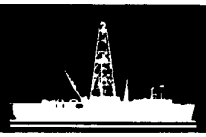
NEWS RELEASE
Ocean Drilling Program



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Legs 122.1 and 123.1

COLLEGE STATION -- Scientists for the Ocean Drilling Program (ODP) will study geologic processes that separated continents, formed ocean basins and destroyed an ancient sea.

Using the scientific drill ship, JOIDES Resolution, they will drill off northwest Australia at sites on the Exmouth Plateau and the Argo Abyssal Plain. Australia's northwest continental shelf and adjacent marine environment represent what geologists call a passive margin which develops when a growing ocean basin causes continents to drift apart.

Passive margins provide especially good clues to Earth's ancient land configurations. As rifting tears continents apart and growing ocean basins fill the intervening space, the torn edges of these separated land masses tend to retain their shape at the time of rifting. These edges, called conjugate margins, are like giant pieces of a puzzle. When hypothetically reassembled, they show scientists what the face of the Earth looked like millions of years ago.

Examples of passive margins and their matching conjugates include North America and North Africa and western Europe, and South America and Africa. Because northwest Australia was joined to India before

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rifting, its conjugate margin is the eastern Indian coast bordering the Bay of Bengal.

More than 220 million years ago, when Earth's continents were amassed into one megacontinent, a widening ancient sea, the Tethys, separated the drifting land masses. The continental land mass of the Southern Hemisphere (Gondwanaland) contained South America, Africa, Antarctica, Australia and India, each of which began its own migration toward a present-day global location.

When continent and adjacent ocean occupy the same lithospheric plate, they are not separated during rifting. Thus the oldest part of the ocean crust remains fused to the nearest continental mass as a widening ocean basin separates the two land masses. A submerged part of the northwest Australian continent, for instance, has never separated from the Tethys crust. This region, called the Exmouth Plateau, lies beneath 2 kilometers of water, a remnant of the ancient Australian continental margin bounded by the Tethys Sea. The plateau remains one of the few places in the world where scientists can examine the unaltered characteristics of the old an continent and its adjacent sea.

Drilling on the plateau will give scientists invaluable information about the nature of ancestral oceans and continents, their sea life and their climates.

At an adjacent site, the Argo Abyssal Plain, a relatively thin sediment layer with a high concentration of plant and animal life covers the ocean floor. The thin sediment layer and high biogenic content will enable scientists to recover and date a sequence of

add two geological material dating as far as 220 million years in Earth's history.

This slice of time will enable scientists to track the evolution of a juvenile Indian Ocean from its birth to its present state and the the breakup of India from Australia, precipitating India's long flight to the Asian continent.

The scientific party will also address a recently postulated theory, based mainly on evidence from Atlantic passive margins, about worldwide sea-level changes through time. Drilling off Australia will test the hypothesis in another region of the world.

Before plumbing the ocean's depths on this cruise, six members of the two scientific crews spent a month investigating rocks in the Himalayas. Evidence of the ancient Tethys Sea can be found on top of the world's highest mountain range, carried there when India collided with the Asian continent. The scientists will correlate these findings with material recovered from beneath the seafloor of Australia. The age and species of fossils found in the Himalayas should match the oldest material recovered from deep-sea drilling off Australia, telling of an ancient time when the two land masses were joined.

Co-chief scientists for Leg 122 are Dr. Ulrich von Rad, Bundesanstalt fur Geowissenschaften und Rohstoffe, Hannover, Federal Republic of Germany, and Dr. Bilal Haq, National Science Foundation, Washington, D.C. For Leg 123, the co-chief scientists are Dr. Felix Gradstein, Bedford Institute of Oceanography, Dartmouth, Nova Scotia, Canada, and Dr. John Ludden, University of Montreal, Quebec, Canada.

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Dr. Suzanne O'Connell and Dr. Andrew C. Adamson, Texas A&M University, College Station, are the ODP staff scientists for Leg 122 and Leg 123, respectively.

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 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 ODP.

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

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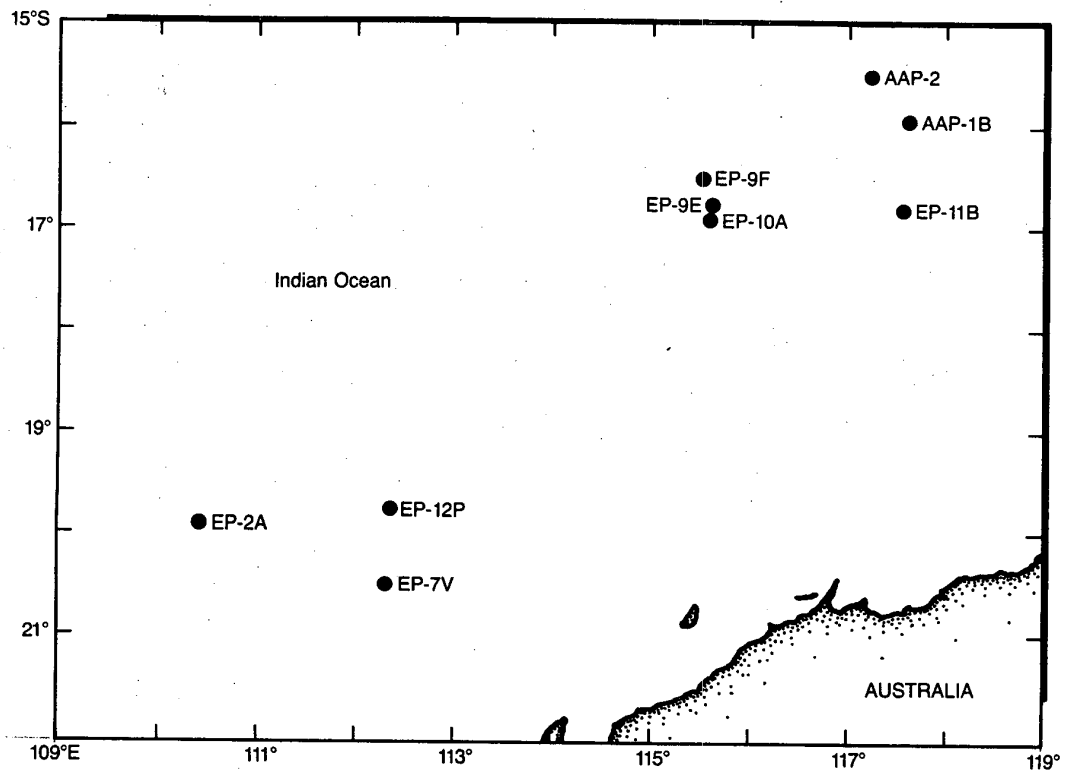

Sites for ODP Legs 122-123
Exmouth Plateau and Argo Basin
July-October 1988