REPORT ON THE SECOND MEETING OF THE SCIENTIFIC MEASUREMENTS PANEL

COLLEGE STATION, TEXAS
FEBRUARY 16-18, 1998

Members present:	Liaisons:
David Anderson (US)	Jay Miller (ODP/TAMU)
Arthur Cheng (US)	Gery Itturino (ODP/BRG)
Peter Flemings (US)	Carla Moore (US-NGDC)
Patricia Fryer (US)	Paul Dauphin (US-NSF)
Joris Gieskes (US) - Chairman	John Farrell (JOI)
Brian Huber (US)	Kathy Ellins (JOIDES)
Alexandra Isern (Pacific Rim)	Kate Moran (Janus)
	Guests:
Tom Janecek - Chairman designate	Dave Goldberg (ODP/BRG)
Siegfried Lallement (F)	Tom Davies (ODP/TAMU)
Peter Wellsbury (UK)	Jeff Fox (ODP/TAMU)
Roger Morin (US)	Kathy Ellins (JOIDES Office)
Rick Murray (US)	Bill Mills (ODP/TAMU)
William Sager (US)	Brad Julson (ODP/Tamu)
Saneatsu Saito (J)	Kazushi Kuroki (ODP/TAMU)
Juergen Wohlenberg (G)	Ann Klaus (ODP/TAMU)
	Buddy Bollfrass (ODP/TAMU)

1. Introduction.

The SciMP is most grateful for the arrangements made for the meeting under trying circumstances caused by a flooding-incident at ODP/TAMU. For these reasons the meeting venue shifted to the Hilton Hotel at College Station.

Although the SciMP missed the opportunity to interact more strongly with the personnel of ODP/TAMU, many interested parties of ODP/TAMU did attend the various sessions. A most fruitful short visit to ODP/TAMU was made on Tuesday 18 February for a visit to the new Camera Track for digital imaging of cores (Bill Mills). Special thanks go to Jay Miller for being an excellent host, which included a reception/dinner at the Miller “Log-Cabin” on Tuesday evening. SciMP enjoyed the typical Texas/New Mexican hospitality of the Miller family.

The meeting was started on Monday February 16 at 8.15 AM and ended on Wednesday February 18 at 3.30 PM.

The chairman welcomed the Panel to College Station and expressed his special welcome to the Chairman-designate Tom Janecek, who only returned from ODP Leg 177 two days before. In addition he welcomed the alternate members Peter Wellsbury (for Chris McLeod) and Saneatsu Saito (for Won Soh). Finally a welcome was extended to Nick Pisias, the new interim-director of JOI-ODP.

Jay Miller explained the arrangements for the meeting at the Hilton Hotel.

2. Problems presented to SciMP by SCICOM

Joris Gieskes mentioned that an urgent task was assigned to SciMP by the SCICOM Chair Susan Humphris as a result of a recent EXCOM motion (Appendix 1):

" **EXCOM Motion 98-1-8:**

Presently determined budgetary constraints through 2003 will negatively impact the delivery of the Long Range Plan . EXCOM asks SCICOM to prioritize future science objectives to maximize the objectives of the Long Range Plan, clearly indicating those which can not be achieved under the existing budget projections. SCICOM should also identify and prioritize changes in the program activities, services, equipment needs and technological developments. SCICOM is asked to forward its report to EXCOM by September 1998.

I am, therefore, asking your panel to set up a procedure by which all the activities and services within your purview, are reviewed over the next few months so that you can present the results of these reviews at the August SCICOM meeting."

In addition Susan Humphris requested SciMP to consider the following items:

"There are several issues that have arisen over the past few months.

1) **Janus issues**: I would like some advice from SciMP on two specific issues here:

- The mechanism by which oversight of Janus can make a smooth transition from the JOI Steering Committee (which is responsible for implementation) to SciMP. When should this occur, and how? How will SciMP carry out its responsibility ? With Kate Moran at the meeting, a plan created with her input would be extremely useful for OPCOM to consider.

- Two aspects of data migration:

1. SCICOM requests that SciMP provide some recommendations regarding how data from Leg 171B on get transferred to, and updated in, the JANUS data base.

2. The other concerns the prioritization for the migration of all the historic ODP data. How do we determine which data should/should not be migrated, what the priorities should be, etc?

2) Although the budget for the drydock is not yet finalized, I suspect there will be insufficient funds for the proposed expansion of the downhole measurements lab. Are there some minor (i.e. less expensive) modifications that could be made to make the existing space more useful?

3) Microbiology lab: note these Action Items which refer to this topic:

- **Action Item for SciMP**:

SCICOM asks SciMP (with input from the Biosphere PPG) to look into (1) the existence, and availability of, containerized microbiological labs and the equipment/facilities contained therein; and (2) the methods by which work with radioisotopes is currently handled on other oceanographic research vessels.

- **Action Item from OPCOM**:

Humphris will request from SciMP a cost estimate for a containerized microbiological facility as envisaged by SCICOM, advice on the availability of

containerized labs that could be used for specific legs, information about the use of radioisotopes on research vessels, and liaison activities with the Biosphere PPG in order to understand their needs.

4) Note this action item from OPCOM.

- **Action Item**:

TAMU will develop a capital replacement plan for SciMP to review next year, as requested previously by PCOM.

5) At the December PCOM meeting, a Motion was passed (Motion 96-3-6) regarding shipboard collaborative arrangements. SciMP needs to review what methods have been put in place to do this.

6) At the recent TEDCOM meeting, TAMU Engineers presented a series of development projects, one of which was Measurements While Coring (MWC). One of the TEDCOM members said that he believed this would eliminate the need for standard logging (note -- he is in exploration so uses logging differently from scientists) ! I agreed to ask SciMP to look at this project and comment on how MWC might change our use of standard logging. Hence, could you please have one of the ODP-TAMU Engineers talk about this, and then provide some feedback for me for TEDCOM.

7) When I met with the Managers at ODP-TAMU in December, they were concerned as to how SciMP would be able to manage the huge range of issues under their purview. This is a concern I have too, and as I thought about it, I wondered whether it would be helpful to designate an annual review of each topic for a specific meeting, rather than try to cover every topic at every meeting; e.g. curation issues at the winter meeting; shipboard labs at the summer meeting, etc. You might want to take advantage of your College Station meeting to work with ODP-TAMU to come up with a good scheme. Just a thought."

This report intends to address most of these issues as well as any other issues that ave arisen during this meeting.

3. Message from JOI

Nick Pisias, the new interim-director of JOI/ODP presented his visions and detailed the 1998-2002 budget.

Nick Pisias pointed out that he, in collaboration with Jeff Fox (ODP/TAMU) and Dave Goldberg (ODP/BRG) had found a temporary solution to further potential shortfalls associated with the so called $900,000 dollar question (Appendix 2). These reductions, of course, meet the necessary aims of the short fall mediation, but they not offer a long term solution to further potential shortfalls as a result of funding deficiencies, which, if anything, will increase over the next 4-5 years. Indeed, some of the suggested cuts are based on "potential" expenditures, e.g., the $ 400K for Microbiology - a topic for the present meeting - and the XRD replacement, which was flagged by SciMP during the last meeting as a potential future expense to be incurred only when the present XRD machine were to be found to be "extinct".

The task, therefore, remains to conduct a search of potential budgetary savings throughout the ODP structure. In the present report SciMP will discuss the nature and scientific consequences of potential savings under its mandate: Shipboard Measurements, Logging

Services, Information Handling, and Publications. SciMP will, however, make some suggestions of other areas that may also have to be considered.

4. Report from the JOIDES Office

Kathy Ellins emphasized the latest working orders for SciMP from the SCICOM Chair (see Section 2 of this report).

Kathy Ellins re-emphasized the structure of the advisory structure of JOIDES/ODP (Appendix 3). The advice rendered by SciMP travels through OPCOM to SCICOM to EXCOM to JOI. This long pathway may have an adverse effect on routine actions that can be taken by ODP/TAMU or ODP/BRG at little or no cost. During later discussions it appeared that JOI may object to such efficient ways of making improvements. In any case, whether through traditional interaction or through JOIDES advice, the direct interaction with the various branches of ODP have been beneficial to the program.

5. Report from ODP/TAMU Operator

5.1. Message from ODP/TAMU Director:

Jeff Fox reiterated the fact that ODP/TAMU has operated now under a fourth year of a level funded budget. No more contingency funds are available, which, in the past, served as potential sources for equipment replacement or purchase with JOI approval. Nonetheless, the motto should remain: “Maintenance of Services and Attention to Innovation”.

Jeff Fox did point out that potential Engineering savings might be effected through separate funding under the auspices of OD-21 and/or the IODP. In addition potential funding is being explored from interested parties from Industry (e.g., associated with hydrate problem, etc.).

However, in the meantime any Engineering developments are still funded through ODP/JOI.

Jay Miller provided SciMP with a detailed Operator’s Report on ODP/TAMU Activities - Appendix 4.

5.2. Curation

John Firth reported on curatorial services at ODP (see Appendix 4, pages 6-8).

Several issues received attention:

5.2.1. Sample residues

John Firth mentioned his ideas on sample residues to ODP/TAMU. He recommends: “ Although ODP will welcome any residues that are sent back (numbering in the hundreds of samples per year), we do not have the resources to inventory and shelve ALL residues from ALL scientists, if they were send back according to this (present) policy. Therefore, I recommend the we encourage people who want to get rid of their residues to continue to send them back to ODP, but to get rid of the requirement for everyone to do so.” Instead, John Firth suggested that: “Investigators who are not able to do their proposed research, are required to send the unused samples back to ODP. Investigators who complete their proposed research

and who meet their publication obligations, may keep any residues for future use. If they do not wish to keep the residues, they may ship them back to ODP."

5.2.2. John Firth also brought up the problem of sampling the Permanent Archives (see also Appendix 4, page 7).

Rick Murray (also a member of CAB) mentioned that the CAB should be consulted in this sampling policy. This led to the following recommendation:

Recommendation SciMP 98-1

SciMP recommends that Section 6.4 of the Sample Distribution Policy be modified in such a manner that the six month deferral period prior to sampling the Permanent Archive (PA) no longer be required. Implementation of the PA sampling will be overseen by the ODP Curator on a core-by-core basis, but with the approval of the CAB required in each case.

5.2.3. Policy violations

This subject and the non-performance issue will be discussed in Section 7 of this report in greater detail.

5.3. Publications

Ann Klaus presented the ODP/TAMU Report on Publications (Appendix 4, pages 12-14).

Ann Klaus handed out two CD-Roms for the use and testing by SciMP. Feed-back on these CD's will be very much appreciated.

As of now the official ODP publications of the Initial Reports are the CD-ROM accompanied by a 150 page booklet as described in Appendix 4).

Ann Klaus indicated that over the last ~ 5 years substantial savings have been effected as a result of the transition to the electronic publishing mode - between $ 380 and 580 K.

Though substantial savings have been made since the original mandates of ~ 1993, potential further savings have been discussed during the SciMP meeting (see Section 12 of this report).

The policing of "non performance" has been a considerable burden to the Publications Group at ODP/TAMU. Non-performance is at the level of at most ~ 3%. For these reasons SciMP has made recommendations on this and other curation issues - see the following section 7 of this report.

5.4. Status of Shipboard Laboratories

Jay Miller presented the ODP/TAMU report on the status of the shipboard laboratories (Appendix 4, pages 15-17).

John Farrell asked about the comparison between photography and digital imaging. Jay Miller said that such a study is underway and that more definite results will be available in about one year from now.

On Tuesday 19 February Bill Mills demonstrated the newly designed track for digital imaging of the cores. This impressive innovation will be tested on the ship at the earliest convenience.

Jay Miller, in response to the mandate of consideration of potential cuts in services (see Section 2), has prepared in collaboration with the laboratory service officers, a listing of the various equipment of the laboratories in terms of operational costs and potential replacement costs. This list was separated into two main parts: safety related items and items associated with the measurement of ephemeral properties. The list is presented in Appendix 5.

This listing, of course, was the basis of considerable discussion in the panel. Results of the exercise on potential savings and their associated scientific consequences will be discussed in Section 12 of this report, but the listing in Appendix 5 was most helpful towards these purposes.

5.5. Drilling Services

Buddy Bollfrass presented an overview of present Drilling Services (see Appendix 4, pages 8-10).

The main development foci are presently:

a. Heave Compensator System;

b. Measurement While Coring System (MWC).

It is understood, of course, that both of these development projects will be associated with incremental costs. Appendix 6 summarizes the status and future of the two projects. The ODP/BRG are in contact with the ODP/TAMU Engineering staff on these issues.

Members of SciMP did ask the question whether it would not be appropriate to request SCICOM or TEDCOM to investigate room for potential savings in the Engineering program or to urge EXCOM to pursue more vigorously the potential of alternative funding for some of the engineering projects. It is clear that a balance must be found between good shipboard science and continuing engineering developments under the new EXCOM mandate to explore savings.

Liaison with any Engineering Advisory Group (TEDCOM or otherwise) is important to SciMP and the new Panel Chair Tom Janecek has agreed to be this Liaison.

5.6. Motions and Recommendations from Last SciMP

The ODP/TAMU Report contains a Summary on Actions taken or considered during the last SciMP meeting (see Appendix 4, pages 17-19). The SciMP considers this information most valuable, especially because this is one of the most useful sources of information on actions taken with regards the SciMP recommendations.

Nick Pisias indicated that any recommendations from SciMP must be channeled via SCICOM - OPCOM. This has been done and results of the SciMP meeting were presented at the Davos Opcom Meeting in August 1997.

Joris Gieskes indicated that it would be most helpful to SciMP if the Panel Chairman would be kept informed, in a condensed statement, what actions SCICOM/EXCOM/JOI have taken with regard the SciMP recommendations. Traditionally ODP/TAMU has acted on SciMP recommendations (as well as on those of it's predecessors SMP and IHP) when little or no costs were involved. This has very much led to quick action on useful recommendations.

Recommendation SciMP 98-2

SciMP requests SCICOM/JOI to provide a timely summary on actions taken on SciMP Motions and Recommendations. This information should be relayed to SciMP at the earliest convenience, well ahead of the next SciMP Meeting.

6. Editorial Review Board (ERB) and Related Issues

The problem of non-performance was raised during the discussion of the Publications report of ODP/TAMU (c.f., section 6.2.3).

SciMP argues that the policing procedure for tracing non-performers should not rest *a priori* with the ODP/TAMU Publications group.

A subcommittee of SciMP considered this problem in a larger context with particular attention to:

Distribution of ODP Scientific Results

Advantages to PI

Advantages to ODP

Reduction of policing by ODP/TAMU/Pubs

Allowance for flexibility in the overall policy.

Towards these purposes SCICOM suggests the following:

1. Selection of Editorial Board:

Prior to the Leg, so that personnel for this purpose will be "in place" and committed.

2. Obligations towards "performance" are met by:

A. - Publication of a Journal Article (with simultaneous submission of data to the Data Librarian);
- Publication of a Scientific Results Article;
- Publication of a SR Data Report;

or

B. - Submission of data to the ODP Data Curator.

B would constitute the minimum requirement for “performance”.

3. A publication record with log-in titles should be maintained for each leg.

4. Publication deadlines:

28 months after post-cruise sampling party and/or 1-st post-cruise meeting.

The pathway shall be :

Submittal to the ODP Publications to ERB/JOI. ODP Publications should not be responsible for policing these activities, rather this should be a task of ERB/JOI.

5. Collaborative Research:

- A written record will be necessary of commitments made towards this purpose;

- Publication plans and sample requests must be revised to ensure that commitments stay to the leg under study.

Towards the above purposes SciMP recommends:

Recommendation SciMP 98-3

SciMP recommends that SCICOM ask ODP/TAMU to pursue the development of an integrated sampling, data, and publications policy through collaboration between the ODP Publications Office and the Curatorial Advisory Board (CAB), and that ODP/TAMU submit to JOI for approval the integrated policy by April 1998.

7. JANUS Reports

7.1. Janus Steering Committee

Kate Moran presented the overview on the minutes of the JANUS Steering Committee (see Appendix 7).

The Janus Steering Committee has finished their work. An important aspect of the demise of the JANUS Steering Committee, however, will be the problem of oversight of the migration of data to the JANUS data base at ODP/TAMU. This should, in principle, be the job of SciMP.

One impact problem is the Paleo application. There is no direct technical support for this application nor for the further development of AppleCORE). The most difficult job is getting scientists ready, willing, and able to use these facilities. The Janus Steering Committee suggested that Staff Scientists should be the responsible party for this task. In view of the already considerable burdens put on the Staff Scientists, however, it would be more appropriate to delegate this responsibility to the technical support group, with a dedicated staff position to provide this assistance. More importantly, pre-cruise training should be provided to at least on member of the scientific party who will be responsible for the use of this facility. Even then, it was evident from Leg 177 that training on these applications does not guarantee performance.

It will be appropriate for SciMP to set up guidelines for the form in which data need to be reported as well as to determine:

1) What types of data are most important to get in the data base;
2) What format does these data need to be in;

Many data types are not accommodated in the current system-change requirement for performance.

In the previous section a recommendation was made requiring that all post cruise data be provided to ODP. Virtually no post cruise data are provided to ODP at this time (except as included in reprints). Thus the considerations of the Section 7 of this report must include attention to this problem.

Kate Moran indicated that the JANUS Steering Committee is being disbanded though willing still to provide advise on how data will be handled in the future. The prime issue is the transfer of authority from the SC to SCIMP as the database goes from a development project to IS management. SCIMP should be in concert with track made by JANUS SC.

It will be appropriate to provide the SCIMP Chair with the JANUS Steering Committee membership list. An experienced member of this Committee would, in principle be an excellent candidate for the SciMP Panel.

7.2. ODP/TAMU Janus Report

Jack Foster presented the ODP/TAMU Janus Status Report. Appendix 8 provides a quick overview of ODP/TAMU activities in this area.

Most applications of Janus are cross-platform and most applications can be used with Macs, PC's, and Unix. Some applications, however, such as Applecore, are still restricted to use on Mac-s. So are the MST and Labview. Interactions with the data base can be difficult with Mac-s.

Of importance is that as many data as possible should be made available for joint use on the ship through the shipboard-web or the data base. Co-Chief Scientists and the Staff Scientist should ensure this and should also encourage scientists who use private computers (e.g., lap-tops) to transfer their information to the shipboard data base.

It is appropriate to quote from the Janus Steering Committee report section VIII:

"Training

The SC is still very concerned about training in two areas, VCD and Paleo. Both of these applications reside in labs that have no dedicated technical support. The SC recommends that TAMU train all staff scientists (and other key shipboard staff) in the use of AppleCORE so that these individuals can train oncoming science parties. Mike Ranger would be appropriate for providing this training. The SC recommends that TAMU assign one of the shipboard staff to be responsible for training oncoming scientists in the Paleo application. These staff will also need some dedicated training from Tracor (Paul Albright). The SC is concerned about the upcoming port call for Leg 177. This is a heavy paleontology leg and it is the first port call where no "experts" will be available to train the science party. For this port call, the SC urges TAMU to send an experienced paleontology user or the developer to train the oncoming paleontologists. For future legs, the TAMU shipboard staff responsible for paleo can train new science parties.

The SC requests that SCIMP push for the development of short, well maintained "cookbooks" for shipboard use in all of the labs."

Recommendation SciMP 98-4

SciMP recommends that adequate training of shipboard scientists is undertaken in the use of the Applecore and Paleo facilities by a trained specialist either before or during the drilling legs. This will insure proper use of these facilities and a smooth manner to get the data into the Janus data base.

7.3. Data Migration and Archiving

Carla Moore made several suggestions for future SciMP actions:

A "data handling subgroup of SciMP" should be constituted which would be concerned with tracking technical aspects of data migration and archiving. Alternatively, the NGDC Liaison could be requested to track this for the panel and to communicate the results at each panel meeting.

A. With the cancellation of a large scale data migration project (see Section 3 of this report) the need to do this tracking will be very important; it will continue to receive attention from the ODP/TAMU database group, as resources allow. SciMP must monitor this.

B. An additional related issue is the creation of an archive at NGDC/WDC-A MGG, in parallel to ODP/TAMU, by the end of the program. If planning and a gradual efforts towards this is initiated presently, this migration can be achieved at lower cost to the program; perhaps at no additional cost.

SciMP encourages ODP/TAMU to begin working with NGDC/WDC-A for MGG to plan for and to implement the gradual creation of an official parallel data archive at NGDC. SciMP notes the cost savings to the program of beginning this effort as soon as possible, in a coordinated fashion, rather than postponing it to the end of the program.

The ODP/TAMU data base administrator has informed Carla Moore that ODP/TAMU already has transferred data from all of the old floppy disks, tapes, and WORM disks to computer hard drives. If these data were available via ftp, NGDC could download them with little impact on ODP/TAMU staff time, and place the data on official archive media (3480 tapes). As data are added/migrated to the system at ODP/TAMU, archive tapes could be updated at NGDC periodically.

SciMP strongly encourages exchange of ideas between the ODP/TAMU data management and the NGDC, via Carla Moore, the SciMP liaison from NGDC.

8. Logging Services Report

8.1. ODP/BRG Logging Report

Geraldo Itturino presented the Logging Services report of ODP/BRG (Appendix 9).

An important point was raised concerning logging of an intermittent nature in difficult holes. This would constitute drilling a section, followed by logging, da capo. The clear

advantage of such logging strategies is that often longer sections can be logged, especially in holes in unstable environments, that may collapse before any logging is accomplished.

Recommendation SciMP 98-5

SciMP strongly supports the sequential drilling and logging of sections of a drill hole, when potential degradation of a drillhole may endanger the success of a post-drilling logging operation.

8.2. ODP/BRG Developments

Dave Goldberg mentioned that ODP/BRG is concentrating on downhole and related technology development as potential innovations (Appendix 10).

Lamont is developing a rigfloor instrumentation and control package, tied to Maxis, that can plug in wireline tools or memory tools. This is similar to, but not identical to the DAS development going on at ODP. Lamont and ODP are trying to coordinate these efforts.

Wireline heave compensation and at the bit measurements are receiving attention through the development of an active system that measures acceleration. The next phase development is to improve control. Now all logging runs include a Temperature/accel log for deconvolving data.

An uphole component is under development to allow gaining seismic information while drilling. The tool attaches under the top-drive at the rig floor and measures vibration of drillstring.

Logging while drilling was tested during Leg174A with off the shelf technology used to pulse data to surface.

Measurement while coring involves coring through LWD type tool and add sensors to corebarrel or top drive.

Disadvantages to these systems include

fewer sensor types available for measurements
lower quality hole
low industry interest
high cost of BHA

The MWC system in its present conception is primarily designed by ODP/TAMU/Engineering, but collaboration with Lamont is part of this development. One of the main aims is to provide drilling parameters, while drilling, thus enabling better ad-hoc drilling decisions by the Driller and the Operations Manager. At this time it will NOT replace logging (see Susan Humphris' request in Section 2). Certainly the tool will present additional information of use in log-interpretation.

Other potential developments:

Modify temperature/accelerometer to sit in the bit and record bit motion.

Modify ODP procedure to take advantage of oversize logging tools. Many are available with a broad range of applications. Cost to provide ability to use these tools is around $100K, but tool rental is expensive (one discussed industry standard fluid sampler has a replacement cost in excess of $1 million).

How BRG met reduced budget:

2 years ago, standard tools moved to specialty tools. They can only be used if requested in prospectus and included in FY budget. This year, back-up tools were removed. The consequence is that, if these tools fail, the measurement will not happen.

An important matter is that the new Schlumberger Array has a much improved capability with regards porosity measurements, as was quite evident from data presented by both Geraldo Itturino and Dave Goldberg. This topic will be revisited in the discussion of potential savings to the program.

8.3. Shore-based Logging Interpretation

Juergen Wohlenberg presented a report on the efforts by the University of Aachen group on the simultaneous core-log interpretation carried out by the Aachen Group on shore, while the drill ship is still at sea. He showed results of such efforts on the KTB hole, as well as holes from Leg 173 and 176 (Site 534).

These initial trial efforts have been strongly endorsed by the previous Downhole Measurements Panel, but further discussion of these efforts are under the purview of the SciMP.

The experiment during Leg 176 has caused some concern among the shipboard scientific party, partly caused by miscommunication throughout the chain of organization. Among the chief problems was the concern of the scientific party about the manner of publication of the results, the authorship, and the interaction between the Aachen Group and the shipboard scientific party.

The results of this exercise will be discussed in greater detail at the first postcruise meeting of the Leg 176 Scientific Party, in which the Aachen Group, the BRG, the co-chief scientist, and selected members of the scientific party will be present.

As Jim Natland (SCICOM Liaison to SciMP and Co-Chief on Leg 176) will be present at that meeting and at the next meeting of SciMP, a more clear policy on this potentially innovative exercise can be formulated by SciMP. It seems appropriate that the entire exercise should run to completion before SciMP can make a well judged recommendation.

8.4. Third Party Tools

8.4.1. Woods Hole VSP Equipment

A request was received for the potential reclassification of the WHOI VSP equipment to "Mature Tool" status.

This request for certification was originally made to the DMP a number of years ago, when the DMP Consensus strongly endorsed the proposal to carry out a VSP experiment in Hole 735B of Leg 176:

"DMP 96-2-2
A Schlumberger 3-component VSP tool for Hole 735B should be funded for Hole 735B from the BRG-WLS budget for FY 98"

A similar proposal for Leg 179 was approved by SCICOM, but this time the Schlumberger equipment is not available. For these reasons the Chair of SciMP allowed the shipment of the Woods Hole Equipment to the ship, notwithstanding existing misconceptions about this equipment vis-a-vis the Schlumberger equipment, which was not available for the Leg 179 exercise. Keir Becker stated that with respect to the future use of the Hole to be drilled during Leg 179 the VSP experiment will be of importance. Dave Goldberg indicated that some improvements have been made in the Woods Hole equipment, so that a better performance may occur.

SciMP argues that this problem should be revisited in the future. The equipment to be used during Leg 179 has a "certified" status, but it is argued that this problem be revisited as soon as the Leg 179 experiment can be evaluated. This should occur during the next meeting of SciMP. SciMP is of the opinion that the WHOI tool, especially with a better tool from Schlumberger available, should NOT receive the "Mature Status".

For the Leg 179 Offset Seismic Experiment an Ancillary Program Letter was prepared in August 1997. SciMP was not informed on this nor asked for an opinion at that time.

It is imperative that SciMP be more directly in the loop of the planning of downhole and/or shipboard special scientific programs that have an impact on issues in its purview.

Recommendation SciMP 98-6

SciMP urges that, with both Shipboard Measurements and Downhole Measurements under its purview, that SCICOM ensure a mechanism under which SciMP can provide input in a direct manner in operational plans involving third party tools and experiments.

8.4.2. Proposed Plan for Smart Piston Tool for Gas Evaluations.

The Chairman has been approached by Charlie Paull and William Ussler with regards the development of a "smart piston" for the ODP-APC coring system with the aim of measuring and estimating Sediment Gas Stratigraphies (Appendix 11).

A proposal was made to NSF re this development, but the PI's have been urged to make sure that interactions with SciMP and ODP/TAMU/Engineering are carried out under the mandates of the Third Party Tool Requirements. The Appendix on this issue, produced during the first meeting of SciMP, has been sent to Messrs. Paull and Ussler.

The importance of this tool may be the much better estimation of gas concentrations in pore fluids and sediments, a topic that has long been discussed but that has seen little action.

SciMP endorses the development of this tool and urges the developers to interact with ODP/TAMU and to keep the Chairman of SciMP appraised of progress.

9. Micropaleontological Reference Centers

Brian Huber presented the Report of the Micropaleontological Reference Centers (Appendix 12).

Brian Huber raised an important point for concern. It is imperative that each reference center should show signs of activity. If non-activity should be for more than two years, consideration must be given to the relocation of that reference center.

In addition to the MRC report, Brian Huber presented to SciMP for review a number of recommendation on redistribution of slides to various investigators (see also Appendix 12). SciMP agrees with the actions proposed in the MRC report.

Recommendation SciMP 98-7

SciMP, after due consideration of the proposals and the recommendations by the MRC, urges acceptance of the recommendations made by the Micropaleontological Reference Center Lead Curator re the distribution of slides to various paleontological investigators.

10. Microbiology Laboratory

10.1. Microbiology Requirements by PPG

Joris Gieskes reported on his participation as SciMP Liaison in the meeting of the Deep Biosphere PPG in San Francisco, December 1997.

During the previous meeting of SciMP too little information was available for SciMP to be able to make an adequate judgment of the potential financial requirements for a bacteriology program on the JOIDES Resolution. At that time SciMP suggested that the "Microbiology Facility" should be considered as a third party tool. Nonetheless SCICOM/OPCOM earmarked 400 - 500 K dollars to this project, which was subsequently removed from the budget by JOI (see Section 3 of this report).

It appears that under the present funding climate a gradual build-up of a Bacteriological Facility is called for.

Below estimated costs provided by the chair of the PPG are summarized.

Minimum Requirement For ODP Microbiological Facility
(provided by John Sparks, Chair of Deep Biosphere PPG)

Prices in US Dollars

1) High power epifluorescent and phase contrast microscope with digital imaging facility	60k
2) Laminar Flow Hood	12k
3) Freezer -80 degree C, plus liquid nitrogen storage and transport	10k
4) Anaerobic gas manifold system	3k
5) Autoclave	4.2k
6) Anaerobic Cabinet with core handling capacity	15k
7) Two Gas Chromatographs for analysis of contamination tracers and reducing gases	65k
8) Three cooled and heated incubators	24k
9) Refrigerator	2k
10) Initial set-up costs	20k

Total	215.2k

Conversations with Laboratory Officers Bill Mills and Kuro, as well as with John Firth indicated that some of this equipment is either available or can be purchased through surplus from Biomedical Facilities at Texas A&M University.

The SciMP is aware that the next meeting of the Deep Biosphere PPG will be held at ODP/TAMU, especially to meet the engineers to discuss contamination problems. SciMP recommends that this group also discuss the above wish-list with other ODP/TAMU personnel, e.g., John Firth and Bill Mills.

At this stage SciMP recommends that items 1, 2, 3, 6, 9 are priority items, but arrangements with ODP/TAMU staff will allow more low costs purchases or adaptations. ODP/TAMU staff in the operations group, e.g., Bill Mills, will be more than happy to discuss these items with the PPG membership. Joris Gieskes will be in contact with John Sparks re these matters.

10.2. Microbiology Plans

The Chairman of SciMP (Joris Gieskes) received a preliminary draft of the Minutes of the PPG. Without an official report, however, it is difficult to comment on these plans from an operational point of view. Once more, it is of importance to keep SciMP informed on such plans, if possible well ahead of the SciMP meetings. A liaison from SciMP may be appropriate.

10.3. Laboratory Space

As the Deep Biosphere work is essentially a new program to be housed on the ship, available space is an important problem. During hard-rock legs often space will be available in the Paleontology Laboratory, but, especially in soft-rock legs, a real space problem will occur. One possibility is to explore the use of the Second-Look Laboratory for this purpose. However, such measures are essentially stop-gap measures and more adequate space would be most appropriate.

The most important aspect for a successful shipboard microbiology program will be the development of an appropriate Micro-Biology Van. Costs of vans are not excessive and an outfitted van may cost less than 30K dollars. This is a number to be kept in mind when thoughts are directed to the use of a second vessel for isotope use. A few days of ship-time would pay for the expenditures for such a van.

An important question remains: where would be the most convenient place for the introduction of the van ? Either at the location of the present Core-Tech Van (behind the drill derrick) or on top of the lab-stack (to be made possible during drydock ??). Clearly, again, direct contact of the PPG with ODP/TAMU Staff will be important in this respect.

10.4. Radio-active work

The use of Radio-Isotopes should not be allowed in the normal shipboard laboratories. This work should be restricted to a laboratory van (i.e., the same van as envisaged in 10.3.). A protocol for Isotope Usage should be worked out with the Radiation Safety Officer of the Texas A&M University. Presently a system is in place in which the University of Miami serves as the

laboratory that will check the laboratory van for radio-active isotope spills before and after each exercise that involves the use of these isotopes. Appendix 13 presents and overview of regulations that are used at the Scripps Institution of Oceanography.

SciMP stands ready to work with appropriate members of the PPG and ODP/TAMU to develop an appropriate Radio-Isotope Users Protocol for the JOIDES Resolution.

11. Long Term Observatories

Keir Becker updated SciMP on the plans of the Long Term Observatory PPG.

11.1. Mandate

The following items fall under the mandate of the PPG:

- To devise experiments that incorporate the use of ODP boreholes for long-term measurements at seafloor observatories
- To recommend mechanisms for the implementation, emplacement, and oversight of bore-hole related instrumentation in the context of sea floor observatories planned by other global sciences initiatives
- To organize the development of instrumentation/experimental proposals in collaboration with appropriate global geoscience initiatives
- To recommend ways in which instrumentation in boreholes can be serviced and maintained by, and data retrieved from, platforms other than the JOIDES Resolution
- To provide advice on site survey data, core measurements, logging requirements, and the completion of boreholes in preparation for instrumentation

11.2. Generic Types of Observations

- Whole Earth Processes - Global Tomography OSN/ION
- Regional Strain Observatories JT Sites
- Hydrologic Observatories - Corks (13 emplaced since 1991)

Tectonic Observatories - SEIZE Program; Subduction Settings; Accretionary Prisms; Mid Ocean Ridge Observations

11.3. Operational Issues for Observatory PPG

PPG advice to OPCOM should be channeled via SciMP. This advice should pertain the following:

- Coring programs at Observatory Sites
- Logging Programs at Observatory Sites
- Hole completion Issues - Casing, etc.

- Shipboard Space for Observatory Equipment
- Data Archiving Issues

Keir Becker raised the question re the need for a permanent SciMP Liaison to the PPG.

With the present path of advice channeled via SciMP, it appears appropriate to appoint a liaison for the SciMP to this PPG. SciMP proposes Roger Morin, who has experience in downhole measurements as the SciMP liaison.

12. Discussion of Potential Savings in the Scientific Measurements Program under SciMP

As already mentioned in section of this report, SCICOM has requested SciMP to carry out a review of all the activities and services under its purview:

" **EXCOM Motion 98-1-8:**

Presently determined budgetary constraints through 2003 will negatively impact the delivery of the Long Range Plan . EXCOM asks SCICOM to prioritize future science objectives to maximize the objectives of the Long Range Plan, clearly indicating those which can not be achieved under the existing budget projections. SCICOM should also identify and prioritize changes in the program activities, services, equipment needs and technological developments. SCICOM is asked to forward its report to EXCOM by September 1998.

I am, therefore, asking your panel to set up a procedure by which all the activities and services within your purview, are reviewed over the next few months so that you can present the results of these reviews at the August SCICOM meeting."

This proposal is in accordance with a statement made in the first report of SciMP covering the June 1997 Meeting in Halifax:

"**3.1. Future of Shipboard Measurements**

During the 15th Meeting of SMP in March 1996 Jeff Fox, director of ODP/TAMU, indicated that JOI, in consultation with PCOM and BCOM, has been asked to examine the important new innovations in the program (Borehole Utilization, Legacy Holes, etc.) and to detail their costs. In this framework the question was raised as to "what existing components might be dropped or reduced to accommodate the new initiatives...". In view of the future inception of the new Scientific Measurements Panel (SciMP) it will become important to act on an issue regularly brought up during the last few SMP meetings:

"Future of Shipboard Measurements.

SMP is well aware of the budgetary constraints put on ODP as a result of (potential) funding reductions. In order to study the future of Shipboard Measurements in greater detail under these constraints, SMP deems it appropriate to request ODP/TAMU to provide information to be discussed in detail during the next meeting of SMP:

1. It is requested that a list be made of all major equipment, emphasizing the following:

a. Life expectancy;
b. Changes required for future use;
c. Availability of spares;
d. Software requirements;
e. Maintenance requirements;
f. Time available to perform the measurements.

The basic efficiency of obtaining information using a particular apparatus should be a guide.

2. SMP also would like more information in the form of flow-charts of the various laboratories, indicating contributions to the final product of a cruise, as well as the necessity of performing the measurements on the ship.

SMP wishes to stress that hitherto the Panel, justifiably, has advocated the full scale of measurements on board ship, thus providing an opportunity to a large number of scientists from different disciplines to produce a product of first class scientific value in an unique environment that stimulates collaboration. This has served very well also in the training of young scientists and graduate students. Thus, though economic necessities may force some reductions in these efforts, SMP wishes to use the above requested information in a very carefully considered manner. The philosophy should remain that the shipboard party should produce a first rate scientific result through collaborative science on board the JOIDES Resolution. This information constitutes an important legacy of the Ocean Drilling Program

Jay Miller indicated that under the new circumstances of re-organization and the work associated with the writing of a new 5 year budget, little time has been available to pay attention to this issue. However, in the near future attention will be paid to this problem.

Bill Mills noted that for the most part, since technicians are multi-tasking, technical costs are not reduced even if equipment is removed. A major point for consideration, however, will be the question of efficient use of time. In addition there will be a need to investigate aging equipment and its potential replacement. Jay Miller indicated that ODP/TAMU has learned that the level of effort required to do the above job well will be much greater than originally anticipated.

SMP is still of the opinion that this will be a useful exercise, at least as far as reporting age, maintenance requirements, and level of utilization. Hence SMP (or the future SciMP - Scientific Measurements Panel) looks forward to obtaining the requested information so that SMP (SciMP) and ODP/TAMU can jointly investigate in detail what impact potential replacements and/or reductions in shipboard measurements will have on shipboard science or on budgetary savings."

Clearly, with ever increasing budget deficits this item has become of prime importance. For these reasons SciMP has devoted considerable time and attention to an evaluation of the potential cost savings that might be effected, but to consider the consequences of such reductions to the overall goals of the scientific program of ODP.

Below SciMP offers a series of views that will serve to continue debate within OPCOM, SCICOM, and EXCOM.

First a brief review of the functionalities of the various ODP services under the purview if SciMP is appropriate.

12.1. **Shipboard laboratories**

As already mentioned in Section 6.4. of this report, Jay Miller has reported the costs associated with the various shipboard laboratories. Appendix 3 presents this list, which is, albeit, in a preliminary fashion. Of importance is the division of the various equipment items into those that are associated with safety issues, and those which are more ephemeral in nature. In addition, the list provides estimates of yearly needs for supplies, maintenance, and the estimated replacement costs of shipboard apparatus. On the last page of Appendix 3 the support costs for the laboratories are summarized. Replacement costs are presented to indicate the costs that may arise from complete equipment failures.

12.1.1. Chemistry (Organic, Inorganic, XRF/XRD)

Much of the equipment in the Chemistry laboratory is associated with safety issues. This is true especially with respect to the equipment available for the measurement of gases and gas compositions. For these reasons the items tabulated on the first page of Appendix 3 are items that must be retained for the maintenance of minimum safety requirements.

Other instrumentation serves two purposes:

a. Pore waters must be extracted on board ship and certain constituents must be determined forthwith, e.g., pH, Alkalinity, labile compounds such as ammonium. Other components can be determined at low costs with apparatus available: Ion Chromatograph(s) (e.g., cations and anions, mostly sulfate); Atomic Absorption Spectrometer for cations and trace metals.

b. Solids compositions can best be determined through XRF and XRD analysis, data from which can, in principle be used for making scientific drilling decisions. Traditionally results from the XRF apparatus has been a main interest of hard rock scientists, but the analysis of sediments has received increased attention.

Thus:

- Instruments utilized for judgments on for safety as well as those that measure ephemeral properties that may change with time are essential;
- XRD, XRF, utilized by an increasing number of shipboard science projects, are in principle considered essential to shipboard science

12.1.2. Physical properties

The most important equipment in the Physical Properties Laboratory is (and always has been) the MST track. The great improvements of the traditional MST track and the semi-automatization of many of the physical property measurements using the split core track have led to much innovative science and constitute the foundation of the paleoceanographic discipline. In addition split core tracks are presently (or will be in the near future) the basis for digital imaging of the cores.

Other physical properties also need immediate attention upon splitting of the cores: density, conductivity, van shear, etc., as these properties depend on measurements of cores that have not undergone alteration through evaporative processes.

Especially because of the reliance of various shipboard programs (e.g., paleoceanography) several aspects of potential cuts must be considered:

- MST measurements low maintenance, low cost; high yield for low budget
- A potential loss of a wide constituency of the Scientific Community if some or all of these measurements are abandoned.
- ~75% of measurements of physical property measurements are made at sea

12.1.3. Geomagnetism

The cryogenic magnetometer is a new instrument and should last for a long time; the instrument does need periodic supplies, e.g., helium, spares.

Other subsidiary measurements are relatively low cost items, though replacement costs will still amount to ~ 60K dollars.

12.1.4. Sedimentology and Structural Measurements

Microscopes are relatively small items on the overall budget.

Important aspects for both Sedimentology and Structural Geology are the split core track measurements of Color and the Digital Imaging of the cores. Much progress is being made into innovative and improved apparatus that will serve these purposes. Bill Mills demonstrated the latest development in digital imaging, presently at ODP/TAMU. As Color Imaging may replace Color Photography in the future, this development is of importance to ODP.

12.1.5. Photo-Laboratory

Hitherto Photography, black and white as well as color, has been one of the important methods for archiving information on the cores. At present Color Photography is considered the prime methodology for this purpose, as color photographs lend themselves, well to digitization. In the future, however, Color Digital Imaging should be tested versus this method (see 12.1.4. above). This will be initiated during Legs 179/180.

12.1.6. Thin Sections Laboratory

Costs associated with this laboratory are relatively small and the facility serves both hard rock and soft rock petrologists.

12.1.7. Paleontology Laboratory

This laboratory has a wide array of microscopes, which will need periodic service, but are essential to the shipboard scientific program.

12.1.8. Microbiology Facility

See Item 10 of this report.

12.1.9. Underway Geophysics

The use of this laboratory is sporadic and variable. For special experiments, e.g., VSP, or for the purpose of relocating drill sites, this laboratory should be maintained at supplies costing ~ 30K dollars per year.

12.1.10 Downhole Laboratory

The ODP/TAMU responsibilities are mainly with the operation of the temperature tools in the Piston Core Shoe (ADARA) and the WSTP. Both of these instruments yield vital information on the temperature structure of the drilled sections in soft rock settings.

12.2. Downhole logging - Borehole Research Group

David Goldberg indicated that the new lower costs priorities have led to the following (see also Section 8.3):

"2 years ago, standard tools moved to specialty tools. They can only be used if requested in prospectus and included in FY budget. This year, back-up tools were removed. The consequence is that, if these tools fail, the measurement will not happen."

An important matter is that the new Schlumberger Array has a much improved capability with regards porosity measurements, as was quite evident from data presented by both Geraldo Itturino and Dave Goldberg. This topic will be revisited in the discussion of potential savings to the program.

12.3. Publications

As pointed out in Section 5.3 of this report, substantial savings have been accomplished by ODP/TAMU/Pubs as a result of the transfer to electronic publications. Below SciMP will discuss potential changes in policy that may lead to further savings.

12.4. Information Handling

The new Janus Database system is presently being installed at ODP/TAMU - see Section 7.2. of this report.

12.5. **Potential Cost Savings in Shipboard Laboratories Review**

SciMP considered a number of options for cuts in the shipboard measurements. Below SciMP chooses to offer three categories for potential action: most drastic; less drastic; and much less drastic in nature.

A. Most drastic actions:

Complete removal of shipboard work, but for some work on safety related problems and some ephemeral properties. Cores would be packaged for shorebased work on descriptions and further measurements.

Clearly this "solution" would be totally unacceptable to the Science Community. It would diminish the size of the Science Party, but it would be most

difficult to accomplish and it probably would be more costly. In addition, the "captive audience" on board ship will never be replicated on land, as people from different institutions would not be able to justify simultaneous sabbaticals for this purpose !!

B. Moderately Drastic Scenario

Shelving of the following apparatus, causing unavailability on the ship

1) Cryogenic magnetometer
2) XRF
3) XRD
4) VSP
5) Split Core Track
6) Underway lab not assoc. w/ safety
7) p. 3 (Appendix 5) except spectrophotometer

Again this will cause major repercussions with users of the community. The attractiveness of joining a drilling leg is much enhanced by the availability of the above equipment for use in interdisciplinary studies. Finding them covered or removed would not be an interesting thought. A very large of the constituency would be lost, thus causing a major crisis in the science community which the program is supposed to serve.

C. Less Drastic Scenario

In this scenario less equipment would be involved by the "lay-up" of part B. This "lay-up" under C would involve:

1) Routine Expenditures

a) AA: save $1000/yr
b) Old Dionex (ion analyzers):
c) Tensor tools
d) Guns, streamers: $1000
e) Color photography:
f) Molspin
g) Thermal demag.

Also it would not allow replacements of the following items:

2) Replacement Items:

a) AA: $35,000
b) Ion analyzer
c) Multichannel streamers
d) 200Ó water guns
e) VSP guns
f) Dishwasher: $1000

The main problem is that Equipment on board is available and can only be considered "Cost Savers" through the identification of "none replacement". Indeed the cut of the XRD Replacement proposed in Section 3 (Message from JOI) is a *phantom* cut, in that the equipment

is still functional and does not yet present the problem of replacement. The only potential savings under the Category of Replacement would be in the clear identification of the equipment that will not be renewed or earmarked for replacement now or in the future. This could constitute a "future saving".

Jay Miller and Bill Mills presented an estimate of maintenance costs per year to keep present equipment in working shape: this constitutes roughly 90,000 US dollars per year (two days ship-time).

The estimates of "supplies" are less certain and should be separated into the categories: safety (~ 80K dollars) and ephemeral (< 100 K dollars for case B; much less for case C).

SciMP concludes that any "lay-up" (non-use of equipment, though remaining on board) of shipboard equipment would constitute only minor savings in costs. Certainly any future increased deficits would not be combated by the above potential cuts. Cuts in personnel would also be difficult to carry out, as most of the technical personnel is either involved in safety related laboratories (e.g., Chemistry) or only marginally in the other shipboard laboratories. Most of the Technical Staff is needed for core handling purposes. Only under item A could savings be effected rationally.

12.6. **Publications**

Ann Klaus indicated that many of potential costs savings with regards to publications can only be over a longer term period as for volumes up to the year 2001, as contractual arrangements are made with appointed Chief Scientists, etc. In fact as pointed out before in this report, cost savings of 41% in the operating budget have already been realized to 2002.

Extra savings could be effected in the future as follows

A. Less drastic scenario

Outsourcing costs of publications

B. More drastic scenario

Elimination of SR starting with Leg 172: $331,000 total by FY2003

Potential consequences of such a policy could be:

Papers will get lost;
Leg Compendium will be lost;
Non-performing issue will need complete new definition;
Important visibility will be lost;
Collegiality will be strongly affected to the detriment of the program.

IR volume on WEB only w/out edit (straight from ship) with possible publication of Hole Summaries only (Old DSDP Mode). Potential cost savings: ~$ 500,000/year

Potential consequences to the program:

Low quality of the volume
Not citable - "grey literature"
Not archivable
Potential publication conflicts with MOU with NSF, etc.
Loss of visibility of the program - difficulty to read WEB papers

Print Booklet + CD only: cost savings: $300,000 - 350,00

Potential consequences similar as above

12.7. **Information Services**

Use of PC's only Cost savings: ????

This solution is probably not practical and will upset a considerable part of the user community

Data Migration delay Cost savings: 0

1. **Data will get lost through this delay**
2. **Janus limited**

No support for Janus on shore: ~$ 500,000

1. **Effectively cuts shore based science**
2. **Diminished science and synthesis**

Delay computer upgrade: Cost Savings non-existent as this has already been done.

12.8. **Logging Services**

Two potential areas for Logging Services might be earmarked for cuts. Below we detail these with a listing of the consequences.

Innovations

Large diameter tools - pipe conveyed

Consequences:

Large impact on innovative new measurements
- MDT - Fluid sampling
- NMR logging
- FMI logging

Logging While Drilling (LWD) - Logging While Coring (LWC)

Consequences:

Moderate impact
- improved drilling
- needs stronger emphasis on co-ordination between LDEO and

Services

Porosity tool downgrade; no back-ups. Potential savings $ 50,000

Consequences:

Risk of data loss as a result of non-availability of back-up

Compromise in data quality

Moderate impact, particularly for Legs where accurate porosities are

12.9. **Core repositories**

Another potential saving offered for consideration was the problem of core curation.

If indeed the sampling request drop off almost exponentially with time since they were obtained (more information should be provided by the curators), then the question arises whether old cores should be stored in perpetuity. Though statistics already exist on the time dependence of sampling requests (close to an exponential drop with time), SciMP will need input from the Curator at ODP/TAMU. This information should include an investigation into the potential consolidation of repositories in terms of costs and loss numbers.

One of the main results of such a consolidation would be the gradual elimination of technician supported access to the old cores. This problem needs wider discussion in the community, but information from the ODP/TAMU curator would form the basis for such deliberations. At present there is no reliable information on potential savings resulting from an entirely new core curating system, but elimination of the tqo core repositories outside ODP/TAMU would realize approximately $ 400,000/year in savings.

13. Impact on Long Range Plan

In the following we summarize the potential effects of cutting certain services, potential cost savings, and the potential effects on the Long Range Plan (LRP).

Services	Costs	Consequences to LRP
Heave Compensation	$ 1M	Large
Microbiology	$ 90K - 200K	Large
Expand Laboratories	$ 500K	Large
LWC/MWC	$ 50K - 600K	Small/Large

DCB	$ 100K	Large
Large Downhole Tools	$ 100K	Large
Splicore Track Innovation	$ 220K	Large
Seismic While Drilling	??	Small
Hammers	$ 350K	Large
Geotech Tools	$ 100K	Large
Long Term Observatories	Variable	Large
Shipboard Laboratories (maintenance)	$ 100K	Large
Logging (downgrade logging)	$ 50K	Small/Intermittent
Curation (Closures E/W)	$ 400K	Small
Publications	$ 200 K ????	Small
Information Services (Eliminate Janus)	~$ 500K	Large

Many of these items are highly debatable. SciMP offers these suggestions in response to the task given to SciMP by the SCICOM Chair:

"I am, therefore, asking your panel to set up a procedure by which all the activities and services within your purview, are reviewed over the next few months so that you can present the results of these reviews at the August SCICOM meeting."

It seems appropriate that SCICOM consider these options in view of potential changes and in terms of consequences, either with respect to the user-community and the future success of the long-range plan. Input from SCICOM/OPCOM is necessary at this point in the pursuit of this topic. SciMP stands ready to provide further assistance as required by SCICOM/OPCOM.

14. Membership

As a result of the request by the SCICOM chairperson Patty Fryer, Will Sager, and Joris Gieskes were asked to serve through one more meeting of SciMP, i.e., through June 1998. After that these members will rotate of the Panel.

There will be a need for replacement of these US members. One concern will be to preserve balance in the panel. There appears a need for one physical property expert, one magnetic measurements expert (Juergen Wohlenberg did inform the panel chair that he will be replaced in 1999 by Franz Heider, a geomagnetist with previous SMP experience), and an expert on data management (and migration !), perhaps with a Janus Steering Committee experience. There was some question as to how to go about this selection of US members and it was

deemed appropriate to discuss this matter first with the OPCOM membership. Whereas panel membership from the other partners is decided outside the panel, it seems inappropriate that the panel as a whole should discuss US membership. A more definite policy needs to be worked out towards this purpose.

15. Next venue of SciMP

Two possibilities were mentioned:

1. A meeting in early June 1998 in Darwin coinciding with the portcall of *the JOIDES Resolution*. Alexandra Isern has offered to be the host of that meeting; and

2. A meeting at the Lamont-Doherty Borehole Research Group in early June 1998.

The sentiment of the panel was towards a meeting at the ship. Indeed, any further recommendations regarding potential savings with Scientific Measurements could best be generated during the Australia port-call in Darwin.

16. Acknowledgments

The SciMP wishes to thank the co-operative nature of the various measurements branches of ODP (ODP/TAMU and ODP/BRG), with special thanks to Ann Klaus, Jay Miller (the meeting host), Bill Mills, Kazushi Kuroki, and all other ODP/TAMU personnel. Their participation in the Hilton Hotel Meeting served close to the purpose of having the meeting at ODP/TAMU, i.e., to interact closely with ODP/TAMU personnel.