N-2756
OCS-G-6890

In Reply Refer To: FO-2-1

August 21, 1987

Texaco USA
Attention: Mr. J. A. Newton
Post Office Box 60252
New Orleans, Louisiana 70160

Gentlemen:

Reference is made to your Initial Plan of Exploration and Environmental Re received August 7, 1987, amended August 11, 1987, for Lease OCS-G 6890, Block 870, Viosca Knoll Area. This plan includes the activities proposed for Wells A through D.

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 N-2756 and should be referenced in your communication and correspondence concerning this plan.

Sincerely yours,

(Orig. Sgd.) A. Donald Giroir

For D. J. Bourgeois
Regional Supervisor
Field Operations

bcc: Lease OCS-G 6890 (OPS-3-2) (FILE ROOM)
OPS-3-4 w/Public Info. Copy of the plan and ER (PUBLIC RECORDS)

ADGobert:dsl:8/11/87:poecor

COASTAL ZONE MANAGEMENT CONSISTENCY CERTIFICATION

Exploration
Type of Plan

Viosca Knoll Block 870
Area and Block

OCS-G 6890
Lease Number

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

Arrangements have been made with the State-Times in Baton Rouge, Louisiana to publish a public notice of the proposed activities no later than August 24, 1987.

Texaco Producing Inc.
Lessee or Operator

Dale J. Webre
Certifying Official

8/5/87
Date

J A Newton
Land Manager
Southern Exploration
Division

Texaco USA

PO Box 60252
New Orleans LA 70160
504 595 1702

PUBLIC INFORMATION

August 5, 1987

MINERALS MANAGEMENT SERVICE
RECEIVED
AUG 07 1987
FIELD
OPERATIONS
Gulf of Mexico OCS Region, New Orleans, LA

Regional Supervisor
Office of Field Operations
Minerals Management Service
1201 Elmwood Parkway
New Orleans, Louisiana 70123-2394

OCS-G 6890
VIOSCA KNOLL BLOCK 870
OFFSHORE LOUISIANA
PLAN OF EXPLORATION WITH
ENVIRONMENTAL REPORT

Dear Sir:

In accordance with the provisions of Title 30 CFR 250.34, and your letters of January 29, 1979, and October 22, 1981, we hereby submit for your approval fifteen copies of a Plan of Exploration with Enviromental Report for federal lease OCS-G 6890 at Viosca Knoll Block 870. Should any additional information be required, please contact Mr. D. R. Davis, Jr. by telephone (504) 595-1086.

Yours very truly,

TEXACO PRODUCING INC.

By J. A. Newton
J. A. NEWTON

DRD
tdw POE/1

Attachments

PLAN

OF EXPLORATION

TEXACO PRODUCING INC.

FEDERAL LEASE OCS-G 6890

VIOSCA KNOLL BLOCK 870

AUGUST 1987

TABLE OF CONTENTS

PLAN OF EXPLORATION

TEXACO PRODUCING INC.

FEDERAL LEASE OCS-G 6890

VIOSCA KNOLL BLOCK 870

Description of and Schedule for Exploration Activities

Texaco Producing Inc.'s exploration plan for Viosca Knoll Block 870 includes the drilling and completion of four exploratory wells to evaluate federal lease OCS-G 6890 for further development. The first well is scheduled to commence on or about November 15, 1987. A total of 336 days of operations are planned for Block 870.

Description of Rig and Safety Equipment

Depending on the availability of rigs, the proposed wells will be drilled with a semi-submersible rig similar to the "Penrod 77". Included in the Appendix are the rig specifications for the "Penrod 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 abandonment 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 Viosca Knoll Block 870 relative to the Louisiana and Mississippi shoreline. The location plat, provides the surface location of each well.

Current Subsurface Geologic and Geophysical Interpretation

Attached is a subsurface structure map and 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 Producing Inc. and should be exempt from disclosure under the Freedom of Information Act 5

U.S.C. 552. These data are intended for use by authorized Minerals Management Service personnel only.

Oil Spill Contingency Plan

In accordance with OCS Order No. 7, Texaco Producing Inc. has on file with the Minerals Management Service an Oil Spill Contingency Plan which has been approved by the Minerals Management Service by letter of August 27, 1986.

Texaco Producing Inc. 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 Texas, Louisiana, and Florida coast line of the Gulf of Mexico that have the material and equipment necessary to control and clean up oil spills. The closest CGA base at Venice, Louisiana is within 83 miles of the proposed drill sites. Based on the distance from this CGA installation to the proposed drill sites, we estimate the travel and deployment time of personnel, material and equipment to be approximately 8-10 hours.

Onshore Support Bases

Two onshore bases will be used to support the proposed exploration activity: the Texaco facilities at Morgan City and Venice, Louisiana. From these bases personnel and supplies will be

transported by boat and barge to the proposed drill sites. Additionally, personnel may be transported to and from the drill sites by helicopters which are based at Petroleum Helicopters, Inc.'s facilities at Amelia and Venice, Louisian .

Drilling Mud Components and Mud Additives

Included in the Appendix are listings of the drilling mud components and mud additives which are normally used during drilling operations.

Projected Air Emissions Report

The projected air emissions report, which is included in the Appendix, reflects the highest estimated emissions of total suspended particles (TSP), sulfur dioxide (SO_2), nitrogen oxide (NO_x), carbon monoxide (CO) and volatile organic compounds (VOC) for a 336 day period of continuous lease operations to be conducted on Block 870. 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

During July of 1985, a hazard survey was conducted by John E. Chance and Associates over Viosca Knoll Block 870, which included the

proposed drill sites. The data collected included EDO Narrow Beam Bathymetric System, Watergun Profiler, and pinger profiles.

These survey data along with available CDP seismic and velocity profiles were reviewed and included in the assessments of drilling hazards for the following locations:

"A" @ 1500' FNL & 1900' FWL of VK 870;

"B" @ 4000' FNL & 3200' FWL of VK 870;

"C" @ 2400' FNL & 5800' FWL of VK 870; and

"D" @ 500' FNL & 7700' FEL of VK 870.

The water depth at location "A" is 2075 feet. Geophysical control near the well site consist of 8 traverses of CDP seismic control and 24 traverses of sparker and/or shallow seismic. The seafloor is relatively smooth and slopes to the Southeast at an approximate rate of 320 feet per mile. There is however, a high area located in the northwest corner of the block due to a shallow salt piercement. Near surface bedding is composed primarily of marine clays. Evidence of surface or near surface faulting is not observed near the well site. The nearest fault is 1200' southeast of the location and the fault is down-to-the southeast. Shallow faulting will not intersect the well bore,

and shallow "bright spots" are not observed in the vicinity of the location. There are no other indications of shallow hazards or drilling hazards, as recorded by CDP velocity data.

The water depth at location "B" is 2325 feet. Geophysical control near the well site consist of 5 traverses of CDP seismic control and 24 traverses of sparker and/or shallow seismic. The seafloor is relatively smooth and slopes to the Southeast at an approximate rate of 320 feet per mile. Near surface bedding is composed primarily of marine clays. Evidence of surface faulting is not observed near the well site. The nearest fault is 650' southwest of the location and the fault is down-to-the southwest. Shallow faulting may intersect the well bore at approximately 1500' below mudline (BML). Shallow "bright spots" are not observed in the vicinity of the proposed location. There are no other indications of shallow hazards or drilling hazards as recorded by CDP velocity data.

The water depth at location 'C" is 2300 feet. Geophysical control near the well site consist of 5 traverses of CDP seismic control and 24 traverses of sparker and/or shallow seismic. The seafloor is relatively smooth and slopes to the Southeast at an approximate rate of 320 feet per mile. Near surface bedding is composed primarily of marine clays. Surface faulting is not observed near the well site. The nearest fault is 1700' from

this location and the fault is down-to-the southwest. Shallow faulting will intersect the well bore at approximately 1700' BML. Shallow "bright spots" are not observed in the vicinity of the proposed location. CDP velocity data indicate no drilling hazards. Indications of other shallow hazards are not present.

The water depth at location "D" is 2250 feet. Geophysical control near the well site consist of 4 traverses of CDP seismic control and 24 traverses of sparker and/or shallow seismic. The seafloor is relatively smooth and slopes to the Southeast at an approximate rate of 320 feet per mile. Near surface bedding is composed primarily of marine clays. Evidence of surface or near surface faulting is not observed near the well site. The nearest fault being 1100' Southwest of the location and the fault is down-to-the southwest. Shallow faulting will not intersect the well bore. Shallow "bright spots" are not observed in the vicinity of the proposed location. CDP velocity data indicates no additional drilling hazards. A buried gravity slide is apparent in the area of this location but the hazard survey performed by J. E. Chance and Associates notes that parallel strata above the slide area would indicate that this feature is presently stable.

Archaeological Assessment

There is no known archaeological or cultural resources located on Viosca Knoll Block 870.

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 6890 MOSCA KNOLL BLOCK 870

JUNE 1987

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 Viosca Knol. Block 870 (OCS-G 6890). 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 semi-submersible rig will be moved on the lease and four (4) 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 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 Pla

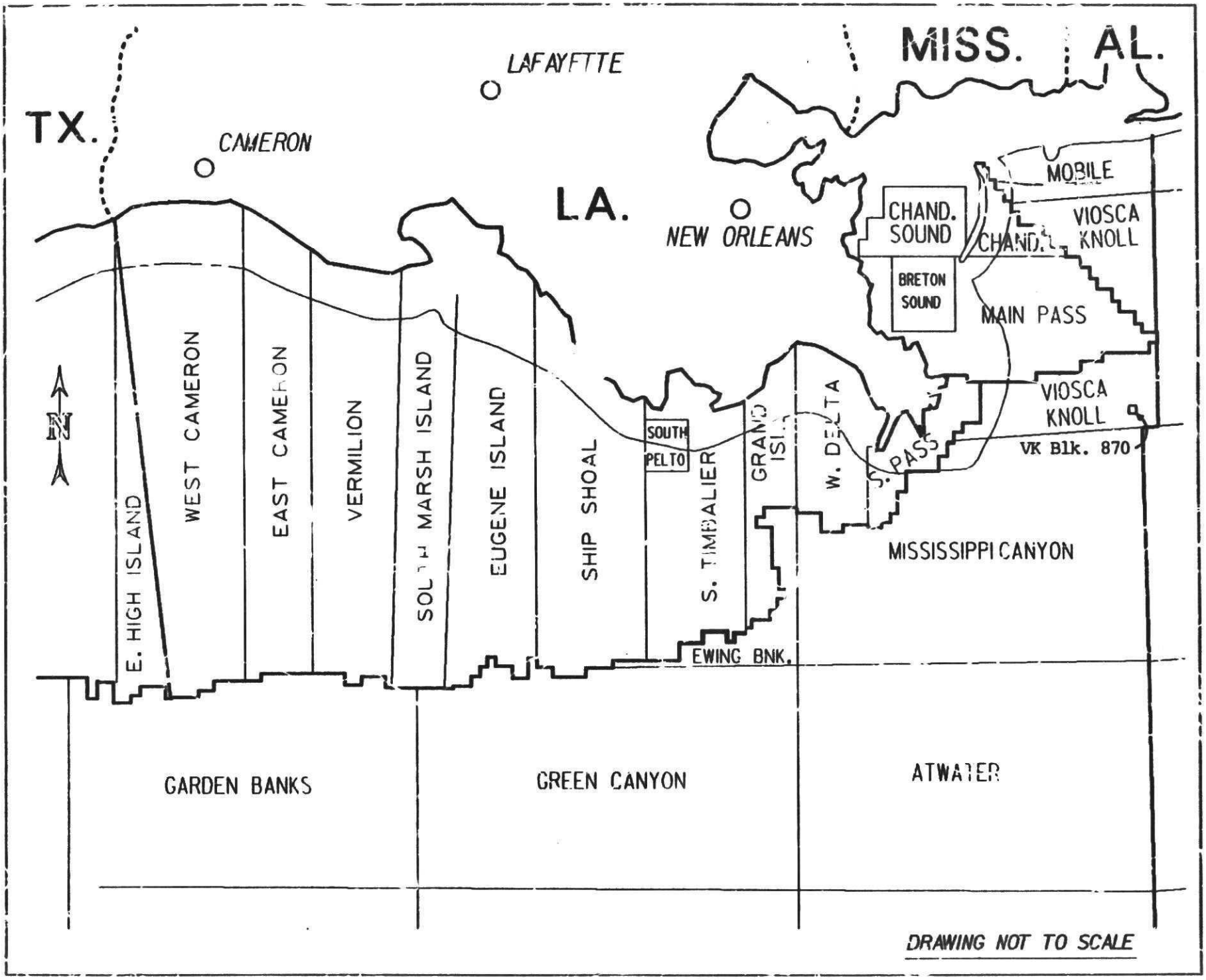

TX.
LAFAYETTE
CAMERON
LA.
NEW ORLEANS
MISS.
AL.
MOBILE
CHAND. SOUND
CHAND.
VIOSCA KNOLL
BRETON SOUND
MAIN PASS
VIOSCA KNOLL
VK Blk. 870
MISSISSIPPI CANYON
W. DELTA
GRAND ISL.
S. PASS
SOUTH PELTO
S. TIMBALIER
EWING BNK.
SHIP SHOAL
EUGENE ISLAND
SOUTH MARSH ISLAND
VERMILION
EAST CAMERON
WEST CAMERON
E. HIGH ISLAND
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 and Venice, Louisiana. 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 or Venice, 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 area, the exact route for each vessel on each particular trip cannot be predetermined.

B. Support Facilities and New Personnel

The proposed activities are expected to use two (2) existing support bases in Morgan City and Venice, Louisiana. 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 Viosca Knoll area exploration activity is located approximately seventy-three (73) miles south of the Alabama coast off Dauphin Island and fifty-eight (58) miles east of the Louisiana coast off the Mississippi Rivers' Pass A Loutre. Figure 1 shows the location of Block 870 in relation to the Gulf Coast, as well as the geographic relationship between Viosca Knoll Block 870 and the other OCS lease areas.

DESCRIPTION OF THE AFFECTED ENVIRONMENT AND IMPACTS

A. Physical and Environmental

1. Commercial Fishing

Viosca Knoll Block 870 falls outside all major finfish and shrimping areas (U.S.D.I., FEIS, Gulf of Mexico, 1986, Visual No. 2). The placement of a drilling rig on Block 870 will remove a portion of the waters 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. These operations should have no impact on commercial fisheries.

2. Shipping

Viosca Knoll Block 870 is free of any shipping fairway or anchorage area. The nearest shipping fairway is approximately 20 miles to the northeast (U.S.D.I., FEIS, Gulf of Mexico, 1986, Visual No. 3). It is likely that marine vessels supporting the proposed activities will utilize a shipping fairway 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 Viosca Knoll Block 870, which is located approximately seventy-three (73) miles from the Alabama coast and approximately fifty-eight (58) miles from the Louisiana coast and has a water depth of approximately 2000 feet. Because Block 870 is so far removed from shore, very little pleasure boating or sport fishing will take place in the area. Additionally, the water depth precludes most recreational activities such as sport diving. No adverse impacts on pleasure boating, sport fishing or recreation are anticipated as a result of these proposed activities.

4. **Cultural Resources**

There are no known cultural resources located in Viosca Knoll Block 870. Visual No. 4 from the Final Environmental Impact Statement (FEIS) (U.S.D.I., 1986) indicates Viosca Knoll Block 870 is located outside the U.S.D.I. designated historic and prehistoric cultural resources high probability lines. Therefore, no impact on cultural resources is expected.

5. **Ecologically Sensitive Features**

There are no known ecologically sensitive features located on Viosca Knoll Block 870 (U.S.D.I., FEIS, Gulf of Mexico, 1986, Visual No. 3). The nearest sensitive feature is the Pass A Loutre Wildlife Management Area located approximately fifty-eight (58) miles to the west of Block 870. The proposed operations should have no impact on this feature.

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

6. **Existing Pipelines and Cables**

There is no evidence of any cables or pipelines being located in Viosca Knoll Block 870.

7. **Other Mineral Uses**

The activities proposed for Viosca Knoll Block 870 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 Viosca Knoll Block 870 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 Viosca Knol' 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, 1986, P III-32). 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, brown pelican, and American alligator (U.S.D.I., FEIS, Gulf of Mexico, 1986, Visual No. 2). The American alligator, which inhabits the Gulf coast, is listed in Louisiana as "threatened by similarity of appearance." The bald eagle inhabits the area from Morgan City, Louisiana east and north to the Mississippi River. The brown pelican inhabits the Barataria Bay area west of Venice, Louisiana. No federally listed endangered plant species are known to occur in the Louisiana coastal area.

The FEIS for lease sales 110 and 112 (U.S.D.I., 1986) 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 Viosca Knoll 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 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.

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, Draft Environmental Impact Statement, Gulf of Mexico, April 1987.

VFC
das/pdm ORC/E2V
061787

COASTAL ZONE MANAGEMENT
CONSISTENCY CERTIFICATION

Exploration
Type of Plan

Viosca Knoll Block 870
Area and Block

OCS-G 6890
Lease Number

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

Texaco Producing Inc.
Lessee or Operator

Dale J. Hebert
Certifying Official

8/5/87
Date

APPENDIX

Rig Specifications for "Penrod 77"

Vicinity Map

Location Plat

Subsurface Structure Map

Geologic Cross Section

Drilling Mud Components

Mud Additives

Projected Air Emissions Report

PENROD 77 INVENTORY

OFFSHORE SEMI SUBMERSIBLE

HULL DESCRIPTION AND CHARACTERISTICS:

PENROD 77 is a modified Bingo 3000 design semi submersible with U.S.A. flag, A.B.S. classification and U.S. Coast Guard Certification. The hull was constructed in 1983. The unit is also built in accordance with U.K. Rules.

Length, overall	334.65 ft
Width, overall	216.53 ft
Height from bottom lower hull to bottom side main deck	120.57 ft
Length of pontoon	334.65 ft
Breadth of pontoon	39.45 ft
Depth of pontoon	31.99 ft
Dimensions of Columns	29.52' x 29.52' with 7.38' corner radius
Length of main deck	246.06 ft
Breadth of main deck	206.69 ft
Drilling draft	79.56 ft
Survival draft	68.08 ft
Transit draft	31.00 ft
Displacement (operating draft)	27,878 long tons
(survival draft)	26,106 long tons
(transit draft)	18,226 long tons
Operating Water Depth	2500 ft
Heliport size (octagon shape)	83 ft across flat 89. ft across corner
Lightship Weight	14,015.3 long tons

HULL STORAGE CAPACITIES:

Fuel	15,421 bbls
Fresh water	4,820 bbls
Drill water	7,230 bbls
Active Liquid Mud	1,800 bbls
Bulk Mud and Cement	10,240 cu. ft.
Sack Material	6000 sacks
Trip Tank	125 bbls
Slugging Tank	50 bbls

OPERATING CRITERIA - D.E.N. CONDITION:

Draft	79.56 ft
Wind velocity	70 knots
Wave height (significant)	26.25 ft
Wave period	9.5 seconds
Current	1.0 knots
Variable deck load	2559 long tons

SURVIVAL CRITERIA:

Draft	68.08 ft.
Wind Velocity	100 knots
Wave Height (significant)	49.22 ft
Wave Period	14.0 seconds
Current	1.5 knot
Variable deck load	2559 long tons

TRANSIT CRITERIA:

Draft	31.01 ft.
Wind Velocity	70 knots
Wave Height (significant)	22.97 ft.
Wave Period	8.5 seconds
Variable deck load	2401 long tons

LOAD CAPACITIES:

Maximum variable deck load:	
Drilling	2559 long tons
Survival	2559 long tons
Transit	2401 long tons
Rotary load	467.5 long tons
Setback load	305 long tons
Pipe Rack	800 lbs/sq. ft.
Riser Rack	350 lbs/sq. ft.
Upper deck uniform deck load	188 lbs/sq. ft.

HULL EQUIPMENT:

Two National model OS-435-HD cranes with Caterpillar model 3408 diesel engines, rated 44 tons at 60 ft. radius. Boom length 150 ft, Markload System VII Load Moment Computer. Meets A.B.S., U.S.C.G. and D.E.N. Rules.

Four National Class D-523-E double Wildcat Windlasses driven by EMD D-79 DC electric motor. Windlassed equipped with PARMAC V-80 hydromatic brake, footage counters and hydraulic load indicators. Maximum rated pull is 522,000 lbs at 47 FPM. Maximum stall for 2 minutes 640,000 lbs.

Eight National 3-1/8" chain fairleaders.

Honeywell RS/904 Acoustic Position Indicator with four position reference pingers and two tilt telemetry pingers.

Anchor Chain - Eight lengths of 3-1/8" diameter x 6000 ft long continuous ORQ Grade Chain.

Anchors - Nine (9) Drillmoor (Moor fast type) 30,000 lb anchors with special swivel shackle.

Buoys - Nine steel anchor buoys 9.84 ft in diameter x 16.40 ft long. Polyurethane foam filled.

Ballast Control Console - One BIM control console to control and monitor ballast tanks, fuel oil tanks, drill water tanks and fresh water tanks. Console controls operation of all valves for pumping into and out of tanks, starts and stops pumps in lower hull pump rooms, has environmental monitoring system and readout for anchor tension system. All information can be graphic displayed and/or recorded.

Pennant Lines - Assorted lengths of 2-1/2" diameter wire rope pennant lines for mooring in water depths up to 1500 ft.

Ballast Pumps - Four ISHII centrifugal type each driven by a 150 hp AC motor.

Sea Water Service Pumps - Two ISHII centrifugal type each driven by a 150 hp AC motor.

Gyrocompass - One Sperry MK 37 Model D.

One lot of Hartzell Supply and Exhaust Fans for machinery spaces and accommendations.

Three Riley-Beaird Model TCF 2.5 Waste Heat Water Desalination System, capacity 8500 GPD.

Sewage Units - Two Red Fox PAC FP-1500 units with chlorine contact chambers.

Sprinkler Pump - Two Ingersoll-Rand type 3 x 2 x 8 VOC vertical centrifugals each driven by a 25 hp AC electric motor.

Bilge Pump - Four Ingersoll-Rand type 3 x 2 x 8 VOC vertical centrifugals each driven by a 20 hp AC electric motor.

Fire Pump - Two Ingersoll-Rand type 4 x 3 x 13 HEC horizontal centrifugal each driven by a 100 hp AC electric motor.

Air Foam Pump - Two Ingersoll-Rand type 4 x 3 x 13 HEC horizontal centrifugal each driven by a 125 hp AC electric motor.

Drill Water Pump - Two Ingersoll-Rand type 4 x 3 x 10 VOC vertical centrifugal each driven by a 50 hp AC electric motor.

Sludge Pump - One FMC model EO41OC vertical piston driven by 1 hp AC electric motor.

Lube Oil Transfer Pump - One Roper model 2AMO8 horizontal gear driven by a 3/4 hp AC electric motor.

Fuel Oil Transfer Pump - Four Ingersoll-Rand type 3 x 1-1/2 x 10 VOC vertical centrifugal each driven by a 30 hp AC electric motor.

Auxiliary Fuel Oil Transfer Pump - Two Ingersoll-Rand type 2 x 1-1/2 x 6 VOC vertical centrifugal each driven by a 3 hp AC electric motor.

Salt Water Pump - Two Mission Magnum 4 x 3 x 13 centrifugals each driven by a 50 hp AC motor.

Helicopter Refueling Unit - One Hiller International refueling unit with 1600 gal storage tank, fuel transfer pump, filters, strainers and hoses.

Welding Machines - Two Lincoln Model R3R-400 rectifier 400 amp DC welders and basic oxygen-acetylene welding equipment.

One Westfalia Model OTA-7-00-066 Fuel Oil Separator.

Four Schottel type S1502LS containerized thrusters, 360 degree azimuthing steerable type each driven by a 1600 hp DC electric motor.

Two Clayton Manufacturing Company Model EO-200-1 Steam Generators with feed water and water treatment equipment. Twenty (20) unit heaters located in required areas.

Two Watercraft of America lifeboats. Capacity 44 men each.
Two inflatable liferafts, capacity 20 men each.

Two inflatable liferafts, capacity 25 men each.

One Watercraft of America Rescue boat, capacity 10 men.

One Sarex type OWS10 oily water separator.

Potable Water Pump - Four Pacific Pumping Company Model 1595-1 centrifugals each driven by a 15 hp AC electric motor.

One Halon fixed fire extinguishing system for generator, SCR, emergency generator, boiler, lower hull pump and paint locker rooms.

One sound powered telephone system with 16 stations.

One Fire, Combustible Gas and Hydrogen Sulfide Gas Dedecting System installed in required areas.

Emergency Generator - Stewart & Stevenson Model 16-92VGDT-550 unit with Detroit Diesel model 16V92T engine and a brushless single bearing 550 KW AC generator. Unit has electric start.

PAM OMESCO 42 Circuit Model SS-200 solid state AC alarm system with remote panel.

ACCOMMODATIONS: Rig is U.S. Coast Guard Certified for 86 men.

Five (5) two men bedrooms with private bath.
Ten (10) two men bedrooms with semi-private bath.
Fourteen (14) four men bedrooms.

Company man office, toolpusher office, six (6) men hospital, laundry room, two galley rooms, two recreation rooms, two mess rooms, change room, two pantry rooms, chiller room, freezer room, radio room, ballast control room and pilot house room.

DRILLING EQUIPMENT:

DRAWWORKS - National Type 1625-DE with 1-3/8" grooved drum, dual electric motor drive with two EMD model D-79 DC motors 1000 hp each, sandline drum, rotary drive, PARMAC V-295 Hydromatic brake with water level controls and crown block protector.

ROTARY TABLE AND DRIVE - National Type C-495 with 49-1/2" table opening, National 2-speed transmission, EMD Model D-79 DC motor and emergency drive.

HOOK - Byron-Jackson Mode. 5500, capacity 500 tons.

SWIVEL - National Type P650, capacity 650 tons with Spare Washpipe Packing Assembly.

WIRELINE ANCHOR - National Type EB with snubber.

WEIGHT INDICATOR - Totco Type 100 System with tong torque assembly, mud pressure gauge, rotary rpm assembly, rotary electric torque assembly, two mud pump spm gauges all mounted in a drillers console.

DRILL PIPE SPINNER - Weatherford Model 13,000 J-29 air operated for 2-7/8" - 7" range.

DRILL LINE - 1-3/8" x 10,000 ft EIPS IWRC drill line.

DUAL STANDPIPE MANIFOLD - DEMCO 5" 5000 psi W.P.

DERRICK - DRECO, Inc. 160' high x 40' x 40' base and 18' x 18' top beam leg dynamic derrick, rated static hook load with 12 lines strung to traveling block of 1,050,000 lbs. Racking capacity 270 stands of drill pipe and 18 stands of drill collars.

Drilling

Setback	None
Hook load	1,000,000 lbs
Wind	85 mph (75 knots)
Roll	7° (single amplitude) with 8 second period
Pitch	7° (single amplitude) with 8 second period
Heave	20 ft. (double amplitude) with 8 second period
List Angle	6°
Center of Rotation (vertical)	85' below base of derrick

Tripping

Setback	500,000 lbs

Wind	85 mph (75 knots)
Roll	7° (single amplitude) with 8 second period
Pitch	7° (single amplitude) with 8 second period
Heave	20 ft. (double amplitude) with 8 second period
List	6°
Center of Rotation (vertical)	85' below base of derrick

Running Casing

Setback	500,000 lbs
Hook load	800,000 lbs
Wind	70 mph (61 knots)
Roll	3° (single amplitude) with 8 second period
Pitch	3° (single amplitude) with 8 second period
Heave	10 ft. (double amplitude) with 8 second period
List	3°
Center of Rotation (vertical)	85' below base of derrick

Survival (pipe racked)

Setback	500,000 lbs
Wind	125 mph (110 knots)
Roll	8° (single amplitude) with 8 second period
Pitch	8° (single amplitude) with 8 second period
Heave	20 ft (single amplitude) with 6 second period
List	
Center of Rotation (vertical)	95' below base of derrick

Survival (moving)

Wind	125 mph (110 knots)
Roll	15° (single amplitude) with 10 second period
Pitch	10° (single amplitude) with 10 second period
Heave	50' (double amplitude) with 10 second period
List	15°
Center of Rotation (vertical)	120' below base of derrick

Air operated adjustable casing stabbing platform.

CROWN BLOCK - DRECO, Inc. 650 ton capacity with seven 60" diameter sheaves grooved for 1-3/8" diameter wire line.

POWER - Four (4) EMD model MD16E9B Power Units rated at 2925 hp each continuous service. Engines are EMD model 16-645E9 driving EMD model AB20-6 600 volt AC generators rated at 2100 KW each.

POWER CONVERSION SYSTEM - Intergrated Power System, Inc. Eight (8) model 2200M SCR converters with one (1) service cubicle, auxiliary cubicle, drillers

console, AC switchboard for four AC generators and two 600/480 VAR 1000KVA transformers.

MUD PUMPS - Two (2) National Type 12-P-160 Triplex 7-1/4" x 12" slush pumps with discharge strainer cross, suction dampner, discharge dampner and pressure relief valve. Each driven by two (2) EMD Model D-79 DC motors through a dual V-belt drive system.

SALT WATER PUMP - Two Mission Magnum 4 x 3 x 13 centrifugals each driven by a 50 hp AC electric motor.

DESANDER PUMP - One Mission Magnum 6 x 5 x 14 centrifugal driven by a 75 hp AC electric motor.

DESILTER PUMP - One Mission Magnum 6 x 5 x 14 centrifugal driven by a 75 hp AC electric motor.

SUPERCHARGING PUMP - Two Mission Magnum 6 x 5 x 14 centrifugals each driven by a 50 hp AC electric motor.

MUD MIXING PUMP - Two Mission Magnum 6 x 5 x 14 centrifugals each driven by a 100 hp AC electric motor.

TRIP TANK PUMP - One Mission Magnum 3 x 2 x 13 centrifugal driven by a 15 hp AC electric motor.

DESILTER - SWECO Model P05C16, capacity 1280 GPM.

DESANDER - SWECO Model P10C03, capacity 1500 GPM.

SHALE SHAKER - Two (2) Brandt dual tandem separator.

MUD AGITATORS - Four (4) Brandt Model MA-20, two Model MA-15, three Model MA-25.

MUD-GAS SEPARATOR - One (1) shop made.

DEGASSER - One SWACO vertical with vacuum pump.

PIT VOLUME - Totco Pitometer with Recorder and Gain/Loss Indicator for mud pits and trip tank.

MUD FLOW - Totco Flow Alert System with pump stroke counters and recorder.

DRILL PIPE:

269 joints of 5" O.D. 19.50# grade E, range 2 with 6-3/8" O.D. 5" XH tool joints.

214 joints of 5" O.D. 19.50# grade G, range 2 with 6-3/8" O.D. 5" XH tool joints.

45 joints of Drilco Hevi-Wate Range II 5" O.D. with 5" XH connections.

Pup joints - 5" O.D. grade G with 4-1/2" IF box and pin conn. Three 5' long, three 10' long and three 15' long.

DRILL COLLARS:

36 - 8" O.D. x 2-13/16" I.D. x 31' long with 6-5/8" reg. conn., slip recess only with 10" inlaid hardmetal 36" from pin and 10" inlaid hardmetal below slip recess.

30 - 6-1/2" O.D. x 2-1/4" I.D. x 31' long NWS with 4-1/2" XH conn., slip recess only with 10" inlaid hardmetal 36" from pin and 10" inlaid hardmetal below slip recess.

12 - Solid Type Lift Nipples 5" O.D. elevator, 48" long with 4-1/2" IF pin x box conn.

12 - 8" O.D. x 2-13/16" I.D. x 16" long adapter subs with 6-5/8" reg pin x 4-1/2" IF box conn.

10 - 6-1/2" O.D. x 2-1/4" I.D. x 14" long adapter subs with 4-1/2" XH pin x 4-1/2" IF conn.

SUBS:

2 - 9-1/4" O.D. x 2-13/16" I.D. x 60" long bit subs with 8" OD fishing neck 30" long with 6-5/8" reg. box x 7-5/8" reg. box bored for float.

2 - 8" O.D. x 2-13/16" I.D. x 60" long bit subs with 6-5/8" reg box x 6-5/8" reg box bored for float.

2 - 8" O.D. x 2-13/16" I.D. x 60" long bit sub with 6-1/2" O.D. fishing neck 30" long with 4-1/2" XH box x 6-5/8" reg box bored for float.

2 - 6-1/2" O.D. x 2-1/4" I.D. x 60" long bit sub with 4-1/2" XH box x 4-1/2" reg. box bored for float.

2 - 8" O.D. x 2-13/16" I.D. x 65" long cross over subs with 6-3/8" O.D. fishing neck 30" long with 6-5/8" reg. pin x 4-1/2" IF box.

2 - 8" O.D. x 2-13/16" I.D. x 65" long cross over subs with 6-5/8" reg pin x 4-1/2" XH box.

2 - 6-1/2" O.D. x 2-1/4" I.D. x 65" long cross over subs with 4-1/2" XH pin x 4-1/2" IF box.

3 - 6-3/8" O.D. x 2-13/16" I.D. x 65" long kelly saver subs with 4-1/2" IF pin x 4-1/2" IF box with rubber installed.

KELLYS:

2 - 5-1/4" HEX kellys - 2-13/16" bore x 54' long, 6-5/8" API reg. LH box x 6-3/8" O.D. 4-1/2" IF pin.

FISHING TOOLS:

TAPER TAPS

1 - 6-3/8" O.D. Tri-State wit': 2" O.D. wicker x 5" O.D. wicker 60" long with 4-1/2" API IF box up conn.

OVERSHOTS AND ASSESSORIES

1 - 8-1/8" O.D. Bowen Series 150 Overshot with 4" API IF box up conn.

1 - 8-1/8" O.D. top extension 36" long

1 - 11-1/4" O.D. oversize guide for 8-1/8" overshot

1 - 15" O.D. oversize guide for 8-1/8" overshot

2 - 6-1/2" spiral grapples

3 - 6-1/2" type A packer

1 - Spiral grapple control

2 - 6-3/8" spiral grapples

3 - 6-3/8" type A packers

1 - Spiral grapple control

2 - 6-1/4" spiral grapples

3 - 6-1/4" type A packer

1 - Spiral grapple control

2 - 6-1/8" spiral grapple

3 - 6-1/8" type A packers

1 - Spiral grapple control

2 - 5" basket grapples

2 - 5" mill control packers

1 - 11-1/4" O.D. Bowen Series 150 Overshot with 6-5/8" API reg box up conn.

1 - 11-1/4" O.D. top extension 36" long

1 - 15" O.D. oversize guide for 11-1/4" overshot

1 - 21" O.D. oversize guide for 11-1/2" overshot

2 - 8" basket grapples

2 - 8" control packers

2 - 7-7/8" basket grapples

2 - 7-7/8" control packers

2 - 7-3/4" basket grapples

2 - 7-3/4" control packers

1 - 13-3/8" - 30" Tri-State type E Marine Spear with 6-5/8" API reg box x pin conn.

1 - Sub Assembly for 20" 106.5 PPF casing for Tri-State type E casing spear.

1 - Stop ring for 20" casing

6 - (1 set) Slip Inserts for 20" 106.50 PPF casing

BLOWOUT PREVENTERS AND CHOKE MANIFOLD:

Two Cameron Iron Works Type U Model II Double 18-3/4" - 10,000 psi WP Super Trim Ram type with four 3-1/8" - 10,000 psi WP #5 CLP side outlets, wedgelocks and pressure balance chambers. Top and bottom connections #27 CLP HUB with stainless steel lined ring grooves. Rams fitted with two sets 5" O.D. pipe, one set blind rams and one set shear blind rams.

Two Rucker-Shaffer 18-3/4" - 5000 psi WP spherical blowout preventors with clamp hub bottom and studded top. Suitable for H2S service.

One SWACO adjustable super choke - 10,000 psi WP H2S trim with remote operating console.

One National 18-3/4" - 10,000 psi WP straight autolock test stump.

One National 18-3/4" - 10,000 psi WP straight autolock connector.

One National guide frame assembly.

One National 18-3/4" - 10,000 psi WP 15° tapered autolock connector.

One National Four Arm Low Riser Package guide frame.

One Oil States 18-3/4" I.D. - 2,000 psi WP single flex joint 10° total deflection, off center.

One National 18-3/4" - 10,000 psi WP 15° tapered autolock test stump.

Six Cameron Iron Works 3-1/8" - 10,000 psi WP Type F gate valves with "AF" failsafe operators. All super trimmed.

Fourteen Cameron Iron Works 3-1/8" - 10,000 psi WP Type F gate valves. All super trimmed.

Two Cameron Iron Works H-2 3-1/16" - 10,000 psi WP hand adjustable chokes. All super trimmed.

One Cameron Iron Works H-2 3-1/16" - 10,000 psi WP positive super trim choke.

Two Cameron Iron Works type F gate valve 2-1/16" - 10,000 psi WP super trim.

Three Cameron Iron Works type FCC gate valve 3-1/8" - 5000 psi WP super trim.

One Cameron Iron Works type F 0 - 15,000 psi pressure gauge.

Two COFLEXIP 3" I.D. x 75' long - 10,000 psi WP, 15,000 psi test choke and kill hoses.

DIVERTER SYSTEM:

Regan Type KFDS 48½" nominal support housing.

Regan Type KFDS 24" nominal diverter assembly.

Regan Type HT-2 diverter handling tool.

One Model DSP-3R-4H-2A-EPR diverter control panel.

One 12" diameter pipe with air operated butterfly valves routed to port and starboard side of hull.

BLOWOUT PREVENTER CONTROL SYSTEM:

BOP CONTROLS

One Koomey Model SSA-300-11S subsea style accumulator unit with thirty (30) eleven gallon accumulator bottles, 300 gal mixed fluid reservoir, 100 gal Welkis reservoir and 100 gal glycol/anti-freeze reservoir.

Two Koomey Model UET60B electric powered triplex pump driven by a 60 hp AC electric motor.

One Koomey Model U7A36 air pump package consisting of three (3) 60:1 ratio air operated pumps.

One Koomey Model UP3RP24 EPR hydraulic control manifold with 24 four way 1/4" control valves, one 1" four way control valve, three 1/2" air operated pressure reducing and regulating valves, flowmeter and gauges.

Three Model SS210-11S Auxiliary Accumulator Banks consisting of fifteen (15) eleven gallon bottles.

One Model EX32G6R electric drillers control panel housed in explosion proof enclosure.

One Model EW21GM mini electric remote control panel.

Two Model HR-2200 air powered hose reels with 1650 feet of 45-1 (3 PSH) subsea control hose.

Two Model RHSP-50 retrievable hydraulic controls pods.

One Model TB-50 test block for testing control pod.

Eighteen (18) eleven gallon bottles mounted on BOP stack.

One Model SR-1800-BB air powered standby hose reel with 1650' of 6-3/16" hydraulic hose.

One Model S15R portable testing unit (nominal 10,000 psi WP).

One set Model RMB-17 riser mounted blocks for stack mounted test blocks.

BLOWOUT PREVENTER HANDLING SYSTEM:

NORMAR 200 ton capacity B.O.P. Carrier with 200 ton hydraulically operated skid unit, hose reel, 60 ton auxiliary trolley and hydraulic power unit, with 50 ton Sotar auxiliary forks.

BULK SYSTEM:

Bulk System - Ten (10) tanks 12'-0" diameter x [illegible], two (2) tanks 10'-0" diameter x 13'-0" high, two (2) 70 cu. ft. su[illegible] Al. complete with required valves. piping, level indicator and load cell weight [illegible]ator.

Bulk Air Compressor - One Quincy Model D-73CS air compressor driven by a 75 hp AC electric motor.

RISER AND SLIP JOINT EQUIPMENT:

National 20" nominal slip joint 60' stroke with Integral choke and kill lines.

Two National handling tools for 20" riser pipe.

One National drill pipe suspension plug assembly for 5" drill pipe.

One Natinal drill pipe suspension plug assembly for 3-1/2" drill pipe.

One National Hydraulic Riser Spider Assembly.

One National 30" autolock connection with 18-3/4" - 10,000 psi adapter and two 8" hydraulic operated ball valves.

50 joints of National 20" O.D. x 50' long riser pipe with Natinal riser lock connections.

2 joints of National 20" O.D. x 25' long riser pipe with National riser lock connections.

2 joints of National 20" O.D. x 10' long riser pipe with National riser lock connections.

Emerson & Cuming Buoyancy Modules for 30 joints for riser.

UNDERWATER TELEVISION SYSTEM:

One Submar, Inc. Sub-sea Guideline Television System with two model CM-4 camera, model A50-IB Pan-Tilt Unit, model MK-XA 400 watt Mercury Vapor Lamp, one TF-5 guide frame and one model P-3626 winch with 2300' of C-18V3A armored television cable. Two model SCU-2 TB System Control Units with XP type X purge.

CEMENT UNIT:

Halliburton Model SKD-4 Twin HT-400 pump unit with two EMD D-79 DC motors and 100 hp electric RCM.

CEMENT HOSES:

Eight Western extra high pressure cementing hoses, 2" x 12' with 1502 unions.

RISER/GUIDELINE/MOTION COMPENSATION SYSTEM:

Six Western Gear model VCT 1750-50B.5 Riser Tensioners, capacity 80,000 lbs each.

Two Rucker-Shaffer Model XL-R.E.U.-C.W.-14-12.5-R.H.-3-B-1.75 riser tensioners, capacity 80,000 lbs. each.

One Western Gear Riser/Guideline Tensioner Control Panel.

Twenty-three (23) air pressure vessels for riser/guideline tensioners and heave compensator.

Six Western Gear model VCT 0750-40B.5 Guideline Tensioners, capacity 16,000 lbs each.

One Western Gear Heave Compensator Model HC-400-16-25C, capacity 400,000 lbs and 25' stroke. Static load 1,200,000 lbs maximum.

One Heave Compensator Control Panel.

Two PRICE Model W-3 High Pressure Air Compressors, three stage air cooled air compressor driven by 60 hp AC electric motor for riser/guideline/motion compensator system.

CASING TOOLS:

Three Byron-Jackson 13-3/8" - 350 ton spider bodies.

Two Byron-Jackson 7" slip assembly for above.

Two Byron-Jackson 9-5/8" slip assembly for above.

Two Byron-Jackson 13-3/8" slip assembly for above.

One Byron-Jackson 7" body guide plate for above.

One Byron-Jackson 9-5/8" body guide plate for above.

One Byron-Jackson 7" door guide plate for above.

One Byron-Jackson 9-5/8" door guide plate for above.

One Byron-Jackson 13-3/8" door guide plate for above.

One Byron-Jackson Casing Guide Bell for above.

One Byron-Jackson Spider Adapter Plate for above.

One Byron-Jackson Upper Guard Assembly for above.

Two Byron-Jackson 7" Upper Guard Guide Plate for above.

Two Byron-Jackson 9-5/8" Upper Guard Plate for above.

Two Byron-Jackson 13-3/8" Upper Guard Plate for above.

One Byron-Jackson Type SJ Elevator for 20" casing.

One Byron-Jackson Type SJ Elevator for 13-3/8" casing.

One Byron-Jackson Type SJ Elevator for 9-5/8" casing.

One Byron-Jackson Type SJ Elevator for 7" casing.

One Baash-Ross Type H-200 Elevator for 20" casing, capacity 200 tons.

Weatherford Model 16000 Hydraulic Power Tong with 7", 9-5/8" and 13-3/8" casing jaws.

One Weatherford Model LP364B Hydraulic Power Unit, water cooled and driven by a 60 hp AC electric motor.

Two Baash-Ross Type AAX Manual Casing Tongs with 20" and 30" jaws.

One Varco Type CB Split Bushing for 30" casing.

One Varco Type CB Split Bushing for 20" casing.

One Varco Type CMS-XL hand slips for 13-3/8" casing.

One Varco Type CMS-XL hand slips for 30" casing.

AIR COMPRESSOR AND AIR DRYER:

Two Quincy Model QSI-490WNW-3 125 hp air compressors. Capacity 498 SCFM at 110 psig, water cooled and pressure regulation system for bulk air. One Hankison Corporation Model E-800 refridgerated compressed air dryer.

OTHER EQUIPMENT:

Drilco Type I Ezy-Torq Unit complete with hydraulic cylinder and Model E power unit.

4 - Houston Engineers Long Stroke Bumper Sub, two 8" O.D. and two 6-1/2" O.D.

1 - Victoria Machine Works Model RJT-33C hydraulic floor mounted racking arm.

23 - Beebe Air Tuggers mounted in various locations on the barge as required.

1 - NSW Corporation 302 Slimline Torque Tool for BOP clamps and bonnet bolts.

1 - Geolograph Model 6 Pen Dril Sentry Recorder for penetration, weight, pump pressure, electric torque, rotary RPM, pump SPM.

Survey Tools - Totco Unit No. 1 with 1-1/4" O.D. - 8° double recording instrument, 16° double recording instrument, charts, baffle plates and retrieving equipment.

Varco Model 6600 Air Operated Power Sub.

One lot of hand tools for rig crew, mechanics, electricians, barge engineer and welder.

Mud Saver Bucket for 5" drill pipe.

Mathey "Surveyor" wireline unit with 25,000' of .092 line.

Two rotary hoses 3" x 75' long, 10,000 psi test.

One Toyoto Diesel Powered - 4000 lb capacity lift truck.

One PAM OMESCO Rig Floor Lighting System consisting of heavy duty fluorescent and mercury vapor lights suitable for explosion proof and Class I Division I Group C & D Service. System is a 3-Wire grounded type for 120 volt single phase 60 hz AC service.

Bug Blowers - Two Brandt 25,000 CFM.

Drill Pipe Protectors - 200 Byron-Jackson 6-3/4" O.D. latch type drill pipe rubbers with installation and removal tool.

Pam Omesco Main Motor Control Center and Switchboard with 8 remote motor control centers.

Pam Omesco Emergency Motor Control Center and Switchboard.

One Hydromatic Brake water cooling system consisting of two Mission 2 x 3 x 10-1/2 centrifugal pumps each driven by a 15 hp AC electric motor and two 8" diameter x 6' long shell and tube heat exchanger.

UPPER KELLY VALVE - OMESCO 6-5/8" heavy duty upper kelly valve, 6-5/8" API reg. LH box and pin conn, 15,000 psi test.

LOWER KELLY VALVE - Two OMSCO LK675 lower kelly valve 6-3/8" O.D. with 5" XH conn., 10,000 psi test.

DRILL PIPE SAFETY VALVE - One OMSCO LK675, 6-3/8" O.D. with 5" XH conn., 10,000 psi test.

INSIDE BOP - Two GRAY for 5" XH , 6-1/4" O.D. with release tool.

1 - Varco Type MPCH hinged pin drive master casing bushing with split bowls #1, #2 and #3.

1 - Varco Type 27HDP Roller Kelly Bushing with 5-1/4" HEX kelly wiper assembly and motion compensator lock assembly.

1 - Varco elevator links 2-3/4" x 132" long, capacity 350 tons.

2 - Varco Type SDXL hand drill pipe slips for 5" drill pipe.

1 - Varco Type DCS-L hand drill collar slip for 6-3/4" - 8-1/4" drill collars.

2 - Varco Type MP-R safety clamp for 9-1/4" - 10-1/2" O.D.

2 - Varco Type DSC-L hand slips for 8-1/2" - 10" drill collars.

1 - Varco Type DCS-L hand drill collar slips for 8" - 9-1/2" D.C.

1 - Varco Type DSC-R hand drill collar slips for 5-1/2" - 7" D.C.

2 - Byron-Jackson Type GG drill pipe elevators for 5" O.D. drill pipe, capacity 350 tons.

2 - Byron-Jackson Type DB Manual Tongs with jaws for 3-1/2" to 17".

RADIOS:

1 - HRF Model RF230M-AC SSB

1 - HRF Model RF104 SSB amplifier 1000 watts.

2 - Sailor Model 144AC VHF radio.

1 - NAR COM 120 air transmitter.

1 - SAC SS-1000 radio beacon 400 watts.

2 - CAI Model CA-35MS/MK II 150 watt SSB.

2 - CAI Model CL-36 1000 watt linear amplifier.

2 - CAI Model CN-19 CW/Radio Teleprinter.

1 - Intech Model 1511 watch receiver.

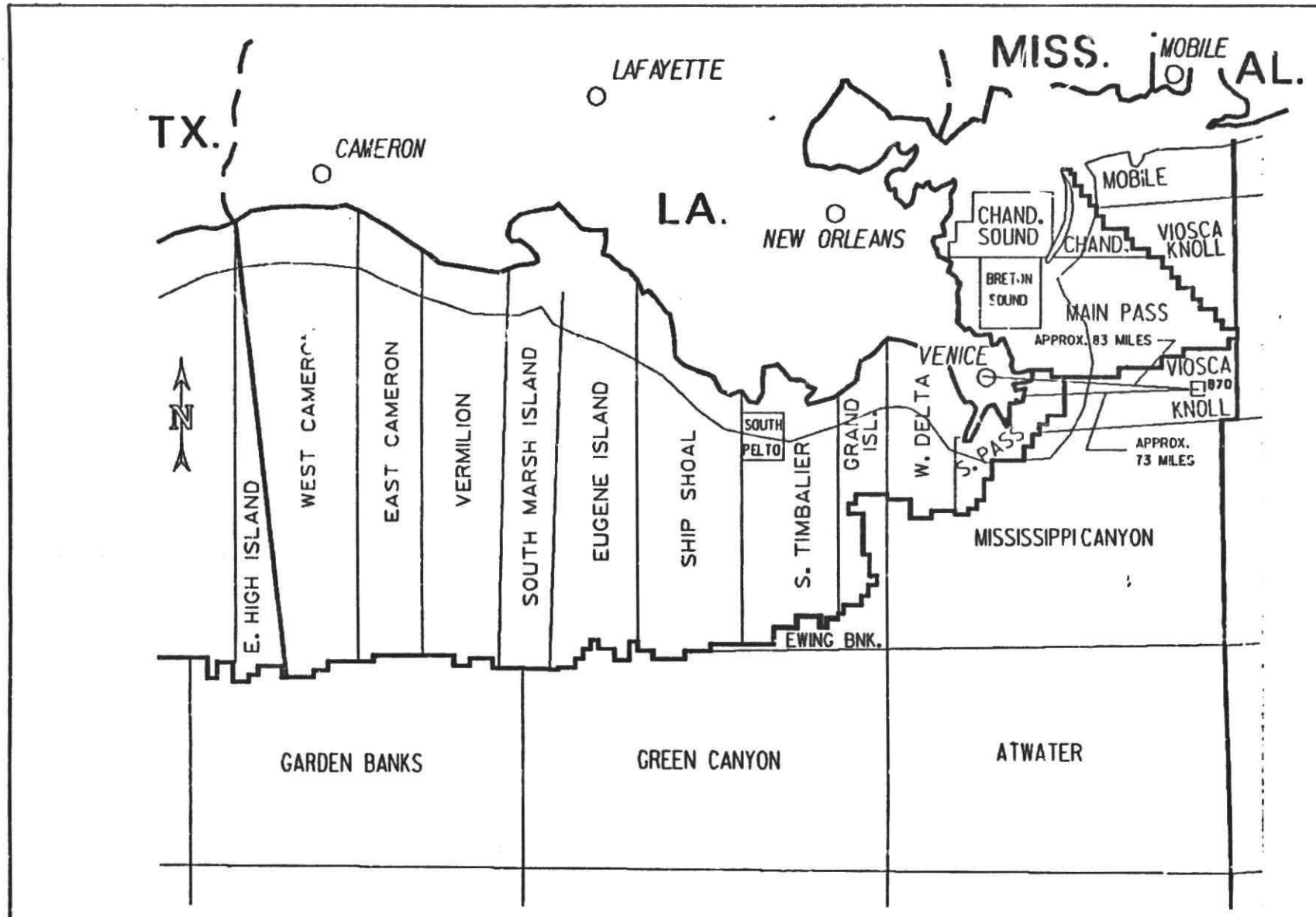
1 - Furuno Model FD-120B automatic direction finder.

1 - SGG Model SG-712-S-36 SSB transceiver.

1 - R.L. Drake Model RR-3 communication receiver.

6 - Standard Communications Model 830S-50B Marine VHF-FM handheld transceiver.

1 - GAI-Tronics Intercom System, 38 stations.



TEXACO PRODUCING INC.

NEW ORLEANS, LOUISIANA

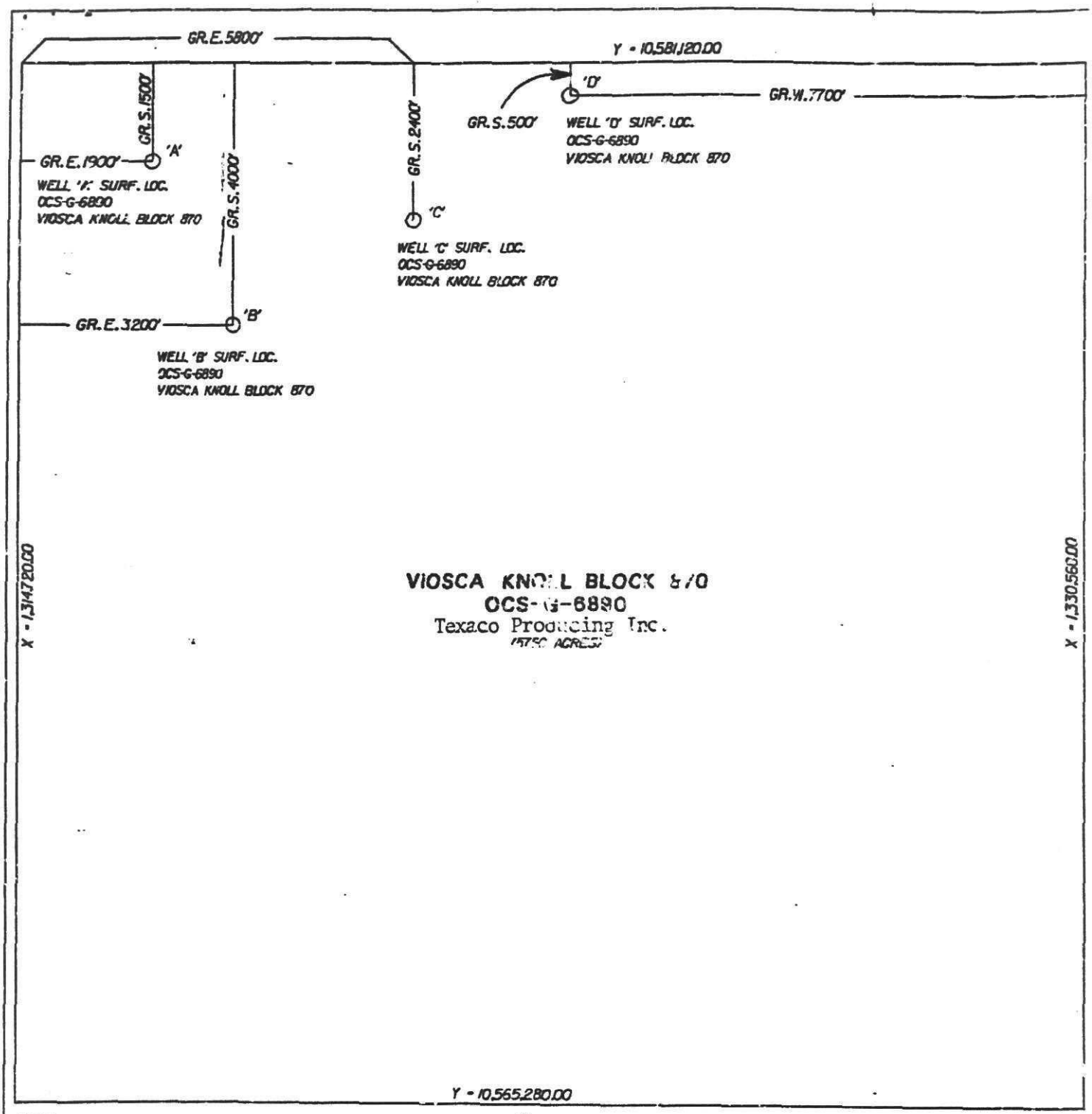
OCS-G-6890

VIOSCA KNOLL BLK. 870

APPROX. 83 MILES SOUTHEAST OF VENICE, LA.

L203/6VK870-2DP.E

DRAWING NOT TO SCALE



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

PLAN OF EXPLORATION

PUBLIC INFORMATION PLAT

PUBLIC INFORMATION

TEXACO PRODUCING INC.

NEW ORLEANS, LOUISIANA

OCS-G-6890

VIOSCA KNOLL BLK. 870

APPROX. 83 MILES SOUTHEAST OF VENICE, LA.

SCALE

[203/63/VKs870AED.POE

DRILLING MUD COMPONENTS

Common Chemical or Chemical Trade Name	Description of Material
Aluminum Stearate	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	$CaSO_4.2H_2O$
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	$NaCr04.10H_2O$
Starch	Corn Starch
"TX-9010"	Biodegradable drilling lubricant
"TORQ-Trim"	Biodegradable drilling lubricant

DRD:tdw POE

MUD ADDITIVES

Common Chemical or Chemical Trade Name	Description of Material
"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 wallnut shells
Wood Fibers	Loss-circulation material

DRD:
tdw POE

PROJECTED AIR EMISSIONS REPORT

FEDERAL LEASE OCS-G 6890

VIOSCA KNOLL BLOCK 870

LOCATIONS A, B, C, D

EMISSIONS IN POUNDS PER DAY

TEMPORARY SOURCES	NO_x	CO	VOC	TSP	SO_2
DRILLING EQUIPMENT[2]	276	60	22	20	18
CONSTRUCTION EQUIP.[3]	-	-	-	-	-
OTHER SOURCES[4]	19	15	11	2	2
MAXIMUM EMISSIONS	295	75	33	22	20

EMISSIONS IN TONS PER YEAR

TEMPORARY SOURCES	NO_x	CO	VOC	TSP	SO_2
DRILLING EQUIPMENT[2]	46.3	10.0	3.7	3.3	3.1
CONSTRUCTION EQUIP.[3]	-	-	-	-	-
OTHER SOURCES[4]	3.2	2.5	1.8	0.3	0.3
MAXIMUM EMISSIONS	49.5	12.5	5.5	3.6	3.4

CO Exemptions (E) in Tons Per Year

E = 3400 x (distance from shore) 2/3 = 3400 (73) 2/3 = 59,396

NO_x, VOC, TSP, SO_2 Exemption (E) in Tons Per Year

E = 33.3 x distance from shore = 33.3 (73) = 2,431

(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 336 days, therefore, being within the limits of the definition of temporary activities.

(2) Based on 60 hphr/ft. from study, "Atmospheric Emissions 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," Third Edition EPA Report AP-42, August, 1977 (Tables 3.2.3-1, 3.2.3-4, and 3.3.3-1).

(4) Based on emission factors from "Compilation of Air Pollutant Emission Factors," Third Edition EPA Report AP-42, August, 1977, (Tables 3.2.1-3, 3.2.3-4 and 9.1-2). Included are helicopter landing and take off, (avg. of two trips/week); supply and/or crew boats, at dockside, (avg. 12 hrs./day, two days/week); fuel storage and transfer; loading and unloading operations; and incineration of waste paper (average of 800 lbs/mo) for duration of project.

DRD:
tdw DOE
07/28/86