

25-6 6848
S-2140

In Reply Refer To: FO-2-1

June 10, 1988

Texaso Producing Inc.
Attention: Mr. J. A. Newton
Post Office Box 60252
New Orleans, Louisiana 70160

Gentlemen:

Reference is made to your Supplemental Plan of Exploration and Environmental Report received May 27, 1988, amended June 8, 1988, for Lease OCS-G 6848, Block 869, Mobile Area. This plan includes the activities proposed for Wells B and C.

In accordance with 30 CFR 250.34, revised December 13, 1979, and our letter dated January 29, 1979, this plan is hereby determined to be complete and is now being considered for approval.

Your plan control number is S-2140 and should be referenced in your communication and correspondence concerning this plan.

Sincerely yours,

(Orig. Sgd.) A. Donald Giroir

Joc

D. J. Bourgeois
Regional Supervisor
Field Operations

bcc: Lease OCS-G 6848 (OPS-3-2) (FILE ROOM)
OPS-3-4 w/Public Info. Copy of the plan and ER (PUBLIC RECORDS)

WWilliamson:cck:06/09/88:poecom

Office of
Program Services

JUN 13 1988

Information Services
Section



PUBLIC INFORMATION

Texaco USA

PO Box 60252
New Orleans LA 70160

May 27, 1988

Regional Supervisor
Field Operations
Minerals Management Service
1201 Elmwood Park Blvd.
New Orleans, LA 70123



FEDERAL LEASE OCS-G 6848
MOBILE BLOCK 869
SUPPLEMENTAL EXPLORATION PLAN

Dear Sir:

In accordance with the provisions of Title 30 CFR 250, Texaco Producing Inc. submits for your approval twelve copies of a Supplemental Exploration Plan for Federal Lease OCS-G 6848 at Mobile Block 869. Should any additional information be required, please contact Mr. David M. Groce by telephone (504) 595-1475.

Yours very truly,

TEXACO PRODUCING INC.

By: 
J. A. NEWTON

DMG:
tdw 5/25/2

**SUPPLEMENTAL EXPLORATION PLAN
TEXACO PRODUCING INC.
FEDERAL LEASE OCS-G 6848
MOBILE BLOCK 869**

Description of and Schedule for Exploration Activities

Texaco Producing Inc.'s (Texaco) exploration plan for Mobile Block 869 includes the drilling and completion of two (2) exploratory wells to evaluate Federal Lease OCS-G 6848. The first well is scheduled to commence on or about August 1, 1988. A total of 416 days of operations are planned.

Description of Rig and Safety Equipment

Depending on the availability of rigs, the proposed wells will be drilled with a jackup rig similar to the "Dixilyn-Field 77". Attached are the rig specifications for the "Dixilyn-Field 77". The specifications for the actual drilling vessel and safety equipment to be used will be submitted along with the application for permit to drill. The rig used to drill the exploratory wells under this plan will contain and maintain a diverter system, blowout-preventers, auxiliary equipment, and mud testing and monitoring equipment. Drilling operations will be conducted in a manner so as to maximize pollution prevention in accordance with OCS Order No. 7. All other safety and control equipment will be used in accordance with other applicable OCS Orders. Well abandoned procedures will be in accordance with OCS Order No. 3.

Geophysical Equipment

All geophysical work prior to the commencement of exploratory drilling operations has been completed. No other geophysical work is presently planned for this lease. If it is subsequently determined that additional work is required, conventional CDP reflection methods will be used.

Location of Proposed Wells

Attached is the vicinity map, which shows the location of Mobile Block 869 relative to the Louisiana shoreline, and the location plat, which provides the surface and bottom hole locations, proposed total depth of each well, and the water depth at the surface locations.

Subsurface Geologic and Geophysical Interpretation

Attached is a subsurface structure map and the geologic cross section which reflect the current subsurface interpretation of the geologic and geophysical data in the area. These data are considered confidential by Texaco and should be exempt from disclosure under the Freedom of Information Act 5 U.S.C. 552.

Oil Spill Contingency Plan

In accordance with OCS Order No. 7, Texaco has on file with the Minerals Management Service an Oil Spill Contingency Plan which has been approved by the Minerals Management Service.

Texaco is a member of Clean Gulf Associates (CGA) and, as such, has access to a stock-pile of oil spill containment and clean-up materials for use in the offshore and estuarine areas. There are several CGA bases which are strategically located along the coastline of the Gulf of Mexico that have the material and equipment necessary to control and clean up oil spills. The closest CGA base at Theodore, Alabama, is located within 18 miles of the proposed drill sites. Based on the distance from the CGA installations to the proposed drill sites, the travel and deployment time of personnel, material and equipment is approximately four (4) hours.

Onshore Support Bases

Onshore bases located at Amelia and Morgan City, Louisiana and Theodore, Alabama will be used to support the exploration activity proposed. From these bases personnel, supplies and materials will be transported by boat and helicopter to the proposed drill sites.

Drilling Mud Components and Mud Additives

Attached are listings of the drilling mud components and mud additives which are normally used during drilling operations.

Project Air Emissions Report

The attached projected air emissions report reflects the highest estimated emissions of total suspended particles (TSP), sulfur dioxide (SO₂), nitrogen oxides (NO_x), carbon monoxide (CO) and volatile organic compounds (VOC) for a 416 days of continuous lease operations. Upon comparison of the estimated emissions to the emissions calculated using the exemption formulas, it was determined that the proposed exploration activities were exempt from further air quality review. Based on these data, emissions from the proposed exploration activities will not cause any significant effect on the air quality of the onshore areas.

Drilling Hazards Assessment

An archeological and hazard survey was conducted in August 1984 and in January 1988 by John E. Chance and Associates, Inc. over Mobile Blocks 868 and 869 which included the proposed drill sites. Attached is the evaluation of drill sites "B" and "C" for potential drilling hazards.

ARCHEOLOGICAL ASSESSMENT

The archeological survey conducted over Mobile Blocks 868 and 869 identified several magnetic contracts. The proposed drill sites avoid these areas. There are no known archeological or cultural resources located on Mobile Block 868 and 869.

SHALLOW HAZARDS EVALUATION
LOCATION "B": 10,500' FSL AND 700' FWL
OF BLOCK 869, MOBILE

The seismic data which traverse the well site consist of CDP profiles and high resolution profiles which include the side scan sonar, magnetometer, water gun and pinger profiles.

The water depth at the proposed drill site is 47 feet. The seafloor is slightly irregular and slopes to the southeast at an approximate rate of 10 feet per mile. The seafloor topography is characterized by gentle ridge and sand wave formations. The near surface strata are composed of approximately 20 to 50 feet of sand overlying a clay bed. There is no evidence of surface or near-surface faulting near the drill site. The well bore is not expected to penetrate any shallow fault zone.

Shallow "bright spots" are observed in the high resolution data at approximately 200 to 700 feet below the seafloor at a location 500 feet from the proposed drill site. CDP velocity data indicate no anomalous velocities in the vicinity of the drill site and normally pressured strata are expected to the total depth of the well. Higher than expected mud weights were required in the drilling of several wells in the area. The Chevron OCS-G 5062 No. 1 well at Mobile Block 861 flowed with a mud weight of 16.7 ppg at 21,645 feet, the Shell OCS-G 5072 No. 1 well at Mobile Block 909 used a mud weight of 17.1 ppg at 22,235 feet and the Exxon OCS-G 6856 No. 1 well at Mobile Block 913 encountered gas cut mud from 15.2 ppg to 13.2 ppg at 21,179 feet. Texaco will take the necessary precautions while drilling the well.

Several magnetic anomalies were identified from 500 to 1000 feet of the drill site. These anomalies are expected to be small ferrous debris. The drill site avoids these anomalous areas.

SHALLOW HAZARDS EVALUATION
LOCATION "C": 1940' FNL AND 4480' FEL
OF BLOCK 868, MOBILE

The seismic data which traverse the well site consist of CDP profiles and high resolution profiles which include the side scan sonar, magnetometer, water gun and pinger profiles.

The water depth at the proposed drill site is 40 feet. The seafloor is slightly irregular and slopes to the southwest at an approximate rate of 15 feet per mile. The proposed drill site is located on the southwest flank of the crest of a sand wave feature. The near-surface strata are composed of approximately 20 to 50 feet of sand overlying a clay bed. There is no evidence of surface or near-surface faulting near the drill site. The well bore is not expected to penetrate any shallow fault zone.

Shallow "bright spots" are observed in the high resolution data at approximately 200 to 700 feet below the seafloor at a location 3300 feet southeast of the proposed drill site. The high resolution data also indicate an amplitude anomaly at -1900 feet, below sea level, at a location 400 feet northwest of the proposed drill site. CDP velocity data indicate no anomalous velocities in the vicinity of the drill site and normally pressured strata are expected to the total depth of the well. Higher than expected mud weights were required in the drilling of several wells in the area. The Chevron OCS-G 5062 No. 1 well at Mobile Block 861 flowed with a mud weight of 16.7 ppg at 21,645 feet, the Shell OCS-G 5072 No. 1 well at Mobile Block 909 used a mud weight of 17.1 ppg at 22,235 feet and the Exxon OCS-G 6856 No. 1 well at Mobile Block 913 encountered gas cut mud from 15.2 ppg to 13.2 ppg at 21,179 feet. Texaco will take the necessary precautions while drilling the well.

Two magnetic anomalies were identified at 1100 and 1500 feet southwest of the drill site. These anomalies are expected to be small ferrous debris. The drill site avoids these anomalous areas.

ALABAMA

LOUISIANA

FLORIDA

MOBILE

FORT WALTON BEACH

NEW ORLEANS

APPROX 8 MILES

APPROX 6 MILES

GULF OF MEXICO

VICINITY MAP

TEXACO PRODUCING INC.



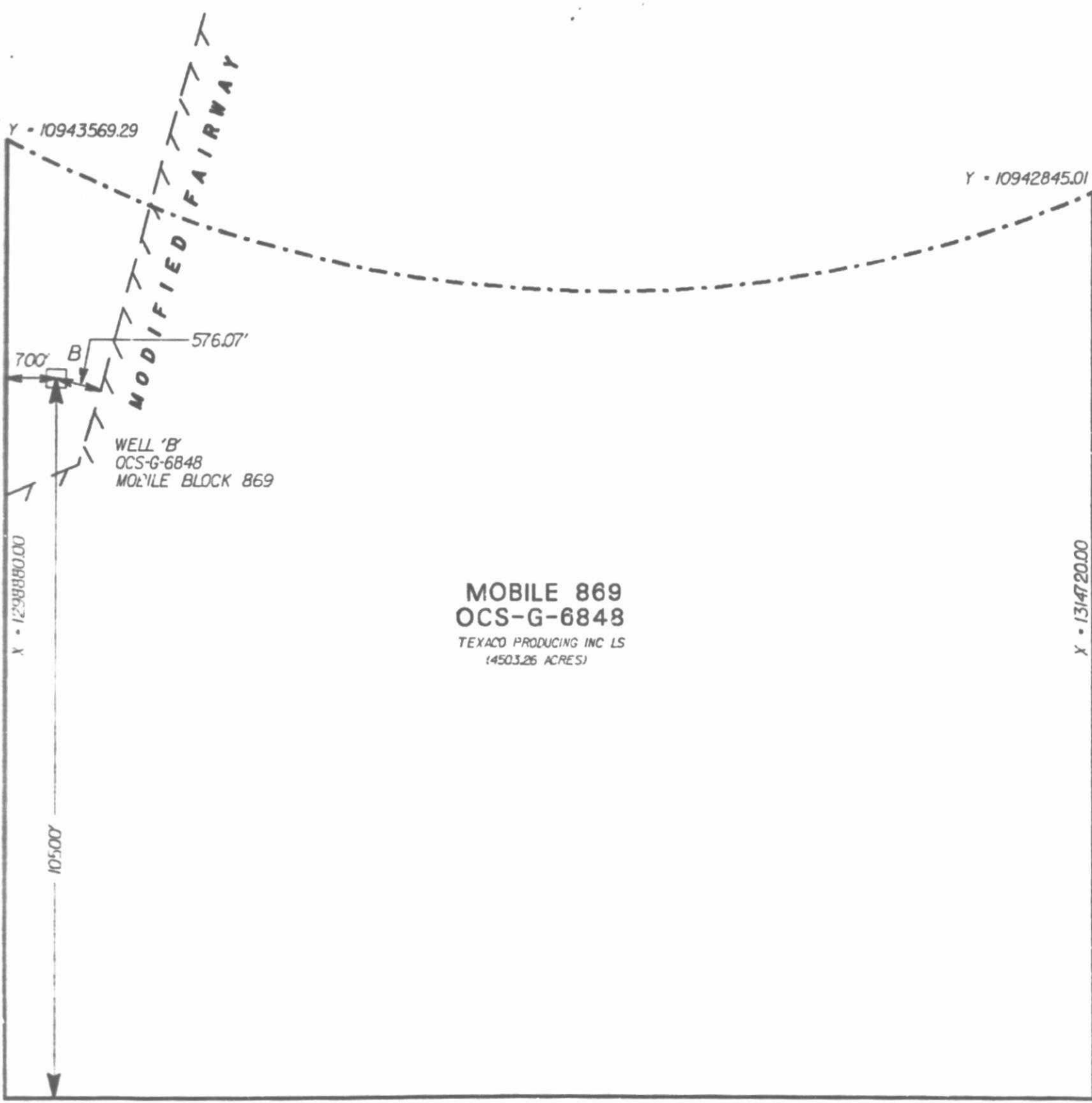
NEW ORLEANS, LA.



MOBILE BLOCK 869
OCS-G-6848

DRAWING NOT TO SCALE

SCALE
1000' 0' 1000' 2000'
[203012]MO869B.PMT CAL 5-24-88



MOBILE 869
OCS-G-6848
 TEXACO PRODUCING INC LS
 (4503.26 ACRES)

105.00'

X = 1298880.00

X = 1314720.00

Y = 10943569.29

Y = 10942845.01

Y = 10929600.00

NOTE:
 ALL COORDINATES ARE BASED ON UNIVERSAL TRANSVERSE
 MERCATOR GRID COORDINATE SYSTEM, ZONE 16 NAD 27.

TEXACO PRODUCING INC.

NEW ORLEANS, LA.

MOBILE BLOCK 869 WELL B
OCS-G-6848

APPROX 8.2 MILES S/SE OF DAUPHINE ISLAND, ALABAMA

SCALE
 1000' 0' 1000' 2000'
 [203012]MO869B.PWT GAL 5-24-88

SUPPLEMENTAL
PLAN OF EXPLORATION
 PUBLIC INFORMATION PLAT

Y = 10945440.00

1940'

C

4480'

Y = 10943569.29

WELL 'C'
OCS-G-6840
MOBILE BLOCK 869

EXISTING FAIRWAY

MODIFIED FAIRWAY

X = 1298880.00

MOBILE BLOCK 868
OCS-G-5067
EXXON
(5687.34 ACRES)

MOBILE BLOCK 869
OCS-G-6848
TEXACO PRODUCING INC LS
(4503.26 ACRES)

Y = 10929600.00

NOTE:
ALL COORDINATES ARE BASED ON UNIVERSAL TRANSVERSE
MERCATOR GRID COORDINATE SYSTEM, ZONE 16 NAD 27.

SUPPLEMENTAL
PLAN OF EXPLORATION
PUBLIC INFORMATION PLAT

TEXACO PRODUCING INC.



NEW ORLEANS, LA.

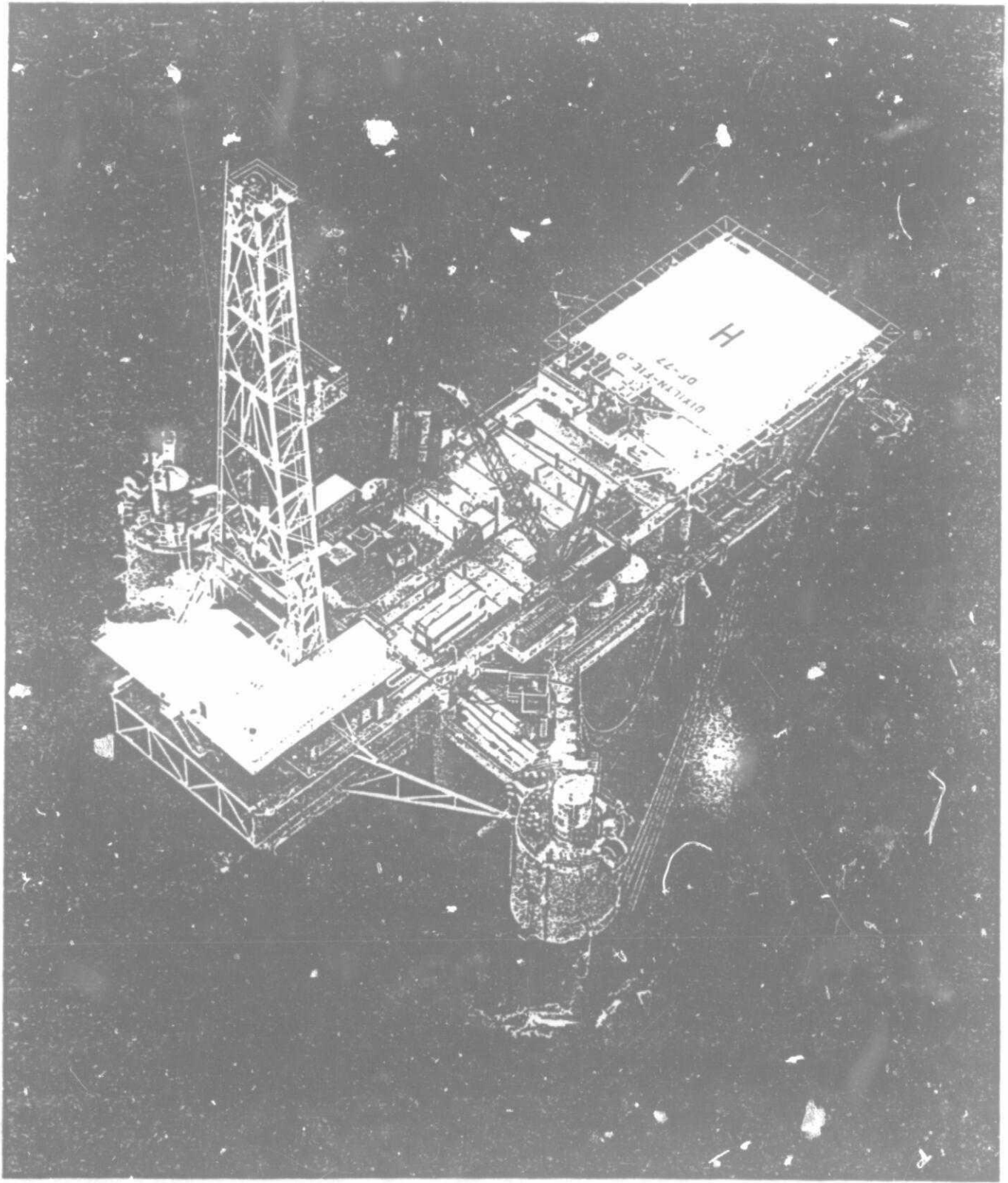


MOBILE BLOCK 869 WELL C
OCS-G-6848

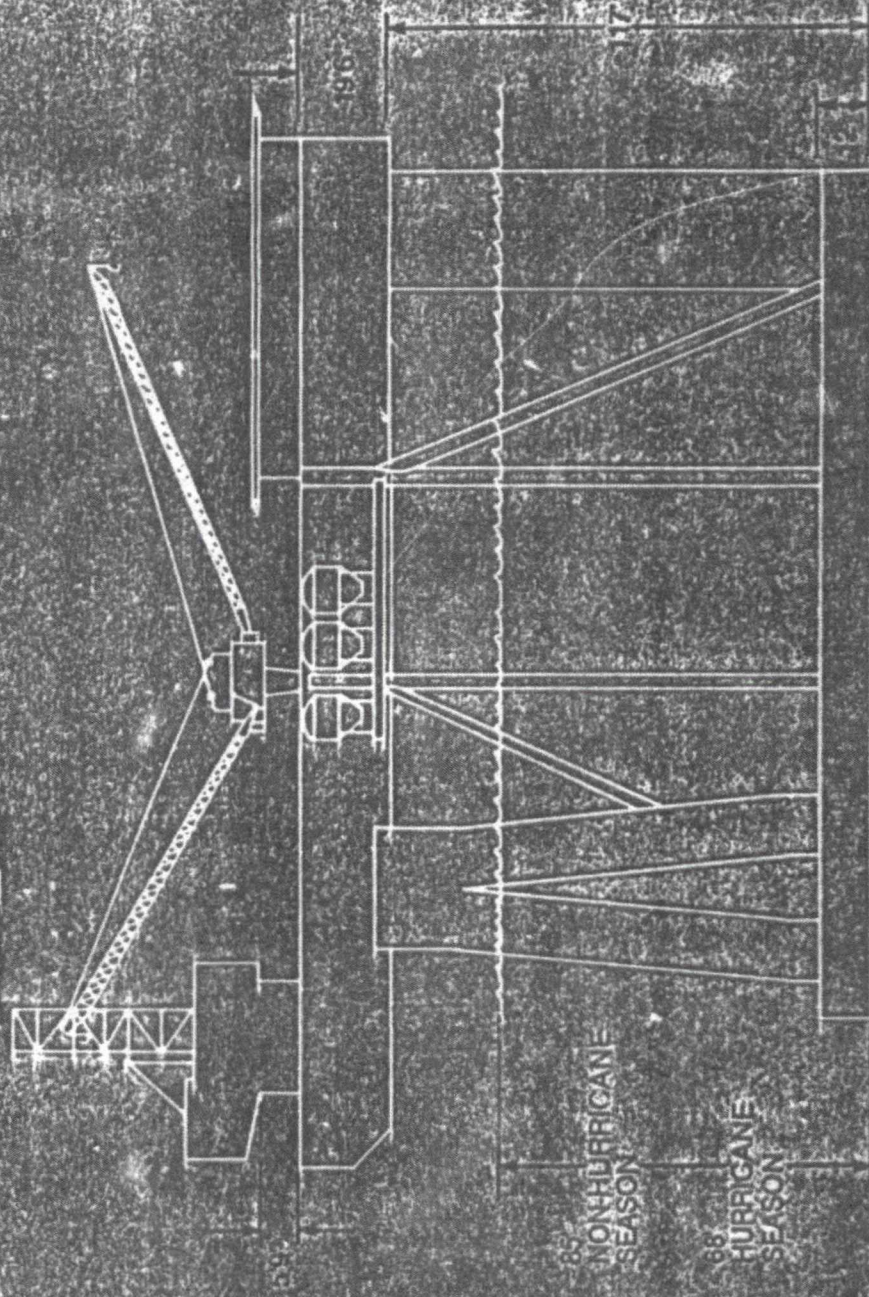
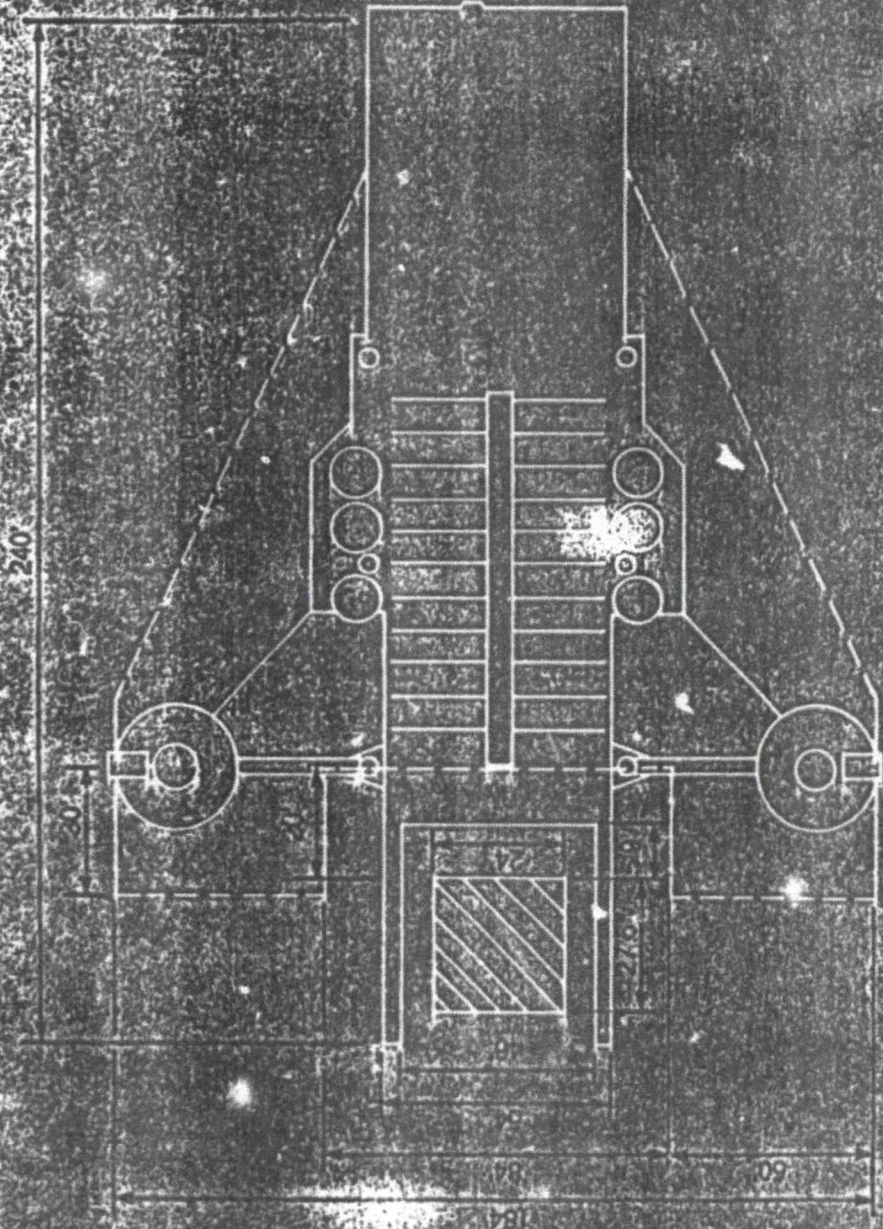
APPROX 8.2 MILES S/SE OF DAUPHINE ISLAND, ALABAMA



W
Dixilyn-Field



Rig 77



85
NONHURRICANE
SEASON

86
HURRICANE
SEASON

REMOVABLE
SKIRT

188

Dixilyn-Field 77

A Zero Discharge Deep Drilling Submersible

Water Depth Capability

Non-Hurricane Season: 85'.

Hurricane Season: 68'.

Minimum: 15' including scour skirt subject to bottom conditions.

Drilling Capability

30,000 feet

Variable Deck Load

Drilling: 4049 S. Tons

Moving: 900 S. Tons

Storage Capacities

Diesel Fuel: 3580 bbls.

Drill Water: 5280 bbls.

Potable Water: 1540 bbls.

Bulk Mud: 3000 ft³.

Bulk Cement: 3000 ft³.

Liquid Mud: 1840 bbls.

Sack Storage: 4000 sacks (1540 ft³.)

Drawworks

National 1625 DE, driven by three (3) GE 752 DC motors.

Rotary Table

National 37½", C-375 independently driven by one (1) GE 752 DC motor.

Main Power

Two (2) 16 cylinder EMD diesel engines, each driving an EMD 1400 KW, 600 volt generator.

One (1) 12 cylinder EMD diesel engine driving an EMD 1050 KW, 600 volt generator.

General Electric SCR System.

One (1) Caterpillar D 3412 driving a 420 KW generator.

Mud Pumps

Two (2) National 12P160 Triplex pumps, each driven by two (2) GE 752 DC motors.

Mast

148' x 30' Pyramid with a static hook capacity of 1,556,000 lbs.

Cantilever Capacity

Combination hook setback 1,700,000 lbs.

Substructure

Designed for multiwell drilling through an area 24' wide x 27½' long.

Traveling Equipment

Traveling Hook Block: National 760G650, 7 sheave, 650 tons.

Swivel: National P-650 650 tons.

Well Control Equipment

One (1) Regan KFDI-2000 psi diverter.

One (1) 13 5/8" 5000 psi Cameron annular Type D. - H²S trim

One (1) 13 5/8" 10,000 psi Cameron Type "L" Double. - H²S trim

One (1) 13 5/8" 10,000 psi Cameron Type "L" Single. - H²S trim

Mud System

Brandt dual tandem shale shaker.

Pioneer desander with three (3) 12" cones.

Swaco 10T4-SS mud cleaner.

Swaco degasser.

Drill Pipe

5" O.D.

Sewage Plant

One (1) Red Fox sewage disposal unit.

Quarters

Air conditioned, capacity for 58 people.

Cranes

Two (2) Link-Belt API 238A with 100' boom and 50 ton capacity at 25' radius.

Cementing Unit

Halliburton HT 400 twin diesel engine driven.

Zero Discharge

Unit is outfitted to comply with Zero Discharge requirements in environmentally sensitive areas.

DRILLING MUD COMPONENTS

<u>Common Chemical or Chemical Trade Names</u>	<u>Description of Material</u>
Alumin Sterate	Aluminum Stearate
"AKTAFLO-S"	Nonionic Surfactant
Barite	Barium Sulfate ($BaSO_4$)
Calcium Carbonate	Aragonite ($CaCO_3$)
Calcium Chloride	Hydrophilite ($CaCl_2$)
Calcium Oxide	Lime (Quick)
Calcium Sulfate	Anhydrite ($CaSO_4$)
Carboxymethyl Cellulose	Carboxymethyl Cellulose
Caustic Potash	Potassium Hydrate
Caustic Soda	Sodium Hydroxide (NaOH)
Chrome Lignite	Chrome Lignite
Chrome Lignosulfonate	Chrome Lignosulfonate
Drilling Detergent	Soap
"E-Pal"	Non-toxic, biodegradable defoamer
Ferrochrome Lignosulfonate	Derived from wood pulp
Gel	Sodium montmorillonite, bentonite, attapulgite
Gypsum	$CaSO_4 \cdot 2H_2O$
Lignite	Lignite
Lignosulfonate	Lignosulfonate
"Mud Sweep"	Cement Pre-flush
"MOR-REX"	Hydrolyzed Cereal Solid
"Shale Trol"	Organo-aluminum complex
Sapp	Sodium Acid Pyrophosphate
Soda Ash	Sodium Carbonate
Sodium Bicarbonate	$NaHCO_3$
Sodium Carboxymethyl Cellulose	Sodium Carboxymethyl Cellulose
Sodium Chloride	NaCl
Sodium Chromate	$NaCrO_4 \cdot 10H_2O$
Starch	Corn Starch
"TX-9010"	Biodegradable drilling lubricant
"TORQ-Trim"	Biodegradable drilling lubricant

MUD ADDITIVES

<u>Common Chemical or Chemical Trade Name</u>	<u>Description of Material</u>
"Black Magic"	Oil base mud concentrate
"Black Magic Supermix"	Sacked concentrated oil base mud
Diesel	Used to mix certain loss- circulation pills
"Jelflake"	Plastic foil, shredded cellophane
MICA	Loss-circulation material
"Pipe-Lax"	Surfactant mixed with diesel
"Wall-Nut"	Ground walnut shells
Wood Fibers	Loss-circulation material

dmj 4/19/1

**PROJECTED AIR EMISSIONS REPORT
FEDERAL LEASE OCS-G 6848
MOBILE BLOCK 869**

EMISSIONS IN POUNDS PER DAY

Temporary Sources ⁽¹⁾	NOx	CO	VOC	TSP	SO ₂
Drilling Equipment ⁽²⁾	196	42	16	14	13
Construction Equipment ⁽³⁾					
Other Sources ⁽⁴⁾	<u>19</u>	<u>15</u>	<u>11</u>	<u>2</u>	<u>2</u>
MAXIMUM EMISSIONS	215	57	27	16	15

EMISSIONS IN TONS PER YEAR

Temporary Sources ⁽¹⁾	NOx	CO	VOC	TSP	SO ₂
Drilling Equipment ⁽²⁾	35.7	7.7	2.9	2.6	2.4
Construction Equipment ⁽³⁾					
Other Sources ⁽⁴⁾	<u>3.5</u>	<u>2.7</u>	<u>2.0</u>	<u>0.4</u>	<u>0.4</u>
MAXIMUM EMISSIONS	39.2	10.4	4.9	3.0	2.8

CO Exemption (E) in Tons Per Year.

$$E = 3400 \times (\text{distance from shore})^{2/3} = 3400 (15)^{2/3} = 20,680$$

NOx, VOC, TSP, SO₂ Exemption (E) in Tons Per Year.

$$E = 33.3 \times \text{distance from shore} = 33.3 (15) = 500$$

- (1) Air emissions from temporary activities that occur in one location for less than three years are exempt from further air quality review. Temporary activities for this proposal will last approximately 416 days, therefore, being within the limits of the definition of temporary activities.
- (2) Based on 60 hphr/ft. from study, "Atmospheric Emissions From Offshore Oil and Gas Development and Production," EPA 450/3-77-026, June, 1977.
- (3) Based on emission factors from "Compilation of Air Pollutant Emission Factors", Fourth Edition EPA Report AP42, September, 1985 (Tables 3.2.-1, 3.3-1, and 3.4-1).
- (4) Based on emission factors from "Compilation of Air Pollutant Emission Factors," Fourth Edition EPA Report AP-42, September, 1985 (Tables 3.2-1, 3.3-1, and 9.1-2). Included are helicopter landing and take off (avg. of two trips/week); supply and/or crew boats, at dockside (avg. of 12 hrs./day, two days/week); fuel storage and transfer; loading and unloading operations; and incineration of waste paper (average of 800 lb/mo) for duration of project.

DMG:
tdw 5/25/2

ENVIRONMENTAL REPORT
FOR COASTAL MANAGEMENT CONSISTENCY DETERMINATION

SUPPLEMENTAL EXPLORATION PLAN
MOBILE BLOCK 869
FEDERAL LEASE OCS-G 684
MAY 1988

FOR INQUIRIES CONTACT:

TEXACO PRODUCING INC.
P. O. BOX 60252
NEW ORLEANS. LA 70160

VINCENT F. COTTONE (504) 595-1471
DAVID M. GROCE (504) 595-475

ENVIRONMENTAL REPORT
MOBILE BLOCK 869
FEDERAL LEASE OCS-G 6848

By letter of September 28, 1984, Getty Oil Company (Getty) submitted the initial exploration plan and environmental report for the activity proposed for Mobile Blocks 868 and 869 Federal Lease OCS-G 6848. By letter of October 15, 1984, the Minerals Management Service (MMS) advised Getty that the exploration plan environmental report (plan control number N-1844) were deemed complete and were being considered for approval. By letter of November 14, 1984, the MMS conditionally approved Getty's plan.

Texaco Producing Inc. incorporates Getty Oil Company's environmental report of September 1984 herein by reference thereto. This document may be reviewed at the following locations.

Public Information Library
Minerals Management Service
1201 Elmwood Park Blvd.
New Orleans, LA 70123

Alabama Department of Environmental Management
1751 Federal Drive
Montgomery, Alabama 36130

COASTAL ZONE MANAGEMENT
CONSISTENCY CERTIFICATION

Supplemental Exploration Plan
Type of Plan

Mobile Block 869
Area and Block

Federal Lease OCS-G 6848
Lease Number

The proposed activities described in detail in this Plan comply with the State of Alabama's approved Coastal Management Program and will be conducted in a manner consistent with such Program.

Texaco Producing Inc.
Lessee or Operator


Certifying Official

May 27, 1988
Date

COASTAL ZONE MANAGEMENT

CONSISTENCY CERTIFICATION

Supplemental Exploration Plan
Type of Plan

Mobile Block 869
Area and Block

Federal Lease OCS-G 6848
Lease Number

The proposed activities described in detail in this Plan comply with the State of Louisiana's approved Coastal Management Program and will be conducted in a manner consistent with such Program.

Texaco Producing Inc.
Lessee or Operator


Certifying Official

May 27, 1988
Date



**ENVIRONMENTAL REPORT
AND
AIR QUALITY REVIEW
FOR COASTAL MANAGEMENT CONSISTENCY DETERMINATION
BY THE STATES OF LOUISIANA AND ALABAMA ON OPERATIONS
PROPOSED IN THE PLAN OF EXPLORATION FOR
GULF OF MEXICO LEASE OCS-G 6848
MOBILE BLOCK 869
JUNE 1988**

Prepared by:

**Vincent F. Cottone, P.E.
Texaco Producing Inc.
Post Office Box 60252
New Orleans, LA 70160
(504) 595-1471**

DESCRIPTION OF PROPOSED ACTION

This report addresses the activities proposed by Texaco Producing Inc. (TPI) for Mobile Block 869 (OCS-G 6848). The approximate location of the proposed activities are presented in Figure 1, a general vicinity map of the Gulf of Mexico Outer Continental Shelf (OCS) lease areas.

It is anticipated that a jack-up rig will be moved on the lease and two (2) additional exploratory wells will be drilled. The surface locations of the wells and additional information regarding specific activities proposed by TPI for this block are included in the Supplemental Plan of Exploration (POE) to which this report is attached.

The proposed activities will be carried out by TPI with a guarantee of the following:

1. The best available and safest technologies will be utilized throughout the project. This includes meeting all applicable requirements for equipment types, general project layout, safety systems, equipment and monitoring systems.
2. All operations will be covered by a Minerals Management Service (MMS) approved Oil Spill Contingency Plan.

TX.

MISS. AL.

LAFAYETTE

CAMERON

LA.

NEW ORLEANS

Blk. 869
MOBILE

CHAND. SOUND

CHAND. VIOSCA KNOLL

BRETON SOUND

MAIN PASS

VIOSCA KNOLL



E. HIGH ISLAND

WEST CAMERON

EAST CAMERON

VERMILION

SOUTH MARSH ISLAND

EUGENE ISLAND

SHIP SHOAL

SOUTH PELTO

S. TIMBALIER

GRAND ISL.

W. DELTA

S. PASS

MISSISSIPPI CANYON

EWING BNK.

GARDEN BANKS

GREEN CANYON

ATWATER

DRAWING NOT TO SCALE

FIGURE 1

3. All applicable Federal, State, and local requirements regarding air emissions, water quality, and discharge for the proposed activities, as well as any other permit conditions, will be complied with.

A. Travel Modes, Routes, and Frequencies

In addition to the drilling rig, service boats and helicopters will be used to transport equipment, material, personnel, and supplies to the drill site. TPI expects to operate the service boats out of support base facilities in Morgan City, Louisiana and Theodore, Alabama. It is estimated that the service boats will make three (3) to four (4) trips each week. Helicopters flights to the area will average two (2) trips per week and will originate from and return to Petroleum Helicopters, Inc.'s facilities at Amelia, Louisiana.

It is anticipated that the transportation vessels will utilize the most direct routes from their points of origin. However, because a vessel supporting the proposed exploration activities may be scheduled for other stops in the the exact route for each vessel on each particular trip cannot be predeterm.

B. Support Facilities and New Personnel

The proposed activities are expected to use two (2) existing support bases in Morgan City, Louisiana and Theodore, Alabama. The proposed activities will not require any expansion to these facilities. The proposed activities will be accomplished using existing employees and contract personnel. No new employment is expected to be generated as a result of these activities.

C. New Support Facilities

No new support facilities will be required.

D. New or Unusual Technology

No new techniques or unusual technology will be used.

E. Location of the Proposed Activities

The Mobile area exploration activity is located approximately six (6) miles from the Alabama coast southwest of Fort Morgan Peninsula. Figure 1 shows the location of Block 869 in relation to the Gulf Coast, as well as the geographic relationship between Mobile Block 869 and the other OCS lease areas.

DESCRIPTION OF THE AFFECTED ENVIRONMENT AND IMPACTS

A. Physical and Environmental

1. Commercial Fishing

Mobile Block 869 falls within the brown and white shrimp harvest areas, (U.S.D.I., FEIS, Gulf of Mexico, 1987, Visual No. 2) wherein the possibility of shrimping activities exists. The placement of a drilling rig on Block 869 will remove a portion of the trawling space available for use by commercial fisheries and provide the possibility of fishing gear conflicts. Additionally, the waters adjacent to the drill site may become temporarily turbid due to drilling operations.

Mobile Block 869 also falls within the "principal industrial bottomfish harvest area" (Visual No. 2). Fishes within this group are taken on or near the bottom by trawlers. Many of the species taken in this category spawn in offshore waters and it is possible that the eggs might be affected by contact with drill cuttings and/or drilling mud if they were present near the rig during such discharges. These discharges may also cause temporary relocation of adults due to inundation of feeding grounds at the drill sites.

Both commercial shrimp and fish trawling activities may be temporarily interrupted by the placement of the drilling rig, but no long term effects are anticipated as a result of the proposed activities.

2. Shipping

Mobile Block 869 is presently covered by five intersecting designated shipping fairways. (U.S.D.I., FEIS, Gulf of Mexico, 1987, Visual No. 3). TPI submitted a request to the U.S. Coast Guard on August 5, 1985 to modify the western fairway boundary. If the modification is approved as requested, the northwestern corner of Block 869 will become clear. It is likely that marine vessels supporting the proposed activities will utilize these shipping fairways to gain access to the support bases. However, it is unlikely that the marine vessels will have a significant effect on fairway traffic. All marine vessel operations will be in accordance with the U.S. Coast Guard's regulations regarding navigation standards and the drilling rig and each marine vessel will be equipped with all U.S. Coast Guard required navigational safety aids.

3. Small Craft Pleasure Boating, Sport Fishing and Recreation

The activities proposed in the accompanying POE are primarily confined to Mobile Block 869, which is located approximately six miles from the Alabama coast and has a water depth of approximately 50 feet. Many fishermen charter boats to deep-sea fish and sport dive in the northern Gulf. Petroleum platforms in the northern Gulf provide recreation for fishermen and scuba divers because they act as artificial reefs attracting and establishing aquatic communities including highly sought after food and sport fishes. The reef effect created by petroleum platforms is well known and is evidenced by the numerous private boat owners who regularly visit offshore facilities to harvest food and sport fishes.

Frequently, offshore rigs and platforms serve as navigation points for small commercial and recreational marine craft. Manned drilling rigs and platforms can also provide a haven for small craft operators forced to abandon their vessels during storms or following boat accidents. The installation and use of navigational aids, lifesaving equipment, and other safety requirements pursuant to Coast Guard regulations are standard procedure for drilling rigs and marine vessels utilized by TPI.

4. Cultural Resources

There are no known cultural resources located in Mobile Block 869. Visual No. 4 from the Final Environmental Impact Statement (FEIS) (U.S.D.I., 1987) indicates that Mobile Block 869 is located inside the U.S.D.I. designated historic and prehistoric cultural resources high probability lines. The last geohazard survey and archaeological assessment conducted on Block 869 provides the following for prehistoric times.

"Due to the lack of diagnostic landforms or river channels within the discernible subbottom strata, the survey area may be considered a low probability zone for recovering prehistoric cultural remains. The Upper 10 to 25 feet of sand should not contain any in situ prehistoric sites, although durable artifacts of stone, baked clay, or bone could be scattered into the surficial sands. The probabilities of recovering prehistoric cultural remains from the sand deposits are extremely low.

If sites did exist along the exposed Pleistocene surface now buried beneath the Holocene sands, it is possible that archeological remains could have been preserved, within the estuarine transition zone, but high probability zones for prehistoric human sites or remains are not evident."

For historic times, the report states: "The side scan sonar and magnetometer records were reviewed for evidence of possible shipwrecks within the survey area. The side scan sonar records from the 1984 and 1983 surveys revealed a total of nine objects on the seafloor. The recorded images suggest that these contacts range from 5 to 20 feet across and protrude 1 to 7 feet off bottom. The contact recorded on Line 1 at Shot Point 14.6 correlated closely with a 4 gamma magnetic anomaly which indicates that the object is primarily ferrous material. The contacts observed off Line 41 were associated with a 30 gamma anomaly and represent the largest mass noted in the area. Five other contacts recorded on Lines 43 and 65 are attributed to historical and present locations of the navigation buoy No. 1 at the entrance of the Mobile Bay Ship Channel.

The Coast Guard reports that typically a 12,500 pound anchor or "sinker" is used to hold the buoy in place. These anomalies and the sonar contacts should be noted when planning future lease operations. The water depths are slightly deep for any historic vessel to have run aground, and the ferrous debris may have been discarded by boats passing through or across the Fairway; however this region has seen rather extensive historic ship activity, and the anomalies should be avoided as possible cultural resources. TPI will take proper precautions when operating near any of these anomalies. Therefore, based on the above, no impact on cultural resources is expected."

5. Ecologically Sensitive Features

There is an ecologically sensitive feature located on Mobile Block 869 (U.S.D.I., FEIS, Gulf of Mexico, 1987, Visual No. 3). Visual No. 3 indicates the Alabama Department of Conservation and Natural Resources has a permitted artificial fishing reef named Dauphine Island Bridge located in the southern part of Block 869. The proposed operations should have no impact on this feature.

There is no indication of "hard" or live bottoms within the surveyed areas of Block 869. The bottom topography is slightly irregular characterized by gentle ridge and sand wave formations. There were no subsurface deformational features, such as slumps or faults, observed within the area. Bottom sediments are predominantly sand which may be subject to scour under storm conditions. Sand content may vary along the northern limits of the survey where a possible dump site of dredge material is suspected.

The onshore support bases will necessitate the passage of marine vessels and helicopter traffic. These operations will have only minimal impact on the Louisiana and Alabama shorelines.

6. Existing Pipelines and Cables

There is no evidence of any cables or pipelines being located in Mobile Block 869.

7. Other Mineral Uses

The activities proposed for Mobile Block 869 will have no impact on other mineral uses.

8. Ocean Dumping

The major sources of ocean dumping related to OCS hydrocarbon exploration activities are drilling muds and drill cuttings. Drill cuttings are brought to the surface by the drilling mud. These cuttings are separated and disposed of overboard. After the exploratory drilling in Mobile Block 869 is completed, TPI anticipates dumping its excess water-based drilling fluid (estimate 1000 bbls.). If any oil-based mud is used, it will be transported to shore for proper disposal. Treated domestic waste, drill water, and kitchen and other wastes will also be disposed of at the proposed drill site. There will be no intentional discharge of any oily or hazardous materials in violation of MMS or EPA regulations.

9. Endangered or Threatened Species

Federally listed endangered or threatened species which might occur in the Mobile Area are the fin whale, humpback whale, right whale, sei whale,

sperm whale, Kemp's ridley turtle, green turtle, hawksbill turtle, leatherback turtle, and loggerhead turtle (U.S.D.I., FEIS, Gulf of Mexico, 1987, p III-44). Of the whale species, the sperm whale is perhaps the most common in the Gulf of Mexico. Generally, these whales inhabit the waters of the continental slope and the deep oceanic waters. The other species of whales may be considered uncommon in the Gulf. The leatherback turtle is believed to prefer the deeper oceanic waters while the other species may be considered more coastal in nature. However, it is possible that any of these turtle species may occur in the project area at one time or another. Little or no impact is expected to any of these threatened or endangered species by the proposed activities.

Federally listed endangered or threatened species which may occur in the vicinity of the onshore bases are the bald eagle and American alligator (U.S.D.I., FEIS, Gulf of Mexico, 1987, Visual No. 2). The American alligator, which inhabits the Gulf Coast, is listed in Louisiana as "threatened by similarity of appearance and is listed in Alabama as endangered." The bald eagle inhabits the area from Morgan City, Louisiana east and north to the Mississippi River. The Alabama, Chotawatchee and Perdido Key beach mice, which occur along the eastern Alabama and northwestern Florida Gulf beaches were listed as endangered species on June 6, 1985. The beach mice are restricted to sand dune habitat on coastal areas along the eastern Alabama and northwestern Florida coasts. No federally listed endangered plant species are known to occur in the Louisiana or Alabama coastal area.

The FEIS for lease sales 113, 115 and 116 (U.S.D.I., 1987) discusses the occurrence and impact on endangered or threatened species. The impacts discussed are primarily based on the occurrence of oil spills. The impacts on various endangered and threatened species will depend on the nature of the spill, weather conditions, proximity of the spill to the species, tolerance of the species for oil, and the response time and effectiveness of the spill cleanup and containment services. Given these variables, the impact on the various endangered or threatened species will vary from no effect to serious.

The experience of oil and gas exploration in the Gulf of Mexico indicates that there is a small probability of occurrence of an oil spill. The probability remains low because of the level of technology used by the industry to insure safe and responsible operations. TPI, as a prudent operator, will take the necessary measures to reduce the probability of oil spills. Towards this, TPI will comply with OCS Order No. 7 on pollution prevention and control, and has an approved Oil Spill Contingency Plan on file with the MMS. It is unlikely that the offshore or onshore activities related to the Mobile area exploratory drilling activities will have any effect on the federally listed endangered or threatened species.

B. Socio-Economic Data

In accordance with MMS guidelines, the initial OCS Socio-Economic Data Base Report for the support base facilities utilized by TPI will be prepared for submission pursuant to the specific parameters to be established by the MMS at a later date.

UNAVOIDABLE ADVERSE IMPACTS

The greatest threat to the environment would be caused by an oil spill or well blowout. These occurrences can be reduced in number by utilizing trained personnel, adequate operational safeguards, and employing available safety and pollution control systems. These measures are standard operating procedure for TPI.

The unavoidable adverse impacts that will occur as a result of the proposed exploratory drilling will be few in number and temporary in nature. The primary adverse impacts are a localized degradation of water and air quality in the vicinity of the drilling site, the potential obstruction to commercial and recreational fishing vessels, and the disruption and/or killing of benthic and/or pelagic organisms during the location of the drilling rig and during the disposal of muds, cuttings, domestic wastes, and treated sewage.

The discharge of drill cuttings and water-based muds will result in an increase in water turbidity, burial of benthic organisms, and possible toxic effect on marine organisms in the immediate vicinity of the drilling rig. A reduction in photosynthetic activity and plankton population can also be expected as a result of discharging. However, it is expected that the pelagic and benthic organisms will repopulate the area rapidly after discharges end.

The proposed activities will generate a small amount of air pollutants due to the emissions from the diesel engines; therefore, some deterioration in air

quality of the OCS operation area is expected. These emissions affect only the immediate exploration activity site and are rapidly dissipated by the atmosphere. A Projected Air Emissions Report has been prepared for the proposed activities and is included in the appendix to the POE to which this Environmental Report is a part.

Commercial and recreational fishing could be affected by the proposed activities, mainly in terms of interference. Although the unavoidable adverse impacts could include some smothering of shellfish, reduction of the area presently available for unrestricted fishing, and minimal finfish killing, fishing activities would not be significantly affected.

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REFERENCES

1. United States Department of the Interior, Minerals Management Service, Final Environmental Impact Statement, Gulf of Mexico, December 1983.
2. United States Department of the Interior, Minerals Management Service, Final Environmental Impact Statement, Gulf of Mexico, December 1984.
3. United States Department of the Interior, Minerals Management Service, Final Environmental Impact Statement, Gulf of Mexico, November 1985.
4. United States Department of the Interior, Minerals Management Service, Final Environmental Impact Statement, Gulf of Mexico, November 1986.
5. United States Department of the Interior, Minerals Management Service, Final Environmental Impact Statement, Gulf of Mexico, October 1987.