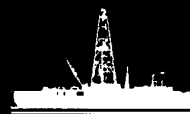


# NEWS RELEASE

## Ocean Drilling Program



For information:  
Karen Riedel  
Ocean Drilling Program  
Texas A&M University  
College Station, TX 77840  
(409) 845-9322

March 27, 1989

Leg 124E.2

COLLEGE STATION -- Having weeks of time and miles of ocean to test new tools and equipment has been a dream come true for the engineering staff of the Ocean Drilling Program (ODP).

ODP engineers have returned from six weeks of testing new drilling procedures and coring tools. Unlike their colleagues who perform land-based tests, engineers in scientific ocean drilling have to go far afield to see if new systems work. In this case, engineers on board JOIDES Resolution, drill ship for the ODP, drilled holes for developmental testing off the island of Guam and in the Luzon Strait north of the Philippines.

ODP investigates Earth's structure and evolution beneath the seafloor, and its scientific success is directly tied to the ship's ability to retrieve cores of sediment and rock from sites around the world. Leg 124E was ODP's first cruise exclusively dedicated to testing the tools vital to the program's future expeditions.

The major test was the Diamond Coring System (DCS), which

-more-

add one

uses drill rod and coring bits smaller than the same components in the oil patch. The drill pipe and its diamond-impregnated coring bit also rotate at a higher speed, causing the bit to cut cleanly through hard rocks, rather than crushing the formation.

The engineers correctly speculated that adapting this land-based system to deep-ocean drilling would allow a higher and more pristine recovery of hard rocks. Hard-rock formations are of particular interest to the geological community because they hold some of the secrets to how new seafloor generates and spreads. Scientists, however, have not been able to recover a large amount of samples because of technological difficulties.

Testing the DCS equipment on the high seas

--proved that the system could successfully be handled and deployed at sea

--demonstrated the system's ability to core from a floating vessel in 1600 meters (one mile) of water

--showed that the computer-driven secondary-heave compensator, which compensates for the ship's up and down motion, could function successfully under severe environmental conditions

Other experimental operations conducted by the engineers included testing three other ODP drilling tools for coring various rock formations beneath the seafloor.

--The Extended Core Barrel (XCB) is a high-quality, high-recovery system that extends holes drilled into moderately hard rock or sediment formations.

-more-

add two

--The Pressure Core Sampler recovers cores from beneath the seafloor using up to 5,000 pounds per square inch of working pressure.

--The Navidrill Core Barrel is a coring system that extends the hole beyond the depth achieved by the Extended Core Barrel, again adapting equipment used both in mining and the oil field.

The ship also demonstrated that its dynamic-positioning system could function in water depths up to 8,300 meters (more than five miles). The ship's dynamic positioning system holds the ship stable over a specific site by using giant propeller-like devices called thrusters.

Leg 124E allowed the engineers to test new tools before devoting expensive ship time during a scientific cruise to recovering rocks and sediment in difficult-to-drill formations. The cruise's success has made it possible for ODP to schedule two more engineering legs in the next two years.

The ship left Manila, the Philippines, on Jan. 9, and arrived in Guam on Feb. 16. Barry W. Harding is manager of engineering and drilling operations for the ODP. Michael A. Storms is supervisor of developmental engineering. In addition to the ODP engineering staff, participating engineers were from France, the Federal Republic of Germany, Japan, the Philippines, the United Kingdom and the United States.

JOIDES Resolution, registered as SEDCO/BP 471, is the research vessel for ODP, which is funded by the United States

-more-

add three

National Science Foundation, Canada and Australia, the European Science Foundation Consortium for the Ocean Drilling Program, Federal Republic of Germany, France, Japan, and the United Kingdom.

Joint Oceanographic Institutions for Deep Earth Sampling (JOIDES), an international group of scientists, provides scientific planning and program advice. Joint Oceanographic Institutions (JOI, Inc.), a nonprofit consortium of 10 major U.S. oceanographic institutions, manages the program.

"ODP is naturally excited about this opportunity to devote several weeks to testing innovative engineering techniques," said Dr. Philip D. Rabinowitz, director.

"We know that future scientific exploration can go forward only if we have the technology to drill difficult sites and explore the geologic formations that are critical to Earth's past," he said.

-30-

Note: JOIDES Institutions are: University of California at San Diego; Columbia University; University of Hawaii; University of Miami; Oregon State University; University of Rhode Island; Texas A&M University; University of Texas at Austin; University of Washington; and Woods Hole Oceanographic Institution.

Non-U.S. members are Canada and Australia Consortium for the ODP, European Science Foundation Consortium for the ODP: Belgium, Denmark, Finland, Iceland, Italy, Greece, the Netherlands, Norway, Spain, Sweden, Switzerland and Turkey; Federal Republic of Germany; France; Japan; and the United Kingdom.)

Engineering participants on Leg 124E were: Barry W. Harding, Operations Superintendent, Ocean Drilling Program, Texas A&M University, College Station; Ulrich K. W. Deutsch, Institute of Petroleum Engineering, Clausthal, Federal Republic of Germany; Jean-Baptiste Fay, Institut Francais du Petrole, Rueil Malmaison, France; Ronald Fierback, Tonto Drilling Services, Salt Lake City, Utah; Keith Floyd, British Petroleum Company Ltd., London, United Kingdom; Dillard Hammet, Energy Service Company, Ltd., Houston, Texas; Steven P. Howard, ODP; David Huey, ODP; Claude Mabile, Institut Francais du Petrole, Rueil Malmaison, France; Hiroshi Matsuoka, ODP; Charles N. McKinnon, Westech Gear Corporation, Laguna Niguel, Calif.; Marshall Pardey, Tonto Drilling Services, Salt Lake City, Utah; Thomas L. Pettigrew, ODP; Tobey Potter, Lamont-Doherty Geological Observatory, Palisades N.Y.; Alexander C. Skinner, British Geological Survey, Edinburgh, Scotland; Charles Sparks, Institut Francais du Petrole, Rueil Malmaison, France; Michael A. Storms, ODP; Alexander L. Sutherland, National Science Foundation, Washington, D.C.

Scientific participants for Leg 124E were: William D. Rose, Science Coordinator, ODP; David R. Baladad, Office of Energy Affairs, Manila, Philippines; William R. Bryant, Texas A&M University, College Station; Charles Helsley, Hawaii Institute of Geophysics, University of Hawaii at Manoa, Honolulu, Hawaii; Roger Larson, University of Rhode Island, Narragansett; Russell B. Merrill, ODP; Karl Oscar Sandvik, Continental Shelf and Petroleum Technology Research Institute Ltd., Trondheim, Norway; James Scott, Lamont-Doherty Geological Observatory, Palisades, N.Y.; Robin Smith, Joint Oceanographic Institutions, Inc., Washington, D.C.