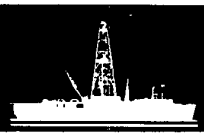
NEWS RELEASE
Ocean Drilling Program



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Leg 120.2

COLLEGE STATION,TX -- Scientists now have a 97-million-year geologic record to determine the origin and evolution of the Kerguelen Plateau, one of the world's largest underwater structures.

The giant structure lies in the remote subantarctic region of the Indian Ocean. At 2500 kilometers (1550 miles) in length, its size and shape resemble Argentina. Tiny Kerguelen, Heard and MacDonald islands are the only above-water expressions of the submerged formation.

Scientists on the 20th cruise of the Ocean Drilling Program (ODP) sailed to the distant region on the drilling vessel JOIDES Resolution, their home for the nine-week expedition. They drilled five sites on the plateau with two primary objectives in mind:

--to obtain, by deep-ocean drilling, cores of sediment from the plateau to interpret the region's past environments

--to recover cores of crustal rocks to learn how the plateau originated

The results reveal a fascinating history of a region that began with the barren land mass, evolved into a lush, primeval forest and underwent a long period of slow subsidence before reaching its present depth.

The oldest material recovered was basement rock, basaltic

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crustal rocks which were erupted as the plateau began to form about 97 million years ago. Analyses on board the ship showed that the rocks' composition was unique, resembling neither the basalts generated at Earth's mid-ocean ridges nor those that form islands like Hawaii. The scientists also determined that the rocks had formed either above or very near to sea level, proof that the plateau existed as a land mass during the earliest phases of its history.

The first sediment accumulation occurred on land or in very shallow water, such as in a marsh or flood plain. Fingernail-sized fragments of fossil wood found in the reddish brown, soil-like silts and clays also point to terrestrial conditions existing in a warm, moist climate.

After these land-based sediments were deposited, the Kerguelen Plateau began to subside beneath the sea. The evidence came from layers of marine limestones containing fragments of fossilized bryozoans (marine invertebrates), clams, sponges, sea urchins and other sea creatures, including the tooth from a marine vertebrate (possibly a mososaur, a giant swimming lizard). Scientists determined that these limestones accumulated through the Late Cretaceous Period (about 66 to 97 million years ago).

As time passed, the Kerguelen Plateau subsided still further. Beds of fine-grained chalk, composed of the microscopic skeletons of single-celled marine plants and animals, accumulated for the next 65 million years. Subsidence continued until about 1.6 million years ago as the water deepened to its present-day depths of more than a kilometer. The region's climate also began 36 million years ago to

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cool significantly.

From about 1.6 million years ago to the present, blooms of diatoms (microscopic marine algae) and layers of rocks carried by icebergs from Antarctica left a record of the climate changes that occurred during the Ice Ages.

The scientists and ship's crew on board JOIDES Resolution drilled in high winds, stormy seas and freezing temperatures to obtain this region's remarkable record of almost 100 million years. Their efforts have attained a new level of knowledge about the origin and history of the Kerguelen Plateau, one of Earth's least-understood geologic features.

Co-chief scientists for the cruise were Dr. Roland Schlich, Institute de Physique du Globe, Strasbourg, France, and Dr. Sherwood W. Wise, Jr., Florida State University. Staff scientist was Dr. Amanda Palmer, Texas A&M University.

JOIDES Resolution, registered as SEDCO/BP 471, is the research vessel for ODP which is funded by the United States National Science Foundation, Canada, the European Science Foundation Consortium for the Ocean Drilling Program, France, Japan, West Germany 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.

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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, 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.

"The Ocean Drilling Program completes its 18-month campaign in the Indian Ocean at the end of 1988," said Dr. Philip D. Rabinowitz, director of the ODP.

"We will be exploring the eastern and central Pacific regions through 1990," he said.

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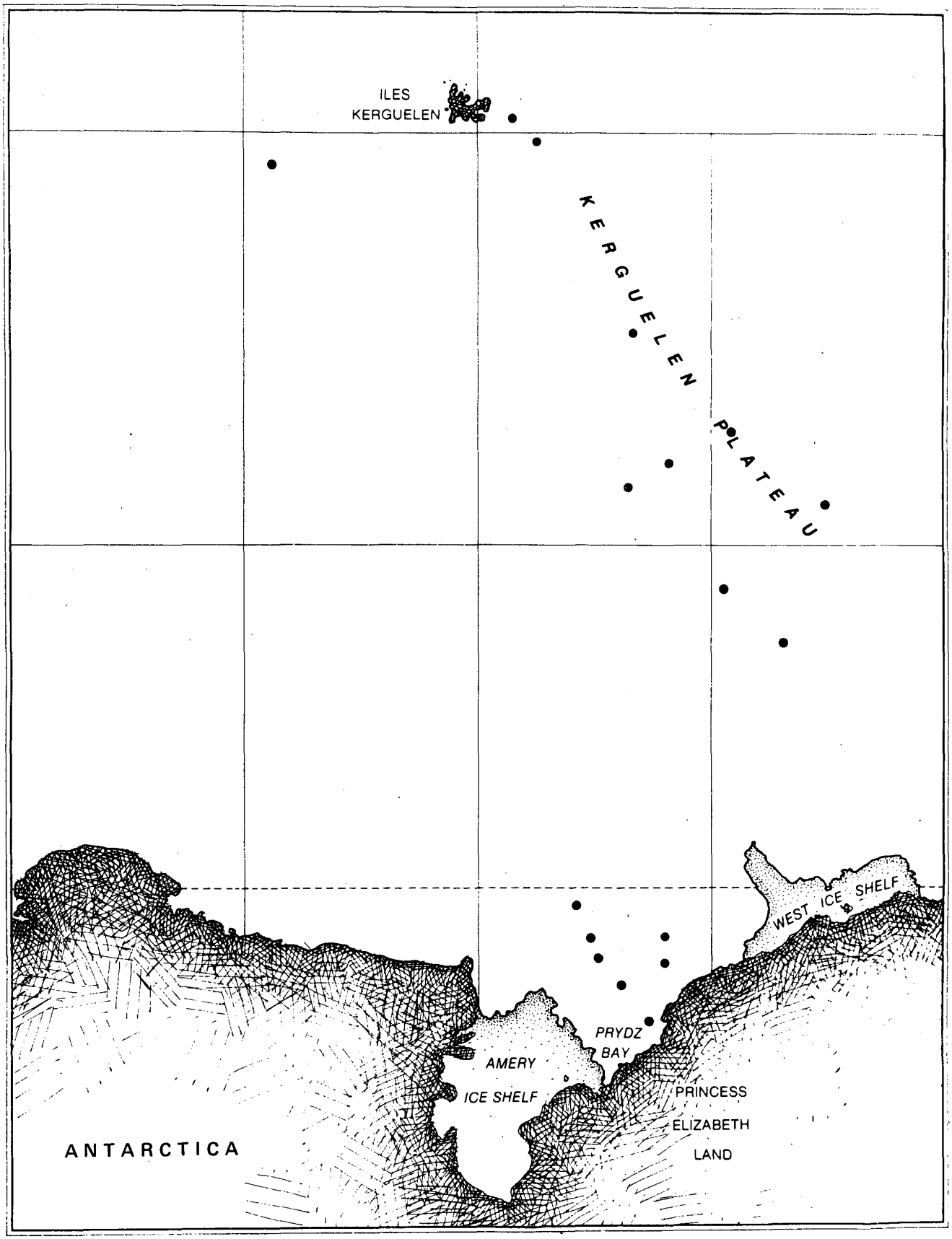
(Note: JOIDES institutions are: University of California at San Diego, Scripps Institution of Oceanography; Columbia University, Lamont-Doherty Geological Observatory; University of Hawaii, Hawaii Institute of Geophysics; University of Miami, Rosenstiel School of Marine and Atmospheric Science; Oregon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

Non-U.S. members are Department of Energy, Mines, and Resources, Earth Sciences Sector, Canada; European Science Foundation Consortium for the Ocean Drilling Program, Belgium, Denmark, Finland, Iceland, Italy, Greece, the Netherlands, Norway, Spain, Sweden, Switzerland and Turkey; Bundesanstalt fur Geowissenschaften und Rohstoffe, Federal Republic of Germany; Institut Francais de Recherche pour l'Exploitation de la Mer, France; University of Tokyo, Ocean Research Institute, Japan; and Natural Environment Research Council, United Kingdom.)

The scientific party for Leg 120 of the Ocean Drilling Program was: Roland Schlich, co-chief scientist, Institut de Physique du Globe, Strasbourg, France; Sherwood W. Wise, Jr., co-chief scientist, Florida State University, Tallahassee; Amanda A. Palmer, staff scientist, Ocean Drilling Program, Texas A&M University, College Station; M.-P Aubry, Universite Claude Bernard, Villeurbanne, France; William A. Berggren, Woods Hole Oceanographic Institution, Woods Hole, Mass.; Peter R. Bitschene, Ruhr-Universitaet Bochum, Federal Republic of Germany; Neal A. Blackburn, Britoil plc, Glasgow, Scotland; James Breza, Florida State University, Tallahassee; Millard Coffin, Bureau of Mineral Resources, Geology and Geophysics, Canberra, Australia; David M. Harwood, Ohio State University, Columbus; Franz Heider, University of Toronto, Ontario, Canada; Mary Anne Holmes, University of Nebraska, Lincoln; William R. Howard, Brown University, Providence, R.I.; Hiroo Inokuchi, Kobe University, Japan; Kerry R. Kelts, Geology Section EAWAG/ETH, Dubendorf, Switzerland; David Lazarus, Woods Hole Oceanographic Institution, Woods Hole, Mass.; Andreas Mackensen, Alfred Wegener Institute for Polar Research, Bremerhaven, Federal Republic of Germany; Toshiaki Maruyama, Tohoku University, Kawauchi, Japan; Marc Munschy, Institut de Physique du Globe, Strasbourg, France; Elizabeth Pratson, Borehole Research Group, Lamont-Doherty Geological Observatory of Columbia University, Palisades, New York; Patrick G. Quilty, Antarctic Division, Kingston, Tasmania, Australia; Frank Rack, Ocean Drilling Program, Texas A&M University, College Station; Vincent J.M. Salters, MIT, Cambridge, Mass.; James H. Sevigny, University of Calgary, Alberta, Canada; Michael Storey, University of Leicester, United Kingdom; Atsushi Takemura, Kyoto University, Japan; David Watkins, University of Nebraska, Lincoln; Hurbert Whitechurch, Instit de Geologie, Strasbourg, France, James C. Zachos, University of Rhode Island, Narragansett, R.I.



Sites for Legs 119 and 120