JOIDES SCIENCE COMMITTEE
March 17 2003
Austin, Texas

DRAFT MOTION AND CONSENSUS ITEMS

SCICOM Motion 01-03-1: SCICOM approves the meeting agenda.
Prell moved, Mayer seconded, 13 in favor, 1 absent (Herzig).

SCICOM Motion 01-03-2: SCICOM approves the minutes of its August 2002 meeting in Ghent.
Austin moved, MacLeod seconded, 13 in favor, 1 absent (Herzig).

SCICOM Motion 01-03-3: That the current motion be tabled until it was rewritten. [That revised motion was subsequently adopted as SCICOM Motion 01-03-5.]
Moore moved, Austin seconded, 13 in favor, 1 absent (Herzig).

SCICOM Consensus 01-03-4: SCICOM recommends that, within IODP, PPGs be used only when carefully justified. PPGs should be given clear and specific mandates, with definition of timelines, oversight, reporting and review responsibilities, and expected products.

SCICOM Motion 01-03-5:
SCICOM acknowledges documentation provided by the following PPGs and participants in their meetings:

- Architecture of Oceanic Lithosphere
- Climate and Tectonics
- Deep Biosphere
- Gas Hydrates
- Shallow Water Systems

including reports, meeting minutes, publications and white papers.
Although the PPG process did not function in all cases as originally conceived (for a variety of reasons) SCICOM recognizes that the efforts of PPG participants helped advance important science in the last phases of ODP.
Fisher moved, Austin seconded, 13 in favor, 1 absent (Herzig)

SCICOM Consensus 01-03-6: The compilation of SCICOM members' contributions assessing how well ODP has done as a scientific program will be forwarded to EXCOM for potential input to PEC VI.

SCICOM Consensus 01-03-7:
The Ocean Drilling Program, its predecessor the Deep Sea Drilling Project, and its successor the Integrated Ocean Drilling Program, stand as probably the finest examples in science of how nations can cooperate to achieve a greater good than any could achieve

alone. Since the first hole was drilled in January of 1985, the Ocean Drilling Program has been supported by the governments of over twenty nations. The Program has seen the end of the Cold War, the waxing and waning of geopolitical strife in all corners of the world, and innumerable changes of administrations. Through it all, the Program has continued to put a ship to sea six times a year with a contingent of scientists, students, crew, and staff who left politics and national identity on the beach. By the time the last hole is drilled in September of 2003, the Program will have drilled over 1700 holes, recovered over 215 km of core, and sailed over 2700 scientists from more than 40 nations.

The Ocean Drilling Program has provided scientific advances in solid Earth science, oceanography, paleoclimatology, and numerous other disciplines. The work of the Program has provided fundamentally new understandings of modern Earth processes and has provided the baseline against which much of geology interprets the past. The Program is recognized for the high quality of the science that it has produced over the past 18 years. That science has only been possible because of the efforts of a very large number of people. SCICOM wishes to acknowledge the efforts of those people and to thank them on behalf of the entire Earth science community.

The quality of the science that has been done owes much to the people who have written proposals, both those that have gone on to be drilled and those that have not. The exchange of ideas, the fertilization of one idea by another and the constant push of new ideas, approaches, and techniques have kept the Program vital. The greatest thanks need to go to the proponents who provided the raw material for the scientific ideas that guided the drilling.

Those myriad ideas for good science through drilling would never have come to fruition without the considerable efforts of the members of the scientific community who staffed the scientific advisory structure of the Program. The advisory panels reviewed ideas, nurtured them, questioned them, improved them, assembled site survey data for them, reviewed their safety and ultimately championed them for one of the very few available legs aboard *D/V JOIDES Resolution*. The advisory panels, in turn, only worked because there were people willing to give significant time and energy to leading and serving on those panels. SCICOM offers our heartfelt thanks to all of the hundreds of panelists and panel chairs who have staffed (in alphabetical order) ARP, BCOM, CEPAC, DBRP, DMP, EDRC, ESSEP, EXCOM, IHP, IOP, IPSC, ISSEP, LITHP, OHP, OPCOM, PANCH, PCOM, PPSP, TECP, TEDCOM, SCICOM, SCIMP, SGPP, SOHP, SMP, SOP, SSP, WPAC, DPGs, PPGs, WGs and PECs over the years. You all know who you are.

The best ideas in the world would not have done us any good unless someone managed the money, staffed the ship, arranged the travel, ordered the pipe, collected and sampled the core, built the instruments, curated the core, cooked the food, edited the publications, did the laundry, managed the computer network and on and on and on. The Program has been very fortunate to have had contractors, operators, and partners who were professional in all senses of the word. SCICOM expresses our deep appreciation, on behalf of present and past participants in the Program, to all of the staff and the

leadership (past and present) of the Joint Oceanographic Institutions, Inc. office; the Ocean Drilling Program at Texas A & M University; the Borehole Research Group at Lamont-Doherty, Leicester, Montpellier, Aachen, and Tokyo; the Site Survey Data Bank at Lamont-Doherty Earth Observatory; the core repositories at College Station, Scripps, Lamont-Doherty, and Bremen; and the ship, drilling, and catering crews of the SEDCO/BP 471; We thank Texas A&M University in particular for the commitment the university made to the program at its inception and the facilities they have provided at College Station that have served so many scientists so well.

We recognize that none of this would have happened without money. While the money comes ultimately from governments, we all know that our governments are actually, in the end, run by people. SCICOM wishes to express our thanks to those people who have worked so hard over the years to secure funding for the program and to the agencies represented on the ODP Council that have provided that funding, including United States National Science Foundation; Natural Sciences and Engineering Research Council and Natural Resources Canada; the Australian Department of Primary Industries and Energy; National Taiwan University; the Korean Institute for Geology, Mining, and Minerals; the European Science Foundation representing Belgium, Denmark, Finland, Greece (1986-1995), Iceland, Ireland (since 1999), Italy, the Netherlands, Norway, Portugal (since 1998), Spain, Sweden, Switzerland, and Turkey (1986-1998); the Federal Republic of Germany's Deutsche Forschungsgemeinschaft; Institut Francais de Recherche pour l'Exploitation de la Mer and Institute National des Sciences de l'Univers-Centre National de la Recherche Scientifique; Japan's Ocean Research Institute, the University of Tokyo and Ministry of Education, Culture, Sports, Science and Technology; the Marine High-Technology Bureau of the State Science and Technology Commission of the People's Republic of China; the Natural Environment Research Council of the United Kingdom; and, in 1991-1992, the Institute of Lithosphere of the Soviet Union.

Finally, SCICOM wishes to thank those individuals, from many nations, who have worked so hard to see that there is a successor to the Ocean Drilling Program. We wish our colleagues in the Integrated Ocean Drilling Program planning structure, and the next generation of marine scientists, the same good fortune we have had to participate in one of the great endeavors of modern science and to experience the joy of discovery afforded by the ability to sample and monitor the ocean floor.

Presented by Jamie Austin, Sherman Bloomer, Larry Mayer, Dave Rea

SCICOM Consensus 1-03-8: SCICOM wishes to thank Keir Becker for his leadership of SCICOM and the JOIDES Office in their last incarnations. Keir's thoughtful, thorough, and calm approach has been invaluable to the Program in the complex transition from one program to another. We've all been fortunate to work with him.

There once was a man from Miami
Whose leadership skills were uncanny
He loved CORKs oh so fine,
In boreholes and wine
And made SCICOM work like a family.

Presented by Fisher and Bloomer

SCICOM Consensus 1-03-9: Little that happens on the ODP stage would happen without those working hard behind the scenes; and given that these critical contributions to the success of our program are rarely recognized, SCICOM offers a consensus expressing its profound thanks to the staff of the JOIDES Office this one in Miami and all of its predecessors.

Presented by Rea

SCICOM Consensus 1-03-10: SCICOM sends Paul Dauphin into retirement reluctantly, but with its heartfelt thanks for a job well done. He loves the scientific ocean drilling community and has worked tirelessly for many years to assure its success. Catch us some fish in that lake of yours, Paul, but be sure to throw them back.

Presented by Austin

SCICOM Consensus 1-03-11: SCICOM thanks Jamie Austin, Nancy Hard, Kathy Ellins and the Institute for Geophysics of the University of Texas for hosting its historic final meeting so graciously in the heart of Texas.

Presented by Becker

SCICOM Motion 1-03-12: SCICOM adjourns its final meeting.

Austin moved, Mayer seconded, 13 in favor, 1 absent (Herzig)

ATTENDEES

JOIDES SCIENCE COMMITTEE
March 17 2003
Stephen F. Austin InterContinental Hotel, Austin, Texas

SCICOM Members:

Jamie Austin	University of Texas, USA
Keir Becker (Chair)	RSMAS, University of Miami, USA
Sherman Bloomer	Department of Geosciences, Oregon State University, USA
Steven D'Hondt	Graduate School of Oceanography, University of Rhode Island, USA
Andrew Fisher	Dept. of Earth Sciences, University of California at Santa Cruz, USA
Teruaki Ishii	Ocean Research Institute, University of Tokyo, Japan
Jeroen Kenter	Dept. of Sedimentary Geology, Vrije University, Netherlands (ECOD)
Larry Mayer	Center for Coastal and Ocean Mapping, Univ. of New Hampshire, USA
Chris MacLeod	Cardiff University, UK
Ted Moore*	Department of Geological Sciences, University of Michigan, USA
Warren Prell**	Brown University, USA
David Rea	Department of Geological Sciences, University of Michigan, USA
Will Sager	Texas A & M. University, USA

* One time replacement for Patricia Fryer
**Permanent replacement for Frederick Sarg

Associate Member Observers:

Benoît Ildefonse	Université de Montpellier, France
Zuyi Zhou	Tongji University, Peoples Republic of China

Liaisons:

James Allan	NSF, National Science Foundation, USA
Jack Baldauf	ODP-TAMU Science Operator, USA
Tim Byrne	ISSEP, University of Connecticut, USA
Gilbert Camoin	ESSEP, CEREGE, France
George Claypool	PPSP, USA
Dave Goldberg	ODP-LDEO, Wireline Logging Services, USA
Nick Pisias	JOI, Joint Oceanographic Institutions, Inc., USA

Guests:

Steve Bohlen	JOI, Joint Oceanographic Institutions, Inc., USA
J. Paul Dauphin	NSF, National Science Foundation, USA
John Farrell	JOI, Joint Oceanographic Institutions, Inc., USA
Jeff Fox	ODP-TAMU, Science Operator, USA
Alan Mix	Co-Chief Leg 202, Oregon State University, USA
Rick Murray	SciMP Chair, Boston University, USA
John Orcutt	Co-Chief Leg 203, Scripps Institution of Oceanography, USA
Frank Rack	JOI, Joint Oceanographic Institutions Inc., USA
Ann Trehu	Co-Chief Leg 204, Oregon State University, USA
Heinrich Villinger	Co-Chief Leg 205, Universitat Bremen, Germany

JOIDES Office:

Elspeth Urquhart	JOIDES International Liaison, RSMAS, University of Miami, USA

Guests from the iPC Meeting

André Droxler	iSSP, Rice University, USA
Harry Doust	iILP, Vrije Universiteit, The Netherlands
Nobuhisa Eguchi	iSAS Office, JAMSTEC, Japan
Hisao Ito	iPC, Geological Survey of Japan, Japan
Kenji Kato	iPC, Shinshu University, Japan
Barry Katz	iPPSP Chair, ChevronTexaco, USA
Yoshihisa Kawamura	CDEX, JAMSTEC, Japan.
Hajimu Kinoshita	iPC Co-Chair, JAMSTEC, Japan
Ulrich Harms	ICDP Liaison, GeoForschungsZentrum Potsdam, Germany
Yoshihiro Masuda	iTAP, Dept. of Geosystem Engineering, University of Tokyo, Japan.
Hitoshi Mikada	iSSEP Co-Chair, JAMSTEC, Japan
Ted Moore	iPC Co-Chair, University of Michigan, USA
Kate Moran	iTAP Chair, University of Rhode Island
Tomohisa Nawate	OD21, JAMSTEC, Japan
Delia Oppo	iPC, Woods Hole Oceanographic Institution, USA
JoAnne Reuss	University of Michigan, USA
Izumi Sakamoto	International Working Group Support Office (IWGSO), USA.
Jeffrey Schuffert	iSAS Office, JAMSTEC, Japan
[Kiyoshi Suyehiro	iPC, JAMSTEC, Japan]
Yoshiyuki Tatsumi	iPC, JAMSTEC/IFREE, Japan
Yasuo Yamada	OD21, JAMSTEC, Japan
Minoru Yamakawa	iSAS Office, JAMSTEC, Japan

A. Welcome and Introductions

Becker called the meeting to order at 0840 hrs and welcomed all attendees. Self-introductions followed. Becker noted the absence of one panel member, Peter Herzig, expected to arrive later that day.

B. Logistical Announcements

As the meeting host, James Austin welcomed the attendees to Austin on behalf of the University of Texas at Austin and outlined the meeting logistics.

C. Approval of Agenda

Becker noted minor additions and corrections to the agenda book: John Orcutt would present the Leg 203 science report; in earlier versions of the agenda book Heinrich Villinger's name had been misspelled; also in earlier versions, from page 24, Item E., onwards on the contents list, the pages should be renumbered "minus 3", i.e. page 24 is actually page 21, and so on.

SCICOM Motion 01-03-1: SCICOM approves the meeting agenda.

Prell moved, Mayer seconded, 13 in favor, 1 absent (Herzig).

D. Approval of August 2002 Minutes

SCICOM Motion 01-03-2: SCICOM approves the minutes of its August 2002 meeting in Ghent.

Austin moved, MacLeod seconded, 13 in favor, 1 absent (Herzig).

E. ODP Agency and Prime Contractor Reports

NSF

Allan reported briefly on the following highlights:

- The National Science Board have approved the FY2003-2007 Program Plan, including program phase-out.
- The JOIDES Resolution will be off-contract to ODP on October 1st 2003
- NSF will be caretaking the ODP Program phase-out preserves and transfers of ODP data and knowledge to IODP
- NSF will ensure access to data and samples during the transition to IODP
- ESF has attained full membership status in ODP for FY03.
- NSF has funded three new ODP surveys: South Pacific Eocene Paleoceanography (Lyle et al.); Alaskan Fjords/Continental Shelf (Mix et al.); and Effects of Eustatic and Tectonic Forcing on Developments of Forearc Basin Sequence Stratigraphy (Fulthorpe and McIntosh).

New employment opportunities at NSF were announced and applications encouraged. The posts are for a Program Director to replace J. Paul Dauphin on his retirement and also for an Associate Program Director. The advertisements for these are due out soon and will be posted at http://www.nsf.gov/oirm/hrm/jobs/start.htm.

With regard to U.S. planning for IODP Allan reported that the Request for Proposals (RFP) for a System Integration Contractor (SIC) had been approved by the National Science Board and was due for imminent release. The successful SIC would provide science support services and then bid (with NSF) for the non-riser drill ship. Allan stated that the RFP had been delayed because of NSF operating under "continuing resolution." The lateness of FY203 appropriation caused the President's FY2004 budget to be based upon the FY2003 budget, deferring ship conversion funds to FY2005. Based on the Request for Information (RFI) responses and the FY2004 budget, NSF has re-evaluated the strategy.

Allan continued by outlining the New Acquisition Plan:

- Phase 1: Identification of the SIC
- Phase 2: An acceptable (no significant modifications) vessel to be acquired by SIC (working with NSF) to drill mid 2004
- Phase 3: Acquisition and modification of a vessel by SIC (in collaboration with NSF) to meet identified IODP needs in FY2005 or FY2006.

A synopsis of the proposed strategy was posted on March 3rd 2003 at http://www.eps.gov/spg/NSF/DCPO/CPO/DACS-03-00001/listing.html

Allan stressed that NSF are committed to non-riser drilling as early as possible.

Becker invited questions and Austin asked for the latest news on the signing of a co-operative agreement. Allan answered that there would be a meeting with MEXT the following week. Mayer asked if the response to the RFI was public information and Allan answered that no, it was confidential. D'Hondt asked if the RFP would be released that very day and Allan answered that he was sure the release was imminent.

JOI Report

Pisias reported on the following seven items of interest:

JOI Activities for IODP – A year ago JOI decided it would actively pursue the role of the implementing organization for the non-riser ship. JOI and its Board of Governors established a process to identify the institutions that were members of JOI to respond with JOI as potential operators for the non-riser platform. That process occurred last summer and culminated in September with the selection of TAMU and LDEO to be partners with JOI, thus forming an alliance that will respond to the RFP that is due to be released imminently. The alliance is looking at a management strategy that has the ability to respond to the needs of the scientific community of ocean drilling. Some changes will be significant in the new program. In ODP the scientific advisory committees, which constituted JOIDES, reported directly to JOI. In the new program the scientific advisory

structure will report to the central management organization (CMO) and JOI will be one step removed. JOI's concern is how to maintain that particular connection. JOI was one of the organizations that responded to the RFI and will be actively responding to the RFP when it is released by NSF.

FY04 Program Plan Budget Summary - The FY04 program plan is due to NSF in mid April for administrative review and it will be brought to EXCOM in July for formal approval. Final approval is expected from NSF in August. All the funds for FY04 will be U.S. funds, i.e. there will be no co-mingled funds to support this first part of the phase out. The phase-out plan is in three parts and funds are available for the activity to continue through 2007. The plan provides for reports on the final legs of ODP and the final publication of all ODP activities is not expected until the end of 2007. The plan also provides for data migration and archiving into JANUS and finally into the database at NGDC. The *JOIDES Resolution* will start demobilization in St. John's on September 7th 2003 and continue during the transit to Galveston Texas. All activity on the ship is to come to an end by midnight on September 30 2003 when the demobilization will be complete. All equipment will be prepared for transfer to the new program. There are also significant legacy activities to provide all laboratory procedures etc. (see agenda book) for all legacy activities that are planned. Pisias showed budget figures comparing the FY03 budget of $45.3M for an ODP operational year and FY04 at c. $13M. Regarding impact on personnel, the budgets show 171 FTE's at the start of FY03, the last year with full operations. At the beginning of FY04 only 6 FTE are eliminated, but then they are reduced further through FY04. For example, the science operator begins FY04 with 140 FTE's and reduces these to 86 FTE's by the end of FY04.

Legacy Activities of ODP – An important effort is that of creating a permanent digital archive, cataloguing and maintaining all the equipment that is to be removed from the *JOIDES Resolution*. Data migration priorities were set up at the start of the JANUS database. The order of migration shows the MST was highly requested along with physical properties, chemistry and then the remainder of the data including the paleontological data set. This latter database will take until 2007 to migrate. Pisias showed the status of migration pointing out that for a large number of the data sets 100% of the migration has occurred. All data are expected to be migrated by the end of FY04 with the exception of the paleontological data as mentioned above. All data will be ultimately stored at NGDC as flat ASCII files and NGDC will ensure that data will always be available in the future on readable media. Metadata is also being created to include explanatory note sections, technical procedures etc. David Divins (NGDC) has agreed to Chair a committee at JOI to review the metadata and ASCII files to make sure they are complete. All the MST data files are now in hand. All data that are not presently in electronic form are being scanned and converted.

Legacy documents are being produced as listed in the agenda book. JOI will be posting a web site containing all legacy information including such documents as tool operation manuals. Pisias asked SCICOM members to check the legacy material available and to inform JOI if they identified any missing material. The aim of JOI is to preclude the loss of any data and material from the ODP.

Enhancement Activities for FY04 – Pisias reported some doubt about the amount of available funds due to current increased fuel prices. Becker had been asked to consult SCICOM and prioritize activities should funds not be available to meet all requirements. The first priority was to meet all the science needs as planned followed by the need to complete the legacy activities. JOI carried forward $600k last year, and the budget for fuel this year is based on $250 per metric ton. If this cost rises to $400 per metric ton then all available funds would be needed for fuel. Pisias continued by documenting some of the activities that the program had been enhanced by in FY03. These included 24/7 satellite communication for the ship and means that the network can now be managed from the beach. There are plans to upgrade the water sampler; the downhole sensor sub (DSS) is being modified for Leg 210 so that the data can be retrieved with every core rather than with every pipe trip. Publications and database activities will continue until 2007 and so funds will be used for this and all microfilm archives will be scanned. Becker clarified that the items on the list currently being funded were not in danger of suffering through lack of future funds. Pisias assured SCICOM that this was not the case. MacLeod asked if the list shown by Pisias was an order of priority and Pisias answered that it was not.

Post FY03 Drilling Activities of the *JOIDES Resolution* – Rack continued by outlining the prospects of continued use of the *JOIDES Resolution* after September 2003. There are a number of options under discussion, as well as the possibility for funding tool development activities under phase 2 of JOI's co-operative agreement with the Department of Energy (DOE) regarding gas hydrates. Options for use of the JR include legs in co-operation with industry that would study hydrates, deep biosphere, fluids etc., if there was enough interest from the scientific community. These activities would aim to enhance ODP and IODP goals and would be a potential way to support personnel through the transition period. Three major discussions are going on at the moment; a ChevronTexaco joint industry project (JIP) in the Gulf of Mexico, JNOC-JAPEX planning for a Methane Hydrate 21 (MH21) program in the Nankai Trough, and discussions with the Indian National Gas Hydrate Program. All three of these projects have government and industry support in a 2003-2005 time frame. JOI will respond to a ChevronTexaco JIP issued RFP, which is open until March 31st. The ChevronTexaco JIP will then select a vessel and a science operator based on the responses received to their RFP. They have also issued additional RFPs and JOI has responded to two of these (i.e., for developing: (1) a well plan, and (2) a core handling plan). It's a multi corporation JIP, so other oil companies and other international partners are participating within this JIP, plus several different technical teams are focused on specific issues related to the project. Rack presented the web site where all this information is available: <http:\\qpext.chevrontexaco.com/wwwuexpl_gashydrates>. The JIP also has projects planned with the Naval Research Laboratory and the USGS to gather additional site survey data. Becker asked if the *JOIDES* proposals for the Gulf of Mexico would be addressed in any of these projects. Rack answered that the companies were interested in some of the *JOIDES* proposals. Sager reported that the companies had chosen two sites and neither were the same as those proposed in the *JOIDES* proposals. Rack continued to discuss the proposed hydrate project with JNOC-JAPEX, reporting that the site surveys

had already taken place and the future field program was planned for 2004. JNOC-JAPEX have had discussions with Transocean and are close to signing a contract to use the *JOIDES* Resolution for this work. JNOC-JAPEX have asked about the possibility of negotiating a loan of equipment from NSF, but at the moment it looks unlikely due to the proprietary nature of the data they are hoping to collect. Discussions are continuing but it is likely that they will use the ship without the equipment. The third set of discussions has been with the Director General for hydrocarbons and natural gas in India. India has completed several surveys identifying areas where hydrate potential is greatest and have chosen an area off the east coast where they would like to drill in 2004. They would like to use the *JOIDES Resolution*, including the laboratories. This is also an opportunity to investigate India's desire to join IODP. The prospect is in the Krishna Godvari Basin and the budget is c. $10M for the Indian program. An additional area of interest is off the west coast of India.

Discussions have also been held with NOAA/NURP, the national undersea research program to discuss the potential for the instrumentation of hydrate sites. The potential to instrument hydrate sites could apply to any of the previously discussed sites in the three projects discussed above.

Rack then presented an umbrella project entitled "Interdisciplinary Collaborative Expeditions for a Year of Hydrate Observation and Perturbation Experiments" (ICEY HOPE) that is a scheme to try to co-ordinate the interests of all the different groups to see if they could co-operate together on some of the common goals. This has prompted a lot of discussion between the different groups interested in hydrate exploration. Austin asked when JOI foresaw an interaction between the new, yet to be determined SIC and these various groups, and how did JOI envisage a science-driven program developing and achieving the goal of providing an acceptable non-riser platform by the US. Rack answered that this hydrate work was conceived as a potential way that JOI could provide a bridge between the two programs and also was a mechanism to encourage more industry involvement with the science programs of ODP and IODP. The JOI Board of Governors has given instructions that JOI can accept no liability in formulating any of these proposals; there is also the issue of gaining approval for the use of NSF owned equipment. There have been discussions about creating a Memorandum of Understanding between the DOE and NSF, for the loan of equipment between two government agencies. There have also been discussions with the State Department about creating a similar type of Memorandum of Understanding for the use of NSF-owned equipment for international activities related to hydrates, but these discussions are still unresolved at this time. ChevronTexaco JIP members are willing to provide additional berths on the vessel for science activities beyond their core objectives if there are extenal funds available to support these activities. The JIP is also willing in principle to transfer the cores to a public repository after a proprietary period (e.g., one year).

A discussion then ensued about the suitability of the interface between industrial and scientific communities and the best interests of the IODP. It was commented that theoretically contracts could be signed with TSF that could preclude the use of the JR throughout 2004 for IODP non-riser scientific drilling activities. Pisias commented that

JOI was aware of this issue and was trying to make sure that liaison projects with industry occurred which are primarily driven by ODP/IODP science interests. Austin stated that one of the fundamentals of the scientific ocean drilling program is that it is proposal driven by scientists and, if the proposed sites in the Gulf of Mexico are not chosen by scientists and the program is drilled as an IODP program, then it would represent a fundamental change in the way the program has operated. Fisher thought that this would be a great opportunity to liaise with industry during a period when "at sea science" had not been planned for the program. It was an opportunity to test the liaison capabilities between the scientific drilling program and industry at a time when the competition between science driven proposals was temporarily suspended. Sager commented that the industry projects would go ahead anyway and the question to be addressed was whether or not the scientific drilling programs wanted to be associated with these projects considering that they would be operating under a different system. Mayer commented that more consideration should be given to the post 2003 interim period, as the timetable had now changed and the proposed interim period had become shorter. Fox commented that ODL was aware of the solicitation letter of last week and had stated that, with regard to contract signing with JNOC-JAPEX, that they (ODL) would do nothing to preclude themselves from being involved in the IODP mid FY04 start of phase-in plans.

Arctic Planning – Farrell discussed the objectives and planning status of the proposed Arctic expedition to the Lomonosov Ridge, twice SCICOM's top-ranked proposal and the iPC's number one ranked proposal in August 2002. In October 2002 there was a major planning meeting about the Swedish icebreaker, the *Odin* with participants such as the British Geological Survey (BGS). The BGS have been selected as the interim European science operator for IODP Mission Specific Platforms (MSPs). Also at the meeting were representatives from the Swedish Polar Research Secretariat with whom JOI had a planning contract for this activity, lead scientific proponents to discuss the planning which had already been made during the last year. The secretariat had delivered a major report to JOI in December and this is available on the web site at <http://www.iodp.org/arctic/>. This web site also has a number of other Arctic related documents as background material. At the January 2003 meeting of the International Working Group (IWG) in Nice, the Europeans made a very strong commitment to conduct the Arctic drilling expedition in the summer of 2004 as an IODP program following the principles of IODP. Since then JOI, with NSF approval, continued with a second phase of the planning contract with the Swedish secretariat that extends until February. Last month, the US proponents on the Lomonosov Ridge proposal submitted a request to NSF ODP requesting funds for Science Operating Costs (SOCs). NSF is now considering this proposal. It is thought that the Europeans are considering a contract which would commit them to European Community Ocean Research Drilling, (ECORD) membership and thus also membership in IODP, and possible that this agreement would be signed within the next few weeks. Farrell also thought that there was an intention by the BGS to release a vessel tender for the Arctic expedition. Finally Farrell suggested that in April there would be an announcement of the European Management Agency (EMA) which had been selected to serve as a banker for the various European members to

purchase participation units in IODP and to provide the funds to the European Science Operator to enable MSP expeditions.

Farrell then discussed in detail the planning contract between JOI and the Swedish secretariat regarding the structure and major tasks to be accomplished in this exercise.

Austin asked how much of this planning could be transferred into a legacy plan for future, subsequent Arctic expeditions. Farrell considered that much of what had been learned would be applicable to other expeditions.

PEC VI – Pisias reported on the coming activities of the sixth Performance Evaluation Committee (PEC VI). The primary concern of this committee will be the assessment of the Long Range Plan (LRP) together with the phase out plan and the legacy activities, the advisory structure and the appropriateness of the advisory structure to IODP. Pisias requested suggestions as to the Chair of the committee and the committee itself. He said that suggestions from SCICOM, especially from the international community would be very helpful. The intention was to schedule a meeting in early summer 2003 in order to produce a report by the end of this calendar year. This timetable would allow time to adjust any phase-out activities as needed. Becker suggested that SCICOM members consider possible PEC VI nominees during the lunch break and that the committee could discuss suggestions during Item K. of the agenda. Pisias briefly reviewed the characteristics of acceptable PEC VI members. Mayer asked if there were any possible conflicts or exclusions to consider and Pisias considered that there were not, except possibly from the sub-contractors. Pisias was asked if the PEC VI would be asked to review the advisory structure, implying that these panel members would then be conflicted. Pisias was not sure if that particular review would be useful and included in the committee's mandate. Becker clarified that the PEC VI would consist of six or seven members, suggesting that roughly twice as many nominations would be desirable for JOI to chose among. The committee would be drawn from the international community even although the report would be presented during a period of funding entirely by the U.S.

F. ODP Operator Reports

ODP-TAMU

Baldauf reported on the revised current schedule for the JOIDES Resolution port calls, and then reported on recently completed legs.

Leg 204 concentrated on the Cascadia Margin Hydrate Ridge in the accretionary prism off the west coast of Oregon, the northern end of which had previously been cored during Leg 146. The main purpose of Leg 204 was to recover gas hydrates and to try to understand the structural and stratigraphical constraints on hydrates as well as hydrate formation and fluid flow. Baldauf showed a map and a seismic section of a transect from Site 1245 to Site 1252 to explain the operational strategy. A West – East transect with site locations and site penetrations were illustrated. In total 7 primary and 2 alternate sites

were completed during the cruise (33 APC/XCB holes, 1 RCB hole and 11 LWD holes). A total of 3,674.5 meters were cored with an 83.5% recovery of 3,068.3 meters. Vertical, constant-offset, and walk-away VSPs (Vertical Seismic Profiles) were completed with the *R/V Ewing* using vertical Seismic Imager (VSI) and a Well Seismic Tool (WST). The cruise was atypical and probably one of the most logistically complex of all the ODP Legs. The initial port call was changed from San Francisco to Victoria Canada due to a threatened longshoremen strike. The co-ordination for site time on southern Hydrate Ridge required coordination with the *R/V Sonne*, *R/V Ewing*, *R/V Atlantis* and *R/V New Horizon*. Nine rendezvous were conducted including 7 helicopters and 2 supply boats. In all a total of 42 personnel exchanges on and off the ship were conducted including Dallas morning News, AGU/EOS, DOE, Chevron/Texaco and Context TV.

Further highlights of the leg included:

- 6 holes completed at Site 1249 for preservation of hydrate samples (in cooperation with the DOE)
- Scanning of cores on recovery for hydrate "cold spots" with track mounted infrared camera
- 50 meters of core recovered and stored under pressure in a methane environment
- 35 meters of additional samples recovered and stored in 6 liquid nitrogen dewars.

Baldauf went on to discuss the special HAZMat building, which had been constructed at TAMU for storage of pressure/methane samples. The building was installed on September 12th and the samples arrived on September 16th. A second air conditioning unit was installed which required the removal of most of the pressure vessels. The A/C system failed and the building warmed to 22 degrees C overnight but only one sample was lost. The system is currently functioning and the building is fitted with temperature, fire and methane alarms together with an emergency generator.

Baldauf then discussed the special tool deployments, new technologies and successes during the leg of this impressive range of equipment. The success rates are indicated as (x/x) indicating the number of times the tool was deployed and the number of times it was successful. Tools deployed included the Pressure Core Sampler (30/39); the Davis-Villinger Temperature Tool w/pressure (16/16); the Davis-Villinger Temperature Tool (8/8); the Advanced Piston Corer Temperature Tool (61/61); the Methane Tool (107/110); the Fugro-McClelland Piezoprobe (1/2); the Hyacinth Fugro Pressure Corer (FPC) w/pressure (2/10); the HYACE Rotary Corer w/pressure (4/8), the Drill String Accelerometer tool (17/28); and the RAB-8 logging-while-coring technology (8/8). Becker asked if the HYACINTH effort had been considered successful from the Operator's viewpoint and Baldauf affirmed that it had. Becker reported that he had received a letter from Tim Francis thanking SCICOM for cooperation with the HYACINTH program, and he then passed around copies of this letter to the committee.

Leg 205 Costa Rica – This leg targeted a transect of three sites in the Middle America Trench area. The main purpose of the leg was to install sea-floor observatories, modified CORKs, for examining and monitoring various regimes of fluid flow, primarily within the decollement, the underthrust sediments and the basement. The choice of sites was

based on previous coring operations on Leg 170, particularly Sites 1039 and 1043. Two CORK systems were successfully emplaced, one at Site 1253 and one at Site 1255. The attempted placement of a CORK system at Site 1254 was unsuccessful.
Baldauf summarized the operations as follows:

- The port call was relocated, due to continued threat of longshoremen strike, from San Diego to Victoria with the science party boarding in Acapulco, Mexico.
- A medivac transfer occurred off Puerto Madero, Mexico
- 4 holes were completed at 3 sites (Sites 1253-1255)
- CORKs and osmosamplers were installed at 2 sites (1253 and 1255)
- A total of 404 meters were cored; 280 meters recovered (69%); 998 m drilled w/o coring
- Site 1253
    - Drilled without coring to 370 mbsf.
    - RCB cored to 600 mbsf. (nannofossil chalk/claystone (370-400 mbsf.), gabbro (400-600 mbsf.).
    - 16" (44m), 10 3/4" (413 m), 4 1/2" (400 m) casing, CORK-II and osmosamplers successfully installed.

- Site 1254 was challenging and unsuccessful although two attempts were made.
    - Hole A was drilled and cored to 367 mbsf. During installation of 324 m 10 3/4" casing a joint collapsed in re-entry cone, requiring casing and re-entry cone to be returned to the ship.
    - Hole B was RCB drilled 278 mbsf but deteriorating hole conditions it was not possible to reach the decollement zone. It was proposed that CORK-II would be installed to monitor the upper fault zone. 197 m of 10 3/4" casing was installed. During installation of 230 m of 4 1/2" casing joint failure resulted in 4 1/2" casing loss in hole. Fishing attempts failed.

- Site 1255 was drilled to 123 mbsf, 115 m of 10 3/4' casing was installed. The hole was RCB cored below casing to 157 mbsf (base of decollement) and a CORK-II and osmosampler were installed.

Fisher recounted the same kind of casing failure while drilling in the Nankai Trough and asked if anything had been done to address the problem in the light of this previous experience. He asked if the cause of failure was known. Baldauf replied that the cause was currently being investigated and current speculation included the possibilities that the casing was not filled with water at the appropriate time, it was a result of metal fatigue, or it may have been a function of large pressure changes in the formation.

Leg 206 on the East Pacific Rise was the first of two legs proposed to complete continuous sampling of the upper oceanic crust in super fast spreading region. 4 holes were completed at 1 site (1256). Two of these were focused on the sediment, Hole A being a single mudline core and Hole B using APC to 160 mbsf (102% recovery), and XCB to the basalt contact at 252 mbsf (65%recovery). Hole C was cored 220 to 340 mbsf (88 m into basement). Hole D was the main challenge and 11 re-entrys were completed. Installation of 95 m of 20 1/2" casing, 269 m of 16" casing (19 m into basement) was

completed. RCB coring was continued to 752 mbsf (502 m into basement). Becker noted that the long-term plan was to install a third casing string through the less competent extrusives and asked if anything had been observed to indicate that Leg 206 had reached the depth at which that third casing string should be deployed. Baldauf responded that no such indication had been reported.

Leg 207 on the Demerara Rise was focused mainly on paleoceanographic and paleoclimate objectives. Very small changes in climate or ocean circulation were being targeted in the Cretaceous and late Paleocene age intervals. The cruise recovered most of the critical intervals it was targeting. The ship transited from Leg 206 in the Pacific, through the Panama Canal to Barbados where the science party boarded. Thirteen holes at 5 sites (1257-1261) off the coast of Surinam were successfully drilled and one new site (1260) was approved. Most of the holes were RCB drilled/cored to the proposed depths, i.e. Sites 1257 (284 mbsf), 1258 (460 mbsf), 1259 (558 mbsf), 1269 (509 mbsf), 1261 (659 mbsf). The targeted black shales and other critical event intervals were recovered at most sites, e.g. OAE 3 and OAE 2 at Sites 1257, 1259, 1261), OAE 2 at Sites 1258, 1260 and OAE 1d at Site 1258. The Paleocene/Eocene boundary interval was recovered at Sites 1257, 1258, 1259, 1260. The K/T boundary was recovered at three Sites, 1257, 1258, 1260.

There are 3 cruises remaining before the end of this phase of ocean drilling, Legs 208, 209 and 210. Leg 208 started the previous week in Rio de Janeiro and the ship was currently transiting to the first site on the Walvis Ridge. The port call in Rio de Janeiro was complex for a variety of reasons and two full days were lost. ODP managers were discussing whether this would make a significant difference to the science objectives of Leg 208 and whether the leg might require an extension. There are no current issues for Leg 209 but for Leg 210 one of the sites (3A) will have to be moved c. 1 km as it is currently located in close proximity to a trans-Atlantic fibre optic cable. MacLeod asked if all the scheduled participants on Leg 208 were successful in joining the cruise in Rio and who would be responsible for the extra costs incurred. Baldauf answered that yes, they had all eventually joined the ship and that he thought that the expenses would fall to the relevant member countries.

LDEO

Goldberg presented a brief discussion on logging operations of the recent legs (Legs 204 – 207) together with a report on legacy issues of the Borehole Research Group (BRG).

Goldberg referred to his presentation at the last SCICOM meeting in Ghent when preliminary results from Leg 204 had been discussed. Intensive logging operations had been carried out on this leg including the use of the new magnetic resonance tool while drilling (MRWD). There was also an additional coring device, the Resistivity at Bit logging while coring tool, (RAB-C), and a pressure core measurement downhole geophysical tool. Leg 204 also recorded standard logs and vertical seismic profiling (VSP). On Leg 205 standard logging techniques were employed and at the crustal reference site on Leg 206 there was an extensive logging program. Leg 207 also had a

fairly extensive logging program. Goldberg then showed examples of the logs that had been generated from these holes. The upcoming Legs 208, 209 and 210 will also have standard logs and some specialty devices such as high resolution gamma logging tools. On Legs 208 and 209 there will be a redeployment of the coring tool that allows the core to be recovered at the same time as the logging while drilling (LWD) images are recovered. There will also be some check shots and a new check shot tool will be used during Leg 210. On future legs the INMARSAT satellite system that transfers data from the ship every few days will still be used. The new satellite system installed on the ship at the beginning of Leg 207 will also allow transfer of the full data sets to the shore laboratories.

Goldberg showed a map of the sites for Leg 204 and explained that two VSP tools were used taking up about 4 days of ship time to run these experiments. There were vertical offset VSPs together with two-ship constant-offset VSPs for the first time in ODP. Goldberg showed the superposition at one of the sites of the VSP results and the sonic velocity logs. VSP resolution was very high and afforded excellent correlation which should give valuable data on the properties of hydrates. Goldberg also showed examples of other logs that were recovered on Leg 204; in addition to the 9 sites where the LWD logs were recorded 6 sites had wireline logs and these should provide a comprehensive view of the hydrate bearing formations. Goldberg showed a picture of the first core recovered with the RAB-coring tool. There was a 68% recovery on this test. This tool is also intended for use on Leg 209 through hard rock. Goldberg went on to discuss the logging activities on Leg 205. These had allowed high resolution images showing the areas of high fracture concentration in the hole where the CORK and osmotic sampler have been installed. On Leg 206 there were spectacular logging results from an extensive program. In the basement sequence at c. 750 m depth a full suite of logs show details of the pillow lavas in a zone where core recovery was poor. Goldberg also showed excellent images of the pillow lavas recorded by the Schlumberger borehole televiewer. The only failure of equipment in Leg 206 was the German magnetometer tool that did not operate as expected. Leg 207 logging operations were successful including the critical black shale interval. Logging of this shale unit allowed the sequence and the thickness to be identified. These units proved difficult to core and recover so information from the logging will be significant.

Goldberg briefly discussed the legacy activities of the BRG noting that a continually updated series of technical data sheets and tool summaries were posted on the web site at LDEO. The data processing techniques are also posted here. An archive of the logging data for the Deep Sea Drilling Project (DSDP) is also partially available at the moment. The current logging activities and data transfer activities are also documented on this site. Recent additions include details of the deployment of third party tools. The database is now up to date through Leg 206. Goldberg showed statistics of access to the database site over the previous 4.5 years noting that activity had stabilized during the last 6 months but noted the overall 40% decrease when compared to FY02.

G. Update on JOIDES Panel Matters

Becker noted that although the JOIDES advisory panels were still in existence none had met since the last SCICOM meeting in August 2002. Becker asked the panel Chairs present if there were any matters concerning these panels that should be discussed. There were none.

H. Final Program Planning Group (PPG) Reports

Becker reviewed that there were five written PPG reports that had not yet been formally accepted as final. In the last SCICOM meeting in Ghent in 2002 it had been decided that SCICOM would form five subcommittees to recommend on formats in which they would like these five reports finalized and also to discuss any advisory matters concerning PPGs that could be considered useful in IODP. Becker stated that he would like motions or consensuses to support recommendations concerning PPGs discussed here by the relevant subcommittee chairs.

Becker had asked the five PPG subcommittee chairs to be prepared to give reports at this meeting as follows:

Architecture of Oceanic Lithosphere PPG - Bloomer reported that the PPG was convened in mid 1998 and had met twice. The PPG produced an interim final report that was presented to the Science Steering and Evaluation Panels (SSEPs). The SSEPs sent back a review with some minor requests. There is no record of further activities after this point. The draft PPG report is short but discusses important points, although it provides no details. The minutes from the first meeting are useful as they discuss some of the significant issues that ought to be addressed. Bloomer had constructed a report, included in the agenda book, and his recommendation was to take this report and enter it as the PPG report on record for use by subsequent groups.

Austin asked if Bloomer had sensed, in talking to the SSEPs Chairs, whether or not this had been a successful exercise. Bloomer replied that the PPG had gathered substantial material but that motivation within the PPG was lost during the following phase of email discussions. This made it difficult to produce a final report. Bloomer also thought that the SSEPs expected more, i.e. strategies of how the problems would be addressed once they had been identified. Allan, who had been an observer at meetings of this PPG, suggested that the target audience had been poorly defined. Moore, who had been a SSEPs Chair along with Tarduno at the time these PPGs were conceived, pointed out that they had not been requested by the SSEPs. SSEPs had been presented with them as a result of the reorganization of the advisory structure of ODP and Moore agreed with Allan's observations about the lack of clear definitions of the products and the mandates. If the exercise was to be repeated in IODP it should be under the charge of the SSEPs.

Climate and Tectonics PPG – Rea recounted that this PPG had met in October 1998 and a report was generated by the PPG Chair, Tom Crowley. This report received mixed reviews. Rea summarized the recommendations of the PPG and how these had been

subsequently implemented. Rea briefly discussed the proposals received on this topic and their relevance to the Long Range Plan. Finally he recommended that SCICOM accept his notes, together with a cover page and the minutes from the PPG meeting as the final report on record of this PPG.

Austin asked how Rea perceived the success rate of this PPG. Rea answered that it had been similar to that of the previous PPG as reported by Bloomer. Austin asked if Rea had liaised with the co-chairs of this PPG and if so whether they perceived this PPG experience to be a positive experience. Rea answered that he had not spoken to the co-chairs but that he himself agreed with Bloomer in that the PPG had suffered because of lack of effective procedural organization.

Deep Biosphere PPG - D'Hondt presented the executive summary of the subcommittee report for the Deep Biosphere PPG. This PPG was one of the first to be formed in 1997 and its Chair, John Parkes, had given an oral presentation to SCICOM in early 2000, although no written PPG report was ever submitted. D'Hondt had created the subcommittee report from the PPG's minutes for their first two meetings and from Tom Davies' notes for the third meeting, and also had incorporated a brief history of the science of the deep biosphere in ODP. D'Hondt made the following points in his executive summary:

- The deep biosphere initiative has done reasonably well in ODP and is a major emphasis in IODP Initial Science Plan.
- The aspect of the PPG mandate to advise on shipboard labs and procedures has been completed successfully.
- The PPG did not provide recommendations on Scientific Priorities, Drilling Strategies, Technological Needs, or Program Planning for the next phase of drilling.
- A number of microbiologists and biogeochemists have participated in ODP cruises.
- Deep biosphere objectives are now commonly included in IODP proposals.
- Consequently, we believe that deep biosphere studies would be best advanced in IODP by consistently placing individual scientists with appropriate knowledge and dedication to deep biosphere studies on iSAS and SAS panels.

D'Hondt commented that he did not see the immediate need for creation of another PPG on this topic.

A discussion ensued and Austin suggested that one problem was that there were not enough microbiological experts available to be able to staff and steer such a panel. Byrne commented that the community needed to be motivated to produce more microbiological proposals. Moore asked if the way ahead was perceived to be through microbiological research on legs or through more dedicated legs. D'Hondt thought that microbiology should be embedded in all legs if possible. Byrne thought that perhaps a microbiology PPG was in fact needed to stimulate new proposals but D'Hondt disagreed, adding that the previous PPG had created some bad will and the timing, now, before IODP integrated

fully would be premature. Moore suggested a working group to develop IODP biosphere proposals rather than a PPG. D'Hondt raised another issue in that Leg 201 could not have been accomplished if the sites had not already been drilled previously and the geochemistry known. The Leg 201 biosphere efforts were very labor intensive and there would not be the berths available on the ship to staff the full complement of geochemists and microbiologists to analyze completely new sites.

Gas Hydrates PPG - Fisher recounted the history of this PPG.
PPG organized in April 1998 with this 3-year mandate:
"*…develop a strong, long-range plan for drilling and sampling naturally occurring gas hydrates."*
The aims of the PPG were to:
- get more gas hydrate proposals into the system;
- provide guidance as to needed technical developments;
- develop description of a comprehensive gas hydrate program, beyond drilling on a single leg.

The PPG held a total of three meetings, two in 1998 and one in 1999. An initial report was prepared and submitted in October 1999 on deadline for consideration by SSEPs to assist with evaluation of proposals that fall; an oral report was made to SCICOM in February 2000. The PPG Chair submitted letter of resignation one week later, believing that responsibilities were fulfilled. A "*lightly edited*" version of the draft PPG report was published in JOIDES Journal in Summer/Fall 2000. The SSEP reviews of PPG report were forwarded to former PPG chair in 2001 (19 months after submission of the original report, 9 months post-publication). The former PPG chair and PPG members discussed the report and reviews by e-mail, replied to SSEP chairs that (a) PPG duties had been discharged, and (b) reconsideration of issues raised in review would require reconstitution of PPG, more meetings, etc. – exceeding the maximum three-year mandate.

Fisher then listed the contents of the existing sixteen-page PPG report. He followed this with a brief summary of some of the content of the SSEP reviews, as examples. Fisher recommended that SCICOM should consider the existing report as "final", as primary goals of the PPG have been achieved, several programs have been drilled successfully and other proposals are in the system. He also recommended that SCICOM view the PPG report in context - it was not intended to be a "white paper" on future research directions for an extended period. If this is needed, create a new PPG. Fisher then suggested that for IODP the organization of PPGs needed to be formalized more, i.e. put the above in the form of an informal "contract," signed by IODP-SPC chair(s) and by chair(s) of PPGs; distribute copies to members of all SAS panels and members of appropriate PPGs. This should include, for example, the numbers of meetings to be held and more specific indications of the required product. It would also be beneficial to assign a primary watchdog on SPC to attend all meetings, review document(s), and report back to SPC.

Shallow Water Systems PPG - Austin reported. The Co-Chairs of this PPG were Mountain and Quinn. In June/July 1997 the *JOIDES Resolution* drilled (Leg 174A) on the New Jersey Shelf to see if shallow water drilling could be achieved. It became clear

that it would be possible at some, but definitely not all, shallow water sites. The PPG met twice, at the end of 1998 and in September 1999. Two White Papers were produced with a spread-sheet of technical systems and Quinn had reported these findings of the PPG to the 1999 meeting of the SSEPs in Italy. It is not clear whether there was any formal review of this report by the SSEPs. In August 2000, Mountain and Quinn published an EOS article detailing the findings of the PPG, in addition to the two White Papers already produced. One White Paper examined passive margin transects for investigations into sea level change in addition to other scientific goals, and the other described the prospects of shallow water drilling in coral systems. In 2001 Quinn and Tudhope convened and subsequently published a workshop document on shallow water drilling of corals and carbonates. These three documents deal with science objectives and the technology involved in shallow water drilling. Austin recommended that these documents were a final product of the PPG in lieu of a more formal final report.

Becker then called for a general discussion on the subject of PPGs, stating that there were several issues that should be addressed, including: that the objectives of the PPGs seemed not to have been really made clear, that there wasn't a clear framework for evaluation of the PPG reports, and that the midstream changes of reporting requirements for the panels (from reporting directly to SCICOM to reporting to SSEPs) were not adequately accommodated. Mayer considered the exercise, apart from the Arctic PPG, as a failure and suggested the results were more like those expected of Detailed Planning Groups (DPGs). He stated that he thought the DPG system worked better, adding that possibly in IODP the detailed planning process may play the role of the PPGs. Fisher commented that he understood the rationale of the PPG was to provide additional expertise to the SSEPs that was not otherwise available. Mayer suggested that in the new structure, experts from the community could play that role. Fisher agreed that expertise could be requested from the community providing the timescale and the product were clearly defined and very focused. Austin raised the issue of conflict of interest between the panel experts and the proposal proponents, warning that a situation could arise where it would appear that the program would be supporting people to write proposals. Moore suggested that there may not be a need for PPGs in the future, but if there were then there would be a need to be more specific regarding the mandates etc. It was important not to discourage proposal submission. Kenter agreed with Moore. Rack suggested there be some sort of "road map" to facilitate implementation. Becker thought that the IODP Technical Advisory Panel should be responsible for technical implementation issues. Moore agreed.

Becker then asked if there were a consensus to accept the recommendations of the subcommittee chairs regarding the five outstanding PPG reports, together with a general recommendation to IODP of how to proceed in the future with respect to PPGs. A draft motion was proposed as follows:

Draft SCICOM Motion:
SCICOM receives documentation provided by the following PPGs:
- Architecture of Ocean Lithosphere
- Climate and Tectonics
- Deep Biosphere
- Gas Hydrates
- Shallow Water Systems

including reports, meeting minutes, publications, and white papers,
and notes contributions of these PPGs and products to numerous successes within ODP.

Fisher moved, Bloomer seconded, later tabled.

A lengthy discussion then ensued as to the wording and whether the statement should be a consensus or a motion. Austin recalled that SCICOM had discussed embedding a preface in a consensus that discussed how the committee viewed the role of PPGs in the program, and he stated that, if the chair deemed that the discussion recorded in the minutes would suffice as such a preface, then the motion proposed would be acceptable. Austin commented, however, that it might be better for iPC to get a more focused motion on clarifying terms of PPG utilization from SCICOM. Mayer said he thought there was to be a second motion outlining this point. Becker agreed and asked the subcommittee chairs to verify. The subcommittee chairs disagreed, stating that the issues had been very clear in one of the subcommittee reports, i.e. that of Fisher for the Gas Hydrates PPG. There was some discussion as to whether it was appropriate for SCICOM to make a motion recommending future action by iPC or SPC. Some thought that a consensus of opinion would be more fitting. Mayer was under the impression that there was a consensus about SCICOM reaction to the PPGs. Becker concurred that he too thought there was a consensus that SCICOM should recommend that PPGs in IODP be used sparingly and carefully, and be very focused. Becker suggested that rather than a motion there might be a consensus to this effect and asked for any objections. Austin stated that he thought it was important to link such a consensus to a motion, in that any consensus was part of the discussion that led to the motion. Mayer agreed and questioned Becker's previous statement because he thought it sounded too positive in terms of the consensus he had heard. Becker countered that he thought the subcommittees had reported that each of the PPGs had in some way been valuable in ODP. Austin thought that for posterity the issue was to define the type of group and how it had operated within ODP, and then to evaluate whether or not groups like this would be of value in IODP and if so, how they should function. Austin thought that a second motion was indicated. It was suggested that Fisher should format another motion. Becker pointed out that the motion currently on the floor had to be dealt with before another could be put forward. Referring to the motion on the floor, D'Hondt commented that not everything SCICOM received had been formally provided by the PPGs; materials received had included notes from individuals not necessarily in the groups and also minutes from the meetings. D'Hondt also thought an acknowledgement of receipt of all the PPG reports should be made. Austin commented that the contribution of PPGs to ongoing science production and planning both within ODP and in IODP should be included. Austin also thought that it should be acknowledged that the science of those reports would make the transition into the new program. This motion should be linked to a subsequent motion (that Fisher was about to

write) about the way in which those groups functioned in ODP and should function in the future. Pisias commented that there were some mistakes in the concept of PPGs but that overall the groups' activities had been helpful. Bloomer suggested that SCICOM acknowledge that the people who worked in the PPGs helped advance the science, although the groups did not always function in the manner that SCICOM expected and that the efforts of the people involved in the PPGs have helped advance the science. Pisias agreed.

To allow time to recast the SCICOM statement on PPG's, a motion was made to table the motion currently under discussion:

SCICOM Motion 1-03-3: That the current motion be tabled until it is rewritten.
Moore moved, Austin seconded, 13 in favor, 1 absent (Herzig).

Later, a potential consensus and revised motion were presented, and the wording of both was revised in further discussion. Becker then asked for and received confirmation that the consensus was indeed acceptable, and then asked for a vote on the proposed motion.

SCICOM Consensus 01-03-4:
SCICOM recommends that, within IODP, PPGs be used only when carefully justified. PPGs should be given clear and specific mandates, with definition of timelines, oversight, reporting and review responsibilities, and expected products.

SCICOM Motion 01-03-5:
SCICOM acknowledges documentation provided by the following PPGs and participants in their meetings:

- Architecture of Oceanic Lithosphere
- Climate and Tectonics
- Deep Biosphere
- Gas Hydrates
- Shallow Water Systems

including reports, meeting minutes, publications and white papers.
Although the PPG process did not function in all cases as originally conceived (for a variety of reasons) SCICOM recognizes that the efforts of PPG participants helped advance important science in the last phases of ODP.
Fisher moved, Austin seconded, 13 in favor, 1 absent (Herzig)

J. Leg Science Reports

Leg 201 - D'Hondt reported that the specific objectives of this leg were to investigate and understand microbes in different sub sea-floor environments. Seven sites were investigated, each one of which had been previously drilled by DSDP or by ODP. Three of these sites are open ocean sites in the Peru Basin and the equatorial Pacific. The other four sites are on the Peru margin, three being on the shelf at depths of between 100 – 150 m water depth. The final site is on the slope in 5 km water depth. D'Hondt pointed out

that all results at the moment are shipboard results although a large amount of data were currently being processed as part of the post-cruise onshore investigations. D'Hondt highlighted the main findings of the cruise to date as a) some intervals below the sea floor have a higher cell count than the overlying sea floor, (NB: the hypothesis that 30% of the global biomass lies below the sea floor) and, b) all the open ocean sites illustrated here have below average cell counts.

The only post cruise results D'Hondt showed were results from radio-tracer experiments onboard compared with previous data generated from box cores. These results showed that radio-tracer detection of sulfate reduction has now achieved a dramatically higher resolution than had ever been achieved before. D'Hondt also hinted at a great many other results which had been generated post-cruise but which were not ready to be publicly discussed. He summarized that active sulfate reduction and respiration of CO_2 are present at all of the seven sites at depth. Methane was generated at depth at all of the sites investigated and generation of ethane and propane was also found within the sediment columns. Another interesting result was that nitrogen and oxygen appeared to be bleeding up from below from an underlying aquifer. Basically the microbes are mining ancient iron and manganese deposits from below, for example, from Miocene sediments. A deep unexpected oxic community is being supplied. Finally these results show, by inference, what kinds of communities are present, i.e. the cruise has shown that the microbes do not just represent an assemblage of sulfate reducers with methanogens living beneath them but instead there are mixed assemblages of nitrate, manganese and iron reducers living in different parts of the column. D'Hondt concluded by praising the large amount of pioneer technical and logging work carried out before and during this cruise.

Mayer asked what D'Hondt would do differently the next time. D'Hondt replied that there was not much as the leg had been extremely well planned in advance. The only suggestion he thought possible was to sail more geochemists. He added that this leg would not have been possible if the sites had not previously been drilled and the geochemistry known beforehand. Farrell asked about the status is of the culturing experiments. D'Hondt answered that, of the more explicitly microbiological studies that have been completed, one interesting example was that thermophiles had been successfully recovered. This is interesting because all sites were cooler than 25 ºC. It leads to the theory that, although thermophiles normally get distributed throughout the sea floor, they are still there and revivable millions of years later. Other experiments are ongoing to recover microbes with enough RNA to show that they are active. To date it has been shown that 1% or less of the counted cells actually have enough responsive RNA, i.e. that these cells are active. Austin asked where the desirable sites for any future expeditions might be to augment those from Leg 201. D'Hondt expressed a desire to transect from the MOR into the mid-ocean gyre and also to explore the basement. Byrne enquired as to the reaction of the microbiology community to Leg 201 results and whether the results were already being presented. D'Hondt said that the results were being presented at various meetings and that their reception had been good. The community was particularly impressed by the rigorous contamination screening techniques developed by the DOE and used by ODP. Rack commented on the fact that Leg 201 had modified the core handling techniques onboard and asked if further

improvements were needed such as the relocation of the refrigeration plant. D'Hondt said that no further modifications were needed. Finally D'Hondt expressed thanks to the drilling personnel for allowing drilling on demand, adding that this latitude had made a considerable difference to the operations.

Leg 202 - Mix reported on Leg 202, which focused on Southeastern Pacific paleoceanography and paleoclimatology, an area where there have been few previous sampling expeditions. The simultaneous major experiments were operating on three timescales: the tectonic timescale, dealing with such issue as the Drake passage opening, Panama closure, Andean uplift; an orbital timescale, ice ages, and rhythmic characteristics; and, the millennial time scale, addressing the ODP initiative of high resolution time scales. The leg drilled sites over a very broad latitudinal range of more than 50 degrees enabling investigation of linkages between the low and high latitudes. A large depth range of sampling was achieved to facilitate study of subsurface circulation patterns and, in particular, the role of Antarctic intermediate water in the climate system. Previously this has been effectively unsampled. Biogeochemical processes were also a focus of study. The operational goals were typical for paleoceanography, i.e. complete recovery with no gaps, a lot of emphasis on the quality of the shipboard stratigraphy, especially to link the biostratigraphy between the low and high latitudes, potential for tuning time scales, magnetostratigraphy and radiometrics. The cruise track covered 5000 nautical miles of transect from Valparaiso to Balboa, drilling 11 sites and recovering over 7 km of core. One of the operational innovations was the extensive use of the Advanced Piston Core (APC) drill-over method. To achieve deeper penetration into the section 101 drill-overs were used. Mix gave credit to the drillers for their tremendous cooperation, noting that as a result some very long cores were recovered: three of the holes were over 300m penetration and six over 250 m. This greatly enhanced the scientific results as a direct result of the cooperation of the drillers. Prell asked when the normal APC recovery had stopped. Mix replied that it varied but typically at about half the Leg 202 drill-over recovery. Mix highlighted the range of environments sampled, everything down from sub polar environments in the transition zone between the sub tropical gyre and the eastern boundary current going north and the polar gyre where the currents head south up to the equatorial cold tongue, and the eastern Pacific warm pool. In terms of the subsurface water masses they sampled sites at all the strategic spots, Antarctic intermediate water, polar deep water and north Pacific water masses coming south.

Data collected by Leg 202 will be used in shore-based studies to test global and regional changes in climate, biota, and ocean chemistry on scales of centuries to millennia. Detailed dating methods will be used to place the new South Pacific records into a global framework. The combination of magnetic stratigraphies, recorded in unprecedented detail, with excellent biostratigraphies based on all major fossil groups has provided a unified chronological framework at sites that range from cool transitional, to warm tropical settings. Another kind of age control comes from small changes in Earth's orbit, which are revealed in rhythmic changes in sediment type. Again, complete recovery of long and well-preserved sediment sequences will provide unprecedented resolution of biotic and environmental changes. The new high-resolution logging tools used by ODP record the changes of Earth's orbit from the rhythmic changes in the characteristics of the

downhole sediment sequence and this logging data was found to correlate well with the other evidence yielded by the sediment cores.

Mix detailed some of the other operational innovations employed on this leg including the enhanced use of the multitrack sensor (MST) by slowing the process; predictive coring offsets to accommodate tidal effects on drilling depth estimations; logging and core-log integration; and, alternation of the magnetic and non-magnetic core barrels for improved paleomagnetics.

Leg 203 — Orcutt presented the scientific highlights of the successful drilling in the eastern equatorial Pacific by Leg 203. Drilling Hole 1243A met the primary objectives of Leg 203 by completing a cased and cemented legacy hole penetrating nearly 100 m of basement for the installation of broadband seismometers in a future observatory. This future observatory is planned to contain several types of seismometers and other instrumentation that will connect to the Internet through a satellite communications telemetry link. The equipment will include a multidisciplinary observatory-quality broadband three-component seismometer (0.001—5 Hz) as well as a high-frequency three-component seismometer (1—20 Hz) to ensure high-fidelity recording over the range of frequencies normally recorded by the terrestrial Global Seismic Network. The seismic system, as well as other instrumentation associated with the observatory, will be connected to a Dynamics of Earth and Ocean Systems (DEOS) mooring for both power and high-speed data telemetry to a land station and the Internet. Leg 203 is a multidisciplinary project that primarily represents the interests of the National Science Foundation s component of the international (DEOS) planning effort and the International Ocean Network (ION).

The location of Leg 203 Site 1243, in oceanic crust created by fast seafloor spreading, provided a rare opportunity to examine crustal genesis, evolution, and crust/mantle interaction for a seafloor-spreading end-member responsible for generating the majority of the oceanic lithosphere. In addition to the primary objective, i.e. to drill and case a re-entry hole, (Hole 1243A) as described above, Leg 203 also cored a second uncased hole (Hole 1243B) fitted with a freefall reentry funnel 600 m to the east of Hole 1243A. Hole 1243B is characterized by 110 m of sediment and a total penetration of 195 m. From this hole basalts were recovered from the upper oceanic crust in fast-spreading young lithosphere in the Pacific, and from sub-basement depths in excess of comparable drilling during most previous legs. Rotary coring alone was used in an effort to sample the sediment/basement interface as well as the uppermost fast-spreading lithosphere. The core samples from Hole 1243B are significant given the sparse catalogue of deep basement rocks as yet recovered from young Pacific seafloor.

An additional highlight from Hole 1243B is that paleomagnetic measurements indicate that the basaltic cores recovered, after the removal of the drilling-induced remagnetization, record a stable component of magnetization with both normal and possibly reversed inclinations. Thus it is thought that the lava sequence recovered at Site

1243 may have recorded a reversal sequence (normal-reversed-normal), but this hypotheses requires testing in subsequent shore-based investigations.

Orcutt concluded his presentation by reviewing activities associated with the Ocean Observatories Initiative and its linkages to ODP and the future IODP.

Leg 204 - Trehu presented the results of Leg 204 drilling of gas hydrates on Hydrate Ridge off the coast of Oregon. There were 3 other research vessels in the immediate area, the RVs *Sonne*, *Ewing* and *Atlantis*. The objectives of Leg 204 included testing of geological tools together with the examination of hydrate distribution and concentration, and extent of massive hydrate deposit within the sea floor. The aims were to identify and calibrate geologic fingerprints of past hydrate occurrences, calibrate geophysical estimates of hydrate concentration, determine physical properties of hydrates, the implications for slope stability and the interactions between hydrates and microbes. Trehu listed some statistics of the leg - 50 days on site, 50 days at sea, 45 holes at nine sites 3075m of core with 80% recovery on average, although less than that in the hydrate zone, 36 cores recovered under pressure, 9 helicopter visits, 85 m of hydrate core preserved. Some cores showed relatively thick hydrate horizons but typically the layers are about 1 cm thick in fine-grained sediments. The hydrate layers disappear very rapidly under normal surface pressure. Temperature anomalies, detected with the help of Infra Red cameras were associated with coarse-grained layers.

The drilling location was selected primarily for three reasons. First, in 1996 massive hydrate had been dredged from the sea floor, and second, the morphology of the subsurface structure provided a spatial proxy for the temporal evolution of the type of structure associated with hydrate accumulation. The third reason for choosing this location was the possibility of imaging the subsurface structure. The northern part of Hydrate Ridge which had been drilled previously is in a big incoherent zone. Previous data from Leg 146 includes of images the structures leading up to a vent. A 3-D high resolution seismic survey was therefore the basis for this leg.

Leg 204 was notable for the first cores recovered under pressure with the European HYACE system, a system which worked very well. Pressure core samplers (PCS) are the only direct method of measurement of how much methane is in the core. There were 3 PCS systems on board. It takes several days to degas them so there was a limit in how many of those measurements could be made. All sites were drilled within about a 10 km area, there was little transit between sites and sites were visited more than once. The operational approach targeted specific places where the LWD data suggested that there was a hydrate layer about 10m below sea floor. On integrating the InfraRed data there was an estimate of about 20% hydrate in the upper 30 m assuming that what was not recovered had the same as that recovered of methane and propane in the structure. At most sites there is a distinct offset in an increase in methane below the bottom simulating reflector (BSR). To conclude, the results from this cruise, the combination of the gas chloride content together with other data has led to a much better understanding of where the hydrate is, how it is distributed and how much is there.

Presentations of the Leg 204 initial results were to be given at the EGS-AGU-EUG meeting in Nice in early April.

Leg 205 - Villinger presented a summary of the results of Leg 205. The primary objective of this cruise was to install three modified CORKs (Circulation Obviation Retrofit Kits) also known as CORK-II's. Villinger introduced the background of the area as known from previous drilling on Leg 170. He then outlined the leg objectives, discussed the sites drilled and detailed the osmosamplers deployed within the CORK-II installations. The sites were located in the region of the Middle America Trench off Costa Rica and the holes were drilled in a very close transect from the trench upslope. Villinger showed a seismic cross section of the incoming plate, the sediment basin boundary, the decollement and the holes drilled during prior Leg 170 together with the holes drilled during Leg 205. The target is a non-accretionary prism, the identification of which is one of the major results from Leg 170. Also known from Leg 170 is that the crust that is subducted in this region is very cold, and the key question is what is removing heat from this crust? The data from Leg 170 indicate vigorous sea-water circulation within the upper oceanic crust. The objectives of Leg 205 were to investigate the igneous and alteration history of basement just before crust enters the subduction zone, and to investigate the three hydrological systems identified by Leg 170. To address the latter, Leg 205 installed long term observatories to monitor temperature and pressure and to sample fluids and gases in holes at key hydrological intervals. Villinger explained the CORK-II design, a modified CORK, and the concept of the osmosamplers. The key advantages of the osmotic fluid samplers are that they do not require batteries, rely on electronics, or have moving parts. These samplers are basically driven by the osmotic pressure difference through semi-permeable membranes that is set up between a super saturated salt solution and distilled water. The osmosamplers incorporate very long small-diameter sampling coils, through which the osmotic pumps can continuously draw in small volumes of fluids over a long period of time with good temporal resolution along the sampling coil. If the samples are then recovered, sectioned, and analyzed, they provide a geochemical signal with a temporal variation/resolution of about a week. These samplers were all set up during the Victoria port call and included sampling coils for both fluids and gases.

Villinger then described the three sites drilled. In the reference site, Site 1253, a sill was encountered and it was hoped to drill through the sill into the uppermost part of the basement and get good samples of permeable and true oceanic basement. The sill is composed of gabbro but below the sill were still more gabbros. The lower igneous unit was a coarse-grained gabbro which Leg 205 never got beyond and which was still present 600 mbsf. This prompted a debate amongst the shipboard scientists as to whether or not this was basement, a question that is still unresolved. A discussion ensued at this point in the meeting as to whether this unit described by Villinger could be an off axis flow, a slowly cooled massive flow, a fallen block or true basement.

Villinger continued with a summary of the successful logging operations of the leg and the successful installation of two CORK-II observatories. The installation of a third observatory in Hole 1254 was not possible because of adverse hole conditions. The

observatories were checked with DSV *Alvin* in November of 2002 and will be revisited by in 2004, when the fluid samplers will be recovered and new samplers will be installed. Villinger thanked the drilling crew and TSF personnel together with TAMU personnel, especially Tom Pettigrew.

K. How well have we done? – Input for EXCOM/PEC VI

Becker referred to the relevant document in the agenda book on how well ODP had done as a scientific program, a document which incorporates summaries that had been contributed by SCICOM members at his request following the June 2002 EXCOM meeting. Becker suggested that unless there were any changes to these documents, the whole report be forwarded to EXCOM for possible use by the PEC VI. Prell suggested some changes to the table provided by Bloomer. Becker asked that any subsequent changes from SCICOM members be emailed to the JOIDES Office, and they would then be included in the version forwarded to EXCOM for its final meeting in July 2003. Becker highlighted various sections of the document, particularly the preface he had written, before asking for a consensus that the document should be forwarded to EXCOM as SCICOM's personal input for PEC VI.

SCICOM Consensus 01-03-6: The compilation of SCICOM members' contributions assessing how well ODP has done as a scientific program will be forwarded to EXCOM for potential input to PEC VI.

Becker then asked for SCICOM nominations for possible members of the PEC VI. A list was compiled and recorded by the liaison from JOI, who are responsible for naming the committee.

L. ODP Legacy Holes – status report.

Becker reported briefly on the status of ODP legacy holes, showing a map indicating all ODP observatory sites. He showed the poster prepared by TAMU for the previous SCICOM meeting. At that meeting, Becker had discussed a plan to publish a magazine article version of the poster in the next issue of the JOIDES Journal, and he noted that this will probably appear in the coming issue.

M. Motions thanking panels and members.

Bloomer presented a tribute, prepared by Austin, Bloomer, Mayer and Rea, to all the people who had made the successes of the Ocean Drilling Program possible.

SCICOM Consensus 0**1-03-7:**

The Ocean Drilling Program, its predecessor the Deep Sea Drilling Project, and its

successor the Integrated Ocean Drilling Program, stand as probably the finest examples in science of how nations can cooperate to achieve a greater good than any could achieve alone. Since the first hole was drilled in January of 1985, the Ocean Drilling Program has been supported by the governments of over twenty nations. The Program has seen the end of the Cold War, the waxing and waning of geopolitical strife in all corners of the world, and innumerable changes of administrations. Through it all, the Program has continued to put a ship to sea six times a year with a contingent of scientists, students, crew, and staff who left politics and national identity on the beach. By the time the last hole is drilled in September of 2003, the Program will have drilled over 1700 holes, recovered over 215 km of core, and sailed over 2700 scientists from more than 40 nations.

The Ocean Drilling Program has provided scientific advances in solid Earth science, oceanography, paleoclimatology, and numerous other disciplines. The work of the Program has provided fundamentally new understandings of modern Earth processes and has provided the baseline against which much of geology interprets the past. The Program is recognized for the high quality of the science that it has produced over the past 18 years. That science has only been possible because of the efforts of a very large number of people. SCICOM wishes to acknowledge the efforts of those people and to thank them on behalf of the entire Earth science community.

The quality of the science that has been done owes much to the people who have written proposals, both those that have gone on to be drilled and those that have not. The exchange of ideas, the fertilization of one idea by another and the constant push of new ideas, approaches, and techniques have kept the Program vital. The greatest thanks need to go to the proponents who provided the raw material for the scientific ideas that guided the drilling.

Those myriad ideas for good science through drilling would never have come to fruition without the considerable efforts of the members of the scientific community who staffed the scientific advisory structure of the Program. The advisory panels reviewed ideas, nurtured them, questioned them, improved them, assembled site survey data for them, reviewed their safety and ultimately championed them for one of the very few available legs aboard *D/V JOIDES Resolution*. The advisory panels, in turn, only worked because there were people willing to give significant time and energy to leading and serving on those panels. SCICOM offers our heartfelt thanks to all of the hundreds of panelists and panel chairs who have staffed (in alphabetical order) ARP, BCOM, CEPAC, DBRP, DMP, EDRC, ESSEP, EXCOM, IHP, IOP, IPSC, ISSEP, LITHP, OHP, OPCOM, PANCH, PCOM, PPSP, TECP, TEDCOM, SCICOM, SCIMP, SGPP, SOHP, SMP, SOP, SSP, WPAC, DPGs, PPGs, WGs and PECs over the years. You all know who you are.

The best ideas in the world would not have done us any good unless someone managed the money, staffed the ship, arranged the travel, ordered the pipe, collected and sampled the core, built the instruments, curated the core, cooked the food, edited the publications, did the laundry, managed the computer network and on and on and on. The Program has been very fortunate to have had contractors, operators, and partners who were

professional in all senses of the word. SCICOM expresses our deep appreciation, on behalf of present and past participants in the Program, to all of the staff and the leadership (past and present) of the Joint Oceanographic Institutions, Inc. office; the Ocean Drilling Program at Texas A & M University; the Borehole Research Group at Lamont-Doherty, Leicester, Montpellier, Aachen, and Tokyo; the Site Survey Data Bank at Lamont-Doherty Earth Observatory; the core repositories at College Station, Scripps, Lamont-Doherty, and Bremen; and the ship, drilling, and catering crews of the SEDCO/BP 471; We thank Texas A&M University in particular for the commitment the university made to the program at its inception and the facilities they have provided at College Station that have served so many scientists so well.

We recognize that none of this would have happened without money. While the money comes ultimately from governments, we all know that our governments are actually, in the end, run by people. SCICOM wishes to express our thanks to those people who have worked so hard over the years to secure funding for the program and to the agencies represented on the ODP Council that have provided that funding, including United States National Science Foundation; Natural Sciences and Engineering Research Council and Natural Resources Canada; the Australian Department of Primary Industries and Energy; National Taiwan University; the Korean Institute for Geology, Mining, and Minerals; the European Science Foundation representing Belgium, Denmark, Finland, Greece (1986-1995), Iceland, Ireland (since 1999), Italy, the Netherlands, Norway, Portugal (since 1998), Spain, Sweden, Switzerland, and Turkey (1986-1998); the Federal Republic of Germany's Deutsche Forschungsgemeinschaft; Institut Francais de Recherche pour l'Exploitation de la Mer and Institute National des Sciences de l'Univers-Centre National de la Recherche Scientifique; Japan's Ocean Research Institute, the University of Tokyo and Ministry of Education, Culture, Sports, Science and Technology; the Marine High-Technology Bureau of the State Science and Technology Commission of the People's Republic of China; the Natural Environment Research Council of the United Kingdom; and, in 1991-1992, the Institute of Lithosphere of the Soviet Union.

Finally, SCICOM wishes to thank those individuals, from many nations, who have worked so hard to see that there is a successor to the Ocean Drilling Program. We wish our colleagues in the Integrated Ocean Drilling Program planning structure, and the next generation of marine scientists, the same good fortune we have had to participate in one of the great endeavors of modern science and to experience the joy of discovery afforded by the ability to sample and monitor the ocean floor.

Presented by Jamie Austin, Sherman Bloomer, Larry Mayer, Dave Rea

Prior to adjournment, four other consensus statements were agreed upon:

SCICOM Consensus: 1-03-8 SCICOM wishes to thank Keir Becker for his leadership of SCICOM and the JOIDES Office in their last incarnations. Keir's thoughtful, thorough, and calm approach has been invaluable to the Program in the complex transition from one program to another. We've all been fortunate to work with him.

There once was a man from Miami
Whose leadership skills were uncanny
He loved CORKs oh so fine,
In boreholes and wine
And made SCICOM work like a family.

Presented by Fisher and Bloomer

SCICOM Consensus: 01-03-9: Little that happens on the ODP stage would happen without those working hard behind the scenes; and given that these critical contributions to the success of our program are rarely recognized, SCICOM offers a consensus expressing its profound thanks to the staff of the JOIDES Office this one in Miami and all of its predecessors.

Presented by Rea

SCICOM Consensus 01-03-10: SCICOM sends Paul Dauphin into retirement reluctantly, but with its heartfelt thanks for a job well done. He loves the scientific ocean drilling community and has worked tirelessly for many years to assure its success. Catch us some fish in that lake of yours, Paul, but be sure to throw them back.

Presented by Austin

SCICOM Consensus 01-03-11: SCICOM thanks Jamie Austin, Nancy Hard, Kathy Ellins and the Institute for Geophysics of the University of Texas for hosting its historical final meeting so graciously in the heart of Texas.

Presented by Becker

SCICOM Motion 01-03-12: SCICOM adjourns its final meeting.

Austin moved, Mayer seconded, 13 in favor, 1 absent (Herzig).