

OUTER CONTINENTAL SHELF OIL AND GAS INFORMATION PROGRAM

**Update 2, August 1981
Outer Continental Shelf Oil and Gas Activities
in the South Atlantic (U.S.) and their Onshore Impacts:
A Summary Report, July 1980**

by Catherine A. McCord

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**ROGERS, GOLDEN & HALPERN, INC.
11872 D Sunrise Valley Drive
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1427 Vine Street
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(Update to Open-File Report 80-626)

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INTRODUCTION

In July 1980, the Office of Outer Continental Shelf (OCS) Information issued an initial report called **Outer Continental Shelf Oil and Gas Activities in the South Atlantic (U.S.) and their Onshore Impacts: A Summary Report, July 1980**. The purpose of this report was to provide State and local governments with current information about offshore oil and gas resources and onshore activity in the area extending from Cape Hatteras, North Carolina, to Cape Canaveral, Florida (fig. 1). This information was designed to assist in socioeconomic planning for the onshore impacts of oil and gas development in the affected areas.

Updates to the summary report are published approximately every 6 months in order to provide additional information on events occurring after the initial summary report. A new summary report is published only when significant Federal events occur in the region.

This report, **Update 2**, discusses Outer Continental Shelf oil and gas activities and their onshore impacts for the period of February 1981 to August 1981. This report is designed to supplement the initial South Atlantic Summary Report, July 1980, and Update 1, February 1981. Copies of the initial South Atlantic Summary Report (Jackson, 1980, USGS Open-File Report 80-626) and Update 1 (Havran, 1981, USGS Open-File Report 81-25) may be obtained from the Office of Outer Continental Shelf Information, Conservation Division, U.S. Geological Survey (USGS), National Center, Reston, Virginia 22092, (703) 860-7166.

The South Atlantic Summary Report is one of a series of regional summary reports for the entire OCS of the United States. A summary report for the North Atlantic will be available in September of 1981, and for the Arctic area of Alaska, a summary report will be available during November of 1981. Revised summary reports for the Gulf of Alaska and the Gulf of Mexico will be available during the summer of 1981 and will include information on recent lease sales in each of the areas. A revised South Atlantic Summary Report is scheduled to be published in May of 1982.

Atlantic Index

In addition to the regional summary reports, indexes of information have been prepared by the USGS in conjunction with the Bureau of Land Management (BLM) to further supplement information being made available to State and local governments for planning and decisionmaking purposes. Since the last update for the South Atlantic Region, an Atlantic Index has been released. The indexes are prepared by USGS's Office of OCS Information, in conjunction with the BLM, and they are accumulations of information that are used by the Federal Government in its OCS decisionmaking process. The index provides detailed information on the oil and gas lease-sale process, the leasing schedule and sale history, ongoing programs, studies conducted about the area, and State and local involvement in the OCS leasing program. Also, the index includes a directory of Federal and State OCS-related agencies. A copy of the updated Atlantic Index (Salzmann, 1981, USGS Open-File Report 80-1202) is also available from the USGS.

Leasing Schedule

Lease Sale 56 was held on August 4, 1981. Lease Sale 78 is scheduled to take place in January of 1984.

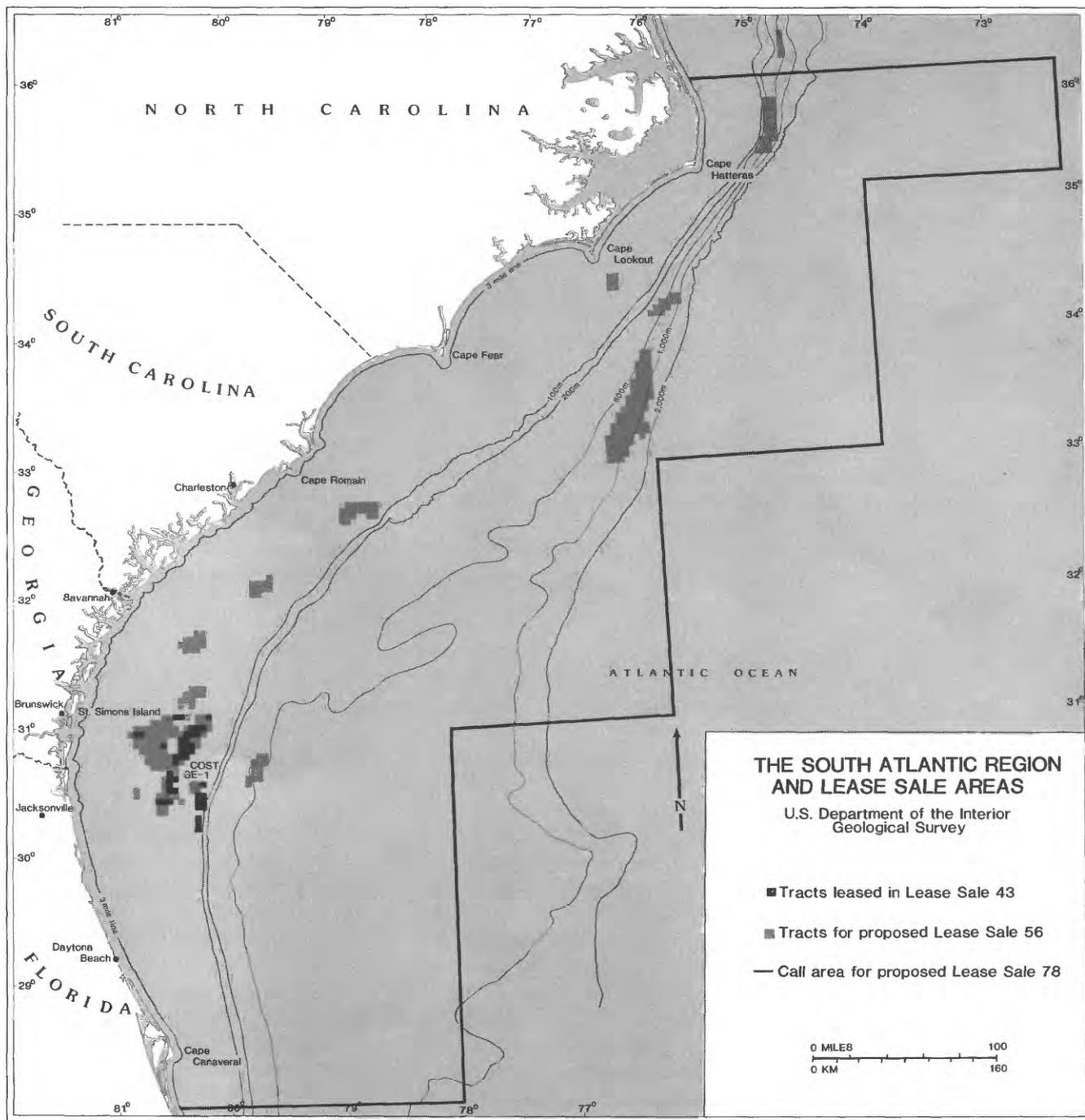


FIGURE 1.--The South Atlantic Region and lease sale areas. (Adapted from Jackson, 1980; BLM, 1981a; and BLM, 1981b, by Rogers, Golden & Halpern, 1981.)

Pursuant to section 18 of the OCS Lands Act Amendments of 1978, the Secretary of the Interior shall annually review and revise the OCS oil and gas leasing program. Revisions to the program are currently under way to streamline lease sale preparation procedures, to offer areas of high potential earlier, and to offer more acreage for leasing.

A proposed 5-year leasing schedule was published in July 1981, and a final schedule is expected to be approved late this year or early in 1982. Until the final schedule is approved, all sale dates noted in this report are based on the June 1980 final schedule. However, pre-lease-sale steps for sales under way may be changed to reflect streamlining efforts and may not match those shown in this report.

OFFSHORE OIL AND GAS RESOURCES OF THE SOUTH ATLANTIC REGION

Geologic Aspects of the South Atlantic Region

For a review of the geology of the South Atlantic OCS, see p. 3 of the July 1980 South Atlantic Summary Report (Jackson, 1980, USGS Open-File Report 80-626). Also, a discussion of the geology of the Lease Sale 56 area was included in the February 1981 Update, (Havran, 1981, USGS Open-File Report 81-25).

Resource and Reserve Estimates

Changes have occurred in the estimates of undiscovered recoverable resources since the publication of the July 1980 Summary Report and February 1981 Update. Tract-specific resource estimates for lands leased in Lease Sale 56 will be included in the revised South Atlantic Summary Report to be published in May of 1982.

MAGNITUDE AND TIMING OF OFFSHORE DEVELOPMENT

Lease Sale 43

OCS Lease Sale 43 was the first lease sale in the South Atlantic Region. The lease site offered 224 tracts covering 1,275,273 acres (515,975 hectares) (fig. 1). The date of the sale was March 28, 1978, and the effective date of leases was May 1, 1978.

Of the 224 tracts offered for sale, 57 tracts received bids and 43 tracts were leased, for a total bonus of \$102,642,921. As a result of Lease Sale 43, eight plans of exploration for 11 blocks were submitted to USGS, but only six exploratory wells have been drilled (BLM, 1981a, p. 25). Of these six wells, Tenneco drilled two, Exxon drilled two, and Getty and Transco each drilled one. All were dry holes and were subsequently plugged and abandoned. Indications are that no other wells will be drilled on Lease Sale 43 tracts, although Sale 43 leases are still active. As of July 1981, Getty Oil has relinquished four (of five) of their leases, leaving 39 active leases. The remaining leases will expire April 30, 1983.

During exploration activities, two rigs were operating. Air and water transportation activities consisted of one routine helicopter flight each day, two to three flights per week

for crew changes, and two to three workboat trips (for supplies) per week.

The onshore impacts resulting from Lease Sale 43 were minimal and for the most part were socioeconomic. Most of the onshore impacts were centered around Brunswick, Georgia (Jackson, 1980, USGS Open-File Report 80-626).

Lease Sale 56

Lease Sale 56 (fig. 1) was held on August 4, 1981, and it was the second lease sale in the South Atlantic Region. The Department of the Interior offered approximately 1,628,944 acres (659,071 hectares) of Federal land off the coasts of North Carolina, South Carolina, Georgia, and Florida for oil and gas leasing (Salzmann, 1981).

Of the 285 tracts to be offered for sale, 136 were in deepwater areas of greater than 1,312 feet (400 m) (Energy Resources and Technology, 1981). Deepwater tracts lie in water deeper than 1,312 feet (400 m). All tracts offered range from approximately 16 to 111 nautical miles (30-206 km) offshore in water depths ranging from 65 to 6,890 feet (20-2,100 m). USGS conditional mean resource estimates for the area are approximately 1.4 billion barrels (0.22 billion m³) of oil and 2.5 trillion cubic feet (0.07 trillion m³) of natural gas. Total development is estimated to require 101 exploratory wells, 56 production platforms, and 1,299 development wells (BLM, 1981a).

Of the 285 tracts offered, only 19 percent or 54 tracts received bids. Fifteen companies participated in the lease sale, with the total of high bids being \$363.8 million.

In July 1981, the State of North Carolina brought suit against the U.S. Department of the Interior because of the State's opposition to the leasing of tracts near its barrier beaches. However, the six environmentally sensitive tracts did not receive any bids and the State of North Carolina has withdrawn its lawsuit.

LEASE TERM. The standard lease term for OCS tracts is 5 years. However, for Lease Sale 56 most of the tracts are in deep water, and all but four of the tracts will carry initial 10-year lease terms to provide industry time to develop these deepwater tracts, assuming that hydrocarbons are present.

LEASING PROVISIONS. Of the 285 tracts offered in the notice of sale, 38 tracts received bids under a fixed royalty of 12.5 percent of the wellhead value of any oil and gas produced, none of the tracts received bids under a fixed royalty of 16.66 percent, and 16 tracts received bids under the bonus bidding system with a fixed net profit share.

The OCS oil and gas summary reports and subsequent updates are designed to complement the environmental impact statement (EIS). Information from both is useful to State and local officials planning for onshore impacts from OCS activities. Some issues considered in the EIS include archeological, biological, geological, and military areas. Ordnance stipulations were developed to protect sensitive areas (BLM, 1981a). The EIS also includes an analysis of potential oil spills and the probability of their reaching the coastline.

Lease Sale 78

The third lease sale in the South Atlantic area, OCS Lease Sale 78, is scheduled for January of 1984. In March 1981, the Bureau of Land Management issued a call for

nominations and comments on areas for oil and gas leasing (BLM, 1981b). The call area (fig. 1) includes 9,640 blocks (53,611,706 acres or 21,691,296 hectares) in waters as deep as 14,490 feet (4,417 m) and is located from 3 to 235 miles (4.8-378 km) off the coast.

The nominations for the sale closed June 1981, with tract selection scheduled for October 1981. The draft environmental impact statement is scheduled to be issued November 1982.

OIL AND GAS TRANSPORTATION STRATEGIES

When commercially producible quantities of oil and gas are located offshore, there must be a mechanism for their transport onshore for processing, refining, and distribution. The Department of the Interior's Bureau of Land Management has the lead role in the transportation planning process for oil and gas discovered on the OCS. This planning process is organized through BLM's Intergovernmental Planning Program for OCS Oil and Gas Leasing, Transportation, and Related Facilities (IPP). Each of BLM's six offshore leasing areas, including the South Atlantic Region, has an advisory committee called the Regional Technical Working Group (RTWG). Each working group meets approximately four times a year to offer advice to the BLM on technical aspects of leasing, transport of oil and gas to shore, and BLM's environmental studies program.

The South Atlantic RTWG met April 28, 1981, in New Orleans, Louisiana. The purpose of this meeting was to help prepare a draft of a regional studies plan for the South Atlantic. The BLM maintains an annual listing of studies and research needs. Carry-over projects, previously rejected studies, and new studies were all examined and ranked by the RTWG, and then submitted to BLM.

The RTWG Committee also met on June 11, 1981, in New Orleans to participate in environmental briefings, nominations, and the tract selection process for proposed OCS Lease Sale 78. Another meeting is scheduled for October or November, 1981, to develop lease stipulations for OCS Lease Sale 78. The types of stipulations under consideration include archeological, biological, geological, military area, ordnance, and transportation concerns.

A new full member, Mr. Jack R. Macgregor of ODECO, Inc., of New Orleans, Louisiana, was added to the Regional Technical Working Group Committee (table 1). Two ad hoc committee members are Mr. Edward F. Wilson of the Commonwealth of Virginia and Mr. James M. Kelly of the U.S. Army Corps of Engineers.

In July 1981, all sale, study, administrative, and operational responsibilities, including those of the South Atlantic RTWG, were transferred from the BLM New Orleans OCS Office to the BLM New York OCS Office.

NATURE AND LOCATION OF NEARSHORE AND ONSHORE FACILITIES

Since the publication of the first update, the level of activities concerning nearshore and onshore support facilities has remained fairly constant. This is due mostly to the low level of oil- and gas-related activity in the region.

TABLE 1.--South Atlantic Regional Technical Working Group Committee

Member	Affiliation
Mr. Frank Basile	Bureau of Land Management
Mr. Murice Rinkel	State of Florida (Co-chairperson)
Mr. Randy Cheek	National Oceanic and Atmospheric Administration
Capt. Henry Helgesen	U.S. Coast Guard
Mr. James M. Kelly	U.S. Army Corps of Engineers
Dr. James Kirkwood	Fish and Wildlife Service
Mr. Paul Martin	U.S. Geological Survey
Mr. Reginald Rogers	Environmental Protection Agency
Mr. James Barber	State of Georgia
Ms. Patricia L. Jerman	State of South Carolina
Mr. James Smith	State of North Carolina
Mr. Edward F. Wilson	Commonwealth of Virginia
Mr. Pat Edling	Tenneco
Mrs. Susan R. Graber	Private Sector
Mr. Jack R. Macgregor	ODECO, Inc.
Mr. Hans Newhauser	The Georgia Conservancy
Mr. John M. Seymour	Southern Natural Gas Company
Mr. McIver Watson	Coastal Plains Regional Commission
Brig. Gen. William Van Harlingen	Private Sector

For further information concerning the South Atlantic Regional Technical Working Group Committee, contact Richard Barnett, Bureau of Land Management, New York OCS Office, Jacob K. Javits Federal Building, Suite 32-120, New York, NY 10278 (telephone: (212) 264-1061).

The city of Brunswick, Georgia, obtained a \$1.2 million loan from the National Oceanic and Atmospheric Administration's Office of Coastal Management, and built an 800-foot (244-m) dock to support oil and gas exploration activities. The land adjacent to the new docks was leased to the oil and service companies.

Three new refineries are planned for the region (Cantrell, 1981, p. 98). In Savannah, Georgia, a new refinery with a 30,000 barrel (4,767 m³) per day capacity is being planned by Carolina Refining and Distributing. The plant is to be completed in 1983. A second Savannah refinery is planned by Southland Refining. The 50,000 barrel (7,945 m³) per day plant is to be completed late in 1982. The third refinery is planned for Brunswick County, North Carolina, by the Brunswick Energy Corporation (Crown Central, Steuart Petroleum, Federal Paper Board Co.). The 150,000 barrel (23,835 m³) per day refinery is to be completed in 1983.

These new facilities are not expected to process OCS hydrocarbons derived from the region, but they could have the potential to handle any future commercial oil discoveries in the Atlantic.

The U.S. Geological Survey has a district office on St. Simon's Island, Georgia, to monitor exploratory activity on the OCS. Because of the minimal amount of OCS oil and gas activity in the South Atlantic Region, the district office will merge with the Mid-Atlantic district office on August 8, 1981. The new district office will be located in the Atlantic City, New Jersey, area and it will deal with the affairs of both regions.

CONCLUSION

In conclusion, because of the minimal offshore oil- and gas-related activity in the South Atlantic Region, the onshore impacts are also minimal. Very little, if any, development has occurred as a result of exploration or development. Even though the South Atlantic OCS does contain large areas with hydrocarbon potential, little optimism has been generated by exploration associated with Lease Sale 43. Lease Sale 56 included tracts with geologic conditions more favorable to the generation, migration, and accumulation of hydrocarbons, especially the deepwater tracts, but industry showed moderate interest in the first deepwater lease sale.

The level of nearshore and onshore activity may increase with exploration associated with Lease Sale 56. More permanent onshore development will be contingent on the outcome of exploration efforts.

REFERENCES

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- , 1981, Watt proposes new initiative to speed leasing in high potential offshore areas, April 16, news release, p. 5.

APPENDIX - OCS-RELATED STUDIES

FEDERAL STUDIES

U.S. Department of the Interior: Bureau of Land Management

The Bureau of Land Management (BLM) of the U.S. Department of the Interior (DOI) conducts an environmental studies program. The BLM New Orleans OCS Office administers studies approved by the BLM Washington Office for the South Atlantic Region. Appendix C of the initial South Atlantic Summary Report describes this program. A number of studies have already been completed for the South Atlantic, and additional studies are planned for fiscal year 1982. Some of the studies were conducted by other agencies within the DOI as a part of the BLM's environmental studies program. The studies listed below either were not included in the South Atlantic Summary Report or were listed, but their status or availability has changed. Completed studies may be reviewed at the New Orleans OCS Office of the Bureau of Land Management, Hale Boggs Federal Building, 500 Camp Street, Suite 841, New Orleans, La., or at the Washington OCS Office of the Bureau of Land Management, 18th and C Streets, NW, Washington, D.C.

Dynalysis of Princeton, South Atlantic OCS circulation model application, phase II (draft): Princeton, N.J. Final report due September 1981.

The objective of this study is to adapt the model, specified by the BLM, to the South Atlantic OCS Region. It will also provide recommendations for the type, quantity, and quality of additional data needed to improve the effectiveness of the model and provide quantitative values of the seasonal surface circulation for use in the Department of the Interior oil spill risk analysis model.

Fish and Wildlife Service, Pilot study of marine mammals, birds, and turtles: synopsis of results (draft): Slidell, La. Final report available October 1981.

The objectives of this study for the South Atlantic and Gulf of Mexico OCS areas are to analyze field data concerning the distribution and abundance of marine birds, mammals, turtles, and manatees; to develop software for analysis and compilation of field data; and to identify and describe areas of special biological significance. Additionally, four synthesis documents will be compiled by the Fish and Wildlife Service from the final report as follows: synopsis of mammals, manatee synthesis, first-year census results, and an annotated bibliography of marine sea turtles.

Fish and Wildlife Service, South Atlantic and Gulf of Mexico marine birds literature synthesis and analysis (draft): Slidell, La. Final report due December 1981.

The objective of this report is to obtain and organize all information from the literature, unpublished reports, oral communications, and other sources that relate to marine birds and the possible effects of OCS oil and gas activity in the South Texas and South Atlantic lease areas.

General Oceanics, Inc., Blake Plateau and mid-water current study (draft): Miami, Fla. Report in progress.

This study will provide bottom current information across the Blake Plateau at four locations for a one-year period. The data collected will provide BLM and USGS with data needed to determine risks in drilling and emplacing bottom production and transportation facilities. The data will be used as input for the South Atlantic OCS circulation model application study.

JAYCOR, South Atlantic OCS physical oceanographic modeling evaluation: Del Mar, Calif. Final report received June 1981.

This report describes and classifies models applicable to the prediction of transport, diffusion, and dispersion of various contaminants. It also assesses the potential for damage or rupture of structures and pipelines on the Continental Margin under varying atmospheric and oceanic conditions.

National Data Buoy Office, South Atlantic OCS data buoy, FY '78 - FY '81: Bay St. Louis, Miss.

A data buoy was deployed off the coast of Charleston, South Carolina, so that more definitive information about the physical oceanography of the Georgia Embayment could be obtained. The buoy is equipped to collect meteorological and sea surface data. A final report will not be issued, but data will be incorporated into other South Atlantic physical oceanography studies.

Science Applications, Inc., 1981, South Atlantic cultural resources evaluation study (draft): McLean, Va.

The geographical area covered in this study extends from Cape Hatteras, North Carolina, to Key West, Florida, and seaward from the mean high-water line to the 656-foot (200-m) isobath. Study objectives include the following: (1) a review of the Quarternary geology of the area, as it relates to the cultural resources; (2) an assessment of the total cultural resources that can be identified; (3) determination of the probability of resource occurrence by area and feature; (4) identification of potential pilot study areas; and (5) a review of present study techniques and data deficiencies.

Science Applications, Inc., South Atlantic OCS physical oceanographic field studies (draft): La Jolla, Calif. Report in progress.

The long-range objectives of these studies are to provide a description and understanding of the currents, circulation, and mixing processes in the South Atlantic OCS Region in sufficient detail to predict the dispersion, dilution, transport, and final distribution of hydrocarbons and other pollutants that may be introduced into the marine environment as a result of OCS oil and gas activities. Additionally, an effort will be made to provide circulation and forcing information for an understanding of the biological, geological, and chemical systems in the Georgia Embayment and the effects of hydrocarbons and other pollutants on these systems.

South Carolina Marine Resources Research Institute, South Atlantic OCS area living marine resources study (draft): Charleston, S.C. Final report due August 1981.

This study will attempt to contribute to the understanding of live-bottom areas and the relationship between live-bottom habitats and adjacent non-live-bottom habitats. It will also attempt to determine if current lease stipulations are properly directed or if more consideration should be given to benthic habitat types other than live bottoms.

U.S. Geological Survey, South Atlantic - Blake Plateau hazards mapping study (draft): Woods Hole, Mass.

This study will consist of an intensive seismic and remote sensing survey off North Carolina in the area of recent industry interest. Major subdivisions of the study include: (1) a stratigraphic study of the shelf, slope, and Blake Plateau and Escarpment off North Carolina; (2) geohazards identification in regard to oil and gas operations on the OCS; (3) determination of geological features supportive of biological communities on the Florida-Hatteras shelf off North Carolina; and (4) synthesis of the study results with former studies into maps for the Geological Atlas series.

U.S. Geological Survey

The following Open-File Reports are available at cost from Open-File Services Section, Branch of Distribution, U.S. Geological Survey, Box 25425, Federal Center, Denver, CO 80225.

Popenoe, Peter, ed., 1980a, Final executive summary report - environmental studies southeastern United States Outer Continental Shelf 1977 - geology: Woods Hole, Mass, U.S. Geological Survey Open-File Report 80-147, 52 p.

This report is a summary of the U.S. Geological Survey Open-File Report 80-146. Beginning in 1976, a variety of geological studies were conducted by the U.S. Geological Survey on the southeastern U.S. Atlantic Continental Margin by agreement with the Bureau of Land Management. The research was to provide an assessment of conditions and hazards that might cause or distribute oil spills or other pollutants, or constrain petroleum exploration or development of the area.

Popenoe, Peter, ed., 1980b, Final report - environmental studies southeastern United States Outer Continental Shelf 1977 - geology: Woods Hole, Mass., U.S. Geological Survey Open-File Report 80-146, 909 p. and appendixes (microfiche).

This report is a compendium of environmental research on the southeastern Atlantic Outer Continental Shelf conducted by agreement with the Bureau of Land Management. Objectives of the program were as follows: (1) measurement of the rate of sediment mobility over the sea bed and monitoring of resultant changes in bottom morphology and texture; (2) determination of the concentration, distribution and flux of suspended particulate matter in the water column; (3) determination of vertical distribution of trace metals in the near surface sediment at selected locations; (4) evaluation of potential geologic hazards to oil and gas development due to surficial and immediate depth structure and mass sediment transport events; (5) identification and determination of the significance of outcrop and reef structures; and (6) support of the chemical and biological benchmark contractor's activities by providing relevant geologic and physical oceanographic information.

LOCAL STUDIES

Florida

City of Jacksonville, Jacksonville Area Planning Board, 1980, Protection of coastal waters from Outer Continental Shelf impacts on Jacksonville Port: Jacksonville, Fla. Available at cost of reproduction from the City of Jacksonville, Planning Department, Florida Theater Building, 128 East Forsyth Street, Suite 700, Jacksonville, FL 32202.

This study's objectives were as follows: (1) to determine the expansion needs of the Port of Jacksonville associated with an increase in OCS activity; (2) to study water quality impacts in the St. Johns River; and (3) to examine the dredge spoil disposal needs related to the maintenance of the river channel. Additionally, plans for future port development and dredge spoil disposal were developed in an effort to maintain water quality levels and protect sensitive environmental areas adjacent to the port.

City of Jacksonville, Planning Department, 1979, Protection of coastal environments from Outer Continental Shelf impacts on the north side of Jacksonville: Jacksonville, Fla. Available at cost of reproduction from the City of Jacksonville, Planning Department, Florida Theater Building, 128 East Forsyth Street, Suite 700, Jacksonville, FL 32202.

The objective of this study was to monitor offshore oil and gas activities resulting from OCS Lease Sales and to determine primary and secondary socio-economic and physical impacts. Particularly addressed were the demands placed on Duval County's facilities such as transportation, housing, and utilities. In addition, efforts were made to develop policies and proposals to provide for OCS-related growth while protecting sensitive environmental areas and resources.

City of Jacksonville Beach, Office of the City Manager, 1979, Coastal zone protection study for Jacksonville Beach: Jacksonville Beach, Fla. Review copy available for loan through the City of Jacksonville Beach, Office of the City Manager, 11 North Third Street, Jacksonville Beach, FL 32250.

This study examined the consequences of a coastal energy facility (Offshore Power Systems) and a possible OCS-related energy facility (resulting from OCS Sale 43) in an effort to plan for the rational utilization of the City of Jacksonville Beach oceanfront. Planning issues addressed included: (1) community facilities; (2) coastal zone protection; and (3) intergovernmental coordination.

Florida Atlantic University and Florida International University, Joint Center for Environmental and Urban Problems, 1979, Technical assistance manual: measuring the onshore impacts of offshore oil and gas: Ft. Lauderdale, Fla. For information regarding availability contact Joint Center for Environmental and Urban Problems, Florida Atlantic University, 1515 Commercial Boulevard, Ft. Lauderdale, FL 33309.

This project was designed as an educational activity to increase northeast Florida residents' awareness and understanding of the potential impacts of OCS-related onshore activities on the region. The project included three workshops and the preparation of a technical assistance manual to aid local planners in dealing with OCS issues.

Nassau County Planning and Zoning Department, 1980, Coastal energy impact program study: prepared for the Nassau County Ocean Highway and Port Authority and City of Fernandina Beach. For information regarding availability contact Nassau County Planning and Zoning Department, Route 3, Box 176, Fernandina Beach, FL 32034.

The objective of this planning analysis was to provide local officials and concerned citizens with information regarding the extent of impacts associated with offshore oil and gas development activity. Initial impacts anticipated for Nassau County because of its strategic location and deepwater port facility include a deep-water oil docking facility and tank farm proposed for Amelia Island and the purchase of Little Tiger Island by a major oil company.