

# NEWS RELEASE

## Ocean Drilling Program



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

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Leg 102.2

NORFOLK--A unique experiment in scientific ocean drilling was successfully completed aboard JOIDES Resolution, which arrived in port today.

Scientists on the cruise re-opened a hole drilled eight years earlier to acquire the first comprehensive collection of geophysical data ever obtained in old ocean crust. The hole, located 360 nautical miles north of Puerto Rico, was originally drilled in more than three miles of water and penetrated 1,000 feet of deep sea sediments and 1,600 feet of ocean crust to a total depth of half a mile below the seafloor.

The hole's location was marked by a metal cone which was placed on the bottom of the ocean floor. Satellite navigation and sophisticated sonar equipment enabled re-entry of the hole by the drill string and measurement tools.

Upon reentering the hole, experiments were conducted to measure the physical and chemical properties of the ocean crust.

A second ship, Fred H. Moore, joined JOIDES Resolution at the site. Sound waves generated by explosions from the two ships helped determine the structure and properties of the

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ocean's crust in the vicinity of the hole.

Both co-chief scientists called the cruise a remarkable scientific and technological success. They said that the quality of the data collected will help scientists better understand the evolution and aging of Earth's crust as it spreads from the mid-ocean ridges. This process, called plate tectonics, explores how continents have shifted about during the geological past and how ocean basins formed.

The drillship, whose registered name is SEDCO BP/471, is the research vessel for the Ocean Drilling Program (ODP), a project funded by the United States, Canadian, French, Japanese and West German governments.

The co-chief scientists for the cruise were Dr. Matthew Salisbury from the Scripps Institution of Oceanography, University of California, and Mr. James Scott from the U. S. Geological Survey, Denver. Dr. Christian Auroux was Texas A&M University staff scientist representative.

JOIDES Resolution is a 470-foot drillship with a derrick that towers 200 feet above the waterline. The heart of the floating research center is a seven-story laboratory stack which provides space and equipment for onboard examination of cores including chemical, gas and physical properties, and paleontological, petrological, paleomagnetic and sedimentological studies. Marine geophysics research is conducted while the ship is under way.

Texas A&M University is science operator for the program and

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is responsible for the ship's staffing and scientific operations, overseeing core collection and analyses, and disseminating the results. Lamont-Doherty Geological Observatory of Columbia University is responsible for downhole logging.

Plans for upcoming cruises include drilling off the coast of Spain and the high latitudes of the Norwegian and Labrador seas and Baffin Bay, according to Dr. Philip D. Rabinowitz, director of ODP for Texas A&M University.

The U. S. National Science Foundation and its counterparts in the four foreign countries fund the program through the Joint Oceanographic Institution, Inc. (JOI, Inc.), which manages the project. JOI, Inc., is a not-for-profit consortium of 10 major oceanographic institutions. Joint Oceanographic Institutions for Deep Earth Sampling (JOIDES), an international group of scientists provides overall planning and program advice.

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(Note: JOIDES institutions are: University of California at San Diego, Scripps Institution of Oceanography; Columbia University, Lamont-Doherty Geological Observatory; University of Hawaii, Hawaii Institute of Geophysics; University of Miami, Rosenstiel School of Marine and Atmospheric Science; Oregon State University, College of Oceanography; University of Rhode Island, Graduate School of Oceanography; Texas A&M University, Department of Oceanography; University of Texas, Institute of Geophysics; University of Washington, College of Ocean and Fishery Science; and Woods Hole Oceanographic Institution.

Non-U. S. members are: Department of Energy, Mines and Resources, Earth Sciences Sector, Canada; Bundesanstalt fur Geowissenschaften und Rohstoffe, Federal Republic of Germany; Institut Francais pour l'exploration des mers, France; and University of Tokyo, Ocean Research Institute, Japan.)