

In Reply Refer To: RP-2-1

JUN 24 1985

Tenneco Oil Exploration and Production
Attention: Mr. D. R. LeBlanc
Post Office Box 39200
Lafayette, Louisiana 70503

Gentlemen:

Reference is made to your Initial Development Operations Coordination Document (DOCD) and Environmental Report received June 7, 1985, for Lease OCS-G 6737, Block 97, Ship Shoal Area. This DOCD includes the activities proposed for Platform A and Wells Nos. 1 and 2.

In accordance with 30 CFR 250.34, revised December 13, 1979, and Notice to Lessees and Operators No. 84-1, this DOCD has been determined to be complete as of June 21, 1985, and is now being considered for approval.

Your control number is N-2765 and should be referenced in your communication and correspondence concerning this DOCD.

Sincerely yours,
(Orig. Sgd.) A. Donald Girouir

D. W. Solanas
Regional Supervisor
Rules and Production

bcc: Lease OCS-G 6737 (OPS-3-2) (FILE ROOM)
OPS-3-4 w/Public Info. Copy of the DOCD and ER (PUBLIC RECORDS ROOM)
DO-6

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Office of
Program Services

JUN 24 1985

Records Management
Section

Tenneco Oil Exploration and Production

A Tenneco Company

Eastern Gulf Division

PO Box 39200
Lafayette, Louisiana 70503
(318) 981-7000



June 7, 1985

U. S. Department of the Interior
Minerals Management Service
P. O. Box 7944
Metairie, LA 70010

Attention: Mr. D. W. Solanas

Re: Development Operations Coordination Document
Ship Shoal Block 97
OCS-G-6737

Sir:

Attached please find nine (9) copies of the Development Operations Coordination Document relative to Tenneco Oil Company's lease referenced above.

Yours very truly,

D. R. LeBlanc
Sr. Production Analyst
Eastern Gulf Division

DRL:ws1

Attachment

MINERALS MANAGEMENT SERVICE

JUN 07 1985

EXPLORATION AND PRODUCTION

DEVELOPMENT OPERATIONS COORDINATION DOCUMENT
SHIP SHOAL AREA
BLOCK 97 (OCS-G-6737)

Tenneco Oil Company, as operator of the above referenced lease, plans to conduct development operations on said lease. These operations are to be conducted from the proposed OCS-G-6737 "A" Platform, to be located 4467' FSL & 6071' FWL of Ship Shoal Block 97.

The OCS-G-6737 Wells. No. 1 and No. 2 have already been drilled and no more wells are planned at this time. These two wells have also been completed. The proposed "A" Platform will be installed over these two wells. It is proposed that one "8" gas pipeline, approximately 39,091' in length will be laid to a subsea tie-in on Tennessee Gas Pipeline's 36" pipeline located in Ship Shoal Block 120.

The proposed schedule of events for this operation is as follows:

<u>DATE</u>	<u>PROPOSED OPERATIONS</u>
8-85	Install OCS-G-6737 "A" Platform, install production equipment and lay pipeline
9-85	Commence production

Please see the attached 6737 schematic and Environmental and Functional Loads chart for the OCS-G-6737 "A" Platform. The specifics of this platform will be detailed in the permitting process. The OCS-G-6737 "A" Platform is being designed for 100 year storm as per A. H. Glenn and Associates. The cathodic protection for the jacket members was designed for a minimum of 20-year life. The design and fabrication of this structure will be in accordance with the following codes and/or regulations.

1. The piling and jacket in accordance with API RE2A (latest edition) of the American Petroleum Institute;
2. All structural steel members comprising the main deck designed in accordance with the latest edition of the AISC Steel Construction Manual;
3. All welding and fabrication will be in accordance with the American Welding Society. Curbs, gutters, and drains will be installed in all deck areas.

The OCS-G-6737 "A" Platform will be equipped with a sufficient number of life jackets, work vests, life floats, four (4) life rings, a D-15 Fire Boss Unit with one remote reel (1500 lbs. dry chemical fire-fighting unit), several portable hand fire extinguishers strategically located and a U.S.C.G. approved First Aid Unit, all in accordance with U.S. Coast Guard regulations pertaining to firefighting equipment and life-saving appliance requirements for artificial islands and fixed structures on the Outer Continental Shelf.

Attached is a map of the proposed pipeline with all pertinent information included. An application for installation of the pipelines will be submitted prior to any work being done on it. The pipeline will be built in accordance with Title 49 CFR, Part 192 and OCS Order No. 9.

Please refer to Tenneco's Shallow Hazard Survey dated June 7, 1985.

An application to install the production equipment on the OCS-G-6737 "A" Platform will be submitted to the M.M.S. as per OCS Order No. 5 before any work is done.

Attached is a brief description of procedures and personnel included in our Oil Spill Contingency Plan. An approved copy is on file with M.M.S. The primary equipment to be used, including its location, deployment, and travel time is also listed.

See the attached listing of employee breakdown by operational phase.

Consumption of energy and material is negligible because of the short duration of this project.

Attached is a location map of the lease block relative to shoreline and the platform location and description of the onshore base facility. Water depth is approximately 29'.

Tenneco Oil Company will adhere to those applicable environmental safeguards outlined in OCS Order Number 1 through Number 14 regarding the drilling and production operations of the development wells. Tenneco Oil Company is a member of Clean Gulf Associates and such will utilize CGA manpower and equipment should the need arise in the event of an oil spill incident.

Tenneco Oil Company will not dispose drilling mud containing free oil into the Gulf. Curbs, gutters, and drains will be installed in all deck areas along with drip pans under the production equipment. All contaminants and treated water will be piped to a sump which automatically maintains the oil at a level sufficient to prevent the discharge of oil into Gulf waters, as per OCS Order Number 7. Tenneco Oil Company's personnel have been instructed in the techniques of equipment maintenance and operation for the prevention of pollution. Pollution inspections will be performed as per OCS order No. 7. All solid waste will be disposed of as per OCS Order No. 7.

Tenneco Oil Company's production facilities to be located in Ship Shoal 97 will be protected by the appropriate safety devices required by OCS Orders and API 14 C.

All wells completed in Block 97 will be equipped with subsurface safety devices as specified in OCS Order Number 5. These devices will be periodically tested as prescribed by the Supervisor. The SCSSV panel will control the downhole ball valves that would shut off the flow of production from the wellbore in the case of a major facility upset. The well Pilot Panel will monitor the pressures of each well and in the case of an undesirable event will actuate the SSV's (Surface Safety Valves). The Safety Control and Production Pilot panel will monitor the conditions of the production vessels, ESD stations, fusible plugs, and gas detectors. This panel will alarm annunciate, and actuate the appropriate device to alleviate or isolate any undesirable event. The production equipment is being designed to adhere to the following codes and regulations:

1. OCS Order Number 5
2. API RP 14D
3. API RP 14C, API RP 14E

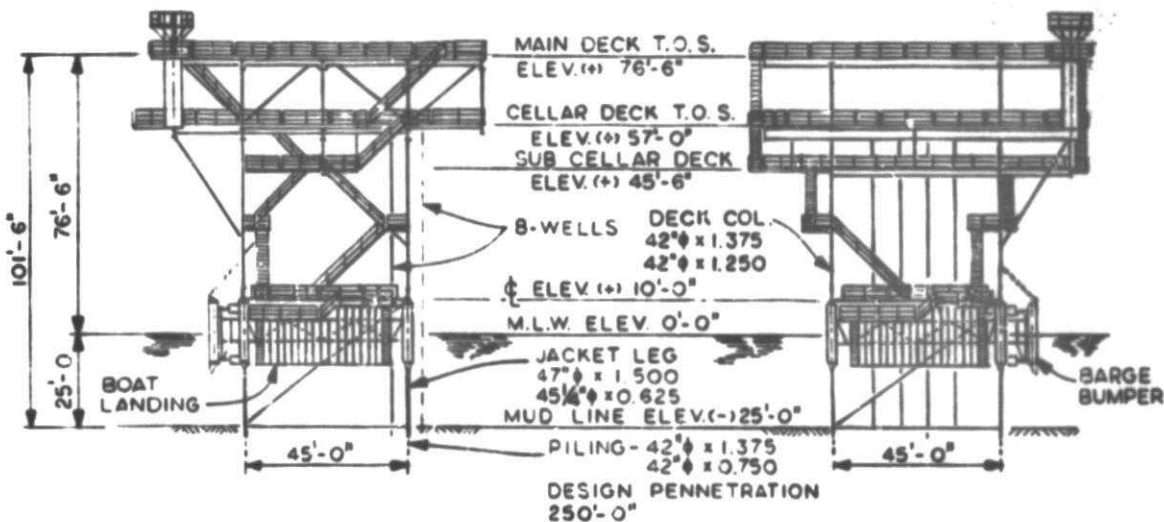
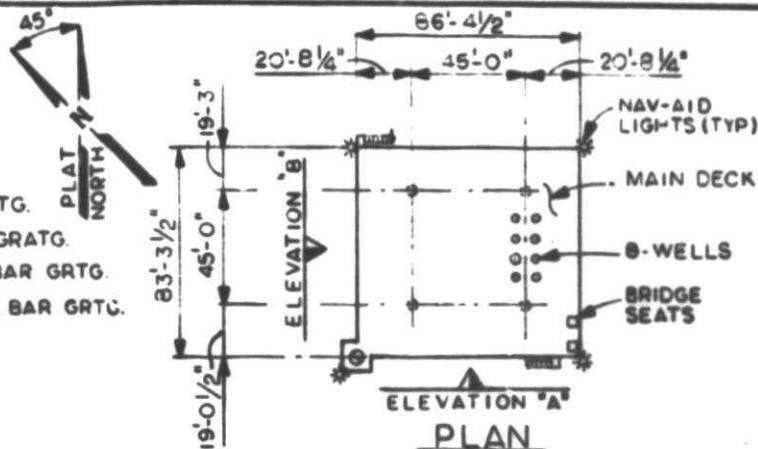
The productive life of this platform is estimated to be twenty (20) years. Please refer to the Air Emissions Attachment to comply with Air Quality Regulations 30 CFR 250.57.

Please see attached mud components listing.

Please refer to the Certificate of Coastal Zone consistency and the Environmental Report to comply with 30 CFR part 250 and 15 CFR Part 930.

DESIGN LOADS PER PILE
 MAX BEARING: 2500 KIPS
 MAX LATERAL: 180 KIPS

MAIN DECK $1 \times \frac{3}{16}$ SERR. BAR GRGT.
 CELLAR DECK $1 \times \frac{3}{16}$ SERR. BAR GRGT.
 SUB-CELLAR DECK $1 \times \frac{3}{16}$ SERR. BAR GRGT.
 WALKWAY AT (+) 10'-0" $1 \times \frac{3}{16}$ SERR. BAR GRGT.



ELEVATION "A"

ELEVATION "B"

TENNECO OIL COMPANY certifies that the design of this platform structure has been certified by a registered professional structural engineer or a civil engineer specializing in structural design, and the platform structure will be fabricated, installed, and maintained as described in the application and any approved modification thereto. Certified design and as-built plans and specifications will be on file at TENNECO OIL COMPANY's office in Lafayette, Louisiana.

APPLICATION BY

COMPANY TENNECO OIL CO.

SIGNATURE _____

TITLE _____ DATE _____

"A" DRILLING PLATFORM

LEASE NO. _____ BLOCK NO. 97

AREA SHIP SHOAL

SHEET _____ OF _____

TENNECO OIL COMPANY
 Ship Shoal Block 97
 "A" Drilling Platform

Environmental and Functional Loads

Wave Approach Direction	Horizontal Force (Kips) ¹	Vertical Force (Kips)	Overturning Moment (Ft.-K)
Longitudinal 270°	815	6403	52,170
Transverse 180°	629	6413	49,478 "
Diagonal 225°	737	6414	52,585

1. Horizontal force includes wind, wave, tide and current forces.

2. Vertical force can be itemized as follows:

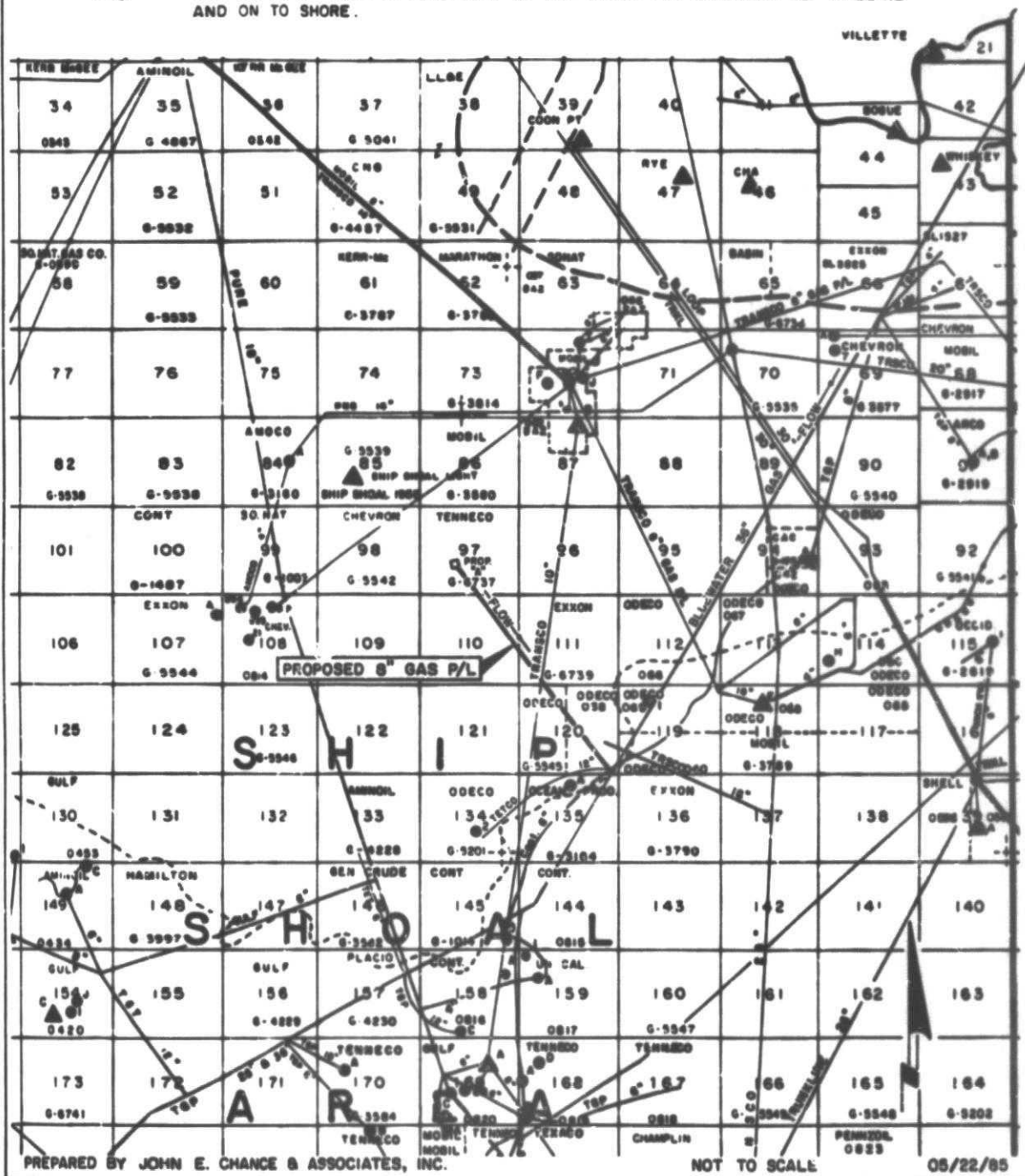
Structural Weight	1423 Kips
Equipment & Live Load	5143 Kips
Buoyancy 270°	163 Kips
180°	153 Kips
225°	152 Kips

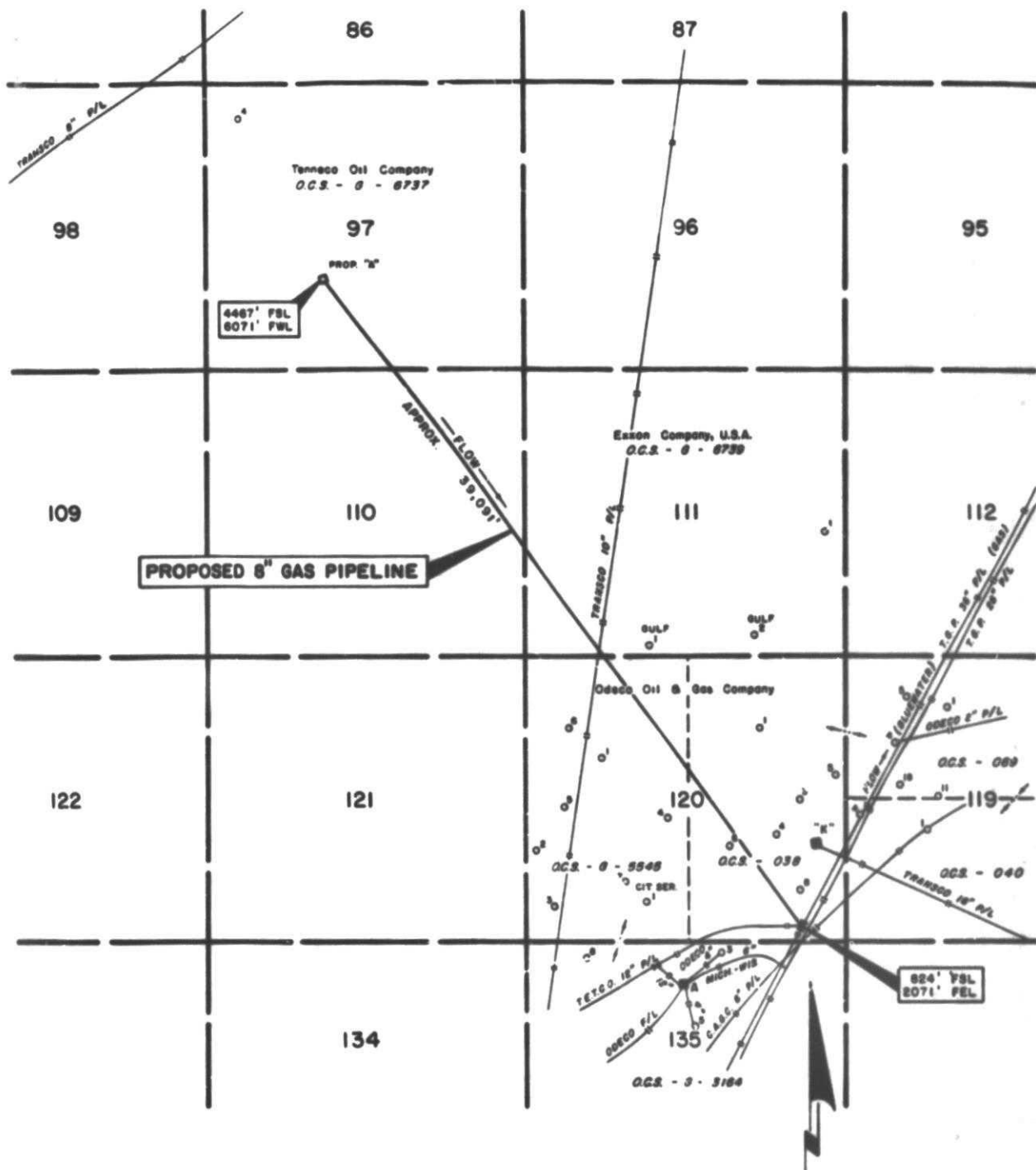
3. Design loads for pile are as follows:

Max. Pile Bending Moment	1953 Ft-K
Max. Pile Axial Load	2483 Kips

**TENNECO OIL COMPANY
VICINITY PLAT
TRANSPORTATION FACILITIES**

GAS SHIP SHOAL 97 PROP "A" STRUCTURE TO SHIP SHOAL 120 BLUEWATER 36" PIPELINE AND ON TO SHORE.





TENNECO OIL COMPANY

**DEVELOPMENT & PRODUCTION PLAN
PLATFORM & PIPELINE FACILITY MAP**

SHIP SHOAL AREA

SCALE: 1" = 6000' 05/22/85

PREPARED BY JOHN E. CHANCE & ASSOCIATES, INC.



TO: EASTERN GULF DIVISION
FOR: D. R. LEBLANC
FROM: J. C. SHANK
RE: SHALLOW HAZARD SURVEY - SHIP SHOAL BLOCK 97
SURFACE LOCATION FOR "A" PLATFORM

DATE JUNE 7, 1985

Surface Location 4467' FSL & 6071' FWL

Geophysical Data:

Multi-sensor high resolution geophysical survey by Intersea Research Corporation for Tenneco Oil Company.

1. Seafloor Hazards. There are no seafloor hazards noted near the surface location. All magnetic anomalies are to the north and east of the location.
2. Shallow Sediment Hazards. The surface location lies in an area clear of obvious amplitude anomalies.
3. Archaeological Features:

The Cultural Resource Service's report included with the shallow hazard survey states that no archaeological sites or features are present on block 97. There are numerous scattered magnetic anomalies located on the block to the north and east of the location.

Conclusion

The proposed surface location is acceptable and considered safe to install the platform.


John C. Shank

REPORTING OF OIL SPILLS OR SPILLS OF HAZARDOUS MATERIALS

OCS LEASES

The following governmental agencies will be notified depending on the amount spilled: (ALL SPILLS WILL BE REPORTED)

LESS THAN 6.3 BARRELS:

U. S. Coast Guard immediately, M.M.S. orally within twelve (12) hours and orally the Louisiana Department of Conservation if spill endangers the coast line. Confirm oral reports in writing on spill report form.

OVER 6.3 BARRELS:

U. S. Coast Guard, M.M.S. Oil and Gas Supervisor, M. M. S. District Supervisor immediately and orally. Orally to the EPA Regional Administrator, Louisiana Department of Conservation, and Louisiana Stream Control Commission. Confirm all oral reports in writing on spill report form.

All spills shall be reported to the U.S. Coast Guard immediately. Spills less than 6.3 barrels shall be reported to the appropriate M.M.S. District Office in the following manner:

If the spill occurs during the daylight hours of 7:00 A.M. through 5:00 P.M. Monday through Sunday, call their office and report spill to the radio operator. If the spill occurs at night, report spill the following day.

If the spill is 6.3 or more barrels, notify the appropriate District Supervisor immediately. Their answering service will give you their number.

The information required by the governmental agencies is:

Location of spill, date and time spill occurred, amount and type material lost, cause of incident and corrective action taken, size of slick, coloration, direction of movement, and weather conditions.

If spill is direct result of a load-out incident, the additional information will be required:

Name of Captain, his home address and telephone number, Z Card Name, call sign and agent.

Chemical dispersants will not be used on spills prior to obtaining approval from the appropriate governmental agencies.

EQUIPMENT

Tenneco Oil Company is a member of Clean Gulf Associates and will call upon them in the event of a spill. Also, we are a member of the Offshore Operator's Committee. This Committee maintains an inventory of member companies' equipment that is available for use by other members.

Clean Gulf Associates has a major base at Grand Isle, Louisiana and a sub-base at Houma, Louisiana.

All procedures and equipment are designed to be in compliance with OCS Order #7 (Pollution and Waste Control). Equipment to be used would mainly include the following:

- I. FAST RESPONSE, SKID-MOUNTED SKIMMER SYSTEM
 - A. Nearest Location - Houma, Louisiana
 - B. Response Time - Two (2) hours load-out, six (6) hours travel = 8 hours
 - C. Personnel Required - Four (4) men per shift

- II. BARGE-MOUNTED, HIGH VOLUME, OPEN SEA SKIMMER SYSTEM
 - A. Nearest Location - Grand Isle, Louisiana
 - B. Response Time - Two (2) hours load-out, eight (8) hours travel = 10 hours
 - C. Personnel Required - Thirteen (13) men per shift

- III. HELICOPTER SPRAY SYSTEM
 - A. Nearest Location - Grand Isle, Louisiana
 - B. Response Time - One (1) hour load-out, two (2) hour travel = 3 hours
 - C. Personnel Required - Two (2) men per shift

BREAKDOWN OF EMPLOYEES

(The exact number of employees may vary from day to day, however, the list provided is typical).

PRODUCTION OPERATIONS

<u>Position</u>	<u>No. of Men</u>
Foreman	1
Pumpers	<u>4</u>
TOTAL	5

DERRICK BARGE

<u>Position</u>	<u>No. of Men</u>
Barge Captain	1
Clerk	1
Foreman	2
Leadman	2
Anchor Operators	2
Crane Operators	2
Barge Welder	2
Barge Mechanic	2
Mechanical Helpers	2
Riggers	10
Cooks and Galley Hands	8
Welders	9
Welder Helpers	8

<u>Position</u>	<u>No. of Men</u>
Laborers	5
X-ray Technicians	2
Inspectors (TOC)	2
Divers	3
Diver Tenders	<u>3</u>
TOTAL	66

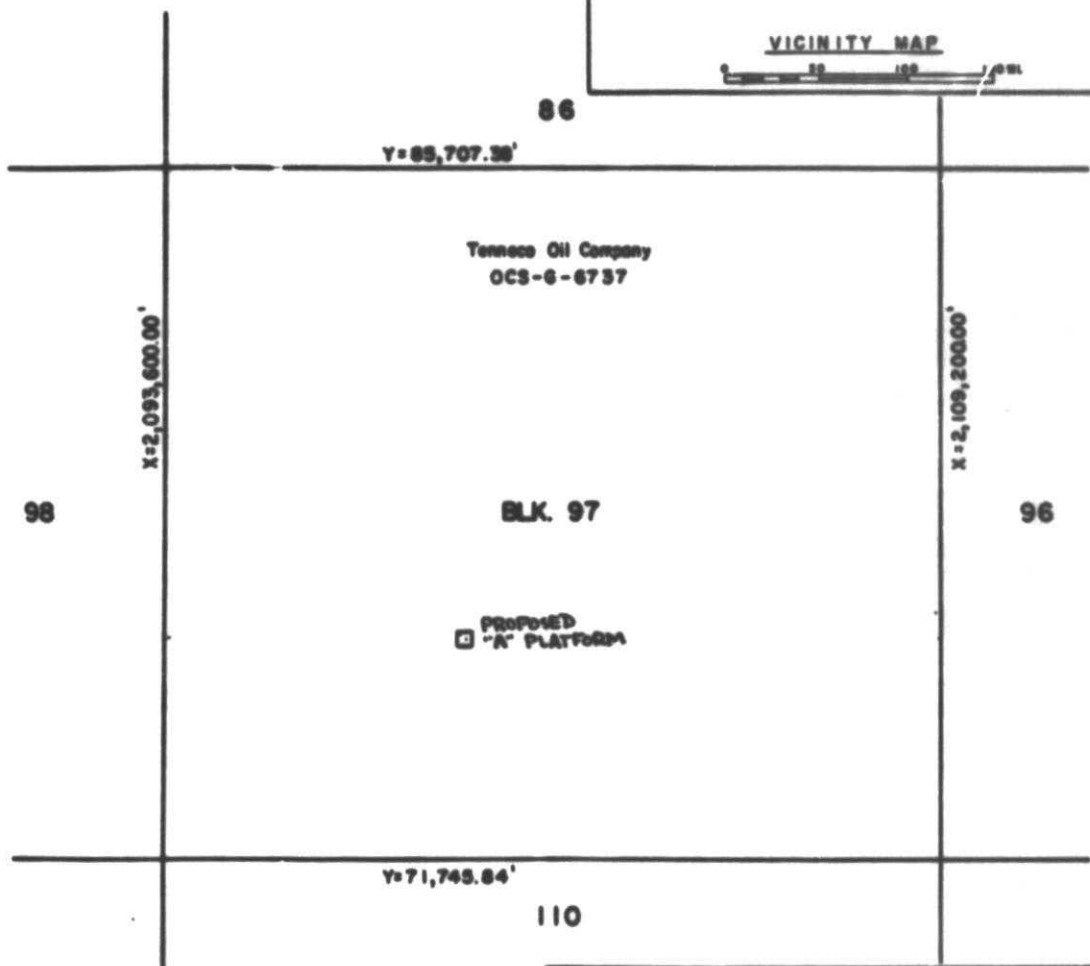
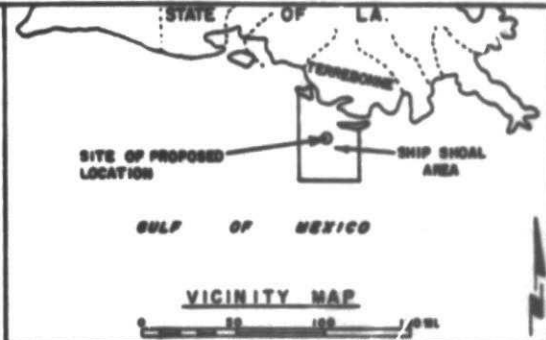
PLATFORM CONSTRUCTION OPERATIONS

<u>Position</u>	<u>No. of Men</u>
Superintendent	1
Field Engineer	1
Foremen	2
Riggers	8
Welder Helpers	4
Welder	6
Crane Operators	1
X-ray Technicians	2
Service Technicians	<u>6</u>
TOTAL	31

ONSHORE :

<u>Position</u>	<u>No. of Men</u>
Warehouse and wharf	6
Helicopter	3
Crew Boat	6
Supply Boat	<u>10</u>
TOTAL	25

Assuming all phases of this Development/Production Plan are being conducted simultaneously, as many as 130+ personnel could be involved, both onshore and offshore. In all likelihood, no more than 75 personnel will be involved at any one time.

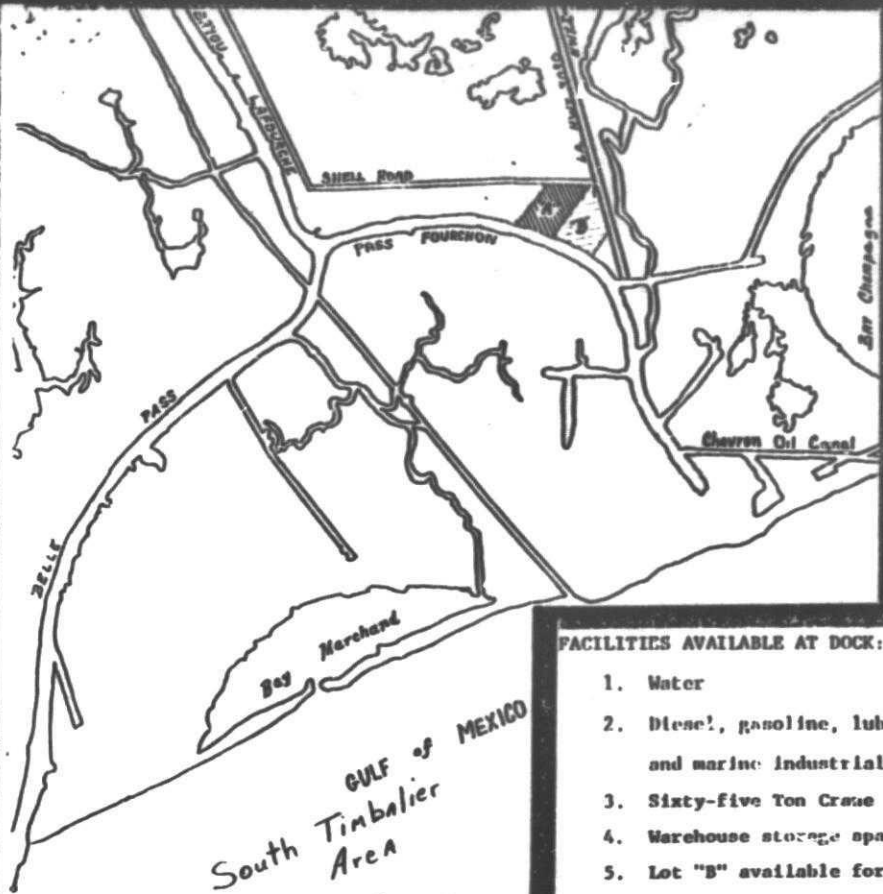


VICINITY SHEET



**PROPOSED MINERAL DEVELOPMENT
SHIP SHOAL AREA BLOCK 97
GULF OF MEXICO**

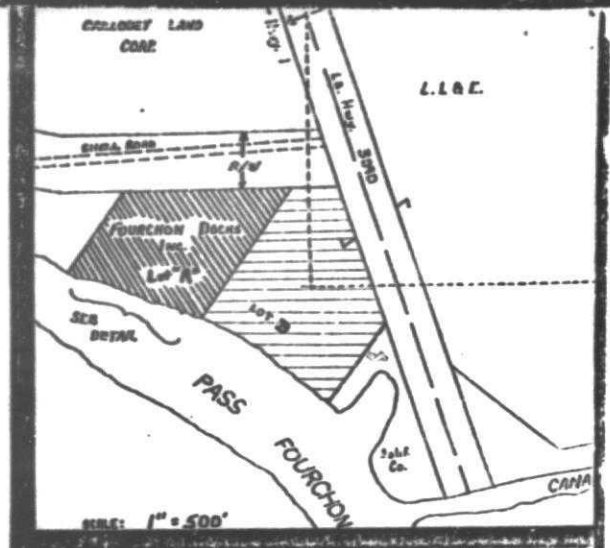
APPLICATION BY **TENNECO OIL COMPANY**
JULY 11, 1984 **LAFAYETTE, LA.**



South Timber Area
GULF of MEXICO

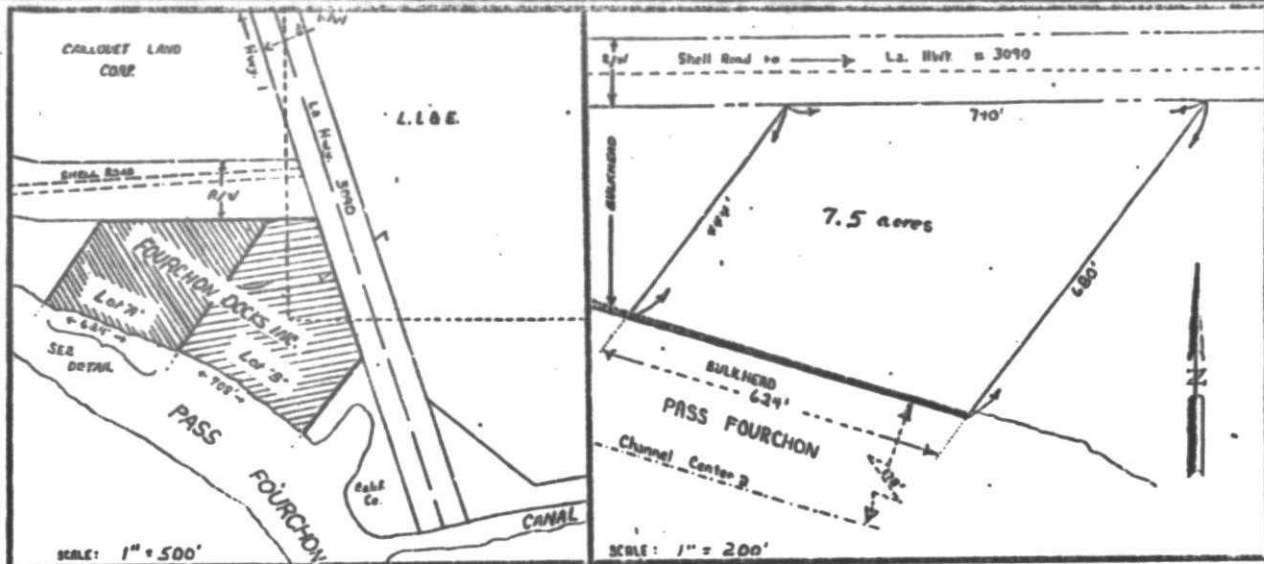
FACILITIES AVAILABLE AT DOCK:

1. Water
2. Diesel, gasoline, lubricants and marine industrial cleaners
3. Sixty-five Ton Crane
4. Warehouse storage space
5. Lot "B" available for expansion



FOURCHON DOCKS INC.

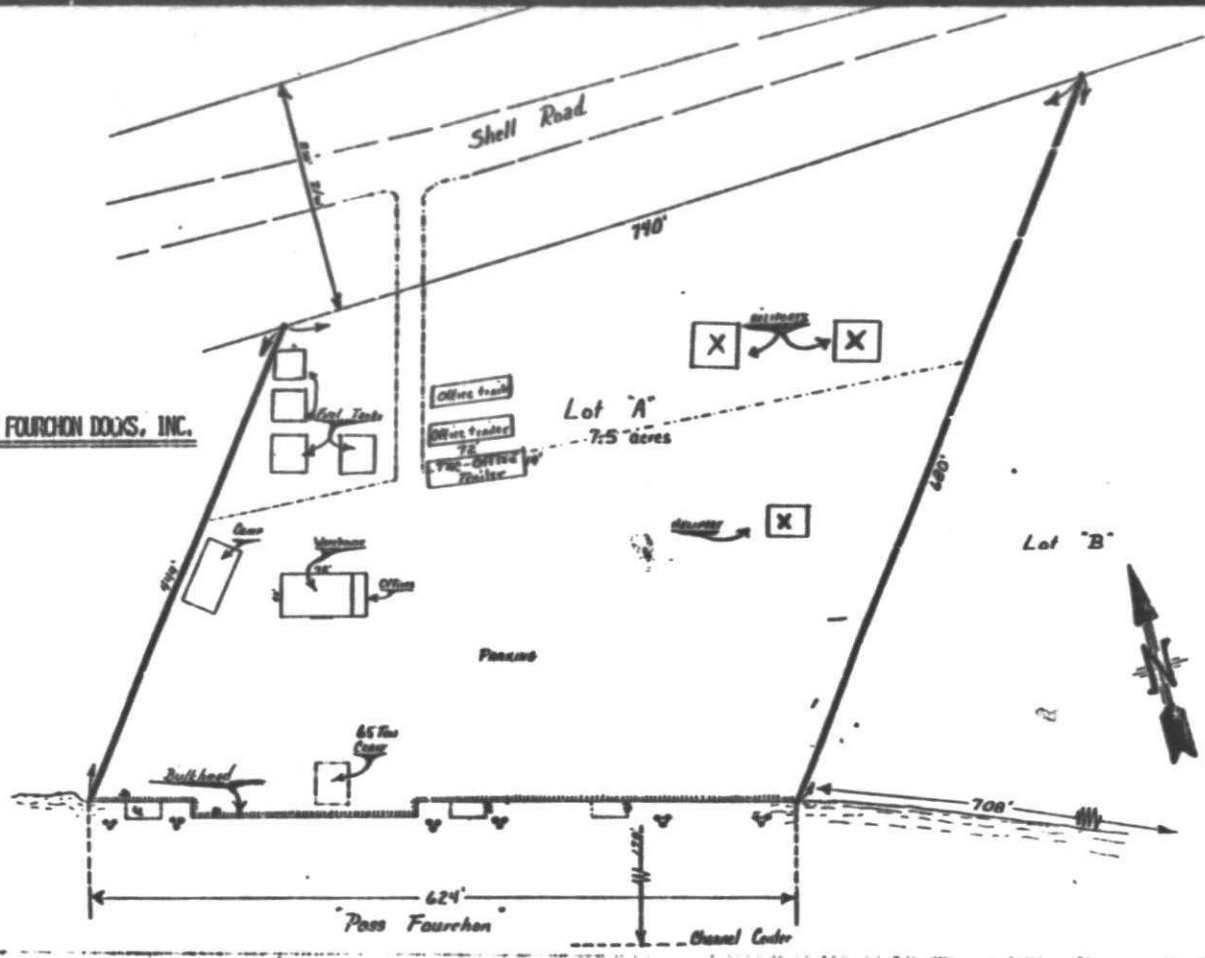
MAP SHOWING PROPERTY OF
FOURCHON DOCKS INC. IN
SECTIONS 13 & 24 OF
T-23-S - R-22-E IN
LAFOURCHE PARISH, LOUISIANA



FOURCHON DOCKS INC.

MAP SHOWING PROPERTY OF
 FOURCHON DOCKS INC. IN
 SECTIONS 13 & 24 OF
 T-23-S - R-22-E. IN
 LAFOURCHE PARISH, LOUISIANA

PROPERTY OF FOURCHON DOGS, INC.



AIR QUALITY CALCULATIONS

TENNECO OIL COMPANY

DEVELOPMENT & PRODUCTION

SHIP SHOAL, BLOCK 97

"A" PLATFORM

The "A" Platform is to be set over two existing wells on Block 97. No additional drilling is planned at this time. Two generators will be placed on the platform, only one of which will run at any given time. The maximum horsepower rating for each should not exceed 250HP. Production is expected to begin in mid-September, 1985, with a projected life of twenty years for the field. Details of the calculations are presented in Tables 1 and 2. All projected emissions are below the maximums and this operation is therefore exempt.

TABLE 1

AREA Ship Shoal BLOCK 97 WELLS _____

PROJECTED EMISSIONS FROM EACH SOURCE
BY AIR POLLUTANT FOR 1985-2005
Year

DRILLING OPERATIONS - WELLS

SOURCE	AIR POLLUTANT (T/YR)				
	SO ₂	NO _x	CO	TSP	VOC
Drilling Rig Projected Emissions lb/day					
Transportation-- Cargo Boat, Crew Boat, & Helicopter lb/day					
250HP reciprocating compressor, lbs/day	.048	144	18.6	na	54
Miscellaneous 25% of Sub-Total					
TOTAL in lb/day	.048	144	18.6	na	54
TOTAL in Tons/year	.009	26.3	3.4	na	9.9

TABLE 2

AREA Ship Shoal BLOCK 97 WELLS _____

EXEMPTION CALCULATIONS

E = 3400 (D^{2/3}) for carbon monoxide
 E = 33.3 D for sulfur dioxide, nitrogen oxides, total suspended particulates, and volatile organic compounds
 D = 20 Statute Miles
 E = 25,044 CO
 E = 666 SO₂, NO_x, TSP, and VOC

POLLUTANTS	"E" (T/YR.)	1985-2005	EXEMPT
		HIGHEST YEAR PROJECTED EMISSIONS (T/Yr.)	
SO ₂	666	.009	yes
NO _x	666	26.3	yes
CO	25044	3.4	yes
TSP	666	na	na
VOC	666	9.9	yes

E = The emission exemption amount expressed in tons per year.

D = The distance of the facility from the closest on-shore area of a state expressed in statute miles.



Description	Dowell Fluid Services	IMCO Services	Baroid	Magco-bar	Milchem	Primary Application
DRILLING FLUID ADDITIVES						
Barite	DOW Ba	IMCO Bar	Baroid	Magco-bar	Mil-Bar	For increasing mud weight
Bentonite	DOW Gel	IMCO Gel	Aquagel	Magcogel	Mil-Gel	Viscosity and filtration control in water-base muds
Attapulgitite	DOW CeGel	IMCO Brinagel	Zeogel	Salt Gel	Salt Water Gel	Salt water viscosifier
DISPERSANTS						
Sodium Acid Pyrophosphate	DOW Sapp	Sapp	Sapp	Sapp	Sapp	Thinner for low pH fresh-water
Sodium Tetrphosphate	DOW Phos	IMCO Phos	Barofos	Magco-Phos	Oil Fos	Thinner for low pH fresh-water
Modified Tannin	Desco	Desco	Desco	Desco	Desco	Thinner for fresh-water and salt water muds alkalinized for pH control
Processed Lignite	DOW Lig	IMCO-Lig	Carbonox	Tannathin	Ligco	Dispersant, emulsifier and supplementary additive for fluid loss control
Causticized Lignite	DOW CeLig	IMCO Thin	CC-16	Caustilig	Ligcon	Caustic-lignite dispersant, emulsifier, and supplementary fluid-loss additive
Modified Lignosulfonate	DOW Experse	IMCO VC-10	Q-Broxin	Spersene	Uni-Cal	Dispersant and fluid-loss control additive for water-base muds
FLUID LOSS CONTROL AGENTS						
Pregelatinized Starch	DOW Celoid	IMCO Loid	Impermex	My-Lo Jel	Milstarch	Controls fluid loss in saturated salt water, lime and SCR muds
Sodium Carboxy-Methyl Cellulose	DOW CMC (Regular)	IMCO CMC (Regular)	Cellex (Regular)	Magco CMC (Regular)	Milchem CMC (Med-Vis)	For fluid-loss control and barite suspension in water-base muds
Sodium Carboxy-Methyl Cellulose	DOW CMC (Hi-Vis)	IMCO CMC (Hi-Vis)	Cellex (Hi-Vis)	Magco CMC (Hi-Vis)	Milchem CMC (Hi-Vis)	For fluid-loss control and viscosity building in low solids muds
Polyanionic Cellulosic Polymer	Drispac	Drispac	Drispac	Drispac	Drispac	Fluid-loss control additive and viscosifier in salt muds



Description	Dowell Fluid Services	IMCO Services	Baroid	Magcober	Milchem	Primary Application
FLUID LOSS CONTROL AGENTS (cont.)						
Polyanionic Cellulosic Polymer	Drispac SuperLo	Drispac SuperLo	Drispac SuperLo	Drispac SuperLo	Drispac SuperLo	Primary fluid-loss additive, secondary viscosifier in salt muds
LUBRICANTS, DETERGENTS, EMULSIFIERS, SURFACTANTS, DEFOAMERS						
Processed Hydrocarbons	Soltex	Soltex	Soltex	Soltex	Soltex	Used in water-base muds to lower downhole fluid loss and minimize heaving shale
Water Dispersible Asphalts	DOW WallKote	IMCO Holecoat		StabilHole	ITI-W'D	Lubricant and fluid-loss reducer for water-base muds that contain no diesel or crude oil
Oil Soluble Surfactants	DOW WallFree	IMCO Freepipe	Skot-Free	Pipe Lax	Petrocote	Nonweighted fluid for spotting to free differentially stuck pipe
Blend of fatty acids, sulfonates and asphaltic materials	DOW Sacked WallFree	IMCO Spot	SF 100			Invert emulsion that may be weighted to desired density for spotting to free differentially stuck pipe
Detergent	DOW DMD	IMCO MD	Con Det	D-D	Milchem	Used in water-base muds to drop sand, reduce torque and minimize bit-barrel drag
An Organic Entity Neutralized with Amines	DOW BioLube	IMCO LubriKleen	Torq Trim	DOS-3	Mil-Plate 2	Supplies more lubricating properties than greases without environmental pollution
Liquid Surface Active Agent	DOW Defoamer	IMCO Defoam-L				Defoamer for water-base muds
LOST CIRCULATION MATERIALS						
Fibrous Material	DOW Fiber	IMCO Fiber	Fibertex	Mud Fiber	Mil-Fiber	Filler as well as matting material
Nut Shells: Fine	DOW PLG-F	IMCO Plug	Wall-Nut	Nut-Plug	Mil-Plug	Most often used to prevent lost circulation
Medium	DOW PLG-M	IMCO Plug	Wall-Nut	Nut-Plug	Mil-Plug	Used to regain lost circulation



Description	Dowell Fluid Services	IMCO Services	Baroid	Magcober	Milchem	Primary Application
LOST CIRCULATION MATERIALS (cont.)						
Nut Shells: Coarse	DOW PLG-C	IMCO Plug	Wall-Nut	Nut-Plug	Mil-Plug	Used where large crevices or fractures are encountered
Ground Mica: Fine	DOW Mica	IMCO Myca	Micatex	Magco-Mica	Milmica	Used for prevention of lost circulation
Coarse	DOW Mica	IMCO Myca	Micatex	Magco-Mica	Milmica	Used to regain lost circulation
Combination of granules, flakes, and fibrous materials of various sizes in one sack	Kwikseal	Kwikseal	Kwik-Seal	Kwik-Seal	Kwik-Seal	Used to regain lost circulation
CORROSION INHIBITORS						
Filmforming Amine	DOW FilmKote					
A Catalyzed Sodium Bisulfite	DOW Oxban S-10					Oxygen Scavenger
SPECIALTY PRODUCTS						
Bentonite Extender	Benex	IMCO Gelex	Benex	Benex	Benex	Increases yield of bentonite to form very low-solids drilling fluid
OIL-MUD ADDITIVES						
Primary Emulsifier	DOW EMA and DOW EMS	IMCO Kenol-S(L) and IMCO Ken-X Conc.1(L)	Invermul	Vertoil	Carbo-Tec(D) and Carbo-Tec(L)	Primary additives to form stable water-in-oil emulsion
Viscosifier Gelling Agent	DOW PreGel	IMCO Ken Gel and IMCO Ken-X Conc.2	Gel-Tone and Petro-Tone	VG-69	Carbo-Gel	Provides viscosity weight suspension and filtration control
Stabilizes Br. whole Conditions	DOW Premix	IMCO VR				Stabilizes running shale, improves emulsion, weight suspension, and fluid loss under high temperature conditions

This mud is a non-oil base mud and will be treated prior to disposal into the Gulf.

COASTAL ZONE MANAGEMENT
CONSISTENCY CERTIFICATION

Development Operations Coordination Document
Type of Plan

Ship Shoal Block 97
Area and Block

OCS-G-6737
Lease Number

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

Tenneco Oil Company

Lessee or Operator

J. L. Gregory *J. L. Gregory*
Vice President

Certifying Official

June 7, 1985

Date

JUN 07 1985

REGIONS AND PRODUCTION

OUTER CONTINENTAL SHELF DEVELOPMENT OPERATIONS COORDINATION DOCUMENTS
ENVIRONMENTAL REPORT, SHIP SHOAL, BLOCK 97
"A" PLATFORM

TENNECO OIL COMPANY
Exploration & Production
Lafayette, Louisiana

contact person
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P. O. Box 39200
Lafayette, Louisiana 70503
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June 3, 1985

prepared by
MERIDIAN RESEARCH CORPORATION
Box 3804
Lafayette, Louisiana 70502-3804

(2) DESCRIPTION OF PROPOSED ACTION

(A) TRAVEL MODES AND ROUTES

Tenneco Oil Company plans to begin production of hydrocarbons from Ship Shoal Block 97. A platform ("A" Platform) is to be set over two existing wells with the operation scheduled to begin on or about August 1, 1985. Production is expected to begin around mid September. The operation will be supported from Fourchon.

Since no drilling is scheduled, boat and helicopter traffic will be limited. During the setting of the platform and the preparations for production, boat traffic could average one round trip every other day. Little or no helicopter traffic is expected. Boat traffic to the Block from Port Fourchon is normally directly to the Block from the shore base, weather and traffic conditions permitting.

(B) SUPPORT BASE

The support base will be the Tenneco facility at Fourchon, Louisiana. This base occupies a 7.5 acre site with 624 feet of water frontage. Facilities include water, fuels, lubricants, marine and industrial cleaners, and a 65 ton crane and warehouse. These facilities are considered adequate to support the operations planned and no additional personnel or expansion of physical facilities is likely to result from these activities.

(C) NEW SUPPORT PERSONNEL

No new onshore facilities such as new land bases, refineries, storage facilities, pumping stations, boat docks, helicopter pads, or fueling facilities are expected to be required. The hydrocarbons will go into the present offshore pipeline network via a connection at South Timbalier Block 120. These products will be processed in existing

onshore facilities which are considered adequate to handle this new production without significant alteration, expansion, or the hiring of new personnel.

(D) NEW TECHNIQUES OR UNUSUAL TECHNOLOGY

No new techniques or unusual technology is expected to be required for this operation.

(E) MAPS OF PROPOSED ACTIVITY

Louisiana is the only affected state. A map is included in the documents showing the location of the platform and any existing or new facilities planned for Block 97.

(F) TRANSPORTATION OF OIL OR GAS

The hydrocarbons to be produced for this Block will be routed through a new pipeline to South Timbalier Block 120 where they will go into the existing offshore pipeline network. Production is anticipated to begin during mid-September of 1985 with the field having an expected useful life of 20 years. Refining of any oil/condensate is likely to occur along the Gulf coast in either Texas or Louisiana with a substantial portion of any gas produced likely to be exported to states east of the Mississippi River.

(3) DESCRIPTION OF THE AFFECTED ENVIRONMENT

(A) PHYSICAL AND ENVIRONMENTAL

(1) Commercial Fishing

Commercial fishing off the coast of Louisiana is centered on the harvest of menhaden, shrimp, unclassified industrial bottomfish, and reef type fishes such as snapper and grouper. Louisiana usually leads the nation in the tonnage landed and ranks near the top in the value of the catch. The

fisheries extend from the shallow bays and inlets to the edge of the continental shelf at a depth of approximately 600 feet.

Menhaden are a schooling species found near the coast and generally are taken in waters of 50 feet or less in depth and within 12 to 15 miles of shore. Block 97 has water depths in the 18-34 foot range and lies about 20 miles from the nearest land. Thus it lies just seaward of the menhaden fishery and no impacts are expected.

Shrimp are taken in large quantities from the coastal and inland waters to approximately the 100 foot depth contour. Beyond this point to the edge of the continental shelf at about 600 feet, the catch is much smaller. Water depths over Block 97 place it within the prime shrimping grounds. The Louisiana shrimp catch usually totals between 55,000,000 and 100,000,000 pounds annually (heads on). The 1983 catch totaled 77,000,000 pounds, a 15% drop from the 1982 catch of 90,530,000 pounds ("The Fish Boat", August, 1984). The total catch during any given year is related to water temperatures and salinities during the spring in the inland waters. At this time the total shrimp harvest is considered to be at its maximum sustainable limit. The setting of a platform in Block 97 will remove an area of seabottom of up to five acres from that currently available to shrimpers. The amount of seabottom removed is so small in relation to that remaining open, that no detectable impacts are foreseen to the annual shrimp harvest.

Unclassified industrial bottomfish are harvested by bottom trawls and are used as pet food, fertilizer, and in some cases for human consumption. Block 97 lies well within this fishery. Again, up to five acres of seabottom will be removed from that currently available to commercial trawlers. However, this fishery is an underutilized fishery, and combined with the

vast areas of seabottom remaining available, no detectable impacts to this fishery are foreseen.

There is an important hook and line fishery in this area for many species that frequent hard bottom areas or the underwater portions of production platforms. Since neither condition presently exists in Block 97, little hook and line fishing is likely at this time. When the new platform has been in place long enough for marine organisms to colonize it, the environment here should be enhanced for species such as seatrouts, redfish, sheephead, flounder, sea catfish, and mackerel. The water depths here are marginal for snapper and grouper, hence, little if any impact on these species is foreseen. The artificial reef function of these platforms has been found in the Gulf of Mexico to actually increase the numbers of free swimming fish, rather than merely concentrate fish already present. Thus a positive impact is foreseen to commercial fishermen seeking the aforementioned and associated species of fish.

(2) Shipping

There are no shipping fairways, anchorage areas, or transit zones on or in the immediate vicinity of Block 97.

(3) Recreation

The primary recreational activity off Louisiana is sport fishing and diving. This activity is usually concentrated around hard bottoms (snapper banks) or the underwater portions of production platforms. Since neither of these conditions is presently found on Block 97, recreational use is considered minimal. With the installation of the new platform, the environment will be enhanced for various species of fish as noted in the section on commercial fishing. Since Block 97 is relatively close to shore

and within reach of onshore launch facilities, an increased recreational use can be anticipated once the platform has been in place long enough to serve as an artificial reef. Thus a positive impact is foreseen for recreational fishermen and divers.

(4) Cultural Resources

No further archaeological analysis is required at this time.

(5) Ecologically Sensitive Features

No ecologically sensitive features have been identified on or in the immediate vicinity of Block 97.

(6) Pipelines and Cables

No pipelines or cables were identified on Block 97 during the analysis of the shallow hazard data.

(7) Other Minerals

There are no known plans at this time for the development of minerals other than hydrocarbons for Block 97.

(8) Ocean Dumping

Ocean dumping is prohibited in this area.

(9) Endangered or Threatened Species

The coastal waters off Louisiana are utilized to some degree by five endangered species of whales, three endangered species of sea turtles, and two threatened species of sea turtles. The endangered species are the blue whale, sei whale, sperm whale, humpback whale, finback whale, Atlantic ridley turtle, hawksbill turtle, and leatherback turtle. Threatened species are the loggerhead and green sea turtles. Of the whale species, the sperm whale is perhaps the most common in the Gulf of Mexico and the blue whale the least common, with only two sightings of the latter having been reported. The other three species of whales may be considered uncommon in the Gulf, although the humpback was once hunted commercially in the central Gulf during the 19th. century (Schmidly, 1981). The leatherback turtle is believed to prefer the deeper oceanic waters while the other species of turtles are considered to be more coastal in nature. The turtles also tend to prefer the more saline waters and are not very common near river mouths or other similar points where fresh water enters the Gulf. Whales likewise prefer the more salty waters and are found most frequently over the continental slope where the water exceeds 600 feet in depth.

General over exploitation of both turtles and whales for food and other products has been the major cause of their decline. A few nations still harvest whales and turtles are taken in many parts of the world. Additionally, turtles are often killed when they become trapped in fishing nets and are unable to surface for air. Their nesting grounds are often disturbed and the eggs may be harvested for food. New evidence indicates that turtles are being killed through the ingestion of plastic trash, that when floating in the water, appears to resemble jellyfish (a favorite turtle food).

Support vessel operations, pipeline laying or trenching, platform setting, and other oil and gas related activities have the potential to cause a minor and limited disturbance to whales or turtles. Both species are highly mobile and are likely to avoid areas where such activity occurs. To date, no scientific evidence has been found that would indicate that oil and gas activities of the type mentioned above has been of significance in the decline of turtle and whale populations. Consequently, the work proposed in this document is not expected to produce any significant or lasting impact to turtle or whale populations.

(4) UNAVOIDABLE ADVERSE IMPACTS

Galloway (1981) conducted a comprehensive review of petroleum related activities in the Texas-Louisiana continental shelf region. His report examined potentially adverse impacts associated with oil and gas activities such as discharge of drilling fluids, disposal of drill cuttings, produced formation waters and oil spills.

Drill cuttings are pieces of the formation cut by the drill bit and brought to the surface. They are separated from the fluid or mud and discharged overboard on a continuous basis during drilling. The larger cuttings tend to move directly towards the seafloor and in shallow water may accumulate in piles or mounds. In deeper water, and where wave and current action are vigorous, no mounds may develop. If a mound or pile develops, any immobile benthic organisms trapped beneath it will be smothered. In time the mounds subside and or dissipate and recolonization occurs so that the seafloor returns to a condition similar or identical to that in existence before drilling occurred.

Large scale discharge of drilling mud occurs on an average of 8-10 times during the drilling of a particular well. Also, as the cuttings are discharged, some drilling mud will be entrained on them and will wash free as the cuttings drift towards the bottom. The clay particles in the drilling fluid tend to flocculate on contact with salt water, and along with the finer cuttings, will form a turbid plume down-current from the drilling rig. When a large scale discharge of mud occurs, this plume may reach down-current for a distance of as much as 3,200 feet before it is completely diluted. The toxicity of these particles is very slight and there is little impact on the water column. The primary impact is a reduction in light

penetration that may reduce the primary production of phytoplankton.

The primary effluent released from petroleum production platforms in the Gulf is the briny water from the target geological formation; this effluent is called formation water. Formation waters are separated from the hydrocarbons such as oil, gas, and condensate before being discharged. A typical production platform will generally discharge no more than 1,500 barrels of formation water on a daily basis. This water normally contains high concentrations of inorganic salts and very low levels of hydrocarbons and other organic compounds. Various studies have shown that the formation waters are slightly toxic to marine life only within a few yards of the point of discharge. Within a short distance, dilution and bacterial action tend to break down the substances present and reduce the salinity to ambient levels. The products of the bacterial action may then contribute to the support of the food chain as nutrients. Impacts on water quality and marine life thus tend to be minimal.

Accidental oil spills or blowouts are always a concern with respect to oil and gas operations. However, close adherence to applicable rules and regulations and good industry safety practices have minimized the chances of a damaging spill. In fact, more oil now enters the Gulf from the flow of the Mississippi River than from OCS oil and gas operations.

The construction of product lines to nearby pipelines or other platforms will temporarily disrupt the population of benthic organisms along the routes and will result in a small increase in turbidity as the lines are put in place. Recolonization of the bottom will occur rapidly and the effects of the increased turbidity on primary productivity of phytoplankton should be minimal and of very short duration. No long term impacts from pipeline laying

operations are forseen.

As previously indicated, installation of the platform will remove up to five acres of seabottom from that potentially available to bottom trawlers. The amount of seabottom affected is so small in relation to that remaining available, that no detectable impacts are anticipated. On the other hand, marine productivity should be increased because of the artificial reef function of the underwater portion of the platform. At this time about 4,000 acres of reef habitat has been added to the Gulf off Louisiana by the installation of platforms.

In summary, adverse impacts caused by the installation and operation of these production facilities are expected to be localized and minor. No major or permanent damage to the marine environment or to man's use of it is anticipated.

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(6) STATEMENT

The proposed activity will be carried out and completed with the guarantee of the following items:

- (a) The best and safest techniques will be utilized throughout the project. This includes meeting all applicable requirements for equipment types, general project layout, safety systems and equipment and monitoring systems.
- (b) All operations will be covered by a Minerals Management Service approved oil spill contingency plan.
- (c) All applicable Federal, state, and local requirements regarding air emission and water quality and discharge for the proposed activities, as well as any other permit condition, will be complied with.