

#### IV. Alternatives Proposed

OTA asked its scientific panel to consider whether alternatives to the present ocean margins drilling program could increase its scientific value, decrease the costs, or both. Several alternate approaches are included in Appendix A. Next alternatives first question the basic assumptions or constraints that helped mold the present program: industry participation, technology development, the variety of scientific problems addressed, and the budgetary considerations. The interaction between these factors has produced certain compromises evident in the present program.

Among the alternatives suggested are two general approaches -- those that place greater focus on the science and those that give greater emphasis to resources.

##### A. Alternatives With Greater Science Focus

Most alternatives focus on the scientific efforts and recommend a delay in developing the technology, and thus the very deep drilling. While these alternatives lack the scientific variety as the present plan, they suggest focus on a few principal areas of research. Most advocate using the NAS' Bally report, which is broadly supported as addressing important problems, for initiating a program. Some, such as that proposed by Dr. John Imbrie, advocate making a direct connection between specific science goals and national needs for future oil and gas resources.

The principal elements in an alternative approach with a greater science focus would be to:

- o Plan and conduct extensive geophysical surveys as the initial effort and delay decisions on the technology and operations for very deep drilling.
- o Identify targets that are within the capability of existing technology for the early drilling efforts.
- o Define the goals of the very deep drilling phase after the initial work is completed, assuming the possibility of substantially improved technology by that time developed by industry.
- o Seek broad scientific support for specific program plans commensurate with the size of the effort before each phase of the program.

This approach appears to have the following effect on other aspects of the program.

Industry Participation: Some petroleum companies may be more willing to support this approach, others may not if drilling is proposed in water depths of less than **6,000 feet**.

Technology Development: This would be done in steps with lower risk at each step.

Budget: Less funding would be required in the early years. More emphasis would be placed on geophysical studies and less on developing

hardware. A decision to spend alot more money for the drilling ship may be delayed. Also, it may be possible to estimate more accurately the costs at each phase.

B. Alternatives with Greater Resource Focus

Industry and some academic scientists adovocate the need for a greater understanding of potential hydrocarbon resources in offshore continental margins. The present program offers very little for assessing commercial resources. Some petroleum companies want the government to refrain from any greater involvement in attempts to locate offshore oil and gas resources. However, there is some support for a program that would include some government and industry cooperation with a focus on assessing commercial resources. (See Section VI for industry views and Appendix C for the Hedberg proposal.)

An alternative for this approach would probably contain the following elements:

- o The petroleum industry would take the lead in planning and conducting a program to assess the commercial resources on the U.S. continental margins.
- o The government would offer incentives to allow industry funding of the program.
- o Scientific studies would be conducted both as an adjunct to the industry program and separately in those areas that industry

would not cover.

The approach appears to have the following effect on other aspects of the program:

Science: A new science plan would have to be developed in conjunction with an industry plan. It would be important to get broad support for this as well.

Technology: The Glomar Explorer may be an appropriate vessel for this program, but, if so, the government would not be involved in developing advanced drilling and well control technology.

Budget: The government's ocean margin drilling budget would probably be substantially reduced and industry would probably assume the large financial risks.