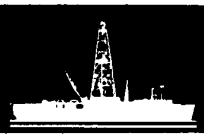
NEWS RELEASE
Ocean Drilling Program



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

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Leg 106.2

COLLEGE STATION -- Fourteen scientists aboard JOIDES Resolution arrive Friday in Malaga, Spain, after drilling in the largely unexplored rift valley of the Mid-Atlantic Ridge.

During November and December, scientists for the Ocean Drilling Program (ODP) concentrated on two sites at the ridge, both approximately 1200 miles southeast of Bermuda.

The Mid-Atlantic Ridge is an underwater volcanic mountain range that encircles the world. Marine geologists have only recently begun to extensively explore this ridge which produces new crustal material and is responsible for seafloor spreading, the process that pushes apart large plates of Earth's crust.

Using new drilling technology at the first site gave scientists an unprecedented opportunity to learn more about the creation of ocean crust. At the second site, the ship was the first ever to collect samples adjacent to Atlantic Ocean black smokers, a system of underwater hot springs that produces rich deposits of ore on the seafloor.

Traditional drilling methods into deep ocean basins depend on thick layers of sediment to provide lateral support for the

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flexible drill string to penetrate the surface. Because the ocean floor at the mid-ocean ridge does not have this protective layer, drilling into the newly formed crust called for a different technique.

After an intensive year of research and development, this expedition deployed and successfully tested a new drilling technique. Using a camera similar to the one which discovered the Titanic earlier this year, scientists were able to view their target -- a submarine volcano almost two miles (three kilometers) below the sea surface. A 20-ton guide base was lowered to the seafloor and locked in place with 2,000 cubic feet of cement. The base provided the stability needed to drill into the rocky surface. Despite difficult drilling conditions caused by the hard, fractured volcanic rocks, a valuable core of rock was recovered from the volcano's interior. Scientists will study the material to learn more about the creation of new ocean crust and the evolution of volcanic systems at mid-ocean ridges.

The technological achievement of this cruise has provided a permanent undersea laboratory for future studies of the rugged, mid-ocean terrain. In April, scientists will return to deepen the hole and recover more cores of scientifically significant volcanic material.

At the second site, the television camera gave the scientists a firsthand look at a submarine hydrothermal vent system. These systems, found in areas of underwater volcanoes, are caused when cold sea water circulates down into the hot,

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recently erupted lavas. The lava heats the seawater to extremely high temperatures, causing it to upwell as hot springs onto the seafloor. Marine geologists are particularly interested in these hydrothermal systems because of their ore-producing capabilities.

Television images beamed back to the ship revealed a mysterious subterranean landscape with 30-feet high, ornate chimney structures made of sulfide ore deposits. Called black smokers because of the escaping billows of murky smoke, the pipes in the middle spew hot, metal-enriched fluids, piling up deposits of ore minerals onto the seafloor. This area of warm water and high mineral content is home to a unique biological community which scientists named the Snakepit after the snake-like creatures that swim lazily around the vents' mouths.

The television camera showed an underwater environment teeming with life. Shrimp-like crustaceans of various sizes darted in and out of view while small organisms, possibly anemones, were attached to the rocks of the rubble-strewed seafloor.

The singular biological community, which consists of mostly small, mobile organisms, differs from the hydrothermal communities in the Pacific, which are known for their large, polyp-like tubeworms, clams and mussels.

The cruise was only the second time that scientists on board a research vessel have observed active hydrothermal vents in the Atlantic Ocean.

Samples recovered during drilling included black sand and

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gravel composed mostly of copper, zinc and iron sulfides, as well as massive nuggets of iron and copper sulfides. Scientists studying these deposits will be able to enhance our understanding of how the circulation of seawater through hot, volcanic rocks leaches metals and concentrates them into ore deposits.

Co-chief scientists for the cruise were Dr. Robert S. Detrick of the University of Rhode Island, and Dr. Jose Honnorez of the University of Miami, Florida. Dr. Andrew C. Adamson was the ODP staff scientist representative from Texas A&M University.

The 14-member scientific party were from the United States, Canada, France, West Germany and Japan. A technical crew of 25 and a ship's crew of 68 also sailed.

JOIDES Resolution, registered as SEDCO/BP 471, is the research vessel of ODP which is funded by the United States National Science Foundation, Canada, France, Japan, West Germany and the United Kingdom.

The 470-foot-long drill ship's derrick 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 on board examination of sediment and hard-rock cores. Studies include chemical, gas and physical properties, paleontology, petrology, paleomagnetics and sedimentology. Marine geophysics research is conducted while the ship is under way.

Texas A&M University, as science operator, operates and staffs the drill ship and retrieves cores from strategic sites

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around the world. The science operator also ensures that adequate scientific analyses are performed on the cores. Texas A&M maintains shipboard scientific labs, provides logistical and technical support for shipboard scientific teams, manages post-cruise activities, is curator for the cores and of the scientific results.

Lamont-Doherty Geological Observatory of Columbia University is responsible for downhole logging.

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

(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 at Austin, Institute of Geophysics; University of Washington, College of Ocean and Fishery Sciences, and Woods Hole Oceanographic Institution.

Non-U. S. members are Canada, Department of Energy, Mines, and Resources, Earth Sciences Sector; Federal Republic of Germany, Bundesanstalt fur Geowissenschaften und Rohstoffe; France, Institut Francais de Recherche pour l'Exploitation de la Mer; Japan, University of Tokyo, Ocean Research Institute; and United Kingdom, Natural Environment Research Council.)

Members of the Leg 106 scientific party were: Co-chief scientists Robert S. Detrick, University of Rhode Island, and Jose Honnorez, University of Miami, Florida; Andrew C. Adamson, Texas A&M University, College Station; Garrett W. Brass, National Science Foundation, Washington, D. C.; Kathryn M. Gillis, Dalhousie University, Halifax, Nova Scotia, Canada; Susan E. Humphris, Woods Hole Oceanographic Institution, Woods Hole, Mass.; Catherine Mevel, Universite Pierre et Marie Curie, Paris, France; Peter S. Meyer, Woods Hole Oceanographic Institution; Nikolai Petersen, Universitaet Muenchen, Munich, Federal Republic of Germany; Martina Rautenschlein, Max-Planck-Institut fuer Kosmochemie, Mainz, Federal Republic of Germany; Tsugio Shibata, Okayama University, Japan; Hubert Staudigel, Scripps Institution of Oceanography, La Jolla, Ca.; Kiyohiko Yamamoto, Tohoku University, Sendai, Japan; and Anita L. Wooldridge, University of Miami.