

UNITED STATES GOVERNMENT  
MEMORANDUM

October 25, 2002

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

Subject: Public Information copy of plan  
Control # - N-07606  
Type - Initial Exploration Plan  
Lease(s) - OCS-G22547 Block - 395 West Cameron Area  
OCS-G23767 Block - 396 West Cameron Area  
Operator - Remington Oil and Gas Corporation  
Description - Wells A, B and C  
Rig Type - JACKUP

Attached is a copy of the subject plan.

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

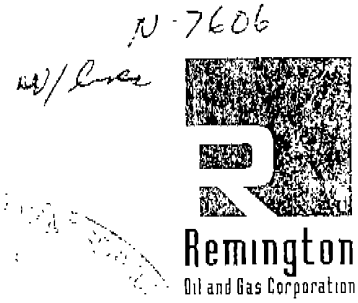
  
Robert Stringfellow  
Plan Coordinator

Site Type/Name	Botm Lse/Area/Blk	Surface Location	Surf Lse/Area/Blk
WELL/A	G23767/WC/396	6013 FNL, 1037 FEL	G23767/WC/396
WELL/B	G23767/WC/396	2100 FSL, 1000 FEL	G23767/WC/396
WELL/C	G22547/WC/395	2100 FSL, 1000 FWL	G22547/WC/395

*noted/oc*

October 21, 2002

Minerals Management Service  
Regional Supervisor, Office of Field Operations  
1201 Elmwood Park Boulevard  
New Orleans, Louisiana 70123-2394  
Attention: Nick Wetzel



RE: Initial Exploration Plan  
Leases OCS-G 22547 & OCS-G 23767, West Cameron Blocks 395 & 396  
OCS Federal Waters, Gulf of Mexico, Offshore, LA

Gentlemen:

In accordance with the provisions of Title 30 CFR 250.203, Remington Oil & Gas Corporation (Remington Oil & Gas) hereby submits for your review and approval nine (9) copies of an Initial Exploration Plan for Leases OCS-G 22547 & OCS-G 23767, West Cameron Blocks 395 & 396, Offshore, Louisiana. Five (5) copies are "Proprietary Information" and four (4) copies are "Public Information".

Excluded from the Public Information copies are certain geologic discussions, depth of wells and structure maps.

Remington Oil & Gas anticipates activity commencement under this proposed Initial Exploration Plan on or about November 20, 2002. Remington currently has under contract MODU, Rowan Texas. The Rowan Texas is scheduled to begin drilling operations at West Cameron Block 416, OCS-G 23770, Well No. 001 on or about October 23, 2002. Should that well prove to be non-commercial, Remington would like to proceed with operations proposed under this plan for West Cameron Blocks 395 & 396. Operations could be concluded at West Cameron 416 as early as November 19, 2002. Any and all efforts made by the MMS to expedite the approval of the subject plan will be appreciated.

Should additional information be required, please contact Remington's Oil & Gas regulatory agent, J. V. Delcambre with Regulatory Services, Inc. at (337) 593-9420.

With kindest regards,

REMINGTON OIL & GAS CORPORATION

*Doug Logan /RAS*

Doug Logan  
Land Manager

# INITIAL EXPLORATION PLAN

WEST CAMERON BLOCKS 395 & 396

LEASES OCS-G 22547 & OCS-G 23767

OFFSHORE, LOUISIANA

REMINGTON OIL & GAS CORPORATION  
8201 PRESTON ROAD, SUITE 600  
DALLAS, TEXAS 75225

Prepared by:

Regulatory Services, Inc.  
304 La Rue France, Suite 204  
Lafayette, LA 70508  
337.593.9420  
337.593.9422 FAX

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PUBLIC INFORMATION COPY



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Remington Oil & Gas Corporation  
Initial Exploration Plan  
WEST CAMERON BLOCKS 395 & 396  
LEASE OCS-G 22547 & OCS-G 23767

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SECTION 1

CONTENTS OF PLAN

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Included in this Section is Attachment "A", "A-1",

Attachment "B" and "B-1"

## 1.1 DESCRIPTION, OBJECTIVE AND SCHEDULE

As described in this Initial Exploration Plan, Remington Oil & Gas proposes the drilling of three (3) exploratory wells. Planned commencement date is approximately November 20, 2002 subject to the approval of this Initial Exploration Plan and issuance of the required Permits to Drill. Remington currently has under contract MODU, Rowan Texas. The Rowan Texas is scheduled to begin drilling operations at West Cameron Block 416, OCS-G 23770, Well No. 001 on or about October 23, 2002. Should that well prove to be non-commercial, Remington would like to proceed with operations proposed under this plan for West Cameron Blocks 395 & 396. Operations could be concluded at West Cameron 416 as early as November 19, 2002. Any and all efforts made by the MMS to expedite the approval of the subject plan will be appreciated.

It should be emphasized that this schedule is tentative in the meaning of Title 30 CFR 250.203-1. Additional exploratory drilling must be predicated upon the need to further develop the structures and/or reservoir limitations.

In addition to the drilling of the subject well, other activities, which may be conducted under this Plan, are the setting of well protector type structures, sea floor templates, velocity surveys in wellbores, and the collection of soil borings.

## 1.2 WELL LOCATION(S) - (Well Location & Vicinity Plats are included as Attachment "A")

The approximate location of each proposed exploratory well, including proposed surface location (PSL), bottom hole location (BHL), true vertical depth (TVD), and water depth for each proposed well is described below. See Attachment "A" for details on well location and vicinity plats.

WELL	PROPOSED LOCATIONS	TOTAL DEPTH	WATER DEPTH	TOTAL DAYS DRILL/COMP
WC 396				
"A"	PSL: 6013' FNL & 1037' FEL of Blk WC 396 Lat: 28° 49' 13.22551" Long: 93° 36' 19.39410"		77'	15/8

WELL	PROPOSED LOCATIONS	TOTAL DEPTH	WATER DEPTH	TOTAL DAYS DRILL/COMP
WC 396 "B"	PSL: 2100' FSL & 1000' FEL of Blk WC 396 Lat: 28° 48' 07.46453" Long: 93° 36' 17.49776"		83'	15/8
WC 395 "C"	PSL: 2100' FSL & 1000' FWL of Blk WC 395 Lat: 28° 48' 07.85642" Long: 93° 35' 55.02602"		82'	15/8

### 1.3 DESCRIPTION OF DRILLING UNIT

A typical jack-up drilling rig has been identified as the type of movable offshore drilling unit (MODU) to be used for the proposed wells. Typical Diverter and BOP Schematics are included as Attachment "B" and "B-1". The rig utilized by Remington Oil & Gas will be operated and maintained in accordance with Title 30 CFR Part 250.300, "Pollution Prevention".

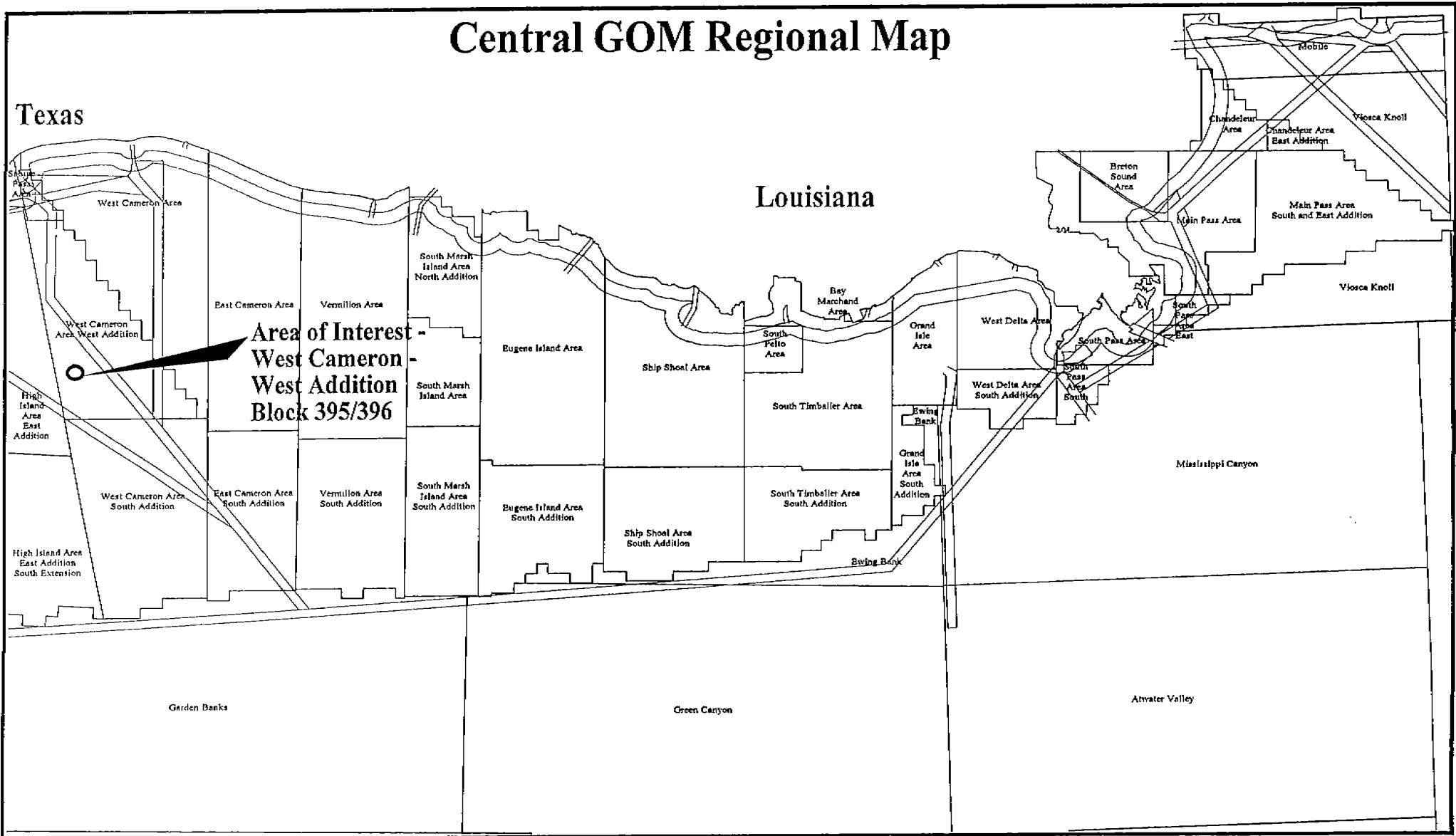
Selection of a MODU will be contingent upon compliance with Title 30 CFR 250.400. Specific safety and pollution-prevention features shall include, but will not be limited to, well control and blow-out prevention equipment. Rig specifications will be included as part of the Applications for Permit to Drill. In addition, adequate life rafts and personal flotation devices as required by the U.S. Coast Guard will be available at all times.

The drilling rig and each of the marine vessels servicing the rig and its operations will be equipped with all U. S. Coast Guard required navigational safety aids to alert ships of its presence in all weather conditions. West Cameron Blocks 395 & 396 is not located in a designated shipping fairway/anchorage area, therefore, a permit from the Department of Army, Corps of Engineers, New Orleans District, will not be required.

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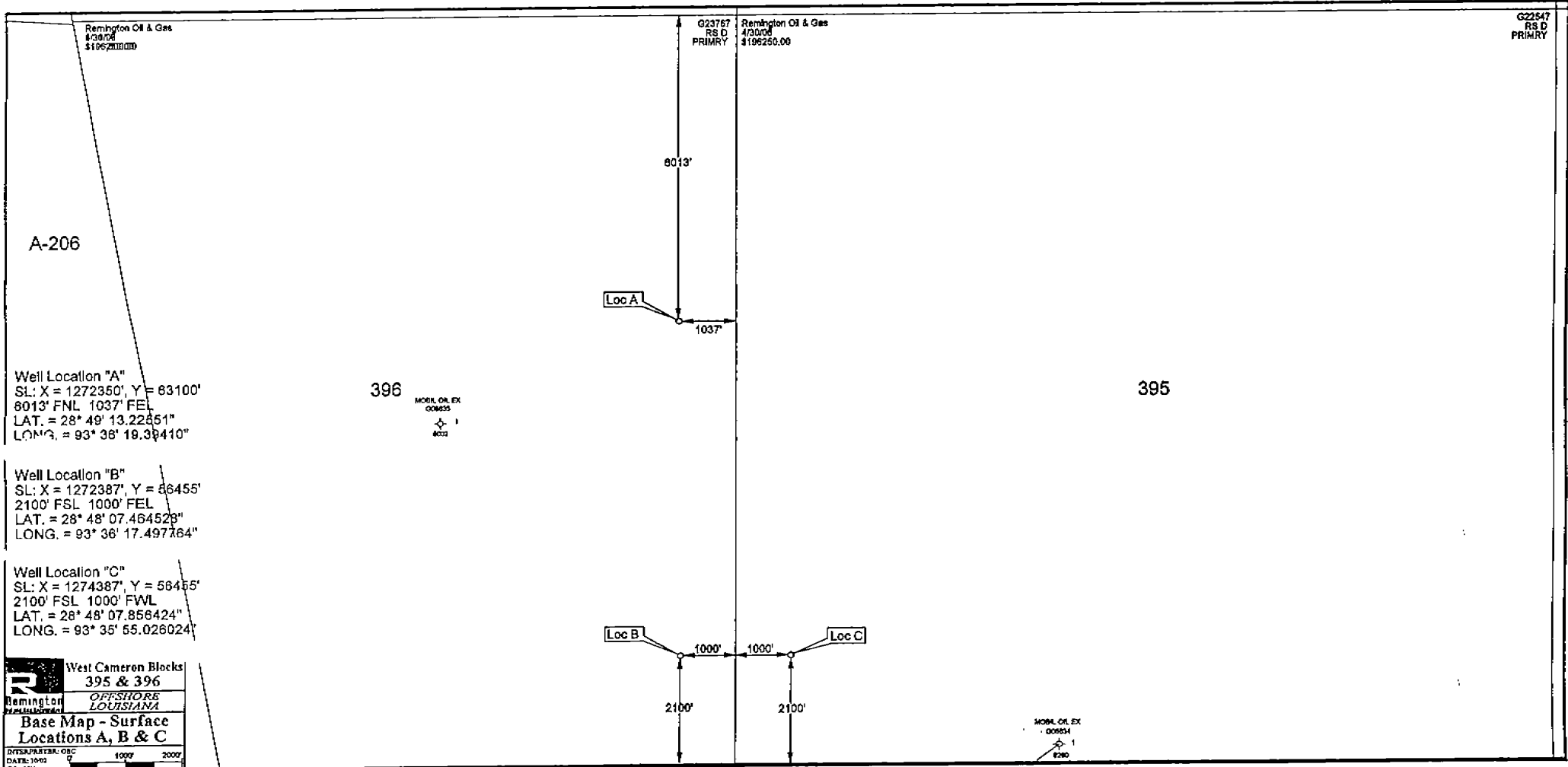
# Central GOM Regional Map



Attachment "A"

**Area of Interest -  
West Cameron  
West Addition  
Block 395/396**

Attachment "A-1"



Remington Oil & Gas  
4/30/02  
\$196250.00

G23767  
RS D  
PRIMARY

Remington Oil & Gas  
4/30/02  
\$196250.00

G22547  
RS D  
PRIMARY

6013'

1037'

Loc A

396

MOBL OIL EX  
00853  
1  
6280

395

A-206

Well Location "A"  
SL: X = 1272350', Y = 63100'  
8013' FNL 1037' FEL  
LAT. = 28° 49' 13.22451"  
LONG. = 93° 36' 19.39410"

Well Location "B"  
SL: X = 1272387', Y = 66455'  
2100' FSL 1000' FEL  
LAT. = 28° 48' 07.464528"  
LONG. = 93° 36' 17.497764"

Well Location "C"  
SL: X = 1274387', Y = 56455'  
2100' FSL 1000' FWL  
LAT. = 28° 48' 07.856424"  
LONG. = 93° 35' 55.026024"

Loc B

1000'

1000'

Loc C

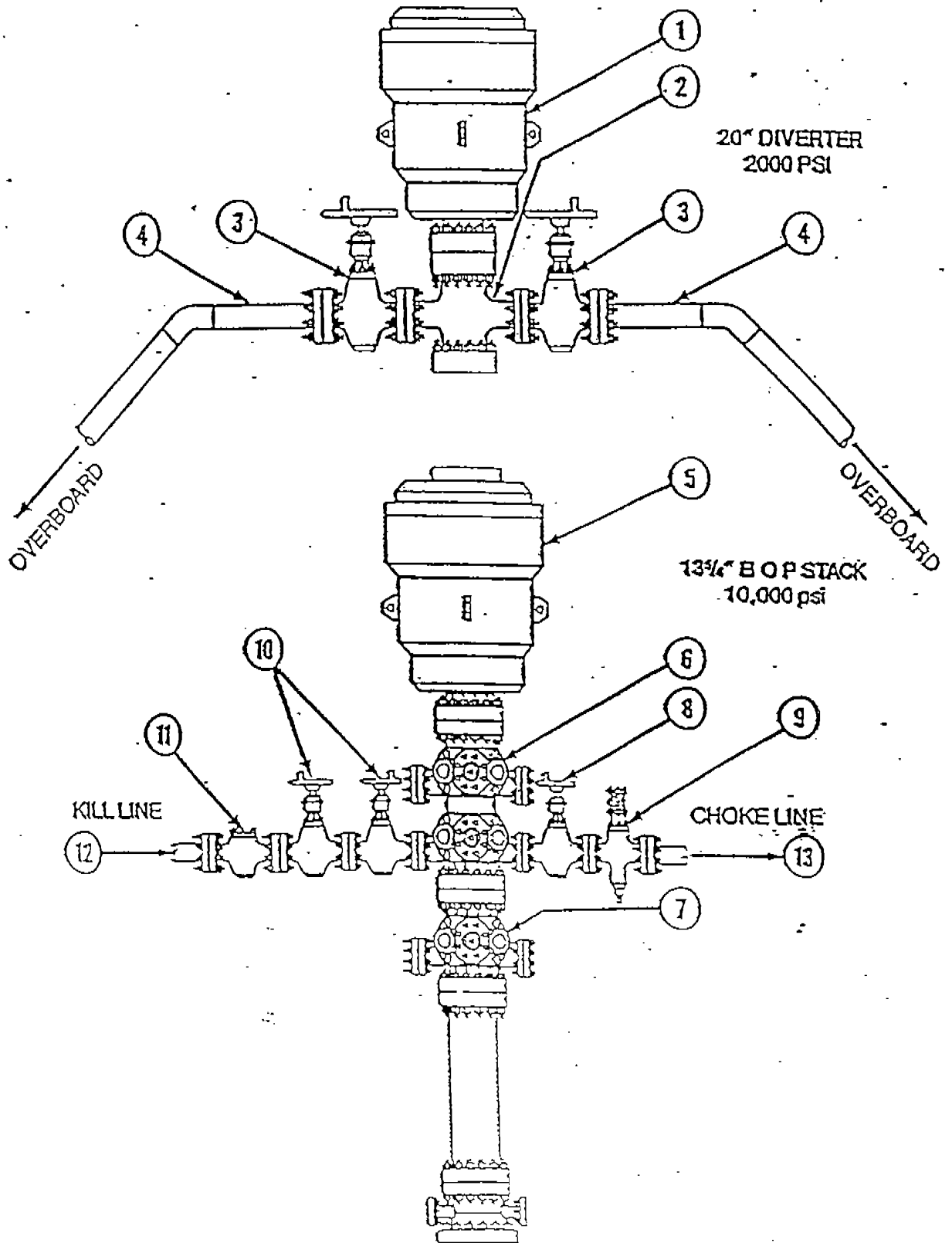
2100'

2100'

MOBL OIL EX  
00853  
1  
6280

West Cameron Blocks  
395 & 396  
Remington  
OFFSHORE  
LOUISIANA  
Base Map - Surface  
Locations A, B & C  
INTERPRETER: OBC  
DATE: 10/02  
SCALE: 1" = 1000'

# BLOWOUT PREVENTER STACK WITH A HYDRIL DIVERTER



Refer to following page for description of individual items of this assembly.  
ATTACHMENT "B"

## 20" HYDRIL DIVERTER 2000 psi

ITEM	DESCRIPTION
1	20" HYDRIL 2000 psi Type MSP
2	20" FLANGE SPOOL 2000 psi w/6" 2000 psi Outlets
3	6" GATE VALVE std Low Pressure (REMOTE)
4	6" DIVERTER LINE (To Overboard)

## BLOWOUT PREVENTER STACK

13<sup>5</sup>/<sub>8</sub>' 10,000 psi

ITEM	DESCRIPTION
5	13 <sup>5</sup> / <sub>8</sub> " HYDRIL ANNULAR BOP 5000 psi Type GK H2S Trimmed
6	13 <sup>5</sup> / <sub>8</sub> " CAMERON DOUBLE BOP 10,000 psi WP H <sub>2</sub> S Trimmed
7	13 <sup>5</sup> / <sub>8</sub> " CAMERON SINGLE BOP 10,000 psi WP H <sub>2</sub> S Trimmed
8	4 <sup>1</sup> / <sub>2</sub> " MANUAL GATE VALVE Cameron Type "F" H <sub>2</sub> S
9	2 <sup>1</sup> / <sub>2</sub> " REMOTE HYDRAULIC VALVE Cameron Type "F" 10,000 psi H <sub>2</sub> S
10	2 <sup>1</sup> / <sub>2</sub> " MANUAL GATE VALVE Cameron Type "F" 10,000 psi H <sub>2</sub> S
11	2 <sup>1</sup> / <sub>2</sub> " CHECK VALVE Cameron Type "R" 10,000 psi H <sub>2</sub> S
12	3" 10,000 psi KILL LINE from Choke Manifold
13	3" 10,000 psi CHOKE LINE from choke Manifold

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Remington Oil & Gas Corporation  
Initial Exploration Plan  
WEST CAMERON BLOCKS 395 & 396  
LEASE OCS-G 22547 & OCS-G 23767

SECTION 2

GENERAL INFORMATION

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## **2.1 CONTACT PERSON**

Remington Oil & Gas Corporation authorizes the following representative be contacted for any inquiries pertaining to this Plan:

Regulatory Services, Inc.  
Attention: J. V. Delcambre  
304 La Rue France, Suite 204  
Lafayette, Louisiana 70508  
337.593.9420  
337.593.9422 Fax  
[jdelcambre.rsi@cox-internet.com](mailto:jdelcambre.rsi@cox-internet.com)

## **2.2 NEW OR UNUSUAL TECHNOLOGY**

Remington Oil & Gas does not propose to utilize any new techniques or unusual technology for the proposed operations; however, the best available and safest technologies (BAST) as referenced in Title 30 CFR 250 will be incorporated as standard operational procedure.

## **2.3 BONDING INFORMATION**

In accordance with Title 30 CFR 256, "Bonding Requirements" and NTL 98-18N, Remington Oil and Gas Corporation has qualified and was issued on December 28, 1998 a waiver under the financial criteria established by NTL 98-18N. The waiver applies to all leases for which Remington has any recorded title interest and all leases for which Remington has provided a third party indemnity agreement. This waiver allows Remington to defer the posting of supplemental bonds in the Gulf of Mexico Region (GOMR).

Remington Oil & Gas Corporation has on file with the Minerals Management Service the bonding necessary to meet the \$3,000,000 areawide development criteria pursuant to the provisions of Title 30 CFR Part 256 and NTL-2000-G16.

## **2.4 ONSHORE BASE AND SUPPORT VESSELS**

The proposed surface location in West Cameron Blocks 395 & 396 is located approximately 62 miles from the nearest shoreline and 72 miles from the shorebase located Cameron, Louisiana. Water depths range from approximately 72 feet to 84 feet. A Vicinity Plat showing the surface locations of the West Cameron Blocks 395 & 396, Wells "A", "B" and "C" relative to the shoreline and onshore base is included as Attachment "A".

Remington Oil & Gas will utilize existing onshore facilities located in Cameron, Louisiana. This will serve as a port of debarkation for supplies and crews. No onshore expansion or construction is anticipated with respect to the proposed activities. This base is capable of providing the services

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necessary for the proposed activities. It has 24-hour service, a radio tower with a phone patch, dock space, equipment and supply storage space, drinking and drill water, etc.

Support vessels and travel frequency during drilling activities are as follows:

Crew Boat	3 trips per week
Supply Boat	2 trips per week
Helicopter	1 trip per week

The boats will normally move via the most direct route from Cameron, Louisiana. The helicopters will normally take the most direct route to travel between the two points when air traffic and weather conditions permit.

## **2.5 LEASE STIPULATIONS**

Oil and gas exploration activities on the OCS are subject to stipulations developed before the lease sale and would be attached to the lease instrument, as necessary, in the form of mitigating measures. The MMS is responsible for ensuring full compliance with stipulations. The subject oil and gas lease for OCS-G 22547 was issued with no special lease stipulations. The subject oil and gas lease for OCS-G 23767 was issued with a special lease stipulation. Lease Stipulation No. 06 involves reducing the potential taking of marine protected species. Remington Oil & Gas Corporation will comply with all lease stipulations.

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Remington Oil & Gas Corporation  
Initial Exploration Plan  
WEST CAMERON BLOCKS 395 & 396  
LEASE OCS-G 22547 & OCS-G 23767

SECTION 3

GEOLOGICAL, GEOPHYSICAL,  
AND H<sub>2</sub>S INFORMATION

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Included in this Section is Attachment "C",

Attachment "D", "D-1" & "D-2",

Attachment "E", and Attachment "F"



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### **3.1 GEOLOGICAL AND GEOPHYSICAL INFORMATION**

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#### **Structure Contour Maps (Included as Attachment "C")**

(Not Applicable)

#### **Geological Structure Cross-Section (Included as Attachment "D" thru "D-2")**

(Not Applicable)

#### **Shallow Hazards Report**

A high-resolution seismic survey, utilized for the site evaluation for the drilling rig emplacement, will be submitted under a separate cover letter with the Initial Exploration Plan for West Cameron Blocks 395 & 396. Gulf Ocean Services conducted a High Resolution & Geophysical Study for Remington Oil & Gas Corporation in West Cameron Blocks 395 & 396 in September, 2001 and September, 2002 respectively.

#### **Bathymetry Map (Included as Attachment "E")**

There is some topographic relief across block 396 expressed as a east-west trending ridge in the central portion of the block. Overall, the seafloor generally slopes to the southeast. The water depth varies from 72' in the northwest corner of the block to 84' in the southeast corner of block 396. The steepest gradients occur along the ridge where the heights range from 66' to 70' and plunge to 78' to 80' at the base with gradients approaching 30'/mile. The seafloor topography over the northern half of block 395 is highly irregular with a number of elongated ridges and troughs. The southern half of block 395 slopes to the south at a gradient of 5'/mile. Water depths range from a high of 68' in the northeast corner to a low of 84' along the southern border. The features to be drilled in West Cameron Block 395 & 396 are amplitude related fault traps.

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**Archaeological Resources** (Submitted under Separate Cover Letter with High Resolution Geophysical Report)

The surface locations for Leases OCS-G 22547 & OCS-G 23767, West Cameron Blocks 395 & 396 falls within the high-probability area for prehistoric archaeological resources as defined by the Minerals Management Service and an archaeological assessment was done. The archaeological assessment is part of the High Resolution & Geophysical Report for West Cameron Blocks 395 & 396. Based on the archaeological assessment the probability of locating the presence of significant prehistoric cultural resources in the survey of Blocks 395 & 396, West Cameron Area is assessed as extremely poor. However, Remington Oil & Gas, as a prudent operator, will avoid all sites, structures and objects of historical or archaeological significance. Such findings will be reported and every reasonable effort will be made to preserve and protect the cultural or archaeological resource.

**Shallow Hazards Assessment** (Included as Attachment "F")

An analysis of the seafloor and subsurface geological and manmade features and conditions that may adversely affect the proposed operations is required. A Shallow Hazard Analysis for each proposed surface locations is included as Attachment "F".

**High-Resolution Seismic Lines**

Copies of the annotated high – resolution seismic lines closest to the proposed surface locations are being submitted with the Initial Exploration Plan for West Cameron Blocks 395 & 396 under a separate cover letter.

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**3.2 HYDROGEN SULFIDE INFORMATION**

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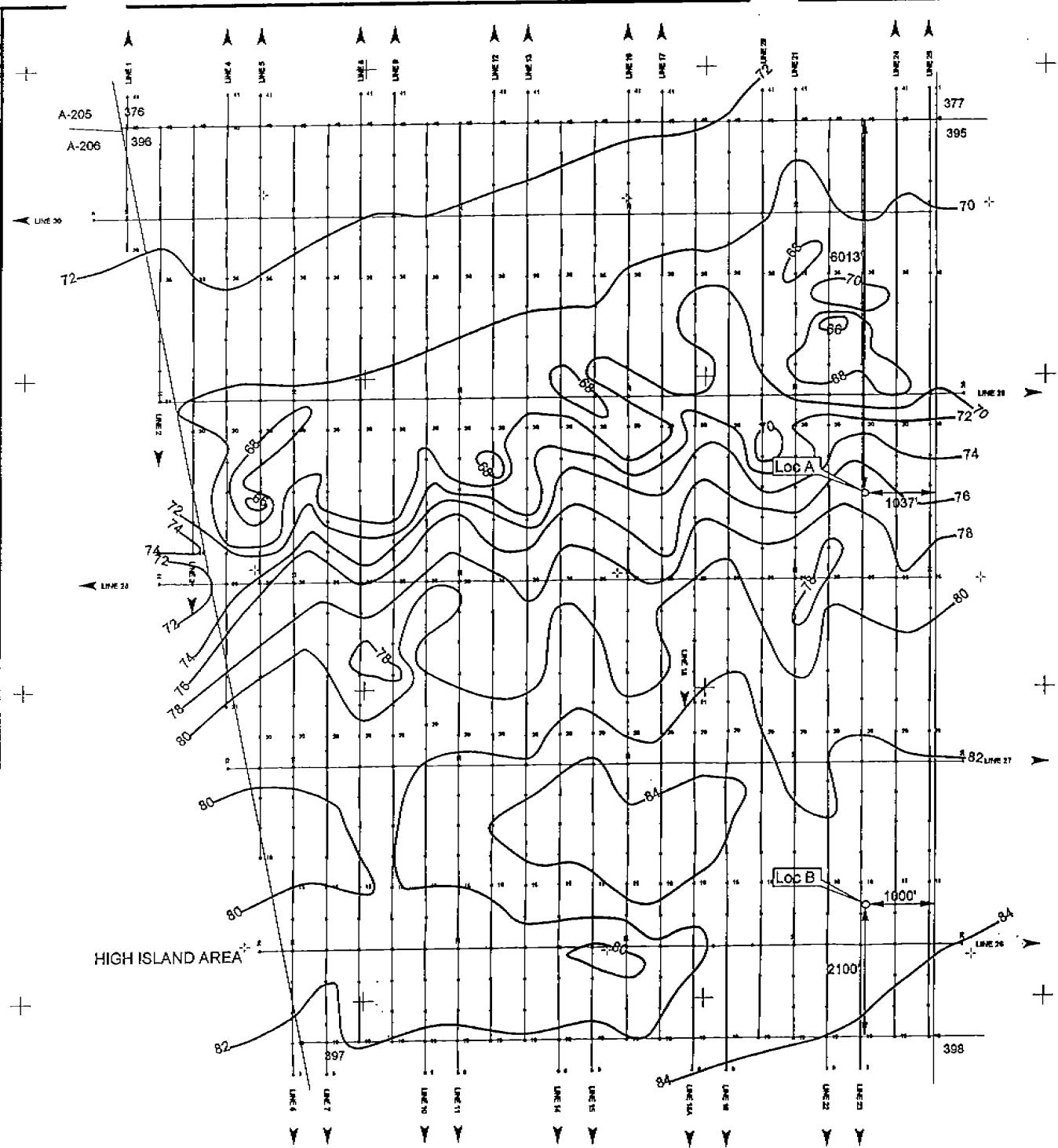
**Classification**

In accordance with Title 30 CFR Part 250.417(c) Remington requests that West Cameron Blocks 395 & 396, Leases OCS-G 22547 & OCS-G 23767, be classified by the Minerals Management Service as an area where the absence of hydrogen sulfide ( "H<sub>2</sub>S" ) has been confirmed.

The drilling of similar stratigraphic horizons on OCS-G 22250, Well #001 supports the basis for this determination.

**Contingency Plan**



In accordance with Title 30 CFR Part 250.4179(f), a Contingency Plan is not required since the area should be classified as "H<sub>2</sub>S Absent".



70 — BATHYMETRIC CONTOUR. DEPTHS, IN FEET, BASED ON ACOUSTIC VELOCITY OF 4967 FEET/SECOND IN THE WATER COLUMN. DEPTHS ADJUSTED TO MEAN HIGH WATER. CONTOUR INTERVAL = 2 FEET

Well Location "A"  
 SL: X = 1272350', Y = 63100'  
 6013' FNL 1037' FEL  
 LAT. = 28° 49' 13.22551"  
 LONG. = 93° 36' 19.39410"  
 PTD: 8500' (MD/TVD)

Well Location "B"  
 SL: X = 1272387', Y = 56455'  
 2100' FSL 1000' FEL  
 LAT. = 28° 48' 07.464528"  
 LONG. = 93° 36' 17.497764"  
 PTD: 8500' (MD/TVD)

Remington Oil and Gas Corporation	
HIGH-RESOLUTION GEOPHYSICAL SURVEY	
WEST CAMERON AREA BLOCK 396	
Louisiana (Lambert) Coordinate System, South Zone Grid Units In Feet	
INTERPRETATION BY: J.W. Arlt GCR JOB NO: 13-3-004	GESTEX COMPANY PROJECT No. 1005 REPT. 2001
 <b>GULF OCEAN SERVICES, Inc.</b> OFFSHORE SURVEYS	
SCALE: 1:12,000  IN FEET (SCALE 1:12,000)	
BATHYMETRY MAP	

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# REMINGTON OIL & GAS CORPORATION

## INITIAL EXPLORATION PLAN WEST CAMERON BLOCKS 395 & 396, OCS-G 22547 & OCS-G 23767

### SHALLOW HAZARD EVALUATION

#### Location "A"

The proposed "A" surface location is 6013' FNL and 1037' FEL of Block 396. Geophysical control near the well site consists of two traverses (Line 23 is a north-south traverse within 50' and Line 28 is a east-west traverse 1400' south of the location), of 12,000 joule sparker, 3.5 KHz subbottom profiler and combined side scan sonar, magnetometer, and echo sounder data. The entire block is covered with 3D, 60 fold time migrated seismic data at 25 by 25 meter bin spacing. The seafloor slopes to the south at this location with a water depth of 77 feet. Near surface bedding is parallel and generally continuous. There is no evidence of near surface faulting that would intersect the wellbore. Shallow bright spots are not observed near this wellbore location.

#### Location "B"

The proposed "B" surface location is 2100' FSL and 1000' FEL of Block 396. Geophysical control near the well site consists of two traverses (Line 23 is a north-south traverse located 75' away and Line 26 is a east-west traverse 625' away), of 12,000 joule sparker, 3.5 KHz subbottom profiler and combined side scan sonar, magnetometer, and echo sounder data. The entire block is covered with 3D, 60 fold time migrated seismic data at 25 by 25 meter bin spacing. The seafloor is essentially flat at this location with a water depth of 83 feet. Near surface bedding is parallel and generally continuous. There is no evidence of near surface faulting that would intersect the wellbore. Shallow bright spots are not observed near this wellbore location.

#### Location "C"

The proposed "C" surface location is 2100' FSL and 1000' FWL of Block 395. Geophysical control near the well site consists of two traverses (Line 2 is a north-south traverse within 30' and Line 17 is a east-west traverse 625' away), of 12,000 joule sparker, 3.5 KHz subbottom profiler and combined side scan sonar, magnetometer, and echo sounder data. The entire block is covered with 3D, 60 fold time migrated seismic data at 25 by 25 meter bin spacing. The seafloor slopes to the south at this location with a water depth of 82 feet. Near surface bedding is parallel and generally continuous. There is no evidence of near surface faulting that would intersect the wellbore. Shallow bright spots are not observed near this wellbore location.

## 4.0 BIOLOGICAL INFORMATION

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THIS SECTION IS RESERVED FOR CHEMOSYNTHETIC  
AND  
TOPOGRAPHIC FEATURES INFORMATION

The Proposed Activities being submitted under this Plan  
Do Not Require the Preparation of This Data.

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Remington Oil & Gas Corporation  
Initial Exploration Plan  
WEST CAMERON BLOCKS 395 & 396  
LEASES OCS-G 22547 & OCS-G 23767

SECTION 5

WASTE AND

DISCHARGE INFORMATION

Included in this Section is Attachment "G"

And Attachment "H"

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The Minerals Management Service regulations, the EPA NPDES General Permit and the U. S. Coast Guard's regulations implementing MARPOL 73/78 Annex V prohibit the disposal of trash and debris into the marine environment.

The major operational wastes generated during offshore oil and gas exploration and development include drilling fluids and cuttings and produced water. Other major wastes generated by the offshore oil and gas industry include the following: deck drainage and miscellaneous well fluids, cement, BOP fluid and from other sources – sanitary and domestic wastes, gas and oil processing wastes, ballast water and other miscellaneous minor discharges.

All discharges associated with the drilling and completion operations for the proposed well location will be in accordance with regulations implemented by Minerals Management Service (MMS), U. S. Environmental Protection Agency (EPA) and the U. S. Coast Guard.

## **5.1 WASTE INFORMATION**

### **Minerals Management Service**

The Notice to Lessees and Operators NTL 98-14 dated August 10, 1998 advises operators that special caution should be exercised in the handling and disposing of small items, packaging materials, which could be lost in the marine environment and eventually washed ashore. MMS recommends that OCS operators develop and implement training programs to emphasize the proper control and disposal of refuse.

Operators are required to install curbs, gutters, drip pans, and drains on rig deck areas in a manner necessary to collect all contaminants and debris not authorized for discharge. The rule explicitly prohibits the disposal of equipment, cables, chains, containers, or other materials into offshore waters. Portable equipment, spools or reels, drums, pallets and other loose items weighing 18 kg or more must be marked in a durable manner with the operator's name prior to use or transport over offshore waters. Smaller objects must be stored in a marked container when not in use.

Therefore, Remington Oil & Gas will comply with the regulations under Title 30 CFR Part 250.300(a) and 250.300(b)(6) which prohibits the deliberate discharge of containers; as well as Title 30 Part 250.300(c), which requires the identification markings on equipment, tools, and containers.

### **U. S. Coast Guard**

The Marine Pollution Research and Control Act of 1987 implemented Annex V of the International Convention for the Prevention of Pollution from ships. Under the provisions of the law, all ships and watercraft, including all commercial and recreational fishing vessels, are prohibited from dumping plastics at sea. The law also severely restricts the legality of dumping other vessel-generated garbage and solid waste items both at sea and in U. S. navigable waters.

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The U. S. Coast Guard is responsible for enforcing the provisions of this law and has developed final rules for its implementation, calling for adequate trash reception facilities at all ports, docks, marinas and boat launching facilities.

### **Environmental Protection Agency**

When wastes exceed the NPDES permit requirements for overboard discharges, they must be transported to shore for disposal. The Resource Conservation and Recovery Act (RCRA) provides a framework for the safe disposal of discarded materials, regulating the management of solid and hazardous wastes. The USEPA has exempted many oil and gas wastes from coverage under hazardous waste regulations under Subtitle C of RCRA.

Exempt waste includes those generally coming from an activity directly associated with the drilling, production, or processing of a hydrocarbon product. Nonexempt oil and gas wastes include those not unique to the oil and gas industry and used in the maintenance of equipment.

Solid domestic wastes will be transported to shore for proper disposal at an authorized disposal site, and sewage will be treated on location by U. S. Coast Guard approved marine sanitation devices.

Offshore oil-field wastes that are not discharged or disposed of onsite are brought onshore for disposal and taken to specifically designated commercial oil-field waste disposal facilities. In Louisiana, these sites are referred to as NOW sites or "non-hazardous oil-field waste" disposal sites.

At commercial waste treatment facilities, liquid wastes are usually injected into disposal wells and solid wastes are usually put into pits, land treated, land farmed or undergo a stationary treatment process to remove contaminants.

Liquid wastes are usually transported to shore by barge or in tanks located on supply boats. Once onshore, the wastes are generally transported to commercial oil-field waste disposal facilities by vacuum truck or barge.

In Louisiana there are seven (7) existing commercial oil-field waste disposal facilities that receive all of the types of wastes that would come from OCS operations and in Texas there are ten (10) facilities. Included in these numbers are two sites in Louisiana and one in Texas that process naturally occurring radioactive material (NORM) - contaminated oil-field wastes.

In addition to drilling wastes, trash and debris from the offshore oil industry are shipped onshore for disposal. These wastes include mud bags, drums, crates and a variety of domestic wastes. The trash and debris are disposed of at either municipal or industrial landfills depending on the method or company that an operator hires to haul the trash from their service base or directly from the offshore facility.



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## **5.2 DISCHARGE INFORMATION**

### **U. S. Coast Guard**

Victual matter or organic food wastes are allowed to be ground up into small pieces and disposed of overboard from structures located more than 20 km from shore.

### **Environmental Protection Agency**

The USEPA regulates discharges from the offshore oil and gas industry under Section 402 of The Clean Water Act. The USEPA established effluent limitation guidelines for discharges and to authorize discharges into the waters of the United States by the issuance of the National Pollutant Discharge Elimination System (NPDES) permits.

Offshore wastes can be discharged overboard only if they are covered by a USEPA NPDES permit. Drilling muds and cuttings can be discharged overboard only if they meet requirements found in the NPDES permit. The permit requirements include (a) limit the acute toxicity to a minimum 96-hour LC 50 of 30,000 ppm as measured in the diluted suspended particulate phase; (b) prohibit the discharge of oil-based drilling fluids, oil-contaminated drilling fluids, or drilling fluids containing diesel oil and any drill cuttings generated while using these fluids; (c) prohibit the discharge of free oil (static sheen test); (d) limit the amount of cadmium and mercury in stock barite used in drilling fluids; and (e) limit the drilling fluid discharge rate to 1000 barrels per hour unless the well is within a controlled discharged rate restriction area, where the discharge will be as determined by a rate table.

Discharge will contain no free oil and will be in compliance with and monitored as required by the permit.

Continuous discharges occur during the entire drilling phase with bulk discharges resulting at the end of the well. Observation of the drilling fluid is accomplished through daily inventory of mud and chemicals added to the system; in addition to monthly and end of well LC50 toxicity test required by EPA. Typical mud components which may be used in the drilling of the proposed well is included as Attachment "G".

The anticipated discharges associated with Remington Oil & Gas's operations in West Cameron Blocks 395 & 396 are listed on Attachment "H". In accordance with EPA's NPDES General Permit GMG290000, Part I.B.1(b), "Limitations", all facilities are subject to a maximum discharge of 1000 barrels per hour.

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**DRILLING FLUID ADDITIVES  
PRODUCT CROSS REFERENCE**

<b>WEIGHT MATERIALS</b>			
BIL-BAR	BARCID	MH BAR	API Barite, 4.2 specific gravity
DENSIMX	BARODENSE	FER-OX	Macaceous hematite
W.O. 30	BARACARB	LO-WATE	Calcium carbonate
<b>VISCOIFIERS</b>			
MIL GEL	AQUAGEL	MH GEL	API-grade Wyoming bentonite
MILGEL NT	AQUAGEL GOLD SEAL		Untreated Wyoming bentonite
SALTWATER GEL	ZEOGEL	SALT GEL	API-grade attapulgite
SUPER-COL	QUICK-GEL	KWIK-THIK	High-yield bentonite, treated
NE-VIS			Organic polymer blend
XCD POLYMER	XCD POLYMER	XCD POLYMER	XC Dispersable
MIL-BEN	SHUR-GEL		Bentonite CCMA Spec. DFCP4
<b>DEFLOCCULANTS</b>			
MIL-TEMP	THERMA-THIN DP	MELANEX-T	High-temperature deflocculant
NEW-THIN	THERMA-THIN	TACKLE (Liquid)	Polymeric deflocculant
UNI-CAL	Q-BROXIN	SPEPSENE	Chrome lignosulfonate
UNI-CAL CF	Q-BII	SPEPSENE CF	Chrome-free lignosulfonate
MIL-KEM	LIGNOX	RD 2000	Lime mud thinner
SAPP	SAPP	SAPP	Sodium acid pyrophosphate
QLFOS	BARAFOS	PHOS	Sodium tetraphosphate
MIL-THIN	THERMA-THIN	THIN X (Liquid)	Anionic copolymer thinner
<b>FILTRATION CONTROL AGENTS</b>			
BIOLOSE			Modified polysaccharide
CHEMTRIX	DURENEX	RESINEX	Polymer blend, high-temperature
FILTREX	BARANEX	RESINEX	Polyanionic lignin resin
LIGCO	CARBONOX	TANNATHIN	Lignite
LIGCON	CC-16	CAUSTILIG	Casticized lignite
MILSTARCH	IMPERMEX	MY-LO-GEL	Pregelatinized starch
NEW-TROL	POLYAC	SP-101	Sodium polyacrylate
PERMA-LOSE HT	DEXTRID	POLY-SAL	Nonfermenting starch, high-temp.
PYRO-TROL	THERMA-CHEK	POLY RX	Polymeric, high temperature
KEM-SEAL	THERMA-CHEK		Copolymer, high-temperature
MIL-PAC	PAC R	POLYPAC	Polyanionic cellulose
MIL-PAC LV	PACL	POLYPAC	Low-viscosity polyanionic cellulose
MILPARK OMC HV	CELLEX (High Vis)	OMC HV	Sodium carboxymethylcellulose
MILPARK OMC LV	CELLEX	OMC LV	Sodium carboxymethylcellulose
<b>CORROSION CONTROL CHEMICALS</b>			
MIL-GARD	NO-SULF	SULF-X	Basic zinc carbonate
GIL-GARD R	BARASCAVL	SULF-X ES	Chelated zinc
NOXYGEN	COAT-888 BARACOR 113	OXYGEN SCAVENGER	Oxygen scavenger
SCALE-BAN	SURFLO-H35 BARACOR 129	SI-1000	Scale inhibitor
AMI-TEC	BARAFILM BARACOR 300 COAT-B1400 COAT-C1815	CONCOR 202 CONCOR 101 CONCOR 303	Film-forming amine
<b>CARBO-DRILL OIL MUD ADDITIVES</b>			
CARBO-MUL	INVERMUL NT VERSACOAT	VERSAWET	Emulsifier (and wetting agent) primarily
CARBO-MUL HT	EZ MUL NT		High-temperature emulsifier and wetting agent
CARBO-TEC	INVERMUL	VERSAMUL	Emulsifier
CARBO-GEL	GELTONE II	VERSAGEL	Organophilic clay nectonite
CARBO-VIS	GELTONE II	VERSAMOD	Organophilic clay
CARBO-TROL		VERSATROL	Filtration control agent
CARBO-TROL A-9	DURATONE HT	VERSALIG	Nonasphatic filtration control, high-temperature
SURF-COTE	DRILTREAT or OMC	VERSAWET	Oil wetting agent for oil muds
CARBO-MIX	DRILTREAT		Nonionic emulsifier, high-activity
CARBO-TEC HW			HW oil mud emulsifier

## DRILLING FLUID ADDITIVES PRODUCT CROSS REFERENCE

SHALE CONTROL ADDITIVES			
ALPLEX			Aluminum complex
BIO-DRILL 1402			Oil mud alternative
NEW-DRILL	EZ MUD	POLY-PLUS	PHPA liquid
NEW-DRILL HP			Powdered PHPA
NEW-DRILL PLUS	EZ MUD DP		Powdered PHPA
SHALE-BOND	SHALE-BAN	HOLECOAT	Resinous shale stabilizer
PROTECTOMAGIC			Oil-soluble blown asphalt
PROTECTOMAGIC M	AK-70	STABIL-HOLE	Water - dispersants, blown asphalt
SPOTTING FLUIDS			
BLACK MAGIC			Oil-base spotting fluid
BLACK MAJIC LT	EX SPOT		Low toxicity oil - base spotting fluid
BLACK MAJIC SFT		OIL-FAZE	Oil-base spotting fluid concentrate
MIL-FREE	SCOT-FREE/ ENVIRO-SPOT	PIPE-LAX	Liquid spotting fluid
BIO-SPOT	ENVIRO-SPOT		Nontoxic water - base spotting fluid
BIO-SPOT II			Nontoxic water - base spotting fluid
MIL-SPOT 2	SCOT-FREE	PIPE-LAX W	Weighted (oil base) spotting fluid concentrate
LUBRICANTS			
AQUA-MAGIC			Low-toxicity lubricant
LUBRI-FILM	EP MUDLUBE	E.P. LUBE	Extreme-pressure lubricant
MIL-LUBE		LUBE-106	General lubricant
DETERGENTS/FOAMERS			
AMPLI-FOAM	DRILFOAM	FOAMER 80	Mist and stiff foaming agent
MIL CLEAN	BAROID RIG WASH BARA-KLEAN	KLEEN-UP	Biodegradable detergent
MILPARK MD	CON-DET	DD	Drilling detergent
DEFOAMING AGENTS			
LD-8	BARA DEFOAM	DEFOAM-X	Hydrocarbon-base defoamer
W.O. DEFOAM	BARA BRINE DEFOAM	DEFOAM-A	Alcohol-base, saltwater muds
ALUMINUM STEARATE	ALUMINUM STEARATE	ALUMINUM STEARATE	Aluminum Stearate
LOST-CIRCULATION MATERIALS			
CHIK-LOSS			Seepage loss control differential sticking preventative
MIL-CEDAR FIBER	PLUG-GIT	MH CEDAR FIBER	Cedar fiber
MIL-FIBER	FIBERTEX	MH FIBER	Fiber blend
MILFLAKE	JELFLAKE	FLAKE	Shredded cellophane flake
MILMICA	MICATEX	MICA	(Muscovite) mica graded
MIL-PLUG		NUT PLUG	Ground pecan shells
MIL-SEAL	BARO-SEAL	KWIK SEAL	Blended lost-circulation material
COTTONSEED HULLS	COTTONSEED HULLS	COTTONSEED HULLS	Cottonseed hulls
PAPER			Ground paper
WALNUT SHELLS	WALL-NUT		Ground walnut shells
MAGNE-SET			Acid-soluble cement
WORKOVER AND COMPLETION FLUIDS			
MUD-PAC	COAT-44 & 45	CONCOR 404 X-CORE	Corrosion (packer fluid) inhibitor
BRINE-PAC	BARACOR-A		Corrosion inhibitor clean brine fluids
W.O. 21L	LIQUI-VIS	VIS-L	Liquid HEC polymer
PRESERVATIVES			
DRYOCIDE			Dry (biodegradable) biocide
X-CIDE 207	BARA B466	BACBAN II & III	Biocide
<p>X-CIDE 207 is a registered trademark of Petrotille Corporation.  DRYOCIDE is a registered trademark of Nalco Chemical Company.  XCD (in XCD POLYMER) is a registered trademark of Marck &amp; Co., Inc.  OILFOS is a registered trademark of Monsanto Company.</p>			

**INITIAL EXPLORATION PLAN  
LEASES OCS-G 22547 & OCS-G 23767  
WEST CAMERON BLOCKS 395 & 396**

**QUANTITIES AND RATES OF DISCHARGES**

<b>WELL</b>	<b>DEPTH</b>	<b>HOLE SIZE</b>	<b>QUANTITY (BBL) <sup>(1) &amp; (2)</sup></b>	<b>DISCHARGE RATE</b>
WC 396			N/A	MAX 1000 BPH
"A"			344	MAX 1000 BPH
			1875	MAX 1000 BPH
			1150	MAX 1000 BPH
WC 396			N/A	MAX 1000 BPH
"B"			344	MAX 1000 BPH
			1829	MAX 1000 BPH
			1183	MAX 1000 BPH
WC 395			N/A	MAX 1000 BPH
"C"			344	MAX 1000 BPH
			1829	MAX 1000 BPH
			1183	MAX 1000 BPH

A list of mud additives that may be used while conducting drilling operations is shown as Attachment "G".

Mud and drill cuttings will be discharged at the well site in accordance with EPA regulations.

Mud and drill cuttings which have been contaminated with oil or other hazard chemicals will be transported to shore for proper disposal at an authorized disposal site.

\* The discharge rate will not exceed 1000 bbls/hr., in accordance with EPA regulations.

<sup>(1)</sup> Discharge consists of cuttings and drilling fluids.

<sup>(2)</sup> Quantity (bbls) = capacity of hole (cuttings) + 20 % ( loss of drilling fluids)

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Remington Oil & Gas Corporation  
Initial Exploration Plan  
WEST CAMERON BLOCKS 395 & 396  
LEASES OCS-G 22547 & OCS-G 23767

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SECTION 6

OIL SPILL RESPONSE

AND CHEMICAL INFORMATION

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**6.1 WORST CASE DISCHARGE LESS THAN 1000 BARRELS (not applicable)**

The volume of the worst-case discharge scenario (calculated according to 30 CFR Part 254.47 (a) or (b), as appropriate is less than 1000 barrels over a 30-day period. Therefore, the information is as follows:

Company Name:  
OSRP Approval Date:  
Worst Case Certification Approval Date:

Name of OSRO (Equipment):  
Name of OSRO (Personnel – Primary):

Alternative Method for Transfer of Liquid  
Hydrocarbons Other than Pipeline:

**6.2 WORST CASE DISCHARGE MORE THAN 1000 BARRELS**

The volume of the worst-case discharge scenario (calculated according to 30 CFR Part 254.47 (a) or (b), as appropriate 1000 barrels or more over a 30-day period. Therefore, the information is as follows:

Company Name: Remington Oil & Gas Corporation  
OSRP Approval Date: 2/6/02  
Worst Case Certification Approval Date: Pending

Name of OSRO (Equipment): CGA / MSRC

Name of OSRO (Personnel-Primary): Garner Environmental Services

Alternative Method for Transfer of Liquid  
Hydrocarbon Other Than Pipeline: Not Applicable

Location of Primary Spill Response  
Equipment: Lake Charles, Louisiana  
Location of Pre-Planned Staging Area: Cameron, Louisiana

CATEGORY	REGIONAL OSRP	EP
Type of Activity	Production	Drilling Rig
Spill Location (Area / Block)	East Cameron 344	West Cameron Blocks 395 & 396
Facility Designation	A Platform	Wells "A", "B" and "C"
Distance to Nearest Shoreline (miles)	110 miles	62 miles
Volume		
Storage Tanks (total)	0 bbls	240 bbls
Flowlines (on facility)	0 bbls	0 bbls
Lease term pipelines	1122 bbls	0 bbls
Uncontrolled blowout	1200 bbls	240 bbls
Total Volume	2322 bbls	480 bbls
Type of Oil(s)	Oil	Diesel / Condensate
API Gravity(s)	36.0°	36.0° / 58.0°

"Near Shore" Worst Case Scenario Per Regional OSRP	Not Applicable
"Far Shore" Worst Case Scenario Per Regional OSRP (Designated as East Cameron Block 344)	2322

**Calculated Volume of Worst Case Discharge Scenario Per 254.47 (a) or (b) for Proposed Operations Under the Supplement Plan of Exploration**

254.47 (a) Oil Production Platform Facility	Not Applicable
254.47 (b) Exploratory or Development Drilling	480

**Revised Worst Case Discharge Scenario**

Remington Oil & Gas Corporation has updated the Regional Oil Spill Response Plan for a new Worst-Case Scenario, which is East Cameron Block 344 as noted above. Environmental Safety and Health Consulting Service, Inc. (ES&H) has filed the amendment to the plan on December 11, 2001.

**6.3 SPILL RESPONSE CERTIFICATION STATEMENT**

Since Remington Oil & Gas Corporation has the capability to respond to the worst-case spill scenario included in its regional OSRP and since the worst-case scenario determined in the Initial Exploration Plan does not replace the Worst-Case Scenario in our Regional OSRP, I hereby certify that Remington Oil & Gas Corporation 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 proposed activities in our Initial Exploration Plan.

The Remington's Regional OSRP will cover activities proposed under this plan.

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Remington Oil & Gas Corporation  
Initial Exploration Plan  
WEST CAMERON BLOCKS 395 & 396  
LEASES OCS-G 22547 & OCS-G 23767

SECTION 7

AIR EMISSIONS INFORMATION

Included in this Section is "Attachment I"



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

OMB Control No. xxx-xxxx  
Expiration Date: Pending

<b>COMPANY</b>	REMINGTON OIL & GAS CORP.
<b>AREA</b>	West Cameron
<b>BLOCKS</b>	395 & 396
<b>LEASES</b>	OCS-G 22547 & OCS-G 23767
<b>PLATFORM</b>	
<b>WELLS</b>	"A", "B" & "C"
<b>COMPANY CONTACT</b>	J. V. Delcambre
<b>TELEPHONE NO.</b>	337.593.9420
<b>REMARKS</b>	Drill three (3) exploratory wells.

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

If ALL questions are answered "No":

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

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

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

If question number 8 is answered "Yes":

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

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**8.0 ENVIRONMENTAL INFORMATION**

**REMINGTON OIL & GAS CORPORATION**

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**INITIAL EXPLORATION PLAN**

**ENVIRONMENTAL REPORT**

**WEST CAMERON BLOCKS 395 & 396  
LEASES OCS-G 22547 & OCS-G 23767**

**OFFSHORE, LOUISIANA**

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OCTOBER 2002

*Prepared by:  
Regulatory Services, Inc.  
304 La Rue France, Suite 204  
Lafayette, Louisiana 70508  
(337) 593-9420*

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## 1. DESCRIPTION OF PROPOSED ACTION

Remington proposes to conduct exploratory activities in West Cameron Blocks 395 & 396, OCS-G 22547 & OCS-G 23767, Offshore, Louisiana

As proposed, the Initial Exploration Plan for West Cameron Blocks 395 & 396 provides for the drilling of three (3) wells.

At this time, the planned commencement date for proposed activities is on or about November 20, 2002.

### **A. DESCRIPTION OF PROPOSED TRAVEL MODES, ROUTES AND FREQUENCY**

Support vessels will be dispatched from a support base located in Cameron, Louisiana. The boats will normally move to West Cameron Blocks 395 & 396, surface location for Wells "A", "B" and "C" via the most direct route from Cameron, Louisiana. However, boats operating in the field may travel from other facilities nearby. The following is an estimate of trips to the proposed operations.

#### Drilling Operations

Crew Boat	3 trip per week
Supply Boat	2 trips per week
Helicopter	1 trip per week

### **B. ONSHORE SUPPORT BASE**

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

The first socioeconomic database report will be submitted when the MMS and the State of Louisiana identifies the specific parameters to be addressed in these semi-annual reports.

### **C. NEW OR UNUSUAL TECHNOLOGY**

No new or unusual technology will be required for these operations.

### **D. VICINITY MAP**

The surface location for the proposed activity is in West Cameron Blocks 395 & 396, which is approximately 62 nautical miles from the nearest coastline and 72 miles from Cameron, Louisiana. See Attachment "A", and "A-1" for details on surface locations.

## 2. DESCRIPTION OF AFFECTED ENVIRONMENT

### A. COMMERCIAL FISHING

The Gulf of Mexico continues to provide nearly 20% of the commercial fish landings in the continental United States. During 1994, commercial landings of all fisheries in the Gulf of Mexico totaled nearly 2.2 billion pounds valued at about \$806 million.

Menhaden, with landings of 1.7 billion pounds, valued at \$76.7 million, was the most important Gulf species in quantity landed during 1994. Shrimp, with landings of 206.2 million pounds, valued at \$335 million was the most important Gulf species in value landed during 1994. The 1994 Gulf oyster fishery accounted for 72% of the national total with landings of 27.3 million pounds of meats, valued at about \$96 million. The Gulf blue crab fishery accounted for 25% of the national total with landings of 49.1 million pounds valued at \$34 million.

Alabama ranked third among Central and Western Gulf states in total commercial landings for 1994 with 23.3 million pounds landed, valued at \$48.1 million. Shrimp was the most important fishery landed, with 14.4 million pounds, valued at \$30.1 million. In addition, during 1993, the following five species each accounted for landings valued at over \$125,000: blue crab, black mullet, red mullet roe, flounder, and the American oyster.

Mississippi ranked last among Central and Western Gulf states in total commercial fishery landings for 1994, with 258.1 million pounds landed, valued at \$44.8 million. Shrimp was the most important fishery, with 10.5 million pounds landed, valued at about \$18.4 million. In addition, during 1994, the following four species each accounted for landings valued at over \$125,000: black mullet, red snapper, American oyster, and blue crab.

Louisiana ranked first among Central and Western Gulf states in total commercial fishery landings for 1994, with 1.7 billion pounds landed, valued at \$339.7 million. Menhaden was the highest quantity finfish, with 1.0 billion pounds landed, valued at \$49 million. Shrimp was the highest value shellfish, with 87.6 million pounds landed, valued at \$158 million. In addition, during 1994, the following 12 species each accounted for landings valued at over \$1 million: black drum, flounder, red mullet roe, Atlantic sheepshead, red snapper, vermilion snapper, spotted sea trout, swordfish, yellowfin tuna, blue crab, and the American oyster.

Texas ranked second among Central and Western Gulf states in total commercial fishery landings for 1994 with nearly 81.1 million pounds, valued at \$206.2 million. In quantity and value, shrimp ranked first with about 78 million pounds, valued at \$141.9 million. In addition, during 1994, the following seven species each accounted for landings valued at over \$500,000: black drum, red snapper, vermilion snapper, yellowfin tuna, blue crab, and American oyster. The Gulf of Mexico yielded the nation's second largest regional commercial fishery by weight in 1994. The Gulf Fisheries landing was 20% of the national total by weight and 20% by value. Most commercial species harvested from Federal waters of the Gulf of Mexico are considered to be at or near an over fished condition. Continued fishing at the present levels may result in rapid declines in commercial landings and eventual failure of certain fisheries. Commercial landings of traditional fisheries, such as shrimp, red snapper, and spiny lobster, have declined over the past decade despite substantial increases in fishing effort. Commercial landings of recent

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## 2. DESCRIPTION OF AFFECTED ENVIRONMENT

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fisheries, such as shark, black drum, and tuna, have increased exponentially over the past five years, and those fisheries are thought to be in need of conservation.

Nearly all species significantly contributing to the Gulf of Mexico's commercial catches are estuarine dependent. The degradation of inshore water quality and loss of Gulf wetlands as nursery areas are considered significant threats to commercial fishing. Conflicts between fishermen using fixed gear (traps) and mobile gear (trawls) continue to be a problem in some parts of the Gulf. Natural catastrophes may change the physical characteristics of offshore, near shore and inshore ecosystems and destroy fishing gear and shore facilities.

The Gulf of Mexico shrimp fishery is the most valuable in the United States accounting for 71.5% of the total domestic production. Three species of shrimp - brown, white, and pink - dominate the landings. The status of the stocks are as follows: (1) brown shrimp yields are at or near the maximum sustainable levels; (2) white shrimp yields are beyond maximum sustainable levels with signs of over fishing occurring; and (3) pink shrimp yields are at or beyond maximum sustainable levels.

### **B. SHIPPING**

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

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

The drilling rig and each of the marine vessels servicing this operation will be equipped with all U.S. Coast Guard required navigational safety aids to alert ships of its presence in all weather conditions.

## 2. DESCRIPTION OF AFFECTED ENVIRONMENT

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### C. PLEASURE BOATING, SPORT FISHING AND RECREATION

The northern Gulf of Mexico coastal zone is one of the major recreational regions of the United States, particularly for marine fishing and beach activities. Gulf Coast shorelines offer a diversity of natural and developed landscapes and seascapes. Major recreational beaches, and wildlife lands, as well as designated preservation areas, such as national seashores, parks, beaches, and wildlife lands, as well as designated preservation areas, such as historic and natural sites and landmarks, wilderness areas, wildlife sanctuaries, and scenic rivers. Gulf Coast residents and tourists from throughout the nation, as well as from foreign countries, use these resources extensively and intensively for recreational activity. Commercial and private recreational facilities and establishments, such as resorts, marinas, amusement parks, and ornamental gardens, also serve as primary-interest areas.

Predominant among public recreation areas abutting the Gulf of Mexico are Padre Island National Seashore and Gulf Islands National Seashore. These seashores account for approximately 110 miles of exposed Gulf beachfront, which accommodates over 1.5 million recreational visits a year. Besides beaches, these seashores contain nationally significant forts, shipwrecks, wetlands, lagoons and estuaries, sea grasses, fish and wildlife and archaeological sites.

Other national resource lands like coastal components of the National Wildlife Refuge System exemplified by Bon Secour National Wildlife Refuge in Alabama's Baldwin and Mobile Counties and the recently established Grand Bay National Wildlife Refuge with lands along the Mississippi and Alabama coast, harbor wildlife and habitat worthy of national management and protection.

The two major recreational areas most directly associated with and potentially affected by offshore leasing are the offshore marine environment and coastal shorefront of the adjoining states. The major recreational activity occurring on the OCS is recreational fishing and diving. A special report by Schmied and Burgess (1987) indicates there are about 4 million resident participants in marine recreational fishing and over 2 million tourists who angle for Gulf marine species. According to NMFS, over 40 % of the nations marine recreational fishing catch comes from the Gulf of Mexico, and marine anglers in the Gulf made over 15 million fishing trips in 1991, exclusive of Texas. Texas marine anglers using private boats expended over 4.5 million man-hours to land about 1.5 million saltwater fish during the 1990-1991 fishing years.

Marine recreational fishing trips and catch along the Gulf coast had been declining for several years but began to rebound in 1991. Speckled trout is the most sought sport fish in coastal marine waters; whereas, snapper and mackerel are some of the more popular offshore sport fish. Marine recreational fishing in the Gulf Region from Texas to Alabama is a major industry important to these state's economies. The marine recreational fishing industry accounts for an estimated \$769 million in sales and employment for over 15,000 people, earning more than \$158 million annually.

## 2. DESCRIPTION OF AFFECTED ENVIRONMENT

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The coastal shorelines of the central and western planning areas contain extensive public park and recreation areas, private resorts and commercial lodging. Most of the outdoor recreational activity focused on the Gulf shorefront is associated with accessible beach area. Beaches are a major inducement for coastal tourism, as well as a primary resource for resident recreational activity. Recreational resources, activities, and expenditures are not constant along the Gulf of Mexico shorefront, but are focused where public beaches are close to major urban centers. Beach use is major economic factor for many Gulf coastal communities, especially during peak-use seasons in the spring and summer. Tourism in the coastal zone of the five Gulf Coast States has been valued at an estimated \$20 billion/year.

### D. POTENTIAL OR KNOWN CULTURAL RESOURCES

Archaeological resources are any prehistoric or historic site, building, structure, object, or feature that is manmade or modified by human activity. Significant archaeological resources are defined in 36 CFR 800, Section 60.6. The MMS previously has contacted the State Historic Preservation Officers for all Gulf Coast States and requested them to provide a list of those National Register of Historic Places that are in their State's coastal zones and that could be affected by OCS leasing activities.

With the exception of the Ship Shoal Lighthouse, **historic archaeological resources** on the OCS consist of shipwrecks. Management of this resource was accomplished by establishing a high-probability zone for the occurrence of historic shipwrecks. A recently completed Texas A& M University study has (Garrison et al., 1989) updated the shipwreck database. Statistical analysis of over 4,000 potential shipwrecks in the northern Gulf indicated that many of the OCS shipwrecks occur in clustered patterns related mainly to navigation hazards and port entrances. Geomorphic features that have a high probability for associated **prehistoric archaeological resources** in the Central and Western Gulf include barrier islands and back-barrier embayments, river channels and associated floodplains and terraces, and salt dome features.

An archaeological survey of West Cameron Blocks 395 & 396, the surface locations for Wells "A", "B" and "C" has been conducted. High-resolution geophysical survey data was used to evaluate for evidence of historic shipwrecks and high probability areas for prehistoric archaeological sites associated with formerly sub aerially exposed landforms. The lease tract lies in the MMS Zone 2, an area where the potential for significant historic period shipwrecks is considered low. However, seven (7) magnetic anomalies, which were recorded, could represent a shipwreck, as well as the more likely modern debris. These magnetic anomalies will be avoided by a radius of 250 feet until their nature, age and significance can be ascertained.

A review of lists and charts published by the U. S. Department of Transportation, the National Ocean Service and CEI, as well as files maintained by the MMS indicates that no shipwrecks have been recorded in West Cameron Blocks 395 & 396, although a number of wrecks have been reported in the areas around the Block since colonial times whose locations remain unconfirmed.



## 2. DESCRIPTION OF AFFECTED ENVIRONMENT

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Correlations between prehistoric archeological sites and geomorphic features on the Gulf Coastal Plain have shown that certain landforms were attractive habitation and resources utilization site. Such features include the natural levees, margins, point bars, and terraces of alluvial streams, the margins of lakes and estuaries, relict beach ridges, and the crests of surficially exposed salt domes. The identification of such features on presently submerged portions of the shelf would indicate high probability areas for prehistoric archeological sites.

The profiler data indicate that the sub bottom sediments are well stratified, conformable and nearly flat-lying to subbottom depths in excess of 1000 feet.

The evaluation of the high-resolution geophysical survey data from West Cameron Blocks 395 & 396, the surface locations for Wells "A", "B" and "C", indicates that the probability of locating the presence of significant prehistoric cultural resources in the block is assessed as "extremely poor". The blocks lie in the MMS Zone 2, an area where the potential for significant historic period shipwrecks is considered low. An archaeological evaluation was performed on the blocks and is being submitted as part of the High-Resolution Geophysical Survey Report for the lease.

Remington, as a prudent operator, will avoid all sites, structures, or objects of historical or archaeological significance. Such findings will be reported and every reasonable effort will be made to preserve and protect the cultural or archaeological resource.

### **E. ECOLOGICALLY SENSITIVE FEATURES**

Coastal barriers of the Western and Central Gulf Coast consist of relatively low landmasses that can be divided into servile interrelated environments. The beach itself consists of the foreshore and backshore. The non-vegetated foreshores slope up from the ocean to the beach berm-crest. The backshore may occasionally be absent due to storm activity. If present, the backshore is found between the beach berm-crest and the dunes and may be sparsely vegetated. The dune zone of a barrier landform can consist of a single dune ridge, several parallel dune ridges, or a number of curving dune lines that are stabilized by vegetation. These elongated, narrow landforms are composed of sand and other unconsolidated, predominantly coarse sediments that have been transported and deposited by waves, currents, storm surges and winds.

When Gulf water levels are elevated by storms, water will overwash a coastal barrier. This action will create over wash fans or terraces behind and between the dunes. With time, these terraces will be vegetated by opportunistic species. Along more stable barriers, the area behind the dunes consists of broad flats that support scrubby woody vegetation. Saline or freshwater ponds may be found among the dunes on the landward flats. Landward, these flats may grade into wetlands and intertidal mud flats that fringe the shore of lagoons, islands and embayments. In other areas, these barriers may grade into scrub or forest habitat of the mainland, with no bay or lagoon separating the two landforms.

## 2. DESCRIPTION OF AFFECTED ENVIRONMENT

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Habitats found among the coastal barrier landforms provide a variety of niches that support many avian, terrestrial, aquatic and amphibious species, some of which are endangered or threatened. Stability of these habitats is primarily dependent upon the rates of geodynamic change for each coastal vicinity. The major sources of pressure that cause barrier landforms to change are storms, subsidence, delta abandonment and human activity.

Barrier landforms of these coasts are continually adjusting their configuration in response to prevailing or changing environmental conditions. Landform changes can be seasonal and cyclical, such as seen with the transitional movement of sand onshore during the summer and offshore during the winter due to seasonal wave energy differences.

Changes in landforms can also be non-cyclically progressive. As headlands and beaches are eroded away, their sediments are reworked. Under site-specific conditions, sandy sediments are transported laterally along the shoreline forming sand spits to the side of headlands or islands. As these sand spits extend themselves, they may encap marshes or previously open shallow Gulf waters. By separating inshore waters from Gulf waters and slowing the distribution of freshwater into the Gulf, the movement of barrier landforms can contribute to the area of estuarine habitat available along a coast.

Accumulations and movements of the sediments that make up barrier landforms are often described in terms of transgressive and regressive sequences. Transgressions and regressions are related to local relative sea-level change and rates of sedimentation and erosion. A transgressive sequence is one in which the shore moves landward and marine deposits form on terrestrial sediments. In contrast, a regressive sequence is one in which terrestrial sediments are deposited over marine deposits as the land builds out into the sea. Both transgressive and regressive barriers occur in the Central and Western Gulf of Mexico.

From east to west, headlands found on the barrier coast of the Western and Central Gulf include Baldwin County Headland in Alabama, the barrier islands of Mississippi Sound, Chandeleur Island, the Modern Mississippi River Delta and its developing barrier islands, the Bayou Lafourche Headland and accompanying barrier islands, Isles Dernieres, the Cheniere Plain of Louisiana and Texas, Trinity River Delta, Brazos -Colorado River Delta and its accompanying barrier islands, barrier islands of Espiritu Santo Bay and Laguna Madre and Rio Grande Delta. The Mississippi Sound barrier islands are relatively young, having formed some 3,000 to 4,000 years ago as a result of shoal-bar aggradation. The islands are well vegetated by southern maritime climax forest of pine and palmetto. The Islands generally are regressive with high beach ridges and prominent sand dunes. The Mississippi Sound Islands are separated from each other by tidal inlets with deep, wide channels. These channels have associated ebb and flood tidal deltas. Shoals are adjacent to all the barriers. The barriers are separated from the mainland by Mississippi Sound.

Louisiana has the most rapidly retreating beaches in the nation. The statewide average for 1956-1978 was 8.29 m/yr (van Beek and Meyer-Arendt, 1982). The sand beach formed between the Gulf and Bay Marchand retreated landward at rates of 18-23 m/yr between 1887 and 1978

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## 2. DESCRIPTION OF AFFECTED ENVIRONMENT

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(Penland and Suter, 1988). The average retreat rate for Cameron Beach between the 1880's and 1980's has ranged from 10 to 20 m/yr (Boyd and Penland, 1988).

The coast of the Chenier Plain is fronted by sand beaches and coastal mudflats. The source of mud is the discharge of the Mississippi and Atchafalaya Rivers. Their fine sediments drift westward with the prevailing near shore currents. Fluid mud extends from the seaward edge of the marsh grasses to a few hundred meters offshore. Although only thin sand beaches occur along the Chenier Plain, resting against the marsh, much of the Chenier coast is fairly stable.

The Texas coast between Louisiana and Rollover Pass is a physiographic continuation of the Chenier Plain. Here, thin accumulations of sand, shell and caiche nodules make up beaches that are migrating landward over tidal marshes. These beaches are narrow and have numerous over wash features and local poorly developed sand dunes.

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

Louisiana contains most of the Gulf coast wetlands. The deterioration of coastal wetlands, particularly in Louisiana, is an issue of concern. In Louisiana, the annual rate of wetlands loss has been measured at 130 km<sup>2</sup> for the period 1955-1978. A recent study has shown that the current rate of land loss on the Deltaic Plain area of the Louisiana coast has decreased to about 90 km<sup>2</sup> per year.

Several factors contribute to wetlands loss in coastal Louisiana, including sediment deprivation (a result of a 50 % decrease in the suspended-sediment load of the Mississippi River since the 1950's and the channelization of the river, which has prevented overbank sediment deposition), subsidence and sea-level rise, and the construction of pipeline and navigation canals through the wetlands.

In Mississippi and Alabama, the mainland marshes behind Mississippi Sound occur as discontinuous wetlands associated with estuarine environments. The most extensive wetland areas in Mississippi occur east of the Pearl River delta near the western border of the state and in the Pascagoula River delta area near the eastern border of the State. The wetlands of Mississippi seem to be more stable than those in Louisiana, reflecting the more stable substrate and more active sedimentation per unit of wetland area. Also, there have been only minor amounts of canal dredging and levying in the Mississippi wetlands.

## 2. DESCRIPTION OF AFFECTED ENVIRONMENT

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In Texas, coastal marshes occur along the inshore side of barrier islands and bays on river deltas. Salt marshes consisting primarily of smooth cordgrass occur at lower elevations and at higher salinities. Brackish marshes occur in transition areas landward of salt marshes on slightly higher elevations and at greater distances from saltwater bodies. Freshwater marshes of the region occur primarily along the major rivers and tributaries. Sparse bands of black mangroves are also found in the region. Broad expanses of emergent wetland vegetation and hypersaline waters to the south. In these areas, smooth cordgrass, the most common salt-marsh grass elsewhere in the Gulf occurs rarely in salt marshes. Common salt-marsh plants here include more salt-tolerant species such as *batis maritima* and *salicornia*.

Wetland changes observed in Texas during the past several decades appear to be driven by subsidence and sea-level increases. Open-water areas are appearing in wetlands along their seaward margins, while new wetlands are encroaching onto previously non-wetland habitat along the landward margin of wetland areas on the mainland, on the back side of barrier islands, and onto spoil banks. In addition, wetlands are being affected by human activities including canal dredging, impoundments, and accelerated subsidence caused by fluid withdrawals. The magnitudes of these wetland acreage changes in most of Texas have not been determined at the present time.

A recent study funded by MMS entitled "Causes of Wetland Loss in the Coastal Central Gulf", examined coastal ecosystems of the Northern Gulf of Mexico region and how wetland habitats have changed as a result of natural processes and man's activities thereon. The study's primary focus was on assessing and quantifying the direct and indirect impacts of OCS-related activities on wetland areas. Canal construction for pipelines and navigation has been the major OCS-related impacting factor.

Direct impacts were defined as those physical alterations that are the direct result of canal construction. Direct impacts include wetlands resulting from the actual dredging of the canal, the disposal of dredged spoil and any subsequent widening of the canal as a result of channel-bank erosion. Based on the study's findings, OCS-related direct impacts have accounted for 16% of all the direct impacts that have occurred in Louisiana's wetlands. Direct OCS impacts account for only 4% - 5% of the total wetlands loss during the period 1955\1956 to 1978. In recent years, more stringent construction regulations have required that pipelines installed across wetlands be backfilled with spoil material immediately after the pipeline is emplaced in its ditch. Direct impacts per unit length of OCS-related navigation canals are about 20 times greater than OCS pipeline canals. Indirect impacts are those that occur as a result of hydrologic changes (salinity and drainage regimes) brought on by canal construction. Indirect impacts from canals associated with the OCS program have been estimated as accounting for 4% - 13% of the total amount of wetland loss that occurred in coastal Louisiana between 1955/1956 to 1978.

There are an estimated 3 million ha of submerged seagrass beds in the exposed, shallow coastal waters of the northern Gulf of Mexico. An additional 166,000 ha are found in natural embayments and are not considered exposed to OCS impacts. The area off Florida contains approximately 98.5% of all coastal seagrasses in the northern Gulf of Mexico. Texas and

## 2. DESCRIPTION OF AFFECTED ENVIRONMENT

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Louisiana contains approximately 0.5 % of the Gulf seagrasses. Mississippi and Alabama have the remaining 1 % of seagrass beds.

Seagrass beds grow in shallow, relatively clear and protected waters with predominantly sand bottoms. Their distribution depends on an interrelationship among a number of environmental factors that include temperature, water depth, turbidity, salinity and substrate suitability. Primarily because of low salinity and high turbidity, the luxuriant growth of seagrasses and the concomitant high diversity of associated marine species are found only within a few scattered protected locations in the Central and Western Gulf of Mexico. The turbid waters and soft highly organic sediments of Louisiana's estuaries limit widespread distribution of seagrass beds. Consequently, there are only a few areas in coastal Louisiana where seagrass beds occur. The most extensive beds occur in Chandeleur Sound. Seagrasses also occur within Mississippi Sound.

Offshore seagrasses are not conspicuous in the Central and Western Gulf; however, fairly extensive beds may be found in estuarine areas behind barrier islands throughout the Gulf. Seagrasses would be continuous around the entire periphery of the Gulf if it were not for the adverse effects of turbidity and low salinity of the Mississippi River effluent from the delta to Galveston.

In general, the vast majority of bottom substrate available to benthic communities in the Central and Western Gulf consists of soft, muddy bottoms; the benthos here is dominated by polychaetes. Benthic habitats on the continental shelf at most risk to potential impacts from oil and gas operations are those of the topographic features and the pinnacle trend live bottom.

The northeastern portion of the Central Gulf of Mexico exhibits a region of topographic relief, the "pinnacle trend", found at the outer edge of the Mississippi-Alabama shelf between the Mississippi River and DeSoto Canyon. The pinnacles appear to be carbonate reefal structures in an intermediate stage between growth and fossilization. The region contains a variety of features from low-relief rocky areas to major pinnacles, as well as ridges, scraps and relict patch reefs. It has been postulated that these features formed during the last sea level low stages of the most recent ice age. The heavily indurated pinnacles provide a surprising amount of surface area for the growth of sessile invertebrates and attract large numbers of fish.

In the pinnacle trend, the bases of the pinnacles rise from the seafloor between 53 and 110 m with vertical relief occasionally in excess of 20 m. The features of the pinnacle trend offer a combination of topographic relief and hard substrate for the attachment of sessile organisms and therefore, have a greater potential to support significant live-bottom communities than surrounding areas on the Mississippi-Alabama Shelf.

Chemosynthetic clams, mussels, and tube worms, similar to the hydrothermal vent communities of the eastern Pacific have been discovered in the deep waters of the Gulf. These cold-water communities are associated with seismic wipe-out zones and hydrocarbon seep areas between water depths greater than 400 m and 1000 m. Chemosynthetic communities have been a source of controversy over the past few years, in part because of the unusual environment requirements and

## 2. DESCRIPTION OF AFFECTED ENVIRONMENT

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hypothesized sensitivity of the communities to oil and gas activities. The MMS requires site-specific surveys of bottom-disturbing actions in water depths greater than 40 m in order to judge the potential of the region for supporting chemosynthetic organisms. In accordance with NTL 99-11, Remington will review this Block for any site-specific activities.

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

Seven distinct biotic zones on the banks of the Gulf have been identified. None of the banks contain all of the seven zones. The zones are divided into four categories dependent upon the degree of reef-building activity in each zone. The Central Gulf of Mexico lists 16 topographic features and the Western Gulf of Mexico list 23 topographic features. None of those listed are in or near the vicinity of the proposed operations in West Cameron Blocks 395 & 396.

### **F. PIPELINES AND CABLES**

As a prudent operator, Remington will conduct its operations in accordance with the provisions specified in Minerals Management Service Notice to Lessees 83-03 in order to avoid all pipelines and / or cables in the vicinity of the proposed locations.

### **G. OTHER MINERAL USES**

The activities proposed for West Cameron Blocks 395 & 396 will have no direct or indirect impact on other mineral uses.

### **H. OCEAN DUMPING**

The Marine Pollution Research and Control Act of 1987 implements Annex V of the International Convention for the Prevention of Pollution from Ships. Most of the law's regulatory provisions became effective on December 31, 1988. Under provisions of the law, all ships and watercraft, including all commercial and recreational fishing vessels, are prohibited from dumping plastics at sea. The law also severely restricts the legality of dumping other vessel-generated garbage and solid waste items both at sea and in U. S. navigable waters. The USCG is responsible for enforcing the provisions of this law and has developed final rules for its implementation, calling for adequate trash reception facilities at all ports, docks, marinas, and boat launching facilities.

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Under the provisions of Title 33 CFR 151.73 all fixed and floating platforms or all drilling rigs, manned production platforms, and support vessels operating under a Federal oil and gas lease are

## 2. DESCRIPTION OF AFFECTED ENVIRONMENT

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required to develop a Waste Management Plan in accordance with Title 33 CFR 151.57 and off post placards reflecting MARPOL, Annex V dumping restrictions. Waste Management Plans will require oil and gas operators to describe procedures for collecting, processing, storing, and discharging garbage and to designate the person who is in charge of carrying out the plan. These rules also apply to all oceangoing ships of 12 m or more in length that are documented under the laws of the U.S. or numbered by a State and that are equipped with a galley and berthing. Placards noting discharge limitations and restrictions, as well as penalties for noncompliance, apply to all boats and ships 8 m or more in length. Furthermore, the Shore Protections Act of 1988 requires ships transporting garbage and refuse to assure that garbage and refuse are properly contained on board so that it will not be lost in the water from inclement wind or water conditions.

The disposal of oil and gas operational wastes is managed by USEPA through regulations established under three Federal Acts. The Resource Conservation and Recovery Act (RCRA) provides a framework for the safe disposal of discarded materials, regulating the management of solid and hazardous wastes. The USEPA has exempted many oil and gas wastes from coverage under hazardous wastes regulations under Subtitle C of RCRA. If covered, such waste would be more stringently regulated under hazardous wastes rules, i.e., industry would be responsible for the wastes from the generation to their final disposal. Exempt wastes include those generally coming from an activity directly associated with the drilling, production, or processing of hydrocarbon product. Nonexempt oil and gas wastes include those not unique to the oil and gas industry and used in the maintenance of equipment.

The direct disposal of operational wastes into offshore waters is limited by USEPA under the authority of the Clean Water Act, and when injected underground, oil and gas operational wastes are regulated by USEPA's third program, the Underground Injection Control Program.

A general NPDES permit, based on effluent limitation guidelines, is required for direct disposal of operational wastes into offshore waters. The major discharges from offshore oil and gas exploration and production activities include produced water, drilling fluids and cuttings, ballast water, and storage displacement water. Minor discharges from the offshore oil and gas industry include drilling-waste chemicals, fracturing and acidifying fluids and well completion and workover fluids; and from production operations, produced sand, deck drainage, and miscellaneous well fluids (cement, BOP fluid); and other sanitary and domestic wastes, gas and oil processing wastes, and miscellaneous discharges.

## 2. DESCRIPTION OF AFFECTED ENVIRONMENT

### I. ENDANGERED AND THREATENED SPECIES AND CRITICAL HABITAT

Twenty-nine species of cetaceans, one sirenian, and one exotic pinniped (California sea lion) have been sighted in the northern Gulf of Mexico. Seven species of baleen whales have been reported in the Gulf of Mexico. These include the northern right whale and six species of balaenopterid whales (blue, fin, sei, Bryde's minke and humpback). Sightings and strandings of these species in this area are uncommon, though historical sightings and strandings census data suggest that they more often frequent the north-central Gulf region in comparison to the other areas of the Gulf.

Twenty-two species of toothed whales and dolphins have been reported in the Gulf of Mexico. These include the great sperm whale; pygmy and dwarf sperm whales; four species of beaked whales (Cuvier's, Blainville's and Sowerby's); killer whale; false and pygmy killer whale; short-finned pilot whale; grampus (Risso's dolphin); melonheaded whale; and nine other species of delphinid dolphins (bottlenose, Atlantic spotted, pantropical spotted, spinner, clymene, striped, common, Fraser's and rough-toothed). Many of these species are distributed in warm temperate to tropical waters throughout the world.

Six species of baleen whales (northern right, blue, fin, sei, minke and humpback) and one species of toothed whales (sperm whale) found within the Gulf of Mexico are currently listed as endangered species under the provisions of the U. S. Endangered Species Act of 1973. All are uncommon to rare in the Gulf except for the sperm whale.

The Alabama, Choctawhatchee and Perdido Key beach mice, subspecies of the oil field mouse, occupy restricted habitats in the mature coastal dunes of Florida and Alabama. The beach mice feed nocturnally on the lee side of the dunes and remain in burrows during the day. Their diet consists mainly of beach grass and sea oats, and sometimes sea rocket and invertebrates.

The green turtle population in the Gulf once supported a commercial harvest in Texas and Florida, but the populations has not completely recovered since the collapse of the fishery around the turn of the century. Green turtles prefer depths of less than 20 m, where seagrasses and algae are plentiful. Leatherbacks, the most oceanic of the marine turtles, occasionally enter shallow water in more northern areas. The hawksbill is the least commonly reported marine turtle in the Gulf. Texas is the only Gulf state where stranded turtles are regularly reported. The Kemp's ridley sea turtle is the most imperiled of the world's marine turtles. Nesting in the United States occurs infrequently on Padre and Mustang Islands in south Texas from May to August. Female Kemp's ridleys appear to inhabit near shore areas and congregations of Kemp's have been recorded off the mouth of the Mississippi River.

The loggerhead sea turtle occurs worldwide in habitats ranging from estuaries to the continental shelf. Aerial surveys indicate that loggerheads are common in less than 50 m depths, but they are also found in deep water. In the Gulf of Mexico, recent surveys indicate that the Florida Panhandle accounts for approximately one-third of the nesting on the Florida Gulf Coast. In the Central Gulf, loggerhead nesting has been reported on Gulf Shores and Dauphin Island, Alabama; Ship Island, Mississippi; and the Chandeleur Islands, Louisiana. Nesting in Texas



## 2. DESCRIPTION OF AFFECTED ENVIRONMENT

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occurs primarily on North and South Padre Islands, although occurrences are recorded throughout coastal Texas.

Those birds most susceptible to oiling either raft at sea, such as gulls and terns, or dive when disturbed, such as cormorants and boobies. Migrant and non-migrant coastal and marine birds populate the beaches and wetlands of the northern Gulf of Mexico. This broad category consists of three main groups: waterfowl, wading birds, and marine birds. Feeding habitats include the waters and coastal shores of the open Gulf, bays and estuaries, brackish and freshwater wetlands, as well as coastal farmlands and landfills.

The piping plover is endangered in the Great Lakes watershed and threatened elsewhere. Its historic populations have remained depressed because of losses to their beach and nesting habitat. On the Gulf Coast, Texas and Louisiana have the largest numbers and highest wintering densities. There, the plover prefers intertidal flats and beaches for its habitat. Piping plovers are susceptible to contact with spilled oil because of their preference for feeding in intertidal areas.

The whooping crane breeding population winters along the Texas coast from November to April, occupying the coastal marshes of Aransas, Calhoun, and Matagorda Counties. Portions of these counties and the Aransas National Wildlife Refuge have been designated as critical habitat for the whooping crane.

The Arctic peregrine falcon is a subspecies of the peregrine falcon, which breeds in Northern American tundra. A portion of the population migrates along the Central, Mississippi and Eastern Flyways to winter on the U. S. and Mexican gulf coasts. The birds concentrate along beaches and barrier islands.

Bald eagles are found throughout the Gulf States. Bald eagles actively nest in upland and wetland areas 30 - 50 miles from the coast throughout the Gulf. Bald eagles inhabit areas near water although they rarely nest on the coast. They prey on birds, fish and small mammals. Historically, two nestings have occurred along the Mississippi coast. In northwestern Florida, coastal nesting occurs at St. Vincent, St. Marks and lower Suwannee National Wildlife Refuges.

Brown pelicans have been removed from the Federal endangered species list in Alabama and Florida, but remain listed as endangered in Mississippi, Louisiana and Texas. Their decline is primarily the result of hatching failure caused by ingestion of fish containing pesticides. Nesting occurs in colonies on coastal islands. Six brown pelican rookeries have been documented in Louisiana: on Queen Bess, North Last, Calumet-Timbalier and Grand Gosier islands, and at South Pass. There is also a small rookery on Pelican Island in Nueces County, Texas. Unsuccessful nesting has occurred on Sunset Island in Matagorda Bay, and 40 hatchlings have been reintroduced to San Bernard National Wildlife Refuge. Brown pelicans inhabit the coast, rarely venturing into freshwater or flying more than 32 km (20 miles) offshore. They feed by plunge-diving to catch fish near the surface.

## 2. DESCRIPTION OF AFFECTED ENVIRONMENT

### J. SOCIOECONOMIC

In relation to oil and gas activity in the Gulf of Mexico, the exploration and production of crude oil and gas is classified as a primary industry. Classified as secondary industries are activities associated with the processing of crude oil and gas refineries, natural gas plants, and petrochemical plants.

The production of OCS oil and gas, particularly offshore Louisiana, has been a major source of revenue in the study area since 1954. Data from the 1990 Census show that the average annual payroll associated with oil and gas activities amounts to approximately \$3.3 billion for the Gulf of Mexico Region (\$2.7 billion for the Central Gulf, \$0.6 billion for the Western Gulf). Average annual tax dollars generated per employee in the offshore oil and gas program are estimated at 8% of payroll revenues. Thus, State and local taxes generated annually by the Federal offshore oil and gas program are estimated at \$217.0 million from the Central Gulf and \$50.9 million from the Western Gulf.

Job estimates for the year 1995 show that 31,700 jobs are directly or indirectly dependent on the offshore program. Approximately 81% of these jobs are associated with activity in the Central Gulf and 19% are related to the Western Gulf. Nearly all offshore-related employment in the Central Gulf is due to activity offshore Louisiana; in addition, offshore activity in other areas of the Gulf also generates employment in Louisiana. Estimates of direct employment offshore are 25,677 workers in the Central Gulf and 6,023 workers in the Western Gulf.

The offshore oil exploration industry including oil companies, drilling contractors and oilfield suppliers provide a major input to Louisiana's economy. A number of ports in the Central and Western Gulf have developed into important centers for offshore support. The most active of these in Louisiana are (from east to west) Venice, Fourchon, Intracoastal City and Cameron, Louisiana. The onshore support base for operations in West Cameron Blocks 395 & 396 will be located at Cameron, Louisiana.

### 3. UNAVOIDABLE ADVERSE ENVIRONMENTAL IMPACTS

#### A. WATER QUALITY

As a result of the proposed action, marine waters could be degraded from bottom disturbances, oil spills and waste discharges. Bottom disturbances from platform and pipeline emplacements and removals are expected to result in minor, localized, temporary impacts to water quality due to sediment re-suspension. Oil spill incidents are expected to have a negligible impact on regional water quality, alter surface water for only a short duration, two to three months, and will affect only a very small area of offshore waters at any one time. More stringent conditions, required in the new NPDES permits for waste discharges from the OCS oil and gas industry, are expected to eliminate the biological and ecological impacts that were documented to have occurred in the past from discharges. The contribution from waste discharges associated with CPA to regional, long-term changes in offshore water quality is expected to be negligible.

#### B. EFFECTS ON MARINE ORGANISMS

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

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

#### C. EFFECTS ON THREATENED OR ENDANGERED SPECIES

Activities resulting from the proposed action have a potential to cause detrimental effects on endangered cetaceans. These cetaceans could be impacted by operational discharges, helicopter and vessel traffic, platform noise, explosive platform removals, seismic surveys, oil spills, and oil-spill response activities. The effects of the majority of these activities are estimated to be sublethal. The impacts could cause acute or chronic physiological stress, alter normal behavior and result in some degree of avoidance, either temporary or permanent, of the impacted area(s). Lethal impacts are expected to be rare for all marine mammals, with the most likely impacts resulting from vessel collision with lethargic individual animals at the surface. The unexpected and unintentional removal of individuals of any species is considered an incidental take. Recovery times will vary with species size, gestation period and rates of reproductive activity. Oil spills of any size are expected to seldom contact endangered and threatened cetaceans.

Activities resulting from the proposed action have a potential to affect Alabama, Choctawhatchee, and Perdido Key beach mice detrimentally. Beach mice could be impacted by oil spills, oil-spill response activities, beach trash and debris and coastal habitat degradation. Deleterious effects are not expected because of the low probability of spill occurrence and due to the protected species and habitat requirements for cleanup under the Oil Pollution Act of 1990. Unless an oil spill would occur in conjunction with a strong storm surge, there is an estimated probability of less than 0.5% if contact to occur with the beach mice or their habitats.

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### 3. UNAVOIDABLE ADVERSE ENVIRONMENTAL IMPACTS

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Activities resulting from the proposed action have a potential to affect marine turtles detrimentally. Marine turtles could be impacted by anchoring, structure installation, pipeline emplacement, dredging, operational discharges, OCS-related trash and debris, vessel traffic, explosive platform removals, oil-spill response activities and oil spills. The effects of the majority of these activities are expected to temporarily disturb their habitats but deaths are expected to be rare. Disturbances are expected to be temporary and marine turtles are expected to recover from within a period of weeks to months. The extent and severity of effects from any oil spill are expected to be lessened by coastal oil-spill contingency.

The Gulf of Mexico is populated by resident and migratory species of coastal and marine birds. This broad category consists of five main groups, seabirds, shorebirds, wading birds, marsh birds and waterfowl. The major impact-producing factors related to the proposed action include air emissions, oil spills, oil-spill response activities, degradation of water quality resulting from OCS discharges, OCS helicopter and service vessels traffic and noise, habitat loss and modification resulting from pipeline landfalls and coastal facility construction and discarded trash and debris from service-vessels and OCS Structures. Effects of the major impact-producing factors on coastal and marine birds would be periodic disturbance and temporary displacement of localized groups and individuals from proposed activities. Decreases in number of adults and / or nests could occur as a result of oil spills and spill related coastal habitat loss or degradation. Groups experiencing the loss of individuals would require up to several years to recover to a pre-disturbance condition, depending on the species and the existing conditions.

The brown pelican, arctic peregrine falcon, bald eagle and piping plover may be impacted by helicopter and service-vessel traffic, offshore pipeline landfalls, entanglement in and ingestion of offshore oil and gas related plastic debris, and oil spills. The effects of these activities are expected to be sublethal causing temporary disturbances and displacement of individual or localized groups inshore. Chronic sublethal stress, however, is often undetectable in birds and can be masked for some period of time. It can serve to weaken individuals and expose them to infection and disease. Lethal effects result primarily from uncontained inshore oil spills and associated spill-response activities and are especially serious for endangered species. Any reduction in population size represents a threat to their existence. The net effect will be the alteration of species composition and possibly the reduction of the overall capacity of the disturbed area(s) in general. It is assumed that an oil spill in the CPA will rarely contact and affect the feeding, resting or nesting habitats for endangered birds. The effect from a spill is expected to be negligible.

The Gulf sturgeon could be impacted by oil spills resulting from the proposed action. The impact could cause nonfatal irritation of the gill epithelium and an increase of liver function for less than a month. However, oil spills of any size will rarely contact the fish.

### 3. UNAVOIDABLE ADVERSE ENVIRONMENTAL IMPACTS

#### **D. WETLANDS AND BEACH**

The major impact-producing factors associated with the proposed action that could affect barrier landforms include oil spills, pipeline emplacement, navigation canal dredging and maintenance dredging and support infrastructure. Impacts from onshore and near shore construction of OCS-related infrastructure (pipelines landfalls, navigation channels, service bases, platform yards, etc.) are not expected to occur, because no new infrastructure construction is anticipated as a result of the proposed action.

The proposed activity is not expected to result in permanent alternations of barrier beach configurations, except in localized areas downdrift from navigation channels that have been dredged and deepened.

Wetlands include forested wetlands (swamps), tidal marshes, and seagrasses. Swamps and marshes occur throughout the coastal zone. Seagrasses are restricted in distribution to small areas behind barrier islands in Mississippi and Chandeleur Sound. Impact-producing factors resulting from OCS oil and gas activities that could adversely affect wetlands include oil spills, onshore discharge of OCS-produced waters, pipeline placements, dredging of new navigation channels, maintenance dredging and vessel usage of existing navigation channels and construction of onshore facilities in wetland areas.

Offshore oil spills associated with the proposed action can result from platform accidents, pipeline breaks or navigational accidents. Just as the probability of an oil spill impacting coastal beaches is extremely low, an offshore oil spill is unlikely to contact coastal wetlands or seagrasses in the CPA.

The proposed activity is expected to result in a small amount of dieback and mortality of wetlands vegetation as a result of contacts from oil spills. Most of these wetlands will recover within 10 years and the remaining will be converted to open water. Some wetlands are projected to be eroded along channel margins as a result of OCS vessel wake erosion, and some wetlands are projected to be created as a result of beneficial disposal of dredged material from channel-deepening projects.

#### **E. AIR QUALITY**

The potential degrading effects on air quality from onshore and offshore operational activities are platform emissions; drilling activities during exploration, delineation, and development; service vessel operation; evaporation of volatile hydrocarbons from surface oil slicks; fugitive emissions during hydrocarbon venting and offloading.

Emissions of pollutants into the atmosphere for these activities are likely to have minimum impact on offshore air quality because of prevailing atmospheric conditions, emissions heights, and pollutant concentrations. Onshore impact on air quality from emission from OCS activities is estimated to be negligible because of the atmospheric regime, the emission rates, and distance of these emissions from the coastline. The above discussion is based on average conditions;

### 3. UNAVOIDABLE ADVERSE ENVIRONMENTAL IMPACTS

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however, there will be days of low mixing heights and wind speeds that could increase impact levels. These conditions are characterized by fog formation, which in the Gulf occurs about 35 days a year, mostly during winter. Impact from these conditions is reduced in winter because the onshore winds have the smallest frequency (37%) and rain removal is greatest. Summer is the worst time, with onshore winds having a frequency of 61%. Emissions of pollutants into the atmosphere are expected to have concentrations that would not change the onshore air quality classifications.

#### **F. COMMERCIAL FISHING**

The effects of commercial fisheries from activities associated with the proposed action could come from coastal environmental degradation, emplacement of production platforms, underwater OCS obstructions, production platform removals, seismic surveys, oil spills, subsurface blowouts, pipeline trenching and offshore discharges of drilling muds, produced water and naturally occurring radioactive material (NORM).

Since approximately 92 % of commercially harvested species are estuary dependent, coastal environmental degradation resulting from the proposed action, although indirect, has the potential to adversely affect commercial fisheries. The environmental deterioration and effects on commercial fisheries result from the loss of Gulf wetlands as nursery habitat, and from the functional impairment of existing habitat through decreased water quality.

Wetlands and estuaries within the CPA may be affected by OCS-related activities resulting from the proposed action. These include construction of new onshore facilities in wetland areas; pipeline placement in wetland areas; vessel usage of navigation channels and access canals; maintenance of navigation channels; inshore disposal of OCS-generated oil field wastes, and oil and chemical spills from both coastal and offshore OCS-support activities.

The emplacement of production platform with surrounding 100-m navigation safety zone, in water depths of less than 152 m results in the loss of approximately 6 ha of bottom trawling area to commercial fishermen and causes space-use conflicts. Underwater OCS obstructions, such as pipelines, cause gear conflicts that result in losses of trawls and shrimp catch, business downtime and vessel damage. However, all pipelines in water depths less than 61 m will be buried and their locations made public knowledge. Nearly 97% of trawl fishing in the CPA occurs in water depths less than 61 m. Although, Gulf fishermen are experiencing some economic loss from gear conflicts, the economic loss for a fiscal year has historically been less than 1 % of the value of that same fiscal year's commercial fisheries landings. In addition, the Fishermen's Contingency Fund covers most financial losses from gear conflicts.

The effects on the extent of damage from an oil spill to Gulf commercial fisheries is restricted by time and location. Oil spills that contact coastal bays, estuaries and waters of the OCS when pelagic eggs and larvae are present have the greatest potential to affect commercial fishery resources. Migratory species, such as mackerel, cobia, and crevalle, could be impacted if oil spills contact near shore open waters. An oil spill contacting a low energy inshore area would affect localized populations of commercial fishery resources, such as menhaden, shrimp and blue

### 3. UNAVOIDABLE ADVERSE ENVIRONMENTAL IMPACTS

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crabs. Chronic oiling in an inshore area would affect all life stages of a localized population of a sessile fishery resource such as oysters.

For OCS-related oil spills to have an effect on a commercial fishery resource, whether estuary dependent or not, eggs and larvae would have to be abnormally concentrated in the immediate spill area. There is no evidence at this time that commercial fisheries in the Gulf have been adversely affected on a regional population level by spills or chronic oiling. The effect of oil spills on commercial fisheries is expected to cause less than 1 % decrease in commercial populations or in commercial fishing. At the expected level of effect, the resultant influence on Central Gulf fisheries is negligible and will be indistinguishable from natural population variations.

#### **G. SHIP NAVIGATION**

Very little interference can be expected between the drilling unit, structures and marine vessels utilized during exploratory operations and ships that use established fairways. However, at night and during rough weather, fog and heavy seas, ships not using established fairways could collide with the structures.

Approved aids to navigation will be installed on the structure and all marine vessels servicing these operations in accordance with USCG regulations.

#### **H. CULTURAL RESOURCES**

Blocks with a high probability for the occurrence of prehistoric and historic or historic archaeological resources may be found in the Western Gulf. Blocks with a high probability for prehistoric resources may be found landward on a line that roughly follows the 45-m bathymetric contour. These are areas of the northern Gulf of Mexico that are considered to have a high probability for historic period shipwrecks.

The placement of drilling rigs, production platforms and pipelines have the potential to cause a physical impact to prehistoric and / or historic archaeological resources. It may be assumed that a standard rig in less than 457 m of water will directly disturb 1.5 ha of soft bottom; the average platform under the same conditions will directly disturb 2 ha. Pile driving associated with platform emplacement may also cause sediment liquefaction an unknown distance from the piling, disrupting stratigraphy in the area of liquefaction. Pipelines placed in water depths less than 61 m must be buried. Burial depths of 1 m are required with the exception of shipping fairways and anchorage areas, where the requirements are 3.0 m and 4.6 m respectively.

Oil spills have the potential to affect both prehistoric and historic archaeological resources. Impacts to historic resources would be limited to visual impacts and possibly physical impacts associated with spill cleanup operations. Impacts to prehistoric archaeological sites would be the result of hydrocarbon contamination of organic materials, which have the potential to date site occupation through radiocarbon dating techniques as well as possible physical disturbance associated with spill cleanup operations.

### 3. UNAVOIDABLE ADVERSE ENVIRONMENTAL IMPACTS

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The greatest potential impact to an historic archaeological resource as a result of the proposed action would result from a contact between an OCS offshore activity (platform installation, drilling emplacement, dredging or pipeline project) and an historic shipwreck. An NTL for archaeological resource surveys in the Gulf of Mexico Region (NTL91-02) has increased the survey line-spacing density for historic shipwreck surveys from 150m to 50m.

Most other activities associated with the proposed action are not expected to impact historic archaeological resources. No new onshore infrastructure construction or pipeline landfalls are expected as a result of the proposed action. Ferromagnetic debris has the potential to make the magnetic signatures of historic shipwrecks. There is a small chance of contact from an oil spill associated with the proposed action. Furthermore, the major impact from an oil-spill contact on an historic coastal site, such as a fort or lighthouse, would be visual due to oil contamination. These impacts would be temporary and reversible. Maintenance dredging of navigation channels may result in impacts to historic shipwrecks; however, the percentage of OCS use of these channels under the proposed action ranges from less than 0.3% to 2.3% use.

The OCS activity could contact a shipwreck because of incomplete knowledge on the location of shipwrecks in the Gulf. Although this occurrence is not probable, such an event would result in the disturbance or destruction of important historical archaeological information. Other factors associated with the proposed action are not expected to affect historic archaeological resources.

There is only a small probability that an unknown cultural resource exists in the lease area.

Remington, as a prudent operator, agrees that should any site, structure, or object of historical or archaeological significance be discovered during drilling and exploration activities within the lease, such findings would immediately be reported to the Director, Gulf of Mexico OCS Region, and every reasonable effort would be made to preserve and protect the cultural resources from damage until said Director has given directions as to its preservation.

**BEST AVAILABLE COPY**



### 3. UNAVOIDABLE ADVERSE ENVIRONMENTAL IMPACTS

#### I. RECREATION AND AESTHETIC VALUES

The primary impact-producing factors associated with offshore oil and gas exploration and development, and most widely recognized as major threats to the enjoyment and use of recreational beaches, are oil spills, trash and debris. Additional factors such as the physical presence of platforms and drilling rigs can effect the aesthetics of beach appreciation and noise from aircraft can disturb the ambiance of the beach-related recreational experience. All these factors, either individually or collectively, may adversely affect the number and value of recreational beach visits.

Oil spills occurring in the Gulf of Mexico are estimated to dissipate rapidly and that only relatively small fractions are subject to tarball formation because of the chemical properties of many northern Gulf light crude oils. A recent investigation on the abundance and sources of tarballs on the recreational beaches of the CPA concludes that their presence along the Louisiana coastline is primarily related to marine transportation activities and their effect on recreational use is below the level of social and economic concern.

The proposed action is not expected to result in pollution events and near shore operations that may adversely affect the enjoyment of some beach uses on the Louisiana and / or Texas beaches. The proposed operation will have little effect on the number of beach users.

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1. Final Environmental Impact Statement, Proposed Oil and Gas Lease Sales 110 and 112, Gulf of Mexico OCS Region, OCS EIS, MMS 86-0087.
  2. Final Environmental Impact Statement, Proposed Oil and Gas Lease Sales 110 and 112, Gulf of Mexico OCS Region, OCS EIS, MMS 86-0087, visuals.
  3. Final Environmental Impact Statement, Proposed Oil and Gas Lease Sales 113, 112, and 116, Gulf of Mexico OCS Region, OCS EIS, MMS 87-0077.
  4. Final Environmental Impact Statement, Proposed Oil and Gas Lease Sales 118 and 1258, Gulf of Mexico OCS Region, OCS EIS, MMS 88-0044.
  5. Final Environmental Impact Statement, Proposed Oil and Gas Lease Sales 123 and 125, Gulf of Mexico OCS Region, OCS EIS, MMS 89-0053.
  6. Final Environmental Impact Statement, Proposed Oil and Gas Lease Sales 131, 135, and 137, Gulf of Mexico OCS Region, OCS EIS, MMS 90-0042.
  7. Final Environmental Impact Statement, Proposed Oil and Gas Lease Sales 157 and 161, Gulf of Mexico OCS Region, OCS EIS, MMS 95-0058.
  8. Final Environmental Impact Statement, Proposed Oil and Gas Lease Sales 147, 150, and 137, Gulf of Mexico OCS Region, OCS EIS, MMS 90-0065.
  9. Final Environmental Impact Statement, Proposed Oil and Gas Lease Sales 157 and 161, Gulf of Mexico OCS Region, OCS EIS, MMS 95-0058.
  10. Final Environmental Impact Statement, Proposed Oil and Gas Lease Sales 169, 172, 175, 178 and 161, Gulf of Mexico OCS Region, OCS EIS, MMS 97-0010.

## STATEMENT

### **THE PROPOSED ACTIVITIES WILL BE CARRIED OUT AND COMPLETED WITH THE GUARANTEE THAT:**

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.

All operations will be covered by an approved oil spill response plan.

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

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Remington Oil & Gas Corporation  
Initial Exploration Plan  
WEST CAMERON BLOCKS 395 & 396  
LEASES OCS-G 22547 & OCS-G 23767

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SECTION 9

THE COASTAL

ZONE MANAGEMENT

CONSISTENCY CERTIFICATION

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Included in this Section is Attachment "K",

Attachment "L", and Attachment "M"

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**INITIAL EXPLORATION PLAN**

**WEST CAMERON BLOCKS 395 & 396**

**OCS-G 22547 & OCS-G 23767**

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

Arrangements have been made with the State-Times in Baton Rouge, Louisiana to publish a public notice of the proposed activities no later than October 30, 2002.

Additionally, arrangements have been made with Cameron Parish Pilot, DeQuincy, Louisiana to publish a public notice of the proposed activities no later than October 30, 2002.

**REMINGTON OIL & GAS CORPORATION**  
**LESSEE OR OPERATOR**

*Doug Logan /RAS*

\_\_\_\_\_  
Doug Logan  
Land Manager

*October 22, 2002*

\_\_\_\_\_  
Date

**ATTACHMENT "K"**



Initial Exploration Plan  
Remington Oil & Gas Corporation  
OCS-G 22547 & OCS-G 23767, Blocks 395 & 396  
West Cameron Area, Offshore, LA  
Page Two (2)  
October 21, 2002

A copy of the plan described above is available for inspection at the Coastal Management Division Office located on the 10th floor of the State Lands and Natural Resources Building, 625 North 4th Street, Baton Rouge, Louisiana. Office hours: 8:00 AM to 5:00 PM, Monday through Friday.

The public is requested to submit comments to the Louisiana Department of Natural Resources Coastal Management Division, Attention: OCS Plans, Post Office Box 44487, Baton Rouge, Louisiana 70804-44487. Comments must be received within 15 days of this notice or 15 days after the Coastal Management Section obtains a copy of the plan and it is available for public inspection. This public notice is provided to meet the requirements of the NOAA Regulations on Federal Consistency with approved Coastal Management Programs.

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A copy of the published notice and bill should be submitted to the attention of the undersigned:

Mr. Doug Logan  
Land Manager  
Remington Oil & Gas Corporation  
8201 Preston Road, Suite 600  
Dallas, Texas 75225

If you have any questions, please notify the undersigned.

With kindest regards,  
REMINGTON OIL & GAS CORPORATION

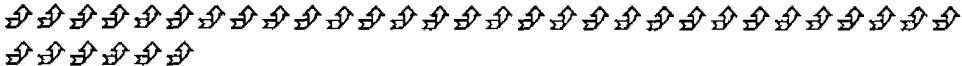
*Doug Logan / RAS*  
Doug Logan  
Land Manager

ATTACHMENT "L"



Initial Exploration Plan  
Remington Oil & Gas Corporation  
OCS-G 22547 & OCS-G 23767, Blocks 395 & 396  
West Cameron Area, Offshore, LA  
Page Two (2)  
October 21, 2002

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Mr. Doug Logan  
Land Manager  
Remington Oil & Gas Corporation  
8201 Preston Road, Suite 600  
Dallas, Texas 75225

If you have any questions, please notify the undersigned.

With kindest regards,

REMINGTON OIL & GAS CORPORATION

Doug Logan  
Land Manager

ATTACHMENT "M"



Remington Oil & Gas Corporation  
Initial Exploration Plan  
WEST CAMERON BLOCKS 395 & 396  
LEASES OCS-G 22547 & OCS-G 23767

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SECTION 10

OCS PLAN INFORMATION FORM

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**OCS PLAN INFORMATION FORM**  
(USE SEPARATE FORM FOR EACH LEASE)

<b>EXPLORATION PLAN</b> X	<b>DEVELOPMENT OPERATIONS COORDINATION DOCUMENT</b>	<b>DEVELOPMENT &amp; PRODUCTION PLAN</b>
OPERATOR: <b>Remington Oil &amp; Gas Corporation</b>		ADDRESS: <b>8201 Preston Road, Suite 600</b>
MMS OPERATOR NO.: <b>01704</b>		<b>Dallas, Texas 75225</b>
CONTACT PERSON: <b>J. V. Delcambre</b>		PHONE NO. <b>(337)593-9420</b>
PROPOSED START DATE: <b>20-Nov-2002</b>	RIG TYPE: <input checked="" type="checkbox"/> U <input type="checkbox"/> S <input type="checkbox"/> P <input type="checkbox"/> F <input type="checkbox"/> D <input type="checkbox"/> S <input type="checkbox"/> O <input type="checkbox"/> T <input type="checkbox"/> H <input type="checkbox"/> E <input type="checkbox"/> R	DISTANCE TO CLOSEST LAND (IN MILES): <b>62</b>
NEW OR UNUSUAL TECHNOLOGY <b>YES</b> <input type="checkbox"/> <b>NO</b> <input checked="" type="checkbox"/> <b>X</b> ONSHORE SUPPORT BASE(S): <b>Cameron, LA</b>		
NARRATIVE DESCRIPTION OF PROPOSED ACTIVITIES: <b>Drill Wells "A", "B" and "C".</b>		
		PROJECT NAME, IF APPLICABLE: <b>West Cameron Blocks 395 &amp; 396</b>

**PROPOSED WELL/STRUCTURE LOCATIONS**

WELL/ STRUCTURE NAME	SURFACE LOCATION	BOTTOM-HOLE LOCATION (FOR WELLS)
Platform ___ or Well <b>A</b>  Name: <b>OCS-G 23767</b>	CALLS: <u>6013'</u> F <u>N</u> L and <u>1037'</u> F <u>E</u> L of LEASE <u>OCS-G 23767</u> , <u>West Cameron</u> AREA, BLOCK <u>396</u> X: <u>1272350</u> Y: <u>63100</u> LAT: <u>28° 49' 13.22551"</u> LONG: <u>93° 36' 19.39410"</u> TVD (IN FEET) _____ MD (IN FEET): _____	CALLS: _____ F _____ L and _____ F _____ L of LEASE _____ AREA, BLOCK _____ X: _____ Y: _____ LAT: _____ LONG: _____ WATER DEPTH (IN FEET): <b>77</b>
Platform ___ or Well <b>B</b>  Name: <b>OCS-G 23767</b>	CALLS: <u>2100'</u> F <u>S</u> L and <u>1000'</u> F <u>E</u> L of LEASE <u>OCS-G 23767</u> , <u>West Cameron</u> AREA, BLOCK <u>396</u> X: <u>1272387</u> Y: <u>56455</u> LAT: <u>28° 48' 07.46453"</u> LONG: <u>93° 36' 17.49776"</u> TVD (IN FEET) _____ MD (IN FEET): _____	CALLS: _____ F _____ L and _____ F _____ L of LEASE _____ AREA, BLOCK _____ X: _____ Y: _____ LAT: _____ LONG: _____ WATER DEPTH (IN FEET): <b>83</b>
Platform ___ or Well <b>C</b>  Name: <b>OCS-G 22547</b>	CALLS: <u>2100'</u> F <u>S</u> L and <u>1000'</u> F <u>W</u> L of LEASE <u>OCS-G 22547</u> , <u>West Cameron</u> AREA, BLOCK <u>395</u> X: <u>1274387</u> Y: <u>56455</u> LAT: <u>28° 48' 07.85642"</u> LONG: <u>93° 35' 55.02602"</u> TVD (IN FEET) _____ MD (IN FEET): _____	CALLS: _____ F _____ L and _____ F _____ L of LEASE _____ AREA, BLOCK _____ X: _____ Y: _____ LAT: _____ LONG: _____ WATER DEPTH (IN FEET): _____
Platform ___ or Well _____  Name: _____	CALLS: _____ F _____ L and _____ F _____ L of LEASE _____ AREA, BLOCK _____ X: _____ Y: _____ LAT: _____ LONG: _____ TVD (IN FEET) _____ MD (IN FEET): _____	CALLS: _____ F _____ L and _____ F _____ L of LEASE _____ AREA, BLOCK _____ X: _____ Y: _____ LAT: _____ LONG: _____ WATER DEPTH (IN FEET): _____
Platform ___ or Well _____  Name: <b>OCS-G-</b>	CALLS: _____ F _____ L and _____ F _____ L of LEASE <u>OCS -G-</u> , _____ AREA, BLOCK _____ X: _____ Y: _____ LAT: _____ LONG: _____ TVD (IN FEET) _____ MD (IN FEET): _____	CALLS: _____ F _____ L and _____ F _____ L of LEASE <u>OCS -G-</u> , _____ AREA, BLOCK _____ X: _____ Y: _____ LAT: _____ LONG: _____ WATER DEPTH (IN FEET): _____