



U.S. Department of the Interior  
Minerals Management Service  
Gulf of Mexico OCS Region

Technical Announcement

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Contact: Barney Congdon  
(504) 736-2595

Caryl Fagot  
(504) 736-2590

Debra Winbush  
(504) 736-2597

*Historical Reconstruction of the Contaminant Loading and Biological Responses in the Central Gulf of Mexico Shelf Sediments*

OCS Study MMS 2003-063

The Minerals Management Service (MMS), Gulf of Mexico OCS Region, announces the availability of a new study report, *Historical Reconstruction of the Contaminant Loading and Biological Responses in the Central Gulf of Mexico Shelf Sediments*.

This study documents changes in chemical contaminants and biological components of dated sediments from the central Gulf of Mexico continental shelf to evaluate the relative sources and concentrations, including trace metals, selected organic compounds, phytoplankton pigments, diatom remnants, and foraminifera. The distribution of the selected trace metals and organic compounds suggests a chronic contaminant loading from the river itself, from oil and gas exploration in the Gulf of Mexico, perhaps from natural seeps in the area, and the chronological usage of chlorinated agricultural pesticides. The temporal patterns in phytoplankton are consistent with the increased accumulation of diatom remnants in sediments. The increasing pigments and greater concentrations in areas where hypoxia is more likely to occur indicate an increase in eutrophication or a worsening of hypoxia or both. No definite relationship could be established between the contaminant concentration in sediments and the composition of foraminiferal assemblage. Deformed foraminifera, one indicator of extreme chemical pollution, are not present in either of the cores. On the other hand, the diversity and relative-abundance changes of foraminiferal species fit the model of progressively worsening seasonal hypoxia in the area.

This report is available only in compact disc format. The discs are available from the Minerals Management Service, Gulf of Mexico OCS Region, at a charge of \$15.00 by referencing OCS Study MMS 2003-063. You will be able to obtain this report also from the National Technical Information Service in the near future. Here are the addresses. You may also inspect copies at selected Federal Depository Libraries.

Minerals Management Service  
Gulf of Mexico OCS Region  
Public Information Office (MS 5034)  
1201 Elmwood Park Boulevard  
New Orleans, Louisiana 70123-2394  
Telephone requests may be placed at  
(504) 736-2519 or 1-800-200-GULF  
or FAX: (504) 736-2620

U.S. Department of Commerce  
National Technical Information Service  
5285 Port Royal Road  
Springfield, Virginia 22161  
(703) 487-4650 or FAX: (703) 321-8547  
Rush Orders: 1-800-336-4700

MMS is the Federal agency in the U.S. Department of the Interior that manages the nation's oil, natural gas, and other mineral resources on the Outer Continental Shelf in Federal offshore waters. The agency also collects, accounts for, and disburses mineral revenues from Federal and American Indian leases. These revenues totaled over \$6 billion in 2002 and nearly \$127 billion since the agency was created in 1982. Annually, nearly \$1 billion from those revenues go into the Land and Water Conservation Fund for the acquisition and development of state and Federal park and recreation lands.

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MMS's Website Address: <http://www.mms.gov>

[Return to Technical Announcements](#)