

Reply Refer To: RP-2-1

SEP 27 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 Plan of Exploration and Environmental Report received September 13, 1985, for Lease OCS-G 7751, Block 129, Ship Shoal 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 has been determined to be complete as of September 27, 1985, and is now being considered for approval.

Your plan control number is N-2295 and should be referenced in your communication and correspondence concerning this plan.

Sincerely yours,

L
Original Signed: Eric L. Primeaux

D. W. Solanas
Regional Supervisor
Rules and Production

bcc. Lease OCS-G 7751 (OPS-3-2) (FILE ROOM)
OPS-3-4 w/Public Info. Copy of the plan and ER (PUBLIC RECORDS ROOM)
DC-6

MJTolbert:blb:9/13/85 Disk 3A

Office of
Program Services

SEP 30 1985

Information Services
Section

Tenneco Oil
Exploration and Production

A Tenneco Company

Eastern Gulf Division

PO Box 39200
Lafayette, Louisiana 70503-9200
(318) 981-7000

September 13, 1985

U. S. Department of the Interior
Minerals Management Service
P. O. Box 7944
Metairie, Louisiana 700210

Attention: Mr. D. W. Solanas

MINERALS MANAGEMENT SERVICE

SEP 18 1985

TELETYPE UNIT

Re: Exploration Plan
Ship Shoal Block 129
OCS-G-7751

Sir:

Attached please find nine (9) copies of the Exploration Plan, Environmental Report and Consistency Certification relative to Tenneco Oil Company's OCS-G-7751 Lease in Ship Shoal Block 129.

The Summary of Exploration Wells, the Structure Map and the Schematic Cross Sections are considered proprietary data to be exempt from disclosure under the Freedom of Information Act and should therefore not be made available to the public or provided to any affected state or the executive of any local government. In this respect, proprietary data have been removed from all but five (5) copies of the Exploration Plan.

Yours very truly,

TENNECO OIL COMPANY

D.R. LeBlanc

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

DRL:ws1

Attachment

PLAN OF EXPLORATION
SHIP SHOAL AREA
BLOCK 129 (OCS-G-7751)

Tenneco Oil Company, the operator of the above referenced lease, proposes to conduct exploratory drilling operations on said lease for evaluating the potential commercial quantities of oil and/or gas.

Plans are to commence drilling operations on or about November 1, 1985 for the OCS-G-7751 Well No. A utilizing the "Marlin VI" jack-up rig. This well will require approximately 45 days to drill. The remainder OCS-G-7751 wells will be drilled at a later date, contingent on the results of the No. A well. These wells will also require 45 days each to drill and all exploratory operations will be completed by the end of 1990. If these wells are drilled, it is anticipated that the "Marlin VI" will also do the drilling.

Attached are the drilling rig specifications of the "Marlin VI" indicating the important features thereof, including features pertaining to safety and pollution prevention and control. This rig will be equipped with typical pollution control equipment, including, but not limited to storage facilities, deck drains, sumps, drip pans, and sewage treatment facilities. Life saving appliances and firefighting equipment of the "Marlin VI" will be in accordance with the U. S. Coast Guard regulations.

Attached is Tenneco Oil Company's Shallow Hard Survey for Wells A through D. This is supplemented by a Archeological and Hazard Survey conducted by John E. Chance & Associates, Inc. which has been previously submitted. A listing of survey equipment is included in this survey. Also attached is a location plat of the leased block relative to the shoreline which depicts the proposed surface location. A description of the onshore base facility is included. Water depth in this area is approximately 50'.

The following are the proposed surface locations:

<u>WELL No.</u>	<u>PROPOSED SURFACE LOCATION</u>
A	3500' FSL & 1500' FEL
B	955' FSL & 707' FEL
C	3100' FSL & 1700' FEL
D	650' FSL & 575' FEL

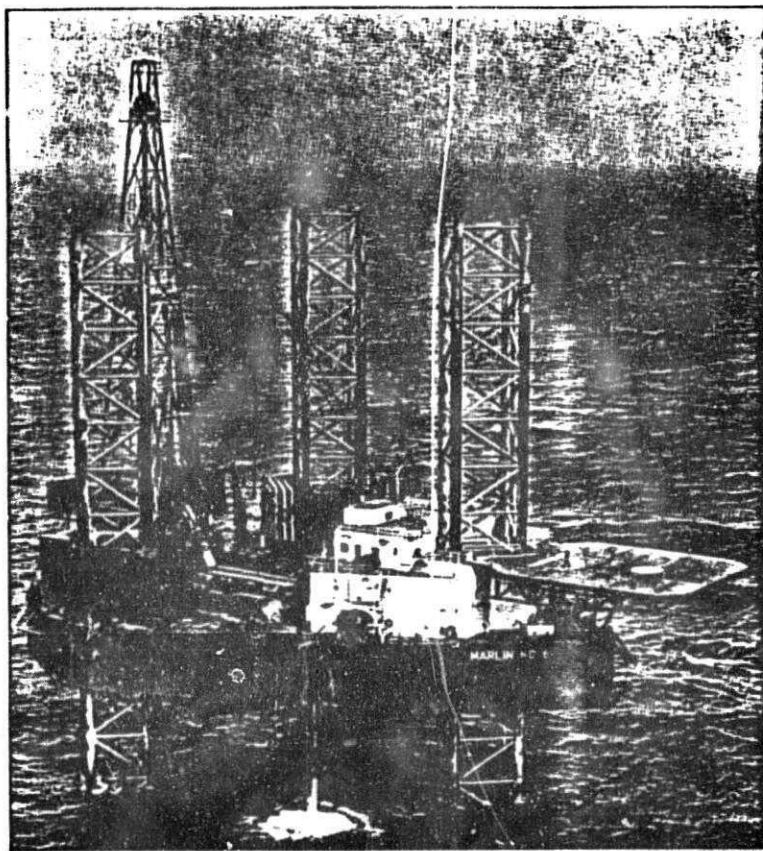
On the Summary of Exploration Wells are the proposed surface location, bottom hole location, measured depth and total vertical depth for each well. The structure map and schematic cross sections reflecting the most current geological/geophysical interpretation are attached for your review. These attachments are considered proprietary data and should be exempt from disclosure under the Freedom of Information Act (5 U.S.C. 552) and implementing regulations (43 CFR Part 2).

Please refer to the Air Emissions Section to comply with Air Quality Regulations 30 CFR 250.57.

A brief description of equipment, personnel, and procedures to be employed for preventing, reporting, and cleaning up a pollution spill, including equipment and deployment and travel time is attached.

See the attached list of mud components to be used during the drilling of these wells.

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.



MARLIN NO. 6, a self-elevating type mobile drilling platform, is one of the largest and most versatile offshore drilling rigs ever built. Its independent leg system and jacking system permit year-around operation over almost any type soil condition or ocean floor terrain in water depths up to 300 feet in non-hurricane and 250 feet during hurricane season. With its generous storage capacity for supplies and air-conditioned accommodations for a 54-man crew, MARLIN NO. 6 can operate independently for considerable periods of time without servicing from the shore.

EXHIBIT "A" PART II

GENERAL DIMENSIONS

The Marlin No. 6 consists of two principal parts:

1. The platform containing all working and living areas, heliport, and equipment. Platform is 208' long x 178' wide x 22' molded depth at sides. Slot in platform is 50' long x 50' wide with 22' cantilevered off the stern to complete the drilling slot.

Rig has the capability of drilling from the slot position or to skid off and cover a multi-well pattern on a fixed platform.
2. Three square trussed legs 22' on a side x 410' long, with a 48" diameter spud can.

FACILITIES AND EQUIPMENT

QUARTERS

Air conditioned quarters for 49 men, including galley, pantry, freeze and chill walk-in reefer, office, hospital, and storage areas. Maximum occupancy of each room is four men. The galley is equipped with modern electrical appliances including steam table and baking and barbecuing equipment. The mess room-galley is arranged for cafeteria style serving. A large recreation room is equipped with color television, card table, and comfortable chairs for off duty personnel.

A laundry with commercial type washer, extractor, and dryer is provided for the convenience of the crew.

A control room is provided topside for the complete operation of all jacking equipment, B.O.P. equipment, fog signals, and tank gauging.

Fluorescent lighting is installed throughout the platform and quarters. Machinery areas have mercury lights.

A 27 station Gai-Tronics five party phone system is installed in all critical areas for complete communication with all parts of rig with jacks for Gai-Tronics headsets located in all pod houses.

A Bio-Pure Model BP-30-SW-M treatment plant is provided for normal domestic sewage. The unit is powered by oil field electric motors. It uses two aeration pumps and has a capacity of 3,000 gallons per day.

STORAGE FACILITIES

- 3 Drilling-water tanks with a total of 5,530 barrels.
- 2 Potable-water tanks with a total capacity of 904 barrels.
- 3 Fuel-oil tanks with a total capacity of 4,134 barrels.
- 3 Active mud pits with a total capacity of 1,190 barrels.
- 3 Ballast tank (salt water) with a total capacity of 7,230 barrels.
- 6 Pre-load tanks (salt water) with a total capacity of 30,829 barrels.
- 1 Dirty lube oil tank with a capacity of 1,229 gallons.
- 1 Fuel oil day tank with a capacity of 2,704 gallons.
- 6 Pressure tanks with a total capacity of 6,300 cubic feet. Any of these tanks can be used for either barite or cement. A dual pneumatic pressure transfer system assists the loading, unloading, and transferring of bulk materials. A surge tank and weighing scales are provided for the weighing and mixing of barite. A surge tank is also provided for the mixing of bulk cement. A pressure vessel is provided for unloading of bulk materials delivered to the platform in bulk.

cans. Storage area is provided for 6,000 sacks of barite or cement with separate take on lines for barite and cement.

The pipe rack deck has adequate storage area for 12,000' of 5" drill pipe and necessary drill collars and 15,000' of 9 5/8" O.D. casing.

PAINTING AND CORROSION PROTECTION

All exterior surfaces of the platform, skid unit, and main deck area, are coated with inorganic zinc. The exterior areas excluding decks and legs are also coated with an epoxy color coat.

Interior machinery areas of the platform are finished with an alkyd enamel coating.

The legs are coated with inorganic zinc.

Exterior surfaces of the columns below the water-line are protected by zinc anodes. The interior surface of the leg footings are protected by galvalum anodes.

Interior surfaces of the drilling water and ballast tanks, pre-load tanks, and voids are coated with Oreco petroleum base inhibitor.

Interior surfaces of the potable water tanks are coated with epoxy.

The interior surfaces of active mud pits are coated with coal tar epoxy.

SAFETY EQUIPMENT

- 2 Brucker Survival Capsules Model 9091. This capsule has accommodations for 28 passengers, a toilet, water tight food and water storage compartments, and storage for tools and survival equipment. Capsule is powered by 40 HP Model 6.107 L₅ Westerbeke Engine for a maximum loaded speed of 4 3/4 knots.
- 2 Model 20-201 holding platforms to hold and support the Brucker capsule to the rig platform.
- 3 10-man life floats.
- 4 Ring buoys.
- 36 Life preservers.
- 1 General Alarm System.
- 1 Fixed dry chemical-type extinguishing system with 3 strategically located hose connections.
- 13 Fire stations.
- 22 10-lb. dry chemical fire extinguishers.
- 4 2½-gallon foam fire extinguishers.
- 1 Fog signal.
- 1 Set obstruction lights.
- 1 First aid kit.
- 1 Litter.

MACHINERY AND EQUIPMENT

Platform Jacking Equipment

- 1 National Jacking System--an electro-mechanical rack and pinion drive comprised of six gear boxes, two for each leg each with six individual electric gear motors and gear trains terminating at six pinions, which ride a double toothed rack on diagonally opposed leg chords. The rated jacking capacity for this system is 6,900 short tons at approximately 1.0 ft./min. The static holding capacity for this system is 12,600 short tons.
- 1 Control console located in control house. The controls are a push button system, operated

from the console. Each leg can be operated individually or all legs simultaneously.

Skid Jacking Unit

- 1 Hydraulic pump, driven by an AC electric motor with control console.
- 4 Hydraulic cylinders.

Air Compressors

For bulk cement and mud systems-two units Gardner Denver ACH, air cooled compressors with 30-HP AC electric motors.

- 1 Quincy QSI 740 rotary screw air compressor with a capacity of 740 CFM at 125 lb. PSI, driven by 150-HP electric motor.
- 1 Quincy 350 - capacity - 150 CFM at 125 lb. with 100-HP electric motor.

For start-up air, one unit: Stewart & Stevenson Model K-25 powered by a 12-HP Diesel engine. This unit is connected to the air receiver tank battery.

Pumps

- 2 Vertical-turbine, deep-well pumps: Johnson one-stage 16 LC rated at 2,000 GPM at 100' total head and 3,200 GPM at 70' head, with 75-HP AC electric motors.
- 2 Roper Diesel Fuel Transfer Pumps Model 2K-30-14-Standard fitted rotary pump powered by a 3-HP AC electric motor. These pumps are used for the transfer of fuel oil.
- 1 Roper 2-K-30-14-Standard fitted rotary pump powered by a 3-HP AC electric motor. This pump is used for the transfer of dirty lube oil.
- 2 Mission 2" x 3" R 11½ centrifugal pumps powered by 40-HP AC electric motor. These pumps are used for fire and bilge.

Miscellaneous

- 2 Roth Water System Pressure Sets, one for the potable water system and one for the washdown system, each containing a 1½-HP pump.
- 2 National Pre-estal Cranes with 65-ton capacity with 75' booms--located on top of jack houses on each side of the pipe rack.
- 1 Crane Unit 500 with 80' boom--max. lift 49,000 lb. with a 20' radius.
- 2 Lincoln Model SAE-400 Type S-7046-400 AMP motor drive DC Welding Machines.
- 1 Air Conditioning and Heating System, rated at 40 tons.
- 1 King Remote Platform Tank Gauging System. Gauges located in the control room, calibrated to read in kips (½ ton increments) and in feet and inches, for each of the tanks.
- 1 Harris Single side band radio RF communications Model 201 M.
- 1 Entech Model V-110 VHF Marine Radio.
- 1 Nirex JWP-36-C100 fresh water distiller with a maximum capacity of 9,500 GPD.

POWER EQUIPMENT

- 2 EMD Model S16E1G, 2,250 HP diesel electric power packages. Each unit has a GE 1500 KW AC generator, complete with necessary generator and motor control cabinets, drawworks, and mud pump control panels. These power packages furnish power for jacking, drawworks, drilling pumps, rotary, Halliburton pump unit, and for general platform power.
- 1 EMD Model S8E1G, 1,100 HP diesel electric power package. This is connected to a GE 700 KW AC generator. This unit is used in conjunction with the 2 EMD Models S16 to form the power system.

- 1 Bayior Co.—Six Unit Model 15,000 Thyrig SCR DC Drilling Control System.

DERRICK, DERRICK SUBSTRUCTURE AND SKID BASE

- 1 Skid base 30' x 50' which spans the 50' drilling slot. This unit supports the derrick substructure and contains a cellar deck for handling and storing of blowout preventer equipment.
- 1 Unitized derrick substructure 30' x 30' with 48' x 54' steel deck area. This substructure contains and supports the drawworks unit, rotary unit, choke manifold, B.O.P. closing unit, B.O.P. handling equipment (air operated winch), air receiver tank, hydraulic power units, standpipe manifold, heat exchanger unit for brake, derrick and derrick equipment.
- Both of the above units are equipped with hydraulic jacking systems for jacking both longitudinally and transversely. This allows the rotary to be aligned for the drilling of nine wells on eight foot centers within the 50' x 50' drilling slot.
- 1 160' x 30' base Lee C. Moore Beam Leg Derrick is of bolted construction. The derrick has a rated static hook load of 1,000,000 lbs. with 12 lines strung to the traveling block, and wind load capacity of 100 mph with pipe racked.
- 1 Hutchison-Hayes heavy duty vapor proof fluorescent lighting system for the derrick. The derrick substructure, and cellar deck of skid base are equipped with explosion proof fluorescent fixtures. The drilling slot is lighted with 3 explosion proof mercury vapor flood lights, and the pipe rack deck areas are lighted by 11 mercury vapor floodlights.
- 1 Electric wire line unit mounted on top of living quarters.

HOISTING AND COMPLEMENTARY EQUIPMENT

- 1 National Type 1625-DL drawworks nominally rated at 3,000 input HP, powered with two EMD Model D79MB electric motors. This drawworks unit is equipped with a sand line reel having a capacity of 20,500' of 9/16" wire line, Model 7838 Elmagco eddy current brake, complete with heat exchanger cooling, National Model 6-B Micromatic drilling control, Model TCB Crownomatic safety control, and Model 54 Coastal sand line guide.
- 1 National Type 760-F Crown Block with 60" diameter sheaves grooved for 1 1/2" wire line, complete with sand line, cat line, and tugger line sheaves.
- 1 National Type 660-G-500 hook-block assembly with 500-ton capacity. The traveling block has 6-60" diameter sheaves grooved for 1 1/2" wire line.
- 1 National Type P-500 Swivel equipped with a Foster Model 77 Hydraulic Power kelly spinner and a 6-3/8" Omaco 15,000 lb. test safety valve.
- 1 5 1/2" x 54' overall Drilco forged alloy steel kelly with 2-3/16" bore.
- 1 National Type C-375 Rotary table with 37-1/2" table opening. The unit is powered by one EMD D79 electric motor driving through a two speed, 700 HP gear transmission.
- 1 Varco Type MSPC master casing bushing with insert bowl and lifting sling and bit breaker.
- 1 Set Varco 5" spring loaded drill pipe slips.
- 1 Set (2) Byron Jackson Type "DB" heavyweight rotary tongs, complete with four lug jaws and hinge jaw assembly, ranging from 3 1/2" to 12".
- 1 SSW 40 Varco spinning wrench ranging from 3 1/2" to 9".
- 2 Byron Jackson "G" Centerlatch Elevator for 5" O.D. drill pipe, 18° taper tool joint. 350-ton rated capacity.
- 1 Set (2) Byron Jackson Model 26940-1132 2-3/4" x 134" weldless elevator links, 350-ton rated capacity.
- 2 Sets Varco #3754 - 5" Type "SDXL" extra long drill pipe slips.
- 1 Set Varco #2503 - Type "DCS-L" drill collar slip, 6-3/4" to 8-1/4" range.
- 1 Varco #33013 "MP-R" drill collar safety clamp.
- 1 Varco Top Drive Drilling System.

- 1 Byron Jackson Zip Lift assembly with elevator links and doll head for handling drill collars and consisting of:
 - 1 #29960 elevator for 7 1/2" O.D. collar.
 - 1 Set (2) 1-3/4" x 72" weldless elevator links.
 - 1 Doll head assembly for 4 1/2" or 5" O.D. shank.
- 1 1 1/2" x 7,500' Union ELP "Flexcore" bright rotary drilling line, on steel reel.
- 1 9/16" x 15,000' Union galvanized 6 x 7 Unicore sand line.
- 1 Geolograph Bit Sentry Drilling Control, Martin Decker instruments and EMD rotary table torque meter.
- 1 AWE-9-10 Martin-Decker Type "E" weight indicator complete with E-80 sensater pressure transformer unit for use with National Type "E" wire line anchor.
- 1 GMCA-505P indicating mud gauge complete with diaphragm protector and 50' high pressure hose.
- 1 HGA-28P indicating tong torque assembly complete with 25' high pressure hose for mounting in gauge box.
- 1 Air Hoist, Ingersoll-Rand, Type H-5UL—Capacity 3,400 lb. single pull capacity at 90 PSI air pressure. Unit mounted on derrick floor for handling drill pipe, etc.
- 1 Air Hoist, Ingersoll-Rand, Type H-4UL on rig floor.

DRILLING PUMPS AND MUD SYSTEMS

- 2 National Type 12P-160, 7 1/2" Triplex Single acting slush pumps. Each unit is powered EMD Model D79-DC electric motors. Each pump is equipped with Hydriil Type K-20- pulsation dampeners. These units are piped with two 6" schedule 160-5000 PSI mud lines with 6" 5000 PSI manifold valves. These pumps are controlled only from the position.
- 3 Mission 6 x 8 R centrifugal pumps with 10" impellers. The pumps are powered by 75-HP AC motors. These pumps are manifolded together and are for mud mixing, desanding, and pumping out sumps and platform preload tanks.
- 2 Mission 6 x 8 R centrifugal pumps with 13" impellers. The pumps are powered by 75-HP AC motors. These pumps are used to precharge the National Triplex slush pumps.
- 2 Mission 2 x 3 R centrifugal pumps with 11 1/2" impellers. The pumps are manifolded together and used for the transfer of drilling water and for deck washdown.
- 2 Mission 2 x 3 R centrifugal pump with 10 1/2" impellers. These pumps are installed on the brack cooling unit.
- 6 Demco submarine guns are installed in active mud pits, fed with 6 x 8 centrifugal and 100-HP motor.
- 1 Brandt heavy duty mud agitator Model MA-25 powered by 25-HP 1800 RPM AC electric motor. These units are installed in the three active mud pits.
- 1 "Lightnin" Chemical Mixer Model NS-1 powered by a 1/3-HP 1750 RPM AC electric motor. This unit is installed on a chemical tank.
- 2 Derrick Sandwich Shakers Model L48-96LP-3.
- 1 King circulating head Model 4SC with 5" X-hole connection.
- 1 King wireline stripper model 4AR.
- 2 Goodall rotary hoses, 3 1/2" x 75', 10,000 PSI test—for 6" schedule 160 Standpipe.
- 1 Brandt 3 - 12" cone desander equipped with 6 x 8 Mission cent and 100 HP motor.
- 1 Brandt dual mud cleaner mounted on shaker tank.

- 3 Sancer 6 x 8 centrifugal pumps with 100 HP motors manifolded at end of shaker units.

BLOWOUT PREVENTERS AND ASSOCIATED EQUIPMENT

- 1 Cameron blowout preventer assembly, type "U" triple unit. Top unit has 13-5/8", 10,000 PSI clamp connection. Bottom unit has 13-5/8", 10,000 PSI flanged connection. Each unit has one 2", and one 4", 10,000 PSI flanged outlet below each set of rams. Top and bottom units are equipped with 5" drill pipe rams and the middle unit is equipped with blind rams, and one set of 7-5/8" CSG rams.
- 2 4" 10,000 PSI FCC gate valves with hydraulic operators.
- 1 Cameron blowout preventer assembly Type D, Top connection has 13-5/8" 5000 PSI flanged connection. Bottom has 13-5/8", 10,000 PSI clamp connection.
- 1 Hydril blowout preventer Model 37370Y—20" 600 Type MS.
- 1 Diverter system consisting of 2 - 8" Cameron hydraulic valves with Bettis operators and a 4-way fail safe control panel.
- 1 Payne accumulator unit Model 76-10-160-SL 160 gallon automatic pump consisting of:
 - 2 Model NSSUA-80-3 Hydro pneumatic accumulators 80-gallon capacity, 3000 PSI.
 - 1 250-gallon reservoir.
 - 2 C750 air pumps.
 - 1 PQ30 triplex electric pump.
 - 1 300020 Payne seven-station fluid control manifold.
- 1 300047 seven station air operated Payne remote control station consisting of:
 - 7 1/2" 250 PSI WP—4-way air valves.
 - 1 1/2" master valve and gauge.
 - 1 Air receiver.
 - 7 3" x 2-1/8"—250 PSI WP double acting actuating cylinders.
- 1 3" and 2" line choke manifold and fabricated gas separator unit is installed on the derrick floor. This unit also has a 4" circulating line connected. The high pressure Halliburton line and mud stand pipe manifold is connected to the choke manifold.
- 2 20-ton capacity blowout preventer handling units are mounted on overhead trolley beams to expedite the installation and removal of blowout preventer equipment.
- 4 Beebe-Bros. Model 200 OP-120-16 Series 2R single drum air tuggers. Line pull is 2000 lbs. at 90 PSI. These units are installed on derrick substructure cellar deck to expedite the handling of blowout preventer equipment.

DRILL PIPE, DRILL COLLARS, AND TOOLS

- 9000 ft. of 5" O.D. ARMO 19.50 lb. grade E and 6000 ft. of 5" O.D. ARMO 19.50 lb. grade G range 3 seamless internal upset drill pipe with fine particle flush type hard-facing on tool joints. Tool joints are 6-3/8" O.D. x 5" X-hole.
- 8 7-3/4" O.D. x 43" with 6-5/8" reg. conn. Drilco drill collars. 11 7/8" Drilco drill collars with 5/8" H-90 connections. Box end of drill collars have machined recesses to accommodate elevators and slips and eliminate the need for drill collar clamps and lift subs. Special set of elevator and elevator balls are provided to expedite this drill collar string when making trips. Necessary subs for connecting 5" drill pipe and drilling bits to these collars.
- 1 Complete set of fishing tools for contractors downhole tools.
- 1 Gray Fig 162 automatic blowout preventer with release tool.
- 2 TIW lower kelly valves.

RENTAL EQUIPMENT

- 1 Halliburton cementing unit with blender and with two HT 400 pumps. Each pump is powered by an EMD Model D-79 DC electric motor. Each pump is equipped with an automatic reset Kintbach relief valve set at 12,000 psi. One centrifugal mixing pump powered by a 40 HP AC electric pump.
- 1 Swaco horizontal mounted degasser unit.



TENNECO OIL EXPLORATION & PRODUCTION

(COMPANY)

INTER-OFFICE COMMUNICATION

TO: EASTERN GULF DIVISION
FOR: D. G. McWILLIAMS
FROM: H. B. RUSSELL
RE: SHALLOW HAZARD SITE CLEARANCE FOR
SHIP SHOAL 129 LOCATIONS A, B, C, AND D

DATE: SEPTEMBER 12, 1985

Introduction

The area was surveyed by John Chance & Associates for Tenneco from September 4 through September 9, 1985. Data Acquired and analyzed for possible hazardous conditions were from fathometer, magnetometer, sidescan sonar, sub-bottom profiler, and snarker.

Surface Location Recommendation

Location A: 3500' FSL/1500' FEL of Block 129
Location B: 955' FSL/707' FEL of Block 129
Location C: 3100' FSL/1700' FEL of Block 129
Location D: 650' FSL/575' FEL of Block 129

General Observations and Location Analysis

1. Water depth on all locations is approximately 50'.
2. Silty clay on bottom to a depth of approximately 30'.
3. No indication of faulting in the near surface.
4. No evidence of any shallow gas anomalous conditions - the general vicinity has been drilled several times with no adverse conditions.
5. There is one small, 25 gamma, magnetic anomaly 500' northwest of Site A but should offer no hazard.
6. There are two abandoned pipelines in the immediate vicinity of Locations B and D. There are also barges located in the vicinity of Locations B and D tied-up to a Gulf platform.
7. Side-scan sonar detected no obstructions on the sea floor.

(continued)



TEMNECO OIL EXPLORATION & PRODUCTION
(COMPANY)

INTEROFFICE COMMUNICATION

Shallow Hazard Site Clearance for
Ship Shoal 129 Locations, A, B, C, and D

Page 2

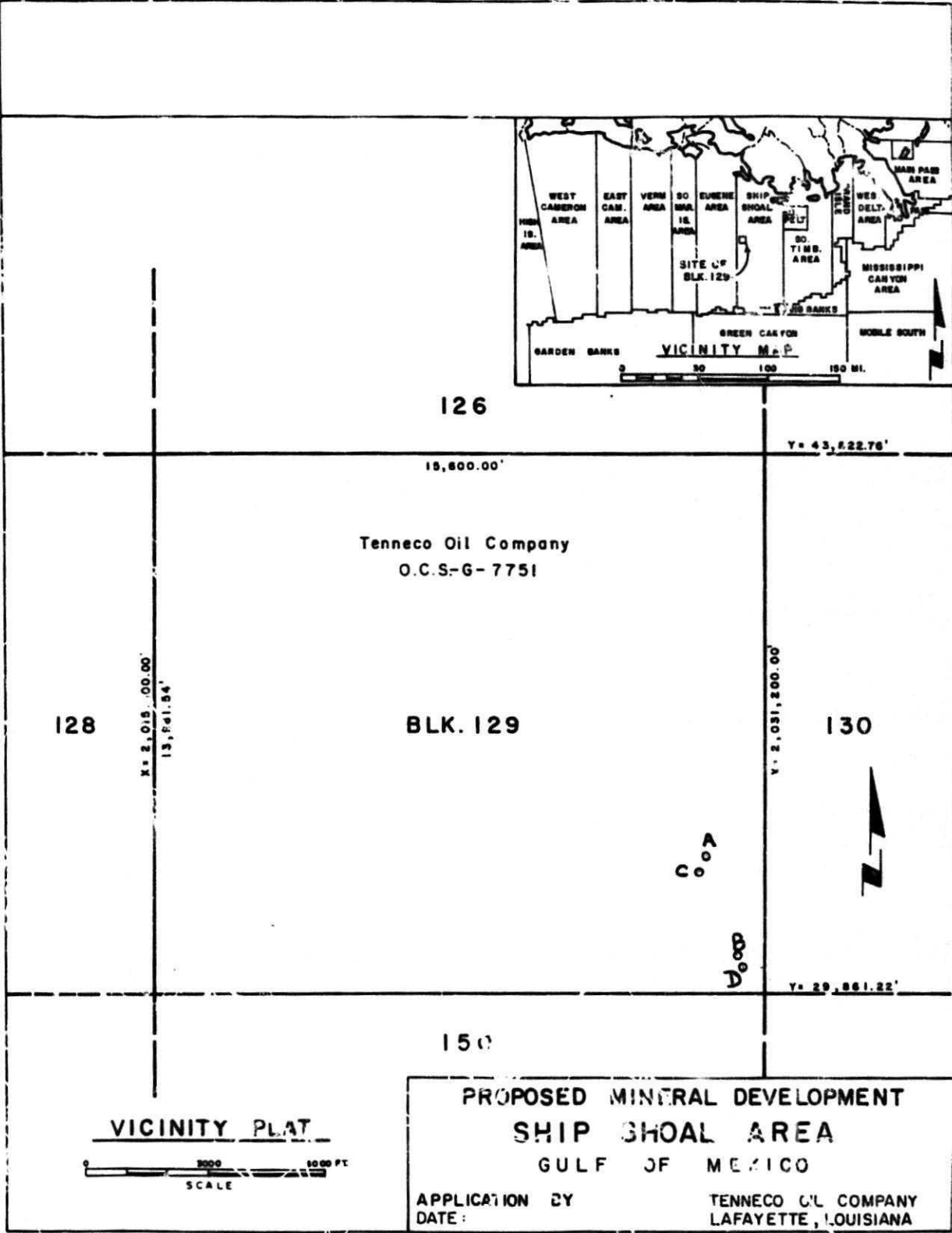
Recommendations and Conclusions:

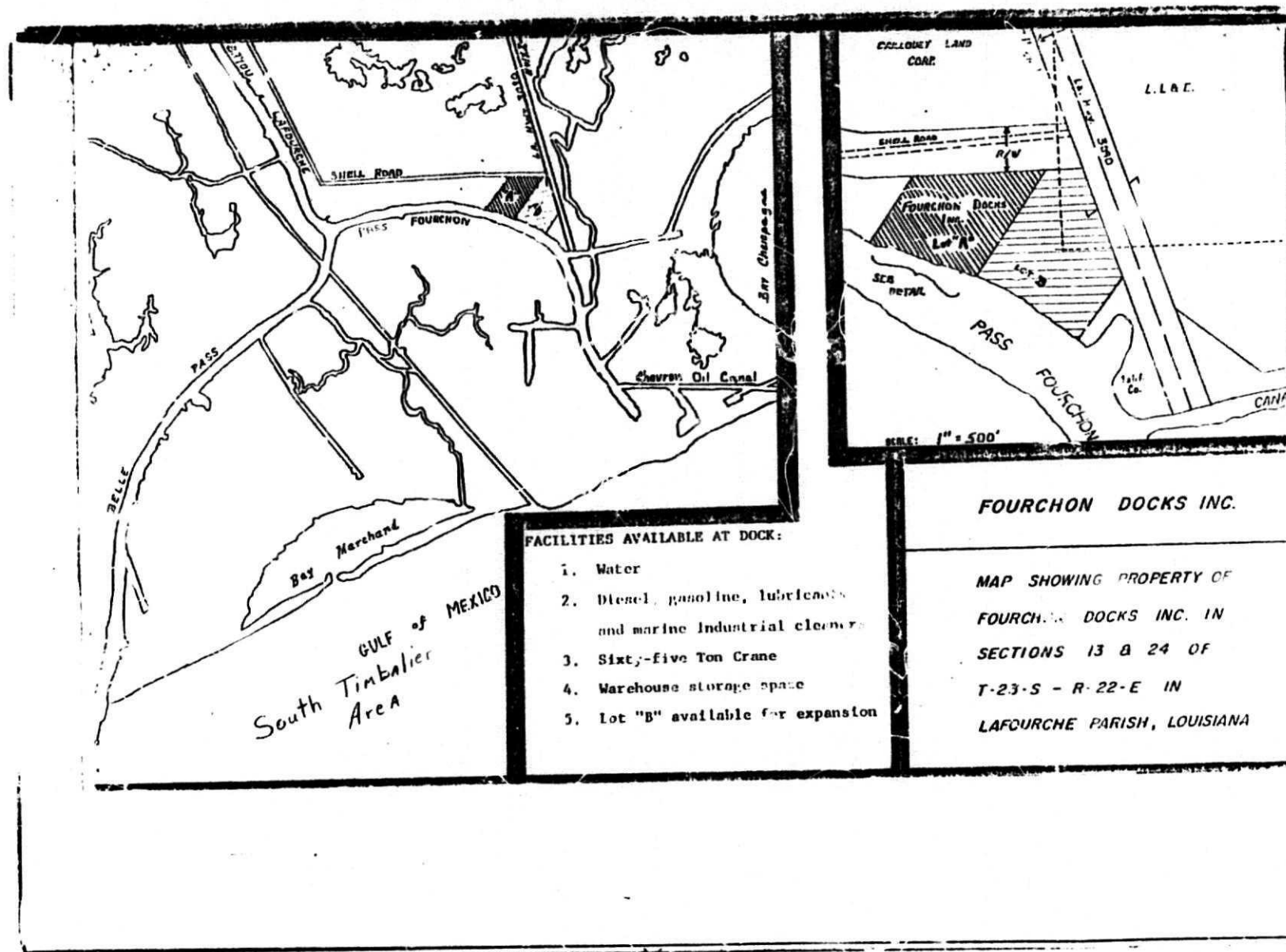
Locations A and C pose no problem and may be successfully occupied noting the small magnetic anomaly northwest of A and C. Precautions should be taken in the vicinity of Locations B and D noting the presence of two abandoned pipelines and barges tied-up to the Gulf platform or anchored near those locations.

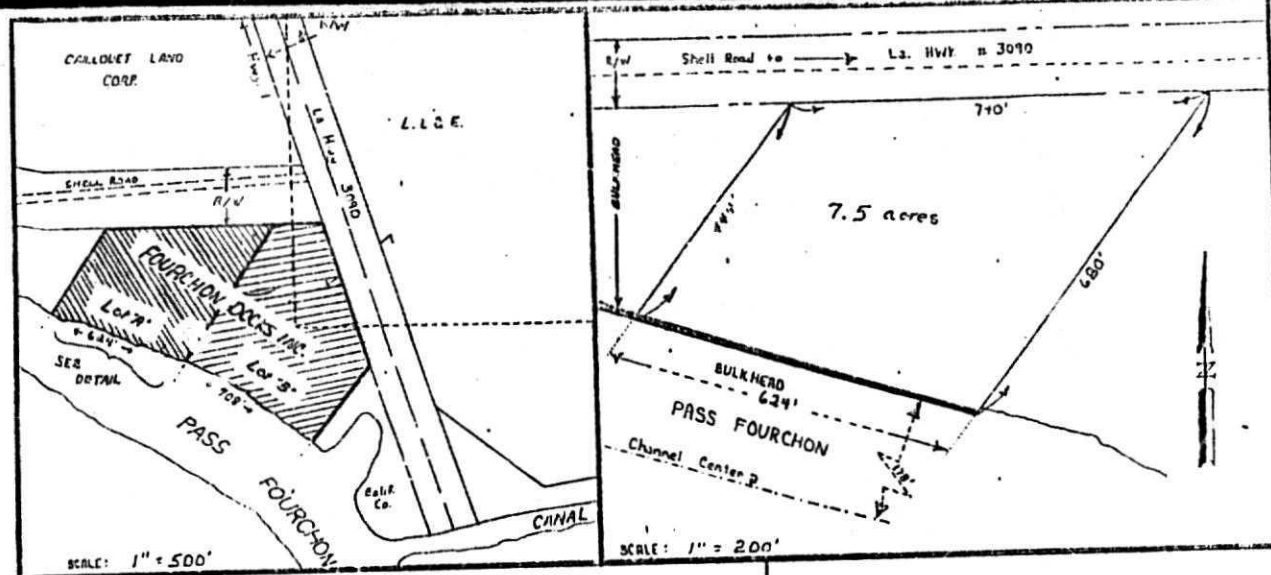
Harold B. Russell
Harold B. Russell

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Attachment

cc. Shallow Hazard Distribution

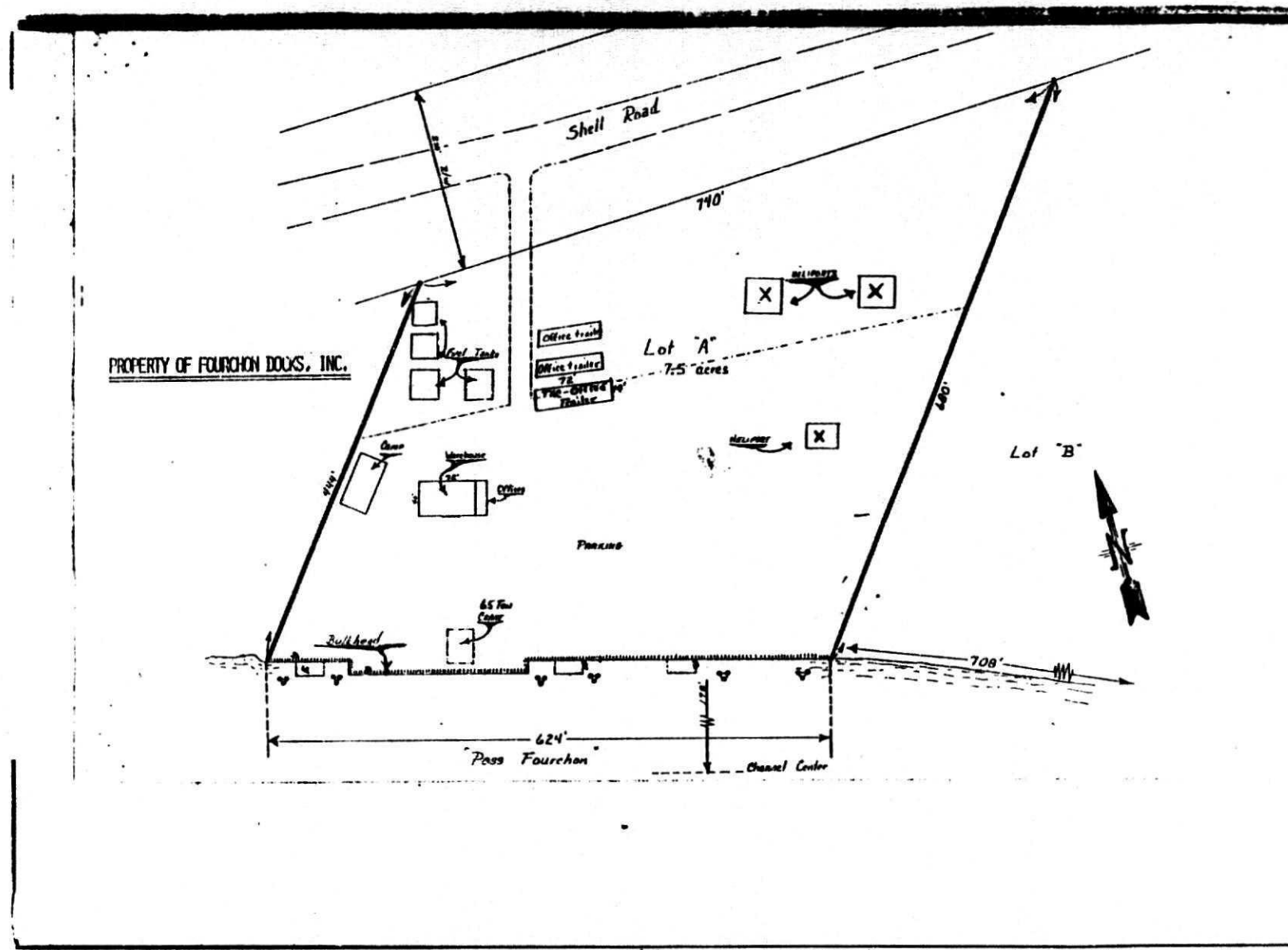






FOURCHON DOCKS INC.

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



The Summary of Exploratory Wells, the Structure Map and the Schematic Cross Sections are considered proprietary data to be exempt from disclosure under the Freedom of Information Act and should therefore not be made available to the public or provided to any affected state or to the executive of any local government. In this respect, proprietary data have been removed from all but five (5) copies of the Plan of Exploration.

AIR QUALITY CALCULATIONS

TENNECO OIL COMPANY

EXPLORATION

SHIP SHOAL, BLOCK 129

WELLS A-D

Emission calculations are based upon the drilling of four exploratory wells. Operations are scheduled to begin on or about September, 20, 1985, and to require 180 days of trouble free drilling. During this period the drill rig is expected to have an average daily fuel consumption of 1,500 gallons. Details of the calculations are presented in Tables 1-3. All projected emissions are below the maximums and this operation is therefore exempt.

TABLE 1

PROJECTED AIR EMISSION
WELLS A-D
BLOCK Ship Shoal 129

EMISSION SOURCE	RUNNING TIME/DAY	TAKEOFF & LAND- INGS/DAY	FUEL CON- SUMPTION GALS/DAY	EMISSION FACTORS POUND/1,000 GALS.					EMISSION FACTORS AIRCRAFT TAKEOFF & LANDINGS					PROJECTED EMISSION 1-DAY PROJECTION IN #				
				SO ₂	NO _x	CO	TSP	VOC	SO ₂	NO _x	CO	TSP	VOC	SO ₂	NO _x	CO	TSP	VOC
DRILLING RIG	24 hrs		1500	31.2	469	102	33.5	37.5						46.8	704	153	50.3	56.3
CARGO BOAT (IN BERTH)	2 hrs		4	31.2	469	102	33.5	37.5						0.1	1.9	0.4	0.1	0.2
CREW BOAT (IN BERTH)	2 hrs		4	31.2	469	102	33.5	37.5						0.1	1.9	0.4	0.1	0.2
HELICOPTER TAKE- OFF & LANDINGS		4							.18	.57	5.7	.25	.52	0.7	2.3	23	1.0	2.0
1-DAY TOTAL														47.7	710	177	51.5	58.7

ABOVE NUMBERS IN POUNDS

Projected emissions are based on data from "Compilation of Air Pollutant Emission Factors", 3rd Edition AP-42, EPA, 1977. Table 3.3.3.-1 and Table 3.2.1.-3.

TABLE 2

AREA Ship Shoal BLOCK 129 WELLS A-D

PROJECTED EMISSIONS FROM EACH SOURCE

BY AIR POLLUTANT FOR 1985/86
Year

DRILLING OPERATIONS - WELLS

SOURCE	AIR POLLUTANT (T/YR)				
	SO ₂	NO _x	CO	TSP	VOC
Drilling Rig Projected Emissions lb/day	46.8	704	153	50.3	56.3
Transportation-- Cargo Boat, Crew Boat, & Helicopter lb/day	0.9	6.1	23.8	1.2	2.4
SUB-TOTAL lb/day	47.7	710	177	51.5	58.7
Miscellaneous 25% of Sub-Total	11.9	178	44.3	12.9	14.7
TOTAL in lb/day	59.6	888	221	64.4	73.4
TOTAL in Tons/year	5.4	79.9	19.9	5.8	6.6

TABLE

AREA Ship Shoal BLOCK 129 WELLS A-D

EXEMPTION CALCULATIONS

E = $3400 (D^{2/3})$ for carbon monoxide
 E = 32 for sulfur dioxide, nitrogen oxides, total suspended
 particulates, and volatile organic compounds

D = 33 Statute Miles
 E = 34,990 CO
 E = 1,099 SO₂, NO_x, TSP, and VOC

POLLUTANTS	"E" (T/YR.)	1985 HIGHEST YEAR	EXEMPT
		PROJECTED EMISSIONS (T/Yr.)	
SO ₂	1099	5.4	yes
NO _x	1099	79.9	yes
CO	34990	10.0	yes
TSP	1099	5.8	yes
VOC		6.6	yes

E = The emission expressed in tons per year.
 D = The distance of the facility from the closest onshore area of a
 state expressed in statute miles.

ALERT PROCEDURE

This Alert Procedure will become effective immediately upon the observance of an oil or hazardous material spill from a company installation of any kind which could possibly pollute shorelines, coastal or inland waters, or the open sea, or which could damage, foul or endanger any property or wildlife onshore or offshore.

INTERNAL ALERT PROCEDURE:

- (1) Any Company employee observing an oil or hazardous material spill of any quantity must immediately notify his supervisor (MANDATORY NOTIFICATION).
- (2) The supervisor will confirm the spill, its cause and basic nature, and notify the area engineer responsible for the area concerned. All of the information required on the "Report of Oil or Hazardous Material" is to be provided (MANDATORY NOTIFICATION).
- (3) The area engineer will make a preliminary determination of the seriousness of the spill and notify the division production superintendent, and the production manager operations. The area engineer will make an information report to his supervisor.
- (4) The production manager operations, and in his absence, the division production superintendent, will assess the seriousness of the spill and if the situation requires it, he will notify the division production manager and appropriate members of the contingency task force. Calling the contingency task force into operation is under the authority of the production manager operation and in his absence, the division production superintendent.

Situations requiring activation of the contingency task force are to be reported to the Houston office by the person activating the contingency task force and providing at least the spill report information.

EXTERNAL ALERT PROCEDURE:

The responsibility for the notification of an oil or hazardous material spill rests with any company employee observing a spill. The employee must immediately notify his supervisor who will follow the procedures in this manual to notify the appropriate governmental agencies (MANDATORY NOTIFICATION).

Any person other than an employee (visitor, contractor personnel, or third party) must immediately notify a company representative. The employee will then use the External Alert Procedure (MANDATORY NOTIFICATION).

Procedures defined in the following memorandums are to be followed in reporting spills.

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.

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 - Grand Isle, Louisiana
 - B. Response Time - Two (2) hours load-out, nine (9) hours travel = 11 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, nine (9) hours travel = 11 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) hours travel = 3 hours
 - C. Personnel Required - Two (2) men per shift



DOWELL FLUID SERVICES

COMPARATIVE PRODUCTS

DMC-1

Description	Dowell Fluid Services	IMCO Services	Baroid	Magcobar	Milchem	Primary Application
DRILLING FLUID ADDITIVES						
Barite	DOW Bar	IMCO Bar	Baroid	Magcobar	Mil-Bar	For increasing mud weight
Bentonite	DOW Gel	IMCO Gel	Aquagel	Magcogel	Mil-Gel	Viscosity and filtration control in water-base muds
Attapulgit	DOW CeGel	IMCO Brinegel	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 Tetraphosphate	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 alkalized 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


DOWELL
DOWELL FLUID SERVICES
COMPARATIVE PRODUCTS
DMC-2

Description	Dowell Fluid Services	IMCO Services	Baroid	Magcohar	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-WD	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 MD	Used in water-base muds to drop sand, reduce torque and minimize bit-balling
An Organic Entity Neutralized with Amines	DOW BioLube	IMCO LubriKleen	Torq Trim	DOS-3	Mil-Plate 2	Supplies more lubricating properties than oils 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



DOWELL FLUID SERVICES

COMPARATIVE PRODUCTS

DMC-3

Description	Dowell Fluid Services	IMCO Services	Baroid	Magcobar	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 EMB	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 Borehole Conditions	DOW Premuix	IMCO VR				Stabilizes running shaft, 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

EXPLORATION PLAN

Type of Plan

SHIP SHOAL BLOCK 129

Area and Block

OCS-G-7751

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.

Arrangements have been made with the State-Times in Baton Rouge, Louisiana to publish notice of the proposed activities no later than September 30, 1985.

Tenneco Oil Company
Lessee or Operator

J. L. Gregory
J. L. Gregory
Vice President
Certifying Official

September 13, 1985
Date

ENVIRONMENTAL REPORT
EXPLORATION
SHIP SHOAL AREA, BLOCK 129

TENNECO OIL COMPANY
Exploration and Production
Lafayette, Louisiana

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August 29, 1985

prepared by
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(2) DESCRIPTION OF PROPOSED ACTION

(A) TRAVEL MODES AND ROUTES

Tenneco Oil Company plans to conduct exploratory drilling on Ship Shoal Block 129. Operations are anticipated to begin during the last quarter of 1985. Four wells are expected to be required to determine if hydrocarbons are present in commercially producible quantities. Onshore support will be provided from Port Fourchon. It is estimated that a crew boat will make a daily round trip and a supply boat a trip every other day to the Block. Access to the Gulf for the boats will be via the short channel from Port Fourchon to the Gulf and then directly to the Block. Two round trips daily are anticipated for helicopters. Helicopter traffic is normally by the most direct route, weather and traffic conditions permitting.

(B) SUPPORT BASE

Onshore support will be provided from the Tenneco Base at Port Fourchon, Louisiana. The operations planned are expected to help maintain this base at or near its present level of operations. No new positions are likely to be created and no expansion of the physical facilities is foreseen because of the exploratory drilling planned for Block 129.

(C) NEW SUPPORT FACILITIES

No new onshore support facilities such as new land bases, refineries, storage facilities, pumping stations, boat docks, helicopter pads, or fueling facilities are expected to be required. Should a commercial discovery occur, the hydrocarbons would be likely to be transported to shore through connections with the nearby offshore pipeline network and processed in the present onshore facilities. These facilities are considered fully adequate to process any new hydrocarbons discovered without significant alteration or 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

Maps are included with the POE showing the Block in relation to affected states and the proposed drill sites.

(F) TRANSPORTATION OF OIL OR GAS

The proposed drilling is for exploratory purposes. Should commercially valuable deposits of oil/gas be found, it is likely that the hydrocarbons would be transported to shore via connections with the nearby offshore pipeline network and processed in the present onshore facilities.

(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 and value of the catch. The fisheries extend from the shallow coastal 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 30 feet or less in depth and within 12 to 15 miles of shore. Major uses are pet food, fertilizer, and chicken feed. Block 129 lies about 33 miles offshore with water depths of approximately 43-57 feet. The project area thus lies beyond the seaward edge of the menhaden fishery. Due to the water depths, and the distance from shore, no detectable impacts to this fishery are anticipated.

Shrimp are taken in large quantities from the inland, coastal, and offshore waters to approximately the 100 foot depth contour. Beyond this point to the edge of the continental shelf, at a depth of about 600 feet, the catch is much smaller. The water depth and distance from shore places Block 129 within the most productive part of the shrimp fishery.

The Louisiana shrimp catch usually averages between 55,000,000 and 100,000,000 pounds annually (heads on). The 1983 catch totaled 77,000,000 pounds, a 15 percent drop from the 1982 catch of 90,530,000 pounds ("The Shrimp 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 exploratory drilling planned for Block 129 will, for the duration of the drilling, remove about five acres from that potentially available to shrimpers. The amount of seabottom removed is so small in relation to that remaining open, that no detectable impacts to this fishery are foreseen.

Unclassified industrial bycatch fish represent another of the major fisheries. They are caught by bottom trawls and are used as pet food, fertilizer, and in some instances, for human consumption. The project area lies within this fishery. As noted earlier, up to five acres of seabottom will be temporarily removed from that potentially available to trawlers. Since this is an under utilized fishery, and due to the small area of seabottom removed in relation to the large area remaining, no detectable impacts to this fishery are foreseen.

The harvest of reef type fishes such as snapper and grouper is normally concentrated around hard bottom areas known as snapper banks or artificial reef habitats such as those found around wrecks or the underwater portions of production platforms. None of these conditions are found on Block 129. Should a discovery occur, and a platform be set here, a positive impact could occur in that the platform would serve as an artificial reef and thus enhance the potential for some types of fishes that frequent hard bottom areas in shallow water. Water depth and conditions here are marginal for snapper and grouper, but favorable for other species such as codfish, sheepshead, various seatrouts, and flounder. Thus, no negative impacts are foreseen and there is the possibility for a positive impact should a discovery occur.

(2) Shipping

There are no shipping fairways, anchorage areas, or transit zones in or immediately adjacent to Block 129.

(3) Recreation

The primary recreational activity off the Louisiana coast is sport fishing and diving. These activities are usually centered around hard bottoms or production platforms in the OCS areas. Recreational Shrimping is normally conducted near shore by small boats. Since none of these conditions are found on Block 129, recreational value is considered to be minimal. If a discovery should occur, and a platform be set here, the distance from suitable shore facilities such as launch ramps or marinas, would tend to enhance recreational use of this Block. Also there are numerous platforms in the vicinity of Block 129. Thus no impacts are seen to recreational interests from this proposed drilling program unless a discovery should occur. In that case there could be an enhancement of recreational opportunities due to the artificial reef function of production platforms.

(4) Cultural Resources

A cultural resources analysis of the data gathered for Block 129 was made by Robert J. Floyd, Marine Archaeologist. It was noted that this Block has been submerged for approximately 12,000 years. That time is within the period of human occupation of the northern Gulf coast. However, no indications of prehistoric sites were evident in the data reviewed and the likelihood of such sites being found was considered remote. No shipwrecks are known in this area and none could be positively identified in the shallow hazard survey. Pipelines and other modern activities were evident. Consequently, no conditions or restrictions were suggested for the exploratory drilling program.

(5) Ecologically Sensitive Features

No ecologically sensitive features have been identified on or in the vicinity of Block 129.

(6) Pipelines and Cables

An abandoned pipeline crosses a small portion of the Block in the southeast corner in association with several abandoned Gulf wells. Tenneco is aware of the location of these facilities and has sited the exploratory wells to avoid the pipeline and well.

(7) Other Minerals

There are no known plans at this time for the development of minerals other than hydrocarbons for Block 129.

(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).

Drilling and support vessel activities have the potential to cause a minor and limited disturbance to any whales or turtles in the vicinity. However, these creatures are mobile and are likely to avoid areas where such activity occurs. To date, no scientific evidence has been found that would indicate that disturbances related to oil and gas activities have been of significance in the decline of whale and turtle populations. Consequently, the exploration drilling planned for this area should not have a significant or lasting impact on turtle or whale populations in the Gulf.

(4) UNAVOIDABLE ADVERSE IMPACTS

Gailaway (1981) completed an extensive review of petroleum related activities in the Texas-Louisiana continental shelf region. Potential negative impacts addressed by him were discharge of drill cuttings, drilling fluids, oil spills, and produced formation waters.

Drill cuttings are small fragments of the formation cut by the drill bit and discharged into the water on a continuous basis during the drilling of each well. The larger cuttings tend to move directly towards the bottom, and in shallow waters are likely to accumulate on the seafloor in mounds or piles. In deeper waters, or where wave and current action are vigorous, the mounds may not develop. When a pile accumulates, any immobile benthic organisms trapped beneath it will smother. Over time, plants and animals will colonize the mound and the seafloor will return to a condition similar to that in existence before drilling began.

Large-scale discharge of drilling mud occurs on an average of 8-10 times during the drilling of each well. Also, as the cuttings are discharged, some 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 drill cuttings, form a turbid plume down-current from the drill rig. When a large-scale release of mud occurs, this plume may reach down-current for a distance of up to 3,200 feet before it is completely diluted. The toxicity of the cuttings and the drilling mud components is very slight and there is little impact on water quality. The primary effect is a reduction of light penetration which may reduce primary production by phytoplankton.

The briny water from the formation being exploited is the primary effluent discharged during production. Since the work planned for the project area is for exploration, there should be no discharge of formation water except possibly for a limited time during the testing of a well. These waters usually contain a high concentration of inorganic salts and low concentrations of hydrocarbons and other organic compounds. This water is slightly toxic within a few yards of the point of discharge. Beyond this point the salts and other minerals present tend to be broken down by bacteria and are incorporated into the food chain as nutrients.

An area of seabottom of up to five acres will be temporarily removed from that available to bottom trawlers. The area removed is so small in relation to the vast areas remaining open, that no detectable impacts to the fish catch are foreseen. Oil spills are always a possibility. However, good industry safety practices combined with strict

adherence to applicable rules and regulations has greatly reduced the chances of a damaging spill. In fact, at this time, more oil is added to the Gulf of Mexico from the flow of the Mississippi River than from OCS oil and gas operations.

In summary, unavoidable adverse impacts associated with this exploratory drilling are considered to be minor and temporary. No major or permanent damage to the marine environment or to man's use of it is foreseen.

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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.