

SEP 9 1985

In Reply Refer To: RP-2-1'

Mark Producing, Inc.
Attention: Ms. Susan Hathcock
675 Bering Drive
Houston, Texas 77057

Gentlemen:

Reference is made to your Initial Plan of Exploration and Environmental Report received August 26, 1985, amended August 27, 1985, for Leases OCS-G 7703 and 7704, Blocks 77 and 79, respectively, South Marsh Island Area. This plan includes the activities proposed for Wells A through E in Block 77 and Wells A through E in Block 79.

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 9, 1985, and is now being considered for approval.

Your plan control number is N-2274 and should be referenced in your communication and correspondence concerning this plan.

Sincerely yours,

Jee Original Signed: Kent E. Stauffer

D. M. Solinas
Regional Supervisor
Rules and Production

bcc: Lease OCS-G 7703 (OPS-3-2) (FILE ROOM)
Lease OCS-G 7704 (OPS-3-2) (FILE ROOM)
OPS-3-4 w/Public Info. Copy of the plan and ER (PUBLIC RECORDS ROOM)
DO-4

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MICROFILMED
Office of
Program Services

SEP 10 1985

Information Services
Section

PUBLIC INFORMATION

MARK PRODUCING, INC.

PLAN OF EXPLORATION

OCS-G 7703 and OCS-G 7704

All of Blocks 77 and 79

South Marsh Island Area

Offshore, Louisiana

MINERAL MANAGEMENT SERVICE

AUG 26 1985

U.S. DEPARTMENT OF THE INTERIOR

SECTION

ITEM

- | | |
|----|---|
| 1 | Introductory Letter |
| 2 | Proposed Type and Sequence of Exploration Activities and Timetable |
| 3 | Description of Drilling Vessel |
| 4 | Safety & Environmental Safeguards, Including Oil Spill Contingency Plan |
| 5 | Approximate Location of Proposed Wells and Plat |
| 6 | Structural Interpretation and Shallow Drilling Hazards Report |
| 7 | Onshore Support Base Facilities |
| 8 | Mud Components |
| 9 | Air Quality Review |
| 10 | Coastal Zone Management Statement |
| 11 | Environmental Report |

Mark Producing
675 Benno Drive
Houston, Texas 77057



August 23, 1985

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

Attention: Mr. Ralph Melancon
Acting Regional Supervisor
Office of Rules and Production

Re: OCS-G 7703 and OCS-G 7704
All of Blocks 77 and 79, respectively
South Marsh Island Area
Plan of Exploration

Gentlemen:

In accordance with 30 CFR 250.34, as amended, Mark Producing, Inc., herein respectfully submits for approval a proposed Plan of Exploration for the referenced blocks.

Leases OCS-G 7703 and 7704, effective August 1, 1985, and September 1, 1985, respectively were purchased by Mark 100%. Previous activities on these leases consists of the following:

Block 77: A total of four (4) wells have been drilled on this block. Mobil drilled three (3) wells, two of which were dry holes. A 12" flowline was laid from Well #2 to Tennessee Gas' 30" pipeline. OCSX Offshore drilled one (1) dry hole.

Block 79: Tennessee drilled a total of seven (7) wells. Well #1 was P&A'd. A 4-pole structure was set over Well #2 and five (5) development wells were drilled, two of which were drilled into block 78 which is due north of block 79. A 12" flowline was laid from the platform to Tennessee Gas' 30" pipeline. The platform has not been removed as Well #A 1 in Block 79 is currently producing.

Mark Producing, Inc., submits eleven (11) copies of the proposed Plan of Exploration. Five (5) copies are considered "Proprietary Information" and are exempt from disclosure. Six (6) copies are "Public Information". The information believed to be exempt is geological and/or geophysical. As operator of this lease, Mark requests that this information and data considered exempt be dispersed for use only by the U. S. Government.

Three (3) copies of the High Resolution Geophysical Survey Report and Archeological Survey prepared by Gardline Surveys, Inc. are being submitted under separate cover this date.

August 23, 1985
Page 2

We anticipate drilling on this lease to begin on or around October 15, 1986.

A complimentary copy of this Plan of Exploration has been forwarded to the district office. If there are any questions, please call.

Sincerely,



Susan Hathcock
Supervisor, Regulatory Affairs

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Enclosures

cc: MMS Lafayette District Office

**PROPOSED TYPE AND SEQUENCE OF
EXPLORATION ACTIVITIES AND TIMETABLE**

SECTION 2

Mark Producing, Inc. proposes to drill a total of (10) exploratory wells in South Marsh Island Blocks 77 and 79. Five (5) wells are planned for each block.

Drilling operations are expected to commence October 15, 1985. Each well will take approximately 45 days to drill. Drilling will not be continuous. The total project should be complete by August, 1987.

DESCRIPTION OF DRILLING VESSEL

Section 3

A typical jack-up rig will be utilized for exploratory drilling. See attached equipment list and diverter system drawing.

TYPICAL JACK-UP RIG

I. RIG SPECIFICATIONS

A. PRINCIPAL DIMENSIONS

LENGTH, OVERALL:	230 FEET
BEAM, OVERALL:	200 FEET
DEPTH:	26 FEET
DRILLING SLOT:	50 X 41 FEET
LEG DIMENSIONS:	3 SQUARE - 30 X 467 FEET

B. OPERATING SPECIFICATIONS

DRILLING DEPTH:	30,000+ FEET
OPERATING WATER DEPTH	
NON-HURRICANE SEASON:	350 FEET
HURRICANE SEASON:	275 FEET
VARIABLE LOAD:	4,000,000 LBS
QUARTERS:	USCG CERTIFIED SLEEPING ACCOMMODATIONS FOR 56 MEN WITH COMPLETE MESSING FACILITIES. AIR CONDITIONED
MOORING:	4 - LeTOURNEAU W-1500TS ELECTRIC ANCHOR WINCHES
HELIPORT:	71 FOOT DIAMETER RATED FOR SIKORSKY S-61 HELICOPTER

C. RIG CAPACITIES

BULK MATERIAL:	6 - 1050 CUBIC FOOT "P" TANKS
SACK STORAGE:	5000 SACKS
ACTIVE MUD:	1430 BARRELS
BLACK MAGIC PIT:	142 BARRELS
SLUGGING PIT:	34 BARRELS
DRILL WATER:	5350 BARRELS
POTABLE WATER:	970 BARRELS
FUEL OIL:	3020 BARRELS

D. CLASSIFICATION

CONSTRUCTED IN 1974 AT MARATHON LeTOURNEAU, VICKSBURG, MISSISSIPPI,
IN ACCORDANCE WITH AMERICAN BUREAU OF SHIPPING RULES, MALTESE CLASS.
A-1 DRILLING PLATFORM

UNITED STATES COAST GUARD CERTIFIED

II. EQUIPMENT SPECIFICATIONS

- A. DERRICK: PYRAMID 147 X 30 X 30 FOOT, 1,329,000 L/J GROSS NOMINAL CAPACITY DESIGNED FOR 100 MPH WIND LOAD WITH 18,000 FEET OF 5" DRILL PIPE RACKED
- B. DRAWWORKS: NATIONAL 1625 DE POWERED BY 2 - EMD-D79 800 HP MOTORS, GROOVED FOR 1-1/2" LINE, AND EQUIPPED WITH CROWN-O-MATIC, AND BAYLOR 7838 ELMAGCO BRAKE. 9/16" X 15,000' SAND LINE
- C. HOISTING EQUIPMENT: ALL 650+ TON CAPACITY
- CROWN BLOCK: NATIONAL 860J, 8 - 60 INCH SHEAVES, GROOVED FOR 1-1/2" LINE
- HOOK BLOCK: NATIONAL 760-G-650, 7 - 60 INCH SHEAVES, GROOVED FOR 1-1/2" LINE
- SWIVEL: NATIONAL P-650
- ANCHOR: NATIONAL TYPE EB
- D. ROTARY: NATIONAL C-375 WITH 2-SPEED TRANSMISSION, POWERED BY 1 EMD-D79 800 HP MOTOR
- E. DRILLER'S CONSOLE: MARTIN DECKER PANEL WITH WEIGHT INDICATOR, PUMP PRESSURE, PUMP STROKES, ROTARY RPM, TONG TORQUE, PIT LEVEL, FLOW-SHOWS AND RECORDERS WITH REMOTE READOUT
- F. PRIME MOVERS
- ENGINES, GENERATORS, AND DISTRIBUTION: 3 - EMD SR-16 CYLINDER DIESEL ENGINES EACH DRIVING A 1500 KW ALTERNATOR, ALL OPERATING A KOSS-HILL SCR SYSTEM
- EMERGENCY POWER: 1 - EMD SR-8 CYLINDER DIESEL ENGINE DRIVING A 700 KW AC GENERATOR
- G. MUD SYSTEM
- MUD PUMPS: 3 - NATIONAL 12-P-160 TRIPLEX PUMPS, EACH DRIVEN BY 2 EMD-D79 800 HP MOTORS
- CHARGING PUMPS: 2 - MISSION 6" X 8" CENTRIFUGAL PUMPS EACH DRIVEN BY A 50 HP MOTOR
- MUD MIXING PUMPS: 2 - MISSION 6" X 8" CENTRIFUGAL PUMPS EACH DRIVEN BY A 100 HP MOTOR

SHALE SHAKER: BRANDT DUAL-TANDEM SCREEN SEPARATOR
DESANDER: DEMCO 3 - 12" CONES
DESILTER: DEMCO 12 - 4" CONES
DEGASSER: SWACO
GAS DETECTOR: BAROID SINGLE POINT INDUSTRIAL DETECTOR
STAND PIPES: 2 - 5" WITH 2 - 10,000# TEST ROTARY MOSES
MUD TESTING EQUIPMENT: MUD WEIGHT BALANCE, VISCOSITY FUNNEL, VISCOSITY CUP, AND API FILTER PRESS
CIRCULATING HEAD: KING WITH 4-1/2" I.F. CONNECTION
MUD AGITATORS: 3 - LIGHTNIN' MODEL 85Q20 20 HP MUD MIXERS

H. BLOWOUT PREVENTERS

RAMS:
 1 - 13-5/8" CAMERON TYPE "U" SINGLE 10,000# CAMLOCK CONNECTIONS, H₂S SERVICE
 1 - 13-5/8" CAMERON TYPE "U" DOUBLE 10,000# CAMLOCK CONNECTIONS, H₂S SERVICE
ANNULAR:
 1 - 13-5/8" HYDRIL 10,000# CAMLOCK CONNECTIONS, H₂S SERVICE
 1 - 20" HYDRIL MSP 2000# ANNULAR BORED TO 21-1/4"
DIVERTER: 6" LOW PRESSURE DIVERTER SYSTEM WITH FULLY OPENING HYDRAULICALLY OPERATED 6" HCR VALVE AND PNEUMATICALLY OPERATED GATE VALVES FOR OVERBOARD DISCHARGE
CHOKE MANIFOLD: 10,000# TEST CHOKE MANIFOLD, H₂S SERVICE
CLOSING UNIT: KOOMEY PREVENTER CONTROL SYSTEM WITH 2 - 80 GALLON ACCUMULATORS, MASTER AND REMOTE PANELS
INSIDE BOP AND SAFETY VALVES: INSIDE BOP AND TWO FULL OPENING SAFETY VALVES ON DERICK FLOOR TO FIT DRILL PIPE FURNISHED BY CONTRACTOR
KELLY VALVE: 6-5/8" OMSCO 10,000# TEST KELLY VALVE

SPOOLS: 21-1/4" 2000# 600 SERIES WITH 1 - 6" & 1 - 4" 5000# OUTLETS

I. DRILL STRING AND HANDLING TOOLS

DRILL PIPE: 12,000' OF 5" 19.50# GRADE "E" WITH 4-1/2" I.F. TOOL JOINTS
3000' OF " 24.75# GRADE "E" WITH 4-1/2" I.F. TOOL JOINTS

DRILL COLLARS: 18 - 7-1/2" O.D. 129#/FT WITH 5-1/2" H-90 TOOL JOINTS

KELLY: DRILCO, 5-1/4" X 40' HEX

KELLY SPINNER: VARCO 6:00 POWER SUB

IRON ROUGHNECK: VARCO IR 2000

POWER SLIPS: VARCO FOR 5" DRILL PIPE

SLIPS: 1 SET 5" VARCO
1 SET 5" BAASH ROSS
1 SET 7-1/2" WOOLEY
1 SAFETY CLAMP

TONGS: 2 BJ TYPE DB 3" THROUGH 17-1/2" HINGED JAW ASSEMBLY

ELEVATORS: 2 SETS FOR 5" DRILL PIPE
1 SET FOR DRILL COLLARS

BAILS: 1 SET BJ 500 TOM

SUBS: 2 BIT SUBS AND CROSSOVER SUBS FOR CONTRACTOR'S DRILL PIPE AND DRILL COLLARS, 2 SPARE KELLY SAVER SUBS

DRILL PIPE PROTECTORS: CONTRACTOR WILL SUPPLY PROTECTORS FOR USE IN SURFACE CASING ONLY

FISHING TOOLS: 1 OVERSHOT 8-5/8" O.D., WITH 4-1/2" I.F. BOX, 5", 6-1/4", 6-3/8", 7-1/2" GRAPPLES

J. CEMENTING UNIT: HALLIBURTON TWIN HT-400 WITH CLOSED HIGH-WEIGHT CIRCULATING UNIT

K. CRANES: 3 - MARATHON LeTOURNEAU PCM 120 WITH 100' BOOMS, RATED FOR 90,000# AT 25' RADIUS

L. LOGGING UNIT: PROVISIONS TO ACCOMMODATE ONE UNIT

M. WIRELINE UNIT:

MATHEY ELECTRIC POWERED HYDRAULIC WIRELINE
UNIT WITH 15,000' OF .092" WIRE

N. MISCELLANEOUS EQUIPMENT

WATERMAKER:

1 - 400 GPH CAPACITY

SAFETY EQUIPMENT:

2 - WHITTAKER 28 MAN SURVIVAL CAPSULES

APPLIANCES AS REQUIRED BY USCG TO INCLUDE
ALL AIDS TO NAVIGATION FOR DRILLING UNITS

WELDING EQUIPMENT:

ELECTRIC AND OXYGEN-ACTYLENE

LUBRICATION:

ALL LUBRICATING OILS AND GREASES FOR ALL
CONTRACTOR'S EQUIPMENT

COMMUNICATIONS:

350 WATT BASE FM RADIO

VHF MARINE RADIO

RIG TELEPHONE INTERCOM SYSTEM

SUPPLIES AND SERVICES:

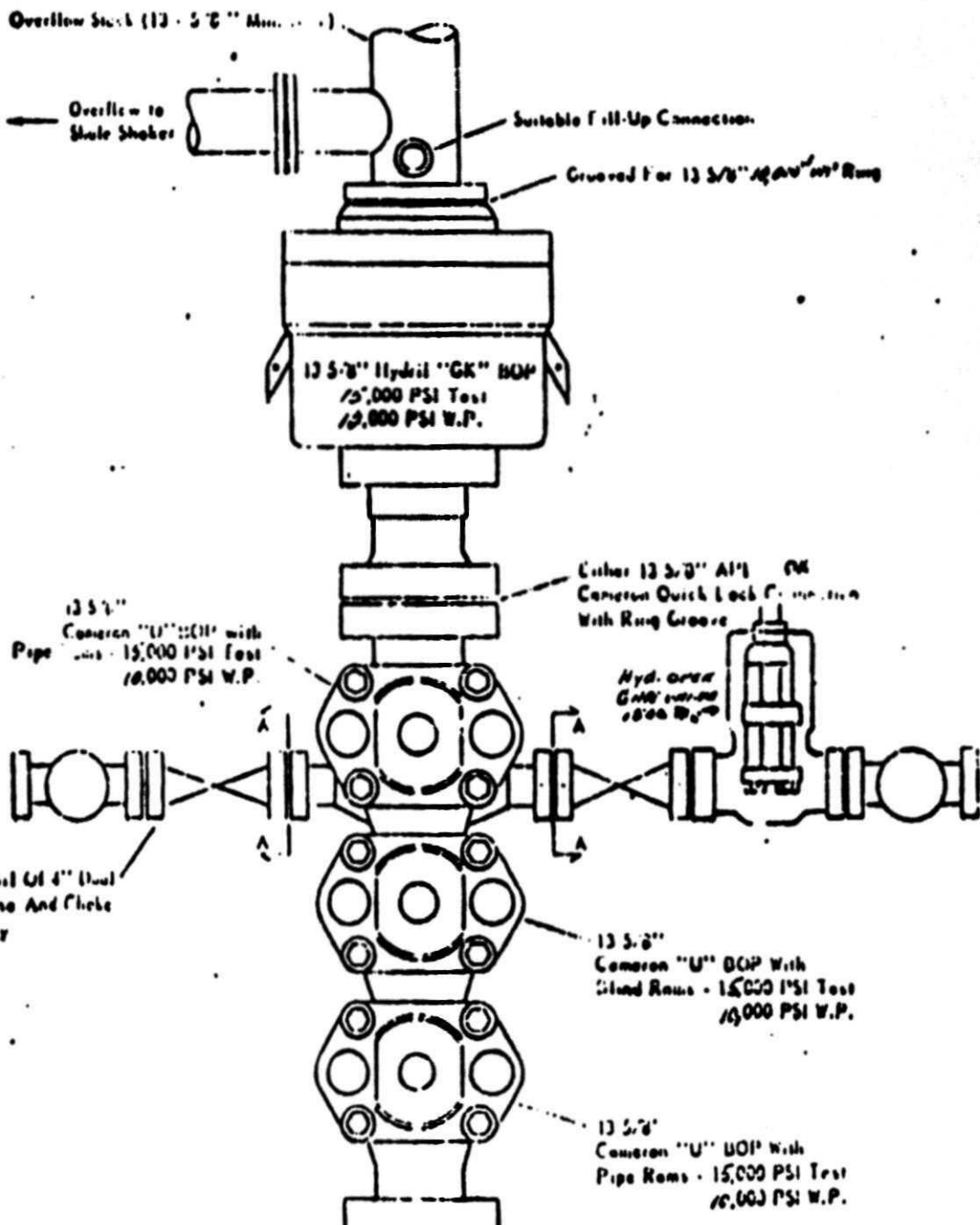
SUPPLIES AND SERVICES AS REQUIRED TO
PROPERLY OPERATE AND MAINTAIN THE DRILLING
UNIT AND DRILLING EQUIPMENT

CATERING SERVICE AND SUPPLIES TO PROVIDE
FOR CONTRACTOR'S PERSONNEL AND REASONABLE
NUMBER OF OPERATOR'S EMPLOYEES

SHORE BASED DISPATCHER AND RADIO INSTALLATION
AT DOCKSITE

TYPICAL JACK-UP RIG

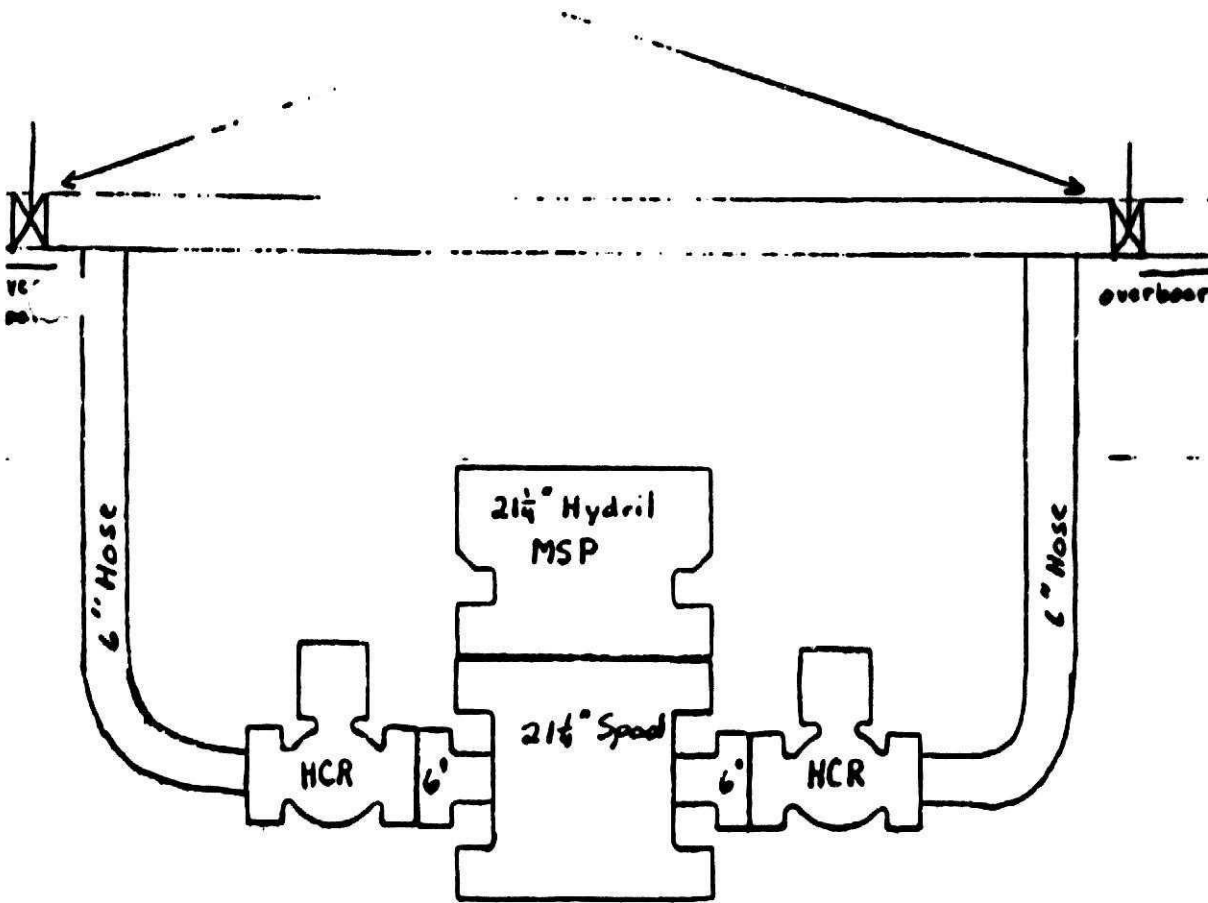
13 5/8" - 15,000 PSI TEST BLOWOUT PREVENTER ASSEMBLY



TYPICAL JACK-UP RIG

DIVERTER SYSTEM

Remote Controlled
Air operated Gate Valve



SAFETY AND ENVIRONMENTAL SAFEGUARDS

Section 4

Safety features during drilling operations will include well control and blowout prevention equipment that meets or exceeds the requirements of OCS Order No. 1.

Oil in any form shall not be disposed of into the water of the Gulf.

Liquid waste materials containing substances which may be harmful to aquatic life or wildlife, or injurious in any manner to life or property shall be treated to avoid disposal of harmful substances into the waters of the Gulf.

Drilling muds containing oil are not disposed of into the Gulf. This type material is loaded and barged to shore for proper disposal. Drilling mud containing toxic substances are neutralized prior to disposal.

Drill cuttings, sand, and solids containing oil are not disposed of into the Gulf unless the oil has been removed.

The subject offshore mobile drilling unit is equipped with drip pans under the rig floor. All oil from diesel engines is pumped to a sump and then pumped into barrels for return to an onshore site.

Operator personnel are instructed in the techniques and methods necessary to prevent pollution. Non-operator personnel are instructed and supervised to insure that non-pollution practices are adhered to. The facilities are inspected daily.

OIL SPILL CONTINGENCY PLAN

Mark Producing, Inc.'s, Oil Spill Contingency Plan was approved on July 29, 1985, by the MMS. This plan designates an Oil Spill Team consisting of Mark Producing personnel and contract personnel. This team's duties are to eliminate the source of the oil spill, remove all sources of possible ignition, deploy the most viable means of available transportation to monitor the movement of this slick, and contain and remove the slick, if possible.

Mark Producing is a member of the Clean Gulf Associates (CGA). The CGA has four permanent bases in Louisiana at Venice, Grand Isle, Intercoastal City, and Cameron, and two bases in Texas at Galveston and Rockport. Each base is equipped with fast response skimmers and there is a barge mounted high volume sea skimmer based at Grand Isle. In addition to providing equipment, the CGA also supplies advisors for cleanup operations.

Deployment time to South Marsh Island Blocks 77 and 79 is approximately 8 hours from Morgan City, Louisiana.

PUBLIC INFORMATION

APPROXIMATE LOCATION OF PROPOSED WELLS AND PLAT

SOUTH MARSH ISLAND BLOCK 77

<u>WELLS</u>	<u>LOCATIONS</u>	<u>DEPTH</u>
A	Surf: 6200' FSL & 4000' FEL	
B	Surf: 3200' FNL & 5500' FWL	
C	Surf: 3200' FNL & 5500' FWL	
D	Surf: 3200' FNL & 5500' FWL	
E	Surf: 3200' FNL & 5500' FWL	

SOUTH MARSH ISLAND BLOCK 79

<u>WELLS</u>	<u>LOCATIONS</u>	<u>DEPTH</u>
A	Surf: 4500' FSL & 2200' FWL	
B	Surf: 4500' FSL & 2200' FWL	
C	Surf: 4500' FSL & 2200' FWL	
D	Surf: 2800' FNL & 600' FWL	
E	Surf: 7000' FSL & 2500' FWL	

66 65

64

SL B, C, D, & E

5500'

3200'

MARK PRODUCING, INC.
OCS-G-7703

A

4000'

6200'

12" Flowline

30" Tennessee Gas Pipeline

76 77

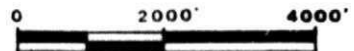
78

81 80

Mark Producing **MP**

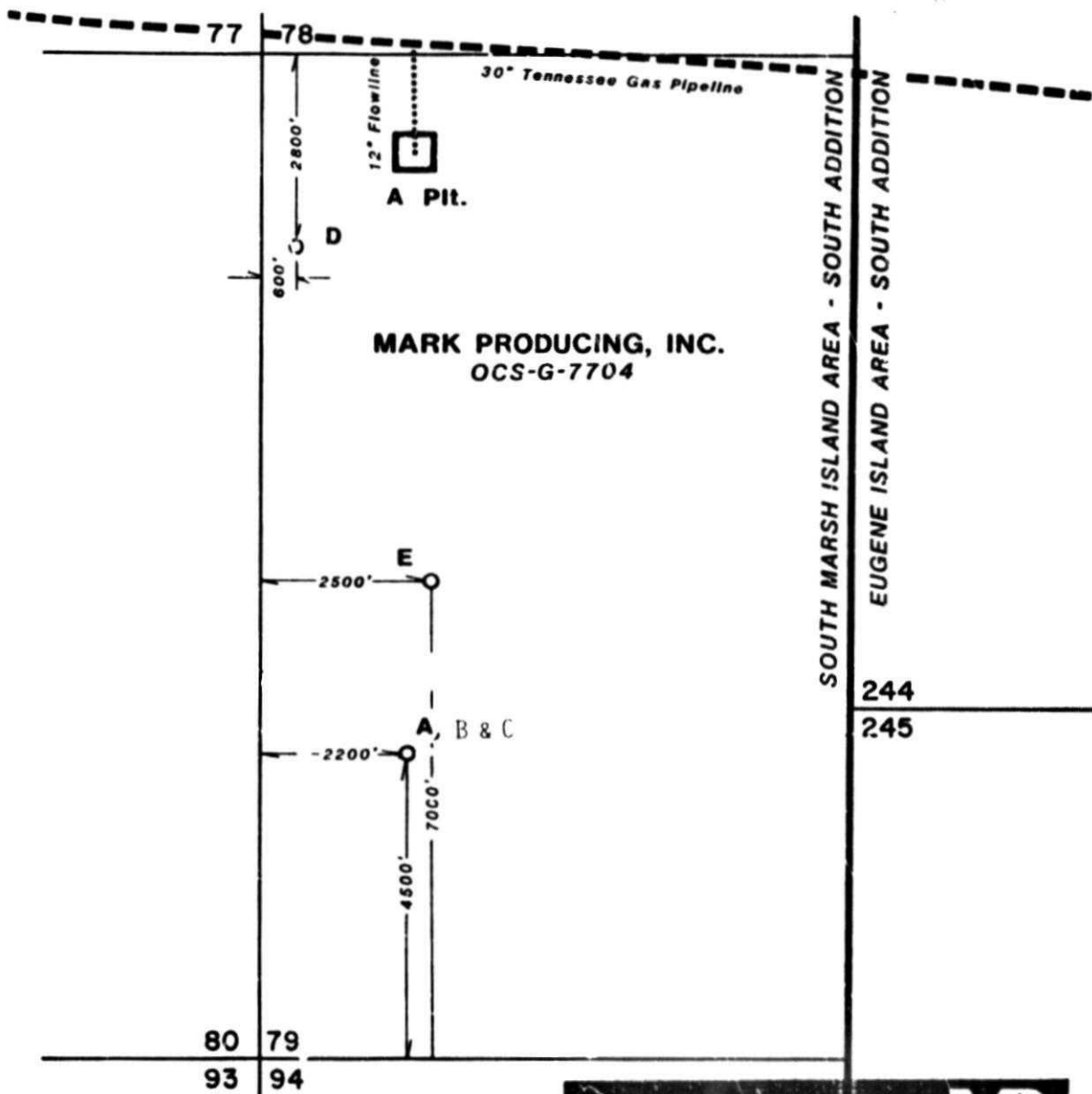
SOUTH MARSH ISLAND 77
OFFSHORE LOUISIANA

PLAN OF EXPLORATION



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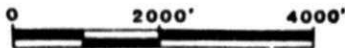
PUBLIC INFORMATION



Mark Producing **MP**

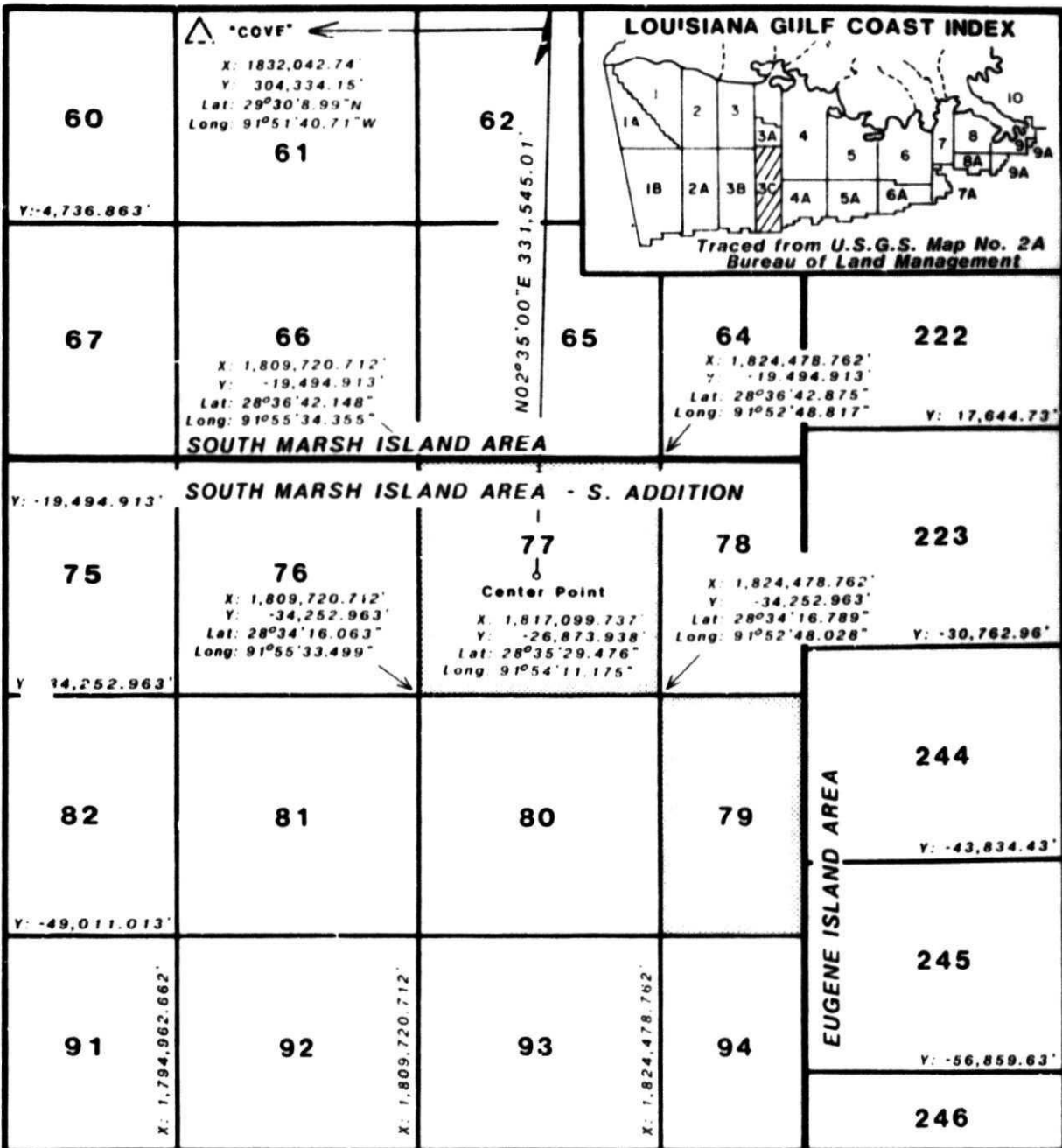
SOUTH MARSH ISLAND 79
OFFSHORE LOUISIANA

PLAN OF EXPLORATION



8/85

PUBLIC INFORMATION



**PROPOSED MINERAL DEVELOPMENT
GULF OF MEXICO - SOUTH MARSH ISLAND AREA - SOUTH ADDITION
OFFSHORE LOUISIANA**

MARK PRODUCING, INC.

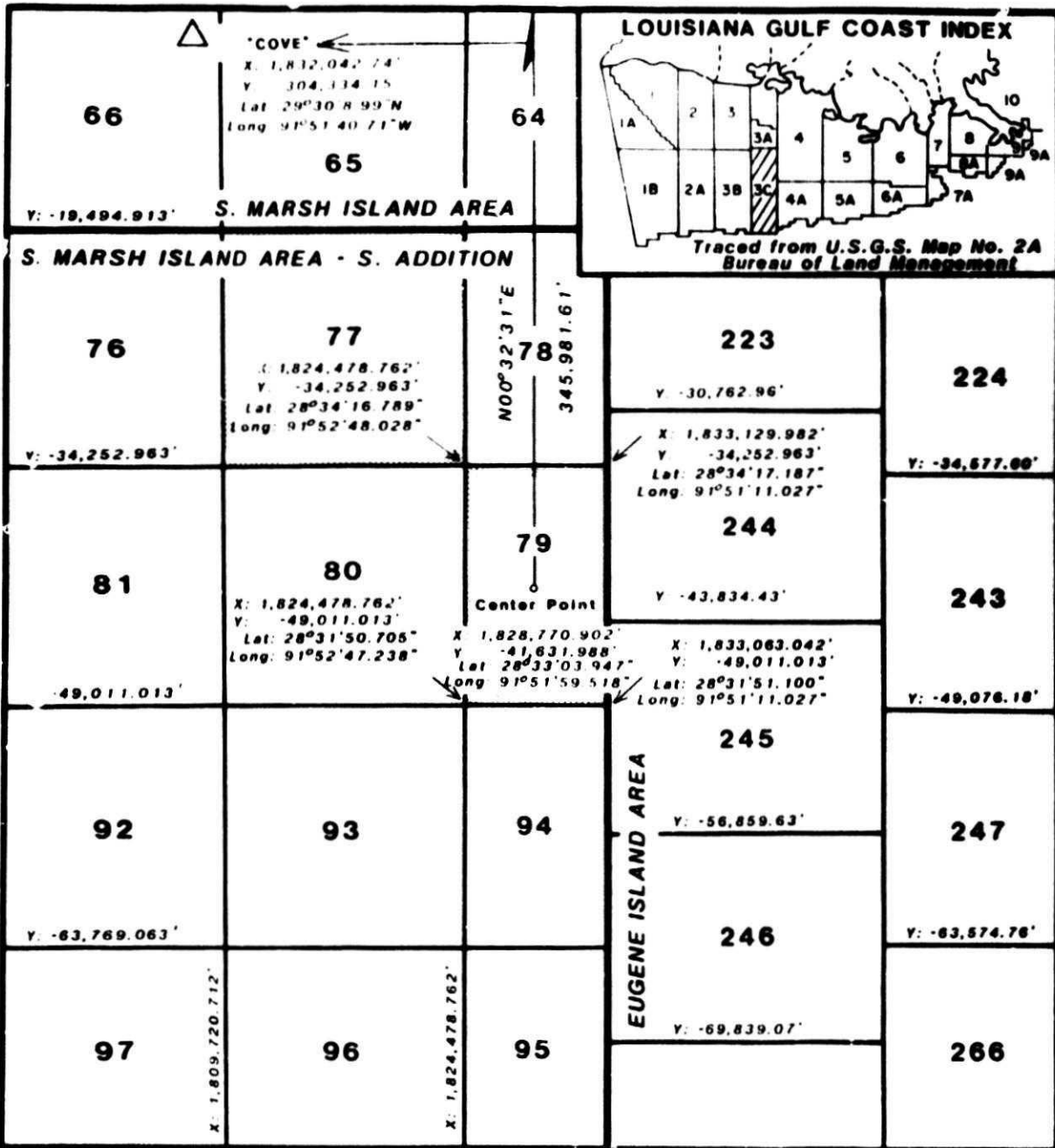
1" : 8000'

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LOUISIANA GULF COAST INDEX



Traced from U.S.G.S. Map No. 2A
Bureau of Land Management



**PROPOSED MINERAL DEVELOPMENT
GULF OF MEXICO - SOUTH MARSH ISLAND AREA - SOUTH ADDITION
OFFSHORE LOUISIANA**

MARK PRODUCING, INC.

1" : 8000'

8/85

STRUCTURAL INTERPRETATION AND SHALLOW HAZARDS REPORT

Section 6

Mark Producing, Inc., has reviewed the geophysical data pertinent to all of Blocks 77 and 79, South Marsh Island Area. This included Echo Sounder, Magnetometer, Side-Scan Sonar/Sub-Bottom Profiler, EDO Sub-Bottom Profiler, and Analog Seismic Monitor data obtained by Gardline Surveys, Inc. These engineering surveys were submitted under separate cover on August 23, 1985.

Mark has reviewed all data over and proximal to the surface locations of the proposed wells. These data indicate no valid anomalies and/or shallow drilling hazards.

We anticipate no hazards during drilling operations. These wells will be drilled in a safe and workmanlike manner.



Wes Bird
Geophysicist

ONSHORE SUPPORT BASE FACILITIES

Section 7

Mageobar's dock in Morgan City, Louisiana will serve as the onshore support base facility during the exploratory drilling in South Marsh Island Blocks 77 and 79. This will serve as port of debarkation for supplies and crews. No expansion or construction is anticipated with respect to this activity. A list of services and facilities at Mageobar's dock that will be utilized in support of this activity follows.

1. 31,000 sack bulk brite storage
2. 3,000 lb. liquid calcium chloride capacity
3. Twenty-four (24) hour service
4. Radio tower with phone patch
5. Parking lot - 100 cars
6. Drinking water
7. Drill water
8. 300 foot dock space
9. 20 ton crane
10. Office space available, if needed
11. Bulk delivery barges, liquid mud barges, rig bulk tank (land and inland water), tugs, offshore boats and bulk trucks are readily available when needed.

MUD COMPONENTS

Section 8

Attached is a list of mud components and additives, including the common and chemical trade name of each which will be used in Mark Producing, Inc.'s, operations.

SAFETY AND ENVIRONMENTAL

TECHNICAL DATA

No. 6

Date Issued 18 Aug. 1977

ISSUED BY THE SAFETY AND ENVIRONMENTAL CONTROL DEPARTMENT

ENVIRONMENTAL INFORMATION SUMMARY MAGCOBAR PRODUCTS

The information contained in this summary is a compilation of data generated by OPG Environmental Engineering as well as independent testing laboratories. In certain cases the information has been provided by the product supplier.

This summary is intended to be used as a quick reference guide, as more specific information is available through Environmental Engineering. There are eight data columns included; an explanation of each follows:

- Column 1 - Product Name: Self explanatory.
- Column 2 - Physical or Chemical Composition: Description of the major chemistry involved in the product.
- Column 3 - Concentration Normally Used in Drilling Mud (a/bbl and ppm): This column describes the use concentrations in both pounds per barrel (on top), and parts per million (on bottom).
- Column 4 - TL_m or LD_{50} : This is toxicity data generally for aquatic organisms. Fresh or salt water tests will be so indicated. If data represents other test species, it will be so noted. TL_m and LD_{50} represent that concentration of material tested that caused fatalities is 50% of the test population. Natural dilutions are not taken into account during these tests. Concentrations are expressed in ppm.
- Column 5 - Water Solubility: Descriptive wording found in the column designates if the product is soluble in water, and if so, to what extent.
- Column 6 - TLV: This is the Threshold Limit Value established by OSHA (Occupational Safety and Health Administration). This represents an airborne concentration of a substance, under which it is believed that nearly all workers may be repeatedly exposed day after day, without adverse effect. The (*) designates that this material is considered as a nuisance particulate only.
- Column 7 - DOT Hazard Class: The Department of Transportation has promulgated very specific regulations pertaining to the transportation of hazardous substances. This column will describe that hazard.
- Column 8 - Special Comments: Found here will be any special comments concerning items such as disposal, handling precautions, etc.

(1) PRODUCT NAME	(2) PHYSICAL OR CHEMICAL COMPOSITION	(3) CONCENTRATION NORMALLY USED IN DRILLING MUD	(4) 96 H.C. TL _m OR LD ₅₀	(5) WATER SOLUBILITY	(6) TLV *NUISANCE DUST ONLY	(7) D.O.T. HAZARD CLASS	(8) SPECIAL COMMENTS NOTES
ALUMINUM STEARATE	Aluminum Stearate	.01 - 1 #/bbl 30 - 300 ppm	N/A	Negligible	None	None	Allowed in the manufacture of food containers
BENEX	Anhydride Copolymer	.05 #/bbl 150 ppm	Saltwater 690 ppm	Appreciable	*10mg/m ³	None	Avoid prolonged exposure to dust
BIT LUBE	Reacted and Neutralized Phenolics	.3 - 6 #/bbl 9,000 - 18,000 ppm	Fresh .97 ppm Salt .80 ppm	Insoluble	None	None	Avoid prolonged exposure to vapors
CALCIUM CHLORIDE	Calcium Chloride	0 - 210 #/bbl 0 - 630,000 ppm	Fresh > 1,000 ppm	Soluble to Saturation	None	None	Completion fluids
CALCIUM BROMIDE	Calcium Bromide	0 - 210 #/bbl 0 - 630,000 ppm	N/A	Soluble to Saturation	None	None	Completion fluids
CAUSTIC SODA	Sodium Hydroxide	.25 - 2 #/bbl 750 - 6,000 ppm	Toxicity well documented	Complete	2mg/m ³	Corrosive	Should not be a pH change in natural waters. Materials are corrosive to skin, and should be handled accordingly.
CAUSTIC POTASH	Potassium Hydroxide	.25 - 2 #/bbl 750 - 6,000 ppm	Toxicity well documented	Complete	2mg/m ³	Corrosive	
CEASTOP	Calcium Carbonates and lignosulfates	.5 - 25 #/bbl 14,000 - 75,000 ppm	Fresh .8,400 ppm Salt > 30,700 ppm	Slight	*10mg/m ³	None	Avoid prolonged dust exposure
CEASCAL	Calcium Carbonates and lignosulfates	.5 - 10 #/bbl 15,000 - 30,000 ppm	Fresh .28,000 ppm Salt > 30,000 ppm	Appreciable	*10mg/m ³	None	Basically non-toxic
CELLULOSEAL	Cellophane	.2 - 15 #/bbl 6,000 - 45,000 ppm	N/A	Insoluble	*10mg/m ³	None	Cellophane is normally considered inert

(1) PRODUCT NAME	(2) PHYSICAL OR CHEMICAL COMPOSITION	(3) CONCENTRATION NORMALLY USED IN DRILLING MUD	(4) 96 HR. TL _m OR LD ₅₀	(5) WATER SOLUBILITY	(6) TLV *NUISANCE DUST ONLY	(7) D.O.T. HAZARD CLASS	(8) SPECIAL COMMENTS NOTES
CHP SEAL	Cedar fiber	2 - 15 #/bbl 6,000 - 45,000 ppm	N/A	Insoluble	5mg/m ³	None	Toxicity of wood chips is of no consequence
COTTONSEED HULLS	Cottonseed Hulls	2 - 15 #/bbl 6,000 - 45,000 ppm	N/A	Insoluble	*10mg/m ³	None	There should be no Byssinosis exposure with this product
CYPAN	Sodium Polyacrylate	25 - 5 #/bbl 750 - 1,500 ppm	Fresh water 766 mg/l	Appreciable	None	None	Very low order toxicity to rats and rabbits. Tested by American Cyanamid
D.D.	Detergent alkylates	1 #/bbl 300 ppm	Fresh 255 ppm Salt 140 ppm	Appreciable	None	None	Should easily biodegrade
DESCU	Sulfomethylated Tannins	2 - 5 #/bbl 6,000 - 15,000 ppm	N/A	Complete	05/mg/m ³	None	No toxicity data available. Toxicity should be comparable to Quebracho
DG 55	Bentonites & Silica Flour	2 - 5 #/bbl 6,000 - 18,000 ppm	N/A	Insoluble	<10mg/m ³ Depending on percent of free silica	None	Toxicity is comparable to MagcoGel
DIASEAL M	Diatomaceous earth	Depends on spotting application	N/A	Insoluble	2 Fibers/cc for Asbestos content	None	Material contains asbestos, and must be handled accordingly
DOS 3	Cosmetic Diesel Oil	3% Injection	Salt >1,000 ppm	Insoluble	None	None	Seawater mud with 5% DOS 3 Toxicity = > 10,000 ppm
DRISPAC	Cellulose Ether polymer	25 - 5 #/bbl 750 - 15,000 ppm	N/A	Complete	*10mg/m ³	None	Toxicity on product is unknown. Drilling fluid with Drispac added has a toxicity of 46,000 - 74,000 ppm
DRILLAD 420 RAPIDRILL (LO-FLO)	Polymer	Depends on application	N/A	Appreciable	None	None	Avoid eye contact and long term dust exposure

(1) PRODUCT NAME	(2) PHYSICAL OR CHEMICAL COMPOSITION	(3) CONCENTRATION NORMALLY USED IN DRILLING MUD	(4) 96 HR. TL _m OR LD ₅₀	(5) WATER SOLUBILITY	(6) TLV *NUISANCE DUST ONLY	(7) D.O.T. HAZARD CLASS	(8) SPECIAL COMMENTS NOTES
DOUVIS	Polysaccharide	.3 - 1 #/bbl 900 - 3,000 ppm	Fresh > 1,000 ppm	Hygroscopic	None	None	Should easily biodegrade
DV 22	Blend of metallic oxides and asphalt	.25 #/bbl 750 ppm	N/A	Insoluble	5mg/m ³	None	Long term dust exposure should be controlled
DV 33	Detergent alkylates in a hydrocarbon carrier	.5 - 6 #/bbl 1,500 - 18,000 ppm	Fresh - 32 ppm Salt - 5.2 ppm	Slight	None	Flammable	Used in oil mud systems which are not disposed of in conventional methods
FLOXIT	Copolymer of acrylamids and Acrylic Acid	.01 - .04 #/bbl 30 - 120 ppm	N/A	Appreciable	None	None	Avoid prolonged dust exposure
GEO-GEL	Sepiolite	to 15 #/bbl to 45,000 ppm	Fresh > 16,428 ppm	Insoluble	None	None	Naturally occurring ore. Basically inert
INHIBITOR 101	Formulated amines in a naphtha base	1 - 4 #/bbl 3,000 - 12,000 ppm	Fresh - 34 ppm Salt - 61 ppm	Dispensable only	10 ppm	None	Dispose of only in approved areas, or as local laws dictate
INHIBITOR 202	Formulated amines with an organic salt in a hydrocarbon carrier	1 - 4 #/bbl 3,000 - 12,000 ppm	Fresh - 32 ppm Salt - 29 ppm	Dispensable only	400 ppm	Flammable	Dispose of only in approved areas, or as local laws dictate
INHIBITOR 303	Formulated morpholine com pounds in an alcohol carrier	1 - 4 #/bbl 3,000 - 12,000 ppm	Fresh - 7,300 ppm Salt - 13,750 ppm	Appreciable	20 ppm	None	Dispose of only in approved areas, or as local laws dictate
KLEEN UP	Detergent and degreaser	Varies	Fresh - 70 ppm Salt - 30 ppm	Appreciable	None	None	Should easily biodegrade
KWIK SEAL	Cane fiber, nut shells, mica	Depends on severity of lost circulation	Fresh - 17,000 ppm	Insoluble	*10mg/m ³	None	Avoid prolonged exposure to dust

(1) PRODUCT NAME	(2) PHYSICAL OR CHEMICAL COMPOSITION	(3) CONCENTRATION NORMALLY USED IN DRILLING MUD	(4) 95 HR. TL _m OR LD ₅₀	(5) WATER SOLUBILITY	(6) TLV *NUISANCE DUST ONLY	(7) D.O.T. HAZARD CLASS	(8) SPECIAL COMMENTS NOTES
K VIK THIK	Peptized Bentonite	5 - 20 #/bbl 15,000 - 60,000 ppm	Fresh > 14,500 ppm Salt > 100,000 ppm	Insoluble	<10mg/m ³	None	TLV depends on percent of free silica
LIME	Calcium oxide	5 - 2 #/bbl 1,500 - 6,000 ppm	N/A	Forms solution	5mg/m ³	Air and water shipments only	Irritating to skin and eyes, handle accordingly
LU WATE	Limestone	8 - 12 lbs/gal oil mud	Fresh > 100,000 ppm Salt > 100,000 ppm	Negligible	*10mg/m ³	None	Used to weight oil muds
MC QUEBRACHO	Tannin	2 - 5 #/bbl 6,000 - 15,000 ppm	Fresh 135 ppm Salt 158 ppm	Moderately	*10mg/m ³	None	Should easily biodegrade
MAGCO POLY-SAL	Polysaccharide	Up to 12 #/bbl Up to 36,000 ppm	Fresh 315 ppm	Appreciable	*10mg/m ³	None	Should easily biodegrade with time
M/ GCO CMC	Carboxymethyl cellulose	25 - 2 #/bbl 750 - 6,000 ppm	N/A	Appreciable	None	None	Biodegradable. Toxicity is unknown, however it is a food additive
MAGCO-LUBE	Paraffinic hydrocarbons in an alkanolamide	5 - 2 #/bbl 1,500 - 6,000 ppm	Fresh 167 ppm Salt 477 ppm	Appreciable only in fresh water	None	None	Should easily biodegrade
MAGCOBAR	Barium sulfate	Depends on mud weight desired	Fresh > 100,000 ppm Salt > 100,000 ppm	Insoluble	*10mg/m ³	None	Natural mineral ore. Basically inert
MAGCOGEL	Bentonite	5 - 35 #/bbl 15,000 - 105,000 ppm	Fresh 14,500 ppm Salt > 100,000 ppm	Insoluble	<10mg/m ³ Depends on percent of free silica	None	Natural mineral ore
GCONATE	Formulated petroleum sulfonate	5 - 2 #/bbl 1,500 - 6,000 ppm	Fresh 7.4 ppm Salt 6,800 ppm	Insoluble	None	None	Almost totally nondispersible in salt water

(1) PRODUCT NAME	(2) PHYSICAL OR CHEMICAL COMPOSITION	(3) CONCENTRATION/ NORMALLY FOUND IN DRILLING FLUID	(4) 95 HR. TL ₅₀ OR LD ₅₀	(5) WATER SOLUBILITY	(6) TLV *NUISANCE DUST ONLY	(7) D.O.T. HAZARD CLASS	(8) SPECIAL COMMENTS NOTES
MAGCONOL	2-ethylhexanol	1 - 2 #/bbl 300 - 600 ppm	Fresh - 415 ppm Salt - 26 ppm	Negligible	None	None	Avoid prolonged exposure to vapors
MAGCO-PHOS	Sodium Metaphosphate	1 - 25 #/bbl 300 - 750 ppm	Fresh - 1,200 ppm Salt - 7,100 ppm	Appreciable	*10mg/m ³	None	Avoid prolonged exposure to vapors
MAGCO MICA	Mica flakes	2 - 30 #/bbl 6,000 - 90,000 ppm	N/A	Insoluble	*10mg/m ³	None	Toxicity should be nil as these flakes are insoluble
MIXICAL	Calcium carbonate	5 - 25 #/bbl 1,500 - 75,000 ppm	N/A	Nil	*10mg/m ³	None	There should be no toxicity with calcium carbonate
MUD FIBER	Bagasse Cane fiber	2 - 15 #/bbl 6,000 - 45,000 ppm	N/A	Negligible	None	None	Should be of no consequence. Dust exposures should be controlled
MY LO JEL	Starch	1 - 2 #/bbl 3,000 - 24,000 ppm	N/A	Appreciable	*10mg/m ³	None	Non-toxic. No restriction as a food product
MY LO JEL PRESERVA TIVE	Paraformal- dehyde	3 - 5 #/bbl 900 - 1,500 ppm	N/A	Partially temperature and pH dependent	3mg/m ³	None	Toxicity Oral Rat - LD ₅₀ 800 mg/kg body weight
NUT PLUG	Ground walnut shells	2 - 30 #/bbl 6,000 - 90,000 ppm	N/A	Negligible	None	None	Toxicity should be of little consequence
OILFAZE	Blend of dry materials, in- cluding clays and G-lsionite	72 - 40 #/bbl 66,000 - 120,000 ppm	Fresh - 2,676 ppm Salt - 3,500 ppm	Insoluble	*10mg/m ³	None	Disposal is no problem, as this is an oil mud product and is not discharged
OS-1	Sodium Sulfite	Maintain excess Sulfite at 20 - 300 ppm	Fresh - 450 ppm Salt - 175 ppm	Complete	None	None	This is an O ₂ scavenger

(1) PRODUCT NAME	(2) PHYSICAL OR CHEMICAL COMPOSITION	(3) CONCENTRATION NORMALLY USED IN DRILLING MUD	(4) 5 HR. TL _m OR LD ₅₀	(5) WATER SOLUBILITY	(6) TLV *NUISANCE DUST ONLY	(7) D.O.T. HAZARD CLASS	(8) SPECIAL COMMENTS NOTES
OS 1L	Ammonium Bisulfite	Maintain excess sulfite at 100 - 300 ppm	Fresh - 135 ppm Salt - 185 ppm	Complete	None	None	This is an O ₂ scavenger
PIPE LAX	Surfactants in a Naphtha base	1 - 1.5 #/bbl 3,000 - 4,500 ppm	Fresh - 2,800 µgm Salt - 15,000 ppm	Insoluble	400 ppm for Naphtha	Flammable	Used for spot treatments. Emulsifies readily in seawater
POLYBRINE	Formulated polymers and Carbonates	3 - 6 #/bbl 9,000 - 18,000 ppm	Fresh - 2,250 ppm Salt - 6,100 ppm	Insoluble	*10mg/m ³	None	Dry, inert material
POTASSIUM CHLORIDE	Potassium Chloride	Used to build the KCl Polymer mud systems	N/A	Soluble to saturation	None	None	Toxicity is well established in literature
R-T-SINEX	Sulfonated lignites and resins	2 - 5 #/bbl 6,000 - 15,000 ppm	Fresh - 5,400 ppm Salt - 6,800 ppm	Complete	None	None	Avoid prolonged exposure to dust
SALINFEX	An alcohol ether sulfate	1 - 3 #/bbl 3,000 - 9,000 ppm	Fresh - 16 ppm Salt - 67 ppm	Appreciable	None	Flammable	Avoid prolonged exposure to vapors
SALT GEL	Attipulgate clays	Depends on viscosity treatment	N/A	Insoluble	*10mg/m ³	None	This material is known as Fuller's Earth a basically inert material
SE 11	Dodecyl Benzene Sulfonates in a hydrocarbon carrier	5 - 4 #/bbl 1,500 - 12,000 ppm	Fresh - 160 ppm Salt - 100 ppm	Insoluble	None	None	Control long term vapor exposure. Not discharge to mud product
SI 1000	Organic phosphates	Maintain excess phos phate at 5 - 10 ppm	Fresh - 2,830 ppm Salt - 7,000 ppm	Complete	None	None	Used as a scale inhibitor
SOLA ASH	Sodium Carbonate	25 - 2 #/bbl 750 - 6,000 ppm	N/A	Moderate	*10mg/m ³	None	Toxicity: Oral - Rat 4200 mg/kg Basically non-toxic

(1) PRODUCT NAME	(2) PHYSICAL OR CHEMICAL COMPOSITION	(3) CONCENTRATION NORMALLY USED IN DRILLING MUD	(4) 95 HR. TL ₅₀ OR LD ₅₀	(5) WATER SOLUBILITY	(6) TLV *NUISANCE ONLY	(7) D.O.T. HAZARD CLASS	(8) SPECIAL COMMENTS NOTES
SODIUM BICARBONATE	Sodium Bicarbonate	25 - 2 #/bbl 750 - 6,000 ppm	N.A.	Appreciable	*10mg/m ³	None	Toxicity Oral - Rat 5gm/kg. Not an irritant. Basically non-toxic.
SODIUM CHROMATE	Sodium Chromate	25 - 2 #/bbl 750 - 6,000 ppm	N.A.	Complete	5mg/m ³	Corrosive	Chromate treated muds must not be discharged to the natural environment.
SODIUM DICHROMATE	Sodium Dichromate	25 - 2 #/bbl 750 - 6,000 ppm	N.A.	Complete	5mg/m ³	Corrosive	Chromate treated muds must not be discharged to the natural environment.
SPERSEN	Chrome Lignosulfonate	Average 4 #/bbl 12,000 ppm	Fresh - 2,800 ppm Salt - 12,200 ppm	Complete	*10mg/m ³	None	Control long term dust exposures.
STABIL HOLE	Blended clays and asphalts	5 - 10 #/bbl 15,000 - 30,000 ppm	Fresh > 25,000 ppm Salt > 25,000 ppm	Insoluble	5mg/m ³	None	Long term exposure to skin may produce photosensitization.
SURFAK E	Ethylene oxide nonylphenol	1 #/bbl 300 ppm	Fresh - 23,000 ppm Salt - 37,500 ppm	Appreciable	50 ppm	Flammable	Control long term vapor exposure.
SURFAK M	Nonionic Phenol Ethylene oxide	5 - 1 #/bbl 1,500 - 3,000 ppm	Fresh - 110 ppm Salt - 115 ppm	Appreciable	50 ppm	None	Control long term vapor exposure.
TANNATHIN	Lignite	2 - 5 #/bbl 6,000 - 15,000 ppm	Fresh - 24,500 ppm Salt > 20,000 ppm	Negligible	*10mg/m ³	None	Avoid prolonged dust exposure.
UNISTEAM	Dibasic acid with an amine salt	Dependent of rate of steam produced	Fresh > 2,143 ppm	Complete	None	None	For use in geothermal environments to reduce corrosion.
VERTOIL	Blend of dry ma- terials, including fatty acid soaps and Gilsontite	22 - 40 #/bbl 66,000 - 120,000 ppm	Fresh - 570 ppm Salt - 140 ppm	Insoluble	*10mg/m ³	None	Used in oil muds which are not disposed of in the conventional methods.

(1) PRODUCT NAME	(2) PHYSICAL OR CHEMICAL COMPOSITION	(3) CONCENTRATION NORMALLY USED IN DRILLING MUD	(4) 96 HR TL _m OR LD ₅₀	(5) WATER SOLUBILITY	(6) TLV *NUISANCE DUST ONLY	(7) D.O.T. HAZARD CLASS	(8) SPECIAL COMMENTS NOTES
VG-69	Organophilic Clay	5 - 2 #/bbl 1,500 - 6,000 ppm	Fresh > 15,000 ppm Salt > 20,000 ppm	Dispersible	*10mg/m ³	None	Gelling agent for oil muds
VISQUICK VISBESTOS	Asbestos	5 - 10 #/bbl 15,000 - 30,000 ppm	N/A	Insoluble	2 fibers/cc	None	Toxicity well documented for inhalation. Handle with caution. Do not breathe dust.
XP 20	Chrome lignite	3 - 4 #/bbl 9,000 - 12,000 ppm	Fresh 3,000 ppm Salt 8,600 ppm	Appreciable	5mg/m ³	None	Avoid prolonged exposures to dust

AIR QUALITY REVIEW

Section 9

Attached is the projected air emission schedule for our exploration project at South Marsh Island Area Blocks 77 and 79.



August 21, 1985

PROJECTED AIR EMISSION SCHEDULE FOR EXPLORATION PROJECT

GENERAL INFORMATION

Location of Facility:	South Marsh Island 77 and 79 OCS-G 7703 and OCS-G 7704
Distance Offshore:	75 miles
Name of Rig/Platform:	Jack-up
Operator:	Mark Producing, Inc. 675 Bering Drive, Suite 5 Houston, Texas 77057
Contact Person:	Ms. Susan Hathcock
Total Well Footage to be Drilled:	123,050'
Date Drilling Will Begin:	October 15, 1985
Date Drilling Will End:	August 15, 1987
Well Footage to be Drilled in 1985:	13,240'
Well Footage to be Drilled in 1986:	60,590'
Well Footage to be Drilled in 1987:	49,220'

MAJOR SOURCE (OFFSHORE)

Power used aboard drilling vessel; approximate footage drilled 123,050'.*

<u>Emitted Substance</u>		<u>Projected Emissions (lbs/day**) tons/year</u>		
		<u>1985</u>	<u>1986</u>	<u>1987</u>
CO	(87)	2.62	(107) 12.00	(108) 9.75
SO ₂	(28)	.83	(34) 3.82	(34) 3.10
NOX	(410)	12.31	(501) 56.35	(509) 45.77
VOC	(33)	.99	(40) 4.54	(41) 3.69
TSP	(29)	.87	(36) 4.00	(36) 3.25

* Based on 60 hphr/ft. from Table 4-3, "Atmospheric Emissions from Offshore Oil and Gas Development and Production", EPA No. 450/3-77-026, June, 1977.

** Emission factors from Table 3.3.3-1, "Compilation of Air Pollutant Emission Factors", EPA Report AP-42, August, 1977.

Projected Air Emissions
 Mark Producing, Inc.
 South Marsh Island 84

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MINOR SOURCES (OFFSHORE)*

Including helicopter landing and take-off (10 trips/week); supply and crew boats (7 trips/week); and loading and unloading operations.

<u>Emitted Substance</u>	<u>Projected Emissions (tons/year)</u>		
	<u>1985</u>	<u>1986</u>	<u>1987</u>
CO	.50	1.86	1.49
SO ₂	.02	.06	.05
NOX	.10	.36	.29
VOC	.05	.18	.14
TSP	.02	.08	.06

* Tables 3.2.1-3, 3.2.3-1, and 2.1, "Compilation of Air Pollutant Emission Factors", Third Edition, EPA Report AP-42, August, 1977.

TOTAL ALL SOURCES (TONS/YEAR)

	<u>1985</u>	<u>CO</u>	<u>SO₂</u>	<u>NOX</u>	<u>VOC</u>	<u>TSP</u>
MAJOR		2.62	.83	12.31	.99	.87
MINOR		<u>.50</u>	<u>.02</u>	<u>.10</u>	<u>.05</u>	<u>.02</u>
TOTAL		3.12	.85	12.41	1.04	.89
<u>1986</u>						
MAJOR		12.00	3.82	56.35	4.54	4.00
MINOR		<u>1.86</u>	<u>.06</u>	<u>.36</u>	<u>.18</u>	<u>.08</u>
TOTAL		13.86	3.88	56.71	4.72	4.08
<u>1987</u>						
MAJOR		9.75	3.10	45.77	3.69	3.25
MINOR		<u>1.49</u>	<u>.05</u>	<u>.29</u>	<u>.14</u>	<u>.06</u>
TOTAL		11.24	3.15	46.06	3.83	3.31

Projected Air Emissions
Mark Producing, Inc.
South Marsh Island 84

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ONSHORE SOURCES

These should be about the same as minor sources unless new facilities are installed at the onshore base. No additional facilities are required or planned at this time.

EMISSION EXEMPTION DETERMINATION

$$\text{For CO: } E = 34000^{\frac{2}{3}} = 3400 (75)^{\frac{2}{3}} = 60,467 \text{ tons/year}$$

$$\text{For NOX, VOC, TSP \& SO : } E = \frac{33.30}{2} = 33.3 (75) = 2,498 \text{ tons/year}$$

As per DOI/MMS regulations, this facility is exempt from further air quality review as it has been determined that its operations will not have significant adverse environmental impact on air quality.

COASTAL ZONE MANAGEMENT
CONSISTENCY CERTIFICATION

Plan of Exploration

Type of Plan

South Marsh Island Area Blocks 77 and 79

Area and Block

OCS-G 7703 and OCS-G 7704

Lease Number

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

Arrangements have been made with the State-Times in Baton Rouge, Louisiana to publish a public notice of the proposed activities no later than September 11, 1985.

Mark Producing, Inc.
Lessee or Operator

Susan Hathcock
Certifying Official

Susan Hathcock

8/23/85

Date



P.O. Box 218753 Houston, Texas 77218 713-558-0607



ENVIRONMENTAL REPORT

FEDERAL LEASE OCS-G 7703 AND 7704

SOUTH MARSH ISLAND AREA BLOCKS 77 AND 79

OFFSHORE VERMILION, IBERIA, AND ST. MARY PARISHES, LOUISIANA

The following Environmental Report was prepared by J. Connor Consulting for Mark Producing, Inc., for Coastal Management Consistency Determination by the State of Louisiana on operations proposed in the Plan of Exploration for federal lease OCS-G 7703 and OCS-G 7704. For inquiries regarding this report please contact:

MARK PRODUCING, INC.

675 BERING, #5

HOUSTON, TEXAS 77057

ATTENTION: MS. SUSAN HATHCOCK

(713) 953-5125

2. DESCRIPTION OF PROPOSED ACTION

Mark Producing, Inc. plans to conduct exploration activities on South Marsh Island Area Blocks 77 and 79 (OCS-G 7703 and OCS-G 7704).

As proposed, the Plan of Exploration for South Marsh Island Area Blocks 77 and 79 consists of drilling ten (10) wells.

At this time, planned commencement date for Well "A" and all associated activities in Blocks 77 and 79 is on or about October 15, 1985.

(a) TRAVEL MODES, ROUTES AND FREQUENCY

The proposed exploration activity for federal leases OCS-G 7703 and OCS-G 7704 will require the use of a jack-up rig to drill the exploratory wells on South Marsh Island Blocks 77 and 79. The rig will be moved to South Marsh Island Blocks 77 and 79 from an unknown location in the Gulf of Mexico.

In addition to the jack-up, service boats will be used to transport equipment, material, personnel and supplies to the drill sites. It is estimated that the crew boats and supply boats will make daily trips from support bases located in Morgan City, Louisiana. The proposed travel route for these vessels begins at Morgan City, Louisiana. From this point the vessels will normally move through Atchafalaya Bay, to the Gulf of Mexico and then to South Marsh Island Blocks 77 and 79.

Helicopter flights to South Marsh Island Blocks 77 and 79 will average 10 trips per week and will originate from and return to Morgan City, Louisiana. The helicopters will normally take the most direct route of travel between the two points when air traffic and weather conditions permit.

(b) SUPPORT BASE

The proposed activities will utilize a support base at Morgan City.

Louisiana. The base provides 24-hour service, a radio tower with phone patch, dock space, office space, a parking lot, equipment and supply storage space, drinking and drill water, etc. These proposed exploration activities will help to maintain this base at its present levels 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 Blocks 77 and 79.

(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 likely to be required because of the activities planned for Blocks 77 and 79. Any newly discovered deposits of hydrocarbons should help to maintain onshore facilities and activities at or near their present levels rather than result in some type of expansion.

(d) NEW TECHNIQUES OR UNUSUAL TECHNOLOGY

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

(e) MAPS OF PROPOSED ACTIVITY

As shown by the attached Vicinity Plat, the proposed activity is located approximately 75 miles from the Louisiana shore.

(f) TRANSPORTATION OF OIL AND/OR GAS

If producible hydrocarbons are found they are likely to be transported to shore through connections with the pipelines already in place near Blocks 77 and 79.

3. PHYSICAL AND ENVIRONMENTAL

(1) Commercial Fishing

South Marsh Island Area Blocks 77 and 79 are located approximately 75 miles from shore where the water depth is approximately 135 to 140'. Shrimp and menhaden are the primary fishing resources found in this area.

The placement of a drilling rig on Blocks 77 and 79 may remove a portion of the seafloor and waters above from harvesting by commercial fisheries. Additionally, the waters adjacent to the drill sites may become temporarily turbid due to drilling operations. These operations should have no significant impact on commercial fisheries.

(2) Shipping

South Marsh Island Area Blocks 77 and 79 are clear of all fairways and anchorage areas. Operations in this area will be in accordance with the U.S. Coast Guard's regulations regarding navigation standards. There should be little or no impact on shipping resulting from the proposed operations.

(3) Recreation

The proposed activities, which are primarily confined to South Marsh Island Area Blocks 77 and 79 are located approximately 75 miles south of the Louisiana coastline. Along the Coastline at Vermilion Bay, West Cote Blanch Bay, and Atchafalaya Bay are located several beaches and barrier islands including Marsh Island and Point Au Fer Island which are recreational resources in the area. To protect these recreational resources, Mark Producing will comply with OCS Order No. 7 regarding pollution prevention and control, and has established an Oil Spill Contingency Plan which was approved by the Minerals Management Service. There are no adverse impacts expected as a result of the proposed activities.

(4) Cultural Resources

South Marsh Island Area Blocks 77 and 79 lie inside the Cultural Resource Sensitivity Demarcation Line (USDI, 1979, Visual 1) and, therefore, fall in an area where cultural resources are likely to be found. An archaeological survey was required for South Marsh Area Blocks 77 and 79. Mark Producing, Inc. agrees that if any site, structure, or object of historical or archaeological significance should be discovered during operations, the findings will be immediately reported to the Supervisor and every reasonable effort will be made to preserve and protect the cultural resources from damage until the Supervisor has given direction as to its preservation.

(5) Ecologically Sensitive Features

There are no marine sanctuaries, refuges, or preserves in the immediate area of South Marsh Island Area Blocks 77 and 79. Along the coastal shores of Vermilion, Iberia and St. Mary Parishes, Louisiana, the ecologically sensitive features include oyster harvest areas, the bald eagle feeding ground, wading bird rookeries, and finfish and shellfish nursery and spawning grounds. Service vessels for the proposed activities may pass through or near these sensitive features.

(6) Existing Pipelines and Cables

Block 77: A Tennessee Gas 30" pipeline crosses the west line approximately 1100' from the southwest corner and crosses the east line approximately 250' from the southeast corner. A 12" flowline begins at approximately 6494' from the south line and 2774' from the east line and runs due south to connect with the 30" pipeline.

Block 79: A Tennessee Gas 30" pipeline runs from the west, follows the north line and then enters the block 4000' from the east line and exits

at the east line approximately 200' from the northeast corner. A 12" flowline runs north from platform "A" which is located at approximately 2250' from the west line and 1450' from the north line to tie in with the 30" pipeline.

All pipelines will be avoided during the proposed activities.

(7) Other Mineral Uses

The activities proposed for South Marsh Island Blocks 77 and 79 will have no direct or indirect impact on other mineral uses.

(8) Ocean Dumping

Ocean Dumping is prohibited in this area.

(9) Endangered or Threatened Species

Mark Producing, Inc.'s proposed operations at South Marsh Island Area Blocks 77 and 79 are located approximately 75 miles south of the Louisiana coastline off Vermilion, Iberia, and St. Mary Parishes, Louisiana. These coastal shores and upland areas are the habitat of several endangered or threatened species. These species include the Arctic peregrine falcon, the red-cockaded woodpecker, the bald eagle, the American Alligator, the red wolf, Kemp's ridley sea turtle and the Brown Pelican. These species may be affected by the development of coastal lands and/or the occurrence of oil spills which may affect the species directly or through their food sources. Since the proposed activities include no plans for the development of coastal lands, the impact on endangered or threatened species is primarily based on the occurrence of oil spills.

On pages III-5 through III-72 of the Final Environmental Impact Statement for OCS Sale No. 47 there is a discussion of the factors for estimating the significance of oil spills and their impacts. The impacts on various endangered and threatened species will depend on the nature of the

spill, weather conditions, proximity of spill to species, tolerance for oil of species, and the response time and effectiveness of the oil spill clean-up and containment services. Given these variables, the impact on the various endangered or threatened species will vary from little or no effect to serious.

The experience of oil and gas exploration in the Gulf of Mexico indicates that there is a small probability of occurrence of an oil spill. The Draft Environmental Impact Statement (DEIS) for OCS Sale No. A-62 and 62 indicates on page 71 that the "aggregate 15 year spill rate is .0009 percent of the total volume produced." Table 7, page 73, of the DEIS indicated that there have been only 30 incidents of oil spills for this 15 year period. The probability remains low because of the level of technology used by the oil and gas industry to insure safe and responsible operations. Mark Producing, Inc., as a prudent operator will take the necessary measures to reduce the probability of oil spills. Mark Producing, Inc.'s proposed operations in South Marsh Island Blocks 77 and 79 should pose no threat to any endangered or threatened species.

(b) SOCIO-ECONOMIC

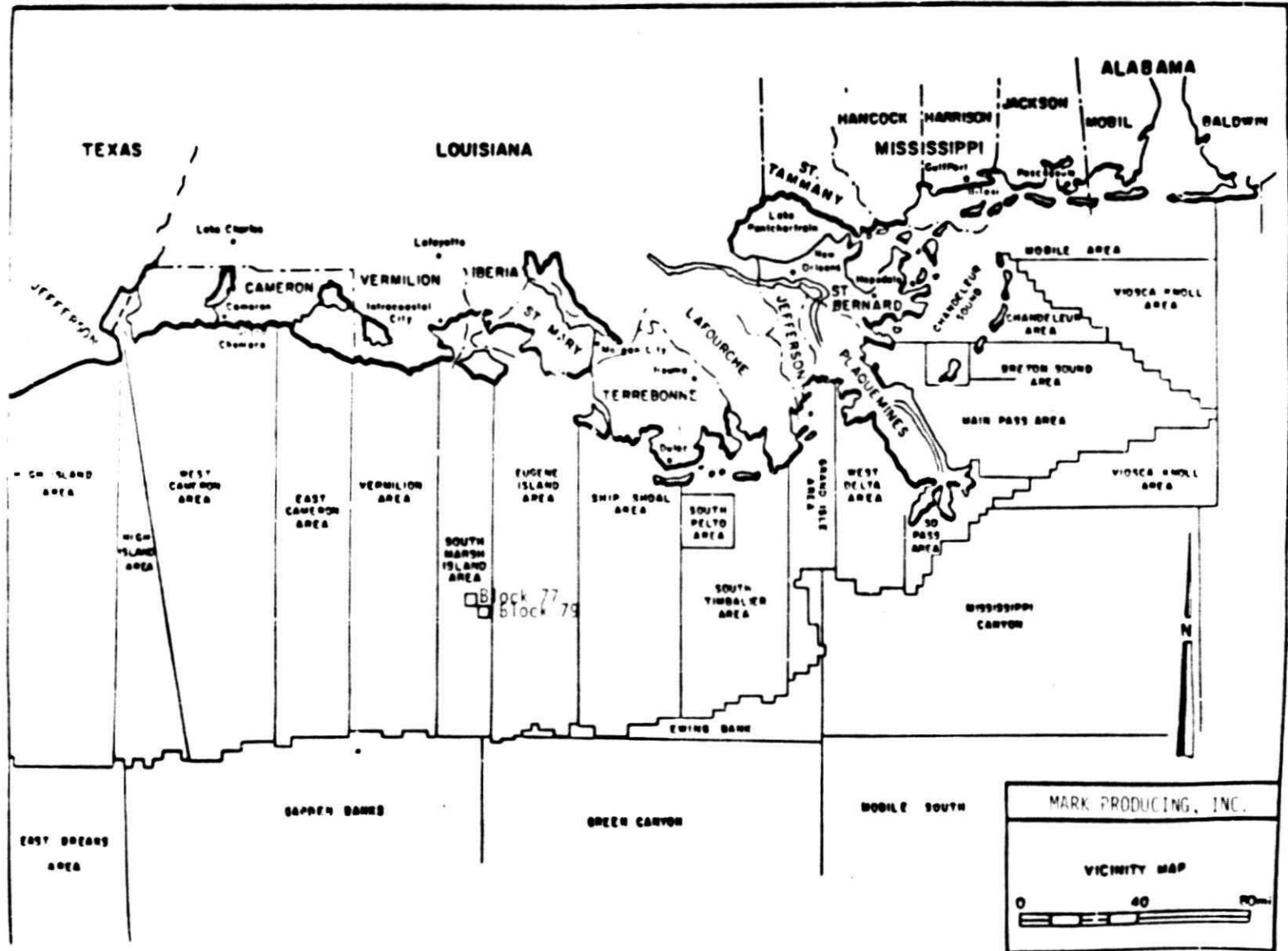
(1) Related New Employment

Not applicable at this time.

4. UNAVOIDABLE ADVERSE IMPACTS

The drilling of the proposed wells should result in minimal unavoidable adverse impacts. The impact on water quality and marine organisms would be a result of a non-toxic turbidity which lasts only a short time and would be limited to a localized area. The impact on air quality would also only be local in nature and would be quickly dissipated by the environment. There

should be no impact or effect on any onshore area.



Block 77
Block 79

MARK PRODUCING, INC.

VICINITY MAP

0 40 80

SUMMARY

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

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

REFERENCES

1. United States Department of the Interior, BLM Draft Environmental Impact Statement, OCS Oil and Gas Lease Sales A-62 and 62.
2. United States Department of the Interior, BLM Final Environmental Impact Statement, OCS Oil and Gas Lease Sales A-62 and 62.
3. United States Department of the Interior, BLM Final Environmental Impact Statement, OCS Oil and Gas Lease Sale 47.
4. United States Department of the Interior, BLM Draft Environmental Impact Statement, OCS Oil and Gas Lease Sales 67 and 69.
5. United States Department of the Interior, BLM Final Environmental Impact Statement OCS Oil and Gas Sales 67 and 69.
6. United States Department of the Interior, Minerals Management Service, Final Regional Environmental Impact Statement, January, 1983.