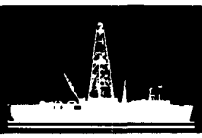
NEWS RELEASE
Ocean Drilling Program



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Leg 125.1

COLLEGE STATION -- Seagoing scientists for the Ocean Drilling Program (ODP) will devote most of the first segment of a two-part cruise to drilling into a newly discovered kind of submarine seamount.

The scientists, who will be on board JOIDES Resolution, drill ship for the ODP, will drill for four months off the Mariana and Bonin island chains in the western Pacific.

A graceful conglomeration of arc-shaped island chains and adjacent deep-ocean trenches mark this region of the Pacific, which is also plagued by continual volcanic and earthquake activity. These islands and trenches resulted when two of Earth's crustal plates converged, one plate being consumed underneath the other. The plate that is thrust beneath descends into the mobile upper mantle, or asthenosphere. This subduction, which may occur at rates as high as 10 centimeters (4 inches) a year, creates great earthquakes beneath the inner wall of the trench, where the two plates come into contact.

Isolated peaks called seamounts also dot the ocean floor near

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these areas of high tectonic activity. Seamounts often rise hundreds of meters above the surrounding seafloor and are especially common in the Pacific, where they number more than 10,000.

Until the last five years, scientists had thought that all seamounts originated as volcanoes puncturing the seafloor. And, indeed, many do as exemplified by the Hawaiian Island-Emperor Seamount chain.

Scientists, however, have recently revised how they look at some seamounts. Dredging of seamounts in the western Pacific has brought up samples of serpentine, rocks associated with segments of altered mantle material that have been thrust upward from beneath ocean crust. They now theorize that these serpentine-laden seamounts represent a diapir, which occurs when chemical activity and hydrothermal circulation alter the rocks beneath the seafloor. The alteration process also decreases the rocks' density, causing the formation to rise and pierce the seafloor.

The seamounts off the Marianas and Bonins, therefore, manifest how intense heat, chemical changes and hydrothermal circulation at convergent boundaries can alter remnants of Earth's ocean crust deep beneath the seafloor.

So far, scientists have not had much opportunity to examine material brought up from the deeper ocean crust and upper mantle.

By drilling into a formation which has risen up from Earth's inner depths, scientists hope to learn more about how ocean crust

forms and evolves. Certain minerals found on land are alsoassociated with this kind of formation. Identifying these minerals' sources will help determine sites for further exploration and development of these resources.

Co-chief scientists for Leg 125 are Dr. Patricia Fryer of the University of Hawaii at Manoa, Honolulu, and Dr. Julian Pearce of The University, Newcastle upon Tyne, the United Kingdom.

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

The 470-foot-long drill ship's derrick towers 200 feet above the waterline. A seven-story laboratory stack provides facilities for on board examination of sediment and hard-rock cores. Laboratories contain space and equipment for studies in 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 around the world. The science operator also ensures that adequate scientific analyses are performed on the cores. To do this, Texas A&M maintains shipboard scientific labs and provides logistical and technical support for shipboard scientific teams. On shore,

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in the Texas A&M University Research Park, the science operator manages post-cruise activities, curates the cores and publishes the scientific results.

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

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.

"During the next two years, JOIDES Resolution will drill in the western Pacific," said Dr. Philip D. Rabinowitz, director of the ODP. "We will address a wide range of scientific problems relating to the origin and evolution of the ocean crust in this region."

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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.)