UNITED STATES DEPARTMENT OF THE INTERIOR

MINERALS MANAGEMENT SERVICE

Gulf of Mexico OCS Region

New Orleans, Louisiana

FINAL

SITE-SPECIFIC ENVIRONMENTAL ASSESSMENT

No. U-609

Revised Exploratory Activity

Destin Dome Block 56

Lease OCS-G 6406

May 1989
Commodity: Oil and Gas

United States Department of the Interior
Minerals Management Service
Gulf of Mexico OCS Region
New Orleans, Louisiana

OCS SITE-SPECIFIC ENVIRONMENTAL ASSESSMENT

May 1989

Operator: Conoco Inc.
Plan Type: Revised Plan of Exploration
Area: Destin Dome Block 56
Lease: OCS-G 6406
Date Submitted: Jul 20, 1989
Commencement Date: July 1989

Prepared by Dennis L. Chew

RELATED ENVIRONMENTAL DOCUMENTS

FEIS's for OCS Lease Sale Nos. 94, 98, 102, 113, 115, and 116
SEA No. N-2388
SEA No. R-1802

Area-Wide Environmental Assessment for Exploration Activities in the Northwest Section of the Eastern Planning Area
FINDING OF NO SIGNIFICANT IMPACT

I have considered the Revised Plan of Exploration submitted by Conoco Inc. to drill exploratory Well No. 2 in Destin Dome Area Block 56 (OCS-G 6406), SEA No. U-609, and, based on the environmental analysis contained in this environmental assessment and any mitigation measures contained therein, find that there is no evidence to indicate that the proposed action(s) will significantly (40 CFR 1508.17) affect the quality of the human environment, and the preparation of an environmental impact statement is not required.

[Signature]
Acting Regional Supervisor
Leasing and Environment
Gulf of Mexico OCS Region

[Date]
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<td>Area-Wide Environmental Assessment</td>
</tr>
<tr>
<td>AER</td>
<td>Area-Wide Environmental Report</td>
</tr>
<tr>
<td>CSA</td>
<td>Continental Shelf Associates</td>
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<tr>
<td>CZM</td>
<td>Coastal Zone Management</td>
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<tr>
<td>EIS</td>
<td>Environmental Impact Statement</td>
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<tr>
<td>GOM</td>
<td>Gulf of Mexico</td>
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<tr>
<td>H₂S</td>
<td>Hydrogen Sulfide</td>
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<tr>
<td>MMS</td>
<td>Minerals Management Service</td>
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<tr>
<td>NEPA</td>
<td>National Environmental Policy Act</td>
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<td>NPDES</td>
<td>National Pollutant Discharge Elimination System</td>
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<td>SEA</td>
<td>Site-Specific Environmental Assessment</td>
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<tr>
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FIGURES

1. Geographic location of Destin Dome Area Block 56  
2. Revised location of Well No. 2  
3. Position of the well sites in relation to the hard-bottom area
INTRODUCTION

This Site-Specific Environmental Assessment (SEA) submitted for revised exploration activity proposed in Destin Dome Block 56 has been written as an addendum to SEA No. N-2388 (Conoco Inc.). SEA N-2388 contains site-specific and updated information for proposed activities in Blocks 56, 57, and 99 that are not contained in the Area-Wide Environmental Assessment (AEA). The SEA was prepared using the AEA dated May 1984, entitled "Area-Wide Environmental Assessment for Exploration Activities in the Northwest Section of the Eastern Planning Area" as a base document. Both this AEA and SEA N-2388 can be obtained through the Public Information Records Office of the Minerals Management Service (MMS), Gulf of Mexico (GOM) Region, Outer Continental Shelf (OCS) Office.

The AEA/SEA process is designed to simplify and reduce the size of environmental assessment documents by eliminating repetitive discussions of the same issue. By using SEA N-2388 and the AEA as base documents, this SEA concentrates on the issues specific to the proposed action. As an addendum to SEA N-2388, and thereby indirectly referencing information presented in the AEA dated May 1984, this SEA conforms to MMS and other appropriate guidelines for preparing environmental assessments.

I. DESCRIPTION OF THE PROPOSED ACTION

A. GENERAL

Conoco Inc. filed a Revised Plan of Exploration (POE) on April 20, 1989 for Destin Dome Block 56, Lease OCS-G 6406. They also provided an Addendum to the Site-Specific Environmental Report (SER) for exploratory drilling in the Gulf of Mexico, Destin Dome Area Blocks 55 (OCS-G 6405), 56 (OCS-G 6406), 57 (OCS-G 6407), 99 (OCS-G 6410), and 100 (OCS-G 6411). Conoco Inc. submitted the original SER dated January 1986 (Racal-Decca Survey, Inc., 1986a). This SER referenced information provided in previously submitted AER's prepared in 1984 and 1985 (Continental Shelf Associates (CSA), Inc., 1984; Survey Inc., 1984, 1985). The area for which the revised exploration activity is planned is located approximately 41 km (25.5 mi) due south of Santa Rosa Island, Florida, and 108 km (67 mi) southeast of the city of Theodore, Alabama (Figure 1). The water depth at the proposed well site is 58 meters (190 feet).

The objective of the proposed revised operation is to evaluate the hydrocarbon potential of Destin Dome Block 56. The surface location for the revised well is shown in Figure 2. The operator plans to commence drilling in July 1989. For additional information concerning the proposed action, refer to the revised POE (Racal-Decca Survey, Inc., 1989b).

B. EQUIPMENT AND SUPPORT SYSTEMS

Conoco Inc. plans to use the jack-up rig "Odeco Ocean Titan" or similar equipment to drill the exploratory well. Specifications for the actual drilling vessel and safety equipment to be used would be submitted along with the application for permit to drill. During drilling operations, appropriate requirements of 30 CFR Part 250.56 for gas detecting equipment to monitor mud returns and for blowout prevention equipment to maintain well control will be met. The rig will be equipped with curbing and drip pans around equipment as necessary to prevent pollution. All discharges will be in compliance with an approved U.S. Environmental Protection Agency (USEPA) National Discharge
Figure 1. Geographic location of Destin Dome Area Block 56.
Figure 2. Revised location of Well No. 2 (Conoco Inc., 1989).
Elimination System (NPDES) permit. Operations will be conducted under an approved Critical Operations and Containment Plan. The rig has adequate firefighting equipment and will be operated in compliance with appropriate U.S. Coast Guard regulations. Details regarding the safety and pollution prevention systems available on the "Odeco Ocean Titan" are contained in the revised POP (Racal-Decca Survey, Inc., 1986b).

The onshore support base for the proposed activities is located in Theodore, Alabama. No new families are expected to move into the vicinity of the shore base area. No new facilities will be required and no new land acquisition or construction is anticipated. Additional information on these facilities and the proposed activities expected to originate from them is included in Sections III.C.1 and IV.C.1 of this SEA.

C. SCHEDULE OF ACTIVITIES

Conoco Inc. proposes to drill Well No. 2 at a revised location (Figure 2). The proposed drilling is scheduled to begin in July 1989. The drilling time would be approximately 200 days.

D. TRANSPORTATION ROUTES

Two vessels would operate out of existing dock facilities located in Theodore, Alabama. Conoco Inc. would use one work boat (about 210 feet long), one crew boat (about 90 feet long), and one standby boat (about 90 feet long) in support of the drilling operations. It is anticipated that the work boat and crew boat each would make approximately one round trip per day from the dock to the rig site. The standby boat is expected to make one round trip per month to and from the rig. Once the boats reach the mouth of Mobile Bay, they would travel the most practical, direct route to the rig.

Commercial airlines and other types of transportation would be used to carry drilling personnel from various locations on the Gulf Coast to the Theodore, Alabama area. Rig personnel would be transported to the rig site by the crew boat. A helicopter would be used to transport small supplies and on occasion personnel to the drill site following the most direct route when weather and traffic conditions permit. Approximately two flights per day would originate from the base facility in Theodore, Alabama.

E. PERSONNEL REQUIREMENTS

Rig personnel would total about 100. Of these, about 50 would be on the rig at any given time. The rig "Odeco Ocean Titan" provides accommodations for 56 men, complete with all normal living facilities. No new families are expected to move into the vicinity of the onshore base located in Theodore, Alabama.

Further information regarding personnel requirements, including rig crews, boat crews, dispatchers, pilots, and other employees is contained in the original SER (Racal-Decca Survey, Inc., 1986a).

F. TECHNOLOGY

No new or unusual technologies will be employed during this drilling operation (Racal-Decca Survey, Inc., 1986a).
G. CONTINGENCY PLANS

Pollution spill prevention will be accomplished primarily by compliance with the design, equipment, and operation requirements of 30 CFR Part 250, Subpart C. Procedures and guidelines for spill regulations in accordance with applicable regulations are provided in Conoco's Regional Oil Spill Contingency Plan (OSCP), an Oil Spill Trajectory Analysis and response plan for the Destin Dome area (Racal Survey Inc., 1987), and a Site-Specific OSCP (Conoco Inc., 1989, Attachment VI) which satisfies all requirements of 30 CFR Part 250.42. Both plans provide for advance preparation and action procedures for a Divisional Task Force and an Operational Response Team. Response time from Theodore, Alabama, where the equipment specified in Lease Sale 116, Part 1, Stipulation No. 6 is stockpiled, is less than 8 hours. Details can be found in the Site-Specific OSCP. Additional information on specific resources availability, response time, oil spill trajectories, and site-specific response plan can be found in Attachment VI of the revised POE (Racal-Decca Survey Inc., 1986a), the Oil Spill Trajectory Analysis and Response Plan for the Destin Dome Area (Racal Survey Inc., 1987), and in Conoco's Regional OSCP.

A Hydrogen Sulfide (H2S) Contingency Plan which describes safety requirements and procedures for OCS drilling operations where H2S may be encountered has been prepared in compliance with 30 CFR 250.67.

H. DISCHARGES AND EMISSIONS

1. General

Solid and liquid discharges and gaseous emissions would be generated by offshore and onshore activities and transportation operations resulting from the proposed revised POE. At the drill site in Destin Dome Block 56, all discharges to the ocean would be under a NPDES permit regulated by the USEPA. Conoco Inc. would maintain full compliance with the NPDES permit during all activities in the area (Racal-Decca Survey Inc., 1986a).

2. Solid Wastes

Solid waste discharges from the rig would consist of drill cuttings and small amounts of other solids. The cuttings, generated both at the bit and through erosion of the borehole walls, are brought to the surface by the drilling mud. These returns have their solids separated from their liquids through the use of solids control equipment (i.e., shale shakers, centrifuges, etc.). After separation, the cuttings are discharged overboard and the mud is recycled. A small amount of drilling fluid may adhere to the cuttings. Cuttings discharge rates and volumes with respect to drill depth would vary during the duration of the well drilling depending on hole size, rate of penetration, magnitude of the hole erosion, and other factors. All cuttings discharge would be in compliance with the approved NPDES permit (Racal-Decca Survey Inc., 1986a).

For further information regarding solid wastes, refer to the original SER (Racal-Decca Survey Inc., 1986a) and the Revised POE (Racal-Decca Survey Inc., 1986a).
3. Liquid Wastes

Liquid wastes include sanitary wastes, domestic wastes, drilling fluids, and water from several sources (e.g., freshwater maker blowdown, deck drains, non-contact cooling water, produced water, and fire control system test water). Treatment of liquid waste effluents would be in compliance with the NPDES permit. Information concerning liquid wastes is contained in the original SER (Racal-Decca Survey, Inc., 1986a) and the Revised POE (Racal-Decca Survey, Inc., 1989b).

4. Gaseous Wastes

Exploratory activities in Destin Dome Block 56 would consist of drilling, testing, completion, and/or abandonment operations. The distance to the nearest landfall is about 41 km (25.5 mi). Projected air emissions from offshore sources and exemption levels are presented in the original SER (Racal-Decca Survey, Inc., 1986a). The estimated actual emissions for the project are less than the exemption levels, thus exempting these activities from further air quality reviews [Federal Register, 45 CFR 47, Friday March 7, 1980 (Racal-Decca Survey, Inc., 1986a)].

Onshore emission levels should be minor and temporary during helicopter takeoffs and landings, as well as when the work boat and crew boat are in transit in the harbor or at the dock when the generators are running (Racal-Decca Survey, Inc., 1986a).

I. STATE CERTIFICATION

The Consistency Certification of Conoco Inc. for the State of Alabama is included in Appendix A of the Addendum to the SER (CSA, Inc., 1989a). Conoco Inc. certifies that the AER's, SER, SER Addendum, and POE indicate that each of the proposed activities, their associated facilities, and effects are all consistent with and comply with the provisions and guidelines of the Alabama-approved coastal zone management (CZM) program. The proposed activities will be conducted in a manner consistent with the CZM program. A copy of the original Florida Consistency Certification which is still valid for the proposed well in Block 56 is also included in Appendix A of the SER Addendum.

J. MEASURES FOR COMPLIANCE

During drilling operations in Destin Dome Area Block 56, Conoco Inc. and its contractors will maintain full compliance with the NPDES permit and regulations governing oil and gas lease operations in the Gulf of Mexico (GOM), as well as with the applicable lease stipulations.

Compliance with lease stipulations from OCS Sale No. 79 were described in the related AEA's and SER. The SER Addendum discusses two stipulations (Stipulations 2 and 6) from OCS Sale No. 116, Part 1 that are being complied with by Conoco Inc. for Destin Dome Area Block 56 operations.
Stipulation No. 2 of Sale No. 116, Part 1 concerns live-bottom areas. CSA, Inc. (1989b) conducted a live-bottom survey for the second well location (Well No. 2) in Block 56 in accordance with Stipulation No. 2 of Sale No. 116, Part 1, the MMS Revised Guidelines for Photodocumentation Surveys dated 31 January 1989, and the Live-Bottom Survey Plan for Block 56 dated 16 January 1989, which was approved by the MMS and State of Florida. The results of the survey are presented in a report prepared by CSA, Inc. (1989b) and are summarized in the SER Addendum (CSA, Inc., 1989a).

Stipulation No. 6 of Sale No. 116, Part 1 concerns oil spill response. Destin Dome Area Block 56 is in Panhandle Area B. Conoco Inc. will comply with the Panhandle Area B requirements of Stipulation No. 6 of Sale No. 116. Conoco has submitted to the MMS a site-specific OSCP for Destin Dome Area Block 56 and an update of Conoco's regional OSCP. The regional and site-specific OSCP's comply with present information required by 30 CFR 250.42. The OSCP's follow the format and address the guidelines contained in the 1 February 1989 Letter to Lessees (FO-2-1) from the MMS, GOM OCS Region.

The regional and site-specific OSCP's contain information that summarizes the most recent applicable trajectory analyses and discusses the response strategies to be used for the protection of the environmental resources that are shown to be potentially vulnerable. The site-specific OSCP identifies Theodore, Alabama as the shore base where the oil spill containment and clean-up equipment will be stockpiled. The types and amount of equipment, at a minimum, will comply with those listed for Area B in Stipulation 6 of Sale No. 116, Part 1. At Conoco's Theodore, Alabama shore base, a fast response system, 750 ft of open ocean boom, a small vessel to assist in boom deployment, and five bales of sorbent pads will be stockpiled for immediate deployment and transport to the drill site. The boat dispersant spray system, a helicopter underslung sprayer system, a 180-bbl dispersant transport system, 98 drums of dispersant (Corexit 9527), and 2 drums of a surface oil-collecting agent are stockpiled at the Clean Gulf Associates warehouse in Panama City, Florida. Contractual arrangements with operators of local vessels of opportunity will be maintained in order to assure a direct response from the shore base to the drill site. As shown in the site-specific OSCP, this arrangement provides a capability of on-site deployment and initial operation of containment and clean-up equipment within eight hours of a spill event. At the drill site, Conoco Inc. will also maintain 200 ft of sorbent boom and a means for its deployment.

In addition to the above, the combination of Conoco's regional and site-specific OSCP's addresses and provides information on the following other items required by 30 CFR 250.42: 1) a dispersant-use plan; 2) provisions for inspecting and maintaining response equipment; 3) procedures for detection of a spill and specific notification procedures; 4) identification of additional locally and regionally available response equipment and supplies; 5) identification of specific response actions; 6) provisions for disposal of recovered products; and 7) provisions for monitoring and predicting spill movement.
K. NEARBY PENDING ACTIONS

The only operations in Destin Dome Block 56 are those addressed in the original and revised SER's and POE's submitted by Conoco Inc. and Chevron U.S.A. Inc., respectively, and in this SEA. Conoco Inc. is not aware of any mineral mining operations in these blocks other than the proposed oil and gas exploration. Potential economic deposits of phosphate and quartz sands are thought to be present on the west Florida shelf although no mining has occurred to date [U.S. Department of the Interior (USDOI), 1987].

II. ALTERNATIVES TO PROPOSED ACTION

Alternatives to approval of the revised proposal as originally submitted are:

Non-approval of the proposal - Conoco Inc. would not be allowed to undertake the proposed revised Plan of Exploration activities in Destin Dome Block 56. This alternative could prevent discovery and development of much-needed hydrocarbon resources and would result in loss of royalty income for the United States. Considering this aspect and the fact that minimal impacts are anticipated, this alternative was not deemed appropriate.

Approval with additional mitigation - In the course of this evaluation process, the following protective measures were identified to further mitigate the environmental impacts associated with the proposal.

1. In compliance with the lease stipulation regarding control of electromagnetic emissions and operations of boat and/or aircraft traffic into the designated Military Warning Area W-155, the operator must enter into an agreement with Fleet Area Control & Surveillance Facility, Naval Air Station, Attention: Chief Lyon, Pensacola, Florida 32508, Telephone: (904)452-2735/4671.

2. Although the operator's lease is not within Military Warning Area W-453, the plan indicates that boat and/or aircraft traffic would traverse this area. The operator has indicated that their onshore support base would be Theodore, Alabama; therefore, in order to provide control of electromagnetic emissions and the operations of boat and/or aircraft traffic the operator should enter into an agreement with 159th Tactical Fighter Group, NAS NOLA, Attention: Colonel Jack Boh/Captain Erik McDonald, New Orleans, Louisiana 70143, Telephone: (504)393-3521/3377.

3. The MMS analyses indicate there is a potential geologic hazard problem. Based on this finding, appropriate measures to mitigate potential impacts will be brought to the lessee's attention.

4. The operator will be advised that the proposed activities may encounter H₂S gas; therefore, adherence to 30 CFR 250.67 is required.

5. The operator will comply with the requirements of Stipulation No. 6 of Sale 116, Part 1 regarding oil spill response.
In addition to these measures, appropriate OCS Orders, regulations, and procedures are believed sufficient to prevent significant adverse impacts. Measures which Conoco Inc. proposes to implement to limit pollution effects are discussed in the revised plan, revised SER, and AER's Outer Continental Shelf Orders, Notices to Lessees and Operators, and lease stipulations have been identified in this assessment as existing mitigation for potential environmental impacts associated with the proposed revised POE (see also Section I.J.).

III. DESCRIPTION OF THE AFFECTED ENVIRONMENT

A. PHYSICAL ENVIRONMENT

1. Environmental Geology and Hazards

a. General Description of Geology

Water depth variations for Destin Dome Block 56 are indicated on the bathymetry map in the original SER (Racal-Decca Survey, Inc., 1986a). The water depth at the proposed revised location of Well No. 2 is about 58 meters (190 feet). The seafloor is basically irregular, dipping gently to the South, Southeast at 1 m (4 ft) per 1.6 km (mile). A broad depression or trough is located south of the seafloor scarp and extends from the southeast corner of Block 56 and across the central section of Block 57. These blocks are located on the Santa Rosa Arch and are along a portion of the northwest border of De Soto Canyon. The sediment type in the vicinity of these blocks has been described as medium sand with a mean sand fraction of 89.99 percent (Marine Technical Services, Inc., 1985).

A large hard-bottom formation oriented in a northeast/southwest direction is located in the SER area (Figure 3). The southwest tip of the hard-bottom formation is located in the northeast corner of Destin Dome Area Block 99, traverses the southern half of Block 56, and terminates in the northeast quadrant of Block 57. The hard-bottom formation ranges in width from approximately 30 to 220 m (98 to 722 ft) with a vertical relief up to 8 m (26 ft) (CSA, Inc., 1989).

Small rock outcrops approximately 9 to 15 m (30 to 50 ft) in diameter and spaced 15 to 60 m (50 to 200 ft) apart are located in the SER area (John E. Chance & Associates, Inc., 1985; Racal Survey Inc., 1988). These outcrops are scattered within Destin Dome Area Blocks 57, 99, and 100.

Additional information on geology is included in the AEA and the operator's hazard study.

b. Potential Geologic Hazards

The shallow hazard study and report for Block 56 indicates that the proposed well location is free of geologic hazards such as sediment slump areas, fractures, and possible biogenic gas deposits (Racal-Decca Survey, Inc., 1986a). No significant or major magnetic anomalies were recorded during the survey.
Figure 3. Position of well sites in relation to the hard-bottom area (CSA, Inc., 1989a).
B. BIOLOGICAL ENVIRONMENT

1. Offshore Habitats

a. Benthic Environment


The following information was extracted from the SER Addendum and Photodocumentation Survey prepared in support of the proposed activity (CSA, Inc., 1989a, b).

Two substrate types were observed in the SER area during the previously described photodocumentation surveys:

1) Sand bottom with little or no attached epibiota; and
2) Hard Bottom (exposed rock) with attached epibiota.

Sand bottom, consisting of sand mixed with shell fragments, was the predominant bottom type in the survey area. The sand and shell fragment substrate supported a soft-bottom assemblage typical of the northeastern GOM. Frequently observed biota associated with the sand bottom included coralline algae, red algae, (Peyssonnelia rubra), asteroids (Luidia clathrata, Tethyaster grandis), urchins (Eucidaris tribuloides, Stylocidarlis affinis), burrowing anemones, sea pens, and numerous bryozoans (e.g., Steganoporella magnilabris). The sand-bottom assemblage within the survey area appeared sparse, with an overall biotic coverage estimated to be less than 3 percent. Demersal fish such as sea robins (Prionotus sp., flounders, skates (Raja eglantera), lizardfish (Synodus spp.) and the longspine porgy (Stenctomus caprinus) were commonly observed on sand-bottom areas. Seventy-seven taxa were identified from the sand-bottom area. They are listed in the SER Addendum (CSA, Inc., 1989a) and Photodocumentation Survey (CSA Inc., 1989b).

A large hard-bottom formation extended in a northeast/southwest direction along the southern portion of the survey area. The hard-bottom formation covered an area of approximately 0.23 km² (0.09 mi²) within the boundaries of the survey area. The proposed drill site is approximately 1,450 m (4,756 ft) from the hard bottom. The hard-bottom formation was approximately 220 m (722 ft) wide at its widest point and had a vertical relief of approximately 6 to 8 m (20 to 26 ft).
Much of the exposed rock was covered by epibiota. The dominant epibiota on the hard-bottom formation were sponges, coralline algae, and bryozoans (e.g., Crista sp.). Soft corals (Gorgonacea) and antipatharians were also found along the hard-bottom formation. Other biota commonly observed along the hard bottom included the arrow crab (Stenorhynchus seticornis), basket stars, (Gorgonocephalidae), echinoids (Stylocidaris affinis, Diadema antillarum), crinoids, and algae (Peyssonnelia spp.). No hermatypic corals were observed during the survey or collected in the dredge samples. The solitary coral Paracyathus pulchellus was seen and collected along the hard bottom.

The hard-bottom feature supported an abundance of fishes. The seabass family (Serranidae) contributed the greatest number of species including red barbier (Hemanthias vivanus), yellowfin bass (Anthias nicholsi), roughtongue bass (Holanthias martinicensis), creole-fish (Paranthias furcifer), tattler (Serranus phoebe), wrasse bass (Liopropoma eukrines), and bank seabass (Centropristis ocyurus).

Representatives from other fish families included bigeyes (Priacanthus arenatus, Pristigenys alta), butterflyfishes (Chaetodon aurata, C. sedentarius) spotfin hogfish (Bodianus pulchellus), blue angelfish (Holocanthurus bermudensis), yellowtail reeffish (Chromis encheirocephalus), purple reeffish (Chromis scotti), batfishes (Oigocentrus spp.), and scorpionfishes (Scorpaena spp.).

Important commercial species such as groupers (Epinephelus niveatus), red snapper (Lutjanus campechanus), and jacks (Seriola dumerilli, S. rivoliana, S. zonata) were observed along the hard-bottom formation. Larger pelagic species congregated in the water column above the hard-bottom areas.

A total of one-hundred and fourteen taxa were identified from the hard-bottom areas. They are listed in the SER Addendum (CSA, Inc., 1989a) and Photodocumentation Survey (CSA, Inc., 1989a).

b. Sensitive Underwater Features

As discussed in the AEA, live bottom areas in the eastern GOM have been determined to be important enough for protection by MMS in the form of special lease stipulations. The shallow geologic hazards survey conducted over the area indicated the presence of several potential hard/live bottoms; therefore, as required, photo-documentation surveys of the SER area have been conducted.

Hard bottom is located in the SER area. The hard-bottom reef structure located in Destin Dome Area Blocks 56, 57, and 99 has a vertical relief estimated to be 6 to 8 m (20 to 26 ft) at certain areas along the formation (CSA, Inc., 1989a). The components of the biological community (epibiota and ichthyofauna) of the hard-bottom formation is summarized in this document and is described in detail in CSA, Inc. (1989b).

Previously described small, low relief, hard-bottom patches are located in Destin Dome Area Blocks 57, 99, and 100.

Based on habitat maps produced from photodocumentation surveys (John E. Chance & Associates, Inc., 1985; Racal Survey Inc., 1988; CSA, Inc., 1989a), the distance from the proposed well location to the nearest hard bottom is approximately 1,450 m (4,756 ft).
2. Endangered or Threatened Species

Endangered or threatened species which may occur in the vicinity of the onshore base are the American alligator (Alligator mississippiensis) and the West Indian manatee (Trichechus manatus). Critical habitat for the endangered Alabama beach mouse (Peromyscus polionotus ammobates) and the Perdido Key beach mouse (Peromyscus polionotus tryssylypensis) are located inshore of the SER area (USDOI, 1987). The brown pelican (Pelecanus occidentalis) has been removed from the Federal endangered species list for Alabama and Florida but is considered endangered or threatened in Mississippi, Louisiana, and Texas (USDOI, 1987). A nesting population of brown pelicans occurs on Gaillard Island near Theodore, Alabama (USDOI, 1987).

C. SOCIOECONOMIC CONDITIONS AND OTHER CONCERNS

Socioeconomic conditions and concerns, including employment, population, and industry centers have been addressed in the AEA (USDOI, 1984) and AER's prepared in 1984 and 1985 (Racal Survey, Inc., 1984, 1985; CSA, Inc., 1985).

The initial OCS Socioeconomic Data Base Report will be developed after the MMS and the States of Alabama, Louisiana, and Mississippi have identified the specific parameters to be addressed in these annual reports. No new personnel will be needed for the proposed activities.

1. Onshore Support Facilities

Conoco Inc. would use an existing onshore base facility located in Theodore, Alabama. This base would serve as a loading point for tools, equipment, and machinery to be delivered to the offshore locations; crew change and transportation base; and temporary storage for materials and equipment. Information regarding personnel and boats and aircraft that would utilize the shorebase is presented in Sections I.D. and E. of this SEA and in the original SER (Racal-Decca Survey, Inc., 1986a). Activities associated with Destin Dome Block 56 should not result in any increase in the size or number of onshore support and storage facilities or land and personnel requirements.

2. Public Opinion

Public hearings concerning the Draft Environmental Impact Statement (EIS) for OCS Sales 113, 115, and 116 were held in Mobile, Alabama and Tallahassee, Tampa, Fort Myers, and Key West, Florida. Public participation was minimal in Alabama. However, Florida hearings were well attended with individuals testifying ranging from 25 in Fort Myers to 63 in Key West. The concerns and potential issues were as follows:

1) The need to buffer 30 miles around the State of Florida;
2) The need to buffer 30 miles around the Florida Middle Grounds;
3) Permanent deferral of all areas south of 26 degrees N latitude; and
4) Permanent deferral of all areas adjacent to the Keys, Everglades, Dry Tortugas, and the Straits of Florida leasing area.
The State of Alabama expressed concern for adequately documenting the offshore pinnacle trend before oil and gas activities are conducted in this area. The State of Florida expressed concern about deferral areas, oil spill modeling, and the lack of data from the Southwest Continental Shelf Study in the draft EIS. Florida's State and local agencies expressed particular concern about potential damage to natural environments and consequently the tourist industry.

3. Navigation

The fairway nearest to Block 56, which runs north-south to the Florida coastline and passes near the western edge of Block 56, is called the Pensacola Fairway (USDOI, 1984b, Visual No. 11). Cargo and crew boats supporting this activity would utilize a portion of the shipping fairway when traveling between Theodore, Alabama and Block 56.

4. Military Warning/Use Areas

Destin Dome Block 56 is located within Military Warning Area No. W-155 (USDOI, 1984b, Visual No. 11). Therefore, in accordance with Lease Stipulation No. 4 regarding control of electromagnetic emissions and operations of boat and aircraft traffic into the designated Military Warning Area W-155, the operator must enter into an agreement with Fleet Area Control and Surveillance Facility, Naval Air Station, Attention: Chief Lyon, Pensacola, Florida 32508, Telephone: (904)452-2735/4671. Although the operator's lease is not located within Military Warning Area W-453, the plan indicates that boat and/or aircraft traffic would traverse this area. Therefore, prior to plan approval, the operator should consult with the 159th Tactical Fighter Group, NAS NOLA, Attention: Colonel Jack Boh/Captain Erik McDonald, New Orleans, Louisiana 70143, Telephone: (504)393-3521/3377.

5. Commercial Fishing

A total of 32 major fisheries exist offshore of the eight Florida and two Alabama counties in the SER area. Table 3.1 of the SER Addendum (CSA, 1989a) lists these fisheries, which were compiled from statistics prepared by the Florida Department of Natural Resources (1988) and Alabama Department of Conservation and Natural Resources. A fishery was considered major in a given county if greater than 100,000 lb were landed or if a particular fishery comprised at least 1 percent of the total catch weight in that county. Visual 2E of the Sale 116 EIS (USDOI, 1987) indicates no shrimping in the SER area (CSA, 1989a).

6. Recreation

There is a hard-bottom formation located in Destin Dome Area Blocks 56, 57, and 99. The photodocumentation survey conducted by CSA, Inc. (1989b) revealed the presence of fishing lines, boat anchors, and other man-made debris which would indicate that the bottom formation was actively utilized by fishermen. Boats anchored in the vicinity of the hard-bottom formation were observed during the survey.

7. Projected Air Emissions and Exemption Levels

Projected air emissions and exemption levels were presented in the original SER (Racal-Decca Survey, Inc., 1986a). The estimated actual emissions for the project area are less than the exemption levels, thus exempting these activities from further air quality reviews.
No Florida counties (e.g., Escambia, Santa Rosa, Okaloosa, Walton, Bay, Gulf, Franklin, and Wakulla) in the vicinity of the SER area are classified as nonattainment areas for any of the airborne pollutants determined by monitoring schemes (40 CFR 50) (US DOI, 1987). Mobile County, Alabama does not meet primary standards for ozone (O₃) (US DOI, 1987).

IV. ENVIRONMENTAL CONSEQUENCES

A. OIL SPILLS

1. Vulnerability of Coastal Land Segments to Oil Spills

Information concerning the predicting and monitoring of oil spill movement and site-specific spill trajectory analyses for the Destin Dome Area and potential impact areas can be found in the Oil Spill Trajectory Analysis and Response Plan for the Destin Dome Area (Racal Survey Inc., 1987).

Revisions to update Conoco's Site-Specific Oil Spill Trajectory Analysis and Response Plan in accordance with the requirements of 30 CFR 250.42 are contained in Conoco's revised POE (Racal-Decca Survey, Inc., 1989b).

Conoco's Regional OS C P and its Site-Specific Oil Spill Trajectory Analysis and Response Plan for the Destin Dome Area both detail procedures and steps in place for the early detection and timely notification of an oil spill. Conoco's Regional OSCP also details the procedures for implementing Conoco's accidental discharge plan, notifying ADEP Team Members, and mobilizing equipment and personnel in the event of a major accidental discharge. It should be noted that based on the Destin Dome Block 56 No. 1 well, only gas and gas condensates are expected to be discovered. However, plans and preparations have been made for more persistent forms of hydrocarbons (e.g., high gravity crude and diesel) which could occur from other sources such as fuel oil transfer operations.

B. ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTIVITY

1. Impacts Concerning Geology

In order to identify potential geological hazards, the available geological and geophysical data for Destin Dome Block 56 were reviewed by the New Orleans District staff of MMS which resulted in a recommendation of approval (Appendix A). Due to the possibility of the presence of H₂S gas, adherence to 30 CFR 250.67 is required. H₂S sensors will be needed. In addition, MMS analyses indicate that there is a potential geologic hazard problem (shallow gas). Based on this finding, appropriate measures to mitigate potential impacts will be brought to the lessee's attention.

2. Impacts on the Biological Environment

Due to the distance of block 56 from shore and the use of an established onshore support base requiring no new construction, dredging, or filling, impacts other than those from oil spills on the area's biological environment would be insignificant. Further site-specific discussion of potential impacts to the benthos and sensitive underwater features are included under their respective headings. Refer to Section IV.A of this SEA and the corresponding section of the AEA (US DOI, 1984a) for a discussion of oil spill impacts to the biological environment.
a. Impacts on Offshore Habitats

(1) Impacts on the Benthic Environment

Impacts to the benthic environment are generally discussed in Sections IV.B.4.b.2 and 3 of the AEA. Additional information regarding the benthic environment has been provided in the SER Addendum (CSA, Inc., 1989a). The following discussion is taken from that document.

The most likely impacts of drilling on benthic organisms in the SER area are: 1) mechanical damage to benthic organisms and substrates during drilling unit placement and removal; and 2) drilling mud and cuttings impacts, including burial, smothering, and increased sedimentation.

Placement of the drilling unit may kill or damage benthic organisms and alter substrates in the immediate vicinity of the drill site. The legs of the drilling unit will compress surface sediments and crush benthic organisms at the drill site. No impacts due to this activity are anticipated on the identified live-bottom areas as the drill site is located approximately 1,450 m (4,756 ft) from the nearest live bottom.

Evidence from previous laboratory and field research indicates that most water-based drilling muds are relatively nontoxic [National Research Council (NRC), 1983; Neff, 1985]. Therefore, the major concern about onsite drilling discharges are increased sedimentation possibly resulting in burial or smothering.

The magnitude and pattern of mud cuttings accumulation around drill sites vary depending on water depth, well depth, the type of formation drilled, the hydrodynamic regime, and the volume and rate of cuttings discharges. Results of previous monitoring programs suggest that 70% would be most likely to occur within a few hundred meters of the drill site, whereas less severe increases in sedimentation may extend out to several thousand meters. Discharged drilling muds and cuttings may increase the sedimentation rate around the drill site.

Figure 3 shows the position of the two well sites (previously drilled and proposed site) relative to the hard-bottom formation in the SER area. Revised M&IS guidelines for photodocumentation surveys dated 31 January 1989 require photodocumentation to at least 1,000 m around the area to be cleared (e.g., drill site location), which suggests that the guideline authors believe that the area beyond 1,000 m is not significantly affected by discharges (CSA, Inc., 1989a).

(2) Impacts on Sensitive Underwater Features

Since the proposed well site is located a sufficient distance from the hard bottom/live bottom areas discussed in Section III.B.1.(a and b) of the this SEA and the proposed exploration activity is short-term (200 days), impacts to any live bottoms which may occur in the Destin Dome Block 56 block are not expected to be significant. Should longer term production activities be planned in the future, these impacts would have to be assessed. The U.S. Fish and Wildlife Service and National Marine Fisheries Service have reviewed the proposal and do not recommend further protection measures (Appendix B).
b. Impacts on Endangered or Threatened Species and Critical Habitats

No impacts on endangered species or critical habitats are anticipated, except in the event of a major oil spill reaching shore.

C. IMPACTS ON SOCIOECONOMIC CONDITIONS AND OTHER CONCERNS

1. Impacts from Construction of Onshore Support Facilities

The onshore support facility for marine operations would be at an existing site in Theodore, Alabama. No new construction, dredging, or filling would be involved.

2. Impacts of Public Opinion

No significant public opposition to the planned operation has surfaced to date.

3. Impacts on Navigation

The revised exploratory activities in Block 56 should have an insignificant effect on shipping even though a portion of a major shipping lane (Pensacola Fairway) lies west of Block 56 (USDOI, 1984b, Vee. No. 11). The revised proposed well location in Block 56 lies outside of the shipping fairway. Marine traffic in support of the proposed activities would not significantly affect shipping activities. The impacts of the drilling rig on marine transportation (fishing and pleasure boating) could be both adverse and beneficial. Stationary structures could represent obstacles to navigation, but they also could serve as navigational aids. The operator is required to comply with U.S. Coast Guard regulations related to the safety of personnel and the display of prescribed navigational lights and signals for the safety of navigation. Conoco Inc. is also required to obtain permits from the U.S. Army Corps of Engineers to prevent obstructions to navigation. Additional information is included in the AEA (USDOI, 1984a).

4. Impacts Concerning Military Use

In compliance with the lease stipulation regarding control of electromagnetic emissions and operations of boat and/or aircraft traffic into the designated Military Warning Area W-155, the operator must enter into an agreement with Fleet Area Control & Surveillance Facility, Naval Air Station, Attention: Chief Lyon, Pensacola, Florida 32508, Telephone: (904)452-2735/4671. Although the operator's lease is not within Military Warning Area W-453, the plan indicates that boat and/or aircraft traffic would traverse this area. The operator has indicated that their onshore support base would be in Theodore, Alabama; therefore, in order to provide control of electromagnetic emissions and the operations of boat and/or aircraft traffic, the operator should enter into an agreement with 159th Tactical Fighter Group, NAS NOLA, Attention: Colonel Jack Boh/Captain Erik McDonald, New Orleans, Louisiana 70143, Telephone: (504) 393-3521/3377. Conducting the exploratory operations in accordance with existing Stipulation No. 4 is expected to reduce potential impacts to a minimal level.
5. Impacts to Commercial Fishing

Direct impacts of exploratory operations in Block 56 would be the removal of a limited area of seafloor and the temporary degradation of water quality in the immediate area of the drill site. Additional information regarding impacts to commercial fishing is included in Section IV.C.7 of the AEA. Refer to Section IV.A of the original SEA and the AEA for a discussion of oil spill impacts on commercial fishing.

6. Impacts to Recreation/Tourism

Due to the distance offshore [41 km (25.5 mi)] and the temporary nature of the proposed activities, impacts to aesthetic and recreational resources in the coastal area would be insignificant. Refer to Section IV.A of this SEA and the AEA for a discussion of oil spill impacts. Impacts to recreational fishing over the hard-bottom formation, as described in Section III.C.6, would be insignificant.

7. Impacts on Air Quality

The effects of the air emissions onshore would be negligible due to the distance of the drill site to the coast. Additional information is included in the AEA. Projected air emissions and exemption levels were presented in the SER prepared by Racal-Decca Survey, Inc.(1986a). The estimated actual emissions for the project are less than the exemption levels. No significant air quality impacts are expected.

V. CONSULTATION AND COORDINATION

In accordance with the provisions of DM 855, copies of the plan were forwarded for review to the U.S. Fish and Wildlife Service. A copy of the plan was also forwarded to the National Marine Fisheries Service and the Alabama CZM and Governor's Offices for their review and comments. Copies of comments of these agencies are included in Appendix B. Florida's CZM and Governor's Offices were provided with copies for their information. A copy of Florida's comments are also included in Appendix B.
BIBLIOGRAPHY


Racal Survey Inc. 1988. Photodocumentation Survey Gulf of Mexico: Eastern planning area Destin Dome Area Block 55 (OCS-G 6405), Block 56 (OCS-G 6406), Block 99 (OCS-G 6410), and Block 100 (OCS-G 6411). A report for Conoco Inc.


VII. PREPARERS

Author:
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Typist:
Joan Boiteaux
VIII. APPENDICES

APPENDIX A - REVIEWS FROM MMS
APPENDIX B - REVIEWS FROM OTHER AGENCIES
To: Supervisor, Exploration/Development Plans Unit, Plans, Platform and Pipeline Section, Field Operations, Gulf of Mexico OCS Region (FO-2-1)

From: Supervisor, Platform/Pipeline Unit, Plans, Platform and Pipeline Section, Field Operations, Gulf of Mexico OCS Region (FO-2-2)

Subject: Plan of Exploration for Conoco

Destin Dome Area, Block 56, Lease OCS-G 6406

30 CFR 250.34 Control No. U-609

Proposed Well/Platform:

Identification and Location

Existing Pipelines Within 500 Feet

Well # 5250' Sub 4200' W.L. Destin

Remarks:

Draft

Unit Supervisor

RECEIVED
APR 20 1995
FIELD OPERATIONS
To: Unit Supervisor, (FO-2-1)
From: Unit Supervisor, (FO-1-2)
Subject: Review of Plan of Exploration/Drilling Control No. 1609

Lease(s) OCS-3 6406, Operator Conoco
Area(s) Desert Dome, Block(s) 5G

Recommendation/Comments

☐ Approval recommended. Normal precautions will be adequate while conducting activities proposed in this plan.

☐ Approval recommended with the following conditions:

CADTATION FOR SHALLOW GASES

☐ Modification recommended as follows:

☐ Disap, recommended for the following reason(s):

☐ Comments: Time when this process is achieved will lead U.S. Senate & Pleas--

Enclosed are the following reviews as per your request:

☑ Hazards Review ☒ Geophysical ☒ Geological

Enclosures
HAZARDS REVIEW

Plan of Exploration:

Area(s): D D
Block(s): C 6
Lease(s): C 6
Operator: ""
Control N.: U-609

The subject proposal includes platforms and wells.

Seafloor Hazards: Significant

Subsurface Hazards: Possible

Other Hazards (Pipelines, Sunken Ships, Cables, etc.):  

Preparers(s):  A
APPENDIX B

REVIEWS FROM OTHER AGENCIES
Memorandum

To: Regional Director, Gulf of Mexico Outer Continental Shelf Region, Minerals Management Service, New Orleans, Louisiana

Subject: Unit Plan of Exploration, Conoco Inc., Lease OCS-G 6406, Block 56, Destin Dome Area, DM 655-1975

The Fish and Wildlife Service has reviewed the subject document in accordance with 655 DM 1. The document covers the exploratory drilling of well 2 in Block 56, Destin Dome Area.

Review of the live bottom survey and revised Plan indicates the proposed drillsite is a minimum of 1,450 meters away from a live bottom area to the south. The live bottom area consists of a high relief rock outcropping colonized by sponges, coralline algae, bryozoans, and soft corals. Since significant impacts are not expected from the proposed operation we would have no objection to this activity. However, there is a possibility of this operation going into production/development. Should this event occur, we would recommend that an extensive monitoring program be implemented to assess potential long term impacts on the live bottom area.

The Oil Spill Contingency Plan appears to be adequate in case of an oil spill or related emergency.

We appreciate the opportunity to provide comments.

CC: Ted Stechman, MMS, New Orleans, LA
    Debby Tucker, FL GOV Office, Tallahassee, FL
    Ed Keppner, NMFS, Panama City, FL
    Bill Kruczynski, EPA, Gulf Breeze, FL
Mr. Kent E. Stauffer  
Chief, Plans and Pipeline Section  
Minerals Management Service  
Gulf of Mexico OCS Region  
1201 Elmwood Park Boulevard  
New Orleans, LA 70123-2394

Dear Mr. Stauffer:

The National Marine Fisheries Service has reviewed the proposed Unit Plan of Exploration for Lease OCS-G 6406, Block 56, Destin Dome off of the Florida coast (Control No. U-609). We have no objection to the drilling of the proposed well.

However, should the exploratory activity result in producible quantities of hydrocarbon and require additional drilling, we may suggest that a monitoring plan be developed to assess possible individual and cumulative impacts to fishery habitat and fishery resources.

We appreciate the opportunity to provide these comments. Should you have any questions, please contact Dr. Edwin Keppner of our Panama City Area Office at 904/234-5061.

Sincerely yours,

Andreas Hager, Jr.  
Acting Assistant Regional Director  
Habitat Conservation Division

CC:  
P/SER
May 10, 1989

Mr. Kent E. Stauffer, Chief
Plans and Pipeline Section
Minerals Management Service
Gulf of Mexico OCS Region
1201 Elmwood Park Boulevard
New Orleans, Louisiana 70123-2394

Dear Mr. Stauffer:

Thank you for forwarding a copy of the proposed revision to the approved Plan of Exploration and Addendum to the Site-Specific Environmental Report for Lease OCS-G 6406, Block 56, Destin Dome Area (Control No. U-609). We have reviewed this information as well as the Photodocumentation Survey which was performed on Block 56 during February 1989 at the State's request.

State representatives met with Conoco and their contractor to discuss the survey plan for Destin Dome Block 56 and agreed to Conoco's final survey plan (see attached February 1, 1989 letter, J. Rogers Pearcy). Representatives from the State, USFWS and EPA met with Conoco again April 21, 1989 to review still photography and video surveys taken within 1,000 m of the area of proposed drilling.

Most of the survey area consists of sand bottom mixed with shell fragments. In some of the area sand was mixed with coralline algal rubble and filamentous algae. A large hard-bottom formation was encountered along the southern portion of the survey area extending along a northeast-southwest direction. The hard-bottom formation covered approximately 0.23 km$^2$ within the boundaries of the survey area. The northern-most proposed drillsite is located approximately 1,450 m from the hard bottom, while the other proposed drillsite is approximately 1,070 m from the hard bottom formation. This hard bottom area supported an extensive epibiotal community dominated by sponges, coralline algae, bryozoans, and soft corals which in turn supports numerous
species of fish including several important to the State's commercial and recreational fisheries.

As you are aware Chevron announced a commercial find of hydrocarbons on this block earlier this year. Discussions with Conoco indicate that after this well is drilled, there is a very high probability that they will be coming to MMS to begin working on a development and production plan. In fact Conoco has had discussions with your agency regarding unitizing several blocks within this area.

Although drilling an additional exploratory well on this block may not pose a major threat to the live-bottom communities in this area, we remain very concerned about what effects development and production may have. I have spoken with Mr. Johnson, Conoco, and expressed our concerns. Mr. Johnson is aware that we will request environmental monitoring should the block go to development and production. However, we believe that certain information can be obtained during the drilling exploratory well which would help in both determining the possible effects of future development and production, as well as how we may best design a monitoring program.

Therefore, I have requested that Conoco consider several types of data collection. First, we have asked that they consider a "fates" study which will determine where drilling discharges are deposited and whether they are deposited on the live-bottom communities in the area. In addition, it would be extremely advantageous to deploy current meters in the area during, at least, the duration of the exploratory drilling activities (approximately 200 days) to determine how the currents in the area may effect deposition of discharges. Both of these measurements will provide useful information for both Conoco and your agency in describing what the effects of development and production activities may have of the environment of the area, as well as assisting in the design of a monitoring program should the block be developed.
I request that your agency also consider the need for this information as it may relate to future activities on Block 56. If you have any questions, please give me a call at (904) 488-5551. We appreciate the opportunity to comment on Conoco’s planned activities on block 6.

Sincerely,

Deborah L. Tucker
Governmental Analyst

DLT/dt

Enclosure

cc:  Jay Johnson, Conoco
     Lorna Patrick, USFWS
     Bill Kruczynski, USEPA
Mr. Kent E. Stauffer, Chief
Plans, Platform and Pipeline Section
Minerals Management Service
1201 Elmwood Park Boulevard
New Orleans, LA 70123-2394

Dear Mr. Stauffer:

Re: FO-2-1
Control No. U-609

Staff members of the Geological Survey of Alabama and State Oil and Gas Board have reviewed Conoco Inc.'s Unit Plan of Exploration and Environmental Report for Lease OCS-G 6406, Block 56, Destin Dome Area. We have no comments on this material at this time.

We appreciate the opportunity to review Conoco Inc.'s Unit Plan of Exploration and Environmental Report and look forward to safe, successful operations in the Federal waters off Alabama's coast.

Sincerely yours,

Ernest A. Mancini
State Geologist and
Oil and Gas Supervisor