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UNITED STATES GOVERNMENT
MEMORANDUM

August 22, 1997

To: Acting Chief, Plans and Pipeline Section, Field Operations, GOM OCS Region (MS 5230)

From: Chief, Environmental Operations Section, Leasing and Environment, GOM OCS Region (MS 5440)

Subject: Site-Specific Environmental Assessment (SEA) Prepared for ATP Oil & Gas Corporation's Initial Development Operations Coordination Document, Lease OCS-G 13366, Garden Banks Area, Block 134, SEA No. N-5676A

ATP Oil and Gas Corporation's proposal to re-enter, complete and commence production of previously approved Exploratory Well No. 1 in Garden Banks Area, Block 134 has been reviewed. Our SEA for the subject action is complete and results in a Finding of No Significant Impact. This Finding is conditioned on the imposition of the following mitigative measures to ensure environmental protection, consistent environmental policy, and safety as required by the NEPA. The Finding is valid only insofar as these conditions are imposed.

1. As acknowledged by the operator, all drilling muds, drilling fluids, and production fluids will be shunted in accordance with the applicable MMS lease stipulation.

2. The operator's application states that the Clean Gulf Associate's identified oil spill response vessel currently operating in High Island Block A-571 would be the source of containment and removal equipment that would be used in initial response to an oil spill from the proposed operations. Our analysis of the potential environmental effects of such an oil spill is based upon the availability of the subject response vessel. Consequently, in the event the vessel is removed from service, or is relocated, the operator shall revise the plan to describe the methodology that would be used to accomplish an equivalent initial response in 5 hours or less.

3. The operator shall be reminded to contact the Manager of the Flower Garden Banks Marine Sanctuary in accordance with the Letter to Lessees dated June 1, 1995 in the event that a spill occurs from the proposed activities that could traverse the waters over the Sanctuary or have an adverse effect on the biota of the Sanctuary. Dr. Gittings can be reached at (409) 779-2705 or by pager at (800) 715-3271.

4. In addition to the annual drills for familiarization with pollution control equipment, and operational procedures required pursuant to 30 CFR 250.43(b), you shall also conduct an annual unannounced drill of a worst case spill situation, subject to MMS approval, for your activity near the Flower Garden Banks.

5. The lessee shall be reminded to plan for the minimization of structures in this area if future development of this lease is a consideration.

6. No bottom-disturbing activities will be allowed within the No Activity Zone of the East and West Flower Garden Banks.

(Orig. Sgd.) Jerry Brashier

Jerry Brashier

cc: ENV 102-01a ENV5-4b (MS 5440)
Lease OCS-G 13366 POD File (MS 5032)
Public Information (MS 5034)

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UNITED STATES DEPARTMENT OF THE INTERIOR

MINERALS MANAGEMENT SERVICE

Gulf of Mexico OCS Region

New Orleans, Louisiana

SITE-SPECIFIC ENVIRONMENTAL ASSESSMENT

No. N-5676A

Development/Production Activity

Garden Banks Area, Block 134

Lease OCS-G 13366

August, 1997

Commodity Oil and Gas
SEA No.N-5676A

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

OCS SITE-SPECIFIC ENVIRONMENTAL ASSESSMENT

August, 1997

Operator ATP Oil and Gas Corporation
Plan Type Initial Development Operations Coordination Document
Area Garden Banks Area, Block 134
Lease OCS-G 13366
Date Submitted February 1997
Plan Commencement Date Upon Approval

Prepared by Ted Stechmann

Related Environmental Documents:

Final EIS for OCS Lease Sale Nos. 81, 84, 98, 102, 104,105, 110, 112, 113, 115, 118, 122, 123, 125, 131, 135, 139, 141, 142, 143, 147, 150, 152, 155, 157,and 161

EA Nos. 500, 504, 505, 506, 507, N-1730, N-1798, N-1845, N-1883, N- 1917, N-2188, N-2200, N-2201, N-2213, S-1924, S-2741A, R-2116, N-2624, N-2758, N-3306, N-3403, N-3519, N-3652, N-3875, N-4460A, N-4652UA, N-5297A, S-4004U, R-3113; N-5703A, and S-4406

U.S. Department of the Interior. Minerals Management Service. Final Area-Wide Environmental Assessment, Exploration and Production Activities Four-Mile Zone of the East and West Flower Garden Banks, OCS Report MMS 84-0053, Metairie, LA: Minerals Management Service, GOM Region, 1984.

FINDING OF NO SIGNIFICANT IMPACT

I have considered the Initial Development Operations Coordination Document for ATP Oil and Gas Corporation, Garden Banks Area, Block 134 (OCS-G 13366), SEA No. N-5676A. Based on the environmental analysis and mitigative measures contained in the site-specific environmental assessment, there is no evidence to indicate that the proposed action will significantly (40 CFR 1508.27) affect the quality of the human environment if the permit/application is approved subject to all of the mitigative measures. Preparation of an environmental impact statement is not required.

Analyst — Date 8/22/97

Jerry Brashier
Chief, Environmental
Operations Section — Date 8/25/97

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ABBREVIATIONS AND ACRONYMS

AEA	Areawide Environmental Assessment for Exploration and Production Activities within the Four-Mile Zone of the East and West Flower Garden Banks
BOP	Blow Out Preventor
CGA	Clean Gulf Associates
COE	Corps of Engineers
DOCD	Development Operations Coordination Document
FGB	Flower Garden Banks
FGNMS	Flower Garden National Marine Sanctuary
FWS	U.S. Fish and Wildlife Service
GOM	Gulf of Mexico
H_2S	Hydrogen Sulfide
MMS	Minerals Management Service
NCSC	Naval Coastal Systems Center
NEPA	National Environmental Policy Act
NPDES	National Pollutant Discharge Elimination System
NTL	Notice to Lessees and Operators
OCS	Outer Continental Shelf
OSHA	Office of Safety and Hazard Administration
OSCP	Oil Spill Contingency Plan
SEA	Site-Specific Environmental Assessment
SER	Site-Specific Environmental Report
USEPA	U.S. Environmental Protection Agency
USCG	United States Coast Guard

INTRODUCTION

This Site-Specific Environmental Assessment (SEA), submitted in support of an Area-Wide Environmental Assessment (AEA), is written for development/production activity proposed for Garden Banks Area, Block 134. The SEA contains site-specific and updated information for the proposed action in Block 134 that is not contained in the AEA. The SEA was prepared using the AEA dated October 1984, entitled "Area-Wide Environmental Assessment for Exploration and Production Activities within the Four-Mile Zone of the East and West Flower Garden Banks" as a base document. This base document can be obtained through the Public Records Office of the Minerals Management Service, Gulf of Mexico, Outer Continental Shelf Region. Those sections of the AEA that are referenced in the SEA are indicated throughout the text.

In compliance with the National Environmental Policy Act (NEPA), this AEA/SEA concept implements the tiering process outlined in 40 CFR 1502.20 which encourages agencies to tier environmental documents to eliminate repetitive discussions of the same issue. By use of reference to the AEA, the SEA concentrates on the issues specific to the proposed action. The SEA conforms to the MMS and other appropriate guidelines for preparing environmental assessments in compliance with the requirements of NEPA, using information presented in the AEA.

I. DESCRIPTION OF PROPOSED ACTION

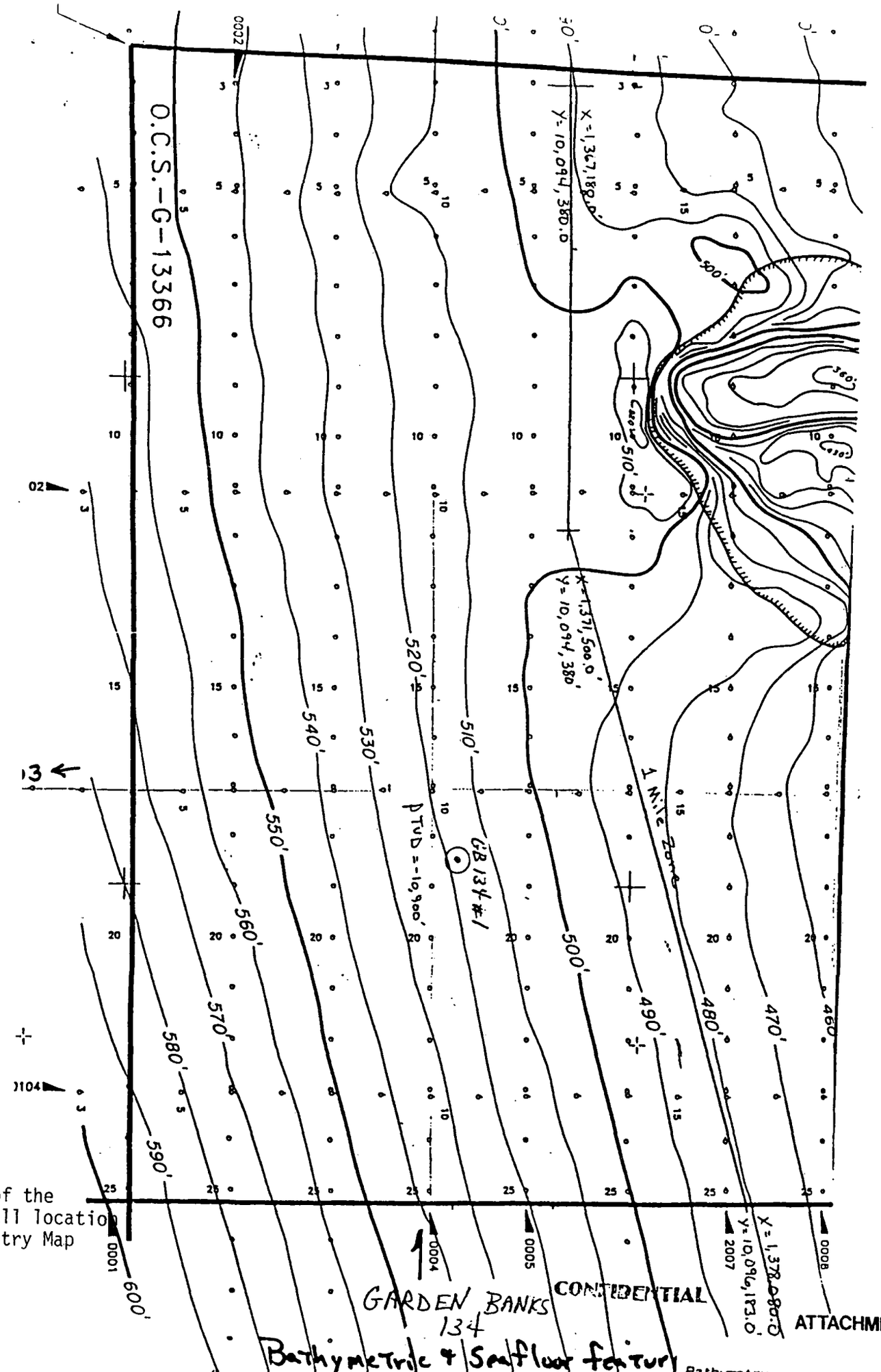
A. GENERAL

An Initial Development Operations Coordination Document (DOCD) for proposed activities in Garden Banks Area, Block 134, Lease OCS-G 13366, was filed by ATP Oil and Gas Corporation (ATP), in February, 1997. The objective of the proposed activities is to develop oil and gas reserves in Block 134 from an existing surface location in the block. Block 134 is located approximately 217 km (135 mi) southeast of the nearest coastline of Galveston Island, Texas. The water depth in the block at the proposed platform location is 156 m (520 ft.). ATP is the designated operator of the Lease OCS-G 13366.

One(1) exploratory well (Well No. 1) has been drilled and temporarily abandoned from a surface location in the block (Figure 1A). ATP plans to re-enter, complete, and produce the well via a nearby processing facility. A semisubmersible rig will complete the well and bring it on production. This action is considered routine for the Gulf of Mexico. For additional information concerning the proposed action, refer to the DOCD of ATP (Appendix A).

B. EQUIPMENT AND SUPPORT SYSTEMS

The equipment associated with the proposed drilling rig is described in the operator's plan. The rig is required to be equipped with safety and monitoring systems to comply with OCS operating regulations and other regulations and laws. No H_2S is expected based on previous drilling experience near this area (ATP's DOCD, Appendix A, and FOPS Reviews, Appendix B).



Locations of the proposed Well location and Bathymetry Map

GARDEN BANKS 134

CONFIDENTIAL

ATTACHMENT D

Bathymetric & Seafloor feature map

Bathymetry Map

The rig used would be equipped with all safety and pollution- prevention equipment and standards required by MMS OCS Operating Regulations, COE, USCG, OSHA, and EPA.

The onshore support facilities are located in Cameron, Louisiana. The proposed activities would not require any new construction (ATP, 1997).

C. SCHEDULE OF ACTIVITIES

Development/ production activities are scheduled to commence immediately following approval of the Application for Permit to Drill.

D. TRANSPORTATION ROUTES

Helicopters and boats would be used to transport personnel and equipment between Garden Banks Area,, Block 134 and Cameron, Louisiana. Boat and helicopter trips to the well location will probably occur on a daily basis during completion and production activities (ATP, 1997).

E. PERSONNEL REQUIREMENTS

The operator stated that existing employees would be adequate for the proposed operations. There would be no additional personnel required (ATP, 1997).

F. TECHNOLOGY

No new or unusual technology would be used in the proposed drilling and development/production activities (ATP, 1997).

G. CONTINGENCY PLANS

As required by MMS, ATP Oil and Gas Corporation has filed a detailed Oil Spill Contingency Plan (OSCP) for alert, reporting, and cleanup procedures for oil spills which was approved by MMS.

The ATP Oil and Gas Corporation OSCP and POE include the following information: 1) response times and proposed response options; 2) a dispersant use plan; 3) notification procedures; 4) a listing of committed and uncommitted spill response equipment; 5) identification of the oil spill response team members, the Oil Spill Response Operations Center, and a description of the communications system; 6) disposal procedures; 7) measures for early spill detection and spill prevention; and 8) methods of monitoring the spill location and of predicting spill movement.

The primary response modes for protection of these banks would most likely be accomplished through the use of containment booms, fast response open sea skimming systems, and possibly spraying dispersants at the leading edge of the slick. ATP should consult with the Manager of the Flower Garden Banks National Marine Sanctuary regarding guidance for dispersant use/application, anchoring of response vessels, and potential movement of the mooring buoys during a spill event resulting from the proposed drilling rig. The NOAA's policy on dispersant use near the Flower Garden Banks encourages their use in water as deep as possible and as far from Sanctuary resources as possible to promote dilution of dispersed oil. NOAA also requests notification of the decision to apply dispersants so that it may consider timely implementation of appropriate monitoring and damage assessment protocols. The Sanctuary may be able to provide information to the On-Scene-Coordinator that could affect the decision on whether to apply dispersants in the area. Likewise, the anchoring of response vessels would be prohibited within the Sanctuary boundaries and permission to move the mooring buoys would be required if it was decided that this would be necessary to facilitate response efforts. The MMS Letter to Lessees dated June 1, 1995 requires that ATP as operator of High Island Block A-397 contact the Manager of the Sanctuary in the event of an oil spill which involves a countermeasure or response.

As required in contingency plans pursuant to the Oil Pollution Act of 1990, ATP has calculated the worst case discharge that could occur from the facility. Refer to section IV.A.1. of this SEA for details of this estimate.

A large portion of ATP's proposed contingency planning efforts are related to oil spill prevention and early spill detection as a means of mitigating to the extent feasible any impacts that may occur in the unlikely event that an oil spill does occur from the subject facility. Safety features are described in ATP's plan submitted February 28,1997 and plan amendment dated June 24, 1997.

The prohibition listed at 15 CFR 943.5(a)(7) (which precludes discharging or depositing, from beyond the boundary of the Sanctuary, any material or other matter, that subsequently enters the Sanctuary and injures a Sanctuary resource or quality) would apply to an accidental oil or gas discharge that may occur as a result of Oryx's permitted activity. The responsible party for the discharge would be subject to civil penalties as discussed at 15 CFR 943.8(a) of not more than $50,000 per violation (each day of a continuing violation constitutes a separate violation), as well as the response costs and damages resulting from the destruction, loss, or injury to a Sanctuary resource as mentioned at 15 CFR 943.9.

If a claim for injury to a sanctuary resource is filed under the Marine Protection, Research, and Sanctuaries Act, the monetary value of damages occurring from such an incident are based upon:

- the cost of replacing, restoring, or acquiring the equivalent of the Sanctuary resources;

- the value of the lost use of the Sanctuary resource pending its restoration or replacement

or the acquisition of an equivalent Sanctuary resource; or the value of the Sanctuary resource if the Sanctuary resource can not be acquired; and

- the cost of damage assessments.

An action could also be pursued under the Oil Pollution Act of 1990.

As previously mentioned, the June 1, 1995 LTL requires that the operator immediately contact the manager of the Flower Garden Banks National Marine Sanctuary in the event that an oil pollution incident occurs.

The operator will also be advised in the approval letter that they should plan for the minimization of structures in this area if future additional development of this lease is a consideration. This places the operator on notice that MMS will be monitoring the development of structures proposed by all operators holding leases near the Flower Garden Banks to ensure that development of the area takes place with a minimum of necessary structures (i.e., pipelines, platforms).

Additional information concerning contingency planning and potential impacts from oil spills is included in Section IV.A of this SEA.

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 DOCD. At the wellsite, Garden Banks Block 134, all authorized discharges will be under a National Pollutant Discharge Elimination System (NPDES) permit regulated by the U.S. Environmental Protection Agency (USEPA).

2. Solid Wastes

a. Drill Cuttings

Approximately 2,057 gallons per day (gpd) of natural subsurface sediment would normally be generated from a typical semisubmersible drilling rig. ATP's proposal involves re-entering an existing wellbore and drilling out a cement plug that was poured following the drilling of the well. The total amount of cement cuttings will be considerably less than was generated during the drilling of the well, but the amount per day should be the same. This material would be shunted into the GOM. (ATP, 1997).

b. Other Solid Wastes

Other solid wastes generated both offshore and at the supply base would be disposed of according to EPA and other applicable regulations. (ATP, 1997).

3. Liquid Waste

Treatment of liquid waste effluents would be in compliance with the NPDES permit. No free oil would be discharged into the Gulf. The estimated daily quantity, content, and description of the discharges are given below. The quantity of discharged drill muds was calculated using hole parameters (ATP, 1997).

a. Drilling Muds

Mud may be discharged for purposes of dilution or at end of well. Any fluids containing free oil will be hauled to shore for proper disposal. Oil-free mud would be discharged by shunting as directed in the lease stipulation (ATP, 1997).

b. Sanitary Wastes and Domestic Wastes

Approximately 7500 gpd of domestic waste and 7650 gpd of treated sewage waste would normally be discharged overboard for a semisubmersible rig.

c. Deck Drain Waste

Deck drain waste consists of rig wash water, rain water and other substances that are washed from the floor of the rig. On a typical semisubmersible rig approximately 600 gpd are estimated to be discharged. Deck drain waste is treated in a oil/water separator to remove any oil and grease prior to overboard discharge.

d. Ballast Water

Ballast water consists of seawater that has been pumped into a ballast tank. The water is stored in dedicated tanks and is not exposed to any contamination.

e. Blowout Preventor Solution

Approximately 125 gpd of this nonpolluting soluble solution is expected to be discharged overboard from a typical semisubmersible rig.

f. Cooling Water

A quantity of 4,214,000 gpd of seawater is estimated to be discharged overboard from a typical semisubmersible rig.

4. Gaseous Wastes

The DOCD indicates that gaseous wastes generated from the proposed activities both onshore and offshore would come from helicopters, boats, and the drilling rig. ATP proposes using a semisubmersible rig for work over/development operations. The total emissions expected at the lease site and from transportation both on a daily and a cumulative basis are given in the DOCD of ATP.

The operator calculated the values for air emissions using the USEPA publication: AP-42 "Compilation of Air Pollutant Emission Factors". The calculations were made using the typical fuel consumption of a platform rig (ATP, 1997).

I. STATE CERTIFICATION

A shore base located in Louisiana is proposed; therefore, a Certificate of Coastal Zone Consistency is was required for the proposed activities, and was submitted with the DOCD.

J. MEASURES FOR COMPLIANCE

No special monitoring programs, over and above those required by OCS Operating Regulations, Notices to Lessees and Operators, and applicable laws and regulations, are required for the proposed action. These regulations provide for training of employees and the design, installation, operation, and maintenance of equipment in a manner which conserves and protects other resources or activities. Inspections are conducted regularly by MMS personnel to enforce all OCS Operating Regulations, Notices to Lessees and Operators, etc.

Compliance with OCS Operating Regulations for these wells compared to other OCS wells is not different. The OCS Operating Regulations do require pollution prevention equipment such as blow out preventors. Pollution control equipment and materials are available to ATP through its membership in CGA. Through CGA, training sessions for familiarization with the pollution prevention and control requirements are all part of the standard procedure for compliance with the OCS Operating Regulations for any OCS well.

No special requirements for the NPDES permit are involved for this block. The general NPDES permit is applicable to this block. There will be activities within the four-mile shunt zone. All drilling fluid and drill cutting discharges will be disposed of through a shunt that will end within 10 m (33 ft) of the ocean floor. ATP will not dispose of well fluids containing free oil in the GOM. Any such fluid will be

brought to shore for proper disposal. ATP has stated its intended compliance with all applicable regulations of the MMS, USEPA, and U.S. Coast Guard (ATP, 1997).

In addition, the MMS will require the following mitigative measures to reduce potential effects of the proposal to the environment of the area. Otherwise the operator will follow normal operating procedures.

1. The operator's application states that the Clean Gulf Associate's identified oil spill response vessel currently operating in High Island Block A-571 would be the source of containment and removal equipment that would be used in initial response to an oil spill from the proposed operations. Our analysis of the potential environmental effects of such an oil spill is based upon the availability of the subject response vessel. Consequentl, in the event the vessel is removed from service, or is relocated, the operator shall revise the plan to describe the methodology that would be used to accomplish an equivalent initial response in 5 hours or less.

2. The operator shall be reminded to contact the Manager of the Flower Garden Banks Marine Sanctuary in accordance with the Letter to Lessees dated June 1, 1995 in the event that a spill occurs from the proposed activities that could traverse the waters over the Sanctuary or have an adverse effect on the biota of the Sanctuary. Dr. Gittings can be reached at (409) 779-2705 or by pager at (800) 715-3271.

3. In addition to the annual drills for familiarization with pollution control equipment, and operational procedures required pursuant to 30 CFR 250.43(b), you shall also conduct an annual unannounced drill of a worst case spill situation, subject to MMS approval, for your activity nwar the Flower Garden Banks.

4. The lessee shall be reminded to plan for the minimization of structures in this area if future development of this lease is a consideration.

5. No bottom-disturbing activities will be allowed within the No Activity Zone of the East and West Flower Garden Banks.

K. NEARBY PENDING ACTIONS

Presently in the AEA area there are several proposed actions. Refer to Table I-2 for a description of existing platforms and pipelines and proposed actions within the 4-Mile Zone of the East and West Flower Garden Banks.

Table I-1

Existing Platform And Pipelines and Proposed Actions
Within The 4-Mile Zone Of The East And West Flower Garden Banks

EXISTING PLATFORMS

1. ANADARKO PRODUCTION CORPORATION - PLATFORMS A & B - HIGH ISLAND A-376
2. MOBIL PRODUCING TEXAS AND NEW MEXICO - PLATFORM A - HIGH ISLAND A-389
3. PENNZOIL EXPLORATION AND PRODUCTION COMPANY - PLATFORM A - HIGH ISLAND A-368
4. ORYX ENERGY COMPANY - PLATFORM A IN HIGH ISLAND A-384
5. ORYX ENERGY COMPANY - PLATFORM B IN HIGH ISLAND A-379
6. ORYX ENERGY COMPANY - PLATFORM C IN HIGH ISLAND A-385
7. ORYX ENERGY COMPANY - PLATFORM D IN HIGH ISLAND A-385
8. ORYX ENERGY COMPANY - PLATFORM E IN HIGH ISLAND A-379

EXISTING PIPELINES

1. TRUNKLINE GAS COMPANY - 10" GAS PIPELINE FROM PLATFORM A IN HIGH ISLAND A-376 TO A SUBSEA TIE-IN IN HIGH ISLAND A-355
2. ANADARKO PRODUCTION COMPANY - 8" GAS AND 4" CONDENSATE PIPELINES FROM PLATFORM B TO PLATFORM A, ALL IN HI A-376
3. TEXACO PIPELINE COMPANY - 8" OIL PIPELINE FROM PLATFORM A IN GARDEN BANKS 189 TO THE H.I.P.S. 6" GATHERING PIPELINE IN HIGH ISLAND A-377
4. KOCH INDUSTRIES, INC. - 10" GAS AND CONDENSATE PIPELINE FROM PLATFORM A IN HIGH ISLAND A-389 TO A SUBSEA TIE-IN IN HIGH ISLAND A-332
5. SANTA FE MINERALS INC. - 4" BULK GAS PIPELINE FROM WELL NO. 1 IN HIGH ISLAND A-373 TO PLATFORM A IN HIGH ISLAND A-368
6. ORYX ENERGY COMPANY - 3" BULK GAS PIPELINE FROM WELL NO. 3 TO PLATFORM A, ALL IN HIGH ISLAND A-370
7. TRANSCONTINENTAL GAS PIPELINE CORPORATION - 24" GAS PIPELINE FROM PLATFORM A, HIGH ISLAND A-370 TO PLATFORM A, HIGH ISLAND A-330
8. SANTE FE MINERALS INC. - 4" BULK GAS PIPELINE FROM WELL NO. 5 IN GARDEN BANKS 224 TO PLATFORM A IN HIGH ISLAND A-384
9. TRANSCONTINENTAL GAS PIPELINE CORPORATION - 10" GAS AND CONDENSATE PIPELINE FROM PLATFORM A IN HIGH ISLAND A-384 TO JUNCTION PLATFORM IN HIGH ISLAND A-573

EXISTING PIPELINES

10. ANR PIPELINE COMPANY - 12" GAS PIPELINE FROM PLATFORM A IN HIGH ISLAND A-386 TO A SUBSEA TIE-IN IN HIGH ISLAND A-370
11. ORYX ENERGY COMPANY - 6 5/8" BULK GAS PIPELINE FROM PLATFORM A, HIGH ISLAND A-397 TO PLATFORM A IN HIGH ISLAND A-379
12. ORYX ENERGY COMPANY - 8 5/8" BULK GAS PIPELINE FROM PLATFORM A IN HIGH ISLAND A-384 TO PLATFORM A, HIGH ISLAND A-379, AND AN 8 5/8" GAS LINE FROM PLATFORM A IN HIGH ISLAND A-379 TO PLATFORM A IN HIGH ISLAND A-384
13. TEXACO PIPELINE INC. - 8 5/8" OIL PIPELINE FROM PLATFORM A IN HIGH ISLAND A-379 TO THE H.I.P.S. GATHERING PIPELINE IN HIGH ISLAND A-521
14. SEAGULL ENERGY E&P INC. - SUPPLEMENTAL EXPLORATION, HIGH ISLAND A-377
15. ANADARKO PRODUCTION CORPORATION - 4 1/2" CONDENSATE PIPELINE AND 8 5/8" GAS PIPELINE FROM PLATFORM B TO PLATFORM A IN HIGH ISLAND A-376

PROPOSED ACTIONS

1. ATP PETROLEUM - INITIAL PIPELINE APPLICATION GARDEN BANKS 134
2. COASTAL OIL AND GAS - INITIAL EP, GARDEN BANKS 139

L. RISK ASSESSMENT METHODOLOGY

A risk assessment analysis has been applied to various impact assessment sections of this SEA. The MMS' risk assessment methodology is a slight adaptation from the National Aeronautics and Space Administration procedures used following the Challenger space craft explosion. These risk assessment techniques have been favorably used in the impact analyses of the MMS' sale specific environmental impact statements and other environmental documents.

A primary strength and one of the more important elements of the methodology is the inclusion of the frequency of effect as an integral part of the analyses. The frequency with which an impact-producing factor (IPF) affects a resource is critical to correctly assessing its effects. Through the risk assessment methodology, emphasis is not placed on how often an IPF occurs, but on how often it contacts and impacts the resource.

Other factors considered in the methodology may include considerations for the severity of impacts, potential recover period (if appropriate), and scope of the impact. A hazard matrix has been developed to integrate both frequency of effect with severity of environmental effect. Impact levels are then derived from the integrated cells within the matrix. See Figure I-2 for this portrayal. In summary, the risk assessment methodology utilizes both severity and frequency data to combine them into an integrated composite impact level on a resource. This system presents impact assessments at more practical/expected levels.

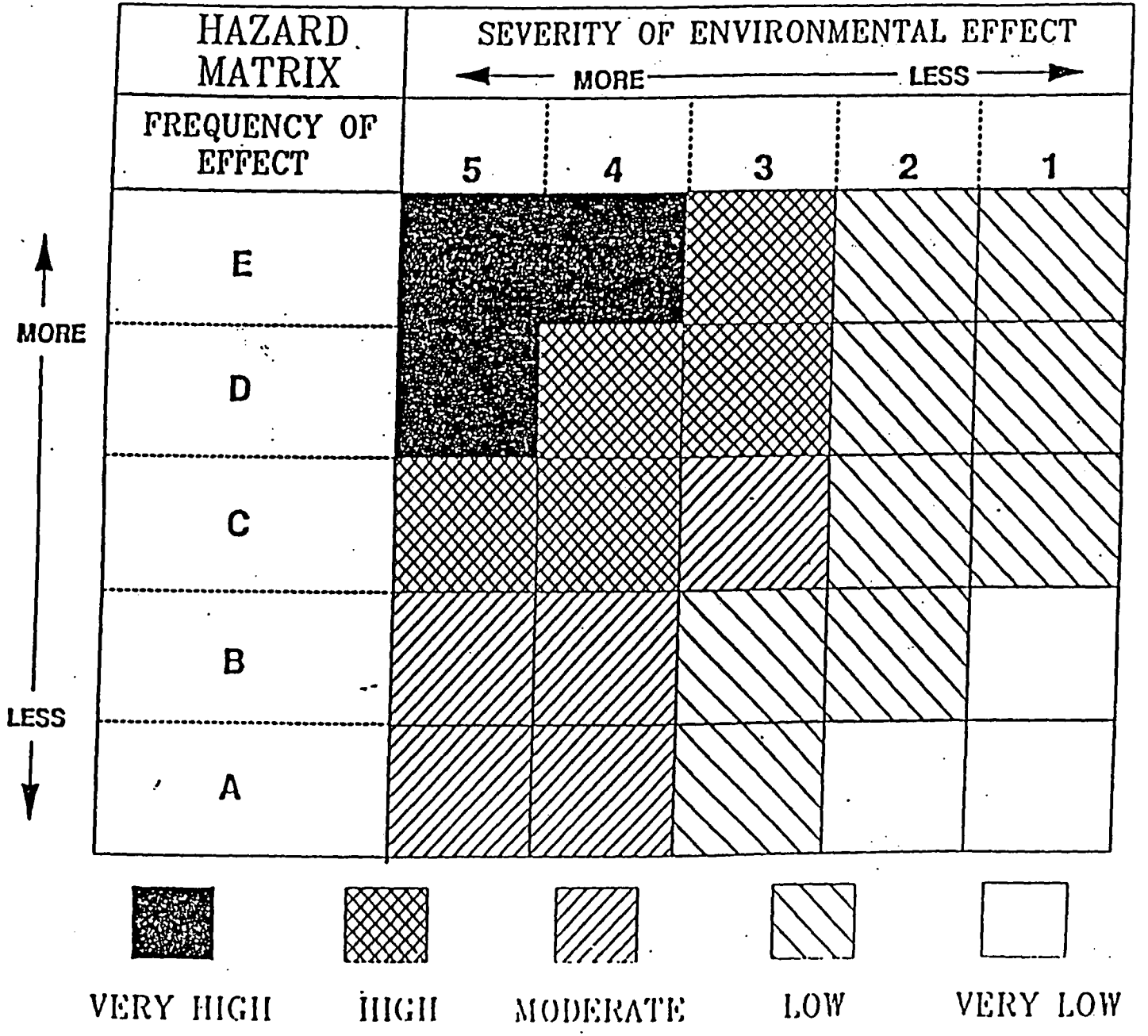


Figure 2. Hazard Matrix.

FIGURE I-2
HAZARD MATRIX

Figure I-2

Hazard Matrix

II. ALTERNATIVES TO THE PROPOSED ACTION

Alternatives including approval of the proposal as originally submitted are:

A. NONAPPROVAL OF THE PROPOSAL

ATP Oil and Gas Corporation, would not be allowed to undertake the proposed development/production activities in Garden Banks Area,, Block 134. 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 necessary.

B. APPROVAL WITH EXISTING MITIGATION

The following mitigative measures are required to ensure environmental protection, consistent environmental policy, and safety as required by the National Environmental Policy Act:

Due to the location of the proposed well completion activities within the four-mile zone of the Flower Garden Banks, shunting of all drill cuttings and drilling fluids to within 10 m (33 ft) of the ocean floor is required. Other measures which ATP proposes to implement to limit pollution effects are discussed in the plan. Outer Continental Shelf Operating Regulations, Notices to Lessees and Operators, and Sale 135 Lease Stipulation Nos. 1 and 2 were identified throughout this assessment as existing mitigation for potential environmental impacts associated with the proposed DOCD.

C. APPROVAL WITH ADDITIONAL MITIGATION

Due to the surface locations of the proposed development activities within the Four-mile zone of the FGBs, special precautions are required to protect these features. Outer Continental Shelf operating regulations and Notices to Lessees and Operators were identified throughout this assessment as existing mitigation for potential environmental effects associated with the proposed action.

In the course of this review, it is determined that additional conditions and measures would be necessary to mitigate potential effects of the proposed action. Refer to Section I.J., Measures For Compliance, in this document for the additional mitigative measures required as conditions of plan approval for the proposed action.

III. DESCRIPTION OF THE AFFECTED ENVIRONMENT

A. PHYSICAL ENVIRONMENT

1. Environmental Geology and Hazards

a. General Description of Geology

The water depth at the site of the proposed operations in Block 134 is approximately 156 m (520 ft.) Sediments in these blocks are composed primarily of sand and mud (ATP, 1997). Additional information is included in Section III. A.1.a. of the AEA.

b. Potential Geologic Hazards

Well No. 1 was successfully drilled without encountering any seafloor or geologic hazards. No anomalous features were observed in the area. Additional information is included in Section III.A.1.b of the AEA.

c. Petroleum Geology

Information on this section is included in Section III.A.1.c of the AEA. Additional site-specific information provided by ATP and the Operations Support Unit of MMS is considered proprietary.

2. Meteorological Conditions

Information in the following sections is included in Section III.A.2 of the AEA.

a. Temperature
b. Cloudiness and Visibility
c. Wind
d. Precipitation
e. Severe Weather

3. Physical Oceanography

a. Sea Temperature and Salinity

Information on this section is included in Section III.A.3.a. of the AEA.

b. Currents

Currents near the FGBs have been measured over different periods and at various depths using profiling systems and moored current meters (Rezak et al, 1985). The data obtained indicated that there is no appreciable seasonal variation in speed or direction. The currents are driven predominantly by the tides with the velocities varying with depth. The near-bottom current flow near the FGBs is around the banks, not up and over them (McGrail et al, 1982).

c. Tides and Sea State

Information on this section is included in Section III.A.3.a. of the AEA.

4. Water Quality

Information on this section is included in Section III.A.4 of the AEA.

5. Air Quality

a. Onshore

The onshore area affected by the proposed activities would include the support base area at Cameron in Cameron Parish, Louisiana. The nearest coastal area to the offshore operations is located in Galveston County, Texas. This coastal area is in Air Quality Control Region No. 216. Galveston County does not meet the primary standard for 0_x established by the National Ambient Air Quality Standards and is therefore classified as a nonattainment area for these pollutants. Otherwise, the county is classified as better than national standards or cannot be classified for the criteria established by NAAQS for: TSP, $S0_2$, CO, and No_2. The area is not designated as a Prevention of Significant Deterioration (Class I) Area (40 CFR 81). Additional information is included in Section III.A.5. of the AEA.

b. Offshore

The air quality of the offshore area is considered better than the national standards for all air pollutants; however, due to the lack of data the area is unclassified.

B. BIOLOGICAL ENVIRONMENT

1. Coastal Habitats

Information in this section is included in Section III.B.1 of the AEA.

2. Offshore Habitats

a. Pelagic Environment

Information in this section is included in Section III.B.2.a of the AEA.

b. Benthic Environment

Information in this section is included in Section III.B.2.b of the AEA.

c. Sensitive Underwater Features

The surface location for the proposed operations is within the four-mile zone of the FGBs. The biota and importance of the FGBs are discussed in Section III.B.2.c of the AEA.

Additional information regarding sensitive underwater resources including topographic features may be found in the corresponding sections of the Final EIS for Gulf of Mexico Sales 157 and 161.

3. Endangered or Threatened Species

Recent investigations indicate that the FGBs attract sea turtles, and may have "resident sea turtles" (turtles who remain at the site for long periods of time).

A publication by Rosman, et. al, 1987, reviewed the results of 178 task-oriented dives to study the FGBs. In all, 12 turtle sightings at the West FGB were recorded from February to September of 1980. By identifying the barnacle pattern on the carapace, scientists were able to conclude that all sightings were the same loggerhead turtle with a carapace length of about 90 cm. A video transect in the West FGB in February 1981, documented the presence of the same sea turtle. These data document a "resident sea turtle" at these banks.

As further evidence of sea turtles at the FGBs, another loggerhead sea turtle was documented in a video transect at the West FGB on July 14, 1981.

Additional information is included in section III.B.3. of the AEA.

4. Breeding Habitats and Migration Routes

Information in this section is included in Section III.B.4. of the AEA. Since the AEA was written, further information about the presence of bottlenose dolphins around the FGB has been documented.

An MMS observer was present during monitoring efforts within the Four-Mile Zone of the FGBs from September 24 through September 27, 1991. On September 26, 1991, two pods of bottlenose dolphins were observed, each consisting of three individuals (Bennett, 1991). While these observations give no information on the frequency or seasonality, the FGBs area is utilized by bottlenose dolphin.

5. Protected Areas of Biological Concern

In the December 5, 1991, Federal Register, NOAA designated the East and West FGBs as a Marine Sanctuary. The area contained within the sanctuary (Figure I-3) approximates the No Activity Zones established and protected by the Department of the Interior. NOAA also issued final and interim regulations that require activities that may affect the sanctuary.

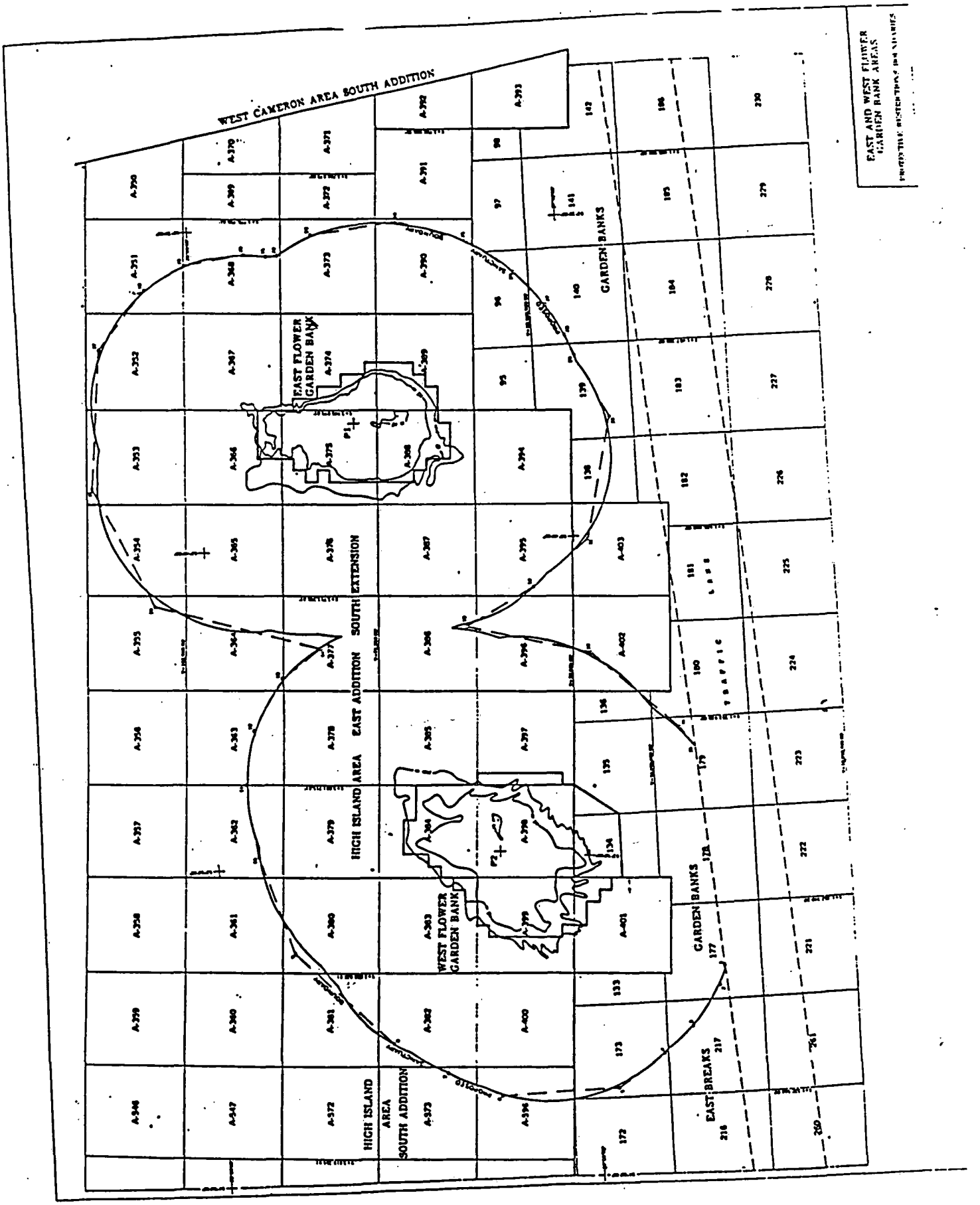


FIGURE I-3
FLOWER GARDEN BANKS MARINE SANCTUARY
BOUNDARY AND FOUR-MILE ZONE

Additional information on this subject is included in section III.B5 of the AEA and in relevant section of the Final EIS for Gulf of Mexico Sale 157 and 161.

C. SOCIOECONOMIC CONDITIONS AND CONCERNS

1. Economic and Demographic Conditions

ATP does not propose to hire additional employees for the proposed activities in Block 134. Information in this section is included in Section III.C.1 of the AEA.

2. Land Use

Information in this section is included in Section III.C.2 of the AEA.

3. Onshore Support Facilities

ATP's support base for the proposed activities will be in Cameron, Louisiana (see Figure B of AEA). ATP's support terminal includes a boat dock and a helicopter base (ATP, 1997).

4. Public Opinion

Comments have been received on ATP's proposed DOCD from other agencies. MMS has received no comments or letters from the public.

A public hearing was held concerning the proposed OCS Oil and Gas Lease Sales Nos. 131 and 135, which included Garden Banks Block 134. Concerns from the public were addressed in the EIS for these lease sales.

5. Navigation

Garden Banks, Block 134 is located approximately 7 miles north of a shipping fairway. Additional information is included in Section III.C.5. of the AEA.

6. Military Warning/Use Areas

Garden Banks Block 134 is not located within a designated military warning or use area. Boat and air traffic associated with the proposed plan is not expected to enter any military areas. Additional information is included in Section III.C.6 of the AEA.

7. Commercial Fishing

Catch data compiled by the National Marine Fisheries Service for the year 1989 for Grid Zone 17 located just north of the FGBs show that a total of 98,885 kg (218,000 lbs) of snappers, valued at $385,683 were caught. Some of those fish likely came from the vicinity of the Banks. Catch for the two most

important snapper species (red and vermilion) was 56,006 kg (123,470 lbs), valued at $247,904 and 41,656 kg (91,834 lbs), valued at $133,519, respectively, (NMFS, 1989). Additional information in this section is included in Section III.C.7 of the AEA.

8. Recreation

The FGBs' exceptional biota offer a unique recreational opportunity to sport divers. The uppermost portions of the Banks support the northernmost living coral reef communities in the northwestern Gulf of Mexico. These communities consist of a widely varied assemblage of algae, sponges, crustaceans, echinoderms, fishes, and hermatypic (reef building) corals. The nearest coral reefs comparable to the FGBs are located at Cabo Rojo (97 km south of Tampico, Mexico) and at the Florida Middle Grounds (155 km south of Franklin County, Florida).

The FGBs are experiencing an ever-increasing number of sport divers recreating at these features. Cancelmo (Under Water USA, Dec. 1991) suggests that more than 1,500 sport divers visit the Banks each year. Generally, diving opportunities are limited to approximately five to six months of the year. Weather and sea conditions are the primary limiting factors. It is estimated that approximately 50 chartered trips occur during the diving season with 25 to 30 divers onboard the vessel each trip. These divers may make a total of 4 to 5 dives on the crest of the Banks. Both 2- and 3-day charters are taken to the Banks at an approximate cost of $300 to $400 per diver.

In addition to the seasonal sport diving activities, a limited amount of recreational fishing also occurs at the FGBs. Recreational vessels are infrequently seen at the Banks. Limiting factors for these fishing excursions include weather and sea conditions as well as the Banks' distance from shore (approximately 200 km).

Additional information is included in section III.C.8 of the AEA.

9. Cultural Resources

Information in this section is included in Section III.C.9 of the AEA.

10. Other Commercial Uses

Information in this section is included in Section III.C.10 of the AEA.

11. Other Mineral Uses

Information in this section is included in Section III.C.11 of the AEA.

12. Pipelines and Cables

There are no known existing pipelines or cables within Block 134. ATP has submitted a pipeline

application to the MMS for transmittal of gas and condensate from Well No. 1 to an existing production facility in another block. Potential environmental impacts associated with the installation of the pipeline to this production facility will be assessed in a separate document. Additional information is included in Section III.C.12 of the AEA.

13. Ocean Dumping

Information in this section is included in Section III.C.13 of the AEA.

IV. ENVIRONMENTAL CONSEQUENCES

A. ACCIDENTAL HYDROCARBON DISCHARGES

1. Oil Spill Accidents

As required in contingency plans pursuant to the Oil Pollution Act of 1990 and MMS regulations at 30 CFR 254, ATP has calculated the worst case discharge that could occur from the subsea well during a blowout scenario. The total volume of 44.7 API degree condensate that could potentially be spilled under this case is estimated by ATP to be 4502 bbl/day.

Blowouts are relatively uncommon in the GOM. From 1956 to 1989, 157 blowouts occurred on the OCS, only 28 of which resulted in the release of oil into the environment. Of these, 16 involved less than one bbl of oil spilled and only two blowouts resulted in the spillage of more than 6,000 bbl. Since 1971, MMS has maintained a data base on blowouts. This data base includes information on the cause and extent of damages from the blowout event. During the time period from 1971-1989, there were 116 blowouts. Thirty-four percent occurred during exploratory drilling, 28 percent during development drilling, ten percent during well completions, nine percent during production, and nineteen percent during work over operations. Sixty-three percent of the oil spilled from these operations occurred during production.

If a worst case spill did occur from the proposed activity, the size of the spill would obviously vary dependant upon the actual spill rate and the number of days the blowout situation continued. Historically, the duration of a blowout varies greatly, from immediately shut-in to 156 days. Of the blowouts occurring on the OCS from 1971-1989, 61 percent have been controlled in one day, 26 percent in one week, and 13 percent in more than one week.

To estimate the probability for a blowout to occur from the proposed actions, the historical record was examined to determine a rate for this occurrence. The total number of blowout events that occurred during the time period of 1975-1989 was correlated to the number of wells drilled during this time period. Based upon this data, it was estimated that about six blowouts will occur per 1000 well starts, of which, four will be attributed to development/production activity. Using this information, the probability for a blowout to occur from the one subsea well proposed by ATP would be 0.4 percent.

Data maintained since 1964 on spills of 1000 bbl or greater from offshore platforms and pipelines have documented only 11 spills of 1000 bbl or more from platforms on the OCS (all OCS areas included). The majority of these spills occurred due to bad weather conditions. This spill event data, in conjunction with the historic production of OCS leases, allow the estimation of a spill rate. This spill rate has not been uniform through time and several revisions have been made (Nakassis, 1982; Lanfear and Amstutz, 1983; Anderson and Labelle, 1990; Anderson and Labelle, 1994). The latest revisions in the spill rate found a decrease in the spill rate for platforms (Anderson and Labelle, 1990; Anderson and Labelle 1994). These reductions were attributed to improved safety practices in the oil industry. Based on historical data, MMS has estimated the rate at which spills occur from platforms for oil spills larger and or equal to 1000 bbl as 0.45 spills per billion bbl produced.

The probability that an oil spill of 1000 bbl or larger will occur from the proposed platform is estimated using a Poisson Distribution and using the spill rate of 0.45 spills per billion bbl produced (Anderson and Labelle, 1994). The other parameter needed to determine this probability would include the amount of oil produced (estimated to be 300 bbl/day condensate), which in this case would be time dependant. A longer period of time would increase the probability because the amount of oil produced would increase. Using this information, the following table presents the time period, the amount of oil produced by the platform, and the probability of one or more spills of 1000 bbl or greater occurring:

TIME	HYDROCARBONS PRODUCED (Bbbl)	PROBABILITY*
Month	0.000009	0.0004%
Year	0.0001	0.005%
5 Years	0.00054	0.02%

*It should be noted that the probability of an oil spill depends very strongly on the volume produced. If the volume decreases with time the probabilities presented in the table above will also decrease, likewise, if the volume increases, the probabilities will increase.

The historical record shows that there have only been four large oil spills exceeding 10,000 bbl as a result of OCS activities (all OCS areas included) - of which two resulted from platforms. These two platform spills resulted from blowouts , which along with the Santa Barbara blowout incident , prompted the implementation of new and stringent operation regulations pertaining to drilling procedures, subsurface safety valves, and platform safety devices. Based on historical data, MMS has estimated the rate at which spills occur from platforms for oil spills larger and or equal to 10,000 bbl as 0.16 spills per billion bbl produced.

The probability that an oil spill of 10,000 bbl or larger will occur from the proposed platform is estimated using a Poisson Distribution and using the spill rate of 0.16 spills per billion bbl produced (Anderson and Labelle, 1990). The other parameter needed to determine this probability would include the amount of oil produced (estimated to be 300 bbl/day condensate), which in this case would be time dependant. A longer period of time would increase the probability because the amount of oil produced

would increase. Using this information, the following table presents the time period, the amount of oil produced by the platform, and the
probability of one or more spills of 10,000 bbl or greater occurring:

TIME	HYDROCARBONS PRODUCED (Bbbl)	PROBABILITY*
Month	0.000009	0.00014%
Year	0.00005	0.0016%
5 Years	0.0005	0.009%

*It should be noted that the probability of an oil spill depends very strongly on the volume produced. If the volume decreases with time the probabilities presented in the table above will also decrease, likewise, if the volume increases, the probabilities will increase.

The probability tables provided in this Section illustrate that the likelihood of a major oil spill accident occurring from the proposed platform is extremely low. The probability estimates do not, however, reflect unforeseen natural events such as hurricanes or geologic events. Probabilities for up to 5 years are provided in the tables because the estimated life of the reserves is projected by ATP to be 5 years.

2. Vulnerability of Coastal Land segments to Oil Spills

A summary of the trajectory analysis (for 10 days) simulated as a part of the Oil Spill Risk Analysis for Lease Sales 157 and 161 (USDOI, MMS, 1996) indicates that the proposed well site falls within Oil Spill Area 19. The Oil Spill Risk Analysis for Lease Sales 157 and 161 indicates that there is a negligible probability that an oil spill occurring in oil spill launch area 19 could contact any coastal areas.

3. Assumptions about the Characteristics and Fates of an Accidental Oil or Gas Discharge at the Flower Garden Banks

The proposed action is located approximately 5 miles from the East Flower Garden Banks and approximately 1mile from the West Flower Garden Banks. Dependent upon the seasonal conditions, trajectory runs conducted for the FGBs area have indicated that surface currents could send oil spilled from the facilities towards either Bank. The expected 44.7 degree API condensate is classified as a Group II light crude oil made up of light fractions of which up to two-thirds of the spill volume would be expected to evaporate. Generally, Group II oils are expected to have low to moderate viscosity and to spread rapidly into thin slicks. Containment/recovery from the water is; therefore, most effective early in the response.

An analysis of the effects of a condensate spill approximately the same size and duration of the worst case estimated by ATP was conducted and analyzed in the report "Analysis of Potential Effects of Oil spilled From Proposed Structures Associated with Oryx's High Island Block 384 Unit on the Biota of the East Flower Garden Bank and on the Biota of Coffee Lump Bank" dated September 14, 1994. However, due to the differences in water depth, 530 feet at the proposed site versus approximately 352 feet at Oryx's

platform site, it would not be appropriate to examine the results of this study in any detail for this specific proposal. It should be noted; however, that the condensate scenarios modeled by CSA for ORYX as part of the 1994 analysis indicated no effects to the Flower Garden Banks as a result of high volume spills of condensate.

In a blowout situation, some small quantity of hydrocarbons escaping from the pipeline could be absorbed to sediment particles suspended in the nephloid layer. However, researchers have found that the nephloid layer is generally confined to the deeper silt and clay areas at the base of the banks. For typical summer and fall conditions, when the water is strongly stratified and near bottom flow is approximately 25 cm/s (0.5 kn), there is relatively little suspended sediment in the water column above 100 meters. During an extreme condition, when the current flow was strong (> 90 cm/s), the nephloid layer was confined to a zone within 20 meters of the seafloor in 120 meters of water. These investigators concluded that the nephloid layer that develops over the silt and clay at the base of the Flower Garden Banks would not be carried upward onto the shallower portions of the Banks.

4. Effects of Oil Spills on the Environment

Refer to section IV.A.4. of the AEA for discussions of oil spill impacts to coastal habitats, benthic communities, endangered or threatened species, other wildlife including migratory waterfowl, commercial fishing, recreation/tourism, cultural resources, water quality, and air quality. Further site specific and updated information is added below.

Benthic Communities - While the corals reefs of the Flower Garden Banks support a significant and varied assemblage of algae, sponges, crustaceans, echinoderms, and fishes, the hermatypic (reef building) corals may be argued as being the most important taxa. Bright et al. (1984) listed 21 species of scleractinian corals from the Flower Garden Banks, 18 of which are hermatypic. The corals of the Flower Garden Banks provide not only the framework upon which the other fauna depend, but they are responsible for establishing this colorful biome as an important recreational resource. The Flower Garden Banks are capped by the northernmost living coral reef communities in the northwestern Gulf of Mexico and are frequented by an increasing number of recreational scuba divers (see Section III.C.8).

While the other reef fauna of this area may be detrimentally affected by spilled oil, such impacts would be far less than on the corals. For example, Knap et al. (1985) reported that in exposure experiments with physically and chemically dispersed oil, casual observations of the cryptic fauna associated with colonies of *Diploria strigosa* suggested that this other reef phyla may be more sensitive than their host corals. At high concentrations (20 ppm) mortality was observed in polychaetes, mollusks, and decapod crustaceans within 24 hours; however,
D. strigosa appeared to be tolerant of these exposures. While these other invertebrate fauna may in fact be more sensitive than their host corals, their abundances, reproductive rates, and geographical distributions are not as limited as those of their hermatypic hosts. Aside from some low diversity reefs on neighboring banks, the nearest coral reefs proper to the Flower Garden Banks are found off Cabo Rojo, about 97 km (60 miles) south of Tampico, Mexico [644 km (400 miles) south-southeast of the Flower Gardens]; and at the Florida Middle Grounds, about 780 km (485 miles) east of the Flower Gardens.

While a review of the literature reveals conflicting results, most researchers would agree that the evidence suggest a detrimental influence of oil contamination on reef corals. However, differences in experimental design and the variability of field conditions must be noted whenever such comparisons are made (Dodge et al. 1984). For example, it may be misleading to draw conclusions on the long-term damage to coral reefs from studies based on short-term or qualitative observations (Loya and Rinkevich 1980).

In 1986 a major spill occurred in an area along the Caribbean coast of Panama which had previously been well characterized ecologically. This provided an unprecedented opportunity for the study of both the acute and the chronic impacts of oil on tropical marine communities (Keller and Jackson 1991), including coral reefs (Guzman et al. 1991; Guzman and Jackson 1991). The results are for the most part in agreement with previous works regarding the effects of oil spills on shallow reefs, demonstrating that growth rates, population levels, total coral cover, and species diversity decreased significantly in the shallow subtidal areas where the reefs were exposed to oil.

Coral tissue samples, taken following the 1986 oil spill, indicated levels of oil on the order of 25 to 50 ug/mg lipid in specimens from a heavily oiled site (Burns and Knap 1989). However, samples taken in 1988 and 1989 demonstrated that the levels of oil in coral tissues were extremely low (<1 ug/mg extractable organic matter).

While such coral species as *Montastrea annularis*, *Porites astreoides*, and *Diploria strigosa* are common to both the Flower Garden Banks and the reefs of Panama, the habitats differ markedly regarding such parameters as depth, distance from shore, and hydrography (Rezak et al. 1985; Jackson et al. 1989). While the reefs impacted in Panama are fringing reefs within a few tens-of-meters of the shoreline and include shallow reef-flats coming to the waters surface, the coral reefs of the Flower Garden Banks come only to within 18 m of the surface and are over 200 km from shore. The reefs of Panama are also heavily influenced by sedimentation and freshwater runoff from the mangrove forests directly adjacent to them; such coastal influences are not encountered in the much more oceanic environment of the Flower Garden Banks.

The Flower Garden Banks, lacking shallow water reef structures (e.g., reef flat, emergent reefs, etc.) are much less at risk from buoyant-surface bound slicks than the more typical shallower reefs found throughout the Caribbean. However, it may be argued that a blowout would introduce petroleum into the water column which, under the proper conditions, may result in the formation and settling of oil-saturated material with oil-sediment particles. This material may contact and effect living coral tissue.

Bak and Elgershuizen (1976) examined the patterns of oil-sediment rejection of 19 Caribbean hermatypic corals and found that physical contact with such particles was less harmful to corals than the toxic effects of oils. These experiments included the most important hermatypic corals of the Flower Garden Banks: *Montastrea annularis*, *Diploria strigosa*, *M. cavernosa*, *Colpophyllia* spp., and *Porites astreoides* (Bright et al. 1974, 1984; Tresslar 1974; Viada 1980; and Kraemer 1982).

The use of chemical dispersants might also cause a surface slick to sink, exposing deeper reef environments to oil contamination. However, studies of chemically treated oil slicks under field conditions

report subsurface dispersed oil concentrations ranging from less than 1 ppm to a maximum of 20 to 70 ppm; concentration exceeding 10 ppm are usually restricted to the upper 2 to 3 m of the water column (e.g., McAuliffe et al. 1981; Lichtenthaler and Daling 1983, 1985; Delvigne 1985; Gill et al. 1985; Nichols and Parker 1985).

Dodge et al. (1984) exposed colonies of *D. strigosa* for 6-24 hour periods to various concentrations (1-50 ppm) of oil or chemically dispersed oil. These experiments were designed to assess the long-term effects of brief low-level concentrations of chemically dispersed oil and oil alone on corals in situations similar to that which may occur when oil slicks (treated and non-treated) pass over a reef. No significant differences were found between the treated corals and controls in any of the experiments. However, as explicitly stated by the authors, these experiments did not attempt to access chronic pollution from, for example, a slow leak from a grounded tanker or a pipeline.

Cook and Knap (1983) found that an 8 hour exposure of *D. strigosa* to a mixture of crude oil (19 ppm) and a dispersant (1 ppm) reduced photosynthesis by their algal symbionts by 85 percent, while neither oil or dispersant alone had an effect. The greatest effect of crude oil plus dispersant occurred in the incorporation of photosynthetic products into lipids. Synthesis of wax esters and triglycerides, the major storage lipids, was particularly affected. However, total carbon fixation was restored within 3 to 5 hours after treatment, and lipid synthesis was restored within 5 to 24 hours.

Knap et al. (1985) found that colonies of *D. strigosa* exposed to 20 ppm of chemically dispersed oil for 24 hours exhibited various behavioral reactions, including tentacle retraction, tissue contraction and mesenterial filament extrusion. However, effects were typically sublethal, and recovery was usually evident within four days. These symptoms were not significant in long-term transplants. Using the alizarin red staining technique, no long-term effects on skeleutal growth could be detected following any of the treatments. The effects also included a short-term inhibition of photosynthesis by the chemically dispersed oil, with lipid synthesis being most severely affected. Total recovery occurred within 24 hours of exposure. Similar concentrations (1-50 ppm) and similar exposure periods (6 to 24 hours) where used by Knap (1987) who also exposed specimens of *D. strigosa* to oil; the exposures produced no significant effects.

Wyers et al. (1986) examined the behavior of *D. Strigosa* during 6 to 24 hour exposures to water-accommodated fractions of chemically and physically dispersed crude oil. In general, effects observed were sub-lethal, temporary, and only associated with the highest concentrations tested. Behavioral observations provided little evidence of adverse effects at 1-5 ppm concentrations. At 20 ppm, responses included mesenterial filament extrusion; extreme tissue contraction; tentacle retraction; and in certain experiments, localized tissue rupture. The nature and severity of reactions during the dosing phase varied between colonies and treatments, but colonies typically resumed normal behavior within 2 hours to 4 days. It was concluded that the observed biological effects would be unlikely to impair long-term viability.

These studies suggest that when the symptoms elicited by physically or chemically dispersed oil are temporary, they appear to be within the scope of naturally occurring defensive reactions to adverse conditions (Wyers et al. 1986). For example, extreme tissue contraction can be elicited by physical factors and may give rise to rupture as the tissue is withdrawn into the underlying corallum (Kanwisher and

Wainwright 1967; Hubbard 1974). Tentacle retraction occurs in response to such stimuli as temperature extremes (Jokiel and Coles 1977) and high current velocities (Hubbard 1974). Mesenterial filament extrusion is usually reported under conditions of surface tissue damage or irritation, although it can also play a role in feeding activities (Lewis and Price 1975) and interspecific competition (Lang 1973). Similarly, tissue swelling and mucus production can be observed during cleaning and protective activities (e.g., Bak and Elgershuizen 1976; Dallmeyer et al. 1982). Specifically, Bak and Elgershuizen (1976) could find no specific reaction of corals to oil-sand particles. The rejection mechanisms utilized in oil-sand removal were the same, and apparently functioned in the same manner as those used in the rejection of clean sediments.

In a series of field experiments utilizing oil containment barriers, LeGore et al. (1989) exposed portions of an Arabian Gulf coral reef to oil, dispersant, and chemically dispersed oil. Water depth over the experimental site varied from one to three meters, depending on tidal phase. Acropora spp. accounted for more than 95% of the corals included in each test plot. Exposures were conducted for 24 and 120 hours. Corals were examined for biological impacts immediately after the exposure, and then at three-month intervals for a year. For the most part, coral growth appeared unaffected by the exposures; however, some *Acropora* specimens exposed to the chemically dispersed oil for 120 hours exhibited delayed, but minor, effects, which became apparent only during the relatively cold stressful winter season.

Thorhaug et al. (1989) demonstrated that there are differences in the tolerances to dispersed oil products between coral species. *A. palmata*, a coral species inhabiting primarily shallow reefs areas (e.g. reef flats, emergent reefs, etc.), was far more sensitive to dispersed oil than the deeper occurring coral *M. annularis*.

A hierarchy of sensitivity to dispersed oil is applicable to this scenario because the reefs of the Flower Garden Banks crest at 18 m and do not include *A. palmata* (nor its co-specific *A. cervicornis*) characteristic of emergent reefs or the shallower portions of forereefs. The studies of Bright et al. (1974, 1984), Tresslar (1974), Viada (1980), and Kraemer (1982) demonstrate conclusively that at both the East and the West Flower Garden Banks *M. annularis* is the dominant hermatypic coral, followed by *D. strigosa*, *M. cavernosa*, *Colpophyllia* spp., and *Porites astreoides*.
Considering the depth of the coral reefs of the Flower Garden Banks, the prevailing oceanographic conditions, the concentrations of oil in the water column which may be expected (either physically or chemically dispersed), and the hierarchy of sensitivity to dispersed oil of the component hermatypic corals, it can be concluded that any observed biological impacts occurring immediately following a catastrophic spill event would be unlikely to impair the long-term viability of these reefs.

It should; however, be noted that CSA report for the initial DOCD indicated that because acute LC50 values as low as 0.1 ppm have been observed for eggs and larvae of finfish and invertebrates, some effects on these early life stages could occur as a result of a spill. More importantly, CSA observed that during spawning events, planulae larvae could be effected (CSA, 1994).

Endangered Species - The impacts of spilled oil on loggerhead sea turtles is of special concern because the presence of loggerhead sea turtles is well documented at the Flower Garden Banks (Rosman et al., 1987). The data do not allow a prediction of the actual number of sea turtles which could be impacted by spilled oil at a given time.

Oil spillage can affect sea turtles by toxic external contact, toxic ingestion or blockage of the digestive tract, asphyxiation, entrapment in tar or oil slicks, habitat destruction, and displacement from preferred habitats. Hatchlings and pelagic life stages of the sea turtle appear to be the most vulnerable to oil spills originating offshore because the currents that concentrate spilled oil also form debris mats, which these life stages inhabit (USDOI, MMS, 1991). Vargo et al. (1986) studied the impacts of oil on loggerhead and green sea turtles and concluded that these turtles were surprisingly sensitive to oil. Both loggerhead and green sea turtles had a limited ability to avoid oil slicks. Experiments to determine whether sea turtles were attracted to or avoided ingesting tar balls were inconclusive. Physiological experiments showed that respiration, skin, some aspects of blood chemistry and composition, and salt gland function of 15 - 18 month old loggerhead sea turtles were all significantly affected by oil. Oil was observed clinging to the nares, eyes, and in the upper portion of the esophagus and was found in the feces of all turtles. The authors noted similar effects in stranded sea turtles fouled with oil.

The severity of an oil spill event would determine the number of sea turtles impacted, but it is reasonable to assume that in a catastrophic oil spill scenario, at least a small number of animals would be killed or sustain sub-lethal injuries.

Other migratory wildlife - The presence of bottlenose dolphins within the 4-mile protective zone of the Flower Garden Banks was noted by Bennett, 1991. Little is known of the occurrence of other marine mammals in the vicinity of the Flower Garden Banks.

Oil spills and oil-spill response activities can adversely affect cetaceans, causing skin and eye irritation, asphyxiation from inhalation of toxic fumes, food reduction or contamination, oil ingestion, and displacement from preferred habitats or migration routes (Goodale et al., 1981; Gruber, 1981; Geraci and St. Aubin, 1988). When an oil spill occurs, many factors interact to delimit the severity of effects and damage to cetaceans. Determining factors include location, oil type, oil dosage, impact area, oceanographic conditions, meteorological conditions, and season (NRC, 1985; USDOI, MMS, 1987). Cetaceans may actively avoid an oil spill thereby limiting the effects and lessening the extent of damage. Less severe, sublethal effects are defined as those that impair the ability of an organism to function effectively without causing direct mortality (NRC, 1985).

Geraci and St. Aubin (1988) noted that determining the risk to cetaceans from an interaction with oil was extremely difficult because of the host of variables involved in the interaction. Generally, species with large ranges and mobility that feed in the water column versus the surface or on the bottom are less vulnerable to oil. This suggests that baleen whales are the most vulnerable followed by bottlenose dolphins and wide-ranging odontocetes. Geraci and St. Aubin (1982) suggest that dolphins are able to detect and avoid oil. Skin and eye irritation and respiratory disorders caused by contacting oil are sublethal and of a temporary nature (Geraci and St. Aubin, 1988). Death or debilitating illness caused by oil ingestion or by

consumption of contaminated food require large volumes and long-term chronic interactions. Although most oil spill impacts to marine mammals are considered sublethal, at least one report documents the death of great whales from inhalation of toxic fumes accompanying an oil spill in Iran (Oil Spill Intelligence Report, 1983).

Any oil spill event resulting from the proposed work would be expected to be short in duration, but the severity of the spill (among other factors) would determine the number of marine mammals affected. It is reasonable to assume that in a catastrophic oil spill scenario, at least a small number of migratory marine mammals would be killed or sustain sublethal injuries.

5. Oil Spill Containment/Cleanup Capabilities and Effectiveness

Response to a spill of oil would be in full accordance with the applicable federal and state laws and regulations as well as Oryx's own policy for accidental spill prevention and containment.

The OSCP submitted by ATP is designed to help personnel respond quickly and effectively to environmental incidents and is a guide that will be followed in handling spill response situations as related to the subject well. As indicated in Section IV.A.2. of this SEA, the probability of landfall impact from an oil spill associated with the subsea well is negligible. Therefore, the primary environmental and biological concerns involved with a spill from an oil spill associated with the subsea well are its impact to the topographic features located in the area, specifically the East and West Flower Garden Banks.

In the event of an oil spill, the primary response modes for protection of these banks would be accomplished through the use of containment and sorbent booms, fast response open sea skimming systems and possibly dispersant application. The NOAA's policy on dispersant use in and near the Flower Garden Banks requests notification if dispersant use is proposed. The anchoring of response vessels would be prohibited within the Sanctuary boundaries and permission to move the mooring buoys would be required if it was decided that this would be necessary to facilitate response efforts. The operator is required, per the June 1, 1995 LTL, to notify the Manager of the Flower Garden Banks National Marine Sanctuary in the event that a spill occurs as a result of activities in this Block.

ATP is a member company of Clean Gulf Associates and has access to equipment under contract by this association. By reference, the Clean Gulf Associates Operations Manuals are incorporated by ATP into and made a part of their OSCP.

The "identified vessel fast response skimming system (ID vessel) that is prestaged offshore at High Island A-571 will be utilized as the primary response option. An ID vessel is a utility vessel under contract to an oil company and prestaged at offshore locations located throughout the Gulf on which skimming equipment is mounted by CGA for use by member companies as a first response to a spill in the area. A skimming system including a crane, power pack, outrigger, and boom, GT-185 skimmer (design rating 200 g.p.m.), and 2100 gallon oil separator are skid mounted on each vessel. There are also 500 feet of Expand 4300 open ocean boom stored on the vessel to be used for containment in conjunction with the skimming

operations. Upon notification, the ID vessel can proceed immediately to the spill scene. Contract crews to relieve the operating crew that are already staged on the ID vessel could be obtained and flown to the spill site. The response time for this primary response is estimated by the operator to be approximately 3 hours. This alternative would reduce the amount of time needed to respond from the closest onshore CGA equipment base (16.5 hours) as the time needed for the procurement of a vessel of opportunity for load out of the equipment and travel time from the onshore dock facility would be eliminated. During a spill event, the operator will be required to cascade in additional equipment as deemed necessary to respond to the spill scenario.

ATP could activate the following additional equipment to respond to a worst case spill situation occurring at the well site: 1) two Fast Response Units (FRU) loaded out of Galveston, Texas with an anticipated 16.5 hour response time and 2) one FRU trucked from Lake Charles, Louisiana and loaded out of Cameron, Louisiana with an anticipated 16.5 hour response time.

If deemed necessary, ATP would be required to obtain additional CGA equipment from other offshore ID vessel locations and other CGA equipment bases located throughout Louisiana. Response times from these ID vessels and CGA bases would vary dependant upon the location of the equipment and the type of equipment transported.

The effective daily recovery rate of the equipment that would be called out to respond to a worst case scenario was determined using the USCG guidance requiring a reduction of the equipment's nameplate capacity by using a 20 % efficiency factor in the calculations. Based on this formula, the effective daily recovery capacity was estimated for the I.D. vessel at 1300 bbl/day and for the three FRUs at a total of 10,200 bbl/day. Once all of the equipment is operational in this scenario, the total recovery capacity onsite is estimated at 11,500 bbl/day. The following table lists the recovery and storage capacity of this equipment and the amount of oil potentially spilled under the worst case spill scenario presented by ATP during the timeframes required for this equipment to be onsite and operational.

HOURS SINCE SPILL ORIGINATED	CALCULATED* DAILY RECOVERY CAPACITY ONSITE (bbl/day)	AMOUNT** SPILLED (bbl)	RECOVERED WASTE STORAGE ONSITE
3 hrs	1300 bbl/day	563 bbl	50 bbl
16.5 hrs	11,500 bbl/day	3096 bbl	5,786 bbl
36 hrs	11,500 bbl/day	6750 bbl	28,786 bbl

*These estimates were determined using the USCG guidance which requires using a 20% efficiency factor in the calculation.

**Represents the total amount spilled within the indicated timeframes under ATP's worst case scenario without taking into account the amount of hydrocarbons expected to be lost to the environment due to weathering or any amount removed by cleanup operations.

As the above table indicates, approximately 11,500 bbl/day recovery capacity could be onsite within 16.5 hours to handle a spill that at the end of 16.5 hours would total 3096 bbls and could potentially continue to spill at a rate of 187.5 bbl/hr under the worst case scenario. The response equipment that could reach the spill site within 16.5 hours should provide more than sufficient recovery capability to handle a spill of this magnitude. It is important to note that since the USCG formula for determining the effective daily recovery capacity of oil recovery devices used in this analysis takes into account the potential limitations due to available daylight, weather, sea state, and percentage of emulsified oil in the recovered material, those limitations are not considered further in the analysis.

The adequacy of ATP's proposed equipment and capabilities will be verified through the annual scheduled and unscheduled oil spill drills. ATP will hold (subject to MMS approval) and conduct an annual unannounced drill for their production activity near the Flower Garden Banks. These drills will monitor ATP's readiness to deal with both the most likely and worst case scenarios for potential oil spills. If changes in the response strategy are deemed necessary during the conduct of these drills, ATP will be required to amend their proposed response strategy.

ATP will be required by the affected State and the USCG to ensure that recovered oil and oiled debris will be disposed of properly in accordance with all federal, state, and local requirements. The transportation of any oil or oiled debris will have to be conducted in compliance with all federal and state regulatory agency's requirements. Therefore, these materials will be required to be transported only in USCG-approved vessels, barges, and/or tanks or DOT permitted tank trucks. ATP will be required to dispose of wastes associated with oil spill recovery activities in a safe manner at an approved waste disposal site by the appropriate regulatory agencies. In addition to the oil storage capacities of each piece of response equipment called to the scene, ATP proposes to provide four 500 bbl dracones which can be onsite within 14-16.5 hours, a 3,000 bbl bladder from MSRC which can be onsite within 16.5 hrs, and a large USCG certified oil tank barge (average total capacity 23,000 bbl) which can be onsite within 36 hours. Once the oil tank barge arrives onsite, sufficient storage capacity would be available to support the cleanup operations under the worst case scenario as presented by ATP.

A low level of impact from a pollution event might be expected from the proposed action for the following reasons:

The distance to shore (135 miles);
the depth of the topographic features (18 meters);
the water depth at the proposed site (530 feet);
the remote possibility that an oil spill would occur;
the results of the CSA study(refer to Sections IV.A.3. of this SEA);
the location of an I.D. vessel for a fast initial response effort (3 hours);
ATP's proposed response strategy for responding to a spill;
the conduct of announced and unannounced drills to ensure ATP's oil spill response capabilities;
ATP's proposed spill prevention and detection measures, as well as existing measures and regulations;
and the spill response mitigation included as a condition of plan approval(refer to Section I.J.).

B. IMPACTS CONCERNING THE PHYSICAL ENVIRONMENT

1. Impacts Concerning Geology

The proposed operations are clear of any of the potential geologic hazards mentioned in Section III.A.1.b (ATP, 1997).

2. Impacts Concerning Meteorology

Mitigation to be taken during hurricanes, is discussed in Section IV.B.3. of this SEA. In conditions of high winds and reduced visibility due to fog or rain, helicopter traffic and/or boat traffic between the site and shore base would be temporarily suspended.

Interferences due to weather conditions are expected to be short-term and infrequent, producing only an insignificant effect on the movement of supplies and personnel to and from the facilities. The effect on offshore operations should be minimal. Additional information is included in Section IV.B.2 of the AEA.

3. Impacts Concerning Physical Oceanography

Oceanographic conditions which could adversely affect the operation have been taken into consideration during the planning and designing of the proposed action. Although drilling rigs are designed to operate in rough sea conditions, precautions would be taken by ATP if a hurricane approached Block 134. Activities would be halted, protective measures taken, and facilities secured. No significant impacts from normal physical oceanographic conditions would be expected during the implementation of this development plan.

4. Impacts on Water Quality

No significant impacts to the water quality of the area are expected as a result of the proposed activities. As discussed in Section I.J., all discharges are required to adhere to the standards imposed by the NPDES Permit. Also, because all drilling muds and cuttings will be shunted to within 10 meters of the bottom, impacts are expected to be localized near the bottom, with little or no intrusion into the upper water column. Refer to Section IV.A. of this SEA and the corresponding section of the AEA for a discussion of oil spill impacts to water quality. Additional information is included in Section IV.A.4 of the AEA.

5. Impacts on Air Quality

a. Onshore

The effects of the air emissions onshore would be negligible due to the distance of thel site to the coast. The percent increases in ambient concentrations contributed by the onshore secondary emissions from the proposed activities would be insignificant. Additional information is included in Section IV.B.5 of the AEA and in the operator's plan.

b. Offshore

Data presented in the operator's plan indicate that the total emissions expected from the proposed activities in Block 134 would be well below the calculated exemption levels, qualifying these activities for exemption from further air quality review. The site-specific air quality review conducted by MMS as a part of this environmental analysis concluded that there could be no significant effect on air quality from the proposed action (Appendix B). Additional information is included in Section IV.B.5 of the AEA and in the operator's plan.

C. IMPACTS ON THE BIOLOGICAL ENVIRONMENT

Due to the distance of Block 134 from shore 217 km (135 mi), 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 in the AEA for a discussion of oil spill impacts to the biological environment.

1. Impacts on Coastal Habitats

No significant impact is expected on coastal habitats.
Additional information is included in Section IV.C.1 of the AEA.

2. Impacts on Offshore Habitats

a. Impacts on the Pelagic Environment.

No significant impact is expected on the Pelagic Environment. Additional information is included in Section IV.C.2.a. of the AEA.

b. Impacts on the Benthic Environment.

The impacts to the benthic environment are generally discussed in Section IV.C.2.b of the AEA. Impacts to the benthos of the FGBs are discussed in the Impacts to Sensitive Underwater Features, Section IV.C.2.c of this SEA. They are also discussed in the study: "Gulf of Mexico Offshore Operations Monitoring Experiment Study (GOOMEX) Phase I: Sublethal Responses to Contaminant Exposure - Interim Results From the East Flower Gardens (HI-A389) and Other Study Sites." The study addressed the impacts from shunting drilling discharges to the seafloor from closely monitored oil and gas platforms. Impacts were localized (largely within 500 meters) and resulted in lower polycyclic aromatic hydrocarbons (PAH) in sediments than that known to be associated with toxic biological effects, but in high PAH levels in fish livers. Benthic infaunal organisms were relatively low, and large populations of cirratulid polychates occurred at several near-field stations. Sublethal impacts near a platform in High Island A-389 included an influence on invertebrate reproduction, with a higher portion of gravid females at far-field stations, and a

greater prevalence of disease and parasites.

c. Impacts on Sensitive Underwater Features

The biota of the FGBs has been determined to be worthy of protection. MMS has attached a special lease stipulation to Lease OCS-G 13366 in order to insure protection (Appendix A). In addition, NOAA has designated the FGBs as a National Marine Sanctuary. The proposed platform location is within the four-mile zone established by the stipulation. This stipulation requires that all drill cuttings and drilling fluids generated within the four-mile zone be disposed of by shunting them to within 10 m (33 ft) of the seafloor. ATP has outlined their methods in the DOCD of complying with the stipulation regarding disposal of drill cuttings and drilling fluids by shunting (ATP, 1997).

The National Research Council (1983) concluded that most of the drilling discharge deposition from a drill site is limited to within approximately 1000m (3,281 ft.) from the discharge point. The proposed surface location is approximately two miles from the No Activity Zone of the West Flower Garden Bank. Impacts should be negligible on the Bank. In addition, shunting has been found to be an effective mitigative measure in areas near topographic highs since the effluent is generally confined to depths greater than where the sensitive organisms are located (Ibid). Studies indicated that shunted effluents will flow around the bank and not over the living reef. Since the surface location of Well A is located approximately one miles from the No Activity Zone of the West Flower Garden Bank, no anchoring impacts are expected. Therefore, impacts to the West Flower Gardens are not expected to be significant. Representatives from the U. S. Fish and Wildlife Service, the National Marine Fisheries Service and the Flower Garden Banks National Marine Sanctuary have reviewed the proposed activities in Garden Banks Block 134. Their comments are included in Appendix C.

A discussion of their comments is included in Section V of this SEA. Additional information in this section is included in Section IV.C.2.c of the AEA.

3. Impacts on Endangered or Threatened Species

No significant impact is expected on endangered or threatened species. Additional information is included in Section IV.C.3 of the AEA. Oil spill impacts are discussed in Section IV.A.4 of this document and in the corresponding section of the AEA.

4. Impacts on Breeding Habitats and Migration Routes

No significant impact is expected on breeding habitats or migration routes. Additional information is included in Section IV.C.4 of the AEA. Oil spill impacts to migratory wildlife are discussed in Section IV.A.4 of this document and in the corresponding section of the AEA.

5. Impacts on Protected Areas of Biological Concern

No significant impacts are expected on protected areas of biological concern. Additional information is included in Section IV.C.5 of the AEA..

D. IMPACTS ON SOCIOECONOMIC CONDITIONS AND CONCERNS

1. Impacts to Economic and Demographic Conditions

No significant impacts are expected to economic and demographic conditions. Information in this section is included in Section IV.D.1. of the AEA and in ATP's DOCD (ATP, 1997).

2. Impacts on Land Use

No significant impact is expected on land use. Information in this section is included in Section IV.D.2 of the AEA.

3. Impacts of Construction of Onshore Support Facilities

No impacts of construction of onshore support facilities can be expected since ATP proposes using existing facilities (ATP, 1997).

4. Impacts of Public Opinion

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

5. Impacts on Navigation

Development/production activities in Block 134 should have an insignificant effect on shipping. Block 134 is located 217 km (135 mi) offshore and is located outside of any major shipping lanes or anchorage in the Gulf of Mexico (USDI, MMS, 1990 Visual No. 2). Marine traffic in support of the proposed activities is not expected to significantly affect shipping activities in the Cameron, La.area, in part, because of the established support facilities already exist, the temporary nature of the proposed activities, and the infrequency of transportation activities during production operations. 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 and safe havens from marine incidents. 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. ATP is also required to obtain permits from the U.S. Army Corps of Engineers to prevent obstructions to navigation. Additional information is included in Section IV.D.5 of the AEA.

6. Impacts Concerning Military Use

No impacts to or from military use of the GOM are expected since the drilling operations and associated traffic are not expected in any of the designed military warning areas.

7. Impacts on Commercial Fishing

Direct effects of development/production operations on commercial fishing in Block 134 would be the removal of a limited area of seafloor from use and the degradation of water quality at the immediate area of the platform site. Although some commercial fishing could occur within the vicinity of Block 134, no significant conflict of use is expected to develop in the area of the proposed action due to the distance from shore. Refer to Section IV.A. of this SEA and the corresponding section of the AEA for a discussion of oil spill impacts to commercial fishing. Additional information is included in Section IV.D.7 of the AEA.

8. Impacts on Recreation/Tourism

Due to the distance offshore and the nature of the proposed activities, impacts to the aesthetics and recreational resources of the coastal and offshore area would be insignificant. Refer to Section IV.A. of this SEA and the corresponding section of the AEA for a discussion of oil spill impacts to recreation/tourism. Additional information is included in Section IV.D.8 of the AEA.

9. Impacts on Cultural Resources

The operator states that existing onshore support facilities would be utilized; therefore, no impacts to onshore cultural resources are anticipated. Stipulation No. 1 of Lease Sale 131 and 135 (Appendix A) provides further safeguards for the protection of presently unknown cultural resources. The operator is required to report, upon discovery of any site, structure or object of historical or archaeological significance, to the Regional Director, MMS, and to make every reasonable effort to preserve and protect that cultural resource. Additional information is included in Section IV.D.9 of the AEA.

10. Impacts on Other Commercial Uses

There are no other commercial uses in Block 134 to be affected by the proposed activities.

11. Impacts on Other Mineral Uses

There are no plans or proposals for mining other mineral resources other than oil and gas in Block 134; therefore, no conflict of use is expected.

12. Impacts Concerning Pipelines and Cables

No conflict of use is expected. Potential impacts associated with any proposed pipelines in the block will be addressed by this Office at the time that the pipeline application is reviewed.

13. Impacts of Ocean Dumping

No conflict of use is expected because there are no existing ocean dumping areas designated in the area of the FGBs. The operator has stated that compliance with the USEPA NPDES permit will be maintained. Additionally, OCS Operating Regulations require that the operator locate and retrieve any large debris lost overboard as a result of the proposed activities.

E. UNAVOIDABLE ADVERSE IMPACTS

Information in this section is included in Section IV.E of the AEA.

V. CONSULTATION AND COORDINATION

On February 27, 1997 a copy of the DOCD was forwarded to the following.

1. The Division of Ecological Services, U.S. Fish and Wildlife Service, USDOI, Houston, Texas, 77058.

2. The Flower Gardens National Marine Sanctuary , National Ocean Service, NOAA U.S. Department of Commerce, Bryan, Texas, 77803.

3. National Marine Fisheries Service, NOAA, U.S. Department of Commerce, St. Petersburg, Florida, 33702.

A copy of their comments are included in Appendix C.

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VII. PREPARERS

Author:

Ted Stechmann - Biologist

Typist:

Elaine Clark - Secretary

VIII. APPENDICES

APPENDIX A - LEASE STIPULATIONS

APPENDIX B - REVIEWS FROM MMS

APPENDIX C - REVIEWS FROM OTHER AGENCIES

APPENDIX A

LEASE STIPULATIONS

UNITED STATES
DEPARTMENT OF THE INTERIOR
MINERALS MANAGEMENT SERVICE

Outer Continental Shelf, Western Gulf of Mexico
Oil and Gas Lease Sale 135

OCS-G 13366

Stipulation No. 1--Protection of Archaeological Resources.

(a) "Archaeological resource" means any prehistoric or historic district, site, building, structure, or object (including shipwrecks); such term includes artifacts, records, and remains which are related to such a district, site, building, structure, or object (16 U.S.C. 470w(5)). "Operations" means any drilling, mining, or construction or placement of any structure for exploration, development, or production of the lease.

(b) If the Regional Director (RD) believes an archaeological resource may exist in the lease area, the RD will notify the lessee in writing. The lessee shall then comply with subparagraphs (1) through (3).

(1) Prior to commencing any operations, the lessee shall prepare a report, as specified by the RD, to determine the potential existence of any archaeological resource that may be affected by operations. The report, prepared by an archaeologist and a geophysicist, shall be based on an assessment of data from remote-sensing surveys and of other pertinent archaeological and environmental information. The lessee shall submit this report to the RD for review.

(2) If the evidence suggests that an archaeological resource may be present, the lessee shall either:

(i) Locate the site of any operation so as not to adversely affect the area where the archaeological resource may be; or

(ii) Establish to the satisfaction of the RD that an archaeological resource does not exist or will not be adversely affected by operations. This shall be done by further archaeological investigation, conducted by an archaeologist and a geophysicist; using survey equipment and techniques deemed necessary by the RD. A report on the investigation shall be submitted to the RD for review.

(3) If the RD determines that an archaeological resource is likely to be present in the lease area and may be adversely affected by operations, the RD will notify the lessee immediately. The lessee shall take no action that may adversely affect the archaeological resource until the RD has told the lessee how to protect it.

(c) If the lessee discovers any archaeological resource while conducting operations on the lease area, the lessee shall report the discovery immediately to the RD. The lessee shall make every reasonable effort to preserve the archaeological resource until the RD has told the lessee how to protect it.

Stipulation No. 2--Protection of Topographic Features.

The banks which cause this stipulation to be applied to blocks of the Western Gulf are:

Bank Name	No Activity Zone Defined by Isobath (meters)
Shelf Edge Banks	
West Flower Garden Bank[1] (defined by 1/4 1/4 1/4 system)	100
East Flower Garden Bank[1] (defined by 1/4 1/4 1/4 system)	100
MacNeil Bank	82
29 Fathom Bank	64
Rankin Bank	85
Geyer Bank	85
Elvers Bank	85
Bright Bank[5]	85
McGrail Bank[5]	85
Rezak Bank[5]	85
Sidner Bank	85
Parker Bank	85
Stetson Bank	62
Applebaum Bank	85

Bank Name	No Activity Zone Defined by Isobath (meters)
Low Relief Banks[2]	
Mysterious Bank	74,76,78,80,84 (see leasing map)
Coffee Lump	Various (see leasing map)
Blackfish Ridge	70
Big Dunn Bar	65
Small Dunn Bar	65
32 Fathom Bank	52
Claypile Bank[3]	50
South Texas Banks[4]	
Dream Bank	78,82
Southern Bank	80
Hospital Bank	70
North Hospital Bank	68
Aransas Bank	70
South Baker Bank	70
Baker Bank	70

---

1 Flower Garden Banks--In paragraph (c) a "4-Mile Zone" rather than a "1-Mile Zone" applies.

2 Low Relief Banks--Only paragraph (a) applies.

3 Claypile Bank--Paragraphs (a) and (b) apply. In paragraph (b) monitoring of the effluent to determine the effect on the biota of Claypile Bank shall be required rather than shunting.

4 South Texas Banks--Only paragraphs (a) and (b) apply.

5 Central Gulf of Mexico bank with a portion of its "1-Mile Zone" and/or "3-Mile Zone" in the Western Gulf of Mexico.

(a) No activity including structures, drilling rigs, pipelines, or anchoring will be allowed within the listed isobath ("No Activity Zone" as shown on Map 3) of the banks as listed above.

(b) Operations within the area shown as "1,000-Meter Zone" shall be restricted by shunting all drill cuttings and drilling fluids to the bottom through a downpipe that terminates an appropriate distance, but no more than 10 meters, from the bottom.

(c) Operations within the area shown as "1-Mile Zone" on Map 3 shall be restricted by shunting all drill cuttings and drilling fluids to the bottom through a downpipe that terminates an appropriate distance, but no more than 10 meters, from the bottom. (Where there is a "1-Mile Zone" designated, the "1,000-Meter Zone" in paragraph (b) is not designated.)

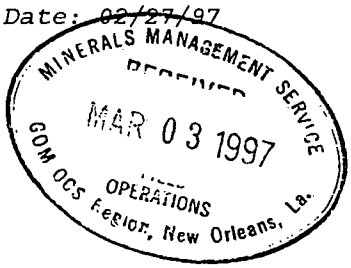
(d) Operations within the area shown as "3-Mile Zone" on Map 3 shall be restricted by shunting all drill cuttings and drilling fluids from development operations to the bottom through a downpipe that terminates an appropriate distance, but no more than 10 meters, from the bottom.

APPENDIX B

REVIEWS FROM MMS

UNITED STATES GOVERNMENT
MEMORANDUM

Date: ~~02/27/97~~



To: *Pipeline Unit (MS 5232)*

From: *Exploration/Development Plans Unit (MS 5231)*

Subject: *Initial DOCD, ATP Oil & Gas,*

Lease OCS-G 13366, Block 134, Garden Banks Area,

Subsea Well No. 1, Control No. N-5676

Please review from a hazards point of view the area within a "5000" *foot radius of the surface location(s) listed below. Please return your review to the Exploration/Development Plans Unit (MS 5231) by 04/02/97.*

B Newton
for Unit Supervisor

PIPELINE REVIEW

Bottom Lease/Structure		*Surface Location*
OCS G13366	*WELL NO. 1*	*-- 3193 feet FSL and 3345 feet FEL of GB Block 0134*

PIPELINE(S) IN VICINITY: None

Frank Lauer
for Unit Supervisor

UNITED STATES GOVERNMENT
MEMORANDUM

Date: 02/27/97

To: Terry Scholten (MS 5440)

From: Exploration/Development Plans Unit (MS 5231)

Subject: Control No. N-5676
Initial DOCD, ATP Oil & Gas
Block 134, Garden Banks Area,
Subsea Well No. 1
Please respond by ---------- 04/02/97.

B T Newton
for Unit Supervisor

Attachment *** PROPRIETARY--FOR U.S. GOVERNMENT USE ONLY ***

AIR QUALITY REVIEW

EXEMPT: (YES) / NO DISTANCE OFFSHORE 117

Information Sources Visual 2, N-5676, Telcon w/ Cathy Thornton 3/31/97

Comments/Recommendations NONE

Terry Scholten
METEOROLOGIST

3/31/97
DATE

APPENDIX C

REVIEWS FROM OTHER AGENCIES

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Division of Ecological Services
17629 El Camino Real, Suite 211
Houston, Texas 77058

April 17, 1997

Memorandum

To: Chief, Plans and Pipeline Section, Field Operations (MS 5231), Gulf of Mexico OCS Region, 1201 Elmwood Park Boulevard, New Orleans, LA 70123

From: Chief, Regulatory Activities, Clear Lake Ecological Services Field Office, Houston, Texas

Subject: Control No. N-5676: Initial Development Operations Coordination Document by ATP Oil & Gas for Drilling Subsea Well No. 1 in Block 134, Garden Banks Area (OCS-G 13366)

We have reviewed the plans for drilling the well under this plan of development and believe there will be no unacceptable impacts on reef communities or other sensitive resources in the Western Gulf provided all stipulations are followed and the recommendations of the Flower Garden Banks National Marine Sanctuary are adhered to.

Thank you for the opportunity to comment.

cc:
Regional Director (ES), FWS, Region 2, Albuquerque, NM
Ben Kropoc, Coastal Management Division, DNR, Baton Rouge, La

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UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE

Flower Garden Banks National Marine Sanctuary
216 W. 26th St., Suite 104
Bryan, Texas 77803
(409) 779-2705 FAX (409) 779-2334
Pager (800) 715-3271

April 12, 1997

Mr. B.J. Kruse, Acting Chief
Plans and Pipelines Section
USDOI/Minerals Management Service
Gulf of Mexico OCS Region
1201 Elmwood Park Blvd.
New Orleans, LA 70123-2394

Dear Mr. Kruse,

Thank you for the opportunity to review ATP Oil and Gas' Initial Development Operations Coordination Document (DOCD) for Lease Block Garden Banks 134, submitted for completion and testing of Subsea Well No. 1 and installation of a right-of-way pipeline in the 4-Mile Zone around the West Flower Garden Bank (Control No. N-5676).

Please notify ATP of spill notification requirements established by agreement between NOAA and MMS, as well as contact phone and pager numbers for the Flower Garden Banks National Marine Sanctuary. The Sanctuary office phone is (409) 779-2705. The pager number is (800) 715-3271.

ATP has adequately stated their intent to strictly adhere to the conditions outlined in Stipulation No. 2 for activities within the 4-Mile Zone, including the shunting of drill cutting and drilling fluids. In addition, ATP stated plans to avoid placing semi-submersible platform anchors within the No-Activity Zone around the West Flower Garden Bank, even though the radius of the maximum anchor spread for a typical platform falls within this zone.

Missing from the DOCD is the proposed route for the pipeline carrying oil and gas produced at this facility. I request that the proposed pipeline route be submitted for review.

Again, thank you for the opportunity to review this application. Please feel free to contact me if you have any questions or further requests.

Sincerely,

Dr. Stephen R. Gittings
Manager

cc: Ms. Stephanie Thornton, Chief, NOAA Sanctuaries and Reserves Division
Mr. Rusty Swafford, NOAA National Marine Fisheries Service
Mr. Fred Warner, Fish and Wildlife Service

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UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
9721 Executive Center Drive N.
St. Petersburg, Florida 33702

April 16, 1997

Mr. B. J. Kruse
Acting Chief, Plans and Pipeline Section
U.S. Department of Interior
Minerals Management Service
1201 Elmwood Park Boulevard
New Orleans, Louisiana 70123-2394

Dear Mr. Kruse:

As requested by memo dated March 26, 1997 (Control No. N-5676), received April 3, 1997, the National Marine Fisheries Service (NMFS) has reviewed the February 28, 1997 ATP Oil & Gas Corporation (ATP) Initial Development Operations Coordination Document (IDOCD), Lease OCS-G 13366, Garden Banks Block 134, in the Gulf of Mexico offshore Texas. ATP is filing this IDOCD to re-enter, complete, and test one subsea well (the temporarily abandoned Garden Banks 134 Well No. 1), install a right-of-way pipeline and commence production, with the site being located within the 4-Mile Restricted Activity Zone of the West Flower Garden Banks National Marine Sanctuary.

NMFS agrees that AHC will not dispose of well fluids containing free oil or hazardous materials in violation of DOI and EPA regulations into the Gulf of Mexico and that Stipulation No. 2 - Topographic Features will be implemented for the one production well located in Garden Banks Block 134. Since no Anchor Spreads Location Plat was submitted with the IDOCD, NMFS is concerned with the location of the Garden Banks Block 134 well and its proximity to the West Flower Garden Bank National Marine Sanctuary No Activity Zone. NMFS requests a copy of the Anchor Spreads Location Plat for this well site for further review and comment. Based upon the above actions being implemented, NMFS finds that there will be no immediate adverse impacts to the living marine resources of the West Flower Garden Bank National Marine Sanctuary from the production well. NMFS will make its determination of possible environmental impact to the living marine resources of West Flower Garden Bank National Marine Sanctuary from the Garden Banks Block 134 well site upon receipt of the Anchor Spreads Location Plat.

NMFS is concerned with portions of the Initial Plan of Exploration Environmental Report attached to this application. No detail is provided on the ecological sensitivity of the West Flower Garden Banks nor is there any detail on the topographic features in the vicinity of the proposed activity. This apparent lack of knowledge of the West Flower Garden Banks ecosystem, including the living marine resources on and around the Bank, may significantly increase the risk of environmental damage to the sensitive biological communities inhabiting this Bank. NMFS requests that MMS ensure that ATP personnel are made aware of the ecological sensitivity of the Flower Garden Banks and that the appropriate information concerning this issue be added to the Environmental Report that accompanied this application.

We appreciate this opportunity to offer our comments and if there are any questions, please call Mr. William Jackson of our Galveston Field Branch at (409) 766-3699.

Sincerely,

for: William Gordon

Andreas Mager, Jr.
Assistant Regional Director
Habitat Conservation Division

After receiving the anchor plat and consulting with the Flower Garden Sanctuary Manager, the NMFS has no additional comments or recommendations.

B Newton

State of Louisiana

M.J. "MIKE" FOSTER, JR.
GOVERNOR

JACK C. CALDWELL
SECRETARY

DEPARTMENT OF NATURAL RESOURCES

25 April 1997

United States Department
of the Interior
Minerals Management Service
Gulf of Mexico OCS Region
Chief, Plans and Pipelines Section
1201 Elmwood Park Boulevard
New Orleans, LA 70123-2394

RE: **C970145**, Coastal Zone Consistency
Proposed Initial Development Operations Coordination Document
ATP Oil & Gas
Garden Banks 134
OCS Number OCS-G 13366
MMS Control # N-5676

Dear Acting Chief:

The above referenced project has been received by this office and has been found to be consistent with the Louisiana Coastal Resources Program as required at Section 307(c) (3) (B) of the Coastal Zone Management Act of 1972 as amended. Any questions concerning this matter may be directed to Ms. Hester Johnson of my staff at (504) 342-7591 or 1-800-267-4019.

Sincerely,

Terry W. Howey

Terry W. Howey,
Administrator

MINERALS MANAGEMENT SERVICE
RECEIVED
APR 29 1997
GOM OCS OPERATIONS
Region, New Orleans, La.

cc: ATP Oil & Gas

COASTAL MANAGEMENT DIVISION P.O. BOX 44487 BATON ROUGE, LOUISIANA 70804-4487
TELEPHONE (504) 342-7591 FAX (504) 342-9439
AN EQUAL OPPORTUNITY EMPLOYER

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N5676
BN

Coastal Coordination Council

May 14, 1997

Mr. Gerald Schlief
Senior Vice President
ATP Oil & Gas Corporation
4299 San Felipe, Suite 230
Houston, Tx 77027

Re: Initial Development Operations Coordination Document, Lease OCS-G13366, Garden Banks, Block 134

Dear Mr. Schlief:

Pursuant to Section 506.30 of 31 TAC of the Coastal Coordination Act, the project reference above has been reviewed for consistency with the Texas Coastal Management Program (CMP).

It has been determined that there are no significant unresolved consistency issues with respect to the project. Therefore, this project is consistent with the CMP goals and policies.

Sincerely,

Doug R. Myers
Consistency Review Coordinator
General Land Office

DRM/lp

cc: Bob Newton, MMS

1700 N. Congress Avenue, Room 617 ◆ Austin, Texas 78701-1495 ◆ (512) 463-5385 ◆ FAX (512) 475-0680