DRAFT Report of the JOIDES Scientific Measurements Panel

La Grande Motte, France

June 18-20, 2001

Summary of SCIMP Recommendations to OPCOM/SCICOM
The following twelve recommendations resulting from the June, 2001 SCIMP meeting in La Grande Motte, France are forwarded to OPCOM/SCICOM for comment and approval. All motions were passed unanimously, 12-0.

SCIMP Recommendation 01-1-1
To facilitate improved communication and synergistic development of future ocean drilling related technology, SCIMP recommends that JOI and JOIDES explore the possibility of scheduling joint meetings between TEDCOM and SCIMP during the remainder of the existing ocean drilling program (e.g., analogous to the current SSEPs).

SCIMP Recommendation 01-1-2
SCIMP recommends to IPSC and iPC that in the future IODP, SCIMP and TEDCOM meet jointly in the manner of the current SSEPs.

SCIMP Recommendation 01-1-3
SCIMP recommends to SCICOM that appropriate prioritized time (e.g., 1-2 days) be set aside in each leg for tool development. These engineering objectives would have priority that is equal to science objectives. The engineering time would be forfeited in the absence of compelling, mature engineering proposal(s). Where possible, engineering field trials should be tied to science objective of the leg.

SCIMP Recommendation 01-1-4
SCIMP recommends to SCICOM that a workshop be convened to define the characteristics and requirements of a hard rock core description methodology. The implementation of the GEOTEK line scan camera provides a digital image that may serve as the foundation of a core's description. The workshop should look forward to the IODP.

SCIMP Recommendation 01-1-5
After evaluating the MGT progress, test results, and proponent's documentation SCIMP certifies this tool with the understanding that the proponent will provide the logging operator with the following: a short tool description with performance specifications (temperature, pressure and other operational limitations); and a full description of the algorithms for data processing and eventual corresponding source code. This and other information can be added to the logging manual and logging operator web site documentation for scientist's use. SCIMP endorses its use on any leg where it can contribute to the scientific objectives.

SCIMP Recommendation 01-1-6
The SCIMP core-log-seismic integration report documented the need for routine acquisition of check shot data. SCIMP therefore enthusiastically endorses the LDEO proposal to test a triple combo tool string with check shot capability that allows such routine acquisition with minimal cost of time.

SCIMP Recommendation 01-1-7
In response to questions about archiving supplementary shipboard data in Microsoft Excel files, SCIMP endorses the policy that leg scientific parties decide which supplementary data

tables are to be archived. These scientific parties will be responsible for converting the data to ASCII format, and will also be responsible for proofing these data at the IR post-cruise meeting.

SCIMP Recommendation 01-1-8
SCIMP recognizes the value of post-cruise research results as an important legacy of ODP and encourages all scientists to provide an electronic copy of any ODP-related publication as well as a digital copy of any data to ODP/TAMU. In addition, SCIMP recommends that ODP/TAMU establish an accounting and tracking procedure for this information and ensure that the digital data and the appropriate reference to methods, standards, and other metadata be provided to the ODP data librarian.

SCIMP Recommendation 01-1-9
SCIMP endorses the concept of using ^{3}H, ^{14}C, and ^{35}S for microbiology in an isolation van on the JOIDES Resolution. While noting that significant progress has been made towards this, Panel requires that the following issues be addressed prior to implementation.
a) Require scientists to submit to ODP/TAMU detailed experimental protocols specific for use on the JOIDES Resolution and proof of certification from their home institution for radioisotope use.
b) Establish Standard Operating Procedures for all radioisotopes to minimize the potential for contamination by a) requiring users to wear protective clothing while in the isolation van (glasses, coveralls, separate shoes) and b) separate person(s) ("runners") to deliver samples to the isolation van.
c) Establish policies that ensure that scientists-users assume responsibility for any clean-up costs.

SCIMP Recommendation 01-1-10
SCIMP thanks Bernard Celerier for his efforts in support of this meeting. In all aspects, it has been most successful, thanks to his Gallic hospitality!

SCIMP Recommendation 01-1-11
SCIMP thanks departing members Joe Ortiz, Bernard Celerier, and Geoff Wheat for their generous, dynamic, and creative efforts in support of SCIMP and ODP. They will be missed!

SCIMP Recommendation 01-1-12
SCIMP publicly thanks Tom Janecek for his impressive contributions that improved the scientific capabilities and operations of ODP. His leadership, expertise, and enthusiasm during his tenure as Chair of SCIMP brought about many positive changes to ODP in response to nearly 100 recommendations to OPCOM. As a result of ODP implementing the vast number of these recommendations, our Panel's expectations on impacting the Program have risen. Tom's legacy is a strong, well-functioning panel that will continue to improve ODP and impact the future of scientific ocean drilling.

Scientific Measurements Panel Participant List

SCIMP Panel Members

Jamie Allan	Co-Chair (US, Appalachian State University)
Bernard Celerier	(France, Universite de Montpellier II-CNRS)
David Divins	(US, NGDC
Mike Fuller	(US, University of Hawaii)
Eiichi Kikawa	Co-Chair (Japan, JAMSTEC)
Ken MacLeod	(US, University of Missouri)
Philip Meyers	(US, University of Michigan)
Peter Michael	(US, University of Tulsa)
Joe Ortiz	(US, Lamont-Doherty Earth Observatory)
David Smith	(US, University of Rhode Island)
Geoff Wheat	(US, W.Coast & Polar Reg Undersea Res Ctr)
Leonardo Sagnotti	(ECOD, Istituto Nazionale di Geofisica e Vulcanologia)

Alternate Attending Member

John Roberts	(UK, Geotek, Ltd.)

Liaisons

Gerry Iturrino	(ODP-LDEO)
Brad Julson	(ODP-TAMU)
Frank Rack	(JOI)
Carl Richter	(ODP-TAMU)
Elspeth Urquhart	(JOIDES)

Regrets:

Keir Becker (regrets)	(JOIDES)
Paul Dauphin (regrets)	(NSF)
Christian Buecker (regrets)	(Germany, GGA)
Dae Choul Kim (regrets)	(PACRIM, Pukyong National University)
Mike Lovell (regrets)	(UK, Leicester University)
Carlos Pirmez (regrets)	(US, ExxonMobil Upstream Research Co)

NOTE: This report of the meeting is grouped primarily by agenda items and is not always in chronological order of discussion.

A) Introduction

The meeting started on Monday, June 18, 2001 at 9:00 AM and ended on Wednesday, June 20, at 12:00 PM.

The Co-Chairs welcomed the panel to the meeting, and gave a special welcome to new member Leonardo Sagnotti and to the ODP/TAMU Supervisor of Technical Support, Brad Julson. John Roberts attended as the UK alternate for Mike Lovell, and Elspeth Urquhart attended in place of Keir Becker from the JOIDES office.

Regrets were received from Keir Becker, Paul Dauphin, Christian Buecker, Dae Choul Kim, Mike Lovell and Carlos Pirmez.

Bernard Celerier, the meeting host, explained logistical arrangements for the meeting.

Panel was asked for approval of the 12/00 Minutes, and they were approved unanimously without discussion.

The Co-Chairs presented the Agenda and asked if there were any additional items that needed to be considered by Panel. A request was made to add discussion of SCIMP membership.

B) Liaison Reports

1) Science Operator (ODP/TAMU)

Please see the ODP/TAMU operator's report (Appendix 01-1-1). Carl Richter gave an additional report on recent operations from ODP Leg 196 at Nankai, detailing the successful setting of an Advanced CORK and the unfortunate loss of two drillstrings during operations. One of the losses occurred during drillstring recovery after setting of the Advanced CORK, leaving drillstring in the entire length of the cased hole. The significant currents and the working of the drillstring during Advanced CORK instrument disengagement may have played parts in these failures; the ship's drillstring was inspected only 15 months ago. The implications for leg objectives were not fully clear at the meeting time.

JOI Update:

Frank Rack's extensive report focused initially on the many personnel changes in the JOI office. These include: Steve Bohlen being named as the new JOI President in November, 2000; a new Director of JOI, to arrive in September, 2001 (since publicly named as Dan Weill, formerly of NSF), two new interns (Mican Nicolo and Christina Riesselman), and a new science writer (Kasey White). Overall, 80% of the staff at JOI are new, hired in the last year.

Frank then gave an overview of changes that have occurred in Ocean Sciences Division at NSF. Don Heinrichs has kindly come out of retirement to serve as both the Acting Division Director and the Marine Geosciences Section Head, positions for which searches are underway. Responsibility for ODP management at NSF lies within the newly created Marine Geosciences Section. Brad Clement has replaced Jamie Allan as Associate Program Director (rotator position) at NSF/ODP, arriving this past May.

Frank also gave a brief rundown of the NSF-managed ODP budget, noting that there was $46.1 M in commingled operational funds authorized for the current fiscal year. The USSSP has a budget of about $6 M and NSF Science Support for U.S. ODP activities provides about an additional $9 M. Although the ODP operating budget is flat-funded, NSF has added $400K to the 2001 budget to help offset increased fuel costs. For FY2002, there is a $46.1 M budget target, and NSF will add funds if fuel costs are higher than $250 a metric ton.

While discussing planning for the new IODP, Frank noted that the interim Science Advisory Structure (iSAS) Office has started. The iSAS Office, housed at JAMSTEC, will function until the official establishment of IODP on October 1, 2003, and will support the operations of the iSAS panels, especially the interim Planning Committee (iPC). Minoru Yamakawa will lead the iSAS office, with Nobuhisa Eguchi and Jeff Schuffert functioning as Science Coordinators. He also stated that Ted Moore and Hajimu (Jimmy) Kinoshita are the nominees to chair the iPC. The interim panels will be formed after the iPC is staffed.

Frank continued with a discussion of the leg 182-194 Co-chief meeting hosted by JOI in April, 2001. He then discussed ship-scheduling changes, and followed with an update of ODP borehole ION support activities and issues. The 4th ION installation has been completed. These systems are currently powered by batteries or cables, with a system lifespan that may span from 5 years to decades.

Frank also gave updates on the Leg 195 CORK installation on South Chamorro seamount, and then discussed Arctic drilling challenges defined by the Arctic PPG, such as may occur by drilling on the Lomonosov Ridge. Multi-icebreaking ship efforts seem to be the most viable scenario that uses a drilling platform, and may make use of a Russian nuclear icebreaker, the Swedish icebreaker ODEN, or other vessels such as the US ship Healey or the Canadian ship Terry Fox. The cost is on the order of $6-8 M. The PPG plan needs to be evaluated to see if drilling can take place prior to IODP. The Arctic DPG is continuing to evaluate these drilling plans.

Frank then continued with a discussion of changes to the ODP Data Sample Acknowledgement statement requiring the use of specific keywords in publications, and development of a new AGI GEOREF database focusing on ODPDSDP publications. Frank finished his report by discussing ODP legacy and closeout activities. A key issue is to keep JANUS running through 2004, with a transfer of this database to IODP and the delivery of flat-field ASCII JANUS data files to the NGDC. Frank also noted that the ODP core repositories: can hold about 3.5 more years of coring, so they have about 1 year of buffer core capacity storage for IODP.

JOIDES Report:
Elspeth Urquhart reported on the move of the JOIDES office the University of Miami, with the move finalized this January. She is the International Liaison for this office, Aleksandra Janik is the scientific coordinator, and Henrike Groschel is the new designer of the JOIDES Journal, which will be published on the World Wide Web. Elspeth noted that she sailed on Leg 173 as a radiolarian specialist. The Co-Chairs urged her to jump in and lend her expertise to the Panel whenever possible.

BRG Report (ODP/LDEO):
Please see the Borehole Research Group's report (Appendix 01-1-2). Gerry Iturrino reported that the new version of the BRG Logging Manual is now available. He also gave a summary of logging challenges on recent legs. Highlights are as follows:

Leg 193: There were significant challenges in coring and logging tough volcanic rock. The scientific party successfully deployed the logging-while-drilling (LWD) Core Barrel Temperature and Resistivity at the Bit (RAB) tools for the first time, demonstrating that the borehole temperature was safe for tool deployment (saw borehole temperatures below 40 degrees C in borehole because of the pumping of drilling fluids). In contrast, the borehole fluids heated up to 300 degrees C plus after circulation stopped during logging (tool operating temperatures range from150 to 260 degrees C). Use of the hammer-in casing allowed the holes to be cased, which enabled the logging to occur.

Gamma ray and resistivity LWD data are also shown in the BRG report (Appendix 01-1-2). This data was used as a supplement to the core to identify stratigraphic units and subunits. Comparing the LWD data to the wireline logging data showed good correlation, but better coverage with the LWD data. Resistivity at bit data is very impressive- it shows 360-degree coverage of the borehole, as compared to only 20% of the borehole covered by the FMS. The RAB data shows non-planar features much better, even though at lower resolution; this coverage is important for structural studies. Panel discussion, about how ODP needs to have full borehole resistivity coverage for structural studies, lead to a potential Action Item that the ODP should investigate the possibility of attaching several FMS units together to provide fuller resistivity coverage of the borehole. Upon revisiting the issue later in the meeting, it was clear that this idea was not practical.

Leg 194: First IESX test and MGT tool deployment
Leg 195: Used conventional logging
Leg 196: Second IESX test and LWD

Gerry also discussed ODP Legacy plans for the BRG, which included the compilation of paper and digital drawings of all BRG tools. A 2 page leaflet will be made for each tool; showing examples of use and data.

C) Panel/PPG/Workshop Reports

OPCOM Report
Frank Rack gave a brief report of OPCOM highlights. These are:
1) OPCOM forwarded SCIMP 00-3-8 (recommendation that the Micropaleontology Reference Centers should be continued in the next program) to IPSC for action
2) SCIMP 00-3-3 (automated titration system)was forwarded by OPCOM to SCICOM and subsequently endorsed by them. Acquisition and deployment is currently on hold because of lack of program funds.

3) SCIMP 00-3-9 (seismic core log integration capability) was forwarded by OPCOM to SCICOM, which endorsed all aspects subject to available funds; these all look to go into the FY02 program plan.

Frank also discussed PPG and DPG issues and reports, reporting that the planning groups have formed a consensus that Lomonosov Ridge drilling in the Arctic is technically feasible. The DPG report will be submitted to OPCOM in August. JOI will need to evaluate what resources are required to support Arctic drilling when the Arctic DPG report arrives.

TEDCOM Report

Jamie Allan reported on issues discussed at the recent TEDCOM meeting hosted by Fugro in Houston. A consistent impression during his attendance was that virtually every issue discussed was of interest to SCIMP, and that the two groups should meet together consistently in this and the future program. This lead to much discussion, with the following statement and motions crafted:

Results from scientific Ocean Drilling have benefited greatly from recent technological advances in drilling, coring, and logging methods (e.g. hammer drill, ADCB, MWD, LWD). The need for continued advancement in these areas is likely to increase in the future due to the enhanced scientific demands of the IODP mission. We suggest that the need for continued science-driven, technical development can in part be accomplished by future joint meetings of TEDCOM and SCIMP, using a model similar to that successfully employed by the SSEPs. If successful, this approach could prove a valuable strategy for use in the IODP advisory structure. The likely advantage of this approach is better communication between panels by placing development in better scientific context and vice versa. This step may also be cost effective and could simplify planning by having two coordinated meetings per year rather than four separate ones.

SCIMP Recommendation 01-1-1

To facilitate improved communication and synergistic development of future ocean drilling related technology, SCIMP recommends that JOI and JOIDES explore the possibility of scheduling joint meetings between TEDCOM and SCIMP during the remainder of the existing ocean drilling program (e.g., analogous to the current SSEPs).

SCIMP Recommendation 01-1-2

SCIMP recommends to IPSC and iPC that in the future IODP, SCIMP and TEDCOM meet jointly in the manner of the current SSEPs.

Highlights of the rest of Jamie's report included:
1) High-friction seals have been installed back on the passive heave compensator; TEDCOM is concerned that this will compromise the efficiency of the active heave compensation system, and noted that large (to 5000 pounds) weight on bit fluctuation still exists.
2) The Hammer Drilling System (HDS) and Advanced Diamond Core Barrel (ADCB) apparently saved Leg 193 (Manus Basin) science, by allowing core recovery where conventional drilling technology would have or did fail. TEDCOM was concerned that drilling fluid pump pressures used were far higher than optimal. It is important to note that a

principle architect of the ADCB system, ODP engineer Leon Holloway, left to work for Conoco July 1.
3) The Davis-Villinger Temperature Probe- Pressure (DVTP-P) development looks promising but there are corrosion problems.
4) The HYACE deployment on Leg 194 showed it to be a developmental instrument, with mixed operational success. This tool was discussed in more detail in John Robert's report (see below).
5) The Borehole Research Group reported on the requested development (FY 2002 budget) of a Drilling Measurement System (DMS), an issue of great interest to the SCIMP. A retrievable core barrel memory module is to be coupled to a drilling sensor sub using an inductive modem, allowing coring data to be easily recovered after each coring run.
6) Presentations were given by Fugro of its impressive percussive coring technology, as well as new high-resolution, high-frequency 3-D seismic systems that could prove both cost-effective and useful in supporting future IODP drilling.
7) TEDCOM expressed frustration with the apparent lack of priority in the program for timely ship time needed for engineering and tool development, viewed as crucial for both ODP and IODP. Specific mention was made of the need for PCS testing on Leg 201 in preparation for use on Leg 204 (a similar request has been made regarding the testing of HYACE/HYACINTH tools), as well as highlighting how earlier testing of the ADCB could have improved crew familiarity and refined operational procedures. SCIMP further discussed these issues, supporting TEDCOM's major points and leading to the following recommendation:

SCIMP Recommendation 01-1-3
SCIMP recommends to SCICOM that appropriate prioritized time (e.g., 1-2 days) be set aside in each leg for tool development. These engineering objectives would have priority that is equal to science objectives. The engineering time would be forfeited in the absence of compelling, mature engineering proposal(s). Where possible, engineering field trials should be tied to science objective of the leg.

D) Update of Previous Meeting Recommendations

Recommendation 00-3-1 Handheld Digital Camera Purchase
Given in TAMU report. Each image tagged with core data, files sorted as to hole-leg, and metadata are given in an MS Excel spreadsheet. Digital close-ups are reshot for publication. SCIMP commends Science Operator for implementing this.

Recommendation 00-3-2 Hard Rock Core (and Applecore) Description Protocols
See later discussion in Update of Previous Meeting Action Items regarding core description.

Recommendation 00-3-3 Automated Titration System
On FY02 Program Plan for prioritization.

Recommendation 00-3-4 Personal Computer Policy
See Science Operator Report- Done

Recommendation 00-3-5 Computer Hardware Upgrades
See TAMU report- no longer upgrading 1/3 of computers yearly.

Recommendation 00-3-6 E-mail Charges
See Science Operator Report- Done

Recommendation 00-3-7 Ephemeral Property Measurement Protocols
See Science Operator report- Panel agrees that if leg science parties need samples before degradation takes place, they should take samples immediately, freeze the samples, or keep cores unsplit and stored in N2. Panel was appraised that an unsplit set of cores from Site 1202, Leg 195 had been left on ship to study degradation, and that routine magnetic measurements to monitor degradation already show a loss of 10% of the magnetic signal strength.

Recommendation 00-3-8 MRC Maintenance in IODP
Has been forwarded to iSCIMP for consideration

E) Update of Previous Meeting Action Items

Core Description
a) Core description SCIMP LWG members (Peter Michael and Jamie Allan) will confer with Jay Miller (ODP-TAMU) and other LWG members (e.g., Paleo) to forge a plan and protocol for acquiring, recording, and labeling all types of digital images.

DISCUSSION: Jamie Allan and Frank Rack reported on a meeting they had on these issues with John Beck, numerous Staff Scientists, and Tom Davies at TAMU in early June. There is no policy in place regarding acquisition of digital photomicrographs. The TAMU representatives agreed to present us with a draft policy for digital images that requires tagging of each photo with core data, setting of minimum resolution limits, and limiting of archive images to those that appear in the volume.

TAMU further reported to Jamie and Frank that the Kodak digital camera, set up on a track for close-ups, worked well on Legs 194 and 195 and will be replaced by the Geotek system on Leg 198. The GEOTEK system images 4 sections at a time, with a 5 minutes per section scan time. TAMU is not sure if the digital output will be in TIFF or BMP file format. The system will be set up at TAMU for training and testing first,. Compression schemes for these images are still under discussion. TAMU wants to explore use of the LizardTech “Mr. Sid” compression scheme, allowing 50 mbyte/section images to compress to about 3% of their original size, thereby allowing scientists to take compressed images off ship. Dave Becker (not present at the meeting) strongly feels the need for an image management system for these Geotek images, especially in light of significant metadata header tagging issues. His project plan, provided to the SCIMP, calls for a four-phase project plan regarding data collection, reduction, storage, and retrieval. SCIMP was uncertain whether metadata issues beyond that of header tagging for these images were being considered, and wishes to know the total memory storage requirements that are being envisioned for this shipboard data. SCIMP was also anxious to learn of unresolved issues regarding shipboard image retrieval.

***ACTION ITEM**: TAMU and SCIMP watchdog Dave Divins to provide update on additional metadata tagging planned for core digital images.*

***ACTION ITEM**: ODP-TAMU explores options for developing a standard means of displaying digital core images analogous to the existing analog core photos.*

***ACTION ITEM**: Digital Photomicrographic Image Policy*
TAMU is asked to provide a comprehensive Digital Photomicrographic Policy for shipboard acquisition and archiving. This policy should cover: 1) Permanent tagging of the images with standard ODP core sample information (e.g. 127-794C-52R1, 57-59 cm) and a scale bar; 2) standard (or minimum) image resolution and pixel depth; 3) standard image acquisition routine (setting up calibrated image acquisition protocols at a given bulb voltage, such as for black and white reflected images or for color transmitted light images), and 4) archive policy, which SCIMP recognizes could limit archive images to those appearing in the Initial Reports volume.

b) Core description LWG members (both SCIMP and ODP) acquire a copy of the core description program utilized by the Hawaii Drilling Project and evaluate its utility for potential modification and use onboard the JOIDES Resolution.

DISCUSSION: Jamie Allan provided a discussion of his experience testing the program at TAMU in early June. As we saw from Roy Wilken's presentation at our last meeting, the Hawaiian Core Description system is written in MS Access. Jamie's impressions of the program was that it was great for describing basalt cores form the Hawaiian Drilling Project, and serves as a good model for ODP development of a lava core description program. Nevertheless, too many modifications are required for ODP to adapt this program for ODP use. Jamie estimated that a least a week's worth of time would be required for a good MS Access programmer and a staff scientist to develop front end a working front end, and he didn't know what else would be required for a JANUS uplink. As only 2 legs are likely going to obtain basalt core in the remainder of ODP (200 H2O and 205 ION), with basalt core acquisition secondary objective, he didn't recommend development (IODP is another matter).

Panel accepted this advice, and further discussion centered around that although a straightforward program with pull-down menus could be written for describing basalt cores, it likely couldn't be done for describing coarse-grained hard rock, such as gabbro. Panel was very mindful that the images that the new Geotek core scanner could provide as a foundation for core description. Panel also agreed that it (and likely iSCIMP as well) did not have broad enough expertise to take on the project of defining what is needed in a comprehensive suite of programs for describing hard rock core. Instead, Panel members felt that a broad workshop to define the issues was needed, with this workshop funded externally to allow broad community participation and input.

SCIMP Recommendation 01-1-4
SCIMP recommends to SCICOM that a workshop be convened to define the characteristics and requirements of a hard rock core description methodology. The implementation of the

GEOTEK line scan camera provides a digital image that may serve as the foundation of a core's description. The workshop should look forward to the IODP.

Chemistry

c) Phil Meyers to investigate the issues associated with the request for new extraction equipment of organic analyses and report back to the panel at the June 2001 meeting.

DISCUSSION: There are scientific and practical question regarding the need for this equipment, to make alkene measurements for paleotemperature studies or very heavy hydrocarbons; Phil doesn't think there is scientific justification to encourage people to make these analyses currently on the JR, but it is a different matter for the iODP with different needs. He doesn't recommend any course of action for the current program, but believes that iSCIMP should look at it. Panel accepted his advice.

d) Brad Julson to report back to panel about x-ray expenditures.

DISCUSSION: TAMU reported that these funds were used for ICP expenditures, as well as to pay for unbudgeted but needed items.

e) Physical Property and Chemistry LWG members to identify a systematic means to collect resistivity measurements (Formation Factor) on board the JR (including equipment and data collection protocols) (see Mike Lovell's report and Peter Blum's letter in the appendices).

DISCUSSION: Geoff Wheat made the case that core sample measurements are straightforward, and that Mike Mottl's equipment should be put on board. Several panel members, from previous experience, disagreed that novices using probe systems could easily and reliably measure resistivity. Discussion followed regarding TAMU's earlier purchase of a purpose-built sediment resistivity system, and the difficulties of setting up measurement protocols. Panel therefore did not feel it could recommend purchase of one of these systems. Instead Panel believed that the modest cost allowed investigators familiar with individual systems to bring their own system on board, and encouraged the Science Operator to support such investigator-operated systems. At the end of the discussion, Panel was very excited to learn that Geotek is developing an inductive, whole-core resistivity system.

***ACTION ITEM**: Geoff Wheat to investigate whether Geotek inductive resistivity system could possibly be grafted onto the current MST, allowing resistivity measurements to be routinely made. He will work closely with TAMU to determine if it should and could be deployed for Leg 201, and will report by e-mail before July 10, so as to allow Panel to consider making a Motion for its purchase and deployment.*

Downhole Tools

f) SCIMP and ODP-TAMU Downhole Laboratory Working Teams to monitor DVTP tool status to ensure the tool is ready for deployment on Leg 195.

DISCUSSION: This tool was indeed used on Leg 195.

g) SCIMP and ODP-TAMU Lab Working Team members to evaluate need for the MGT throughout remainder of program and determine if recommendations should be made to move the tool toward certified status (see Dave Goldber's request for MGT certification).

DISCUSSION: Panel was supportive of this request, although it recognized that there is a need to better document data processing (algorithms and source code) and performance specifications- (T, P limits, etc.) for the tool. It is a proven tool and should be certified for ODP use, provided that the above is provided, such as on the web.

SCIMP Recommendation 01-1-5
After evaluating the MGT progress, test results, and proponent's documentation SCIMP certifies this tool with the understanding that the proponent will provide the logging operator with the following: a short tool description with performance specifications (temperature, pressure and other operational limitations); and a full description of the algorithms for data processing and eventual corresponding source code. This and other information can be added to the logging manual and logging operator web site documentation for scientist's use. SCIMP endorses its use on any leg where it can contribute to the scientific objectives.

h) SCIMP Downhole Lab Working Team members to evaluate need for a high-resolution magnetic susceptibility tool throughout remainder of program and provide the panel with enough information to put forth a recommendation, if necessary, at its next meeting.

DISCUSSION: Gerry Iturrino gave a list of legs that could benefit from having a higher resolution tool. No action taken, tabled until further communication from possible proponents is made.

Computers/Networks/Software/JANUS
i) ODP-TAMU to provide short manual for common email problems.

DISCUSSION: GroupWise E-mail ship problems have primarily been solved, and TAMU has developed a user's manual.

j) ODP-TAMU Information Services to supply SCIMP with a review of NetWare 5.1 as soon as possible.

DISCUSSION: Now on ship, as outlined in TAMU report.

k) Jamie Allan to begin investigation of the extent of changes that occur in data sets from the ship to the initial post-cruise meeting to the final publication of data on the CD ROMs.

DISCUSSION: Jamie Allan reported on meetings with Susan Freeman and Paula Clark at TAMU in early June regarding JANUS and database issues. Corrections to JANUS are now made at post-cruise meeting, such that raw data published in the IR are now identical to those in the JANUS database. The key data issue regards "value-added" MST data, which has been corrected by shipboard scientists for core biscuiting, and gas voids that get moved by core splitting. Therefore, this value added data, the MST data typically used in leg and post-leg

science, cannot be reproduced from the raw data stored in JANUS and from core photographs, as the core photographs no longer show the accurate positioning of voids and biscuiting. Should this “value added” MST data be added to the JANUS database?

Panel agreed that this issue needed further examination, but felt that any recommendation regarding adding "value-added" MST data to the JANUS workload needed to be done in the context of understanding the current TAMU JANUS workload, This issue will be considered in greater detail next meeting.

***ACTION ITEM**: TAMU to provide an update on prioritized JANUS work at next meeting. This will provide a context for consideration of adding value-added MST data (defined as processed MST published in the IR volume) to the JANUS database, or else adding flags as to bad data.*

Curation

l) SCIMP curatorial, micropaleontological, and chemistry LWT members to poll the community and determine extent of geriatric studies on core degradation.

DISCUSSION: Problem is not as severe as first thought. A common-sense strategy should be to sample as soon as possible. SCIMP does not endorse taking samples for sampling's sake; sampling should be science-driven, not logistics- or bureaucratic-driven.

Paleontology/Micropaleontology Reference Centers (MRC's)

m) SCIMP and MRC curators will investigate alternatives that maximize support and use of MRC collections on a day-to-day basis, through the end of the program, and into IODP. Issues to be considered include particulars of the status of the center, and support of the Facility by host institutions and national ODP/IODP offices.

DISCUSSION: The MRC Curators discussed these issues by e-mail and will have a meeting October in Berlin. John Firth from TAMU will attend, as may Frank Rack.

Microbiology

n) Dave Smith and ODP-TAMU microbiology LWG members to investigate issues regarding implementation of Radioisotope van, including costs, insurance, location, swab team, etc. Report/update due at next meeting.

DISCUSSION: See discussions under New Discussion items.

Miscellaneous

o) The Chair will work with the ODP-TAMU SCIMP liaison to establish a better reporting format for the cruise evaluation .

DISCUSSION: Panel noted that the new system for cruise evaluations, developed by Karen Graber, works well.

p) In order to keep the development of these valuable resources on track, SCIMP asks that ODP-TAMU supply the panel with "cookbook" status at each meeting (See Appendix 00-3-13 for status of "cookbooks" as of December, 2000).

DISCUSSION: Carl Richter noted that the Cookbook status is given in the TAMU report. A new Shipboard Scientist Handbook, much needed, is being internally circulated at TAMU.

ACTION ITEM: *Having recently sailed, Mike Fuller will examine the new Shipboard Scientist Handbook to add his comments and perspectives.*

q) Bill Mills to work with Charlie Paul/Bill Ussler to determine if ODP-TAMU has current parts in stock to assemble a manifold for the PCS.

DISCUSSION: Evaluation of needed hardware, by JOI and TAMU, is in progress to construct an ODP gas manifold. The Science Manager and Operator need to report back next meeting as to this status.

r) SCIMP Chair to distribute to SCIMP members several examples of ASCII data outputs for the development of the ODP data archive at end of the program.

DISCUSSION: Frank Rack gave an extensive overview of the JANUS database, including a history of development and a description of web-based documentation. The panel engaged in some discussion regarding possible implications of converting the JANUS database to flatfield ASCII files. Panel expressed strong support for preserving the JANUS database in the new drilling program. In light of these issues, SCIMP wishes to have Susan Freeman and Paula Clark give presentations regarding possible JANUS modifications, implications of conversion to flat-field files, and other database issues at the upcoming SCIMP meeting, especially regarding the preservation of relational database post-program.

ACTION ITEM *Lab Working Team (LWT) members to assess data file formats and content for conversion of JANUS datafiles to ASCII- what do we want to save, especially information that may not be there in flatfield files (like metadata). Each LWT will report to Dave Divins by October 1 as to their assessment, in order to be prepared for discussion at the Fall SCIMP meeting.*

s) ODP-TAMU will compile a document of current lab equipment which will include a listing of equipment by lab, schematics and vendor manuals, ODP operator manuals, potential use for new program, service contracts, and tech reports. The SCIMP Chair will work with ODP-TAMU on a format for the document.

ACTION ITEM: *TAMU will produce a spreadsheet documenting current lab equipment, which will include a listing of equipment by lab, schematics and vendor manuals, ODP operator manuals, potential uses for the new program, service contracts, and tech reports.*

t) SCIMP will develop a document for IPSC describing a conceptual plan for alternate platforms in the new IODP. To begin the process, the SCIMP chair will distribute a

"strawman" conceptual plan for alternate laboratory environments to SCIMP members. SCIMP members will assist the Chair in "fleshing" out the document.

DISCUSSION: Jamie Allan made an initial presentation on what minimum capabilities would be needed for van-based laboratories that could be easily placed onboard alternative platforms. He suggested some basic requirements, which were then modified by subsequent panel discussion. These needs, which might require two rather than one vans, were:
1. Core sectioning
2. Headspace gas analysis (organic geochemistry for drilling safety)
3. Micropaleontology (age control)
4. Whole-core MST (including perhaps inductive resistivity and scanner magnetometer; measure ephemeral properties)
5. Pore-water analysis (other ephemeral properties)
6. Clean sampling and freezing for microbiology

It was recognized that far more discussion was needed than was possible in the time available. Recognizing that this was needed by IPSC quickly, a group led by Phil Meyers was formed and tasked with making a detailed report on these needs back to the Chairs by July 10, which they did.

ACTION ITEM: *Phil Meyers, Joe Ortiz, Geoff Wheat, Dave Smith, and Ken MacLoed will work together as a group to detail on what minimum capabilities would be needed for van-based laboratories that could be easily placed onboard alternative platforms. This report is due by e-mail to the SCIMP Co-Chairs on July 10.*

ACTION REPORT:
SCIMP considers that the minimum laboratory needs for IODP alternate drilling platforms can be met by two 20-foot vans that are configured so that they can be used either on the drilling platforms or on nearby drilling-support sites.

<u>Van 1 - Core handling, MST, and special sampling</u>

Functions:
1. Core sectioning; sampling for density, head-space, and pore-water analysis
2. Whole-core MST measurements (ephemeral properties)
3. Clean sampling for microbiology

Rationale: The functions of this lab all require that cores be available as soon after recovery as possible. Measurements of wet and dry bulk density need samples that are taken before any moisture leaves/enters the cores. Substances dissolved in pore waters are sensitive to the temperature changes that occur after core recovery. Samples for pore-water analysis and head-space gas analysis must therefore be taken quickly. The suite of whole-core MST measurements includes P-wave velocity, gamma-ray attenuation (GRAPE), magnetic susceptibility, and electrical resistivity. The magnetic susceptibility of sediments, in particular, changes as atmospheric oxygen diffuses into cores, making this non-invasive measurement one that must be made quickly. The full suite of MST measurements needs only one pass of each core section through the instrument and efficiently provides a remarkable

range of information. Finally, the significance of the sub-bottom biosphere is now well established, and determinations of microbial activity are becoming common. Facilities for clean sampling for microbiological study need to be available as part of the routine procedures in the early handling of cores to minimize introduction of microbial contaminants.

The equipment and facilities required for these functions, consisting of an MST, a glove box, a core-sectioning stand, and related materials, would fully fill one 20-foot laboratory van.

Van 2 - Safety, drilling decisions, and ephemeral properties

Functions:
1. Head-space gas analysis (drilling safety, ephemeral property)
2. Micropaleontology (drilling age control)
3. Pore-water analysis (ephemeral property)
4. Microbial sample fixing (ephemeral property)
5. Moisture and density measurements (ephemeral properties)

Rationale: The functions of this lab must be done shortly after the cores have been sectioned and are important to drilling decisions. Routine head-space analyses are required to avoid the dangers of drilling into over-pressured, petroleum-type deposits, and these measurements need to be done on a core-by-core basis. Age-control is typically obtained from microfossil (nannofossils, forams, diatoms) analyses of core-catcher samples and is critical for establishing when desired age horizons have been penetrated by drilling. Pore-water properties are sensitive to post-drilling temperature changes and invasion by atmospheric oxygen. The results of these analyses yield information that aids interpretation of head-space gas analyses and improves selection of samples for microbial study. Samples for post-cruise microbial study need to be treated to preserve their sensitive contents and to be specially packaged to prevent contamination. Measurements of wet and dry bulk densities are needed for determinations of mass accumulation rates and are best done immediately after core sectioning. Wet bulk densities of the spot samples will be used to calibrate the continuous density profiles provided by GRAPE.

The equipment and facilities required for these functions, consisting of a gas chromatograph, an oven, a balance, a pycnometer, microscopes, sediment squeezers, titrators, a spectrophotometer, and associated materials, would fully occupy one 20-foot laboratory van.

General requirements

Both vans should be able to accommodate two persons/shift (van #2 may require three persons/shift) and will need to be fully equipped with electricity, running water (hot and cold), climate control, and good ventilation (and both a fume hood and an acid hood for van #2). Ideally, the vans should be connected together so that sample flow is facilitated.

At least one additional laboratory van may often be required for leg-specific objectives. Furthermore, a refrigerated van may also be required for core and sample storage, and some samples may need to be frozen for later study of sensitive properties soon after core sectioning.

u) SCIMP Chair to work with ODP-TAMU Science operator to insure presence of both science (Carl Richter) and technical (Bill Mills/Brad Julson) liaisons at future SCIMP meetings.

DISCUSSION: Panel thanks Brad Julson for attending, and encourages TAMU to continue sending Brad and Carl Richter to each SCIMP meeting.

F) Additional Review of Lab/Services Status

Chemistry:
Panel notes that there have been requests in the community for another shipboard sediment squeezer to extract pore water. Panel does not think that this acquisition is a high priority item when compared for the need for a new titrator or inductive resistivity measurement system. Panel also wondered if there is room for an additional squeezer on a routine basis. Panel encourages PI's to bring their own squeezers if additional squeezers are needed. Panel also discussed the need to replace the aging shipboard spectrophotometer, which is prone to drift. Panel felt that if the already prioritized, strongly needed automated titrator with probe colorimeter is purchased, SCIMP agrees with input provide by former Panel Member Rick Murray that ODP does not need a spectrophotometer at all.

Shipboard Computers/Networks
Panel noted that the programmer who sailed on Leg 194 cleaned up many long-standing problems in the Paleomagnetics and Physical Properties lab. Carl Richter reported that Information Services Programmers have been sailing on every leg since Leg 188; SCIMP supports this concept for efficient lab development.

Data Migration/JANUS
Panel noted that TAMU is doing a good job of documenting JANUS on the web; TAMU needs to warn scientists that data models in lab cookbooks may not be up to date.

G) New Techniques/Measurements
Gerry Iturrino discussed the recommendation from the SCIMP Core-Log Seismic Integration Report for development of a hydrophone receiver. Formation velocities derived from logging, MST, and discrete sample measurements are complementary yet measure samples at different scales and conditions. A single axis geophone that runs in combination with the triple combo tool string will provide one hydrophone measurement ("check shot") from the bottom of the hole. The Borehole Research Group has requested to Schlumberger to acquire an in-line check shot tool (QSST) that can be run with the triple combo. These extra measurements would take up only a few hours of logging time and would be made at a minimal cost. Sea trial of the QSST is targeted for either Leg 198 or 199 depending on tool availability and final co-chief approval

SCIMP Recommendation 01-1-6
The SCIMP core-log-seismic integration report documented the need for routine acquisition of check shot data. SCIMP therefore enthusiastically endorses the LDEO proposal to test a

triple combo tool string with check shot capability that allows such routine acquisition with minimal cost of time.

H) Other New Discussion

1) MS Excel Data Archiving Issues
Jamie Allan related the early June discussions that he, Frank Rack, and Ann Klaus had regarding management and publication of MS Excel data files covering leg core description.

SCIMP Recommendation 01-1-7
In response to questions about archiving supplementary shipboard data in Microsoft Excel files, SCIMP endorses the policy that leg scientific parties decide which supplementary data tables are to be archived. These scientific parties will be responsible for converting the data to ASCII format, and will also be responsible for proofing these data at the IR post-cruise meeting.

2) Capture of Processed Data- SR
JOI and TAMU plan to enforce more strenuously the existing data policy of requiring post-cruise data to be sent to the ODP database at TAMU. SCIMP wants to ensure that any and all post-cruise data sent by scientists to TAMU will wind up in the database, whether it is originally sent to the database personnel or not.

SCIMP Recommendation 01-1-8
SCIMP recognizes the value of post-cruise research results as an important legacy of ODP and encourages all scientists to provide an electronic copy of any ODP-related publication as well as a digital copy of any data to ODP/TAMU. In addition, SCIMP recommends that ODP/TAMU establish an accounting and tracking procedure for this information and ensure that the digital data and the appropriate reference to methods, standards, and other metadata be provided to the ODP data librarian.

3) Return of Sample Residues/Thin Sections
By and large, Panel agrees with the recommendation of ODP Curator John Firth that the fine fraction and microfossil residues do not need to be returned- the bureaucratic overhead is not worth the marginal scientific return. Instead, leg parties can arrange to exchange processed fractions and residues amongst themselves. In contrast, leg thin sections should be encouraged to be returned, as they add much to the ability of post-leg investigators to be able to intelligently sample core.

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ACTION ITEM: *Ken MacLeod will contact John Firth to determine extent of problem regarding older checked-out thin sections to determine whether policy advice is warranted.*

4) Radioisotope Van Deployment/Use Protocols
Dave Smith gave an extensive report on the issues and challenges of deploying a van to house radioisotope work aboard the JOIDES Resolution. Much discussion followed, centering around an endorsement of the basic concept with significant concerns about reducing the risk of contamination and liability. These discussions resulted in the following recommendation:

SCIMP Recommendation 01-1-9
SCIMP endorses the concept of using ^{3}H, ^{14}C, and ^{35}S for microbiology in an isolation van on the JOIDES Resolution. While noting that significant progress has been made towards this, Panel requires that the following issues be addressed prior to implementation.
a) Require scientists to submit to ODP/TAMU detailed experimental protocols specific for use on the JOIDES Resolution and proof of certification from their home institution for radioisotope use.
b) Establish Standard Operating Procedures for all radioisotopes to minimize the potential for contamination by a) requiring users to wear protective clothing while in the isolation van (glasses, coveralls, separate shoes) and b) separate person(s) ("runners") to deliver samples to the isolation van.
c) Establish policies that ensure that scientists-users assume responsibility for any clean-up costs.

5) HYACE Pressure Core Sampler
The co-chairs took advantage of the attendance of John Roberts from Geotek to ask him to give a rundown on the state of the HYACE and HYACINTH projects, and also asked Carl Richter and Frank Rack to provide details of the HYACE deployment on Leg 194, with possible future deployment on Legs 201 and 204.

John Roberts started by giving an excellent background to the HYACE (hydrate autoclave coring equipment) instrument, which was funded over 1997-2000 with an extension to cover a demonstration deployment on Leg 194. A variety of partners were part of the development, with the Universities of Berlin and Clausthal being the principal partners.

There are two HYACE systems, both with flapper valves: 1) a rotary system, devised by Berlin/Clausthal with the cutting shoe being a dry auger, and 2) a hammer/push core system, which locks into the BHA, initially acting as a push core. As this system encounters resistance, a hammer mechanism comes into force, driven by drilling fluids. Fugro was the principle designer of this system.

In addition, there are other components to the HYACE project besides the core retrieval systems. There is a lab transfer chamber (LTC), where one can bring a 4.6 m cased sample into the chamber (rated to 250 bars pressure, equivalent to about 2500m water depth). This chamber has a glass-reinforced plastic body, representing a pressure vessel with an end cap and ball valve at other end.

GEOTEK has designed a vertical MST system to take the LTC and make gamma density and p-wave velocity measurements on the enclosed core. They have not yet constructed this vertical MST system, although they have constructed the pressure case. The SCIMP expressed concerns about moving a bomb into a JR lab during this discussion, emphasizing the need for steel shielding if deployed.

The four deployments for each of the two HYACE systems on Leg 194 were subsequently discussed. Core was recovered on four of these eight deployments, but only one core was

recovered under pressure. For the first of four tests of the Fugro hammer/punch core system, lifting of the core barrel into the autoclave occurred too rapidly for the flapper valve to close. The flapper valve worked on the second deployment, but was damaged during the third deployment. The fourth deployment was done with a known damaged flapper valve. The tests of the hammer were frustrating, because the formation was not stiff enough for effective hammer operation. During the first deployment, the hammer didn't work, but did for a few seconds over the last three deployments.

For the rotary system, the first two deployments did not recover core because of fitting problems with the BHA, and the third deployment with a painted-up tool was conducted as a test to figure out what was going wrong during operation. The last deployment recovered core, but which subsequently was lost during core retraction.

These tool field tests were part of cooperative partnership between the HYACE developers and ODP. Closing reports fully documenting this activity still need to be given.

John subsequently informed us about the HYACINTH project- namely, the Deployment of HYACE Tools In New Tests on Hydrates. The major partners in its development are Geotek, the Universities of Berlin, Clausthal, and Bristol, Fugro, and the British Geological Survey. This projects covers the recovery, storage, MST logging (includes resistivity), sampling, and microbiology analysis of the core under pressure. Current funding is around $2M US; the schedule of development allows for deployment on Leg 201 of both corers and core extraction and storage units. The entire suite of HYACINTH tools could be available for Leg 204.

The nature of the partnership between HYACINTH and ODP is still developing. John emphasized that HYACINTH is not in competition with the ODP Pressure Core System (PCS) or the Japanese pressure core system. All of these tools are somewhat lithology dependent and so are complementary. The PCS is driven from the topdrive, as opposed to HYACE, which is driven from the BHA. For the PCS, TAMU reports that minor updates will be tested on Leg 201 (4 runs- few hours), and it will be deployed as an operational tool on Leg 204.

Frank Rack followed up by placing HYACE and HYACINTH development in the context of addressing methane hydrate scientific strategy in an era of flat ODP funding. HYACE is a welcome development, as it is bringing in new funds for understanding and characterizing methane hydrates. Frank also briefly discussed a DOE proposal submitted by JOI for 1) upgrades to the PCS and for making of a PCS gas manifold system; 2) upgrades to the APC TPC and other downhole memory tools; 3) acquisition of GI guns for use in vertical seismic profiling (VSP) experiments; and 4) obtaining other equipment that would provide enhanced scientific investigation of methane hydrates, such as thermal imaging of freshly-recovered core, and potential modification of the Fugro piezoprobe-hydraulic fracture tool for use with the ODP BHA.

6) APC TPC (methane) tool deployment on Leg 195 update

Carl Richter gave a rundown on the deployment. Impressively, little interruption in operations occurs during deployment (3 minutes to put the tool on the top of the APC piston head). At

Hole 1201B, 2 tests were made at 5728 mbsf. At Hole 1202A, tests were made at 1300-1345 mbsf with the drillstring banging against the ship due to high current, with the tool success underlining its robustness. Raw data was only collected with no calibrations, and the pressure channel was not recorded. Nevertheless, the tool output data was compared against the APC cutting shoe temperature probe data, and qualitatively showed a nice correlation. The raw TPC data seemed to show when free gas was present.

7) GIS Framework for MGG Spatial data; ONR/NSF Data Management Workshop
Frank Rack gave an overview of the workshop to discuss Marine Geology and Geophysics data that was held recently in San Diego. A variety of presentations were made on issues regarding centralized global databases, including those of ODP, IRIS, and others. Reports from the workshop working groups are available online at http://humm.whoi.edu/DBMWorkshop. Frank also talked about an Ocean Drilling Collaboratory pilot program that he has proposed to NSF, together with Peter Knoop of the University of Michigan.

8) GeoQuest IESX Digital Seismic Data Pilot Project
Gerry Iturrino discussed the deployment of the IESX Digital Seismic Data system on Legs194 and 196- an official report will be made available later this fall. Gerry emphasized how important it was to have the full support of the Leg 194- co-chiefs. The Leg 194 scientific party loaded physical property data into IESX and found it very powerful, especially in matching up reflectors with cored formations. An IESX manual is available on line at the Borehole Research Group website.

A few problems were noted. Insufficient IESX licenses caused corrupted data files- there were multiple users for one account, so if several users had the same file open, it could be corrupted. Multiple accounts will solve this problem for Leg 196. Legs also need software-savvy people, especially for creating synthetic seismograms. Overall, it really added much to Leg 194, showing the power and need to encourage digital seismic data submission to the ODP databank. A final report for Leg 196 will be given next meeting.

9) Leg 197 Magnetometer and Susceptibility Tool Deployment Endorsement
SCIMP notes, for the record, that late submissions of material for SCIMP endorsement are troublesome, as last minute requests for advice may not be able to be fulfilled. Gerry Iturrino gave updates throughout the meeting on tool difficulties encountered during late testing of the Gottingen Borehole Magnetometer and Susceptibility tools. Land testing the week before the SCIMP meeting, otherwise successful, had trouble with a freezing of the threads of the tool, causing the tool casing to be cut. A successful test of the rebuilt instrument in a refurbished pressure case in the KTB hole has been subsequently accomplished at the last hour. SCIMP encourages the Leg 197 Chief Scientists to consider the appropriate use of these tools on their leg.

I) SCIMP Membership
As Joe Ortiz and Geoff Wheat are revolving off the panel, SCIMP discussed making recommendations for replacement U.S. panel members to USSAC. Recognizing that we

SCIMP needs to retain their respective fields of expertise, and also noting that SCIMP members are currently all males, the names of potential nominees were given to USSAC.

J) Future Meeting Dates and Places

SCIMP requests to JOIDES that the next meeting be held December 17-19, with a possible side trip to the Hawaiian Deep Drill Hole on December16th. SCIMP will visit the JR on December19th in Honolulu. Mike Fuller will host the meeting. SCIMP further requests to JOIDES that the following meeting is held jointly with TEDCOM, and that it occurs in June 02 in College Station, Texas.

K) Final Recommendations

SCIMP Recommendation 01-1-10

SCIMP thanks Bernard Celerier for his efforts in support of this meeting. In all aspects, it has been most successful, thanks to his Gallic hospitality!

SCIMP Recommendation 01-1-11

SCIMP thanks departing members Joe Ortiz, Bernard Celerier, and Geoff Wheat for their generous, dynamic, and creative efforts in support of SCIMP and ODP. They will be missed!

SCIMP Recommendation 01-1-12

SCIMP publicly thanks Tom Janecek for his impressive contributions that improved the scientific capabilities and operations of ODP. His leadership, expertise, and enthusiasm during his tenure as Chair of SCIMP brought about many positive changes to ODP in response to nearly 100 recommendations to OPCOM. As a result of ODP implementing the vast number of these recommendations, our Panel's expectations on impacting the Program have risen. Tom's legacy is a strong, well-functioning panel that will continue to improve ODP and impact the future of scientific ocean drilling.