

UNITED STATES GOVERNMENT
MEMORANDUM

October 28, 2002

To: Public Information (MS 5034)
From: Plan Coordinator, FO, Plans Section (MS
5231)

Subject: Public Information copy of plan
Control # - N-07607
Type - Initial Exploration Plan
Lease(s) - OCS-G19086 Block - 228 Garden Banks Area
Operator - McMoRan Oil & Gas LLC
Description - Well A
Rig Type - SEMISUBMERSIBLE

Attached is a copy of the subject plan.

It has been deemed submitted as of this date and is under review for approval.

Karen Dunlap
Karen Dunlap
Plan Coordinator

SCANNED

Site Type/Name	Botm Lse/Area/Blk	Surface Location	Surf Lse/Area/Blk
WELL/A	G19086/GB/228	600 FNL, 3550 FWL	G19086/GB/228

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McMoRAN OIL & GAS

McMoRan Oil & Gas LLC
1615 Poydras Street
New Orleans, LA 70112
P.O. Box 60004
New Orleans, LA 70160

Telephone: 504-582-4000
Fax: 504-582-4584

October 23, 2002

Minerals Management Service
Gulf of Mexico OCS Region
1201 Elmwood Park Blvd.
New Orleans, LA 70123-2394

Attention: Regional Supervisor
Office of Field Operations

Re: Exploration Plan
Garden Banks Block 228
OCS-G 19086



Gentlemen:

In accordance with 30 CFR 250.203, McMoRan Oil & Gas LLC requests your approval for an Exploration Plan for the subject block. Enclosed are eleven (11) copies of which five (5) copies include proprietary data not subject to disclosure.

The following is submitted in support of this request.

Contents of Plan

CONTROL No. N7607
REVIEWER: Karen Dunlap
PHONE: (504) 736-2535

Schedule - Activities covered by this plan will commence approximately December 1, 2002, and be completed in 45 days. The well will be drilled, evaluated, and tested. At that time, it will either be temporarily abandoned and completed at a later date, or plugged and abandoned.

Location - Attached as Exhibit 1 is a well location plat and table depicting our well locations. Also attached as Exhibit 2 is a Bathymetry Map.

Drilling Unit - A semi-submersible rig will be used to drill this location. Attached as Exhibit 3 is a description of a typical semi-submersible rig. The rig is equipped with typical pollution control equipment, including, but not limited to, deck drains, sumps, drip pans, and sewage treatment facilities. Blowout preventers and related well control equipment shall be installed, used, maintained, and tested in a manner necessary to assure well control.

General Information

Contact: Julie Bowen
McMoRan Oil & Gas LLC
P.O. Box 60004
New Orleans, LA 70160
504/582-4535
julie_bowen@fmi.com

New or Unusual Technology - No new or unusual technology will be used for this project.

Bonding - Please be advised that McMoRan Oil & Gas LLC maintains a \$3,000,000 areawide bond with the MMS. In addition, a \$400,000 supplemental bond will be filed.

Onshore Support Base and Vessels - Onshore operations are anticipated to take place at an existing facility in Intracoastal City Louisiana. The Intracoastal City base is capable of providing the service necessary for the proposed activities. It has 24 hour service, a radio tower with phone patch, dock space, equipment and supply storage base, drinking water, etc. The onshore activities associated with these exploration activities should not result in any increase in the size and number of onshore support and storage facilities or land and personnel requirements. During drilling operations, a supply boat will make three (3) round trips per week, a crew boat will make three (3) round trips per week, and a helicopter will make seven (7) round trips per week. Attached as Exhibit 4 is a Vicinity Map showing the lease relative to the shoreline and transportation routes. Garden Banks Block 228 is located approximately 135 miles southeast of the Galveston, Texas.

Lease Stipulations

The Garden Banks Block 228 lease does not have any lease stipulations.

Geological, Geophysical, and H₂S Information

Attached is a Structure Map (Exhibit 5), Cross Section (Exhibit 6), Shallow Hazards Report (Exhibit 7), Biostratigraphic/Lithostratigraphic Column (Exhibit 8), and an H₂S Classification Request (Exhibit 9).

The shallow hazards data, which includes interpreted 2-D and/or 3-D seismic lines, shallow hazards report, shallow hazards assessment, and high-resolution seismic lines, has been submitted separately along with a proprietary copy of this EP to the Regional Supervisor, Field Operations.

Biological Information

Chemosynthetic Information – Not applicable to this project since water depth is 829'

Topographic Features – No topographic features are in the vicinity of Garden Banks Block 228.

Live Bottom (Pinnacle Trend) Information – No pinnacle trend features occur in Garden Banks Block 228.

Wastes and Discharges Information

During drilling operations Garden Banks Block 228, the anticipated discharge rates are as follows:

Drilling Fluids	2,769 bbls/month
Drill Cuttings	1,400 bbls/month
Deck Drainage	1,500 bbls/month
Sewage and Domestic Liquid Waste	2,000 gals/day*

*Based on 50 gals/person/day with average 40 persons on board

The quantity of discharge of cuttings is based on the average hole size for each section of hole. Mud may be discharged for purposes of dilution or at the end of the well. Fifty percent (50%) for attached liquids to cuttings is added to give a total drilling fluids discharge. Sewage is treated on location. Solid domestic wastes are transported to shore for proper disposal at an authorized disposal site.

The fluid used for drilling will be a typical lignosulfonate mud, unless otherwise noted in the drilling prognosis. Concentrations of the chemicals in the mud can be estimated from the daily fluids chemical inventory. Other

surveillance of the fluid is accomplished by the monthly and end-of-well LC50 toxicity tests required by the EPA.

In no instance will the drilling fluid discharge rate exceed 1,000 bbls/hour.

Any drilling fluid contaminated with oil or not suitable for overboard discharge will be transported to shore for proper disposal at an authorized disposal site.

All discharges will be in accordance with EPA General Permit GMG290000.

Oil Spill Response and Chemical Information

The worst case discharge volume, calculated in accordance with 30 CFR 254.47(b) for Garden Banks Block 228 is 3,800 barrels condensate/day. The volume of the largest oil/fuel storage tank on the drilling rig is 6,358 barrels.

The following is a list of tanks and/or vessels at the facility that will store oil.

Type Storage Tanks	Tank Capacity (bbls)	Number of Tanks	Total Capacity (bbls)	Fluid Gravity (API Grav.)
Diesel Fuel	6,358	1	6,358	28.0

Activities proposed in this EP will be covered by McMoRan Exploration Co.'s (parent company of McMoRan Oil & Gas LLC and Freeport-McMoRan Sulphur LLC) Regional Oil Spill Response Plan (OSRP), which has been approved by MMS.

McMoRan Exploration Co. is a member of Clean Gulf Associates (CGA). In addition, contract personnel to operate the CGA equipment will be provided by our Oil Spill Response Organizations – Oil Mop/Nalty Environmental, Garner Environmental Services, Inc., Philip Services, and Cenac Environmental Services.

CGA equipment located at Galveston, Texas, would be utilized first with additional equipment transported from the nearest equipment base on-site as required. In the event of a spill, our shorebase in Intracoastal City would be utilized as a staging area for manpower and some equipment. Other equipment will be dispatched directly from CGA equipment storage locations.

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Below is a table of the worst-case discharge comparison.

Category	Regional OSRP	Exploration Plan
Type of Activity	Drilling	Drilling
Spill Location (Area/Block)	EB 301	GB 228
Facility Designation	Exploratory Well	Exploratory Well
Distance to Nearest Shoreline (miles)	110 miles	135 miles
Volume		
Storage tanks & flowlines	N/A	N/A
Pipelines	N/A	N/A
Uncontrolled blowout (volume/day)	31,305 bbls	3,800 bbls
Total Daily Volume	31,305 bbls*	3,800 bbls
30-Day Volume	939,150 bbls	114,000 bbls
Type of Oil(s) – (crude, condensate, diesel)	Condensate	Condensate
API Gravity(s)	52	45.0

The worst-case scenario from activities proposed in this EP (3,800 bbls/day) does not supersede the worst-case scenario in our Regional OSRP (31,305 bbls/day). Since McMoRan Exploration Co. has the capability to respond to the worst-case spill scenario included in its Regional OSRP approved October 8, 2002, and since the worst-case scenario determined for our EP does not replace the worst-case scenario in our Regional OSRP, I hereby certify that McMoRan Exploration Co. has the capability to respond, to the maximum extent practicable, to a worst-case discharge, or a substantial threat of such a discharge, resulting from the activities proposed in our EP.

Air Emissions Information

Attached as Exhibit 10 is an Air Emissions Spreadsheet.

Environmental Information

Coastal Zone Consistency Certification - Attached as Exhibit 11 is the Coastal Zone Consistency Certification.

Environmental Report – Attached as Exhibit 12 is an Environmental Report.

Plan Information Form

Attached as Exhibit 13 is the Plan Information Form.

List of Exhibits

- Exhibit 1 Well Location Plat and Table
- Exhibit 2 Bathymetry Map
- Exhibit 3 Description of Semi-Submersible Drilling Rig
- Exhibit 4 Vicinity Map
- Exhibit 5 Structure Map

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- Exhibit 6 Cross Section
- Exhibit 7 Shallow Hazards Report
- Exhibit 8 Biostratigraphic/Lithostratigraphic Column
- Exhibit 9 H₂S Classification Request
- Exhibit 10 Air Emissions Spreadsheet
- Exhibit 11 Coastal Zone Consistency Certification
- Exhibit 12 Environmental Report
- Exhibit 13 Plan Information Form

If any further information is necessary to approve this plan, please call me (504/582-4535) or e-mail me (julie_bowen@fmi.com).

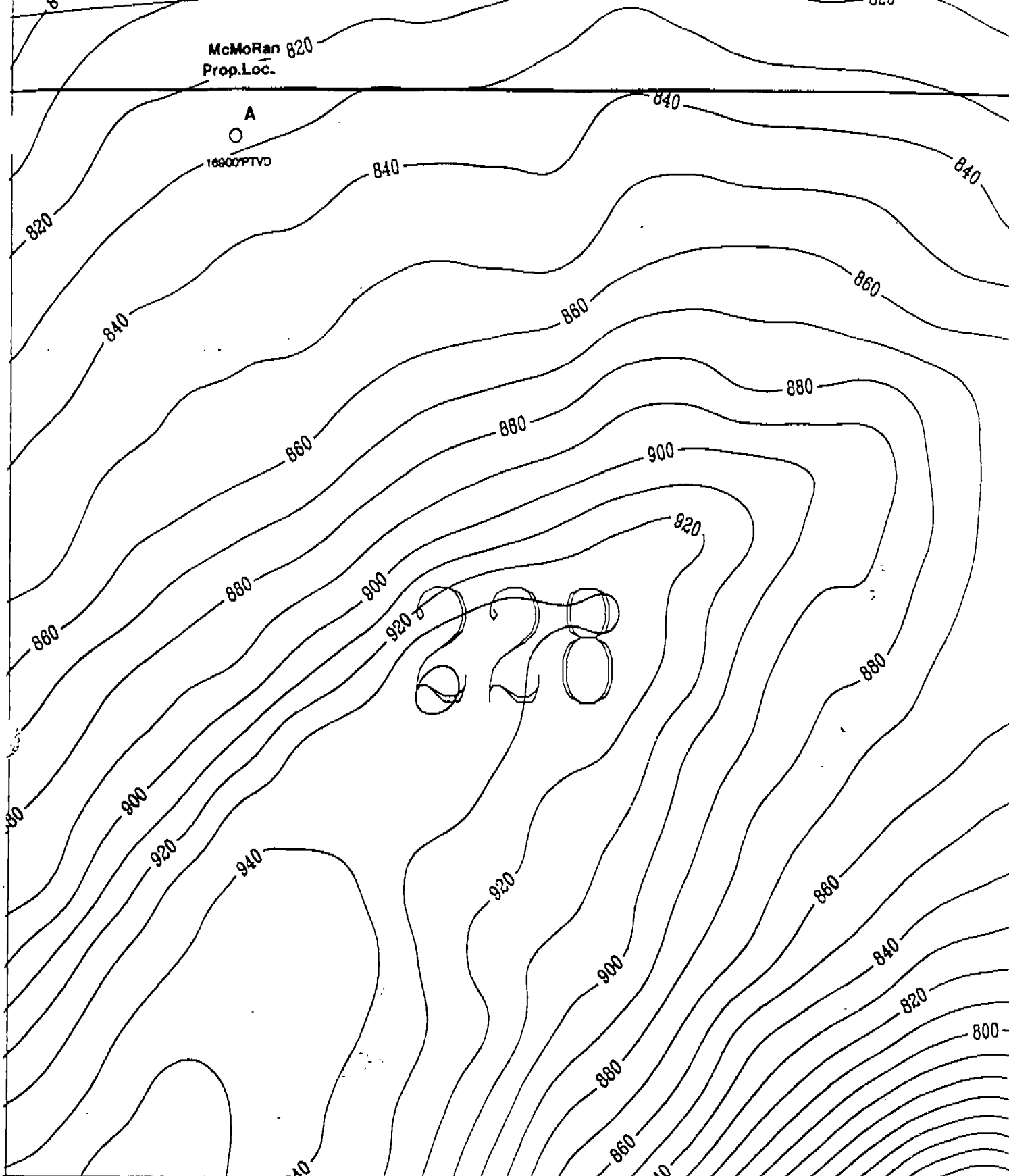
Sincerely,



Julie Bowen
Regulatory Supervisor

/jb
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Attachments

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Loc. 'A' Surf.: 3550'FWL & 600'FNL of Blk.228

X=1,460,830' Y=10,073,640'

Lat: 27° 45'32.16028" Long.: -93° 33'19.70399"

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Exhibit 2 (1/1)

 McMoRan Oil & Gas LLC	
GARDEN BANKS BLK.228	
'CYPRUS' PROSPECT	
Bathymetry Map	
	
PREPARED BY: MCF	CL 10'
DRAFTED BY:	DATE: 10-16-02

16900'FTVD

MCMORAN
OCS-G-19086

Loc. 'A' Surf.: 3550'FWL & 600'FNL of Blk.228

X=1,460,830' Y=10,073,840'

Lat: 27° 45'32.16028" Long: -93° 33'19.70399"



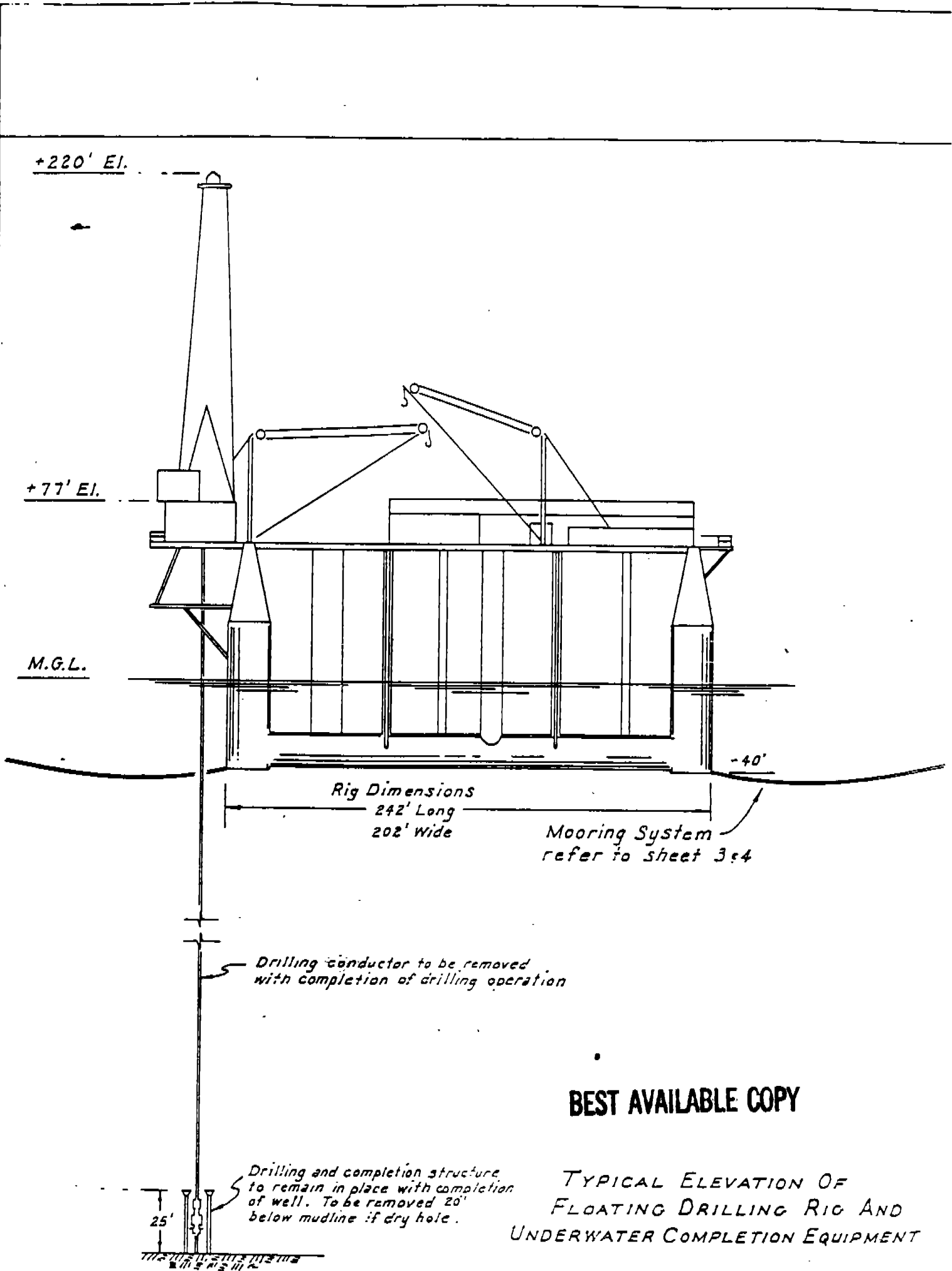
 McMoran Oil & Gas LLC	
GARDEN BANKS BLK.228	
'CYPRUS' PROSPECT	
<i>Well Location Plat</i>	
	
PREPARED BY: MCF	ICL
DRAFTED BY:	DATE: 11-14-09

Exhibit 1 (1/2)



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TYPICAL ELEVATION OF
FLOATING DRILLING RIG AND
UNDERWATER COMPLETION EQUIPMENT

No Scale

Diamond M Hunter

Equipment List

Chains-Eight (8) 2 3/4" x 5,200'
Anchors-Ten (10) 30,000 lbs. Moorfast
Windlasses-Four (4) Skagit double drum

Drawworks-Oilwell E-3000 driven by two (2) GE-752 DC motors with Baylor 7838
Derrick-160' Dynamic with 1,000,000 lbs. hook load capacity
Motion Compensator-Western Gear 400,000 lbs. capacity with 20' stroke
Rotary Table-Oilwell 49 1/2" driven by GE-752 DC motor
Crown Block-Pyramid 600 ton
Traveling Block-Western Gear 600 ton
Hook-BJ-5500 Dynaplex
Swivel-Oilwell PC-650
Iron Roughneck-Varco 2000
Kelly Spinner-Varco 6500
Pipe Spinner-Spinner Hawk 13500
Ezy Torque-Drilco model D

Drill Pipe-12,500' -5" Grade E 19.50 lb. with 4 1/2" IF connections; 7,500' -5" Grade S-135 19.50 lb. with 4 1/2" IF connections; fifteen (15) 5" heavy wall drill pipe with 4 1/2" IF connections
Drill Collars-Nine (9) 9 1/2" OD x 3" ID x 30' long spiral collars with 7 3/8" API regular connections; thirty (30) 7 3/4" OD x 2 13/16" ID x 30' long spiral collars with 6 3/8" API regular connections; thirty (30) 6 1/2" OD x 2 13/16" ID x 30' long spiral collars with 4 1/2" IF connections
Kellys-Two (2) 5 1/2" hexagonal range 3

Diverter System-Regan model KFDH with 10" diverter lines
Pin Connector-One (1) 30" Vetco
Flex Joint-Vetco 18 3/4" with 21" MR-6C connection
Riser Connector-Vetco H-4 18 3/4" 10,000 PSI WP
Annular BOP's-Two (2) Shaffer 18 3/4" 5,000 PSI WP
Ram Preventers-Two (2) Cameron double type "U" 18 3/4" 10,000 PSI WP
Wellhead Connector-Vetco H-4 18 3/4" 10,000 PSI WP
BOP Accumulator Unit-NL Shaffer air-electric 660 gal., 3,000 PSI
Emergency BOP Control System-Raytheon two way acoustic system
Kill and Choke Valves-Three (3) 3 1/8" CIW 10,000 PSI WP right angle; three (3) 3 1/8" CIW 10,000 PSI WP straight thru failsafe gate valves
Marine Riser-1,500' Vetco 21" OD x 1/2" wall with MR-6C connectors and integral choke and kill line
Riser Pup Joints-Five (5), ten (10), twenty (20), thirty (30) and forty (40) feet long
Slip Joints-Two (2) Vetco 55' stroke with dual packer and split inserts
Riser Tensioning Units-Four (4) Western Gear dual line with 50' line travel and maximum single line load capacity of 80,000 lbs.; total tensioning capacity with eight (8) lines 640,000 lbs.
Pod Line Tensioning Units-Two (2) Western Gear single line with 40' stroke and maximum single line load capacity of 16,000 lbs. each

Guideline Tensioning Units-Four (4) Western Gear single line with 40' line travel and maximum line load capacity of 16,000 lbs. each
Underwater Television-Hydro Products system

Mud Pumps-Two (2) Oilwell A-1700PT triplex each driven by two (2) GE-752 DC motors
Charging Pumps-Two (2) 5 x 6 centrifugals with 100 HP electric motors
Mud Mixing Pumps-Three (3) 5 x 6 centrifugals with 100 HP electric motors
Shaleshaker-Brandt dual tandem high speed
Desander-Demco 86-V with six (6) 8" cones
Mud Cleaner-Demco 4-MC-16 with sixteen (16) 4" cones
Degasser-Wellco model 5200

AC Generator-Two (2) EMD-16E-9 diesel engines 3070 HP each driving EMD-2100 KW AC generators; one (1) EMD-16E-8 diesel engine 2200 HP driving EMD-1400 KW AC generator
Emergency Generator-One (1) Caterpillar D-3408 diesel engine 250 KW AC generator
Power Distribution-Ten (10) Bay SCR system with 750V; two (2) 3,000 amp; four (4) 2,000 amp; four (4) 1,200 amp

Spider Elevators-Three (3) BJ-500 ton slip type with inserts for 7", 9 5/8", and 13 3/8"
Casing Tongs-Weatherford Lamb model 16,000

Cranes-Two (2) Link Belt API-238A 50 ton cranes with 120' boom; two (2) 60 ton hydraulic bridge cranes for handling BOP stack

One (1) lot portable fire extinguishers per U.S.C.G.; Halon 1301 flooding system; 150 gallon foam system on heliport; life jackets; four (4) 25 man life rafts; two (2) 50 man lifeboats per U.S.C.G. regulations

Mooring Line Tension-One (1) Bi-M indicating system with eight (8) channel recorder
Vessel Position Reference System-Honeywell RS-904 acoustic type
Drilling Recorder-One (1) Martin Decker seven (7) pen recorder
Pit Level Indicator-Martin Decker
Ballast Control System-Electronic control board with readouts on all tanks

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Cementing Unit-Halliburton HT4 with recirculation mixer
Helicopter Pad-Designed to accommodate a Sikorsky S-61N helicopter
Communication System-Single side band; FM; VHF and Marisat units
Distillation Units-Two (2) Koorney reverse osmosis type with 10,000 GPD capacity each
Sewage Treatment System-Red Fox 5500M

SCHEDULE C
EQUIPMENT INVENTORY

DRILLING UNIT - "DIAMOND M HUNTER"

PART I

101 Drilling Vessel Description and Specifications

The drilling vessel will be as described in Part 2 attached hereto

- a. Moorings - Eight (8) 2-3/4" dia. chains, 5200 ft. long.
- b. Anchors - Eight (8) 30,000 lb. Baldt Moorfast.
- c. Mooring windlasses - Four (4) Skagit double drum type wildcat type for 2-3/4" chain.
- d. Anchor buoys - Eight (8) designed for 1500 ft. water depth.
- e. Pendant wires, shackles and associated jewelry.
- f. One (1) mooring line tension sensing and indicating system with eight (8) channel recorder.
- g. Vessel position reference system - Honeywell RS-904 Acoustic indicator for 1500 ft. water depth adapted to measure lower ball joint angle differential.

102 Drilling Equipment

- a. Drawworks - Oilwell E-3000 driven by two (2) GE 752 DC motors, with Baylor 7838 electric brake and Crown-O-Matic.
- b. Drill line - 1½" dia., 7,500 ft. long IWRC wire rope.
- c. Wireline anchor - designed for 1½" wire rope.
- d. Sandline - 9/16" dia. 15,000 ft. long galvanized wire rope.
- e. Derrick and substructure - 160 ft. derrick with 1,000,000 lb. hook load capacity, 50 ft. x 50 ft. welded substructure.

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- f. Motion Compensator - Western Gear with 400,000 capacity with 20 ft. stroke.
- g. Mud Pumps - Two (2) Oilwell 1700 PT Triplex pumps with pulsation dampeners. Each driven by two (2) GE-752 DC motors. Mud pumps to be charged by two (2) 5 x 6 centrifugal pumps 100 HP.
- h. Rotary Table - Oilwell 49½" table driven by GE-752 motor.
- i. Kelly Bushing - Varco Model 27½ HDP with lock assembly.
- j. Crown Block - 600 ton capacity.
- k. Hook Block - 600 ton capacity with BJ 5500 Dynaplex hook.
- l. Traveling Block Guide System - Two-rail system design.
- m. Swivel - Oilwell PC-650.
- n. Rotary Hose - Two (2) each, installed in derrick, 3" x 60' wire braid, 5,000 w.p.
- o. Weight Indicator - mounted in Driller's console.
- p. Electric Power Supply - described in Part 2
- q. Spinning Wrench - Spinner Hawk - complete with hydraulic controls.
- r. Ezy Torque - Drilco, hydraulic.
- s. Kelly Spinner - Varco Model 6500 or equal.
- t. Recorder - One (1) Drilling Recorder. Six (6) pens for penetration, weight, pump pressure, torque (electric) rotary RPM and pump rate from two (2) pumps alternately.
- u. Iron Roughneck - Varco Model 2000

103 Drill String

- a. Drill Pipe:
 - (1) 12,500 ft. - 5" O.D., Grade E, 19.5 lb/ft. Range 2 drill pipe, quench and temper, with 4½" IF x 6-3/8" O. D. 18-degree taper, ultrasonically inspected tool joints and internally plastic coated.
 - (2) 7,500 ft. - 5" O.D. Grade S-135 19.5 lb/ft. Range 2 drill pipe, quench and temper, with 4½" IF x 6-3/8" O.D. 18-degree taper, ultrasonically inspected tool joints and internally plastic coated.

(3) Fifteen (15) joints 5" Heviwate drill pipe with 4½" IF x 6-3/8" OD tool joints.

b. Drill Collars:

(1) Nine (9) 9½" O.D. x 3" ID x 30' long with 7-5/8" API regular box and pin connections.

(2) Thirty (30) 7-3/4" O.D. x 2-13/16" I.D. x 30' long spiral collars with 6-5/8" API regular box and pin connections. AISI 4145 H fully heat treated alloy steel, hob cut connections, API stress relief box and pin, cold roll thread roots and phos coated. Grooved for slips and elevators.

(3) Thirty (30) 6-1/2" O.D. x 2-13/16" I.D. x 30' long spiral collars with 4½" IF box and pin connections. AISI 4145 H fully heat treated alloy steel, hob cut connections, API stress relief box and pin, cold roll thread roots and phos coated. Grooved for slips and elevators.

c. Kelly- Two (2) 5-1/4" Hex type.

d. Subs and Bit Subs- As required for contractors drill string.

e. Sufficient box and pin thread protectors for all Contractor's equipment.

104 Blowout Preventers, Subsea Equipment and Control Equipment

a. Diverter System - Regan Model KFDH with 10" diverter lines.

b. One (1) 30" Vetco Pin Connector with 1700 feet of 3/16" control hose and storage reel.

c. 18-3/4"-10,000 psi WP BOP stack arranged as shown in the schematic "Blowout Preventer Arrangement" inserted as "Figure 1" and consisting of the following major components:

(1) Flex Joint - Vetco 18-3/4" with 20" MR-6 C connections.

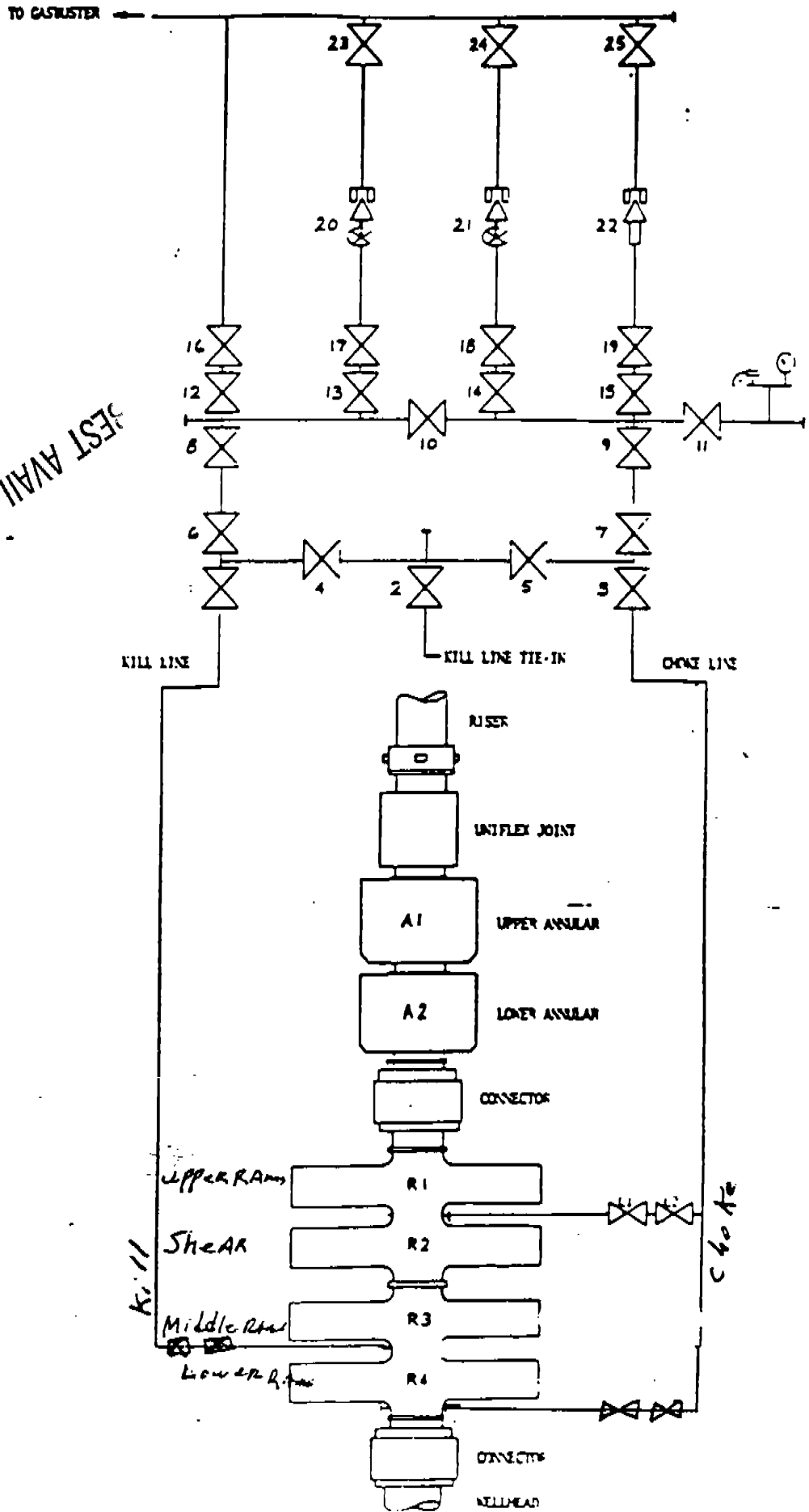
(2) Riser Connector - Vetco H-4, 18-3/4"-10000 psi WP hydraulic connector with emergency release stab subs.

(3) Annular Preventers - Two (2) Shaffer 18-3/4" 5000 psi.

(4) Ram preventer - Two (2) double type "U" Cameron 18-3/4" - 10,000 psi WP BOP's.

(5) Wellhead connector - Vetco H-4, 18-3/4"-10,000 psi WP hydraulic connector.

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d. BOP Kill and Choke Line System:

- (1) Master valves - Three (3) CIW 10,000 psi WP 3-1/8" right angle failsafe valves hydraulic open, spring close.**
- (2) Operating valves - Three (3) CIW 10,000 psi WP 3-1/8" straight through valves, hydraulic open, spring close.**
- (3) Ball Joint Jumper Connection - Two (2) 4" - 10,000 psi WP Vetco Loops.**

e. BOP Guidance System:

- (1) Four post and funnel lower section BOP frame on 6' radius centers complete with reinforcement and guide funnels as required. Funnels and posts slotted for guide wire installation, internally ground and complete with retaining doors. Frame attachment at top Preventer and Wellhead connector with side entry stab subs.**
- (2) Four-funnel upper section BOP frame on 6' radius centers complete with reinforcement as required. Funnels slotted for guide wire installation, internally ground and complete with retaining doors. Frame attachment at Riser connector with side entry stab sub.**

f. Miscellaneous B.O.P. Equipment (Installed in BOP):

- (1) Three (3) sets 5" rams complete with long life ram rubbers.**
- (2) One (1) set shear rams complete.**
- (3) Two (2) annular bag elements.**

g. Marine Riser - 1500 Ft. of Vetco 21" O.D. x 20" I.D. Riser with MR-6C connections, integral choke and kill lines, Riser pup joints - 5 Ft., 10 Ft., 20 Ft., 30 Ft., and 40 Ft. long. Riser material is FG-47-T.

h. Slip joint - Two (2) Vetco slip joint, 55' stroke with dual packer with split inserts. Material of slip joint X-52 inner and outer barrel with MR-6C box connection.

Slip joint packing elements will be capable of operating with 100 psi internal pressure.

Packing gland will be of dual packoff design and be capable of element replacement without cutting inner barrel.

- j. Choke and Kill Hoses:
Two (2) each 3" I.D. 10,000 psi WP hoses, 40 feet long.
- k. Marine Riser Tensioning System:
(1). Four (4) Western Gear dual line type tensioning units designed for 50' line travel and maximum single line load capacity of 80,000 lb. tension.
Total riser tension capacity is 640,000 lb. on eight (8) lines.
(2). Eight (8) idler sheaves.
(3). Control Panel.
- l. Guideline Tensioning System:
(1). Four (4) Western Gear tensioning units, each with 40 ft. line travel and maximum line load capacity of 16,000 pounds.
(2). Four (4) idler sheaves.
(3). Four (4) air winches for 2000 feet of 3/4" wire rope.
- m. Pod Line Tensioning System:
(1). Two (2) each as described in item 5. l.
(2). Two (2) idler sheaves
(3). Two (2) air winches for 2000 feet of 3/4" wire rope.
- n. BOP Accumulator Unit - N.L. air-electric powered 660 gal. accumulator unit, 3000 psi.
- o. Blowout Preventer Control Panels:
(1). Master control panel located on rig floor adjacent to driller's console.
(2). Remote control panel located in toolpusher's office.
(3). Complete manual control at accumulator unit.
(4). All control panels to be graphically illustrated.
- p. Hydraulic Control Hoses - Two (2) hoses 1700 feet long with one 1" supply hose and 37 x 3/16" pilot hoses.
- q. Hydraulic Control Pods- Two (2) Koomey type, fully redundant.

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- r. Choke Manifold - 10,000 psi (See schematic inserted as "Figure 1")
- s. Surface BOP test manifold

105 Downhole Tools and Equipment

- a. Casing Protectors: 150 each with installation tool.
- b. Control Valves:
 - (1). Two (2) inside BOP, with 4-1/2" I.F. connections.
 - (2). One (1) Safety valve with 4-1/2" I.F. connections
 - (3). One (1) Hydril lower kelly valve, 10000 psi W.P. (with spare)
 - (4) One (1) Omsco upper kelly valve, 10,000 psi W.P. (with spare)

106 Fishing Tools.

- a. Overshots as required to catch Contractor's equipment.
- b. Taper taps as required to catch Contractor's equipment

107 Drill String Handling Tools

- a. Tongs, slips, elevators, links for 5" O.D. drill pipe, 9½", 7-3/4" and 6-1/2" O.D. drill collars as listed below:
 - (1). Tongs - One (1) set BJ type SDD, 3½" - 17".
One (1) set BJ type B extended, 3½" - 20".
 - (2). Slips - Two (2) sets Varco SDXL slips for 5" D.P.
Two (2) sets Varco DCS-L slips for 9½" D.C.
Two (2) sets Varco DCS-L slips for 7-3/4" D.C.
Two (2) sets Varco DCS-R slips for 6½" D.C.
 - (3). Elevators- Two (2) sets B.J. type MGG for 5" D.P.
Two (2) sets B.J. type SLA for 9½" DC
Two (2) sets B.J. type SLA for 7-3/4" DC
Two (2) sets B.J. type SLA for 6½" DC
 - (4). Safety Clamps - One (1) Varco type MP-R, 4½" - 10½"
One (1) Varco type MP-M, 10½" - 15-7/8"
 - (5). Links - One (1) set B.J. 500 Ton 3-1/2" x 144" links
One (1) set B.J. 350 Ton 2-3/4" x 132" Links
- b. Rotary tool break-out system - Houston Engineers - Model TV-800AH.
- c. Air Tuggers- Located on drill floor

108 Mud Facilities and Equipment

a. **Mud Tanks**

(1) Two (2) Active Mud Tanks	Total capacity	800 bbls.
(2) Two (2) Reserve Mud Tanks	Total capacity	800 bbls.
(3) One (1) Slugging Pit	Total Capacity	65 bbls.
(4) One (1) Sand Trap	Total capacity	200 bbls.
(5) One (1) Trip Tank	Total capacity	50 bbls.

- b. Mud Mixing Pumps - Three (3) 5 x 6 centrifugal pumps with 100 HP electric motors.
- c. Shaleshaker - Brandt dual tandem highspeed unit.
- d. Desander - Demco 86V with six (6) 8" cones.
- e. Desander Pump - 5 x 6 centrifugal with 100 HP electric motor.
- f. Mud Cleaner- Demco 4 MC 16 w/16 x 4" cones.
- g. Mud Cleaner Pump - 5 x 6 centrifugal with 100 HP electric motor.
- h. Degasser - Wellco Model 5200.
- i. Mud Agitators - Eight (8) 20 HP Lightnin Mixers.
- j. Mud Guns - Two (2) in each active and reserve mud tank.
- k. Pit Level indicator - Martin Decker PVT system.
- l. Gas Detection System - with four (4) terminal sensors.
- m. Circulating Head - King type 4SC.

109 Special Equipment

- a. Halliburton cementing unit. (Rental charges, if any, to be reimbursable)
- b. Totco non-directional drift indicator, 0-8 degrees and 0-16 degrees.
- c. Underwater Television - Subsea Systems or equal.
- d. One H₂S detection system with seven (7) detectors and three (3) alarms.
- e. One (1) fork lift 4500 lb capacity

PART 2

NAME: Diamond M Hunter
YEAR BUILT: 1981
CLASSIFICATION: ABS Maltese Cross AI Drilling Unit

111 Operating Capabilities

A. Water Depth Capacity - 1500 feet
B. Drilling Depth Capacity - 30,000 Feet

112 Principal Characteristics

A. Length Overall 290 Ft.
B. Beam Overall 200 Ft.
C. Main Deck
1) Length 194 Ft.
2) Beam 165 Ft.
B. Hulls (2)
1) Beam 35 Ft.
2) Depth 25 Ft.
C. Baseline to Main Deck 95 Ft.
D. Baseline to Pipe Rack 108 Ft.
E. Baseline to Rig Floor 128.25 Ft.
F. Displacement
1) Lightship (16.5 Ft. draft) 8,175 long tons
2) Ocean Tow (23 Ft. draft) 11,642 long tons
3) Field Move (23 Ft. draft) 11,642 long tons
4) Drilling (55 Ft. draft) 17,012 long tons
G. Variable Deck Load
1) Ocean Move 1300 short tons
2) Field Move 2688 short tons
3) Drilling 2688 short tons
H. Natural Period
1) Heave 20.7 sec.
2) Roll 40.6 sec.
3) Pitch 31.5 sec.

113 Capacities

A. Bulk Tanks	10,000 cu.ft.
B. Sack Storage	5,120 sacks
C. Fuel	6,358 Bbls.
D. Potable Water	1,040 Bbls.
E. Drill Water	15,842 Bbls.
F. Mud Tanks	1,880 Bbls.
G. Quarters	82 man + 5 man hospital

114 Ships Equipment

A. Power System

- 1) Main Diesel Generators - Two (2) EMD 16E-9 Diesel Engines, 3070 HP. Each driving EMD 2100 KW AC Generators. One (1) EMD 16E-8 Diesel Engine, 2200 HP, driving EMD 1400 KW AC generator.
- 2) Emergency Diesel Generators - One (1) Caterpillar D 3408 engine driving 250 KW AC Generator.
- 3) Power Distribution- Ten (10) bay SCR system, each 750V, 2-3000, 4-2000, and 4-1200 amp.

B. Air System

- 1) Main Air System - Three (3) Quincy screw type air compressor, 480 CFM each at 125 psi. Two (2) driven by 100 HP motor. One driven by diesel engine.
- 2) Air Receiver - Two (2) 32 cu. ft. vertical air receivers.
- 3) Bulk System - Two (2) Bulk air compressors 40 psi.

C. Cranes -

Two (2) Link Belt ABS 238 35 ton.

D. Welding Machines -

Three (3) Miller 400 Amp Welders.

E. Safety Equipment

- 1) Fire Fighting Equipment - One (1) Lot portable fire extinguishers as per U.S.C.G., Halon Flooding System and 1500 lb dry chemical system

- | | |
|------------------------------|--|
| 2) Life Jackets - | As per U.S.C.G |
| 3) Liferrafts - | Four (4) 25 man inflatable rafts. |
| 4) Lifeboats - | Two (2) 50 man covered boats. |
| F. Helicopter Deck - | Heliport designed to accommodate a Sikorsky S-61N Helicopter |
| G. Communication - | Single Side Band and FM Radio Stations and Marisat System. |
| H. Distillation Unit - | Two (2) Koomey R/O units -Capacity 10,000 G.P.D. |
| I. Sewage Treatment System - | Red Foxx design. |
| J. Trash Disposal | One (1) Trash Compactor 150 lb. capacity. |

October 17, 2002

Plan of Exploration
GB 228
OCS-G-19086

Well Location "A"
600' FNL & 3550' FWL of Garden Banks Block 228

RE: Request for Classification of
Probability of Encountering H₂S
During Drilling Operations

H₂S Statement:

McMoRan Oil and Gas LLC (McMoRan) respectfully requests, pursuant to 30CFR 250.417, a determination from the Regional Supervisor that the proposed drilling operations under this plan will be classified as "Zones known to contain H₂S is unknown", or "Zones where the absence of H₂S has been confirmed".

McMoRan offers the following production information and/or geological and geophysical data to assist your office in making this determination:

The prospect is located 3 miles south, southwest of the Garden Banks 184 Field. No hydrogen sulfide has been reported from this field, which has produced more than 6.5 BCFG and 218 MBO from Trim B sands. The objective sands (Trim B) were also encountered 5 miles to the south, southeast in the McMoRan #1 GB 272 well. There was no reported occurrence of H₂S while drilling this well. Seismic and well log correlations indicate that our planned well will penetrate sediment of equivalent age.

With production experience to the north and nearby drilling history, no evidence exists to indicate the presence of H₂S; therefore, McMoRan recommends that the proposed drilling operations planned for the above referenced area, be classified as "Zones where the absence of H₂S has been confirmed".

Michael C. Fauquier

Consulting Geologist
Fauquier/POEletter10-17-02.doc

**EXPLORATION PLAN (EP)
AIR QUALITY SCREENING CHECKLIST**

OMB Control No. XXX-XXX
Expiration Date: Pending

COMPANY	McMoRan Oil & Gas LLC
AREA	Garden Banks
BLOCK	228
LEASE	OCS-G 19086
PLATFORM	N/A
WELL	"A"
COMPANY CONTACT	Julie Bowen
TELEPHONE NO.	504/582-4535
REMARKS	Drill, evaluate, and test 1 exploratory well. TA or P&A.

"Yes"	"No"	Air Quality Screening Questions
	X	1. Are the proposed activities east of 87.5° W latitude?
	X	2. Are H ₂ S concentrations greater than 20 ppm expected?
	X	3. Is gas flaring proposed for greater than 48 continuous hours per well?
	X	4. Is produced liquid burning proposed?
	X	5. Is the exploratory activity within 25 miles of shore?
	X	6. Are semi-submersible activities involved and is the facility within 50 miles of shore?
	X	7. Are drillship operations involved and is the facility within 120 miles of shore?
	X	8. Will the exploratory activity be collocated (same surface location) on a production facility?

If ALL questions are answered "No":

Submit only this coversheet with your plan; a full set of spreadsheets is not needed.

If ANY of questions 1 through 7 is answered "Yes":

Prepare and submit a full set of EP spreadsheets with your plan.

If question number 8 is answered "Yes":

Prepare and submit a full set of DOCD spreadsheets showing the cumulative emissions from both the proposed activities and the existing production platform.

Form MMS-138 (March 2000)

Exhibit 10 (1/1)

BEST AVAILABLE COPY

COASTAL ZONE MANAGEMENT

CONSISTENCY CERTIFICATION

Exploration

Type of Plan

Garden Banks Block 228

Area and Block

OCS-G 19086

Lease Number

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

McMoRan Oil & Gas LLC

Lessee or Operator



Certifying Official

10/23/02

Date

COASTAL ZONE MANAGEMENT

CONSISTENCY CERTIFICATION

Exploration
Type of Plan

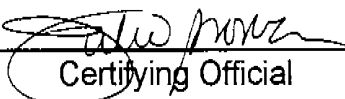
Garden Banks Block 228
Area and Block

OCS-G 19086
Lease Number

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

Arrangements have been made with *The Advocate* to publish a public notice of the proposed activities no later than November 8, 2002. Additionally, arrangements have been made with the *Abbeville Meridional* in Vermilion Parish to publish a public notice of the proposed activities no later than November 8, 2002.

McMoRan Oil & Gas LLC
Lessee or Operator



Certifying Official

10/23/02
Date



McMoRAN OIL & GAS

McMoRan Oil & Gas LLC
1615 Poydras Street
New Orleans, LA 70112
P.O. Box 60004
New Orleans, LA 70160

Telephone: 504-582-4000
Fax: 504-582-4584

October 23, 2002

Abbeville Meridional
P.O. Box 400
Abbeville, LA 70511-0400

Attention: Legal Advertisements

Gentlemen:

Enclosed is a Public Notice which we request be published for one day only on November 8, 2002.

Please send an affidavit and the invoice to the following:

McMoRan Oil & Gas LLC
P.O. Box 60004
New Orleans, LA 70160
Attention: Julie Bowen

Your assistance in this matter will be appreciated.

Sincerely,

A handwritten signature in black ink, appearing to read "Julie Bowen".

Julie Bowen
Regulatory Supervisor

/jb
Enclosure

BEST AVAILABLE COPY

PUBLIC NOTICE

Public Notice of Federal Consistency review of an Exploration Plan (EP) by the Coastal Management Division/Louisiana Department of Natural Resources for the Plan's consistency with the Louisiana Coastal Resources Program.

Applicant: McMoRan Oil & Gas LLC
P.O. Box 60004
New Orleans, LA 70160

Location: Garden Banks Block 228
OCS-G 19086
Lease Offering Date 08/27/97

Description: Proposed Exploration Plan for the above area provides for the exploration for oil and gas. Exploration activities shall include drilling from a semi-submersible rig and transport of drilling crews and equipment by helicopter and/or cargo vessel from an onshore base located at Intracoastal City, Louisiana. No ecologically sensitive species or habitats are expected to be located near or affected by these activities.

A copy of the plan described above is available for inspection at the Coastal Management Division Office located on the 10th Floor of the State Land and Natural Resources Building, 625 North 4th Street, Baton Rouge, Louisiana. Office hours: 8:00 a.m. to 5:00 p.m., Monday through Friday. The public is requested to submit comments to the Coastal Management Division, Attention OCS Plans, P.O. Box 44487, Baton Rouge, LA 70804-4487. Comments must be received within 15 days of the date of this notice or 15 days after the Coastal Management Division obtains a copy of the plan and it is available for public inspection. This public notice is provided to meet the requirements of the NOAA Regulations on Federal Consistency with approved Coastal Management Programs.

Exhibit 11 (4/6)

Exhibit 11 (5/6)

PUBLIC NOTICE

Public Notice of Federal Consistency review of an Exploration Plan (EP) by the Coastal Management Division/Louisiana Department of Natural Resources for the Plan's consistency with the Louisiana Coastal Resources Program.

Applicant: McMoRan Oil & Gas LLC
P.O. Box 60004
New Orleans, LA 70160

Location: Garden Banks Block 228
OCS-G 19086
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Exploration Plan

ENVIRONMENTAL REPORT

McMoRan Oil & Gas LLC

Garden Banks Block 228

OCS-G 19086

OFFSHORE, LOUISIANA

October 23, 2002

McMoRan Oil & Gas LLC
P.O. Box 60004
New Orleans, LA 70160
Attention: Julie Bowen
504/582-4535

TITLE PAGE

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I. DESCRIPTION OF PROPOSED ACTION

McMoRan Oil & Gas LLC proposes to conduct exploratory activities in Garden Banks Block 228, Offshore, Louisiana.

As proposed, the Initial Exploration Plan for Garden Banks Block 228 provides for the drilling of one (1) exploratory well.

At this time, the planned commencement date for proposed activities is approximately December 1, 2002.

A. DESCRIPTION OF PROPOSED TRAVEL MODES, ROUTES AND FREQUENCY

Support vessels will be dispatched from a support base located in Intracoastal City, Louisiana. The boats will normally move to the block via the most direct route from Intracoastal City, Louisiana; however, boats operating in the field may travel from other facilities nearby. Following is an estimate of trips to the proposed operation.

	<u>Drilling Operations</u>
Crew Boat	3 trips per week
Supply Boat	3 trips per week
Helicopter	7 trips per week

B. ONSHORE SUPPORT BASE

The proposed activities will utilize a support base located at Intracoastal City, Louisiana. This base provides 24-hour service, a radio tower with phone patch, dock space, office space, parking lot, equipment and supply storage space, drinking and drill water, etc. The proposed exploration activities will help to maintain this base at its present level of activity. No expansion of the physical facilities or the creation of new jobs is expected to result from the work planned in conjunction with this block.

The first socioeconomic data base report will be submitted when the MMS and the states of Alabama, Louisiana, and Mississippi identify the specific parameters to be addressed in these semi-annual reports.

C. NEW OR UNUSUAL TECHNOLOGY

No new or unusual technology will be required for this operation.

D. VICINITY MAP

Garden Banks Block 228 is located approximately 135 miles southeast of Galveston, Texas. Water depth at the proposed location is 829'. A vicinity map is included in our Exploration Plan as Exhibit 4.

II. DESCRIPTION OF AFFECTED ENVIRONMENT

A. COMMERCIAL FISHING

The Gulf of Mexico provides nearly 20% of the commercial fish landings in the continental United States and 40% of the recreational fishing catch in the nation.

Commercial landings of all fisheries in the Gulf during 1995 totaled 1,490 million pounds, valued at \$787 million. Menhaden was the most important Gulf species in quantity with 1,040 million pounds landed valued at \$52 million. Shrimp was the most important Gulf species in value with 234 million pounds landed valued at \$468 million.

Louisiana ranked first, Mississippi ranked second, and Texas ranked third among Central and Western Gulf states in total commercial fishery landings for 1995 with about 1,129 million pounds landed valued at \$316 million in Louisiana, about 145 million pounds valued at \$42 million in Mississippi, and about 88 million pounds landed valued at \$193 million in Texas.

Nearly all species contributing to the Gulf of Mexico's commercial catches are estuarine dependent.

B. SHIPPING

The establishment of a series of safety fairways or traffic separation schemes (TSS's), and anchorage areas provide unobstructed approach for vessels using U.S. ports. Shipping safety fairways are lanes or corridors in which no fixed structure, whether temporary or permanent, is permitted. TSS's increase navigation safety by separating opposing lanes of vessel traffic. Fairway anchorage are areas contiguous to and associated with a fairway, in which fixed structures may be permitted within certain spacing limitations.

Fairways play an important role in the avoidance of collisions on the OCS, particularly in the case of the large oceangoing vessels, but not all vessels stay within the fairways. Many others, such as fishing boats and OCS support vessels, travel through areas with high concentration of fixed structures. In such cases, the most important mitigation factor is the requirement for adequate marking and lighting of structures. After a structure has been in place for a while, it often becomes a landmark and an aid to navigation for vessels that operate in the area on a regular basis. Most ocean going vessels are equipped with radar capable of aiding navigation in all weather conditions. This has contributed to safe navigation in the OCS.

Garden Banks Block 228 is clear of all shipping fairways and anchorage areas. The drilling rig and each of the marine vessels servicing these operations will be equipped with all U.S. Coast Guard required navigational safety aids to alert ships of its presence in all weather conditions.

C. PLEASURE BOATING, SPORT FISHING AND RECREATION

The northern Gulf of Mexico coastal zone is one of the major recreational regions of the United States, particularly in connection with marine fishing and beach-related activities. The coastal beaches, barrier islands, estuarine bays and sounds, river deltas, and tidal marshes are utilized for recreational activity by residents of the Gulf Coast and tourists from throughout the nation. Publicly owned and administered areas such as national seashores, parks, beaches, and wildlife lands, as well as specially designated preservation areas such as historic and natural sites and landmarks, wilderness areas, wildlife sanctuaries, and scenic rivers attract residents and visitors throughout the year. Commercial and private recreational facilities and establishments, such as resorts, marinas, amusement parks, and ornamental gardens, also serve as primary interest areas and support services for people who seek enjoyment from the recreational resources associated with the Gulf.

The two major recreational areas most directly associated with offshore leasing and potentially affected by it are the offshore marine environment and the coastal shorefront of the adjoining states. The major recreational activity occurring on the OCS is recreational fishing and diving. Speckled trout and redfish are the most sought sport fish in coastal marine waters, whereas snapper and mackerel are some of the more popular offshore sport fish.

The coastal shorelines of the Central Planning Area contain extensive public park and recreation areas, private resorts, and commercial lodging. Most of the outdoor recreational activity focused on the Gulf shorefront is associated with accessible beach areas. Beaches are a major inducement for coastal tourism and a primary resource for resident recreational activity.

Bird watching is a recreational activity of growing interest and importance along the Gulf Coast. Production platforms are known to attract several species of neotropical migrants.

D. POTENTIAL OR KNOWN CULTURAL RESOURCES

Archaeological resources are any prehistoric or historic site, building, structure, object, or feature that is man-made or modified by human activity. The Archaeological Resources Regulation at 30 CFR 250.194 grants specific authority to each MMS Regional Director to require archaeological resource surveys and reports. With the exception of the Ship Shoal Lighthouse, historic archaeological resources on the OCS consist of shipwrecks. Statistical analysis of over 4,000 potential shipwrecks in the northern Gulf indicated that many of the OCS shipwrecks occur in clustered patterns related mainly to navigation hazards and port entrances. The continental shelf shoreward of the 45-m bathymetric contour would have potential for prehistoric sites dating subsequent to 12,000 B.P. The prehistoric archaeological high probability zone is roughly contiguous to the area between the Federal/State boundary and the 45-m bathymetric contour. Activities occurring within this zone are subject to archaeological clearance.

Geomorphic features that have high probability for associated prehistoric sites include barrier islands and backbarrier embayments, river channels and associated floodplains and terraces, and salt-dome features. Man-made features such as mounds may also exist in the shallow inundated portions of the OCS.

A geophysical survey of Garden Banks Block 228 was conducted by Thales Geosolutions, Inc. in August 2001. An amplitude anomaly is noted 500 feet northwest of location A at 451 milliseconds, and another amplitude anomaly is evident 500 feet northeast of location A at 461 milliseconds. No fault escarpments, gas chimneys, hydrocarbon seeps, or additional shallow hazards are noted within 490 feet of the location.

E. ECOLOGICALLY SENSITIVE FEATURES

Barrier beaches are a common landform along the Gulf Coast and stretch in an irregular chain from Florida to Texas. These elongated, narrow landforms are composed of sand and other unconsolidated predominantly coarse sediments transported by waves, currents, storm surges, and wind. The term "barrier" identifies the structure as one that protects other features, such as bays, estuaries, and marshes, from direct impacts of the open ocean. By separating coastal waters from the ocean, barriers contribute to the amount of estuarine habitat along the coast. Habitats found among the coastal barrier land forms provide a variety of niches that support many avian, terrestrial, aquatic, and amphibian species.

Dauphin Island, Alabama, is essentially a low-profile transgressive barrier island, except for a small Pleistocene core at its eastern end. The western end is a Holocene spit that is characterized by small dunes and washover fans with marsh deposits and tree stumps exposed in the surf zone. Coastal Alabama has approximately 3,994 acres of dune/beach complex.

Louisiana has the most rapidly retreating beaches in the nation - they are retreating at an average of 4.2m/year. Barrier beaches along the deltaic plain in Louisiana fit into one of three categories, depending on the stage of the deltaic cycle that the landmass is experiencing. When a major distributary of the Mississippi River is abandoned, submergence due to subsidence and sea-level rise transforms the abandoned delta into an erosional (transgressive) headland with flanking arcs of barrier sand spits. Barrier islands are created when washover channels across sand spits deepen to form permanent channels.

The importance of coastal wetlands to the coastal environment has been well documented. Coastal wetlands are characterized by high organic productivity, high detritus production, and efficient nutrient recycling. They provide habitat for a great number and wide diversity of invertebrates, fish, reptiles, birds, and mammals. Wetlands are particularly important as nursery grounds for many important fish and shellfish juveniles. The Louisiana coastal wetlands support over two-thirds of the Mississippi Flyway wintering waterfowl population and the largest fur harvest in North America.

Louisiana contains most of the Gulf's coastal wetlands. The deterioration of coastal wetlands, particularly in Louisiana, is an issue of concern. In Louisiana, the annual rate of wetlands loss has been measured at 130 km² for the period 1955-1978. Several factors contribute to wetlands loss in Coastal Louisiana, including sediment deprivation (a result of a 50% decrease in the suspended sediment load of the river since the 1950's due to channelization and farmland conservation efforts), subsidence and sea-level rise, and construction of levees.

Alabama has approximately 118,000 acres of coastal wetlands. Approximately 75,000 acres of which are forested and 4,400 acres are freshwater marsh and 34,000 acres are estuarine marsh. Most coastal wetlands in Alabama occur on the Mobile River delta or along the northern Mississippi Sound.

Estuarine marshes around Mississippi Sound and associated bays occur in discontinuous bands. The wetlands of Mississippi are more stable than those in Louisiana, reflecting the more stable substrate, more active sedimentation in wetland areas, and the occurrence of only minor canal dredging in the Mississippi wetlands. Most of the wetlands in Alabama occur on the Mobile River delta or along northern Mississippi Sound.

The shelf and shelf edge of the Central Gulf are characterized by topographic features that are inhabited by benthic communities. The habitat is important because it supports hard-bottom communities of high biomass, high diversity, and high numbers of plant and animal species; they support, either as shelter, food, or both, large numbers of commercially and recreationally important fishes; they are unique to the extent that they are small isolated areas of communities in the vast Gulf of Mexico; they provide a relatively pristine area suitable for scientific research; and they have an aesthetically attractive intrinsic value.

The "Pinnacle Trend," a region of topographic relief, is found at the outer edge of the Mississippi-Alabama shelf between the Mississippi River and DeSoto Canyon. These pinnacles provide a large amount of surface area for the growth of sessile invertebrates and attract large numbers of fish. The potential to support live-bottom communities has made these features a focus of concern and discussion.

Chemosynthetic clams, mussels, and tube worms, similar to the hydrothermal vent communities of the eastern Pacific, have been discovered in association with hydrocarbon seeps in the northern Gulf of Mexico. Initial discoveries of cold-water seep communities indicated that they are primarily associated with hydrocarbon and H₂S seep areas. They are normally found in very sparse concentrations of less than one animal per m². The most dense aggregations of these organisms has been found at waters depths of around 500m and deeper.

Seven distinct biotic zones on the banks of the Gulf have been identified. None of the banks contain all of the seven zones. The Central Gulf of Mexico lists 16 topographic features. None of those listed are in the vicinity of the proposed operations in Garden Banks Block 228.

F. PIPELINES AND CABLES

As a prudent operator, McMoRan Oil & Gas LLC will avoid all pipelines and/or cables in the vicinity of the proposed operations.

G. OTHER MINERAL USES

The activities proposed for Garden Banks Block 228 will have no direct or indirect impact on other mineral uses.

H. OCEAN DUMPING

Ocean dumping is prohibited in this area.

I. ENDANGERED AND THREATENED SPECIES AND CRITICAL HABITAT

Although a large number of endangered and threatened species inhabit the Gulf Coast States and their adjoining waters, only a small percentage occupy coastal and marine habitats. An even smaller number are likely to be affected by OCS oil and gas exploration and production.

The Alabama, Choctawhatchee and Perdido Key Beach Mice occupy restricted habitats in the mature coastal dunes of Florida and Alabama; therefore, their habitat is not threatened by OCS activity.

The Kemp's ridley sea turtle is the most imperiled of the world's marine turtles. Nesting in the U.S. occurs infrequently on Padre and Mustang Islands in South Texas from May to August, and occasionally in Florida. In the Gulf, Kemp's ridleys inhabit nearshore areas, being most abundant in coastal waters from Texas to Florida.

The loggerhead sea turtle occurs throughout the world in habitats ranging from estuaries to the continental shelf. The largest nesting concentration in the United States is on the southeast Florida coast from Volusia to Broward Counties. The Florida panhandle accounts for approximately one-third of the nesting on the Florida Gulf Coast. In the Central Gulf, loggerhead nesting has been reported on Gulf Shores and Dauphin Island, Alabama; Ship Island, Mississippi; and the Chandeleur Islands, Louisiana. Nesting in Texas occurs primarily on North and South Padre Islands. The banks off the central Louisiana Coast and near the Mississippi Delta are important marine turtle feeding areas.

Green turtle nesting in the northern Gulf is isolated and infrequent, except along the northwest Gulf coast of Florida on Eglin Air Force Base lands and Gulf Islands National Seashore, Santa Rosa and Okaloosa Counties; Walton County; and St. Joseph Peninsula, Gulf County and from Pinellas county through Collier County on the southwest Gulf coast of Florida. Green turtles occur primarily in coastal waters where they forage on seagrasses, algae, and associated organisms. In coastal Texas, green turtles may remain in one location for several months.

Leatherbacks are the largest and most pelagic of the marine turtles. Leatherbacks have a specialized jellyfish diet. Their nesting is concentrated on coarse-grain beaches in the tropical latitudes. Florida is the only site in the continental United States where the leatherback regularly nests.

The hawksbill occurs in tropical and subtropical areas of the Atlantic, Pacific and Indian Oceans. It is widely distributed in the Caribbean Sea and western Atlantic Ocean. In the continental United States, the species is recorded from all the Gulf States and from along the eastern seaboard as far north as Massachusetts, with the exception of Connecticut. Stranded turtles, usually hatchlings or yearlings, have been reported in Texas, and recently, Louisiana. Hawksbill turtles are generally associated with coral reefs or other hard substrate areas where they forage primarily on sponges. This species feeds in the photic zone and prefers warm temperatures.

There are five baleen (northern right, blue, fin, sei, and humpback) whale species, one toothed (sperm) whale species, and one sirenian (West Indian manatee) occurring in the Gulf of Mexico that are endangered. The sperm whale is common in the Gulf, while the baleen whales are considered uncommon. Two families of baleen whales occur in the Gulf: balaenids (northern right) and

balaenopterids, or rorquals (blue, fin, sei, and humpback). The northern right is one of the stockiest of all whales and the world's most endangered. The northern right is not a normal inhabitant of the Gulf of Mexico. The blue whale is the largest animal ever known. The blue whale is not considered a regular inhabitant of the Gulf of Mexico. The fin whale is the second largest rorqual. Sightings of fin whales in the Gulf have typically been in deeper water, more commonly in the north-central area. The sei whale is a medium-sized rorqual. Sei whales occur from the tropics to polar zones but are more restricted to mid-latitude temperate zones and is represented in the Gulf by only four reliable records (three of these from strandings in eastern Louisiana). The humpback whale is more robust in body than other balenopterids. Although there are seven reliable sighting records for humpbacks in the Gulf, the time of year and their small size indicate that these humpbacks were inexperienced yearlings on their first return migration. The sperm whale is the largest toothed whale and is the most abundant large cetacean in the Gulf of Mexico. Sperm whales in the Gulf were found to occur at mean depths of 950-1,100m.

Two subspecies of the West Indian manatee are recognized: The Florida manatee and the Antillean manatee. The Florida manatee is found from Louisiana east to Florida and north seasonally to the Carolinas and Chesapeake Bay. The manatees occasionally appearing in Texas waters are most likely from the Antillean group. The manatee's distribution is limited to low-energy, inshore habitats supporting the growth of seagrasses.

The peregrine falcon of North America is separated into three subspecies: Arctic, American, and Peale's. The Arctic peregrine, which originates in the Arctic and sub-Arctic regions from western Alaska to western Greenland, accounts for 99 percent of the fall migrants on the Gulf of Mexico coast.

The piping plover is a migratory shore bird that is endemic to North America. Most wintering plovers occur in Texas and along other U.S. Gulf Coast sites. Coastal sandflats and mudflats in close proximity to large inlets or passes attract the largest concentrations of piping plovers because of a preferred prey base and the substrate coloration provides protection from aerial predators.

The brown pelican is one of two pelican species in North America and remains listed as endangered in Mississippi, Louisiana and Texas. It feeds entirely upon fishes captured by plunge diving in coastal waters.

The Eskimo curlew is a small American curlew that nests in Arctic tundra and migrates to wintering habitat in the pampas grasslands of southern South America. Census efforts are underway to ascertain whether this species is extinct.

The whooping crane is an omnivorous, wading bird. They currently exist in three wild populations and at five captive locations. The only self-sustaining wild population nests in the Northwest Territories and adjacent areas of Alberta, Canada. These birds winter in coastal marshes and estuarine habitat along the Gulf of Mexico coast at Aransas National Wildlife Refuge, Texas.

The bald eagle, threatened in the lower 48 states, is the only species of sea eagle regularly occurring on the North American continent. The bulk of the bald eagle's diet is fish. The nesting range in the southeast U.S. includes the entire coastal plain and along major rivers and lakes; however, the range is now limited with most breeding pairs occurring in Florida and Louisiana, with some in South Carolina, Alabama, and east Texas.

- The least tern is the smallest North American tern and is listed as endangered except within 50 miles of the coast. They prefer inshore habitats and breed on the Atlantic coast from southern Maine to the Florida Keys, and on the coasts of all states bordering the Gulf of Mexico, and along rivers in the interior of the U.S. from Nebraska and Ohio south to New Mexico and the Gulf of Mexico.

The Gulf sturgeon -- a subspecies of the Atlantic sturgeon -- is mostly found along major rivers, estuaries, and offshore waters between the Mississippi River and the Suwannee River, and marine waters of the Central and Eastern Gulf of Mexico south to Florida Bay. Extant occurrences in 1996 include the Mississippi River and Lake Pontchartrain, Louisiana; and Charlotte Harbor, Florida. It was listed as a threatened species on 09/30/91.

J. SOCIOECONOMIC

The Gulf of Mexico impact zone's (from Cameron County, TX to Baldwin County, Alabama) well being is directly or indirectly affected by the OCS oil and gas industry. Historically, Louisiana has been the most dependent on oil and gas activity both offshore and onshore. The onshore support base for operations in Garden Banks Block 228 is Intracoastal City, Louisiana.

III. UNAVOIDABLE ADVERSE ENVIRONMENTAL EFFECTS

A. WATER QUALITY

Operational discharges (drilling muds and cuttings, deck drainage and sanitary and domestic wastes) or accidental oil spills may temporarily degrade some measures of water quality adjacent to the proposed surface location. The impact level from these factors is considered to be low.

B. EFFECTS ON MARINE ORGANISMS

Some organisms will be killed and some will be temporarily functionally impaired as a result of operational discharges. The most affected groups will be plankton and benthos immediately around the proposed surface locations. Damage will be both mechanical and toxicological. These impacts are considered to be localized, short term and reversible at the population level.

An oil spill could affect a broad spectrum of marine organisms. However, most effects would be localized and short term. Any effects on mammals and turtles would be significant.

C. EFFECTS ON THREATENED OR ENDANGERED SPECIES

Anchoring, pipe and structure emplacement, dredging, operational discharges and some oil spill impacts will result in disturbances of the seagrass and benthic fauna and food sources utilized by these species. The impacts on these species is estimated to be moderate to low.

D. WETLANDS AND BEACH

In the unlikely event of a spill occurring and reaching shore, organisms in wetland and beach habitats could be killed or functionally impaired. Human community disruption could also occur. Although all such effects would be localized, any effects on endangered species and/or critical habitats would be significant.

Marine debris education and training and several legal and operations changes affecting oil and gas operations are reducing accidental loss of solid waste from most offshore operations.

E. AIR QUALITY

Air quality degradation may occur from onshore and offshore operational emissions as a result of drilling operations. The major impact producing factors on air quality from OCS-related activity are due to combustion, evaporation, or venting of hydrocarbons. The air quality at the lease site will be degraded temporarily during operations, as a result from support vessels (boats and helicopters). Anticipated emissions are expected to be below MMS guidelines limits and air quality should return to normal once operations are measurably completed. Offshore activities probably will not affect onshore air quality because of the distance between the structure and shore. Air quality at the onshore base will be only insignificantly reduced by onshore activities. Any such effect will be temporary.

F. COMMERCIAL FISHING

The major impact producing factors on fishing activities from the proposed operations is structure placement, oil spills and underwater OCS obstructions such as pipelines and debris.

Oil spills that contact the coastal marshes, bays, estuaries, and open Gulf areas with high concentrations of floating eggs and larvae have the greatest potential for damage to commercial fisheries. The majority of the Gulf's fishes are estuarine dependent. An oil spill could seriously affect commercial fisheries such as menhaden, shrimp, and blue crab that use these areas as nursery or spawning grounds.

The emplacement of one structure eliminates approximately 9 acres of commercial trawling space, and underwater OCS obstructions cause gear conflicts which result in such losses as trawls, shrimp catch, business downtime, and vessel damage.

Commercial fishery resources may also be affected by the discharge of drilling muds which may contain material toxic to marine fishes; however, this is only at concentrations four to five orders of magnitude higher than those found more than a few meters from the discharge point. Further dilution is extremely rapid in offshore waters.

In conclusion, although these factors impact the commercial fisheries industries, the level of impact is expected to be very negligible.

G. SHIP NAVIGATION

Very little interference can be expected between the drilling unit, structures and marine vessels utilized during development operations and ship that use established fairways. However, at night and during rough weather, fog, and heavy seas, ships not using established fairways could collide with the structures. Approved aids to navigation will be installed on the drilling rig and all marine vessels servicing these operations in accordance USCG regulations.

H. CULTURAL RESOURCES

The greatest impact to a historic and/or prehistoric cultural resource as a result of the proposed action would result from a contact between an OCS offshore activity (drilling rig emplacement) and a historic shipwreck and/or prehistoric site located on the OCS.

The cultural resource surveys required prior to an operator beginning oil and gas activities in a lease block are estimated to be 90 percent effective as identifying possible sites.

I. RECREATION AND AESTHETIC VALUES

The drilling rig and marine vessels may represent an obstacle to some sport fisherman, but such an effect is expected to be negligible and not permanent.

Even though existing regulations and orders prohibit indiscriminate littering of the marine environment with trash, offshore oil and gas operations involving men, machines, equipment, and supplies is bound to result in some littering of the ocean. Human nature and accidents associated with offshore operations will contribute some floatable debris to the ocean environment which will eventually come ashore on major recreational beaches.

The effects that normal operations or a minor oil spill would have on any fish stocks important to sport fishermen are also considered to be negligible.

A minor oil spill and/or non-petroleum floating debris could foul beaches inshore of the lease area. The fouling of the beaches would be an aesthetic detriment that could adversely affect recreation. Any effects on each recreation could adversely affect tourism, and consequently, the local economy.

IV. SUMMARY

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

- A. The best available and safest technologies will be used throughout the project. These include meeting all applicable requirements for equipment types, general project layout, safety systems, and equipment and monitoring systems.
- B. All operations are covered by a Minerals Management Service approved Oil Spill Response Plan.
- C. All applicable Federal, State, and Local requirements regarding air emissions and water quality and discharge for the proposed activities, as well as any other permit conditions, will be complied with.
- D. The proposed activities described in detail in the Exploration Plan will comply with Louisiana and Texas' Coastal Management Program and will be conducted in a manner consistent with such program.

REFERENCES

1. Final Environmental Impact Statement, Oil and Gas Lease Sales 110 and 112, Gulf of Mexico OCS Region, OCS EIS, MMS 86-0087.
2. Final Environmental Impact Statement, Oil and Gas Lease Sales 110 and 112, Gulf of Mexico OCS Region, OCS EIS, MMS 86-0087, visuals.
3. Final Environmental Impact Statement, Oil and Gas Lease Sales 113, 115, and 116, Gulf of Mexico OCS Region, OCS EIS, MMS 87-0077.
4. Final Environmental Impact Statement, Oil and Gas Lease Sales 118 and 122, Gulf of Mexico OCS Region, OCS EIS, MMS 88-0044.
5. Final Environmental Impact Statement, Oil and Gas Lease Sales 123 and 125, Gulf of Mexico OCS Region, OCS EIS, MMS 89-0053.
6. Final Environmental Impact Statement, Oil and Gas Lease Sales 131, 135 and 137, Gulf of Mexico OCS Region, OCS EIS, MMS 90-0042.
7. Final Environmental Impact Statement, Oil and Gas Lease Sales 142 and 143, Gulf of Mexico OCS Region, OCS EIS/EA, MMS 92-0054.
8. Final Environmental Impact Statement, Oil and Gas Lease Sales 147 and 150, Gulf of Mexico OCS Region, OCS EIS/EA, MMS 93-0065.
9. Draft Environmental Impact Statement, Oil and Gas Lease Sales 157 and 161, Gulf of Mexico, OCS Region, OCS EIS/EA, MMS 95-0017.
10. Final Environmental Impact Statement, Oil and Gas Lease Sales 166 and 168, Gulf of Mexico, OCS Region, OCS EIS/EA, MMS 96-0058.
11. Final Environmental Impact Statement, Gulf of Mexico OCS Oil and Gas Lease Sale 169, 172, 175, 178, and 182, Gulf of Mexico, OCS Region, OCS EIS/EA MMS 97-0033.
12. Final Environmental Impact Statement, Gulf of Mexico OCS Oil and Gas Lease Sale 171, 174, 177, and 180, Gulf of Mexico, OCS Region, OCS EIS/EA MMS 98-0008.