning can hurt the program. It should be made clear that ODP is global and the vessel will go into the Atlantic, Indian, and Pacific Oceans. It is important that the program does not appear to "come to an end" as did DSDP.

D. Heinrichs said that to get extended the program needs to show an enhancement of the present set of goals.

W. Merrell said that both DSDP and ODP are platform driven programs. Therefore extension through the end of the contract for the vessel is logical, especially since \$10M has been invested in it. The present program should be extended through 1999, then we can rethink what the next mode if any should be. The question of which ocean the ship will be drilling in at the time of renewal of the MOUs will no longer be a problem since there will be time to drill in all oceans.

C. Harrison queried concerning the problems with the JOIDES advisory structure and BCOM. C. Drake said that using a microenvironment management mode needs to be avoided. T. Pyle explained that JOI presents the BCOM recommendations to the contractors who respond to them with their own suggestions. The evaluation was done two years ago and things have changed since then. BCOM has a better defined mandate. A. Maxwell said it is appropriate that PCOM should be making suggestions to the Science Operator since it is the science that drives the program.

J. Baker observed that the next performance evaluation would normally happen soon, but wondered if it should be delayed for a while in order to see how the changes are working out. D. Heinrichs said there is some flexibility in the scheduling of the reviews. C. Drake said it would be premature to do one now and more productive to wait a year. C. Barnes said that it would be helpful to have a report in 1992, which means that a review should be done about one year from now.

J. Baker wanted to know what was the view on publication of Parts A and B of the Proceedings volumes. C. Drake said that they are reasonable documents that are permanent records of the cruises produced in a finite amount of time. What are needed are the results of symposia which give a broader exposure for the program. C. Barnes said that publications that are designed for teaching are needed. A. Maxwell wanted to know what were the opinions about the Part B Proceedings that have been published. C. Drake said that they are good quality. The problem is that the objectives of COSOD are the

basis of the program, but the publications do not address how these thematic objectives are being met by the drilling program.

C. Helsley expressed the appreciation of everyone for the efforts of the Performance Evaluation Committee and of Chuck Drake in discussing the report with EXCOM and the ODP Council. A round of applause showed this appreciation.

#### 467 JOIDES RESPONSE TO REVIEWS

T. Pyle presented the JOIDES response to the Performance Evaluation Committee and the National Science Board reviews of the program. Responses have been made in the following areas:

Reorganizing the advisory structure on a thematic basis by: 1) deleting the regional panels; 2) emphasizing thematic panels; 3) splitting SOHP thematic panel into SGPP and OHP; 4) adding SMP service panel; and 5) revising and updating mandates (EXCOM 9/88).

Emphasizing timeliness of publications and need for thematic synthesis publications by: 1) providing funds for temporary copy editors in FY90 (SOE); 2) providing seed money for thematic publications in FY90 (SOE); and 3) adopting a new publications policy approved by PCOM emphasizing easier outside publication and faster publication of Parts A & B by revising post-cruise meeting schedule.

Criticism of JOI and the lines of communication have been addressed by: 1) providing a mandate for BCOM so that its purpose is not misunderstood; 2) clarifying the JOIDES chain-of-command; and 3) clarifying JOI is sensitive to the international character of the program.

Coordination with other Earth Science programs has been proposed by: 1) Liaisoning with the following groups: Arctic Ocean Drilling; National digital seismic networks (IRIS, POSEIDON, etc.); RIDGE, BRIDGE, FRIDGE; Global Sediment. Geol. Project (IUGS); Continental Drilling; WCRP-WOCE, JGOFS, etc. and 2) Briefings of PCOM by other programs such as the Arctic Ocean Drilling (May PCOM) and Global Seismic Network (proposed for August PCOM).

Question of why there is not deeper drilling: 1) less deep drilling being proposed; 2) some objectives reached earlier than expected; 3) some lithologies still causing drilling problems.

Advice on increasing "dues" has been ignored. ODP will seek more partners.

In addition, the JOI Board of Governors will consider increasing outside representation in the planning structure, for example, by proposing that 2 of 10 US members of PCOM be non-JOI representatives.

#### 468 FUTURE MEETING SCHEDULE

Participants agreed to the following date for the next joint ODP Council/EXCOM meeting:

6-7-8 June 1990                      Washington, DC

[Note: Subsequently it was found that these dates were unavailable and new dates in late May to June will be set]

J. Stel gave some details of the upcoming Fall EXCOM meeting in the Netherlands to be held:

3-4-5 October 1989                      Amsterdam, The Netherlands

The meeting will include a boat tour of the canals, a dinner and an excursion to a castle including lunch.

B. Biju-Duval gave some information on the 1990 Fall EXCOM meeting which will be held in France the first week in October, with possibly a visit to the new French research vessel.

As this was Bernard Munsch's last ODP Council meeting, C. Helsley wanted everyone to acknowledge the contributions that he has made to ODP. A round of applause expressed this appreciation. This was also the last meeting for R. van Lieshout. C. Helsley thanked him for his help and guidance. Another round of applause signified everyone's appreciation. C. Helsley also wanted to acknowledge the contributions of J. Bowman who has also been a longtime contributor to ODP.

**Thursday Afternoon, 1 June 1989**  
**EXCOM Business Session**  
**C. Helsley Chairman**

#### 469 APPROVAL OF PREVIOUS MEETING MINUTES

C. Helsley called for any additions or corrections to the previous minutes. B. Biju-Duval asked for a correction on page 134 of the Agenda Book (last sentence of Minute 458), changing 1991 to 1990.

#### EXCOM Motion

EXCOM approves the minutes of the 13-15 September 1988 Executive Committee Meeting in Edinburgh as corrected. (Motion Barnes, second Stel)

Vote: for 16; against 0; abstain 0

## 470 APPROVAL OF AGENDA

C. Helsley asked if there were any additions to the agenda. There were none.

### EXCOM Motion

EXCOM adopts the agenda for the Executive Committee Business Meeting.  
(Motion Maxwell, second Duce)

Vote: for 16; against 0; abstain 0

## 471 EXCOM ACTIONS ON LONG-TERM PLANNING

### Long Range Planning Document

EXCOM discussion first focussed on the Long Range Planning document. B. Lewis was concerned that the move towards deep crustal objectives might not be achievable. J. Briden thought it was an excellent plan, but needed adjustments at the editorial level (what audience is being addressed?); education section (should be more international in scope); cautionary forward should state that the program is proposal driven and therefore the 95 legs are only an example of what might get drilled. R. Moberly said that N. Piasias had also received comments that the education section was largely a US statement, but he was unable to get a written response from the non-US members in this area. JOI agreed to polish the document. H. Dürbaum was concerned that modern logging techniques would be dropped if drilling pursues crustal objectives using the DCS. The wording on alternate platforms needs modification. J. Stel thought that the defensive tone needs to be polished away. He also questioned the Phase I technological development costs of \$5.4M. T. Pyle said that the JOI office will use this science document as a basis for a more polished one, however, changes need to be written by the concerned parties. C. Helsley said that it is important to have the final document in place by next year. W. Merrell observed that this is a living, working document which needs to get out to the community to show what the science plan is going to be for the renewal. He cannot see any reasons for delaying its publication. C. Barnes was concerned that there is an overall balance problem with hydrosphere, cryosphere and biosphere only being about 1/3 of the drilling plans. W. Merrell said that PCOM thought about and approved this science balance using input from the thematic panels and besides it will get modified as new proposals arrive. C. Harrison wanted to know if PCOM will reconsider the balance. R. Moberly said they will take into consideration these comments. D. Heinrichs emphasized that the science plan is needed right now so that a working plan can be available for presentation to the NSB this fall.

### **EXCOM Motion**

EXCOM adopts the Long Range Plan with modifications as listed below.  
Balance; Editorial; Educational Accomplishments and Opportunities; Example  
Only ~90+ legs; Logging; Alternate Platform; Are Costs in Phase I&II Correct.  
(Motion Merrell, second Caldwell)

Vote: for 14; against 0; abstain 1; absent 1

### **Publications Policy**

Discussion next centered on the Publications Policy approved by PCOM. Although he agreed with the first part, H. Dürbaum wanted Part C of the policy deleted, since he thought the Science Operator would be quicker in handling the problems of copyright and lead times than IHP. J. Briden wanted to know who does give the detailed guidelines to the Science Operator. R. Moberly said that PCOM prefers to use the advice given by the JOIDES advisory panels, which were established for this purpose. Some of the issues were identified by IHP and involve science-related issues rather than operational matters. C. Helsley told PCOM to direct its IHP to provide the guidelines; TAMU should get started on what it can. D. Spencer wanted to know if it were possible to shorten the time for publication of Part A even more, since it should be ready when it comes off the ship. R. Moberly said that some things, such as final graphics, require work off the ship. A minimum of 3 to 4 months are probably needed. T. Pyle pointed out that these time figures were based on a thorough survey by the Information Handling Panel.

### **EXCOM Motion**

EXCOM adopts the new Publications Policy, with the deletion of paragraph C.  
(Motion Dürbaum, second Caldwell)

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

## **472 EXCOM ACTIONS ON NEAR-TERM PLANNING**

### **FY90 Program Plan and Budget**

EXCOM next discussed the FY90 Program Plan and Budget. R. Moberly said that because of letters received about the removal of Geochemical Reference from the FY90 plan, PCOM will reconsider FY90 planning at its August meeting.

C. Harrison was concerned that there was no money budgeted for a day-rate increase. He suggested that money be budgeted for a day-rate increase and placed in a fund that can be used either for this or special engineering projects. B. Lewis said it is better to leave the budget the way it is now, because although BCOM realized this problem, JOI wanted to maintain

flexibility to deal with everything. A. Maxwell agreed that BCOM had looked at this carefully and the problem was best dealt with by BCOM and JOI.

### EXCOM Motion

EXCOM adopts the FY90 Program Plan, including its budget. (Motion Maxwell, second Caldwell)

Vote: for 13; against 1; abstain 1; absent 1

### Radioisotopes Onboard the JOIDES Resolution.

EXCOM next considered the matter of handling radioisotopes onboard the *JOIDES Resolution*. J. Briden thought the matter required immediate action and was better resolved by PCOM than being referred to SMP. J. Briden moved that "EXCOM calls on PCOM to resolve the question of radioisotope-handling policy as a matter of urgency". D. Spencer explained that the difficulty arises because of the incompatibility between low levels of  $C^{14}$  that occur naturally and the large amounts used by the biological experiments which are up to  $10^9$  times higher. WHOI has very restrictive policies. There is a very real danger of spreading radioisotopes over the whole ship. PCOM is wise in what it did. If the experiment has to be done immediately, then another vessel should be used. With the advent of tandem accelerator mass spectrometry, it is even more critical that contamination of the *Resolution* be prevented. The policies towards the use of these tracers need to be looked at critically without pressure from EXCOM. If *urgency* means putting a policy in place without working out the proper safeguards then Spencer stated he could not vote for the motion. C. Harrison agreed that contamination could cause tremendous problems. A. Maxwell also agreed that strict policies are needed and suggested that the UNOLS guidelines be examined. J. Briden said he didn't contest the item about the danger of contamination, he was urging that the policies be formulated as a matter of urgency. In the PCOM wording "until such time" suggests delay. R. Moberly said that PCOM does not have a problem if the experiment is done on another vessel or onshore. If however, the experiment was to be done in a van onboard the *Resolution*, then formal procedures that are appropriate to the *Resolution* are required. PCOM would prefer this advice come from its advisory panel. B. Malfait pointed out that Asahiko Taira had volunteered to help locate a laboratory onshore where the experiment could be done. A. Maxwell wanted to know if it were possible to check the vessel to see if it is presently contaminated. D. Spencer said it would not be an easy matter.

### EXCOM Motion

EXCOM calls on PCOM to resolve the question of radioisotope-handling policy as a matter of urgency. (Motion Briden, second Maxwell)

Vote: for 9; against 5; abstain 1; absent 1 (Failed)

## Political Constraints on Drilling

EXCOM next turned to political constraints on drilling. A. Maxwell suggested that a statement be made that the program will be returning to the Atlantic, but the amount of time spent there will depend on the proposals received. W. Merrell said that this would not be good unless the program goes through 1999. C. Barnes suggested that it should be made clear that ODP is a long-standing international program. B. Biju-Duval suggested that ODP reaffirm that it is a global program that is proposal driven. J. Stel said that this will give a signal to the community that the Atlantic is open to drilling proposals. R. van Lieshout said this will open up the possibilities for renewal of the MOU. J. Briden said that the problem is not in the EXCOM resolution but in the perception that the ship is going to stay in the Pacific. EXCOM should reaffirm its original motion. C. Helsley said the minutes will reflect that we are reaffirming the original motion.

## EXCOM Motion

EXCOM reaffirms that ODP is a global program of ocean drilling, exploring all oceans and driven by the quality of the scientific proposals within approved thematic priorities. (Motion Barnes, second Stel)

Vote: for 16; against 0; abstain 0

## Engineering Development

EXCOM next took up engineering development issues. Because of the concern (see Minute 463) about the apparent incompatibility between the 4-inch diameter hole drilled by the Diamond Coring System (DCS) and the modern suite of logging instruments, A. Maxwell put forward the following motion, "EXCOM directs PCOM to proceed with near term (FY89-93) DCS engineering design that will allow the deployment of modern, geochemical and geophysical logging tools in future ODP drillholes". In the discussion of the motion, B. Raleigh noted that ODP has come to an impasse between logging or return of cores in some instances. He asked what PCOM was planning. R. Moberly said that PCOM was still getting cost estimates for making the systems compatible. We know there are physical limitations on the size of the logging tools, we don't know what the configuration of the DCS will be yet. A. Sutherland said that TEDCOM expresses cautious optimism about a phased deployment of the DCS. Paul Worthington of DMP has said that there would be a great concern for logging if the program developed with a majority of the holes drilled with the DCS.

H. Dürbaum was concerned that use of the DCS may also exclude many of the other downhole measurement tools. T. Pyle said it needs to be clarified whether the motion covers all modern logging tools or just some, since it is subject to interpretation. R. Anderson said the high tech tools are mainly geochemical.

W. Merrell said that the motion would require that the DCS pipe be redone at a cost of \$2.72M without first having proven that the DCS can do the job for which it is intended. This motion will slow down the current development. We are not trying to ignore logging, but it may happen that some logging must be sacrificed to return necessary core. R. Anderson said that the concern is that a headlong dive into the DCS, if it is widely used, will result in the exclusion of logging from the program. B. Raleigh questioned if it would be acceptable to drill holes without logging them. D. Spencer said that it is implicit in the motion that the small-diameter DCS development will cease. W. Merrell said that with this motion logging will become the determining factor in the future direction of the program. B. Raleigh asked if the DCS is where the program is headed. R. Moberly said that Leg 132 will be the test of the DCS, until then we will not know. D. Spencer said that the motion will stop even the design development of the DCS.

#### EXCOM Motion

EXCOM directs PCOM to proceed with near term (FY89-93) DCS engineering design that will allow the deployment of modern, geochemical and geophysical logging tools in future ODP drillholes. (Motion Maxwell, second Dürbaum)

Vote: for 5; against 8; abstain 3 (Failed)

C. Helsley directed that the minutes reflect the concern of EXCOM on this matter. No further action was taken on engineering developments.

### 473 OTHER BUSINESS

#### Contract Renewal

In view of the pending program renewal, EXCOM needs to begin thinking about how to conduct a JOIDES review concerning future subcontracts with the Science Operator, Wireline Logging Services, SEDCO and Schlumberger. Little discussion was held since W. Merrell objected to a discussion at this time and the matter was deferred until the next meeting.

#### Mandates

EXCOM examined the suggested changes in mandates and approved them.

#### EXCOM Motion

EXCOM accepts the mandate changes for OHP, SMP and TEDCOM shown in the Agenda Book. (Motion Merrell, second Caldwell)

Vote: for 16; against 0; abstain 0

#### EXCOM Motion

EXCOM adopts the following change of wording in the EXCOM Terms of Reference paragraph 3: replace "four non-U.S. countries or consortia" with "six non-U.S. countries or consortia"; change Canada to Canada-Australia. (Motion Dürbaum, second Biju-Duval)

Vote: for 16; against 0; abstain 0

### Non-US Liaison in JOIDES Office

J. Briden called on the non-US members of EXCOM to seek for the next meeting possible nominees for the non-US liaison to the JOIDES Office when it moves to the University of Texas at Austin in 1990.

### BCOM Members

C. Helsley also reminded everyone that a nominee to replace J. Stel on BCOM will be needed at the October EXCOM meeting. The PCOM replacement for N. Pias on BCOM will probably be J. Austin to maintain continuity over the next few years.

### Co-Chief Scientist Selection

C. Barnes did not think there was much of a problem and the policy should remain the same. H. Dürbaum recommended that the Co-Chiefs be confirmed by EXCOM after being proposed by PCOM. W. Merrell said that the contract calls for the choice to be made by TAMU and any changes will require renegotiating the contract with JOI. The present approach is reasonable and does not need to be changed. D. Heinrichs said that PCOM has not made a case for there being a problem; in two of three earlier cases since the beginning of ODP, further consideration showed that the proper action had been taken by TAMU. W. Merrell asked that the minutes reflect that no action by EXCOM was needed on this matter. C. Helsley said this is the consensus of EXCOM.

### NSF, Budgets and Global Geoscience Programs

R. Correl of the National Science Foundation addressed EXCOM on some common concerns. President Bush has made a commitment to double the science budget over the next five years as initiated by President Reagan.

NSF has taken up the EXCOM recommendation concerning participation of the USSR in ODP. Recent positive developments that bear on this are the signing by NSF of a science and technology agreement with the USSR Science Academy that provides a new framework outlining a science agenda that has common concerns related to ODP. There is a new administration and the new Science Advisor to the President will be Allan Bromley who will have direct access to President Bush. Allan Bromley served as a member of the National Science Board and helped pen the words of the policy on international global environment research programs.

NSF has adopted a policy statement about the importance of global environmental science research. On an international level, NSF has joined with other countries in emphasizing international cooperation in global environmental science. There is optimism about budgets in the coming

decade for global earth sciences. ODP is held forth as the model of international science cooperation.

EXCOM voiced its appreciation of R. Correl and his presentation.

### Liaisons with other Global Geoscience Initiatives

#### EXCOM Motion

EXCOM approves of the establishment of liaisons with other global geoscience initiatives. (Motion Briden, second Harrison)

Vote: Approved by acclamation

### 474 CONCLUSION OF THE MEETING

Since this was the last formal EXCOM meeting for Jan Stel, C. Helsley wanted to acknowledge a good colleague whose efforts were instrumental in forming the ESF consortium. Thank you for your work on behalf of ODP. A round of applause signified everyone's appreciation.

Long-term EXCOM member Chris Harrison will also be leaving. C. Helsley wanted to acknowledge ODP's debt for the assistance and guidance he has provided. Another round of applause signified everyone's appreciation.

EXCOM also wanted to acknowledge the efforts of Bernard Munsch and R. van Lieshout of the ODP Council for whom this was also the last meeting. He thanked them for their help and guidance. Another round of applause signified everyone's appreciation.

The Business session of EXCOM adjourned at 5:30 PM on 1 June 1989.

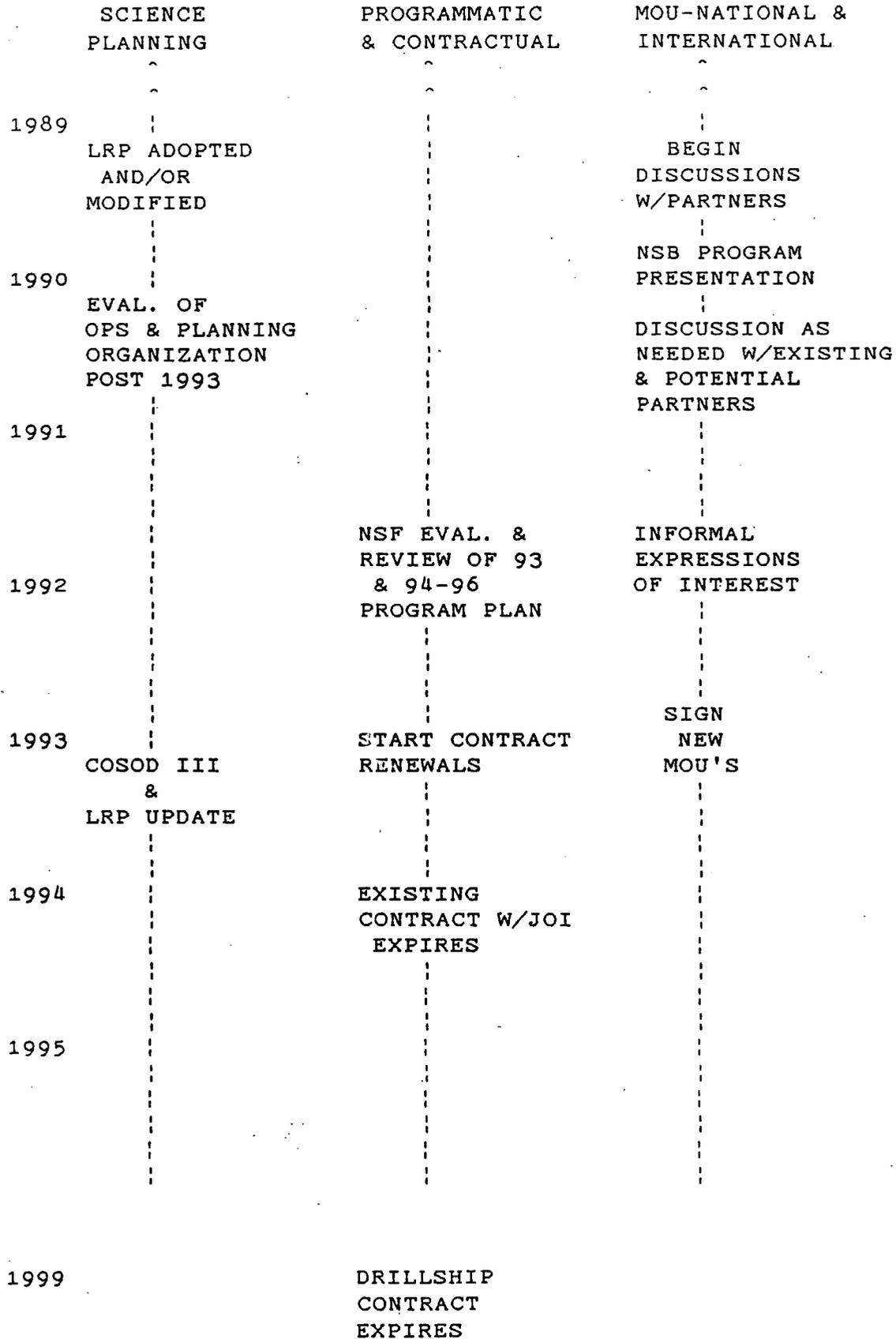
APPENDICES ATTACHED TO 31 MAY-1 JUNE, 1989 EXCOM MINUTES

- A ODP Renewal Actions (D. Heinrichs)
- B LRP Phased Implementation and Financial Implications (N. Pias)
- C Production of FY90 Budget (T. Pyle)
- D FY90 Clearances (T. Pyle)
- E FY89-90 JOI/US Science Support Program Activities (T. Pyle)

LIST OF HANDOUTS AT 31 MAY-1 JUNE 1989 EXCOM MEETING

1. ODP Renewal Actions (D. Heinrichs)
2. Supplements to Long-Range Planning Document (N. Pias)
3. WLS Far-Term Technological Developments (R. Anderson)
4. WLS Status of Near-Term Technological Developments (R. Anderson)
5. WLS Recent Past Achievements Measured Against Goals (R. Anderson)
6. WLS Present Status Operations: Problems and Progress (R. Anderson)
7. Science Operators Report (P. Rabinowitz)
8. Present Status of Budget (T. Pyle)
9. The Resolution Report, v. 5, no. 1, January 1989 (K. Babcock)
10. NEREIS Project (B. Biju-Duval)
11. United States Country Report (B. Malfait)
12. ODP Logging Manual (R. Anderson)

ODP RENEWAL ACTIONS



## IMPLEMENTATION AND FOCUSING OCEAN DRILLING

### PHASE I IMPLEMENTATION

#### Scientific

- High-resolution Neogene paleoceanographic transects especially within the Pacific Basin.
- Sea level studies with drilling on guyots and atolls.
- 1- to 1.5-km deep holes in accretionary wedges.
- Plate kinematic studies of the Pacific Plate
- Initial, 0.5- to 1-km deep holes at fast spreading, unsedimented ridge crests and intermediate spreading, sedimented ridge crests.

#### Technology

- Application of the high-speed, top-drive, diamond mining coring system for drilling in igneous rocks and other consolidated materials.
- Development of strategy for addressing deep drilling in both basement and sedimentary rocks.
- Development of downhole tools and drilling techniques for study of high temperature environments.

Developments outside of ODP which will greatly contribute to programs in later phases include:

- Development of borehole seismometers.
- Development of drilling and sampling techniques in unconsolidated coarse-grained sediments.
- Development of drilling and sampling techniques in shallow water carbonate environments.
- Development of techniques or systems to drill in the ice-covered Arctic.

## PHASE II IMPLEMENTATION

### Scientific

- Intermediate-depth drilling in divergent and convergent margins with emphasis on tectonic, geochemical and paleoceanographic (sea level studies) processes.
- Intermediate-depth ridge crest drilling.
- Intermediate-depth studies of older crustal section.
- Pre-Neogene low resolution climate change studies.
- Deployment of initial array of borehole seismometers.
- Start of drilling efforts in the Arctic Ocean.

### Technology

The technological developments to be concentrated on within ODP during this phase of operations include:

- Evaluation of the diamond coring system for use in both deep sediment drilling as well as for deep crustal drilling.
- Solution to the recovery of alternating soft-hard sediment sequences.
- Development of fully-oriented core samples in all environments.

Developments outside of ODP which will greatly contribute to programs in later phases include:

- Development and initial deployment of long term observatories for ocean ridge and tectonic environments.

## PHASE III IMPLEMENTATION

### Scientific

- Deep crustal drilling to Moho.
- Deep drilling in passive and active margins.
- Deployment of long term observatories.
- Deep stratigraphic test sites.
- Complete Arctic drilling program.

### Technology

The technological developments to be concentrated on within ODP during this phase of operations include:

- Complete development techniques for drilling deep sites with adequate well control.

Developments outside of ODP which will greatly contribute to programs in later phases include:

- Enhanced long-term observatories.

FINANCIAL IMPLICATIONS OF THIS LONG RANGE PLAN

Table 3. Cost Estimates for Engineering Developments and Special Operations

Engineering and Operational Requirements	Scientific Objective Addressed	Phase I 1989-1992 (\$1000)	Phase II 1993-1996 (\$1000)	Phase III 1997-2002 (\$1000)
1. 4km Diamond Coring System,	1,2,3,4,7,8,9,13	1390.	-----	-----
2. 6km DCS	1,2,3,4,7,8,9,10,11,13	-----	1000.	200.
3. Slimline riser and blow-out preventor	1,2,3,7,8,9,10,11	300.	5000.	1500.
4. Improved sediment-coring Systems	7,8,9,10,11,12,13	250.	200.	150.
5. Borehole Seismometers and Operations of Seismic systems.	2,4,5	600.	600.	600.
6. High-temp systems.	3,4,11	1000.	1510.	750.
7. Improved packer and fluid samplers.	4,5,8,11	800.	500.	300.
8. Oriented core samples.	1,2,5,6	250.	250.	-----
9. In-situ pressure sampler.	7,8	250.	250.	150.
10. Slimline logging and borehole experiments.	1,2,3,4,7,8,9,10,11,13	650.	2000.	-----
TOTAL		5490.	11310.	3650.

Table PP-2 FY89-90 Budget Summary (\$K)

	FY89			FY90		
	Std.	SOE	Total	Std.	SOE	Total
Drilling & Engineering	3,122	405	3,527	3,164	1030	4,194
Tech. & Log. Support	3,105		3,105	3,485		3,485
Sci. Operations	939		939	1,002	170	1,172
Science Services	3,100	18	3,118	3,363	86	3,449
Headquarters/Admin.	1,665		1,665	1,809		1,809
Subtotal	11,931	423	12,354	12,823	1,286	14,109
Ship Operations	18,572	588	19,160	18,969		18,969
<b>Total TAMU</b>	<b>30,503</b>	<b>1,011</b>	<b>31,514</b>	<b>31,792</b>	<b>1,286</b>	<b>33,078</b>
L-DGO						
General	1,190	155	1,345	1,279	161	1,440
Schlumberger	1,585	93	1,678	1,757		1,757
<b>Total LDGO</b>	<b>2,775</b>	<b>248</b>	<b>3,023</b>	<b>3,036</b>	<b>161</b>	<b>3,197</b>
<b>JOI/JOIDES</b>	<b>1,600</b>	<b>13</b>	<b>1,613</b>	<b>1,672</b>	<b>53</b>	<b>1,725</b>
Total Uncommitted SOE		0			0	
<b>Totals</b>	<b>34,878</b>	<b>1,272</b>	<b>36,150</b>	<b>36,500</b>	<b>1,500</b>	<b>38,000</b>
NSF Target			36,150			38,000

SCIENCE OPERATOR  
FY90 PROGRAM PLAN  
SUMMARY OF BUDGET CHANGES  
As of March 15, 1989

The following changes incorporate BCOM recommendations (per their meeting March 6-8) to increase SOE allocations up to the required 4% and to decrease the overall budget by \$160,818.

+ \$ 70,000	SOE: Publications (1802F03) Hire two copy editors to assist in the preparation of "Results" volume papers submitted to ODP.
<81,900>	SOE: Computer Services (1802F04) Computer equipment request rejected by BCOM.
<16,000>	SOE: Drilling Operations (1803F02) Reduce supplies associated with hard rock drilling. (NOTE: This reduction was made to compensate for an error in total SOE prescribed by BCOM. Total of items was \$16,000 over the approved amount for SOE of \$1,285,600.)
+ 95,000	SOE: Diamond Coring System (1803F05) Add testing of Diamond Coring System in controlled land test environment.
+ 125,000	SOE: Diamond Coring System (1803F05) Add feasibility study of 7500m system for possible test on engineering leg in FY91.
+ 20,000	SOE: Science Operations (1805F01) Add funds for upgrading the seismic computer system.
<50,000>	Computer Services (1802F04) Cut back programming and consulting which will reduce the level of development and implementation of additional automated data collection software.
<100,000>	Engineering Development (1803F03) Cut further sonic core monitoring system development. Initial testing of this system has been postponed to leg 126.
<30,000>	Engineering Development (1803F03) Cut Instrumented Drill String Sub. This project will be done in FY89.
+ 30,000	Engineering Development (1803F03) Maintenance and refinements of existing operational drilling/coring systems due to engineering, operations, science, or core tech observations.

<50,000> Engineering Development (1803F03)  
 Cut Drill Bit Motion Indicator work.

<5,000> Engineering Development (1803F03)  
 Reduce budget for High Temperature Drilling/Coring work.

<72,918> Logistics (1804F03)  
 Reduce and/or limit ocean freight shipments to/from ship.  
 Curtail emergency air freight shipments to ship.

<10,000> Science Operations (1805F01)  
 Eliminate funds for relocation of newly hired staff  
 scientists (four staff scientists relocated in FY89).

<5,000> Science Operations (1805F01)  
 Decrease number of reprints requested per article.

<5,000> Science Operations (1805F01)  
 Reduce amount of stock shore lab supplies.

<75,000> Ship Operations (1806F01)  
 Reduce fuel budget per new cost estimates for Japan port  
 calls.

\$ <160,818> TOTAL REDUCTION TO BUDGET

Original Budget	\$33,239,000
Less: Reduction to Budget	<u>&lt;160,818&gt;</u>
Revised Budget	<u>\$33,078,182</u>

Cable: LAMONTGEO  
Telex: 710-575-2553  
Fax: (914) 359-2931

Telephone: (914) 359-2900

March 20, 1989

Dr. Ellen Kappel  
JOI, Inc.  
1755 Massachusetts Ave. NW, Suite 800  
Washington, DC 20036

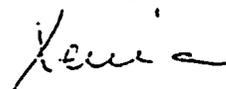
Dear Ellen:

I managed to meet BCOM's budget guideline by cutting or reducing the following from our proposed FY1990 budget of \$3,303,761:

1) Sidewall Entry Sub purchase	\$35,000
★ 2) Insurance deductible (contingency funds)	\$50,000 ★
3) Decrease salaries plus fringe by dropping one student (7.5 months) :	\$ 8,933
4) Overhead saved on salaries plus fringe:	\$ 3,752
5) Schlumberger tool repair decreased by	\$ 1,260
6) Schlumberger tool modification decreased by	\$ 3,000
7) Schlumberger Californium source replacement postponed to FY1991:	\$ <u>5,000</u>
TOTAL REDUCTION	\$106,945
FINAL BUDGET	\$3,196,816

We still hope to go ahead with the new Sidewall Entry Sub purchase in this fiscal year. We still are not certain what the cost will be and will try to hold off making any decision until the end of the fiscal year when we have a better idea of what our budget situation will be.

Sincerely,



Xenia Golovchenko

XG:ems

## Summary of FY90 Special Operating Expenses

### TAMU

1.	\$16,000	publications equipment to improve graphics capability
2.	\$70,000	two copy editors
3.	\$364,600	casing, guide base <del>s</del> , hard-rock drilling supplies
4.	\$45,000	development of smaller hard rock guide base
5.	\$400,000	further development of the diamond coring system (DCS)
6.	\$95,000	land testing of the DCS
7.	\$125,000	feasibility study of drilling to 7000 m with the DCS and the feasibility of reaming the hole for use of specialized downhole tools
8.	\$170,000	upgrading shipboard science equipment, including \$20,000 for the seismic computer system
	<hr/>	
	\$1,285,000	TOTAL TAMU Special Operating Expenses

### LDGO

9.	\$103,488	covers unanticipated additional insurance costs
10.	\$57,600	lease-purchase of the digital borehole televiewer
	<hr/>	
	\$161,088	TOTAL LDGO Special Operating Expenses

### JOI/JOIDES

11.	\$53,000	publication of the Long Range Plan, publication of a "highlights" brochure, and thematic publications "seed money"
	<hr/>	
	\$1,499,688	TOTAL Special Operating Expenses

## FY 1990 CLEARANCES

Leg 129 (Old Pacific).	No clearance needed as planned.
Leg 130 (Ontong Java).	Republic of the Solomon Islands.
Leg 131 (Nankai Geotechnical).	Japan.
Leg 132 (Engineering II).	Possibly Japan.
Leg 133 (Northeast Australia).	Australia.
Leg 134 (Vanuatu Collision).	Republic of Vanuatu.
Leg 135 (Lau Basin - Tonga Arc).	Fiji and the Kingdom of Tonga.
Leg 136 (Engineering III).	TBD

In general, the U.S. has a positive record in obtaining clearances from the countries identified above. For island nations in the South Pacific, the regional CCOP/SOPAC organization has proven to be an effective intermediary in facilitating clearance negotiations, and we are presently pursuing that route.

**CONTRACT YEAR 4 AND 5 JOI/U.S. SCIENCE SUPPORT PROGRAM ACTIVITIES**

<b>Workshops</b>	<b>Total Appr.</b>	<b>Subcontract</b>
<b>CY 4</b>		
Downhole Seismometers	\$39,585.00	JOI/USSAC supported workshops.
Tectonic Frames of Reference	\$31,432.52	
Deep Crust and Mantle	\$36,250.00	
Links Between Geoscience Progs.	\$30,587.00	
Sahagian/AGU Chapman Conf.	\$5,000.00	Contribution toward ws
Kastens and McCoy (Med.)	\$3,795.90	Travel for U.S. scientists to attend non-U.S. ODP-related workshops.
Brass (Arctic)	\$1,328.88	
Crane (Arctic)	\$1,487.79	
Speed (Carib.)	\$1,000.00	Supplements for report reproduction.
Report Reproduction	\$2,011.74	
<b>TOTAL</b>	<b>\$152,478.83</b>	

CY 5 to date	
ODP Geochemistry	\$38,613.00

**Survey Augmentation Total Sub-Contract Amount**

<b>CY 4</b>	<b>Total</b>	<b>Sub-Contract</b>	<b>Amount</b>
Crane and Aikman	\$35,210.00		EPR heat flow Geoprops probe Geochem Ref MCS at MARK area Old Pacific Lau Basin
Karig	\$10,000.00		
Lonsdale (Winterer)	\$34,972.00		
Mutter/Detrick	\$131,630.00		
Larson	\$31,879.00		
Hawkins	\$64,167.00		
<b>TOTAL</b>	<b>\$307,858.00</b>		

<b>CY 5 to date</b>		
Becker	\$28,690	Middle Valley & Escanaba T. Reprocess Geochem Ref Site Anelastic Strain/Nankai
Larson/Diebold	\$17,500	
Karig	\$6,420	

**Downhole Instrumentation (CY 4)**

*Vertical Seismic Profiling*

Stephens, Leg 123	\$22,586.00
Cooper, Leg 126	\$4,572.00

<b>TOTAL VSP</b>	<b>\$27,158.00</b>
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*Wireline Reentry*

Spiess	\$76,633.00
Other	\$49,000.00

<b>TOTAL Wireline</b>	<b>\$125,633.00</b>
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<b>TOTAL Downhole Instr.</b>	<b>\$152,791.00</b>
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