(Continued from page 1273)

all of us to develop the first one together so that we can develop the basic technology and understanding. It is certainly the cheapest way of doing it, and we get access to all the best brains that way. The President nodded affirmation, but whether he agreed is up to him."

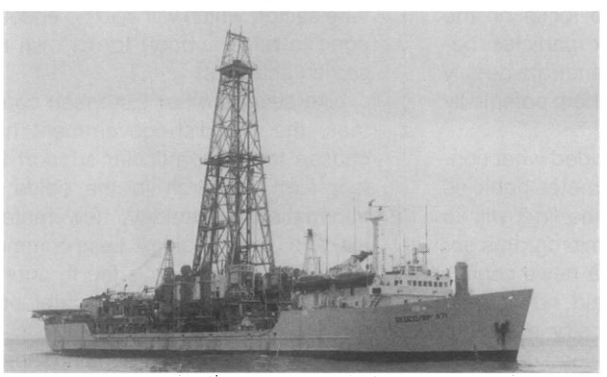
As Beggs left to fly on to Tokyo, where the Japanese government has already expressed much informal interest in collaboration, thoughts in Europe were already turning to the summit meeting of the heads of state of advanced nations, which will take place in London at the beginning of June (and is the successor to last year's meeting in Williamsburg). An endorsement at this meeting of international collaboration in NASA's plans, combined with a commitment to maintain a separate, balanced research program in Europe, would mark a significant step in European space policy, because it could provide the political leverage needed if both of these goals are to be reached.

—DAVID DICKSON

NSF Gets Up Steam on Drilling Program

The National Science Foundation (NSF) has announced the chartering of a drilling ship for its new deep ocean drilling project. The 471-foot vessel will be operated for NSF by the Texas A&M Research Foundation in behalf of a consortium of ten major U.S. oceanographic institutions. Jointly owned by SEDCO Inc., of Dallas and British Petroleum, the ship has a no-nonsense name, *SEDCO/BP 471*, a less evocative one than that of the ship it replaces—the *Glomar Challenger*. But the owners have given NSF the option of changing the name.

The ship will be used in a new Ocean Drilling Program (ODP) which is the successor to NSF's successful Deep Sea Drilling Program (DSDP) that is credited with enabling researchers to substantiate the theory of continental drift and make significant contributions to the long-term understanding of climatic change.



Derrick on ship chartered for NSF towers 200 feet

The ODP is planned as a major international drilling project to study the origins and evolution of the earth and the oceans and ocean resources. Well along in the process of becoming participants are Canada, the United Kingdom, West Germany, and a European Science Foundation consortium which includes Italy, the Netherlands, Norway, Sweden, and Switzerland. And France and Japan are expected to sign on. The Soviet Union was active in the DSDP, but the connection was dissolved after the occupation of Afghanistan.

Each participant will contribute $200,000 in the current year to carry out planning activities and will pay $2.5 million a year when full operations begin. Scientific planning for the program will be done by the Joint Oceanographic Institutions for Deep Earth Sampling (JOIDES), an international organization which performed the same function for the DSDP. Participant countries will be represented on all JOIDES committees and panels and will be guaranteed places for a certain number of their scientists on each scientific cruise.

In searching for a successor to the *Challenger*, NSF at one point seriously considered as a candidate the *Glomar Explorer*, the intelligence ship that under CIA auspices recovered part of a Soviet submarine from the seabed in a deep part of the Pacific. Estimates of the costs of conversion, however, were steep and interest shifted to commercial drilling ships when the current slump in commercial ocean prospecting made such ships available for long-term charter on attractive terms. The contract for the SEDCO/BP vessel, which was built in 1979 in Halifax, Canada, calls for an initial 5-year term with an option for extension.

NSF estimates the cost of running the ship at some $18.4 million a year compared with about $15.7 million for the *Challenger*. Total costs of operating the program are put at about $30 million a year, and NSF anticipates that contributions from its international partners will defray up to a third of the total. Immediate costs for conversion of the ship are put at about $10 million.

The new ship will accommodate 50 scientists, almost twice as many as the *Challenger*, and will have larger and better equipped laboratory facilities. Its drilling capabilities represent a marked advance over those of its predecessor. A positioning system controlled by computer will enable the ship to maintain its position while drilling at depths of up to 27,000 feet. And new electronic measuring equipment will make it possible to gather chemical and geophysical data during drilling that will enhance the value of the core samples obtained. The ship's drilling rig will outshine the *Challenger*'s by having a "riser" enclosing the drill string and providing a conduit for drilling "mud" to be returned to the ship. The system, which will permit core drilling in coastal waters up to 6000 feet deep, also offers protection against blowouts. The new ship is regarded as sturdy enough to be "ice classed," which means, for example, that it could operate in the summer season in the Antarctic Weddell Sea, an area of high interest to geophysicists.

The ODP will have headquarters at Texas A&M at College Station, Texas, from which drillship operations will be managed. Texas A&M is lead member of the Joint Oceanographic Institutions Inc., made up of ten major oceanographic institutions, which will be program manager for ODP. Consortium management is new to oceanography but is used familiarly by NSF in its astronomy and atmospheric research programs. Program managers say that refitting and shakedown runs are expected to be completed this year and the first scientific cruise is scheduled for January 1985.—JOHN WALSH