

## BUDGET COMMITTEE REPORT

28 February - 1 March 1995

### I. INTRODUCTION

The Budget Committee met to consider the budget and planning for FY96. Committee members present were John Orcutt (Chair), Brian Lewis, Rob Kidd, Margaret Leinen, and Robin Riddihough. The budget shortfall this year was \$1,709,421, the largest differential ever posed to a Budget Committee.

The Budget Committee annually reviews the ODP requests and makes its recommendations through this report and the subsequent EXCOM meeting. In this case, the EXCOM will review the recommendations of BCOM, but the meeting is late enough in the year (July) that implementation of the recommendations will have to be done prior to that meeting. However, the issues raised here have major implications for the operations and planning for the next three years and require full review by both the PCOM and EXCOM.

As noted in previous BCOM reports, the budget review process has become progressively more difficult over the last few years. In the past, the source of this difficulty has been the ever increasing gap between available funds and the scientific needs and expectations. While growth has been low in past years, the financial pressure on ODP will be greatly amplified in the next two years (FY97/98) as the projected budget remains flat and inflating "fixed" costs reduce the discretionary portion of the drilling budget. Based on the experience this year, ODP can anticipate programmatic reductions on the order of \$1M in each of these future years.

The BCOM has recommended a budget package that largely supports the proposed, operationally expensive FY96 Science Plan. Cost savings have been realized by slightly delaying the development funding for the Diamond Coring System (DCS) with no actual impact on the schedule for delivering such a system to the ODP, by delaying the acquisition of an upgraded shipboard cryogenic magnetometer, implementing the recent draft recommendations of the PCOM Publications Subcommittee, and reducing efforts in engineering development. Detailed reductions in funding are outlined in Section II.

The BCOM is concerned that the recommendations of the Engineering Development Review Committee (June 1994) have not been fully adopted at this point at TAMU. In particular, Improvement (3) of that report:

All development engineering projects, including really major efforts like DCS, should be assigned distinct budgets and project leaders who report to the supervisor of development engineering.

has apparently not been implemented. This lack of information about the projects and directions of the various engineering projects has made it difficult to evaluate priorities in the light of declining budgets. The impact of a reduction in this area is difficult, under these circumstances, to evaluate. The BCOM recommends vigorous efforts to adopt a project management scheme at TAMU as early as possible, and has provided funds to aid in this effort. Furthermore, the BCOM feels that engineering development requires new means of doing business. Particularly helpful would be major efforts to develop "Joint Ventures" with governments, laboratories and private companies within the member countries.

## II. RECOMMENDATIONS

The Budget Committee recommended budget changes which were, where practical, consistent with guidance from PCOM. We note, however, that the large budget differential required reallocations and cuts larger than those which could be realized from these recommendations alone.

Prior to the BCOM meeting on 28 February, Dr. David Falvey met with the contractors on 27 February to review budgets. Based on discussions at that meeting, the base budget at TAMU was reduced to \$36,203,303 from the earlier budget of \$36,825,105. This budget saving was realized through reductions in publications costs (adoption of PCOM Publications Subcommittee recommendations), technical support (no reduction in personnel), ship operations (savings in fuel, for example). At this level, the TAMU base budget for FY96 (Proposed) was smaller than the TAMU FY95 base budget.

The budget recommendations for FY96 are:

TAMU		
"New" Base		\$36,203,303
Reductions to new base	Engineering Development	(\$200,000)
	Offices/Admin (01 category)	(\$200,000)
	<b>Total New Base</b>	<b>\$35,803,303</b>
SOE's eliminated	DCS	(\$535,000)
	H <sub>2</sub> S	(\$11,000)
	New Cryo. Magnetometer	(\$250,000)
SOE's retained	JANUS (Database)	\$1,700,000
	Drilling Operations	\$560,200
<b>Total TAMU</b>		<b>38,063,503</b>

## JOI

Base		\$1,949,408
Reductions	<i>JOIDES Journal</i>	(10,000)
	Across the board	(\$30,000)
<b>Total JOI</b>		<b>\$1,909,408</b>

## LDEO

Base + SOE		\$4,935,444
Reductions	Wireline tool manual	(\$10,000)
	Ship lab upgrade	(\$10,000)
	Schlumberger (Leg 167 BHTV)	(\$20,000)
	Across the board	(\$30,000)
<b>Total LDEO</b>		<b><u>\$4,865,444</u></b>
<b>TOTAL FY96 BUDGET</b>		<b>\$44,838,355</b>

### II.1 TAMU Reductions and Rationale

- Reductions to both the TAMU base and SOE budgets were recommended. The funding for DCS in FY96 was eliminated with the expectation that this would be taken up again in FY97. The simulation testing of the DCS will not be completed until after December, 1995. Given this, including DCS in the FY97 Science Plan will not be possible under any circumstances. The delay imposed would not, in itself, prevent the use of DCS some time in FY97 (almost certainly no earlier than calendar year 1997).
- The budget item for the repair, refurbishment and recalibration of equipment to support H<sub>2</sub>S (\$11K) operations was set to zero although TAMU assured the BCOM that funds from the existing budget would be found to support this.
- The BCOM has proposed a delay in the acquisition of the cryogenic magnetometer until FY97. Possible carry-over funds which might arise from FY95 operations (lowered fuel usage, lower travel costs, etc.) should be used to purchase the magnetometer as the highest priority.
- Following a review of the programs being pursued as Engineering Development, the BCOM has recommended a reduction of funding at a

level of \$200K for this work. As noted in Section III, the adoption of the recommendations of the Engineering Development Review Committee (including reviews by PCOM and TEDCOM) are essential in the near future in order to develop a clear set of priorities for a limited number of engineering projects.

- Finally, a reduction of \$200K across the board for the 01 category, offices and administration, should be made.

## **II.2 JOI Reductions and Rationale**

In the case of JOI, the BCOM felt that it was important to reduce the costs of printing and mailing of the JOIDES Journal. The BCOM has recommended a reduction of \$10K in this category to be followed by \$10K/year for the next two years (\$30K of \$43K available). The goal is to publish the Journal entirely electronically in three years' time. In the interim, publishing the committee lists, phone numbers and e-mail addresses electronically and on inexpensive printer output and eliminating reports such as white papers could reduce printing and mailing costs. In addition, a single \$30K across the board reduction in budget was recommended.

## **II.3 LDEO Reductions and Rationale**

The LDEO budget was the only one submitted which adhered to JOI's planning target. However, the BCOM felt that several reductions in costs could be made this year. The last wireline tool publication was published in 1994. We recommend no funding for this effort this year. While an upgrade to the wireline lab on the ship is highly desirable, the BCOM recommends delaying this effort for a year. While the BCOM supported the use of special tools for most of the recommended legs, we felt that eliminating the BHTV for one hole on Leg 167 was acceptable. Finally, the BCOM has recommended a \$30K across the board cut to be made at the discretion of the logging office.

## **II.4 Implementation of Project Management**

The total funding needed to implement the Science Plan for FY96 is \$44,838,355. The BCOM recommends that the \$60K differential be devoted to the purpose of implementing project management at TAMU (Section III).

## **II.5 Effects of BCOM's Recommendations on the FY96 Science Plan**

The major operational item in the TAMU SOE itemization that could have affected the FY96 schedule was \$560K of special operations for the deployment of re-entry cones and CORKS, a major requirement of the FY96 Plan, and this has been preserved. PCOM should note that this request assumes one less CORK being deployed on Leg 168. Additional costs of >\$580K calculated by

TAMU in response to the request from proponents of Legs 168 and 169 to allow a split into a three leg scenario for the Juan de Fuca and Sedimented Ridges programs could not be contemplated in the context of our flat-funded budget. PCOM needs to comment at its April meeting on the request from co-chiefs and VSP proponents for a cased re-entry hole to be left at one of the Leg 164 Gas Hydrates sites.

In the LDEO budget an SOE request for deployment of special Schlumberger tools included use of the borehole televiewer (BHTV) on Leg 167. This is flagged only for California Margin site CA-1 and alternate CA-3, at a single leg cost of \$20K. This is the amount recommended for savings from the SOE but LDEO were asked to examine also the need to deploy the high resolution magnetic tool (GHMT) on the Bahamas Transect. PCOM again needs to comment on science priorities here.

## **II.6 Response to PCOM's Prioritization of Potential Budget Cuts**

At its December 1994 meeting PCOM passed the following motion:

"PCOM offers the following prioritization for BCOM with respect to budget cuts required by flat funding of \$44.9M for FY96, 97 & 98, as identified by NSF":

1. Publications: a one third reduction by end FY98
2. Technical Support: potentially a one FTE per leg reduction
3. Engineering Development
4. Support certain experiments and special logs with non co-mingled funds.
5. Reduce SOE in annual budget from 4% to 3%

Also the Program should look to implement new approaches to Project management.

As a result of the BCOM recommendations action has been taken on all but items 4 and 5 in this listing but at least for FY96 the implementation can be made smoothly.

1. The report of PCOM's Publication Subcommittee was made available to both BCOM and TAMU and, although it still has to be presented and discussed at PCOM in April, the base budget level for FY96 recommended in the Report was agreed as the sum to be secured in the TAMU budget. At \$1,751,000 this represents savings of \$217,560 in the first year.

2. TAMU's implementation of a policy to increase the numbers of technical staff who operate on a sea-going only basis has allowed the

required saving of one FTE per leg to be implemented without loss of numbers of technicians at sea.

3. Engineering development at TAMU has suffered a cut of \$200K across the board. This will mean the maintenance of only 2 to 3 projects at TAMU through FY96. PCOM still has to review and prioritize TAMU's ongoing and projected non-DCS development projects at its April meeting.

BCOM found that there was no requirement to invoke PCOM's budget prioritization items 4 and 5 at least for FY96 but it has taken steps to implement the attendant recommendation on Project management by reserving \$60K in the TAMU budget for implementation and training of staff.

### **III. PROJECT MANAGEMENT**

The implementation of full project management for all aspects of ODP is a goal that BCOM believes is essential. It is needed both to adapt to a future of "flat-lined" and declining budgets and to achieve the new way of doing business that will be necessary for renewal beyond 1998.

BCOM recognizes that the introduction of project management procedures may be neither simple, quick nor easy, It therefore recommends that the \$60K balance between the recommended FY96 (\$44,838K) and the available \$44,900K be assigned to TAMU as a Specific Initiative for the implementation of project management. This will involve widespread management training and adaptation of appropriate information systems. The Initiative should clearly have objectives, milestones and measurable outcomes and be in itself a model/test-bed for what it is required.

The BCOM will review progress along these lines in 1996 and expects that TAMU budgets will reflect the full adoption of project management by FY98. Therefore, a plan for implementing project management should be produced by December 1995.

### **IV. PROJECT JANUS**

BCOM noted that a contract for the new base management system had been signed by TAMRF with TRACOR. The contract is for two years, starting in February 1995. The contract is being administered by TAMRF with assistance from TAMU's project leader, John Coyne. Overall project guidance is being provided by a JOI Steering Committee. The mandate of the SC and the Statement of Work for the project have been agreed upon and widely disseminated.

BCOM endorses the overall management structure for JANUS but stresses that the SC should be responsible to JOI in terms of reporting and arrangement of meetings. JOI should therefore control the travel (\$100K) funds for the SC and the user groups to be established by the SC.

## V. THE FUTURE

The Budget Committee is extremely sensitive to the need for continuing innovative science in the Ocean Drilling Program as a requirement for renewal in 1998 and to the fact that this need exists within the context of a flat overall budget with increasing fixed costs. This presents a new challenge to the scientists of ODP, to its managers, and to its contractors. In the past we hoped that the addition of new full partner nations or increased partner membership contributions would result in an increase in the total funding available. However, during the past two years the international economic situation has made increases in member contributions impossible and in some cases has even made the continuation of our present membership difficult. One of our consortia has had to work very hard to maintain its membership and we have had to accept that new international partners will probably come in as replacement for funds lost by some of our existing consortia or, at best, from the formation of a single new consortium. We believe that we are looking at a flat budget until 1998 at best. The effects of inflation will therefore reduce our budget in real dollars. In addition, all of our primary subcontractors face personnel cost increases as well as increases in the cost of secondary subcontractors (SEDCO/BP, Schlumberger).

This new budget challenge comes at a time when we are anxious to address exciting scientific opportunities and at a time when it is critical that we continue to show our capability for innovation and discovery. The 1998 renewal of the contract will be accompanied by great scrutiny of both the overall achievements of the program and the most recent achievements. It will not be sufficient, for example, to point out that our work has been the single most important contribution to understanding subduction zone characteristics and properties that are important for Earth's major earthquake hazard areas. We will need to show a continuing pattern of depth and sophistication in the formulation of our hypotheses for studying this problem and in our results over time. Thus, the next three years of drilling, when our resources will be squeezed to our limits, will be examined in greatest scrutiny for evidence of a lively and productive program. During the past few years the focus for such a program has been technical innovation, which is, of course, expensive.

Our Special Operating Expenses (SOE's) were designed to provide funds for such innovation. However, the last three years have demonstrated that we need innovation in some of the other functions of ODP. For example, our innovation in acquiring a broad spectrum of scientific logging data on a

routine basis has led to a rapid expansion of the ODP database and to innovative new ideas for the integration of this data together with the data collected routinely from shipboard measurements and from post-cruise measurements made as a part of the program and included in our Scientific Results volumes. As a result, starting in FY94, the Budget Committee identified a new relational database to facilitate the synthesis of the expanding quantity of data generated on each leg and of the vast legacy of data collected during the history of ODP. This has decreased the funds available for hardware and technical innovation.

The Budget Committee believes that there is no lack of good scientific plans and objectives being presented to our scientific advisory structure. Thus the challenge is to provide the scientific advisory structure with the greatest capability for technical innovation and for addressing challenging projects during the next few years in spite of flat budgets and a major database initiative. Our Engineering Development Review Committee identified the importance of project management for that division of our efforts. We believe that it is important to extend this approach to the entire program, identifying legs of drilling as "projects" with their own time lines and cost identification. Thus an important component of our strategy is based on project management. In addition, we believe that an increase in joint ventures for technical development will allow us to extend our innovation without an increase in our budget.

Our strategy for emphasis on project management will allow scientific planners and managers to identify and balance the cost of innovative technical solutions for scientific problems with more routine solutions to exciting problems. Without such project management it is impossible for us to assess and balance the costs of innovation against more routine approaches. In order to move to a project management approach, we have identified the Engineering Development function as a pilot program for project management and have identified some of our SOE funds to provide training and to implement this change in management structure.

Our strategy for emphasis on joint ventures will allow us to build upon the extensive technical expertise of our member partners and to provide opportunities and a platform for their innovation within the context of our scientific plan. Such joint ventures in technology present management and legal issues related to intellectual property. Thus, we recommend that JOI be asked to identify such issues and to present the program with a plan to address any legal or management issues that we will face from an expansion of joint ventures with our partner members.

In terms of the impact of declining budgets on the science program BCOM notes that the LRP presently under revision should strive to use the present capabilities to their maximum scientific effectiveness consistent with the



budgetary imposed technical constraints. This will likely mean reduced usage of legs requiring expensive ancillary programs and a delayed implementation of a DCS system through 1998.

Beyond 1998 BCOM stresses that achievement of technically challenging objectives will require increased funding to ODP.