

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

October 2000

Meteorology of the Northeastern Gulf of Mexico: Data from 1995 to 1997 Final Report

OCS Study MMS 2000-075

The Minerals Management Service (MMS), Gulf of Mexico OCS Region, announces the availability of a new study report, *Meteorology of the Northeastern Gulf of Mexico: Data from 1995 to 1997, Final Report.*

This study resulted in a meteorological database of the Northeastern Gulf of Mexico (NEGOM) that may serve as a "handbook" by planners or by analysts preparing initial assessment of conditions associated with nonroutine or accidental events. Knowledge acquired in this study will improve the understanding of wind field patterns and sea breeze structures, atmospheric boundary layer behavior and its moisture fluxes across the land-sea interface, wind stress patterns on the sea surface, and cold air outbreaks. The study area was enclosed within the latitudes of 28^oN-32^oN and the longitudes 82^oW-90^oW. The data collection period for this study was January 1, 1996, through December 31, 1997 (1995 data were included in the database). The database contains over 200 gigabytes of meteorological form more than 50 measurement sites. From this raw data, a very large relational Access database containing more than 5.2 gigabytes of meteorological information was produced on five CD-ROM's. Output from a meteorological model (ETA Model) was also archived for the same period to supplement the observational database for the NEGOM region. Extensive analyses of these data yielded numerous meteorological parameters, graphical products, and maps. A computer-based "Expert" software system was developed and is included on the CD-ROM's. "Expert" allows rapid, real-time access to the information and products developed in this study and aids in interpretation of current and forecast meteorological conditions. A sample of representative findings includes the findings that sea-surface temperature (SST) is greater than air temperatures (unstable regime) in fall and winter, but SST is less than the air temperature (stable regime) in spring and summer. The effects of land-sea breeze are felt between 50 km and 60 km offshore. The land-sea breeze effect is much less pronounced offshore Louisiana, which is probably due to the predominance of swamps and an oporly defined coastline.

For more information about this study or the Environmental Studies Program in general, contact the Environmental Sciences Section (MS 5430), 1201 Elmwood Park Boulevard, New Orleans, Louisiana 70123-2394, telephone (504) 736-2752.

You can obtain copies of the report from the Minerals Management Service, Gulf of Mexico OCS Region, at a charge of \$15.00 by referencing OCS Study MMS 2000-075. 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, 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

The MMS, a bureau in the U.S. Department of the Interior, is the federal agency that manages the nation's natural gas, oil and other mineral resources on the outer continental shelf. The agency also collects, accounts for and <u>disburses more than \$5 billion per year in revenues</u> from federal offshore mineral leases and from onshore mineral leases on federal and Indian lands.

-MMS-GOM-MMS's Website Address: http://www.mms.gov

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