UNITED STATES GOVERNMENT
MEMORANDUM

April 20, 2005

To: Public Information (MS 5034)

From: Plan Coordinator, FO, Plans Section (MS 5231)

Subject: Public Information copy of plan

- Control # - N-08393
- Type - Initial Exploration Plan
- Lease(s) - OCS-G24089 Block - 537 Mississippi Canyon Area
- Operator - Murphy Exploration & Production Company - USA
- Description - Wells A through D
- 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.

Robert Stringfellow
Plan Coordinator

Site Type/Name	Botm Lse/Area/Blk	Surface Location	Surf Lse/Area/Blk
WELL/A	G24089/MC/537	5100 FSL, 1400 FEL	G24089/MC/537
WELL/B	G24089/MC/537	13300 FSL, 3800 FEL	G24089/MC/537
WELL/C	G24089/MC/537	3350 FSL, 750 FEL	G24089/MC/537
WELL/D	G24089/MC/537	15000 FSL, 4200 FEL	G24089/MC/537

MURPHY
EXPLORATION & PRODUCTION
COMPANY - USA

131 SOUTH ROBERTSON STREET (70112)
P.O. BOX 61780
NEW ORLEANS, LA 70161-1780
(504) 561-2811
FAX (504) 561-2837

April 15, 2005

U. S. Department of the Interior
Minerals Management Service
Office of Field Operations
MS 5231
1201 Elmwood Park Boulevard
New Orleans, Louisiana 70123-2394

Attention: Mr. Donald C. Howard
Regional Supervisor - Field Operations

Regarding: **Initial Exploration Plan**
Mississippi Canyon Block 537, OCS-G-24089 #A-D
Anticipated Commencement Date: July 1, 2005

Gentlemen:

Enclosed herewith are nine (9) sets of the above referenced Initial EP. We respectfully request that a speedy review be made to determine whether this document is complete. Should additional information be required, please advise us immediately.

Every effort you extend in order to affect an early approval of this Plan will be greatly appreciated.

Very truly yours,

Debra K. Benoit
Staff Technical Assistant
Environment & Government Affairs

/plans/24089#A-D

APPENDIX A

Description, Objectives and Schedule
Drilling Unit w/ Safety & Pollution Prevention Features
Production Facilities
OCS Plan Information Form

MURPHY EXPLORATION & PRODUCTION COMPANY
Initial EP
OCS-G-24089
Mississippi Canyon Block 537
Offshore, Louisiana

Murphy Exploration & Production Company, as designated Operator of the subject lease, hereby submits this proposed Exploration Plan in accordance with the regulations contained in Title 30 CFR 250.203 and 204 and more specifically defined in the Minerals Management Service Notice to Lessees 2003-G17.

HISTORY OF LEASE

Mississippi Canyon Block 537 was acquired at Lease Sale 182 effective March 20, 2002. Murphy Exploration & Production proposes to drill additional exploratory wells as per attached location table. This contains lease stipulation #6. Shallow Hazards Report was submitted March 22, 2005.

GEOLOGICAL OBJECTIVES: See Appendix C

SCHEDULE OF OPERATIONS: See attached OCS Plan Information Form

PRODUCTION FACILITIES:

Should proposed wells have no commercial production, they will be plugged and abandoned with casings removed to a minimum of 15' BML. If they prove successful, they will be Temporarily Abandoned in accordance with 30 CFR 250.1721.

There will be no additional onshore or offshore facilities or personnel as a result of these exploration activities.

DESCRIPTION OF DRILLING RIG: See attached OCS Plan Information Form

SAFETY STANDARDS AND PROGRAMS - DRILLING OPERATIONS:

The rig to be used will comply with all of the regulations of the American Bureau of Shipping, International Maritime Organization and the United States Coast Guard. All drilling operations will be conducted under the provisions of 30 CFR, part 250, Subpart D and other applicable regulations and notices, including those regarding the avoidance of potential drilling hazards and safety and pollution prevention control. Safety features will include well control and blowout prevention equipment as described in Title 30 CFR 250.50. The appropriate life rafts, life jackets, ring buoys, etc. as prescribed by the U.S. Coast Guard will be maintained on the facility at all times.

All production facilities are constructed and installed to meet M.M.S. and Coast Guard standards for safety and protection of the environment. Murphy Exploration & Production Company's Safety and Training Department monitors and trains personnel in the conduct of safe operations and compliance with all safety and pollution prevention standards.

APPENDIX A - OCS PLAN INFORMATION FORM

General Information

Type of OCS	X	Exploration Plan		Development Operations Coordination Document (DOCD)							
Company Name: Murphy Exploration & Prod.				MMS Operator Number: 02647							
Address: Post Office Box 61780 New Orleans, LA 70161				Contact Person: Debra K. Benoit Phone Number: 504-561-2409 E-Mail Address: Debbie_Benoit@MurphyOilCorp.com							
Lease:OCS-G-24089			Area: MC		Block: 537			Project Name (If Applicable) Medusa West			
Objective	X	Oil	Gas		Sulfur		Salt	Onshore Base: Fouchon,LA			Dist. to Closest Land 33

Description of Proposed Activities (Mark all that apply)

X	Exploration drilling		Development drilling
	Well completion		Installation of production platform
	Well test flaring		Installation of production facilities
	Installation of well protection structure		Installation of satellite structure
	Installation of subsea wellheads and/or manifolds		Installation of lease term pipelines
	Temporary well abandonment		Commence production
	Other (Specify and describe)		

Do you propose to use new or unusual technology to conduct your activities?		Yes	X	No
Do you propose any facility that will serve as a host facility for deepwater subsea		Yes	X	No
Do you propose any activities that may disturb an MMS-designated high-probability		Yes	X	No

Tentative Schedule of Proposed Activities

Proposed Activity	Start Date	End Date	No. of days
Drill A	7/1/05	7/31/05	31
Drill B	8/1/05	8/31/05	31
Drill C	7/1/06	7/31/05	31
Drill D	8/1/06	8/31/06	31
When a rig is selected, the rig specifications will be made			
Application for Permit to Drill			

Description of Drilling Rig

	Jackup		Drillship		Caisson		Tension leg platform
	Gorilla Jackup		Platform rig		Well protector		Compliant tower
X	Semisubmersible		Submersible		Fixed platform		Guyed tower
	DP Semisubmersible		Other (Attach Description)		Subsea manifold		Floating production
Drilling Rig Name (If Known): Unknown					Spar		Other (Attach

Description of Lease Term Pipelines

From (Facility/Area/Block)	To (Facility/Area/Block)	Diameter (Inches)	Length (Feet)	Product

Appendix A
OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location				
Well or Structure Name/Number: A			Subsea Completion	
Anchor Radius (if applicable) in feet			Yes	X No
	SURFACE		BOTTOM HOLE	
Lease No.	OCS-G-24089			
Area Name	MC			
Block No.	537			
Blockline Departures (in feet)	N/S Departure 5100' FSL			
	E/W Departure 1400' FEL		PUBLIC INFORMATION	
Lambert X-Y coordinates	X: 838,122			
	Y: 10,316,393			
Latitude/ Longitude	Latitude: 28° 24' 23.86"			
	Longitude: -89° 29' 45.86"			
	TVD (Feet	MD (Feet):	Water Depth (Feet): 2028'	

Anchor Locations for Drilling Rig or Construction Barge				
Anchor Name	**Area/Block**	**X Coordinate**	**Y Coordinate**	**Length on Seafloor**
A1	MC 537	832255	10314745	1500'
A2	MC 537	831944	10317973	1500'
A3	MC 537	835928	10322806	1500'
A4	MC 537/538	839156	10323117	1500'
A5	MC 538	843989	10319133	1500'
A6	MC 538	844300	10315905	1500'
A7	MC 537/538/582	840316	10311072	1500'
A8	MC 537/581	837088	10310761	1500'

Appendix A
OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location				
Well or Structure Name/Number: B			Subsea Completion	
Anchor Radius (if applicable) in feet			Yes	X No
	SURFACE	BOTTOM HOLE		
Lease No.	OCS-G-24089			
Area Name	MC			
Block No.	537			
Blockline Departures (in feet)	N/S Departure 13,300' FSL			
	E/W Departure 3800' FEL	PUBLIC INFORMATION		
Lambert X-Y coordinates	X: 835,721			
	Y: 10,325,140			
Latitude/ Longitude	Latitude: 28° 25' 44.51"			
	Longitude: -89° 30' 14.64"			
	TVD (Feet):	MD (Feet):	Water Depth (Feet): 2082'	

Anchor Locations for Drilling Rig or Construction Barge				
Anchor Name	**Area/Block**	**X Coordinate**	**Y Coordinate**	**Length on Seafloor**
B1	MC 537	829853	10322946	1500'
B2	MC 537	829543	10326174	1500'
B3	MC 493	833527	10331007	1500'
B4	MC 493	836754	10331318	1500'
B5	MC 538/494	841588	10327334	1500'
B6	MC 538	841899	10324106	1500'
B7	MC 537	837914	10319273	1500'
B8	MC 537	834687	10318962	1500'

Appendix A
OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location				
Well or Structure Name/Number: C			Subsea Completion	
Anchor Radius (if applicable) in feet			Yes:	X No
	SURFACE		BOTTOM HOLE	
Lease No.	OCS-G-24089			
Area Name	MC			
Block No.	537			
Blockline Departures (in feet)	N/S Departure 3350' FSL			
	E/W Departure 750' FEL		PUBLIC INFORMATION	
Lambert X-Y coordinates	X: 838,770			
	Y: 10,315,190			
Latitude/ Longitude	Latitude: 28° 24' 06.68"			
	Longitude: -89° 29' 38.19"			
	TVD (Feet	MD (Feet):	Water Depth (Feet): 2076'	

Anchor Locations for Drilling Rig or Construction Barge				
Anchor Name	**Area/Block**	**X Coordinate**	**Y Coordinate**	**Length on Seafloor**
C1	MC 537	832903	10312966	1500'
C2	MC 537	832592	10316224	1500'
C3	MC 537	836577	10321057	1500'
C4	MC 537/538	839804	10321368	1500'
C5	MC 538	844637	10317384	1500'
C6	MC 538	844948	10314156	1500'
C7	MC 582	840964	10309323	1500'
C8	MC 581	837737	10309012	1500'

Appendix A
OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location				
Well or Structure Name/Number: D			Subsea Completion	
Anchor Radius (if applicable) in feet			Yes	X No
	SURFACE	BOTTOM HOLE		
Lease No.	OCS-G-24089			
Area Name	MC			
Block No.	537			
Blockline Departures (in feet)	N/S Departure 15,000' FSL			
	E/W Departure 4200' FEL	PUBLIC INFORMATION		
Lambert X-Y coordinates	X: 835,322			
	Y: 10,326,840'			
Latitude/ Longitude	Latitude: 28° 26' 01.25"			
	Longitude: -88° 30' 19.50"			
	TVD (Feet):	MD (Feet):	Water Depth (Feet): 2057'	

Anchor Locations for Drilling Rig or Construction Barge				
Anchor Name or	**Area/Block**	**X Coordinate**	**Y Coordinate**	**Length on Seafloor**
D1	MC 537	829545	10324646	2250'
D2	MC 537/493	829144	10327874	2250'
D3	MC 493	833128	10332707	2250'
D4	MC 493	836356	10333018	2250'
D5	MC 494	841189	10329034	2250'
D6	MC 538	841500	10325806	2250'
D7	MC 537	837515	10320973	2250'
D8	MC 537	834288	10320662	2250'

APPENDIX B

Company Contact
New or Unusual Technology
Bonding Requirements
Onshore Base
Support Vessels
Lease Stipulations
Project name
Transportation Routing Map
Bathymetry Plat

COMPANY CONTACT:

Debra Benoit
Post Office Box 61780
New Orleans, Louisiana 70161

Telephone Number: (504) 561-2409
Fax Number: (504) 561-2661
E-Mail: Debbie_Benoit@Murphyoilcorp.com

NEW OR UNUSUAL TECHNOLOGY: None will be used for proposed activities.

BONDING REQUIREMENTS: Murphy Exploration & Production Company's activities are covered by its Area wide Oil and Gas Lease Bond in the amount of $3,000,000.00.

ONSHORE BASE: Marine operations will be based out of Fourchon, LA (64 miles)
Air (helicopter) operations will be based out of Fourchon, LA (64 miles)
All bases are existing and will not be affected by proposed operations.

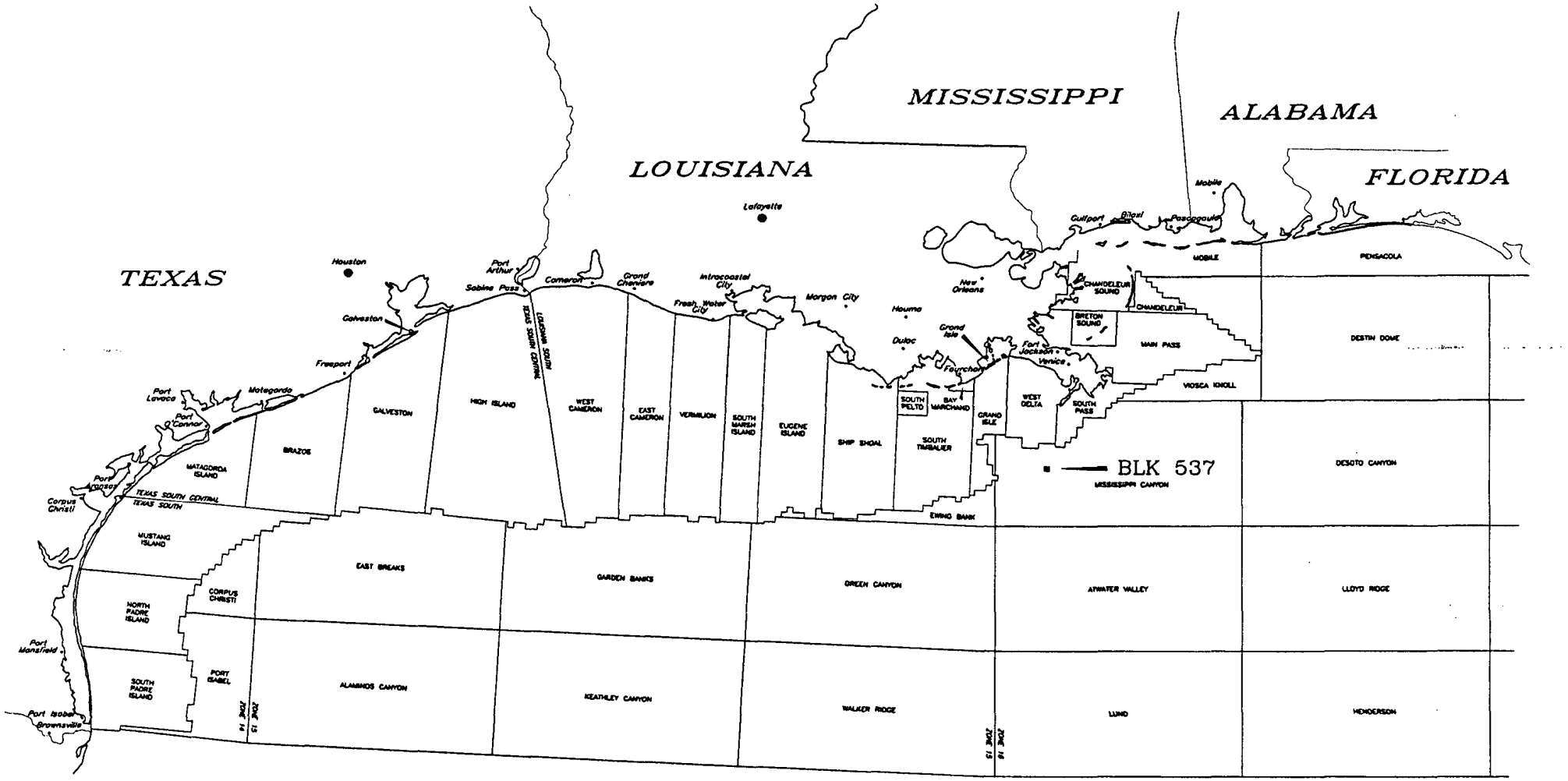
SUPPORT VESSELS: 1 Crew Boat will be utilized daily
1 Supply Boat will be utilized twice weekly.
1 Helicopter will be utilized daily.

TRANSPORTATION ROUTING MAP: See attached.

LEASE STIPULATIONS: None

PROJECT NAME: Medusa West

VICINITY MAP

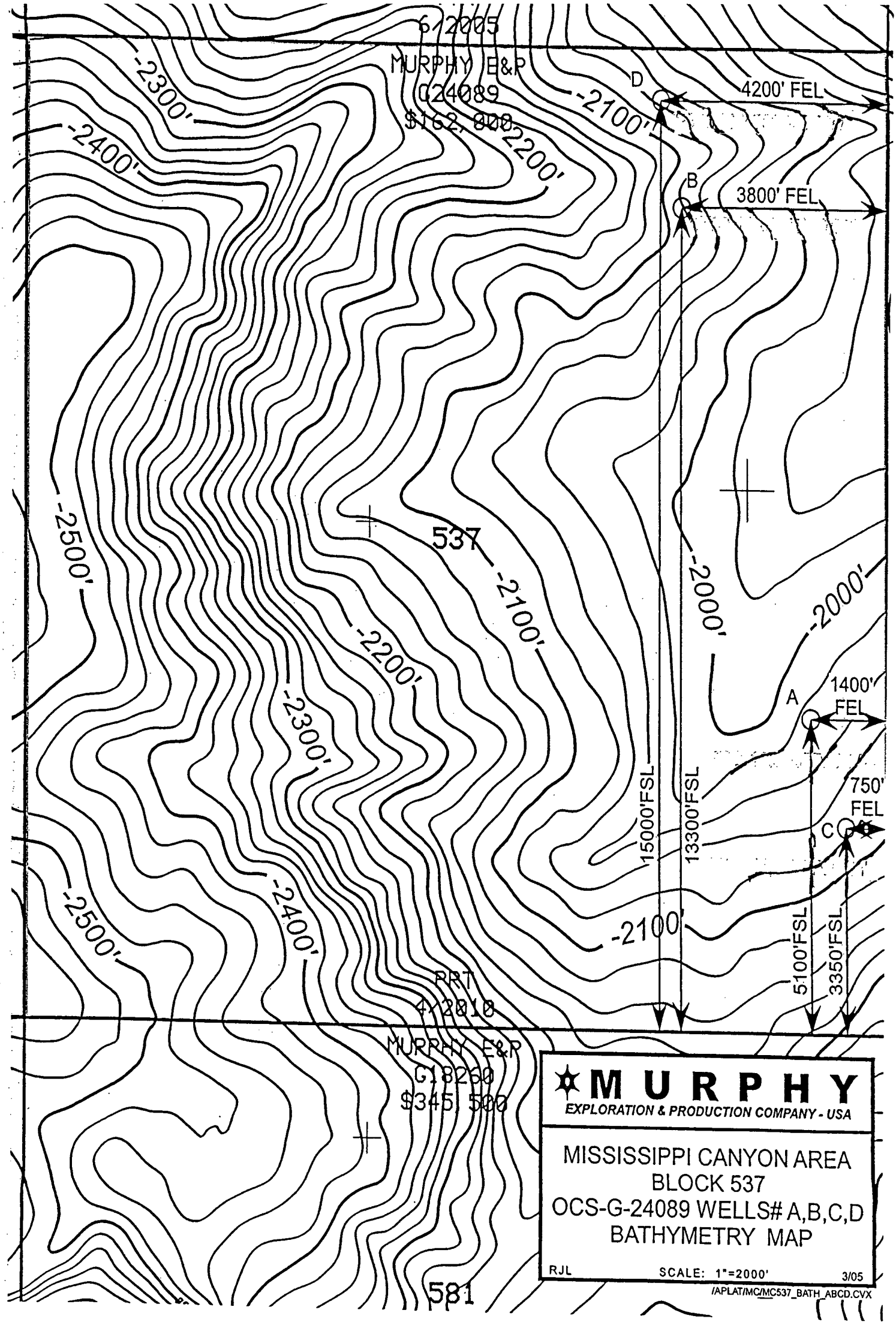


GULF OF MEXICO

Figure 1

MURPHY EXPLORATION & PRODUCTION COMPANY NEW ORLEANS, LOUISIANA		
VICINITY MAP BLOCK 537 MISSISSIPPI CANYON AREA 80 0 80 160 SCALE : 1" = 80 MILES		
TIM MORTON & ASSOCIATES, INC. 730 E. KALISTE SALOOM RD. LAFAYETTE, LOUISIANA	JOB NO. 05-116	DATE: 4/11/05
	MAP NO.	MURPHU16

2


6/2005
MURPHY E&P
G24089
$162,800
-2300'
-2400'
-2100'
-2200'
-2500'
-2000'
D
4200' FEL
B
3800' FEL
537
A
1400' FEL
15000'FSL
13300'FSL
750' FEL
C
5100'FSL
3350'FSL
PRT
4/2010
MURPHY E&P
G18260
$345,500
581
MURPHY
EXPLORATION & PRODUCTION COMPANY - USA
MISSISSIPPI CANYON AREA
BLOCK 537
OCS-G-24089 WELLS# A,B,C,D
BATHYMETRY MAP
RJL
SCALE: 1"=2000'
3/05
/APLAT/MC/MC537_BATH_ABCD.CVX

APPENDIX C

Geological, Geophysical & H2S Information

Structure Contour Map

Interpreted 2-D and/or 3-D Seismic Lines
(to be provided upon request)

Geological Cross Section

Shallow Hazards Report
(previously submitted – see Page 1 in Appendix A)

Shallow Hazards Assessment

High-resolution Seismic Lines

Stratigraphic Column

Time vs. Depth Table
(Not applicable to this Plan - Data is based on well control in the area)

Letter Requesting Determination of H2S

In the event H2S is classified as either present or unknown, Murphy Exploration & Production will conduct operations proposed in this Plan as per its H2S Contingency Plan, prepared according to 30 CFR 250.147, approved November 30, 1998

MURPHY
EXPLORATION &
PRODUCTION
COMPANY

131 SOUTH ROBERTSON STREET (70112)
P.O. BOX 61780
NEW ORLEANS, LA 70161-1780
(504) 561-2811
FAX (504) 561-2837

March 30, 2005

Mr. Don Howard
Regional Supervisor
U. S. Department of the Interior
Minerals Management Service
1201 Elmwood Park Boulevard
New Orleans, LA 70123

RE: OCS-G-24089
Mississippi Canyon Block 537
Medusa West Prospect
Murphy Expro Well Nos. A, B, C & D

Dear Mr. Howard:

Geophysical data in the vicinity of the Murphy Exploration and Production Company's Mississippi Canyon Block 537 well locations have been reviewed and there appears to be no shallow drilling hazards.

As noted on the attached seismic plat the following seismic lines were reviewed for this proposal:

A Geohazard Assessment Study (Report No. 2404-2067) was performed over MC 537 by Fugro-McClelland Marine Geosciences, Inc. on December 17, 2004. Reports were filed with the Minerals Management Service on March 22, 2005.

In addition, the log from the Murphy Expro OCS-G-16618 #4 was reviewed and no impediments to drilling were encountered.

Respectfully submitted,

James R. Murphy
Vice-President U. S. Exploration

JRM/DLW/shs
c:\My Documents\A-Word\POE's\Miss-Canyon\mc537abcd Medusa West.doc

APPENDIX D

Chemosynthetic Communities

Topographic Features

Live Bottom Features

ROV Statement (Deepwater Only)

Seafloor Features Map with Associated Anchor Patterns

CHEMOSYNTHETIC COMMUNITIES

Features or areas that could support high-density chemosynthetic communities are **not** located within 1500 feet of each of the proposed mud and cuttings discharge location.

Features or areas that could support high-density chemosynthetic communities are **not** located within 1500 feet of each of any seafloor disturbances resulting from our use of anchors (including those caused by anchors, anchor chains and wire ropes).

TOPOGRAPHIC FEATURES

There are no topographical features (Flower Gardens, etc) on this lease.

LIVE BOTTOM (PINNACLE) FEATURES

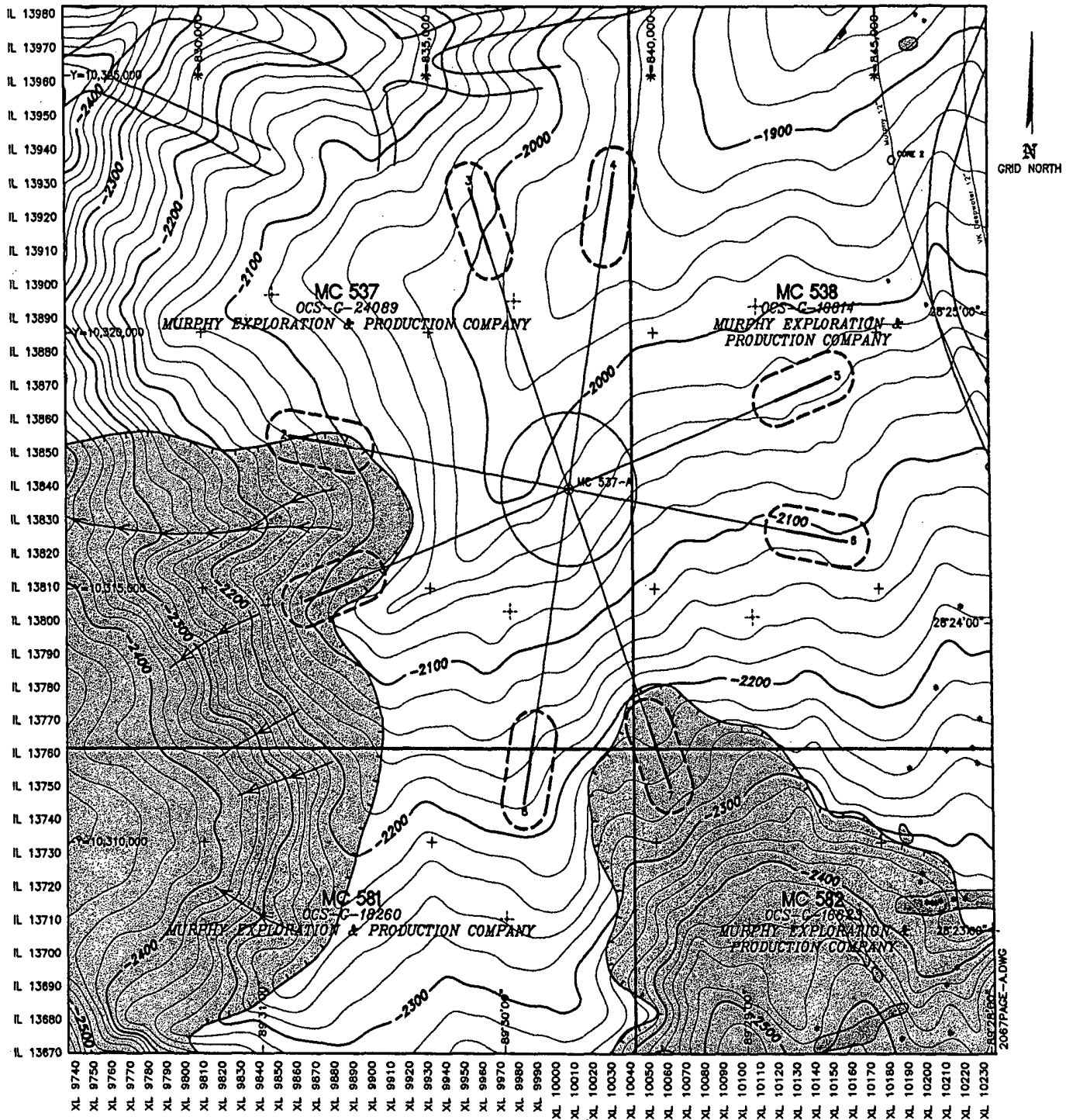
There are no live bottom features (pinnacles) on this lease.

ROV STATEMENT

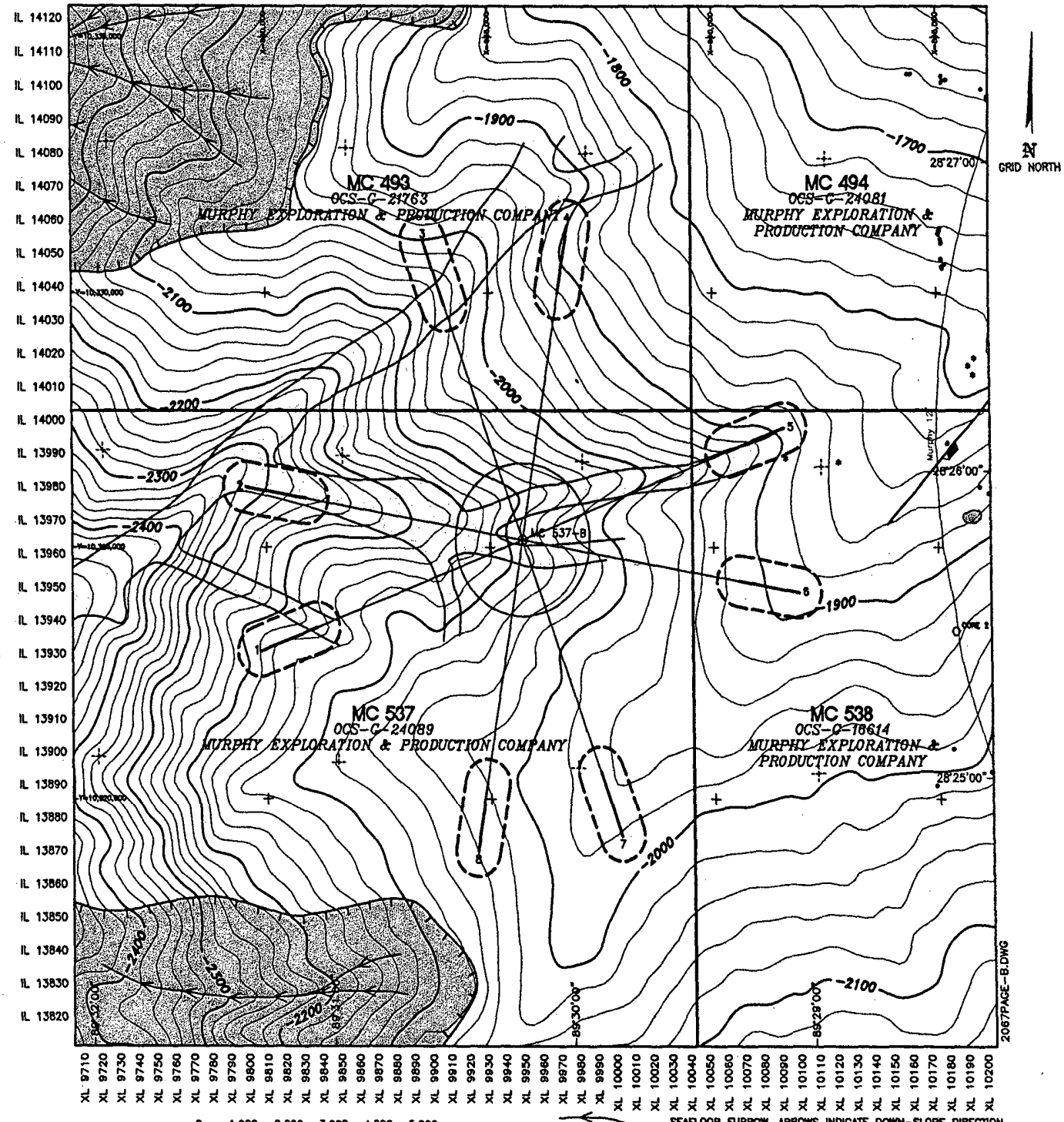
Murphy Exploration & Production Company is familiar with the ROV Survey Requirements set forth in N.L. 2001-G04. A visual survey of the sea floor in the vicinity of the proposed well sites will be performed using an ROV equipped with video imaging capabilities. A survey will be performed immediately before operations commence and immediately after operation completion. The ROV will be run along six transects. Each of the six excursions will extend at least 100 meters from the launch point and that at least one transect passes directly over or very near the well site with the track lines located at 60-degree angles.

The sea floor will be continuously videotaped during the entire survey and the ROV will be run close enough to the sea floor so than relatively small animals and features (1 inch and larger) can be observed and identified. When a type of animal is encountered for the first time or upon encounter with each bottom type, the ROV will be stopped momentarily to attempt close-up video.

Murphy Exploration & Production Company will comply with the provisions stated above when stipulated as a condition of approval for deepwater EP's or Initial DOCD's.



WATER DEPTH AND SEAFLOOR FEATURES MAP
PROPOSED WELLSITE MC 537-A



IL 13820 — 3-D SURVEY LINE NUMBER.

REPORTED LOCATION OF EXISTING PIPELINE.

CORE 2 — PISTON CORE LOCATION.

MC 537-B
8 — PROPOSED WELL LOCATION, DESIGNATION, AND PROPOSED ANCHOR PATTERN. THE ANCHOR PATTERN SHOWN WAS DESIGNED FOR THE "OCEAN CONCORD" IN APPROXIMATELY 2,200 FT OF WATER. BOLD PORTION OF ANCHOR CHAIN INDICATES CHAIN CONTACT WITH SEAFLOOR. A 1,500 FT RADIUS CIRCLE IS SHOWN AROUND THE WELL SURFACE LOCATION AND A 1,000 FT POLYGON IS SHOWN AROUND THE ANCHOR AND ANCHOR CHAIN TOUCHDOWN ZONE AS REQUIRED BY NOTICE TO LESSEES 2000-G20.

1800 — WATER DEPTH CONTOUR, IN FEET. CONTOUR INTERVAL IS 20 FEET.

SEAFLOOR FURROW. ARROWS INDICATE DOWN-SLOPE DIRECTION.

SEAFLOOR EXPRESSION OF SHALLOW BURIED SEDIMENT TRANSPORT PATHWAYS.

SEAFLOOR EXPRESSION OF BURIED MASS MOVEMENT EVACUATION ZONE. TICKS DENOTE DIRECTION OF SLOPE FAILURE.

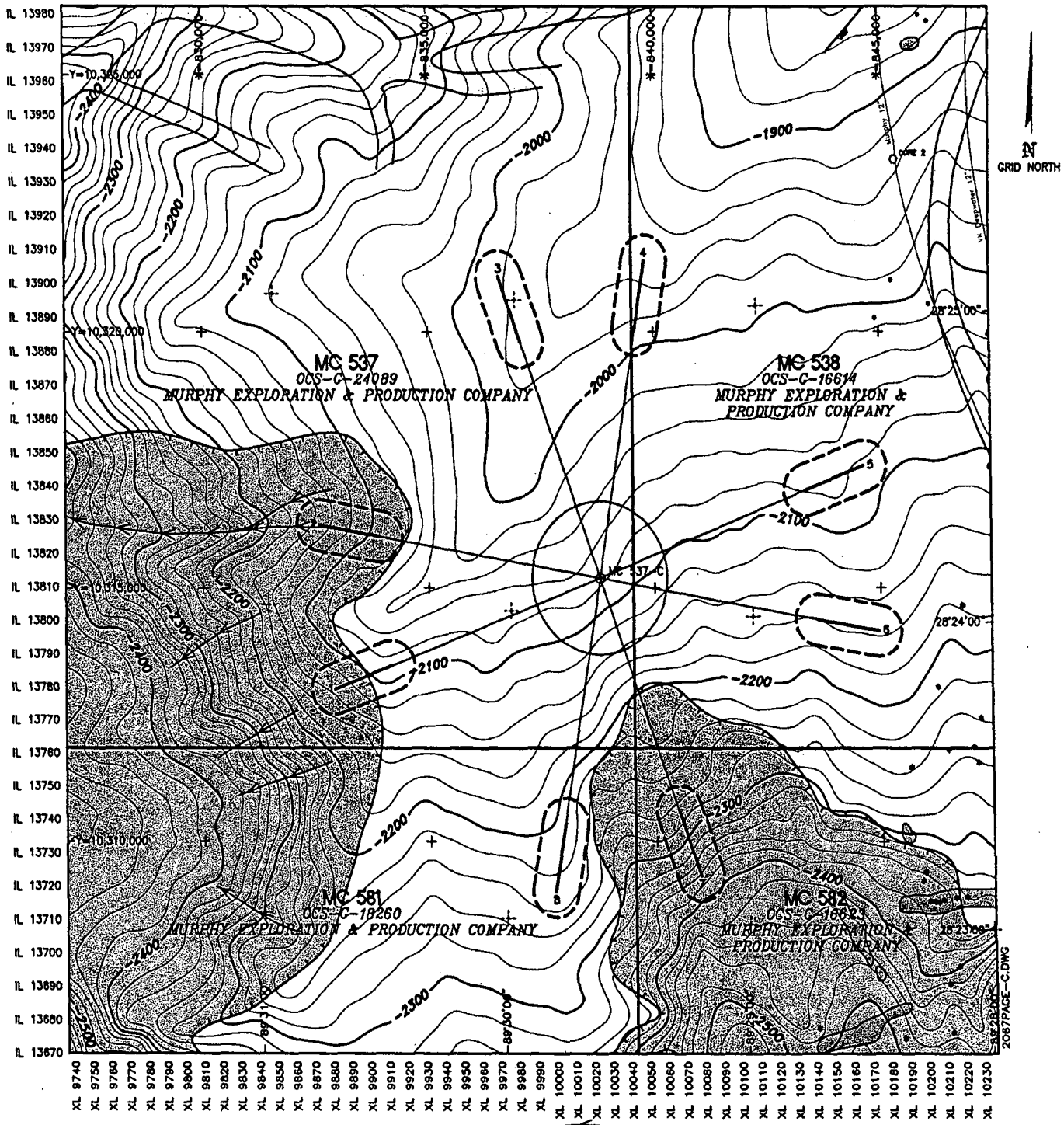
SEAFLOOR OR SHALLOW BURIED FAULT WITH SEAFLOOR EXPRESSION. MAXIMUM SEAFLOOR OFFSET IS ABOUT 10 FEET.

INDIVIDUAL SIDE-SCAN SONAR TARGETS, REPRESENTING POSSIBLE DRUMS. INCLUDES SIX DRUMS IDENTIFIED FROM 1999 ROV DEBRIS SEARCH.

CONCENTRATIONS OF SIDE-SCAN SONAR TARGETS, REPRESENTING AREAS OF POSSIBLE NUMEROUS, CLOSELY-SPACED DRUMS.

SONAR CONTACTS (POSSIBLE DRUMS).

WATER DEPTH AND SEAFLOOR FEATURES MAP
PROPOSED WELLSITE MC 537-B



IL 13670 3-D SURVEY LINE NUMBER.

REPORTED LOCATION OF EXISTING PIPELINE.

CORE 2 PISTON CORE LOCATION.

MC 537-C
6 PROPOSED WELL LOCATION, DESIGNATION, AND PROPOSED ANCHOR PATTERN. THE ANCHOR PATTERN SHOWN WAS DESIGNED FOR THE "OCEAN CONCORD" IN APPROXIMATELY 2,200 FT OF WATER. BOLD PORTION OF ANCHOR CHAIN INDICATES CHAIN CONTACT WITH SEAFLOOR. A 1,500 FT RADIUS CIRCLE IS SHOWN AROUND THE WELL SURFACE LOCATION AND A 1,000 FT POLYGON IS SHOWN AROUND THE ANCHOR AND ANCHOR CHAIN TOUCHDOWN ZONE AS REQUIRED BY NOTICE TO LESSEES 2000-G20.

-1900 WATER DEPTH CONTOUR, IN FEET. CONTOUR INTERVAL IS 20 FEET.

SEAFLOOR FURROW. ARROWS INDICATE DOWN-SLOPE DIRECTION.

SEAFLOOR EXPRESSION OF SHALLOW BURIED SEDIMENT TRANSPORT PATHWAYS.

SEAFLOOR EXPRESSION OF BURIED MASS MOVEMENT EVACUATION ZONE. TICKS DENOTE DIRECTION OF SLOPE FAILURE.

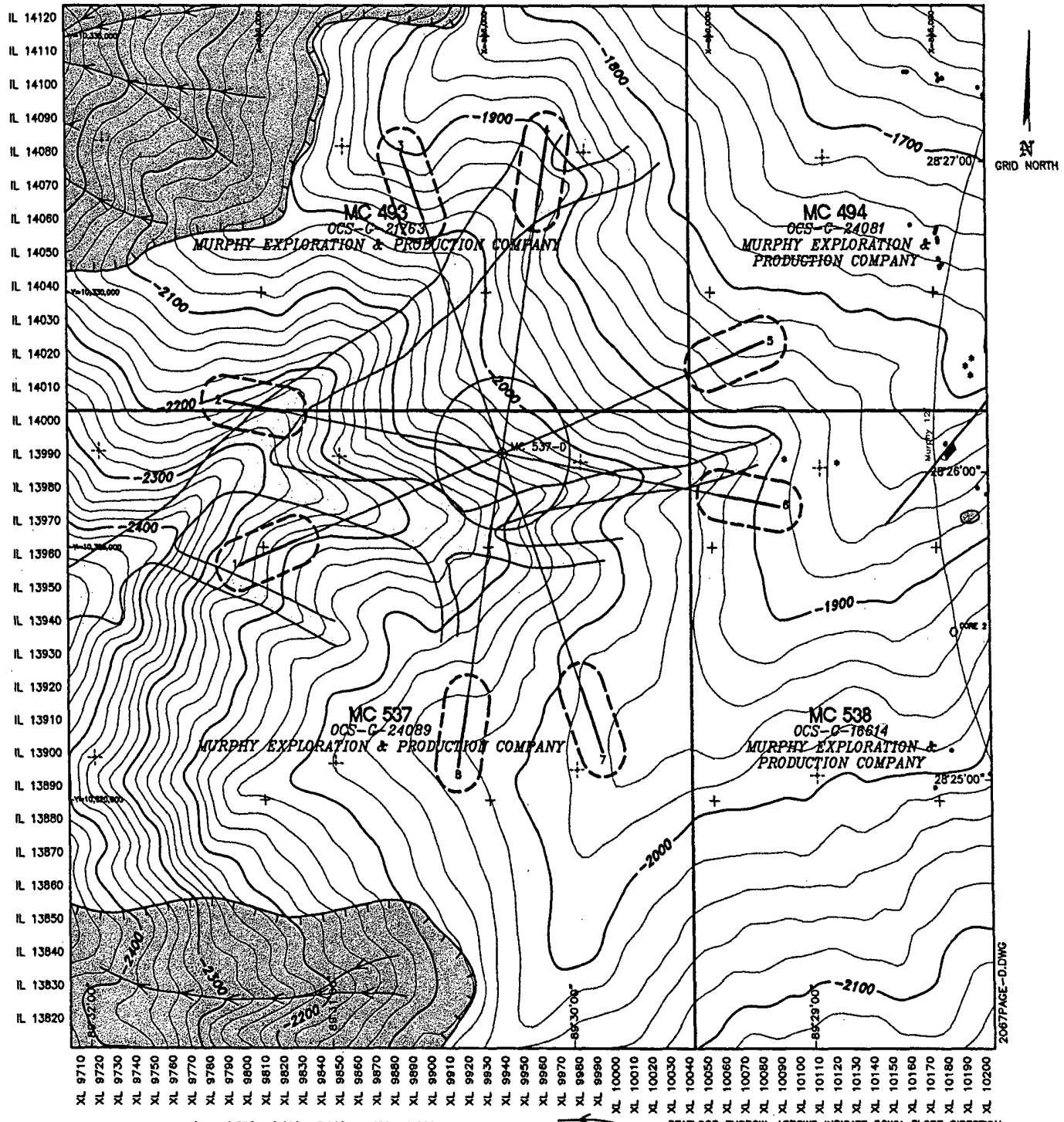
SEAFLOOR OR SHALLOW BURIED FAULT WITH SEAFLOOR EXPRESSION. MAXIMUM SEAFLOOR OFFSET IS ABOUT 10 FEET.

INDIVIDUAL SIDE-SCAN SONAR TARGETS, REPRESENTING POSSIBLE DRUMS. INCLUDES SIX DRUMS IDENTIFIED FROM 1999 ROV DEBRIS SEARCH.

CONCENTRATIONS OF SIDE-SCAN SONAR TARGETS, REPRESENTING AREAS OF POSSIBLE NUMEROUS, CLOSELY-SPACED DRUMS.

SONAR CONTACTS (POSSIBLE DRUMS).

WATER DEPTH AND SEAFLOOR FEATURES MAP
PROPOSED WELLSITE MC 537-C



0 1,000 2,000 3,000 4,000 5,000

SCALE IN FEET

IL 13820 3-D SURVEY LINE NUMBER.

REPORTED LOCATION OF EXISTING PIPELINE.

CORE 2 PISTON CORE LOCATION.

MC 537-D PROPOSED WELL LOCATION, DESIGNATION, AND PROPOSED ANCHOR PATTERN. THE ANCHOR PATTERN SHOWN WAS DESIGNED FOR THE "OCEAN CONCORD" IN APPROXIMATELY 2,200 FT OF WATER. BOLD PORTION OF ANCHOR CHAIN INDICATES CHAIN CONTACT WITH SEAFLOOR. A 1,500 FT RADIUS CIRCLE IS SHOWN AROUND THE WELL SURFACE LOCATION AND A 1,000 FT POLYGON IS SHOWN AROUND THE ANCHOR AND ANCHOR CHAIN TOUCHDOWN ZONE AS REQUIRED BY NOTICE TO LESSEES 2000-G20.

-1800 WATER DEPTH CONTOUR, IN FEET. CONTOUR INTERVAL IS 20 FEET.

SEAFLOOR FURROW. ARROWS INDICATE DOWN-SLOPE DIRECTION.

SEAFLOOR EXPRESSION OF SHALLOW BURIED SEDIMENT TRANSPORT PATHWAYS.

SEAFLOOR EXPRESSION OF BURIED MASS MOVEMENT EVACUATION ZONE. TICKS DENOTE DIRECTION OF SLOPE FAILURE.

SEAFLOOR OR SHALLOW BURIED FAULT WITH SEAFLOOR EXPRESSION. MAXIMUM SEAFLOOR OFFSET IS ABOUT 10 FEET.

INDIVIDUAL SIDE-SCAN SONAR TARGETS, REPRESENTING POSSIBLE DRUMS. INCLUDES SIX DRUMS IDENTIFIED FROM 1999 ROV DEBRIS SEARCH.

CONCENTRATIONS OF SIDE-SCAN SONAR TARGETS, REPRESENTING AREAS OF POSSIBLE NUMEROUS, CLOSELY-SPACED DRUMS.

SONAR CONTACTS (POSSIBLE DRUMS).

WATER DEPTH AND SEAFLOOR FEATURES MAP
PROPOSED WELLSITE MC 537-D

APPENDIX E

Discharges & Disposed Wastes Information

DISCHARGES

Provide this table and description only when you propose:

1. Activities in the Eastern Planning Area of the GOM.
2. Activities within the Protective Zones of the Flower Mississippi Canyon and Stetson Bank.
3. To use new or unusual technology that changes the nature or magnitude of the waste stream.
4. To use a sulphur recovery unit(s).
5. Deepwater development operations. (You may omit this table if you propose operations in an exempted area. Refer to the MMS Internet website at http://www.gomr.mms.gov/homepg/regulate/environ/strategy/strategy.html for a current listing of exempted areas.)
6. Initial EP's, DOCD's, or Supplemental DOCD's with new multiwell structures for which the State of Texas is an affected State (15 CFR 930.58(a)(2)).
7. Initial or supplemental DOCD's for which the State of Alabama is an affected State (15 CFR 930.58(a)(2)).
8. Initial DOCD's or supplemental DOCD's with new multiwell structure that includes disposal in Louisiana State waters or onshore Louisiana (15 CFR 930.58(a)(2)).

DISPOSED WASTES

Provide this table when you propose **all** Initial and Supplemental EP's and DOCD's. Provide this information in **Revised** EP's or DOCD's only when you propose:

1. Drilling operations in the Eastern Planning Area of the GOM.
2. To use new or unusual technology in the handling or discharge of drilling fluids or drill cuttings.
3. Deepwater development operations. (You may omit this table if you propose operations in an exempted area. Refer to the MMS Internet website at http://www.gomr.mms.gov/homepg/regulate/environ/strategy/strategy.html for a current listing of exempted areas.)

DISCHARGES PER WELL (UNLESS OTHERWISE NOTED):

Type of Waste - Approximate Composition	Amt to be Discharged (Volume or Rate)	Maximum Discharge Rate	Discharge and/or Storage Location and Discharge Method*
Water-Based Muds	15000	1000 bbl/hr	Discharged at seafloor
WBM Drill Cuttings	530	1000 bbl/hr	Discharged at seafloor
SBM Drill Cuttings	1450	1000 bbl/hr	Discharged OB via shunt pipe
Muds, ctgs & cement at seafloor	2050	NA	Discharged at seafloor
Produced Water	NA	12.6×10^6/yr	NA
Sanitary Wastes	25 gal/person/day	NA	Treated for oil & grease and discharged overboard
Domestic Wastes	35 gal/person/day	NA	Treated for solids and discharged overboard
Deck Drainage	0-4000 bbl/day dependent on rainfall	15 bbl/hr	Oil & grease removed and discharged overboard
Well Treatment, Workover or Completion Fluids	NA	200 bbl/well	Discharged used fluids overboard, return excess to shore for credit
Uncontaminated fresh or seawater	NA	NA	Discharged overboard
Desalinization Unit	2650 bbl/day	NA	Discharged overboard
Uncontaminated Bilge Water	1200 bbl/project	260 m^3/hr	Discharged overboard
Uncontaminated Ballast Water	15,000 bbl/project	2600 m^3/hr	Discharged overboard
Misc. Discharges - Treated Chemicals added	NA	10 bbl/hr	Discharged overboard
Miscellaneous Discharges (permitted under NPDES) (excess cmt w/ cmtg chems)	NA	NA	Discharged overboard at seafloor without treatment

***All overboard discharges will take place on site.**
Typical semi rig =90 men on board, typical jackup/workover rig=50 men on board

All mud discharged will be tested for toxicity as required by EPA's NPDES discharge permit. Sanitary and domestic wastes are treated in compliance with EPA's NPDES discharge permit. Rig or platform discharge will vary according to the number of personnel on board.

All vessels used in our operations are equipped with Marine Sanitation Devices or holding tanks in compliance with DOT regulations.

DISPOSED WASTES PER WELL (UNLESS OTHERWISE NOTED):

Type of Waste Approximate Composition	Amt in Volume Wt or Rate	Rate per Day	Name/Location of Disposal Facility	Treatment and/or Storage, Transport & Disposal Method
Spent Oil-based Drilling Fluids & Cuttings	NA	200/bbl/day	MI Drilling Fluids, Baroid Mud; Fourchon, LA	Put in appropriate containers, transported to dock for disposal; recycled by mud company
Spent Syn.-based Drlg Fluids & Cuttings	850	6% of discharged cuttings	MI Drilling Fluids, Baroid Mud; Fourchon, LA	Put in appropriate containers, transported to dock for disposal; recycled by mud company
Oil-contaminated Produced Sand	NA	0.6 bbl/day	NA	NA
Waste Oil	300 bbl/yr average 18 bbl/year average	Drilling Rig - 0.8 bbl/day average Platform-0.5 bbl/day	ASCO, Fourchon, LA Chemical Waste Mgt - Sulphur, LA	Transported by boat in drums to dock - Fuel blending "...", Fuel Blending
Produced Water	NA	NA	NA	NA
NORM-contaminated Wastes	NA	NA	NA	NA
Trash and Debris	3000 ft^3/yr average Dependent on number	Drilling Rig - 8 ft^3/yr average Platform - 0.01 m^3/day/man	Solid Waste Disposal, Inc.-Houma, La Galliano Waste - Galliano, LA	Transported in storage bins to dock by boat, transported from dumpster to landfill.
Chemical Product Wastes	Dependent upon operations	Platform-<0.1 gal/day/man	Chemical Waste Mgt - Sulphur, LA	Acids/chems neutralized; haz. wastes sent to incineration at Onyx - Port Arthur, Tx
Workover Fluids	NA	2 bbl/day	NA	NA

No oil will be added to the drilling mud or discharged at any time. In the event it becomes necessary to add oil to the drilling mud or "spot" an oil base lubricate around a stuck drill string, all mud and cuttings will be transported to shore for proper disposal. Drilling rigs and production platforms are constructed with drip pans and or/drains under the floor and machinery to contain oil spills during operations. All used oil from machinery is collected and stored and later transferred to shore base. All metal, steel, cables, etc. are stored on the rig until sufficient quantity accumulates. This material is then transported to our shore base for recycling. Paper, bags, plastics, etc. are compacted in a container by an onboard compactor then transported to shore for disposal.

APPENDIX F

Oil Spill Information

Site-Specific OSRP
Regional OSRP
OSRP Information
Worst-case Scenario Comparison
Facility Tanks and Production Vessels
Diesel Oil Supply Vessels
Support Vessels Fuel Tanks
Produced Liquid Hydrocarbon Transportation Vessels
Oil- and Synthetic-based Drilling Fluids
Blowout Scenario
Oils Characteristics
Spill Response Sites
Spill Response Discussion for NEPA Analysis
Pollution Prevention Measures
FGBNMS Monitoring Plans

SITE-SPECIFIC OSRP

Not applicable. This Plan is not for the Eastern Planning Area and Florida or Alabama is not an affected state.

REGIONAL OSRP

All proposed activities of Murphy Exploration & Production Company are covered by its Regional Oil Spill Response Plan which was approved January 29, 2003. Murphy Exploration & Production is the only entity covered by this OSRP.

OSRP INFORMATION

Murphy Exploration & Production Company's oil spill removal organizations are as follows:

Equipment and personnel:

Marine Response Corporation of Lake Charles, LA for CGA equipment and Airborne Support, Incorporated of Bourg, LA.

Source control services:

Well Control Specialists: Boots & Coots, Cudd Pressure Control, International Well Control and Wild Well Control, all of Houston, Texas.

Diving Companies: Cal Dive of Morgan City, LA and Stolt Comex Seaway, Incorporated of New Iberia, LA.

Primary spill response equipment is located at Ingleside and Galveston, TX; Lake Charles, Fort Jackson and Houma, LA and Pascagoula, MS. Murphy Exploration will use equipment located in Houma, LA with a Fourchon area of Lake Charles, LA.

APPENDIX F CONTINUED

WORST-CASE SCENARIO COMPARISON

The following worst case scenario volume comparison is greater than 1000 barrels.

CATEGORY	REGIONAL OSRP	EP OR DOCD
Type of Activity	Exploration	EP
Facility Location (Area/Block)	MC 582	MC 537
Facility Designation	Well #1	Well #A
Distance to Nearest Shoreline (miles)	33	33
Volume Storage Tanks (total) Flowlines (on facility) Lease Term Pipelines Uncontrolled Blowout (volume per day) Total Volume	 30,000/day 30,000/day	 10,000/day 10,000/day
Type of Oil(s)-(crude oil, condensate, diesel)	Crude	Crude
API° Gravity(s)	22.0°	22.0°

Since Murphy Exploration & Production Company has the ability to respond to the worst-case spill scenario included in its regional OSRP approved on January 29, 2003 and since the worst-case scenario determined for our Exploration Plan does not replace the worst-case scenario in our regional OSRP, I hereby certify that Murphy Exploration & Production Company 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 Exploration Plan.

FACILITY TANKS AND PRODUCTION VESSELS

Type of Storage Tank	Type of Facility	Tank Capacity (bbls)	Number of Tanks	Total Capacity (bbls)	Fluid Gravity (API)
Fuel Oil	Semi-Submersible	5000	2	10,000	#2 Diesel
Crude Storage	Semi-Submersible	500	1	500	Crude
Crane	Semi-Submersible	250	2	500	#2 Diesel

DIESEL OIL SUPPLY VESSELS (transfers of diesel oil used for purposes other than fuel (e.g.) base for corrosion control fluids)

Size of Fuel Supply Vessel	Capacity of Fuel Supply Vessel	Frequency of Fuel Transfers	Route Fuel Supply Vessel Will Take
NA	NA	NA	NA

SUPPORT VESSELS FUEL TANKS (maximum per class in the field at any given time)

Type of Vessel	Number in Field Simultaneously	Estimated Maximum Fuel Tank Storage Capacity
Supply Boat – 225'	1	2400 bbl each
Crew Boat - 162'	1	400 bbl each
Tugs *	2	3000 bbl each
* Includes anchor-handling vessels, construction barges, lay barges, etc.		

PRODUCED LIQUID HYDROCARBON TRANSPORTATION VESSELS

Not applicable. Liquid hydrocarbons will not be transported by means other than pipeline.

SYNTHETIC- AND OIL-BASED DRILLING FLUIDS

Type of Drilling Fluid	Estimated volume of Mud per Well	Mud Disposal Method	Est. Volume of Cuttings Generated per Well	Cuttings Disposal Method
Synthetic-based	2550	Recycle	1450	Discharge
Oil-Based	NA	Recycle	NA	Onshore Disposal

BLOWOUT SCENARIO

The maximum estimated blowout rate of a well in the vicinity is 10,000 BOPD, therefore the worst case discharge is approximately 300,000 barrels which is determined as the daily volume from an uncontrolled blowout for a period of 30 days. Surface intervention would in all likelihood not be able to be accomplished. The probability of the well bridging over within 30 days is high due to the unconsolidated nature of the sediments. In the event the well did not bridge over, a relief well would be drilled. Rig mobilization and drilling of the relief well could take between 20 and 30 days, depending on variables such as rig positioning and depth of blowout.

OILS CHARACTERISTICS

SPILL RESPONSE SITES

Primary Response Equipment Location	Preplanned Staging Location
Houma, LA	Fourchon, LA

PUBLIC INFORMATION

SPILL RESPONSE DISCUSSION FOR NEPA ANALYSIS

Description of Response Equipment; Description of Personnel, Materials and Support Vessels; Description of Oil Storage, Transfer and Disposal Equipment *
*See Section 14, 15, 16 and Appendix E and F of Murphy Exploration & Production's OSRP approved December 3, 2001.

Vessels are to be provided by Murphy. Workboats under contract will be used. In the event of a spill, the fast response unit that is in Lake Charles, LA will be assembled and loaded onto a workboat in Lake Charles, LA. Vessel procurement and assembly of unit will take approximately 2 hours. It will take approximately 3 hours to round up a crew from various areas. All operations will be conducted simultaneously. Vessel travel time from Fourchon, LA to Mississippi Canyon 537 is approximately 12.5 hours*.

Initial Response - Fast Response Unit from Fourchon , LA to MC 537:

Procurement	2.0 hrs.
Waiting on crew	1.0 hrs.
Loading time	1.5 hrs.
Travel to MC 537	7.0 hrs.
Deployment time	1.0 hrs.
Total Response Time	12.5 hrs.

* (Open water 65 miles @ 10 mph, inland travel 3 miles @ 6 mph

As per 30 CFR 254.254.26 (d) (2) (vi) (e) (2), discussion of range of environmental conditions anticipated and the capabilities of response equipment to worst case discharge scenario during adverse weather conditions, please see table below:

Operational Limitations of Response Equipment	
MSRC OSRV	8 foot seas
Hoss Barge	7 foot seas
FRU	4 foot seas
Expandi Boom	6 foot seas, 20 knot winds
Dispersants	Winds more than 25 knots, visibility less than 3 nautical miles, or ceiling less than 1000 feet

POLLUTION PREVENTION MEASURES

The rig to be used will comply with all of the regulations of the American Bureau of Shipping, International Maritime Organization and the United States Coast Guard. All drilling operations will be conducted under the provisions of 30 CFR, part 250 and other applicable regulations and notices, including those regarding the avoidance of potential drilling hazards and safety and pollution prevention control. Safety features will include well control and blowout prevention equipment as described in Title 30 CFR 250. All production facilities are constructed and installed to meet M.M.S. and Coast Guard standards for protection of the environment. Murphy chooses contractors who have good environmental compliance records and Murphy Exploration & Production Company's Safety and Training Department monitors and trains personnel in the conduct of safe operations and compliance with all pollution prevention standards.

FGBNMS MONITORING PLANS

Not applicable. Activities proposed in this Plan will not affect the Flower Mississippi Canyon National Marine Sanctuary.

APPENDIX G

Air Emissions Information

If you answer ***no*** to all of the screening questions from the appropriate table, provide:

(1) Summary information regarding the peak year emissions that will be generated by and associated with your Plan Emissions and Complex Total Emissions. This information is compiled on the summary form of the two sets of worksheets, and you can submit either these summary forms or the format below. You do not need to include the entire set of worksheets.

(2) Following your submittal of the summary information, the GOMR may need you to submit the entire set of worksheets regardless of your response to the above screening questions. The GOMR will make this determination on a case-by-case basis.

If you answer ***yes*** to any of the screening questions from the appropriate table, provide:

(1) Worksheets. Two sets of worksheets; one showing the emission calculations for your Plan Emissions and one showing the emission calculations for the Complex Total Emissions.

Screening Questions for EP's	Yes	No
Is any calculated Complex Total (CT) Emission amount (tons) associated with your proposed exploration activities more than 90% of the amounts calculated using the following formulas: CT = $3400D^{2/3}$ for CO, and CT = 33.3D for the other air pollutants (where D = distance to shore in miles)?		x
Do your emission calculations include any emission reduction measures or modified emission factors?		x
Are your proposed exploration activities located east of 87.5° W longitude?		x
Do you expect to encounter H_2S at concentrations greater than 20 parts per million (ppm)?		x
Do you propose to flare or vent natural gas for more than 48 continuous hours from any proposed well?		x
Do you propose to burn produced hydrocarbon liquids?		x
Screening Questions for DOCD's	**Yes**	**No**
Is any calculated Complex Total (CT) Emission amount (tons) associated with your proposed development and production activities more than 90% of the amounts calculated using the following formulas: CT = $3400D^{2/3}$ for CO, and CT = 33.3D for the other air pollutants (where D = distance to shore in miles)?		
Do your emission calculations include any emission reduction measures or modified emission factors?		
Does or will the facility complex associated with your proposed development and production activities process production from eight or more wells?		
Do you expect to encounter H_2S at concentrations greater than 20 parts per million (ppm)?		
Do you propose to flare or vent natural gas in excess of the criteria set forth under 250.1105(a)(2) and (3)?		
Do you propose to burn produced hydrocarbon liquids?		
Are your proposed development and production activities located within 25 miles from shore?		
Are your proposed development and production activities located within 200 kilometers of the Breton Wilderness Area?		

Air Pollutant	Plan Emission Amounts[1] (tons)	Calculated Exemption Amounts[2] (tons)	Calculated Complex Total Emission Amounts[3] (tons)
Carbon monoxide (CO)	SEE ATTACHED		Na
Particulate matter (PM)			Na
Sulphur dioxide (SO_2)			Na
Nitrogen oxides (NO_x)			Na
Volatile organic compounds (VOC)			Na

[1] For activities proposed in your EP or DOCD, list the projected emissions calculated from the worksheets.

[2] List the exemption amounts for your proposed activities calculated by using the formulas in 30 CFR 250.303(d).

[3] List the complex total emissions associated with your proposed activities calculated from the worksheets

Calculations of the projected Plan Emission, Complex Total Emission and Exemption Amounts were performed by Debra K. Benoit, (504) 561-2409, Debbie_benoit@murphyoilcorp.com

EXPLORATION PLAN (EP)
AIR QUALITY SCREENING CHECKLIST

OMB Control No. XXX-XXX
Expiration Date: Pending

COMPANY	Murphy Exploration & Production Company
AREA	MC
BLOCK	537
LEASE	24089
PLATFORM	
WELL	A-D
COMPANY CONTACT	Debra K. Benoit
TELEPHONE NO.	(504) 561-2409
REMARKS	NA

"Yes"	"No"	Air Quality Screening Questions
	X	1. Are the proposed activities east of 87.5° W latitude?
	X	2. Are H_2S 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.

EMISSIONS CALCULATIONS 1ST YEAR

OMB Control No. xxxx-xxxx
Expiration Date: Pending

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL		CONTACT	PHONE	REMARKS
Murphy Exploration & Pr	MC	537	24089	0	A-D		Debra K. Benoit	(504) 561-2409	

OPERATIONS	EQUIPMENT	RATING	MAX. FUEL	ACT. FUEL	RUN TIME		MAXIMUM POUNDS PER HOUR					ESTIMATED TONS				
	Diesel Engines	HP	GAL/HR	GAL/D												
	Nat. Gas Engines	HP	SCF/HR	SCF/D												
	Burners	MMBTU/HR	SCF/HR	SCF/D	HR/D	DAYS	PM	SOx	NOx	VOC	CO	PM	SOx	NOx	VOC	CO
DRILLING	PRIME MOVER>600hp diesel	39555	1910.5065	45852.16	24	62	27.88	127.90	958.38	28.75	209.10	20.74	95.16	713.04	21.39	155.57
	PRIME MOVER>600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	PRIME MOVER>600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	PRIME MOVER>600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	BURNER diesel	0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	AUXILIARY EQUIP<600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(crew)	1800	86.94	2086.56	12	62	1.27	5.82	43.61	1.31	9.52	0.47	2.17	16.22	0.49	3.54
	VESSELS>600hp diesel(supply)	2100	101.43	2434.32	12	18	1.48	6.79	50.88	1.53	11.10	0.16	0.72	5.41	0.16	1.18
	VESSELS>600hp diesel(helicop.)	1800	86.94	2086.56	3	62	1.27	5.82	43.61	1.31	9.52	0.12	0.54	4.06	0.12	0.88
	VESSELS>600hp diesel(tugs-2)	8400	405.72	9737.28	24	2	5.92	27.16	203.52	6.11	44.41	0.14	0.65	4.88	0.15	1.07
FACILITY INSTALLATION	DERRICK BARGE diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	MATERIAL TUG diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(crew)	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(supply)	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	MISC.	BPD	SCF/HR	COUNT												
	TANK-	0			0	0				0.00					0.00	
DRILLING WELL TEST	OIL BURN	0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	GAS FLARE		0		0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
2005	YEAR TOTAL						37.82	173.49	1300.01	39.00	283.64	21.63	99.24	743.61	22.31	162.24
EXEMPTION CALCULATION	DISTANCE FROM LAND IN MILES 33.0											1098.90	1098.90	1098.90	1098.90	34980.14

EMISSIONS CALCULATIONS 2ND YEAR

OMB Control No. xxxx-xxxx
Expiration Date: Pending

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL		CONTACT	PHONE	REMARKS
Murphy Exploration & Pr	MC	537	24089	0	A-D		Debra K. Benoit	(504) 561-2409	

OPERATIONS	EQUIPMENT	RATING	MAX. FUEL	ACT. FUEL	RUN TIME		MAXIMUM POUNDS PER HOUR					ESTIMATED TONS				
	Diesel Engines	HP	GAL/HR	GAL/D												
	Nat. Gas Engines	HP	SCF/HR	SCF/D												
	Burners	MMBTU/HR	SCF/HR	SCF/D	HR/D	DAYS	PM	SOx	NOx	VOC	CO	PM	SOx	NOx	VOC	CO
DRILLING	PRIME MOVER>600hp diesel	39555	1910.5065	45852.16	24	62	27.88	127.90	958.38	28.75	209.10	20.74	95.16	713.04	21.39	155.57
	PRIME MOVER>600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	PRIME MOVER>600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	PRIME MOVER>600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	BURNER diesel	0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	AUXILIARY EQUIP<600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(crew)	1800	86.94	2086.56	12	62	1.27	5.82	43.61	1.31	9.52	0.47	2.17	16.22	0.49	3.54
	VESSELS>600hp diesel(supply)	2100	101.43	2434.32	12	18	1.48	6.79	50.88	1.53	11.10	0.16	0.72	5.41	0.16	1.18
	VESSELS>600hp diesel(helicop.)	1800	86.94	2086.56	3	62	1.27	5.82	43.61	1.31	9.52	0.12	0.54	4.06	0.12	0.88
	VESSELS>600hp diesel(tugs-2)	8400	405.72	9737.28	24	2	5.92	27.16	203.52	6.11	44.41	0.14	0.65	4.88	0.15	1.07
FACILITY INSTALLATION	DERRICK BARGE diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	MATERIAL TUG diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(crew)	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(supply)	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	MISC.	BPD	SCF/HR	COUNT												
	TANK-	0			0	0				0.00					0.00	
DRILLING WELL TEST	OIL BURN	0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	GAS FLARE		0		0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
2006	YEAR TOTAL						37.82	173.49	1300.01	39.00	283.64	21.63	99.24	743.61	22.31	162.24
EXEMPTION CALCULATION	DISTANCE FROM LAND IN MILES											1098.90	1098.90	1098.90	1098.90	34980.14
	33.0															

OMB Control No. xxxx-xxxx
Expiration Date: Pending

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL
Murphy Explora	MC	537	24089	0	A-D

Year	Emitted Substance				
	PM	SOx	NOx	VOC	CO
2005	21.63	99.24	743.61	22.31	162.24
2006	21.63	99.24	743.61	22.31	162.24
2007	0.00	0.00	0.00	0.00	0.00
2008	0.00	0.00	0.00	0.00	0.00
2009	0.00	0.00	0.00	0.00	0.00
2010	0.00	0.00	0.00	0.00	0.00
2011	0.00	0.00	0.00	0.00	0.00
2012	0.00	0.00	0.00	0.00	0.00
2013	0.00	0.00	0.00	0.00	0.00
2014	0.00	0.00	0.00	0.00	0.00
Allowable	1098.90	1098.90	1098.90	1098.90	34980.14

APPENDIX H

Environmental Impact Analysis

COASTAL ZONE MANAGEMENT CONSISTENCY CERTIFICATE

EXPLORATION PLAN

GULF OF MEXICO

FOR

MISSISSIPPI CANYON AREA BLOCK 537

OCS-G-24089

SUBMITTED TO:

MS. DEBRA BENOIT

MURPHY EXPLORATION & PRODUCTION COMPANY

131 S. ROBERTSON STREET

NEW ORLEANS, LOUISIANA 70112

(504/561-2409)

APRIL 11, 2005

PREPARED BY:

TIM MORTON & ASSOCIATES, INC.

REGULATORY & ENVIRONMENTAL CONSULTANTS

PROJECT NO. 05-116

COASTAL ZONE MANAGEMENT

CONSISTENCY CERTIFICATION

EXPLORATION

.....

Type of Plan

MISSISSIPPI CANYON AREA BLOCK 537

.....

Area and Block

OCS-G-24089

.....

Lease Number

The proposed activities described in detail in the attached Plan comply with Louisiana's approved Coastal Management Program and all relevant enforceable policies and will be conducted in a manner consistent with such Program.

MURPHY EXPLORATION & PRODUCTION COMPANY

.....

Lessee or Operator

.....

Certifying Official

.....

Date

Environmental Impact Analysis

Mississippi Canyon Area
Block 537
OCS-G-24089

April 11, 2005

Prepared for Murphy Exploration & Production Company
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Filename: C:\2005\Murphy\MissCanyon\116-Block537\EIA-EPMC537.wpd

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I. Description of the Proposed Activity

This environmental impact analysis addresses the activity proposed by Murphy Exploration & Production Company (Murphy) for Mississippi Canyon Area Block 537 (OCS-G-24089). The approximate location of the activity is presented on a general vicinity map of the Outer Continental Shelf (OCS) lease areas off the coast of Louisiana (Figure 1).

Murphy proposes to utilize a semi-submersible rig to drill four wells in Mississippi Canyon Area Block 537. More specific information can be found in the attached Exploration Plan (EP).

The proposed activities will be carried out by Murphy with a guarantee of the following:

- The best available and safest technologies will be utilized throughout the projects. This includes meeting all applicable requirements for equipment types, general project layout, safety systems, equipment and monitoring systems.

- All operations will be covered by a Minerals Management Service (MMS) approved Oil Spill Response Plan.

- All applicable Federal, State, and local requirements regarding air emissions, water quality, and discharge for the proposed activities, as well as any other permit conditions, will be complied with.

II. Impact-Producing Factors

Environmental Resources	Impact Producing Factors (IPF's) Categories and Examples Refer to a recent GOM OCS Lease Sale EIS for a more complete list of IPF's					
	Emissions (air, noise, light, etc.)	Effluents (muds, cuttings, other discharges to the water column or seafloor)	Physical disturbances to the seafloor (rig or anchor emplacements, etc.)	Wastes sent to shore for treatment or disposal	Accidents (e.g., oil spills, chemical spills, H2S releases)	Other IPF's you identify
Site-specific at Offshore Location						
Designated topographic features						
Pinnacle Trend area live-bottoms						
Eastern Gulf live bottoms						
Chemosynthetic communities			X			
Water quality		X			X	
Fisheries					X	
Marine mammals	X				X	
Sea turtles	X				X	
Air quality	X					
Shipwreck sites (known or potential)						
Prehistoric archaeological sites						
Vicinity of Offshore Location						
Essential fish habitat					X	
Marine and pelagic birds					X	
Public health and safety						
Coastal and Onshore						
Beaches					X	
Wetlands					X	
Shore birds and coastal nesting birds	X				X	
Coastal wildlife refuges					X	
Wilderness areas					X	
Other Resources You Identify						

III. Analysis of Impact-Producing Factors

A. Site-specific at Offshore Location

1. Designated Topographic Features

After a review of impact-producing factors (including effluents, physical disturbances to the seafloor, and accidents) resulting from activities proposed in the EP, there will be no adverse impacts to topographic features. Mississippi Canyon Area Block 537 is located approximately 13 miles south of Sackett Bank, the nearest known topographic feature.

The following discussion of topographic features is summarized from the Final Environmental Impact Statement (USDOI, OCS EIS/EA MMS 2002-052). The Topographic Lease Stipulation has been used on leases since 1973, and this experience shows conclusively that the stipulation effectively prevents damage to the biota of these banks from routine oil and gas activities. In the unlikely event of an accidental surface or subsurface oil spill, concentrated oil is not expected to impact sessile biota on topographic features. Crests of designated topographic features in the northern Gulf of Mexico are found below 10 meters; therefore, concentrated oil from a surface spill is not likely to reach sessile biota. Subsurface spills could result in the formation and settling of oil-saturated material, and oil-sediment particles could come into contact with living coral tissue; however, a subsurface spill should rise to the surface, and any oil remaining at depth would probably be swept clear of the banks by currents moving around the banks (Rezak et al., 1983). Activities proposed in the EP will be covered by Murphy's Oil Spill Response Plan (OSRP).

2. Pinnacle Trend Area Live Bottoms

After a review of impact-producing factors (including effluents, physical disturbances to the seafloor, and accidents) resulting from activities proposed in the EP, there will be no adverse impacts to pinnacle trend live bottoms. Mississippi Canyon Area Block 537 is located approximately 82 miles southwest of Main Pass Area Block 290, the nearest block protected by the pinnacle trend live bottom stipulation.

The following discussion of pinnacle trend area live bottoms is summarized from the Final Environmental Impact Statement (USDOI, OCS EIS/EA MMS 2002-052). By identifying the individual pinnacles present at the activity site, the lessee would be directed to avoid placement of the drilling rig and anchors on the sensitive areas. Thus, mechanical damage to the pinnacles is eliminated when measures required by the stipulation are imposed. The stipulation does not address the discharge of effluents near the pinnacles because the pinnacle trend is subjected to heavy natural sedimentation and is at considerable depths. The rapid dilution of drill cuttings and muds will minimize the potential of significant concentration of effluents on the pinnacles.

In the unlikely event of an accidental surface or subsurface oil spill, concentrated oil is not expected to impact biota of the pinnacle trend. Any surface oil spill resulting from a proposed action would likely have no impact on the biota of the pinnacle trend because the crests of these features are much deeper than 20 meters. All evidence to date indicates that accidental oil discharges that occur at the seafloor from a pipeline or blowout would rise in the water column, surfacing almost directly over the source location, and thus not impact pinnacles. Activities proposed in the EP will be covered by Murphy's Oil Spill Response Plan (OSRP).

3. Eastern Gulf Live Bottoms

After a review of impact-producing factors (including effluents, physical disturbances to the seafloor, and accidents) resulting from activities proposed in the EP, there will be no adverse impacts to eastern gulf live bottoms. Mississippi Canyon Area Block 537 is located approximately 105 miles west of the nearest block protected by the eastern gulf live bottom stipulation.

The following discussion of eastern gulf live bottoms is summarized from the Final Environmental Impact Statement (USDOI, OCS EIS/EA MMS 2000-077). Through detection and avoidance, the eastern gulf live bottom lease stipulation minimizes the likelihood of mechanical damage from OCS activities associated with rig and anchor emplacement to the sessile and pelagic communities associated with the crest and flanks of such features. Since this area is subject to heavy natural sedimentation, this stipulation does not include and specific measures to protect the pinnacles from the discharge of effluents.

In the unlikely event of an accidental surface or subsurface oil spill, concentrated oil is not expected to impact eastern gulf live bottoms because of the depth of the features and dilution of spills by currents and/or quickly rising oil. Activities proposed in the EP will be covered by Murphy's Oil Spill Response Plan (OSRP).

4. Chemosynthetic Communities

After a review of impact-producing factors (including effluents, physical disturbances to the seafloor, and accidents) resulting from activities proposed in the EP, there are potential impacts to chemosynthetic communities. A Shallow Hazards Assessment was prepared by Fugro Geoservices, Inc., and the following was extracted from that assessment:

No potential hydrocarbon macro-seepage features were identified in the study area. No seafloor or near-seafloor amplitude anomalies are observed, and no anomalous topography, such as significant mounds, depressions, or fault scarps, has been identified within the study area. Therefore, the potential for high-density chemosynthetic communities and authigenic carbonates within the study area is assessed as negligible.

The following discussion of chemosynthetic communities is summarized from the Final Environmental Impact Statement (USDOI, OCS EIS/EA MMS 2002-052). Impacts to chemosynthetic communities from any oil released would be a remote possibility. Release of hydrocarbons associated with a blowout should not present a possibility for impact to chemosynthetic communities located a minimum of 457 meters (1,500 feet) from well sites. Mississippi Canyon Area Block 537 is located approximately 34 miles northeast of Mississippi Canyon Area Block 969, the nearest block with a known chemosynthetic community. Activities proposed in the EP will be covered by Murphy's Oil Spill Response Plan (OSRP).

5. Water Quality

After a review of impact-producing factors (including effluents and accidents) resulting from activities proposed in the EP, there are potential impacts to water quality. The discharges generated as a result of drilling activities associated with this EP will be discharged upon successful bioassay test as per National Pollutant Discharge Elimination System (NPDES) permit guidelines. Solids wastes; typically paper, plastic, cloth, and

metal, will be collected and transported to shore for disposal at an approved disposal facility. Solid wastes generated from the transportation vessels, normally just garbage, will be collected and returned to shore for disposal with the drilling rig refuse. Scrap metal and other metal wastes will be recycled or sold as scrap and will not be shipped to a disposal facility with the other refuse. Sanitary wastes will be treated in approved marine sanitation devices as required by the Clean Water Act. All biodegradable wastes, such as kitchen food scraps, will be comminuted or ground and discharged in accordance with NPDES permit guidelines and Annex V of MARPOL 73/78. Hazardous wastes from the drilling rig, such as paint, or paint thinner, will be collected in sealed metal containers and transported to an approved disposal site in accordance with RCRA guidelines. All applicable Federal, State, and local requirements regarding water quality and discharge for the proposed activities, as well as any other permit conditions, will be complied with.

The following discussion of potential impacts to water quality is summarized from the Final Environmental Impact Statement (USDOI, OCS EIS/EA MMS 2002-052). In the unlikely event of an accidental surface or subsurface oil spill, a variety of physical, chemical, and biological processes act to disperse the oil slick, such as spreading, evaporation of the more volatile constituents, dissolution into the water column, emulsification of small droplets, agglomeration sinking, microbial modification, photochemical modification, and biological ingestion and excretion. The water quality would be temporarily affected by the dissolved components and small oil droplets that do not rise to the surface or are mixed down by surface turbulence. Dispersion by currents and microbial degradation would remove the oil from the water column or dilute the constituents to background levels. Activities proposed in the EP will be covered by Murphy's Oil Spill Response Plan (OSRP).

6. Fisheries

After a review of impact-producing factors (including accidental oil spills) resulting from activities proposed in the EP, there are potential impacts to fisheries. In the unlikely event of an accidental surface or subsurface oil spill, there is the potential for some detrimental effects to fisheries.

The following discussion of potential impacts to fisheries is summarized from the Final Environmental Impact Statement (USDOI, OCS EIS/EA MMS 2002-052). The Gulf sturgeon (Ancipenser oxyrincus desotoi) is the only listed threatened fish species in the Gulf of Mexico. The Gulf sturgeon could be impacted by oil spills. Contact with spilled oil could cause irritation of gill epithelium and disturbance of liver function in Gulf sturgeon. The likelihood of spill occurrence and contact to the Gulf sturgeon is very low.

Should a spill occur in the area of mobile adult finfish or shellfish, the effects would likely be sublethal and the extent of the damage would be reduced to the capability of adult fish and shellfish to avoid a spill, to metabolize hydrocarbons, and to excrete both metabolites and parent compounds. Activities proposed in the EP will be covered by Murphy's Oil Spill Response Plan (OSRP).

7. Marine Mammals

After a review of impact-producing factors (including vessel traffic, noise, accidental oil spills, and loss of trash and debris) resulting from activities proposed in the EP, there are

potential impacts to marine mammals. Endangered or threatened marine mammal species which might occur in the Gulf of Mexico are West Indian manatee (Trichechus manatus), northern right whale (Eubalaena glacialis), fin whale (Balaenoptera physalus), humpback whale (Megaptera novaeangliae), sei whale (B. borealis), sperm whale (Physeter macrocephalus), and blue whale (B. musculus)(USDOI, OCS EIS/EA MMS 2002-052). Several non-endangered and non-threatened mammal species of whales and dolphins also occur in the Gulf of Mexico.

The following discussion of potential impacts to marine mammals is summarized from the Final Environmental Impact Statement (USDOI, OCS EIS/EA MMS 2002-052). Small numbers of marine mammals could be killed or injured by chance collision with service vessels and by eating indigestible debris, particularly plastic items, lost from service vessels, drilling rigs, and fixed and floating platforms. Sperm whales are one of the 11 whale species that are hit commonly by ships (Laist et al., 2001). Collisions between OCS vessels and cetaceans within the project area are expected to be unusual events.

Deaths due to structure removals are not expected due to existing mitigation measures or those being developed for structures placed in oceanic waters. There is no conclusive evidence whether anthropogenic noise has or has not caused long-term displacements of, or reductions in, marine mammal populations. Contaminants in waste discharges and drilling muds might indirectly affect marine mammals through food-chain biomagnification, although the scope of effects and their magnitude are not known.

Chronic and sporadic sublethal effects could occur that may stress and/or weaken individuals of a local group or population and make them more susceptible to infection from natural or anthropogenic sources. Few lethal effects are expected from oil spills, chance collisions with service vessels and ingestion of plastic material. Oil spills of any size are estimated to be aperiodic events that may contact cetaceans. Disturbance (e.g. noise) may stress animals, weaken their immune systems, and make them more vulnerable to parasites and diseases that normally would not be fatal.

The net result of any disturbance would depend on the size and percentage of the population affected, ecological importance of the disturbed area, environmental and biological parameters that influence an animal's sensitivity to disturbance and stress, and the accommodation time in response to prolonged disturbance (Geraci and St. Aubin, 1980). Routine oil and gas activities are not expected to have long-term adverse effects on the size and productivity of any marine mammal species or population stock endemic to the northern Gulf of Mexico.

8. Sea Turtles

After a review of impact-producing factors (including vessel traffic, noise, accidental oil spills, and loss of trash and debris) resulting from activities proposed in the EP, there are potential impacts to sea turtles. Endangered or threatened sea turtle species which might occur in the Gulf of Mexico are Kemp's ridley turtle (Lepidochelys kempii), green turtle (Chelonia mydas), hawksbill turtle (Eretmochelys imbricata), leatherback turtle (Dermochelys coriacea), and loggerhead turtle (Caretta caretta) (USDOI, Region IV Endangered Species Notebook).

The following discussion of potential impacts to sea turtles is summarized from the Final Environmental Impact Statement (USDOI, OCS EIS/EA MMS 2002-052). Routine activities resulting from a proposed action have the potential to harm individual sea turtles. These animals could be impacted by the degradation of water quality resulting from operational discharges; noise generated by helicopter and vessel traffic, platforms, and drillships; brightly-lit platforms; explosive removals of offshore structures; vessel collisions; and jetsam and flotsam generated by service vessels and OCS facilities. Lethal effects are most likely to be from chance collisions with OCS service vessels and ingestion of plastic materials. "Takes" due to explosive removals are expected to be rare due to mitigation measures already established (e.g. National Marine Fisheries Service (NMFS) Observer Program) and in development. Most OCS activities are expected to have sublethal effects. Contaminants in waste discharges and drilling muds might indirectly affect sea turtles through food-chain biomagnification; there is uncertainty concerning the possible effects. Chronic sublethal effects (e.g. stress) resulting in persistent physiological or behavioral changes and/or avoidance of impacted areas could cause declines in survival or fecundity, and result in either population declines, however, such declines are not expected. The routine activities of a proposed action are unlikely to have significant adverse effects on the size and recovery of any sea turtle species or population in the Gulf of Mexico.

In the unlikely event of an accidental surface or subsurface oil spill, sea turtles could be adversely impacted. Oil spills and oil-spill-response activities are potential threats that could have lethal effects on turtles. Contact with oil, consumption of oil particles, and oil-contaminated prey could seriously affect individual sea turtles. Oil-spill-response planning and the habitat protection requirements of the Oil Pollution Act of 1990 should mitigate these threats.

9. Air Quality

Estimated air emissions associated with the proposed activities have been calculated and were determined to be below the MMS exemption levels for particulates, sulfur oxides, nitrogen oxides, volatile organic compounds and carbon monoxide. There would be a limited degree of air quality degradation in the immediate vicinity of the proposed activities; however, the emissions associated with the proposed activities are not projected to have significant effects on onshore air quality.

10. Shipwreck Sites (known or potential)

After a review of impact-producing factors (including physical disturbances to the seafloor) resulting from activities proposed in the EP, there will be no adverse impacts to known or potential shipwreck sites. The area of proposed activities falls outside the zone designated as an area with a high probability of historic shipwrecks.

11. Prehistoric Archaeological Sites

After a review of impact-producing factors (including physical disturbances to the seafloor) resulting from activities proposed in the EP, there will be no adverse impacts to prehistoric archaeological sites. The area of proposed activities falls outside the zone designated as an area with a high probability of pre-historic archeological resources.

B. Vicinity of Offshore Location

1. Essential Fish Habitat

After a review of impact-producing factors (including accidental oil spills) resulting from activities proposed in the EP, there are potential impacts to essential fish habitat. In the unlikely event of an accidental surface or subsurface oil spill, there is the potential for some detrimental effects to essential fish habitat.

The following discussion of potential impacts to essential fish habitat is summarized from the Final Environmental Impact Statement (USDOI, OCS EIS/EA MMS 2002-052). Should a spill occur in the area of a mobile adult finfish or shellfish, the effects would likely be sublethal and the extent of the damage would be reduced to the capability of adult fish and shellfish to avoid a spill, to metabolize hydrocarbons, and to excrete both metabolites and parent compounds. Activities proposed in the EP will be covered by Murphy's Oil Spill Response Plan (OSRP).

2. Marine and Pelagic Birds

After a review of impact-producing factors (including vessel traffic, noise, accidental oil spills, and loss of trash and debris) resulting from activities proposed in the EP, there are potential impacts to marine and pelagic birds.

The following discussion of potential impacts to marine and pelagic birds is summarized from the Final Environmental Impact Statement (USDOI, OCS EIS/EA MMS 2002-052). The majority of effects on endangered/threatened and non-endangered/non-threatened marine birds are expected to be sublethal: behavioral effects, sublethal exposure to or intake of OCS-related contaminants or discarded debris, temporary disturbances, and displacement of localized groups from impacted habitats. Chronic sublethal stress, however, is often undetectable in birds. As a result of stress, individuals may weaken, facilitating infection and disease; then migratory species may not have the strength to reach their destination. No significant habitat impacts are expected to occur directly from routine activities resulting from a proposed action.

Oil spills pose the greatest potential direct and indirect impacts to marine birds. Birds that are heavily oiled are usually killed. If physical oiling of individuals or local groups of birds occurs, some degree of both acute and chronic physiological stress associated with direct and secondary uptake of oil would be expected. Lightly oiled birds can sustain tissue and organ damage from oil ingested during feeding and grooming or from oil that is inhaled. Stress and shock enhance the effects of exposure and poisoning. Low levels of oil could stress birds by interfering with food detection, feeding impulses, predator avoidance, territory definition, homing of migratory species, susceptibility to physiological disorders, disease resistance, growth rates, reproduction, and respiration. Reproductive success can be affected by the toxins in oil. Indirect effects occur by fouling of nesting habitat, and displacement of individuals, breeding pairs, or populations to less favorable habitats. Dispersants used in spill cleanup activity can have toxic effects similar to oil on the reproductive success of marine birds. Activities proposed in the EP will be covered by Murphy's Oil Spill Response Plan (OSRP).

3. Public Health and Safety

After a review of impact-producing factors (including an accidental H_2S release) resulting from activities proposed in the EP, there will be no adverse impacts to public health and safety. Murphy requests that Mississippi Canyon Area Block 537 be classified as an area where the absence of H_2S has been confirmed.

C. Coastal and Onshore

1. Beaches

After a review of impact-producing factors (including accidental oil spills) resulting from activities proposed in the EP, there are potential impacts to beaches. Mississippi Canyon Area Block 537 is located approximately 33 miles from the coast of Plaquemines Parish, Louisiana. Due to the distance from shore and the available oil spill response capabilities, no adverse impacts to beaches are anticipated as a result of the proposed activities. Activities proposed in the EP will be covered by Murphy's Oil Spill Response Plan (OSRP).

2. Wetlands

After a review of impact-producing factors (including accidental oil spills) resulting from activities proposed in the EP, there are potential impacts to wetlands. Mississippi Canyon Area Block 537 is located approximately 33 miles from the coast of Plaquemines Parish, Louisiana. Due to the distance from shore and the available oil spill response capabilities, no adverse impacts to wetlands are anticipated as a result of the proposed activities. Activities proposed in the EP will be covered by Murphy's Oil Spill Response Plan (OSRP).

3. Shore Birds and Coastal Nesting Birds

After a review of impact-producing factors (including vessel traffic, noise, accidental oil spills, and loss of trash and debris) resulting from activities proposed in the EP, there are potential impacts to shore birds and coastal nesting birds. Mississippi Canyon Area Block 537 is located approximately 33 miles from the coast of Plaquemines Parish, Louisiana. Due to the distance from shore and the available oil spill response capabilities, no adverse impacts to shore birds and coastal nesting birds are anticipated as a result of the proposed activities.

The following discussion of potential impacts to shore birds and coastal nesting birds is summarized from the Final Environmental Impact Statement (USDOI, OCS EIS/EA MMS 2002-052). The majority of effects on endangered/threatened and non-endangered/non-threatened shore birds and coastal nesting birds are expected to be sublethal: behavioral effects, sublethal exposure to or intake of OCS-related contaminants or discarded debris, temporary disturbances, and displacement of localized groups from impacted habitats. Chronic sublethal stress, however, is often undetectable in birds. As a result of stress, individuals may weaken, facilitating infection and disease; then migratory species may not have the strength to reach their destination. No significant habitat impacts are expected to occur directly from routine activities resulting from a proposed action. Secondary impacts to coastal habitats will occur over the long-term and may ultimately displace species from traditional sites to alternative sites.

Oil spills pose the greatest potential direct and indirect impacts to shore birds and coastal nesting birds. Birds that are heavily oiled are usually killed. If physical oiling of

individuals or local groups of birds occurs, some degree of both acute and chronic physiological stress associated with direct and secondary uptake of oil would be expected. Small coastal spills, pipeline spills, and spills from accidents in navigated waterways can contact and affect the different groups of coastal birds, most commonly marsh birds, waders, waterfowl, and certain shorebirds. Lightly oiled birds can sustain tissue and organ damage from oil ingested during feeding and grooming or from oil that is inhaled. Stress and shock enhance the effects of exposure and poisoning. Low levels of oil could stress birds by interfering with food detection, feeding impulses, predator avoidance, territory definition, homing of migratory species, susceptibility to physiological disorders, disease resistance, growth rates, reproduction, and respiration. Reproductive success can be affected by the toxins in oil. Indirect effects occur by fouling of nesting habitat, and displacement of individuals, breeding pairs, or populations to less favorable habitats. Dispersants used in spill cleanup activity can have toxic effects similar to oil on the reproductive success of marine birds. Activities proposed in the EP will be covered by Murphy's Oil Spill Response Plan (OSRP).

4. Coastal Wildlife Refuges

After a review of impact-producing factors (including accidental oil spills) resulting from activities proposed in the EP, there are potential impacts to coastal wildlife refuges. Mississippi Canyon Area Block 537 is located approximately 44 miles south of Pass a Loutre Wildlife Management Area, the nearest coastal wildlife refuge. Due to the distance from this refuge and the available oil spill response capabilities, no adverse impacts to coastal wildlife refuges are anticipated as a result of the proposed activities. Activities proposed in the EP will be covered by Murphy's Oil Spill Response Plan (OSRP).

5. Wilderness Areas

After a review of impact-producing factors (including accidental oil spills) resulting from activities proposed in the EP, there are potential impacts to wilderness areas. Mississippi Canyon Area Block 537 is located approximately 33 miles from Plaquemines Parish, Louisiana. Due to the distance from shore and the available oil spill response capabilities, no adverse impacts to wilderness areas are anticipated as a result of the proposed activities. Activities proposed in the EP will be covered by Murphy's Oil Spill Response Plan (OSRP).

D. Other Environmental Resources Identified

None

IV. Impacts on Proposed Activities

Surface locations were evaluated for any seafloor and subsurface geological and manmade features and conditions that may adversely affect operations. No impacts are expected on the proposed activities from site-specific environmental conditions.

V. Alternatives

No alternatives to the proposed activities were considered to reduce environmental impacts.

VI. Mitigation Measures

No mitigation measures other than those required by regulation will be employed to avoid, diminish, or eliminate potential impacts on environmental resources.

VII. Consultation

No agencies or persons were consulted regarding potential impacts associated with the proposes activities. Therefore, a list of such entities has not been provided.

VIII. References

Fugro Geoservices, Inc.

2004 Shallow Hazards Assessment, Medusa West Prospect, Block 537, OCS-G-24089, Mississippi Canyon Area, Gulf of Mexico, Report No. 2404-2067.

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APPENDIX I

Coastal Zone Management Consistency

COASTAL ZONE MANAGEMENT
CONSISTENCY CERTIFICATION

EXPLORATION

TYPE OF PLAN

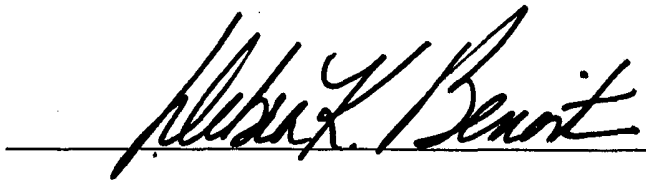
MISSISSIPPI CANYON BLOCK 537

AREA AND BLOCK

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

MURPHY EXPLORATION & PRODUCTION COMPANY

LESSEE OR OPERATOR



DEBRA K. BENOIT
CERTIFYING OFFICIAL

April 15, 2005