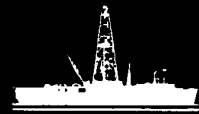


# NEWS RELEASE

## Ocean Drilling Program



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January 31, 1986

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COLLEGE STATION, Texas -- An international team of scientists are trying to unravel some of the mysteries of the Mediterranean by drilling a transect of holes into the seafloor of the Tyrrhenian Sea.

The cores of sediment and rock brought aboard the scientific drill ship JOIDES Resolution, will help scientists better understand the processes that created this structurally unique ocean basin.

The triangular Tyrrhenian Sea, bounded by the toe and instep of Italy and the islands of Sicily, Sardinia and Corsica, is one of the most geologically complex basins in the world. By studying its history as revealed beneath the seafloor, scientists hope to learn more about the sequence of events that formed the basin and surrounding land masses.

A series of unusual geological events are responsible for Italy's unique boot shape, its coastline of cliffs and caves, and its history of earthquakes and volcanic eruptions. The movement of the tectonic plates in this region also caused the uplift of the Appenines and parts of the Alpine mountain ranges.

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The Tyrrhenian basin is unique because it quickly changes, in both geologic time and actual distance, from a young passive margin to an active subduction zone. The passive margin formed on the western side began when seafloor spreading caused the basin to split apart. The subduction zone on the eastern side is caused by the southeastern part of the Tyrrhenian Basin sliding as a plate under the toe of Italy, which in turn creates the instability responsible for volcanoes such as Mount Etna and the earthquakes common to that area.

The distance between the passive margin and the subduction zone is only about 400 miles, and both the creation of the new passive margin and the back-arc spreading and subduction of the southeastern part are believed to have occurred within the last 6 million years. It is now believed that early man was roaming the plains of Africa when these events began.

Scientists have long been fascinated by the geologic history of the Tyrrhenian area. Extensive field research on land has answered many of their questions, but the geologic picture is incomplete. Because of new drilling methods, JOIDES Resolution will be able to recover high-quality, undisturbed cores of rock and sediment. A complete geologic history should help scientists in the future more accurately predict the timing of earthquakes and volcanic eruptions, and the dramatic rise and fall of sea level in relation to the Italian coast line.

Co-chief scientists for the cruise are Dr. Kim Kastens of Lamont-Doherty Geological Observatory, Columbia University, and

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Dr. Jean Mascle, Universite Pierre et Marie Curie, Villefranche sur Mer, France. Dr. Christian Auroux of Texas A&M University is the staff scientist representative.

The Ocean Drilling Program (ODP) is an international project funded by the United States National Science Foundation, Canada, France, Japan, United Kingdom and West Germany.

JOIDES Resolution is a 470-foot-long drill ship 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 on-board examination of sediment and hard-rock cores. Studies include chemical, gas and physical properties, paleontology, petrology, paleomagnetism and sedimentology. Marine geophysics research is conducted while the ship is under way.

Texas A&M, 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, provides logistical and technical support for shipboard scientific teams, manages post-cruise activities, is curator for the cores and distributes samples, and coordinates the editing and publishing of the scientific results.

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

Joint Oceanographic Institutions for Deep Earth Sampling

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(JOIDES), an international group of scientists, provides overall planning and program advice. Joint Oceanographic Institutions (JOI, Inc.), a nonprofit organization of 10 major U. S. oceanographic institutions, manages the program.

Other cruises scheduled this spring include drilling off the northwest coast of Africa and a return trip to the Mid-Atlantic Ridge, announced Dr. Philip D. Rabinowitz, director of ODP.

The ship will drill off the coast of Africa so that scientists can study that region's upwelling of ocean water. This information will provide a better understanding about the cycles of aridity and humidity that have affected Africa's climate through the ages. Scientists will also return to the Mid-Atlantic Ridge where a permanent underwater laboratory will allow them to deepen a hole initiated on a previous cruise. By studying core samples of zero-age volcanic rock, scientists hope to learn more about the history and process of seafloor spreading.

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(NOTE: JOIDES institutions are the University of California, Columbia University, University of Hawaii, University of Miami, Oregon State University, University of Rhode Island, Texas A&M University, University of Texas, University of Washington and Woods Hole Oceanographic Institution.

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