

UNITED STATES GOVERNMENT  
MEMORANDUM

April 14, 2010

To: Public Information (MS 5030)  
From: Plan Coordinator, FO, Plans Section (MS 5231)

Subject: Public Information copy of plan

Control # - S-07403  
Type - Supplemental Exploration Plan  
Lease(s) - OCS-G03194 Block - 59 Main Pass Area  
OCS-G08461 Block - 59 Main Pass Area  
Operator - Phoenix Exploration Company LP  
Description - Well Protector and Well G  
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.

Elmo Cooper  
Plan Coordinator

Site Type/Name	Botm Lse/Area/Blk	Surface Location	Surf Lse/Area/Blk
WP/G		3454 FNL, 3974 FEL	G03194/MP/59
WELL/G	G08461/MP/59	3454 FNL, 3974 FEL	G03194/MP/59



# Phoenix EXPLORATION

March 19, 2010

Minerals Management Service  
Gulf of Mexico OCS Region  
1201 Elmwood Park Boulevard  
New Orleans, Louisiana 70123-2394

Attention: Regional Supervisor, Field Operations  
Plans Unit (MS 5230)

RE: Supplemental Exploration Plan for Leases OCS-G 8461/3194, Main Pass Block 59, OCS Federal Waters, Gulf of Mexico, Offshore, Louisiana and Mississippi

In accordance with the provisions of Title 30 CFR 250, Subpart B and those certain Notice to Lessees (NTL) 2008-G04 and 2009-G27, Phoenix Exploration Company LP (Phoenix) hereby submits for your review and approval a Supplemental Exploration Plan for Leases OCS-G 8461/3194, Main Pass Block 59, Offshore, Louisiana and Mississippi. Excluded from the Public Information copies are certain geologic and geophysical discussions and attachments.

Enclosed are two Proprietary Information copies (one hard copy and one CD) and four Public Information copies (one hard copy and three CDs) of the Plan.

Included in the original proprietary copy of this Plan is the Pay.Gov receipt in the amount of \$3442.00 for the cost recovery as published in the Federal Register on August 25, 2008.

*Contingent upon receiving regulatory approvals and based on equipment and personnel availability, Phoenix anticipates operations under this Plan commencing as early as April 28, 2010.*

Should you have any questions concerning this matter or require additional information, please contact our regulatory consultant, Natalie Schumann, R.E.M. Solutions, Inc. at 281.492.3243 or [natalie@remsolutionsinc.com](mailto:natalie@remsolutionsinc.com).

Sincerely,

Keith O. Westmoreland  
Senior Vice President - Operations

KOW:NNS  
Enclosures

***Public Information***

Online Payment

Step 3: Confirm Payment

1 | 2 | 3

Thank you.  
Your transaction has been successfully completed.

Pay.gov Tracking Information

Application Name: MMS Exploration Plan - BF  
Pay.gov Tracking ID: 25011P20  
Agency Tracking ID: 74107118657  
Transaction Date and Time: 03/19/2010 11:37 EDT

Payment Summary

Address Information	Account Information	Payment Information
<p>Account Holder Keith Name: Westmoreland Billing Address: 333 Clay Street, Billing Address 2: Suite 2000 City: Houston State / Province: TX Zip / Postal Code: 77077 Country: USA</p>	<p>Card Type: Master Card Card Number: *****2289 Region: Gulf of Mexico Contact: 281-492-3243 Company Name/No: Phoenix Exploration Company LP, 2904 Lease Number(s): 8461, 3194, , , Area-Block: , : , , , Surface Locations: 1</p>	<p>Payment Amount: \$3,442.00 Transaction Date 03/19/2010 and Time: 11:37 EDT</p>

**PHOENIX EXPLORATION COMPANY LP**

333 Clay Street, Suite 2000

Houston, Texas 77002

Keith O. Westmoreland

KWestmoreland@PhoenixExploration.us

**SUPPLEMENTAL EXPLORATION PLAN**

**LEASES OCS-G 8461/3194**

**MAIN PASS BLOCK 59**

**PREPARED BY:**

**R.E.M. Solutions, Inc.**

16290 Katy Freeway, Suite 150

Houston, Texas 77094

281.492.3243 (Phone)

281.492.6117 (Fax)

natalie@remsolutionsinc.com

**DATED:**

March 19, 2010

# Plan Contents

(30 CFR Part 250.211 and 250.241)

## A. Plan Contents

Lease OCS-G 8461, Main Pass Block 59 was acquired by BelNorth Petroleum Corporation, Murphy Oil USA, Inc., Elf Aquitaine, Inc., and Odeco Oil & Gas Company at the Central Gulf of Mexico Lease Sale No. 104 held on April 30, 1986. The lease was issued with an effective date of July 1, 1986 and a primary term ending date of July 30, 1991. The lease is being held by ongoing unit production.

Lease OCS-G 3194, Main Pass Block 59 was acquired at the Central Gulf of Mexico Lease Sale No. 38 held on May 28, 1975. The lease was issued with an effective date of July 1, 1975 and a primary term ending date of June 30, 1980. The lease is being held by ongoing unit production.

The current lease operator and ownership are as follows:

<b>Area/Block Lease No.</b>	<b>Operator</b>	<b>Ownership</b>
Main Pass Block 59 Lease OCS-G 08461	Chevron U.S.A. Inc.	Chevron U.S.A. Inc.
Main Pass Block 59 Lease OCS-G 03194	Chevron U.S.A. Inc.	Chevron U.S.A. Inc.

Phoenix Exploration Company LP (Phoenix) is in the process of becoming the designated operator for an aliquot portion of Lease OCS-G 8461, Main Pass Block 59 (proposed bottom-hole location). The Designation of Operator Forms were submitted to the Minerals Management Service Adjudication Department via cover letter dated March 9, 2010.

The proposed operations for Well Location G will be conducted from a surface location in Lease OCS-G 03194, Main Pass Block 59. Phoenix has submitted a Request for Surface Right of Use and Easement covering the proposed operations via cover letter dated March 9, 2010 (RUE OCS-G 30157).

Phoenix proposes to drill, complete, and install temporary caisson (to be installed with MODU – note: no anchors) over Well Location G under this Supplemental Exploration Plan, which is included in **Attachment A** is Form MMS 137 “OCS Plan Information Form”.

## B. Location

Included are the following attachments:

- Attachment B:** Well Location Plat
- Attachment C:** Bathymetry Map (proposed surface location disturbance areas)
- Attachment D:** Typical Caisson Elevation View Drawing

# Plan Contents

(30 CFR Part 250.211 and 250.241)

## **C. Safety and Pollution Prevention Features**

Safety of personnel and protection of the environment during the proposed operations is of primary concern with Phoenix, and mandates regulatory compliance with the contractors and vendors associated with the proposed operations as follows:

**Minerals Management Service** mandates that the operations in this Plan comply with well control, pollution prevention, construction and welding procedures as described in Title 30 CFR Part 250, Subparts C, D, E, and O; and as further clarified by MMS Notices to Lessees.

Minerals Management Service conducts periodic announced and unannounced onsite inspections of offshore facilities to confirm operators are complying with lease stipulations, operating regulations, approved plans, and other conditions; as well as to assure safety and pollution prevention requirements are being met. The National Potential Incident of Noncompliance (PINIC) List serves as the baseline for these inspections.

**U. S. Coast Guard** regulations contained in Title 33 CFR mandate the appropriate life rafts, life jackets, ring buoys, etc., be maintained on the facility at all times.

**U. S. Environmental Protection Agency** regulations contained in the NPDES General Permit GMG290000 mandate that supervisory and certain designated personnel on-board the facility be familiar with the effluent limitations and guidelines for overboard discharges into the receiving waters.

## **D. Storage Tanks and Vessels**

The following table details the storage tanks and/or production vessels that will store oil (capacity greater than 25 bbls. or more) and be used to support the proposed activities (MODU, barges, platform, etc.):

Type of Storage Tank	Type of Facility	Tank Capacity (bbls)	Number of Tanks	Total Capacity (bbls)	Fluid Gravity (API)
Fuel Oil	MODU	250	2	500	No. 2 (Diesel)

## **E. Pollution Prevention Measures**

According to NTL 2008-G04, this section of the Plan is not applicable to the proposed operations.

## **F. Additional Measures**

According to NTL 2008-G04, this section of the Plan is not applicable to the proposed operations.

**OCS Plan Information Form**

**Attachment A  
(Public Information)**

**OCS PLAN INFORMATION FORM**

General Information													
Type of OCS Plan	<input checked="" type="checkbox"/>	Exploration Plan (EP)				Development Operations Coordination Document (DOCD)							
Company Name:	Phoenix Exploration Company LP				MMS Operation Number: 02904								
Address:	333 Clay Street, Suite 2000 Houston, Texas 77002				Contact Person:				Natalie Schumann / R.E.M. Solutions, Inc.				
				Phone Number:				(281) 492-3243					
				E-Mail Address: natalie@remolutionsinc.com									
Lease(s):	8491/3194		Area:		MP		Block(s):		59		Project Name (If Applicable):		Badger Prospect
Objective(s):	<input checked="" type="checkbox"/>	Oil	<input checked="" type="checkbox"/>	Gas	<input type="checkbox"/>	Sulphur	<input type="checkbox"/>	Salt	Onshore Base: Venice, LA			Distance to Closest Land (Miles): 12	
Description of Proposed Activities (Mark all that apply)													
<input checked="" type="checkbox"/>	Exploration drilling								Development drilling				
<input checked="" type="checkbox"/>	Well completion								Installation of production platform				
	Well test flaring (for more than 48 hours)								Installation of production facilities				
<input checked="" type="checkbox"/>	Installation of caisson or platform as well protection structure								Installation of satellite structure				
	Installation of subsea wellheads and/or manifolds								Commence production				
	Installation of lease term pipelines								Other (Specify and describe)				
Have you submitted or do you plan to submit a Conservation Information Document to accompany this plan?											Yes	<input checked="" type="checkbox"/>	No
Do you propose to use new or unusual technology to conduct your activities?											Yes	<input checked="" type="checkbox"/>	No
Do you propose any facility that will serve as a host facility for deepwater subsea development?											Yes	<input checked="" type="checkbox"/>	No
Do you propose any activities that may disturb an MMS-designated high-probability archaeological area?										<input checked="" type="checkbox"/>	Yes		No
Have all of the surface locations of your proposed activities been previously reviewed and approved by MMS?											Yes	<input checked="" type="checkbox"/>	No
Tentative Schedule of Proposed Activities													
Proposed Activity							Start Date		End Date		No. of Days		
Drill and complete Well Location G							04/28/2010		07/16/2010		80		
Install Temporary Caisson over Well Location G							07/17/2010		07/19/2010		3		
Description of Drilling Rig						Description of Production Platform							
<input checked="" type="checkbox"/>	Jackup				Drillship	<input checked="" type="checkbox"/>	Caisson				Tension leg platform		
	Gorilla Jackup				Platform rig		Well protector				Compliant tower		
	Semisubmersible				Submersible		Fixed platform				Guyed tower		
	DP Semisubmersible				Other (Attach description)		Subsea manifold				Floating production system		
Drilling Rig Name (if known): Hercules 251						Spar				Other (Attach Description)			
Description of Lease Term Pipelines													
From (Facility/Area/Block)				To (Facility/Area/Block)				Diameter (Feet)			Length (Feet)		
NA													



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

**Proposed Well/Structure Location**

Well or Structure Name/Number (If renaming well or structure, reference previous name): <b>Well Location G</b>			Subsea Completion		
Anchor Radius (if applicable) in feet: NA			Yes	<input checked="" type="checkbox"/>	No
	<b>Surface Location</b>		<b>Bottom-Hole Location (For Wells)</b>		
Lease No.	03194		08461		
Area Name	Main Pass		Main Pass		
Block No.	59		59		
Blockline Departures (in feet)	N/S Departure:	3,454' FNL	N/S Departure		
	E/W Departure:	3,974' FEL	E/W Departure		
Lambert X-Y coordinates	X:	2,764,126.00	X:		
	Y:	259,876.00	Y:		
Latitude / Longitude	Latitude	29° 21' 33.499"	Latitude		
	Longitude	88° 56' 04.404"	Longitude		
	TVD (Feet):		MD (Feet):	Water Depth (Feet): 67'	

**Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)**

Anchor Name or No.	Area	Block	X Coordinate	Y Coordinate	Length of Anchor Chain on Seafloor
			X=	Y=	
			X=	Y=	
			X=	Y=	
			X=	Y=	
			X=	Y=	
			X=	Y=	
			X=	Y=	
			X=	Y=	

**Paperwork Reduction Act of 1995 Statement:** The Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 35) requires us to inform you that MMS collects this information as part of an applicant's Exploration Plan or Development Operations Coordination Document submitted for MMS approval. We use the information to facilitate our review and data entry for OCS plans. We will protect proprietary data according to the Freedom of Information Act and 30 CFR 250.197. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid Office of Management and Budget Control Number. The use of this form is voluntary. The public reporting burden for this form is included in the burden for preparing Exploration Plans and Development Operations Coordination Documents. We estimate that burden to average 600 hours per response, or 640 with an accompanying EP (1,000 hours in AKOCSR), or 690 (1,700 in AKOCSR) with an accompanying DPP or DOCD, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the forms associated with subpart B. Direct comments regarding the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, Mail Stop 5438, Minerals Management Service, 1849 C Street, NW., Washington, DC 20240.

**Well Location Plat**

**Attachment B  
(Public Information)**

Y = 263,330.00

X = 2,753,350.00



X = 2,760,725.00

MP 59  
OCS-G 08461

MP 59  
OCS-00379  
CHEVRON USA INC

MP 59  
OCS-G 03194  
CHEVRON USA INC

X = 2,768,100.00

MP 60

WELL 'G' (SL)



'A'

FAIRWAY

MP 59  
OCS-G 08461  
CHEVRON USA INC

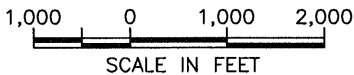
'AA'





### PROPOSED WELL LOCATIONS

LOCATION	BLOCK	CALLS		COORDINATES		LATITUDE	LONGITUDE	WD	MD	TVD
'G' (SL)	59	3,974' FEL	3,454' FNL	X = 2,764,126.00	Y = 259,876.00	29° 21' 33.499" N	88° 56' 04.404" W	67'		

Y = 248,580.00

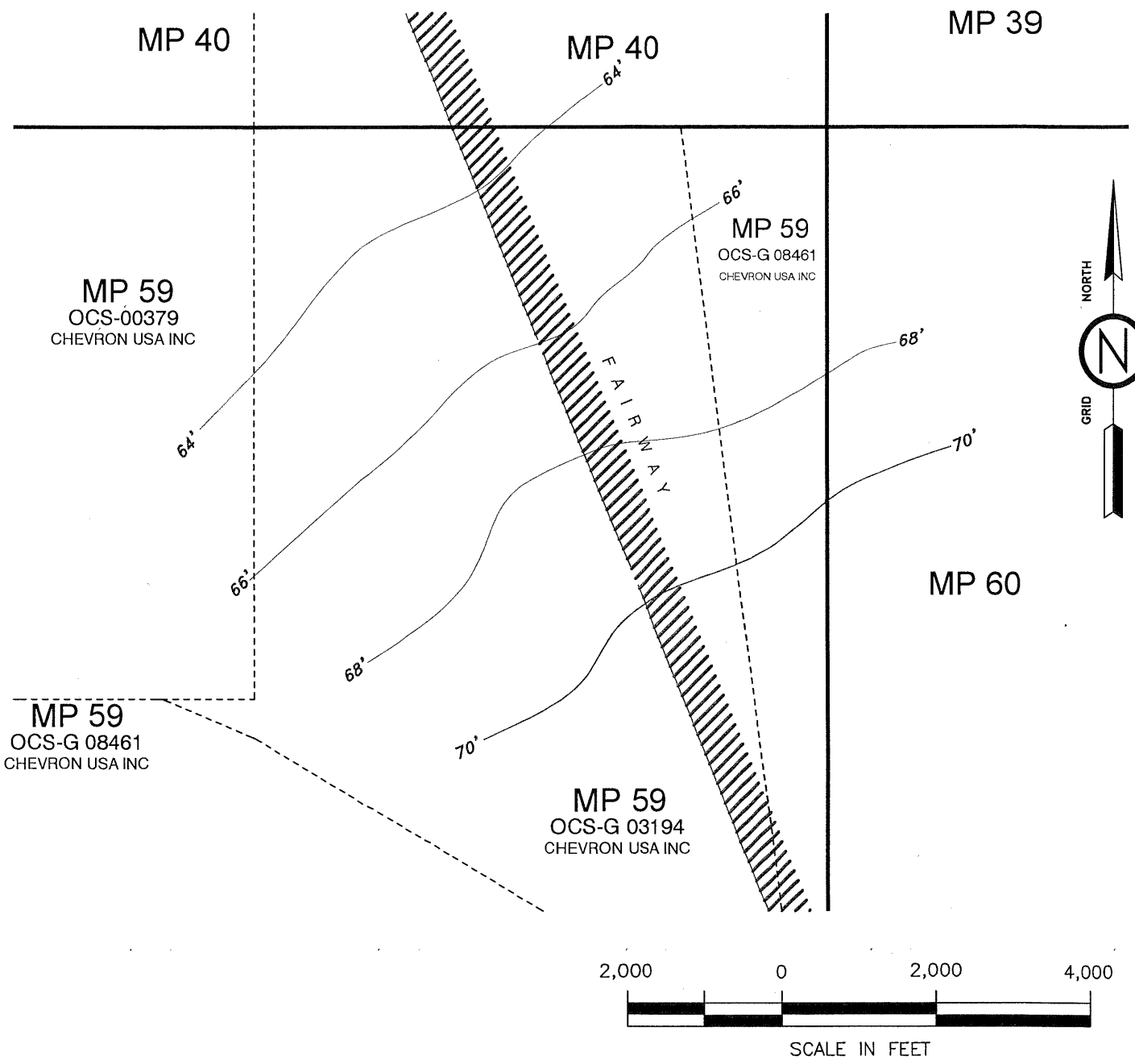


SHEET 1 OF 1  
PUBLIC INFORMATION

DATUM: NAD 27				<b>Chevron U.S.A. Inc.</b>	
SPHEROID: CLARKE 1866					
PROJECTION: LAMBERT					
ZONE: LOUISIANA SOUTH		EXPLORATION PLAT			
 36499 Perkins Road Prairieville, Louisiana 70769 Tel: 225-673-2163 Fax: 225-744-3116		PROPOSED WELL 'G' OCS-G 08461 BLOCK 59 MAIN PASS AREA			
		GULF OF MEXICO			
		DRAWN BY: JLS	DATE: 2-2-2010	CHECKED BY:	DRAWING No.: 09-473-PER-G
REV. DATE:	REV. No.:	SCALE: AS SHOWN	JOB No.: 09-473-13		

Bathymetry Map



Attachment C  
(Public Information)



DATUM:	NAD 27
SPHEROID:	CLARKE 1866
PROJECTION:	LAMBERT
ZONE:	LOUISIANA SOUTH

70' ——— LEGEND:  
BATHYMETRIC CONTOURS IN 2' INTERVALS

SURVEY PERFORMED BY TESLA OFFSHORE, LLC IN OCTOBER, 2009

<b>GEOPHYSICAL SURVEY</b>  <b>BATHYMETRY</b>  BLOCK 59 MAIN PASS AREA  GULF OF MEXICO				
 <b>Chevron U.S.A. Inc.</b>				
 <b>TESLA OFFSHORE, LLC</b> 36499 Perkins Road Prairieville, Louisiana 70769 Tel: 225-673-2163 Fax: 225-744-3116				
PREP. JLS	INT.	CAD JLS	APP. <i>MEX</i>	FILE NO. 09-473-BAT
CHK. <i>JFL</i>	CHK.	CHK. <i>JFL</i>	DATE 2-2-2010	

**Typical Caisson Elevation Drawing**

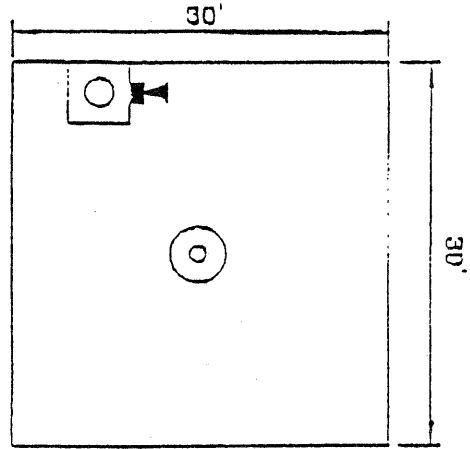
**Attachment D  
(Public Information)**

NAVIGATION  
LIGHT

FOG HORN

Notes:

Structures shall be marked/lighted in accordance  
with U.S. Coast Guard Regulations.



MEAN WATER LINE +1.63' MHG

-0.01' MLG

MUD LINE

TYPICAL CAISSON WELL PROTECTOR

## General Information

(30 CFR Part 250.213 and 250.243)

### **A. Application and Permits**

The following Federal/State applications will be submitted for the activities provided for in this Plan (exclusive of MMS permit applications and general permits issued by the EPA and COE).

<i>Application/Permit</i>	<i>Issuing Agency</i>	<i>Status</i>
Nav-Aids Application	USCG	Pending
Rig Move Reports	USCG, MWA and NGA	Pending

### **B. Drilling Fluids**

According to NTL 2008-G04, this section of the Plan is not applicable to the proposed operations.

### **C. New or Unusual Technology**

Phoenix does not propose using any new and/or unusual technology for the operations proposed in this Plan.

### **D. Bonding Statement**

The bond requirements for the activities and facilities proposed in this EP are satisfied by a areawide bond, furnished and maintained according to 30 CFR Part 256, subpart I; NTL No. 2000-G16, "Guidelines for General Lease Surety Bonds;" and a current MMS-approved deferment from providing additional security under 30 CFR 256.43(d) and National NTL No. 2008-N07 "Supplemental Bonding Procedures." If, any point, Phoenix Exploration Company LP no longer qualifies for a supplemental bonding deferment, Phoenix Exploration Company LP will either provide the required additional security or a third party guarantee within 60 days after such disqualification.

### **E. Oil Spill Financial Responsibility (OSFR)**

Phoenix Exploration Company LP (MMS Company No. 02904) has demonstrated oil spill financial responsibility for the facilities proposed in this EP according to 30 CFR Part 253, and NTL 2008-N05, "Guidelines for Oil Spill Financial Responsibility for Covered Facilities."

### **F. Deepwater Well Control Statement**

According to NTL 2008-G04, this section of the Plan is not applicable to the proposed operations.



## **General Information**

(30 CFR Part 250.213 and 250.243)

### **G. Blowout Scenario**

According to NTL 2008-G04, this section of the Plan is not applicable to the proposed operations.

# Geological and Geophysical Information

(30 CFR Part 250.214 and 250.244)

## **A. Geological Description**

Included as *Attachment E* are the geological targets and a narrative of trapping features proposed in this Plan.

## **B. Structure Contour Maps**

Included as *Attachment F* is a current structure map (depth base and expressed in feet subsea) depicting the entire lease coverage area; drawn on top of the prospective hydrocarbon sands. The map depicts the proposed bottom hole location and applicable geological cross section.

## **C. Interpreted Seismic Lines**

Included as *Attachment G* is a copy of the migrated and annotated (shot points, time lines, well paths) deep seismic line within 500 feet of the surface location being proposed in the Plan.

## **D. Geological Structure Cross-Sections**

An interpreted geological cross section depicting the proposed well location and depth of the proposed well is included as *Attachment H*. Such cross section corresponds to each seismic line being submitted.

## **E. Shallow Hazards Report**

Tesla Offshore, LLC conducted a site specific geophysical survey in Main Pass Block 59, Lease OCS-G 03194 during October 2009 on behalf of Chevron U.S.A. Inc. The purpose of the survey was to evaluate geologic conditions and inspect for potential hazards or constraints to lease development.

Three (3) copies of these reports are being submitted to the Minerals Management Service under separate cover.

## **F. Shallow Hazards Assessment**

A shallow hazards analysis has been prepared for the proposed surface location, evaluating seafloor and subsurface geologic and manmade features and conditions, and is included as *Attachment I*.

## **G. High Resolution Seismic Lines**

Included as *Attachment J* is a copy of the annotated high resolution survey data lines for each surface location disturbance proposed in this Plan.

# Geological and Geophysical Information

(30 CFR Part 250.214 and 250.244)

## H. Stratigraphic Column

A generalized biostratigraphic/lithostratigraphic column from the seafloor to the total depth of the proposed well is included as *Attachment K*.

## I. Time vs. Depth Tables

A time versus depth table is included as *Attachment L*.

Geological Description

Attachment E  
(Proprietary Information)

Structure Maps

Attachment F  
(Proprietary Information)

Deep Seismic Lines

Attachment G  
(Proprietary Information)

Cross Section Maps

Attachment H  
(Proprietary Information)

**Shallow Hazards Assessment**

**Attachment I  
(Public Information)**



**Shallow Hazard Lines**

**Attachment J  
(Proprietary Information)**

Stratigraphic Column

Attachment K  
(Proprietary Information)

Time Vs. Depth Table

Attachment L  
(Proprietary Information)

## Hydrogen Sulfide (H<sub>2</sub>S) Information

(30 CFR Part 250.215 and 250.245)

### **A. Concentration**

According to NTL 2008-G04, this section of the Plan is not applicable to the proposed operations.

### **B. Classification**

In accordance with Title 30 CFR 250.490(c), Phoenix requests that Main Pass Block 59 be classified by the Minerals Management Service as an area where the absence of hydrogen sulfide has been confirmed based on the following correlative wells included in *Attachment M* which were drilled to the stratigraphic equivalent of the well proposed in this Plan:

### **C. H<sub>2</sub>S Contingency Plan**

According to NTL 2008-G04, this section of the Plan is not applicable to the proposed operations.

### **D. Modeling Report**

According to NTL 2008-G04, this section of the Plan is not applicable to the proposed operations.

**H2S Classification**

**Attachment M  
(Proprietary Information)**

# **Biological, Physical and Socioeconomic Information**

(30 CFR Part 250.216 and 250.247)

## **A. Chemosynthetic Communities Report**

According to NTL 2008-G04, this section of the Plan is not applicable to the proposed operations.

## **B. Topographic Features Map**

MMS and the National Marine Fisheries Service (NMFS) have entered into a programmatic consultation agreement for Essential Fish Habitat that requires that no bottom disturbing activities (including rig placement, and rig or construction base use of anchors, chains, cables, and wire ropes) within 152 meters (500 feet) of a “No-Activity Zone” of a topographic feature.

If such proposed bottom disturbing activities are within 500 feet of a no activity zone, the MMS is required to consult with the NMFS.

The activities proposed in this Plan are not affected by a topographic feature.

## **C. Topographic Features Statement (Shunting)**

The activities proposed in this Plan are not affected by a topographic feature; therefore, Phoenix is not required to shunt drill cuttings and drill fluids.

## **D. Live Bottoms (Pinnacle Trend) Map**

Certain leases are located in areas characterized by the existence of live bottoms. Live bottom (Pinnacle trend features) are small, isolated, low to moderate relief carbonate reefal features or outcrops of unknown origin or hard substrates exposed by erosion that provide surface area for the growth of sessile invertebrates and attract large number of fish. Known features occur in an area of topographic relief in the northeastern portion of the western Gulf of Mexico. These leases contain a Live Bottom Stipulation to ensure that impacts from nearby oil and gas activities on these live bottom areas are mitigated to the greatest extent possible.

For each affected lease, the Live Bottom Stipulation requires that you prepare a live bottom survey report containing a bathymetry map prepared by using remote sensing techniques. This report must be submitted to the Gulf of Mexico OCS Region (GOMR) before you may conduct any drilling activities or install any structure, including lease term pipelines in accordance with NTL 2009-G39.

Main Pass Block 59 is not located within the vicinity of a proposed live bottom (Pinnacle trend) area.

# Biological, Physical and Socioeconomic Information

(30 CFR Part 250.216 and 250.247)

## **E. Live Bottoms (Low Relief) Map**

Certain leases are located in areas characterized by the existence of live bottoms. Live bottom (Low relief features) are seagrass communities; those areas that contain biological assemblages consisting of sessile invertebrates living upon and attached to naturally occurring hard or rocky formations with rough, broken, or smooth topography; and areas where a hard substrate and vertical relief may favor the accumulation of turtles, fishes or other fauna. These features occur in the Eastern Planning Area of the Gulf of Mexico.

Main Pass Block 59 is not located within the vicinity of a proposed live bottom (Low Relief) area.

## **F. Potentially Sensitive Biological Features**

Oil and gas operations and transportation activities in the vicinity of potentially sensitive biological features may cause deleterious impacts to the sessile and pelagic communities associated with those habitats. Adverse impacts to the communities could be caused by mechanical damage from drilling rigs, platforms, pipeline and anchor employment.

Main Pass Block 59 is not located within the vicinity of a proposed sensitive biological feature area.

## **G. Remotely Operated Vehicle (ROV) Monitoring Survey Plan**

Pursuant to NTL No. 2008-G06, operators may be required to conduct remote operated vehicle (ROV) surveys during pre-spudding and post-drilling operations for the purpose of biological and physical observations.

Main Pass Block 59 is not located within an area where ROV Surveys are required.

## **H. Threatened or Endangered Species, Critical Habitat, and Marine Mammal Information**

Effective May 14, 2007, Minerals Management Service revised Title 30 CFR Part 250, Subpart B to require lessees/operators to address the federally listed species with designated critical habitat as well as marine mammals which may be impacted by the proposed activities addressed under this Plan.

The following listed species under the jurisdiction of NOAA fisheries are known to occur in the Gulf of Mexico and may be affected by the proposed action:

- **Endangered:** Sperm Whale, Leatherback Turtle, Green Turtle, Hawksbill Turtle, and Kemp's Ridley Turtle, Smalltooth Sawfish
- **Threatened:** Loggerhead Turtle and Gulf Sturgeon

# **Biological, Physical and Socioeconomic Information**

(30 CFR Part 250.216 and 250.247)

No critical habitat for listed species under the jurisdiction of NOAA Fisheries has been designated within the Gulf of Mexico.

The proposed activities in Main Pass Block 59 are not located in the presence of federally listed threatened or endangered species and critical habitat designated under the ESA and marine mammals protected under the MMPA.

## **I. Archaeological Report**

In accordance with NTLs 2005-G07 and 2008-G20, Main Pass Block 59 is located within an area requiring a (300-meter) spacing survey.

This requirement provides protection of prehistoric and historic archaeological resources by requiring remote sensing surveys in areas designated to have a high probability for archaeological resources.

As per NTL 2005-G07 and 2008-G20, this survey was conducted and is being submitted under separate cover to the Minerals Management Service.

## **J. Air and Water Quality Information**

According to NTL 2008-G04, this section of the Plan is not applicable to the proposed operations.

## **K. Socioeconomic Information**

According to NTL 2008-G04, this section of the Plan is not applicable to the proposed operations.



## **Waste and Discharge Information**

(30 CFR Part 250.217 and 250.248)

### **A. Projected Generated Wastes**

According to NTL 2008-G04, this section of the Plan is not applicable to the proposed operations.

### **B. Projected Ocean Discharges**

According to NTL 2008-G04, this section of the Plan is not applicable to the proposed operations.

### **C. Modeling Report**

According to NTL 2008-G04, this section of the Plan is not applicable to the proposed operations.

## **Air Emissions Information**

(30 CFR Part 250.218 and 250.249)

The primary air pollutants associated with OCS exploration activities are:

- Carbon Monoxide
- Particulate Matter
- Sulphur Oxides
- Nitrogen Oxides
- Volatile Organic Compounds

These offshore air emissions result mainly from the drilling rig operations, helicopters, and support vessels. These emissions occur mainly from combustion or burning of fuels and natural gas and from venting or evaporation of hydrocarbons. The combustion of fuels occurs primarily on diesel-powered generators, pumps or motors and from lighter fuel motors. Other air emissions can result from catastrophic events such as oil spills or blowouts.

### **A. Emissions Worksheets and Screening Questions**

The Projected Air Quality Emissions Report (Form MMS-138) addresses the proposed drilling, completion and potential testing operations utilizing a typical jack-up drilling unit, with related support vessels.

### **B. Emissions Reduction Measures**

The projected air emissions are within the exemption level; therefore, no emission reduction measures are being proposed.

### **C. Verification of Nondefault Emissions Factors**

Phoenix has elected to use the default emission factors as provided in *Attachment N*.

### **D. Non-Exempt Activities**

The proposed activities are within the exemption amount as provided in *Attachment N*.

### **E. Modeling Report**

According to NTL 2008-G04, this section of the Plan is not applicable to the proposed operations.

Air Quality Emissions Report

Attachment N  
(Public Information)

EXPLORATION PLAN (EP)

OMB Control No. 1010-0049

OMB Approval Expires: August 31, 2006

AIR QUALITY SCREENING CHECKLIST

COMPANY	Phoenix Exploration Company LP
AREA	Main Pass
BLOCK	59
LEASE	8461/3194
PLATFORM	NA
WELL	Location G
COMPANY CONTACT	Natalie Schumann / R.E.M. Solutions, Inc.
TELEPHONE NO.	(281) 492-3243 / natalie@remolutionsinc.com
REMARKS	Drill, complete and install temporary caisson over Well Location G.

Screening Questions for EP's		Yes	No
Is any calculated Complex Total (CT) Emission amount (in tons associated with your proposed exploration activities more than 90% of the amounts calculated using the following formulas: $CT = 3400D^{2/3}$ for CO, and $CT = 33.3D$ for the other air pollutants (where D = distance to shore in miles)?			X
Does your emission calculations include any emission reduction measures or modified emission factors?			X
Are your proposed exploration activities located east of 87.5° W longitude?			X
Do you expect to encounter H <sub>2</sub> S at concentrations greater than 20 parts per million (ppm)?			X
Do you propose to flare or vent natural gas for more than 48 continuous hours from any proposed well?			X
Do you propose to burn produced hydrocarbon liquids?			X

Air Pollutant	Plan Emission Amounts <sup>1</sup> (tons)	Calculated Exemption Amounts <sup>2</sup> (tons)	Calculated Complex Total Emission Amounts <sup>3</sup> (tons)
Carbon monoxide (CO)	70.69	17821.04	NA
Particulate matter (PM)	9.43	399.60	NA
Sulphur dioxide (SO <sub>2</sub> )	43.24	399.60	NA
Nitrogen oxides (NOx)	324.00	399.60	NA
Volatile organic compounds (VOC)	9.72	399.60	NA

<sup>1</sup> For activities proposed in your EP or DOCD, list the projected emissions calculated from the worksheets.

<sup>2</sup> List the exemption amounts in your proposed activities calculated using the formulas in 30 CFR 250.303(d).

<sup>3</sup> List the complex total emissions associated with your proposed activities calculated from the worksheets.

EMISSIONS CALCULATIONS 1ST YEAR

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL	CONTACT	PHONE	REMARKS	ESTIMATED TONS												
									PM	SOX	NOX	VOC	CO	PM	SOX	NOX	VOC	CO			
Phoenix Exploration Company LP	Main Pass	59	84613194	NA	Location G	Natalie Schumann / R.E.M. Soli (281) 452-3243															
OPERATIONS		RATING	MAX. FUEL	ACT. FUEL	RUN TIME	MAXIMUM POUNDS PER HOUR															
	Diesel Engines	HP	GAL/HR	GAL/D		PM	SOX	NOX	VOC	CO	PM	SOX	NOX	VOC	CO	PM	SOX	NOX	VOC	CO	
	Nat. Gas Engines	MMBTU/HR	SCF/HR	SCF/D	HR/D	DAYS	PM	SOX	NOX	VOC	CO	PM	SOX	NOX	VOC	CO	PM	SOX	NOX	VOC	CO
DRILLING	Prime Mover > 600hp diesel	11400	550.62	13214.88	24	83	8.04	36.86	276.21	8.29	60.26	0.00	0.00	0.00	8.25	8.00	36.71	275.11	8.25	60.02	
	PRIME MOVER > 600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	PRIME MOVER > 600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	PRIME MOVER > 600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	BURNER diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	AUXILIARY EQUIP < 600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	VESSELS > 600hp diesel (crew)	2600	125.58	3013.92	8	83	1.83	8.41	63.00	1.89	13.74	0.61	2.79	0.63	0.61	2.79	20.91	0.63	4.56		
	VESSELS > 600hp diesel (supply)	2600	125.58	3013.92	10	83	1.83	8.41	63.00	1.89	13.74	0.76	3.49	0.78	0.76	3.49	26.14	0.78	5.70		
	VESSELS > 600hp diesel (tugs)	4200	202.86	4868.64	12	3	2.96	13.58	101.76	3.05	22.20	0.05	0.24	0.05	0.05	0.24	1.83	0.05	0.40		
FACILITY	DERRICK BARGE diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
INSTALLATION	MATERIAL TUG diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	VESSELS > 600hp diesel (crew)	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	VESSELS > 600hp diesel (supply)	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	MISC.	BPD	SCF/HR	COUNT																	
	TANK-	0			0	0				0.00					0.00					0.00	
DRILLING	OIL BURN	0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
WELL TEST	GAS FLARE		0		0	0	14.66	67.26	503.96	15.12	109.96	9.43	43.24	324.00	9.72	9.43	43.24	324.00	9.72	70.69	
2010 YEAR TOTAL							399.60	399.60	399.60	399.60	399.60	399.60	399.60	399.60	399.60	399.60	399.60	399.60	399.60	399.60	17821.04
EXEMPTION CALCULATION		DISTANCE FROM LAND IN MILES																			
		12.0																			

SUMMARY

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL
Phoenix Exploration Company LP	Main Pass	59	8461/3194	NA	Location G
<b>Emitted</b>					
<b>Year</b>	<b>Substance</b>				
	<b>PM</b>	<b>SOx</b>	<b>NOx</b>	<b>VOC</b>	<b>CO</b>
2010	9.43	43.24	324.00	9.72	70.69
<b>Allowable</b>	<b>399.60</b>	<b>399.60</b>	<b>399.60</b>	<b>399.60</b>	<b>17821.04</b>

## Oil Spill Information

(30 CFR Part 250.219 and 250.250)

### A. Oil Spill Response Planning

All the proposed activities and facilities in this EP will be covered by the Oil Spill Response Plan CFR 254 and approved on December 04, 2009.

### B. Spill Response Sites

The following locations will be used in the event and oil spill occurs as a result of the proposed activities.

Primary Response Equipment Location	Pre-Planned Staging Location(s)
Houma, LA	Houma, LA

### C. OSRO Information

Phoenix utilizes Clean Gulf Associates (CGA) as its primary provider for equipment, which is an industry cooperative owning an inventory of oil spill clean-up equipment. CGA is supported by the Marine Spill Response Corporation's (MSRC), which is responsible for storing, inspecting, maintaining and dispatching CGA's equipment. The MSRC STARS network provides for the closest available personnel, as well as an MSRC supervisor to operate the equipment.

### D. Worst-Case Scenario Determination

<i>Category</i>	<i>Regional OSRP</i>	<i>Exploration Plan</i>
Type of Activity	Exploratory MODU	Exploratory MODU
Facility Surface Location	Main Pass Block 59	Main Pass Block 59
Facility Description	Well Location G	Well Location G
Distance to Nearest Shoreline (Miles)	12 miles	12 miles
Volume: Storage Tanks (total) Flowline (On Facility) Lease Term Pipeline Uncontrolled Blowout (day) <b>Potential 24 Hour Volume (Bbls.)</b>	     <b>3200 bbls</b>	     <b>3200 bbls</b>
Type of Liquid Hydrocarbon	Condensate	Condensate
API Gravity	50°	50°



<p style="text-align: center;"><b><u>Oil Spill Information</u></b> (30 CFR Part 250.219 and 250.250)</p>
--

The worst-case discharge (WCD) proposed in this EP exceeds the current WCD in the approved OSRP; therefore, the OSRP is in the process of being modified and was submitted to the MMS GOMR on March 15, 2010 for inclusion in our Regional OSRP.

**E. Oil Spill Response Discussion**

According to NTL 2008-G04, this section of the Plan is not applicable to the proposed operations.

**F. Modeling Report**

According to NTL 2008-G04, this section of the Plan is not applicable to the proposed operations.

# Environmental Monitoring Information

(30 CFR Part 250.221 and 250.252)

## **A. Monitoring Systems**

Phoenix subscribes to Wilkens Weather Service which provides access to real-time weather conditions, and provides periodic updates on impending inclement weather conditions such as tropical depressions, storms and/or hurricanes entering the Gulf of Mexico.

Phoenix also relies on the National Weather Service to support the aforementioned subscribed service. During impending inclement weather conditions, Phoenix closely coordinates the activity with our contractors and field personnel to ensure the safety of people for evacuation; measures to prepare the facility for evacuation to ensure protection of the environment and the facility/equipment.

## **B. Incidental Takes**

Effective May 14, 2007, Minerals Management Service revised regulations in Title 30 CFR Part 250, Subpart B to require lessees/operators to provide for monitoring systems if the activities provided for in this Plan have the potential to result in an incidental take of any federally listed species and/or marine mammals.

Phoenix does not anticipate the incidental taking of any species as a result of the proposed activities based on the implementation of, and adherence to, the NTL 2007-G03 "Marine Trash and Debris Awareness Training and Elimination" and NTL 2007-G04 "Vessel Strike Avoidance and Injured/Dead Protected Species Reporting".

## **C. Flower Garden Banks National Marine Sanctuary**

According to NTL 2008-G04, this section of the Plan is not applicable to the proposed operations.

# Lease Stipulations/Special Conditions Information

(30 CFR Part 250.222 and 250.253)

## **A. Lease Stipulations**

Under the Outer Continental Shelf Lands Act, the Minerals Management Service is charged with the responsibility of managing and regulating the exploration and development on the OCS.

As part of the regulatory process, an Environmental Impact Statement (EIS) is prepared for each lease sale, at which time mitigation measures are addressed in the form of lease stipulations, which then become part of the oil and gas lease terms and are therefore enforceable as part of that lease.

As part of this process, the designated operator proposing to conduct related exploratory and development activities, must review the applicable lease stipulations, as well as other special conditions, which may be imposed by the Minerals Management Service, and other governing agencies.

Minerals Management Service did not invoke any stipulations for Leases OCS-G 08461/03194, Main Pass Block 59.

## **B. Special Conditions**

- **Breton Sound Area**

Main Pass Block 59 is located within the (100 km zone) of the Breton National Wildlife Refuge, and will consider the use of best available control technology as required as Notice to Lessees 98-10 if the projected air emissions are determined to significantly affect the air quality of an onshore area.

## **Environmental Mitigation Measures Information**

(30 CFR Part 250.223 and 250.254)

Effective May 14, 2007, Minerals Management Service revised regulations in Title 30 CFR Part 250, Subpart B to require lessees/operators to provide for monitoring systems if the activities provided for in this Plan have the potential to result in an incidental take of any federally listed species and/or marine mammals.

Phoenix does not anticipate the incidental taking of any species as a result of the proposed activities based on the implementation of, and adherence to, the NTL 2007-G03 "Marine Trash and Debris Awareness Training and Elimination" and "NTL 2007-G04 "Vessel Strike Avoidance and Injured/Dead Protected Species Reporting".

**Related Facilities and Operations Information**  
(30 CFR Part 250.256)

**A. Produced Liquid Hydrocarbons Transportation Vessels**

According to NTL 2008-G04, this section of the Plan is not applicable to the proposed operations.

# Support Vessels and Aircraft Information

(30 CFR Part 250.224 and 250.257)

## **A. General**

Personnel involved in the proposed operations will typically use their own vehicles as transportation to and from the selected onshore base; whereas the selected vendors will transport the equipment by a combination of trucks, boats and/or helicopters to the onshore base. The personnel and equipment will then be transported to the drilling rig via the transportation methods and frequencies shown below, taking the most direct route feasible as mandated by weather and traffic conditions:

Type	Maximum Fuel Tank Storage Capacity	Maximum No. in Area at Any Time	Trip Frequency or Duration
Tug Boats	3,000 bbls	1	6 hrs during mob/ 6 hrs during demob
Supply Boats	500 bbls	1	Daily
Crew Boats	500 bbls	1	Daily
Aircraft	1,900 lbs	1	Weekly

## **B. Diesel Oil Supply Vessels**

According to NTL 2008-G04, this section of the Plan is not applicable to the proposed operations.

## **C. Drilling Fluids Transportation**

According to NTL 2008-G04, this section of the Plan is not applicable to the proposed operations.

## **D. Solid and Liquid Wastes Transportation**

According to NTL 2008-G04, this section of the Plan is not applicable to the proposed operations.

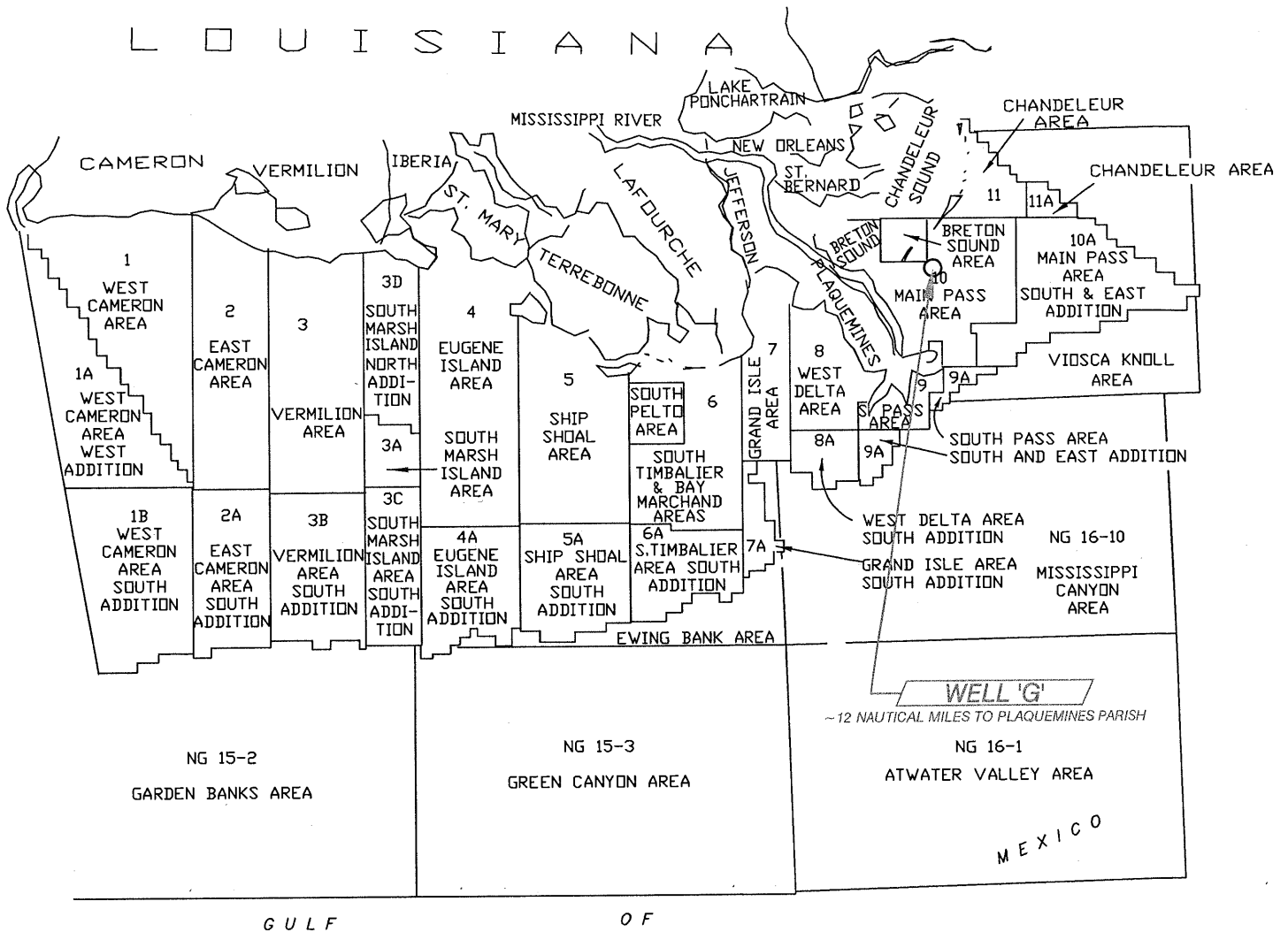
## **E. Vicinity Map**

A Vicinity Plat showing the surface location in Main Pass Block 59 relative to the shoreline and onshore base is included as *Attachment O*.



Vicinity Map

Attachment O  
(Public Information)

LOUISIANA GULF COAST INDEX  
M.M.S. O.C.S. LEASING AREAS



12 miles to the nearest Louisiana shoreline and 22.6 miles to the support base located in Venice, Louisiana.

DATUM: NAD 27		 <b>Chevron U.S.A. Inc.</b>	
SPHEROID: CLARKE 1866			
PROJECTION: LAMBERT			
ZONE: LOUISIANA SOUTH		EXPLORATION PLAT	
 <b>36499 Perkins Road</b> <b>Prairieville, Louisiana 70769</b> <b>Tel: 225-673-2163</b> <b>Fax: 225-744-3116</b>		<b>PROPOSED WELL 'G'</b> <b>OCS-G 08461 BLOCK 59</b> <b>MAIN PASS AREA</b>	
		<b>GULF OF MEXICO</b>	
DRAWN BY: JLS	DATE: 2-2-2010	CHECKED BY:	DRAWING No.: 09-473-PER-G
REV. DATE:	REV. No.:	SCALE: N.T.S.	JOB No.: 09-473-13



# Onshore Support Facilities Information

(30 CFR Part 250.225 and 250.258)

## **A. General**

The proposed surface disturbances in Main Pass Block 59 will be located approximately 12 miles from the nearest Louisiana shoreline, and approximately 22.6 miles from the onshore support base.

Name	Location	Existing/New/Modified
Grand Isle Shipyard	Venice, Louisiana	Existing

Phoenix will use an existing onshore base to accomplish the following routine operations:

- Loading/Offloading point for equipment supporting the offshore operations,
- Dispatching personnel and equipment, and does not anticipate the need for any expansion of the selected facilities as a result of the activities proposed in this Plan,
- Temporary storage for materials and equipment
- 24-Hour Dispatcher

## **B. Support Base Construction or Expansion**

The proposed operations are temporary in nature and do not require any immediate action to acquire additional land, expand existing base facilities.

## **C. Support Base Construction or Expansion Timetable**

According to NTL 2008-G04, this section of the Plan is not applicable to the proposed operations.

## **D. Waste Disposal**

The wastes detailed below are those generated by our proposed activities that are stored and disposed at this location:

Name/Location of Facility	Type of Waste	Amount	Rate	Disposal Method
New Park Environmental Services Venice, LA	Non-hazardous solid: Workover fluids	150 bbls	2 bbls/day	Temporary storage

## **Coastal Zone Management Act (CZMA) Information**

(30 CFR Part 250.226 and 250.260)

Under direction of the Coastal Zone Management Act (CZMA), the States of Alabama, Florida, Louisiana, Mississippi and Texas developed Coastal Zone Management Programs (CZMP) to allow for the supervision of significant land and water use activities that take place within or that could significantly impact their respective coastal zones.

### **A. Consistency Certification**

The proposed supplemental exploratory activities will not require Coastal Zone Management Consistency for the States of Louisiana and Mississippi.

### **B. Other Information**

According to NTL 2008-G04, this section of the Plan is not applicable to the proposed operations.

# Environmental Impact Analysis

(30 CFR Part 250.227 and 250.261)

## A. Impact Producing Factors (IPF's) From Proposed Activities

The following matrix is utilized to identify the affected environments that could be impacted by these IPF's. An "x" has been marked for each IPF category that Phoenix has determined may impact a particular environment as a result of the proposed activities. For those cells which are footnoted, a statement is provided as to the applicability of the proposed activities, and where there may be an effect, an analysis of the effect is provided.

Environmental Resources	Impact Producing Factors (IPFs)					
	Emissions (air, noise, light, etc.)	Effluents (muds, cuttings, other discharges to the water column or seafloor)	Physical disturbances to the seafloor (rig, anchor, structure emplacement, etc.)	Wastes sent to shore for treatment or disposal	Accidents (e.g. oil spills, chemical spills, H <sub>2</sub> S releases)	Other IPFs you identify
<i>Site Specific at Offshore Location</i>						
Designated topographic features		(1)	(1)		(1)	
Pinnacle Trend area live bottoms		(2)	(2)		(2)	
Eastern Gulf live bottoms		(3)	(3)		(3)	
Chemosynthetic communities			(4)			
Water quality		X			X	
Fisheries		X			X	
Marine mammals	X(8)	X		X	X(8)	
Sea turtles	X(8)	X		X	X(8)	
Air quality	X(9)					
Shipwreck sites (known or potential)			(7)			
Prehistoric archaeological sites			(7)			
<i>Vicinity of Offshore Location</i>						
Essential fish habitat		X			X(6)	
Marine and pelagic birds					X	
Public health and safety					(5)	
<i>Coastal and Onshore</i>						
Beaches					X(6)	
Wetlands					X(6)	
Shorebirds and coastal nesting birds					X(6)	
Coastal wildlife refuges						
Wilderness areas						

# Environmental Impact Analysis

(30 CFR Part 250.227 and 250.261)

## Footnotes for Environmental Impact Analysis Matrix

1. Activities that may affect a marine sanctuary or topographic feature. Specifically, if the well or platform site or any anchors will be on the seafloor within the:
  - (a) 4-mile zone of the Flower Gardens Banks, or the 3-mile zone of Stetson Bank;
  - (b) 1000-m, 1-mile or 3-mile zone of any topographic feature (submarine bank) protected by the Topographic Features Stipulation attached to an OCS lease;
  - (c) Essential Fish Habitat (EFH) criteria of 500 ft from any no-activity zone; or
  - (d) Proximity of any submarine bank (500 ft buffer zone) with relief greater than 2 meters that is not protected by the Topographic Stipulation attached to an OCS lease.
2. Activities with any bottom disturbance within an OCS lease block protected through the Live Bottom (Pinnacle Trend) Stipulation attached to an OCS lease.
3. Activities within any Eastern Gulf OCS block where seafloor habitats are protected by the Live Bottom (Low-Relief) Stipulation attached to an OCS lease.
4. Activities on blocks designated by the MMS as being in water depths 300 meters or greater.
5. Exploration or production activities where H<sub>2</sub>S concentrations greater than 500 ppm might be encountered.
6. All activities that could result in an accidental spill of produced liquid hydrocarbons or diesel fuel that you determine would impact these environmental resources. If the proposed action is located a sufficient distance from a resource that no impact would occur, the EIA can note that in a sentence or two.
7. All activities that involve seafloor disturbances, including anchor emplacements, in any OCS block designated by the MMS as having high-probability for the occurrence of shipwrecks or prehistoric sites, including such blocks that will be affected that are adjacent to the lease block in which your planned activity will occur. If the proposed activities are located a sufficient distance from a shipwreck or prehistoric site that no impact would occur, the EIA can note that in a sentence or two.
8. All activities that you determine might have an adverse effect on endangered or threatened marine mammals or sea turtles or their critical habitats.
9. Production activities that involve transportation of produced fluids to shore using shuttle tankers or barges.

# Environmental Impact Analysis

(30 CFR Part 250.227 and 250.261)

## Impact Analysis

### Site Specific at Offshore Location

- **Designation Topographic Features**

There are no anticipated emissions, effluents, physical disturbances to the seafloor, wastes transported to shore, and/or accidents from the proposed activities that could cause impacts to topographic features. The proposed surface disturbances within Main Pass Block 59 are located approximately 70 miles away from the closest designated topographic feature (Sackett Bank). The crests of designated topographic features in the northern Gulf are found below 10 m. In the event of an accidental oil spill from the proposed activities, the gravity of such oil (high gravity condensate and/or diesel fuel) would rise to the surface, quickly dissipate, and/or be swept clear by the currents moving around the bank; thereby avoiding the sessile biota.

- **Pinnacle Trend Area Live Bottoms**

There are no anticipated emissions, effluents, physical disturbances to the seafloor, wastes sent to shore, and/or accidents from the proposed activities that could cause impacts to a pinnacle trend area. The proposed surface disturbances within Main Pass Block 59 are located approximately 40 miles) from the closest pinnacle trend live bottom stipulated block. The crests of the pinnacle trend area are much deeper than 20 m. In the event of an accidental oil spill from the proposed activities, the gravity of such oil (high gravity condensate and/or diesel fuel) would rise to the surface, quickly dissipate, and/or be swept clear by currents moving around the bank; and thus not impacting the pinnacles.

- **Eastern Gulf Live Bottoms**

There are no anticipated emissions, effluents, emissions physical disturbances to the seafloor, wastes sent to shore, and/or accidents from the proposed activities that could cause impacts to Eastern Gulf live bottoms. The proposed surface disturbances within Main Pass Block 59 are located approximately 80 miles from the closest pinnacle Eastern Gulf live bottom stipulated block. In the event of an accidental oil spill from the proposed activities, the gravity of such oil (high gravity condensate and/or diesel fuel) would rise to the surface, quickly dissipate, and/or be swept clear by currents moving around the bank; and would not be expected to cause adverse impacts to Eastern Gulf live bottoms because of the depth of the features and dilutions of spills.

- **Chemosynthetic Communities**

Water depths in Main Pass Block 59 range from 64 feet to 70 feet. Therefore, the proposed activities are not located within the vicinity of any known chemosynthetic communities, which typically occur in water depths greater than 300 meters. Based on the water depth,

# Environmental Impact Analysis

(30 CFR Part 250.227 and 250.261)

there are no anticipated emissions, effluents, emissions physical disturbances to seafloor, wastes sent to shore, and/or accidents from the proposed activities that could impact these types of communities.

- **Water Quality**

Routine operational discharges authorized by EPA's Region VI NPDES General Permit GMG290000 are regulated based on volume discharge rate limitations, and certain testing requirements for oil and grease and toxicity limitations. As such, it is not anticipated these discharges will cause significant adverse impacts to water quality.

Accidental oil spill releases from the proposed activities, and cumulative similar discharge activity within the vicinity could potentially cause impacts to water quality. It is unlikely that an accidental oil spill release would occur from the proposed activities. In the event of such a release, the water quality would be temporarily affected by the dissolved components and small droplets. Currents and microbial degradation would remove the oil from the water column or dilute the constituents to background levels.

In the event of an unanticipated blowout resulting in an oil spill, it is unlikely to have an impact based on the industry wide standards for using proven equipment and technology for such responses, implementation of Phoenix's Regional Oil Spill Response Plan which addresses available equipment and personnel, techniques for containment and recovery, and removal of the oil spill.

- **Fisheries**

Accidental oil spill releases from the proposed activities, and cumulative similar discharge activity within the vicinity may potentially cause some detrimental effects on fisheries. It is unlikely a spill would occur; however, such a release in open waters closed to mobile adult finfish or shellfish would likely be sub-lethal and the extent of damage would be reduced to the capability of adult fish and shellfish to avoid a spill, to metabolize hydrocarbons, and to excrete both metabolites and parent compounds.

In the event of an unanticipated blowout resulting in an oil spill, it is unlikely to have an impact based on the industry wide standards for using proven equipment and technology for such responses, implementation of Phoenix's Regional Oil Spill Response Plan which addresses available equipment and personnel, techniques for containment and recovery, and removal of the oil spill.

Phoenix will conduct the proposed activities under EPA's Region VI NPDES General Permit GMG290000 which authorizes the discharge of certain effluents, subject to certain limitations, prohibitions and recordkeeping requirements. As such, it is not anticipated these discharges will cause significant adverse impacts to water quality.

# Environmental Impact Analysis

(30 CFR Part 250.227 and 250.261)

- Marine Mammals

As a result of the proposed activities, marine mammals may be adversely impacted by emissions, effluents, waste sent to shore, and/or accidents.

Chronic and sporadic sub-lethal effects could occur that may stress and/or weaken individuals of a local group or population and make them more susceptible to infection from natural or anthropogenic sources. Few lethal effects are expected from accidental oil spill, chance collisions with service vessels and ingestion of plastic material.

The net results of any disturbance would depend on the size and percentage of the population affected, ecological importance of the disturbed area, environmental and biological parameters that influence an animal's sensitivity to disturbance and stress, and the accommodation time in response to prolonged disturbance (Geraci and St. Aubin, 1980). Collisions between cetaceans and ship could cause serious injury or death (Laist et al., 2001).

Sperm whales are one of 11 whale species that are hit commonly by ships (Laist et al., 2001). Collisions between OCS vessels and cetaceans within the project area are expected to be unusual events.

In the event of an unanticipated blowout resulting in an oil spill, it is unlikely to have an impact based on the industry wide standards for using proven equipment and technology for such responses, implementation of Phoenix's Regional Oil Spill Response Plan which addresses available equipment and personnel, techniques for containment and recovery, and removal of the oil spill.

Phoenix will conduct the proposed activities under EPA's Region VI NPDES General Permit GMG290000 which authorizes the discharge of certain effluents, subject to certain limitations, prohibitions and recordkeeping requirements. As such, it is not anticipated these discharges will cause significant adverse impacts to water quality.

Additionally, Phoenix does not anticipate the incidental taking of any marine mammals as the result of the proposed activities. The proposed activities will be conducted by our company and its contractors under the additional criteria addressed by MMS in Notice to Lessee's (NLTs) 2007-G04 "Vessel Strike Avoidance and Injured/Dead Protective Species" and NTL 2007-G03 "Marine Trash & Debris Awareness & Elimination".

- Sea Turtles

As a result of the proposed activities, sea turtles may be adversely impacted by emissions, effluents, waste sent to shore, and/or accidents.

Small numbers of turtles could be killed or injured by chance collision with service vessels or by eating indigestible trash, particularly plastic items accidentally lost from drilling rigs, production facilities and service vessels. Drilling rigs and project vessels (construction

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barge) produce noise that could disrupt normal behavior patterns and create some stress to sea turtles, making them more susceptible to disease. Accidental oil spill releases are potential threats which could have lethal effects on turtles. Contact and/or consumption of this released material could seriously affect individual sea turtles. Most OCS related impacts on sea turtles are expected to be sub-lethal. Chronic and/or avoidance of effected areas could cause declines in survival or productivity, resulting in gradual population declines.

In the event of an unanticipated blowout resulting in an oil spill, it is unlikely to have an impact based on the industry wide standards for using proven equipment and technology for such responses, implementation of Phoenix's Regional Oil Spill Response Plan which addresses available equipment and personnel, techniques for containment and recovery, and removal of the oil spill.

Phoenix will conduct the proposed activities under EPA's Region VI NPDES General Permit GMG290000 which authorizes the discharge of certain effluents, subject to certain limitations, prohibitions and recordkeeping requirements. As such, it is not anticipated these discharges will cause significant adverse impacts to water quality.

Additionally, Phoenix does not anticipate the incidental taking of any sea turtles as the result of the proposed activities. The proposed activities will be conducted by our company and its contractors under the additional criteria addressed by MMS in Notice to Lessee's (NTL's) 2007-G04 "Vessel Strike Avoidance and Injured/Dead Protective Species" and NTL 2007-G03 "Marine Trash & Debris Awareness & Elimination".

- **Air Quality**

The proposed activities are located approximately 12 miles to the nearest shoreline. There would be a limited degree of air quality degradation in the immediate vicinity of the proposed activities. Air quality analyses of the proposed activities are below the MMS exemption level. As such, Phoenix does not anticipate any IPF's as a result of the proposed activities.

- **Ship Wreck Sites (Known or Potential)**

There are no physical disturbances to the seafloor which could impact known or potential shipwreck sites, as the review of high resolution shallow hazards data indicate there are no known or potential shipwreck sites located within the surveyed area. As such, Phoenix does not anticipate any IPF's as a result of the proposed activities.

- **Prehistoric Archaeological Sites**

There are no physical disturbances to the seafloor which could cause impacts to prehistoric archaeological sites, as the review of high resolution shallow hazards data and supporting



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studies did not reflect the occurrence of prehistoric archaeological sites. As such, Phoenix does not anticipate any IPF's as a result of the proposed activities.

## Vicinity of Offshore Location

- **Essential Fish Habitat**

As a result of the proposed activities, essential fish habitat may be adversely impacted by effluents and/or accidents.

An accidental oil spill that may occur as a result of the proposed activities has potential to cause some detrimental effects on essential fish habitat. It is unlikely that an accidental oil spill release would occur; however, if a spill were to occur in close proximity to finfish or shellfish, the effects would likely be sub-lethal and the extent of damage would be reduced to the capability of adult fish and shellfish to avoid a spill, to metabolize hydrocarbons, and to excrete both metabolites and parent compounds.

In the event of an unanticipated blowout resulting in an oil spill, it is unlikely to have an impact based on the industry wide standards for using proven equipment and technology for such responses, implementation of Phoenix's Regional Oil Spill Response Plan which addresses available equipment and personnel, techniques for containment and recovery, and removal of the oil spill.

- **Marine and Pelagic Birds**

As a result of the proposed activities, marine and pelagic birds may be adversely impacted by an accidental oil spill, by the birds coming into contact with the released oil. It is unlikely that an accidental oil spill release would occur.

In the event of an unanticipated blowout resulting in an oil spill, it is unlikely to have an impact based on the industry wide standards for using proven equipment and technology for such responses, implementation of Phoenix's Regional Oil Spill Response Plan which addresses available equipment and personnel, techniques for containment and recovery, and removal of the oil spill.

- **Public Health and Safety**

There are no anticipated emissions, effluents, wastes sent to shore, and/or accidents from the proposed activities that could cause impacts to the public health and safety. Phoenix has requested MMS approval to classify the proposed objective area as absent of hydrogen sulfide.

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## Coastal and Onshore

- Beaches

As a result of the proposed activities, beaches may be adversely impacted by an accidental oil spill. However, due to the distance from shore (approximately 12 miles), and the response capabilities that would be implemented, no significant adverse impacts are expected. Both historical spill data and the combined trajectory/risk calculations referenced in the publication of OCS EIA /EA MMS 2002-052 indicate there is little risk of contact or impact to the coastline and associated environmental resources.

In the event of an unanticipated blowout resulting in an oil spill, it is unlikely to have an impact based on the industry wide standards for using proven equipment and technology for such responses, implementation of Phoenix's Regional Oil Spill Response Plan which addresses available equipment and personnel, techniques for containment and recovery, and removal of the oil spill.

- Wetlands

As a result of the proposed activities, wetlands may be adversely impacted by an accidental oil spill. However, due to the distance from shore (approximately 12 miles) and the response capabilities that would be implemented, no significant adverse impacts are expected. Both historical spill data and the combined trajectory/risk calculations referenced in the publication of OCS EIA /EA MMS 2002-052 indicate there is little risk of contact or impact to the coastline and associated environmental resources.

In the event of an unanticipated blowout resulting in an oil spill, it is unlikely to have an impact based on the industry wide standards for using proven equipment and technology for such responses, implementation of Phoenix's Regional Oil Spill Response Plan which addresses available equipment and personnel, techniques for containment and recovery, and removal of the oil spill.

- Shore Birds and Coastal Nesting Birds

As a result of the proposed activities, shore birds and coastal nesting birds may be adversely impacted by an accidental oil spill. However, due to the distance from shore (approximately 12 miles) and the response capabilities that would be implemented, no significant adverse impacts are expected. Both historical spill data and the combined trajectory/risk calculations referenced in the publication of OCS EIA /EA MMS 2002-052 indicate there is little risk of contact or impact to the coastline and associated environmental resources.

In the event of an unanticipated blowout resulting in an oil spill, it is unlikely to have an impact based on the industry wide standards for using proven equipment and technology for such responses, implementation of Phoenix's Regional Oil Spill Response Plan which

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addresses available equipment and personnel, techniques for containment and recovery, and removal of the oil spill.

- **Coastal Wildlife Refuges**

As a result of the proposed activities, coastal wildlife refuges may be adversely impacted by an accidental oil spill. However, due to the distance from shore (approximately 12 miles) and the response capabilities that would be implemented, no significant adverse impacts are expected. Both historical spill data and the combined trajectory/risk calculations referenced in the publication of OCS EIA /EA MMS 2002-052 indicate there is little risk of contact or impact to the coastline and associated environmental resources.

In the event of an unanticipated blowout resulting in an oil spill, it is unlikely to have an impact based on the industry wide standards for using proven equipment and technology for such responses, implementation of Phoenix's Regional Oil Spill Response Plan which addresses available equipment and personnel, techniques for containment and recovery, and removal of the oil spill.

- **Wilderness Areas**

As a result of the proposed activities, wilderness areas may be adversely impacted by an accidental oil spill. However, due to the distance to the nearest area (approximately 12 miles) and the response capabilities that would be implemented, no significant adverse impacts are expected. Both historical spill data and the combined trajectory/risk calculations referenced in the publication of OCS EIA /EA MMS 2002-052 indicate there is little risk of contact or impact to the coastline and associated environmental resources.

In the event of an unanticipated blowout resulting in an oil spill, it is unlikely to have an impact based on the industry wide standards for using proven equipment and technology for such responses, implementation of Phoenix's Regional Oil Spill Response Plan which addresses available equipment and personnel, techniques for containment and recovery, and removal of the oil spill.

## **Other Resources Identified**

Phoenix has not identified any other environmental resources other than those addressed above.

## **B. Impacts on Proposed Activities**

Phoenix does not anticipate any impacts on the offshore site specific locations, offshore vicinity, and/or coastal and onshore environmental conditions.

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## **C. Environmental Hazards**

Main Pass Block 59 is not located within a geographic area impacted by strong environmental phenomena, other than potential hurricanes in the Gulf of Mexico. The permanent structure has been designed to meet the current regulations and API RP 2A design criteria for these hurricane events. To mitigate potential impacts to the facility and/or wells during impending hurricanes, Phoenix will take precautionary measures to secure the facility, and shutting in the wells prior to full evacuation.

## **D. Alternatives**

According to NTL 2008-G04 this section does not apply to Exploration Plan.

## **E. Mitigation Measures**

Phoenix will not implement any mitigation measures to avoid, diminish, or eliminate potential environmental resources, other than those required by regulation and policy.

## **F. Consultation**

Phoenix has not contacted any agencies or persons for consultation regarding potential impacts associated with the proposed activities. Therefore, a list of such entities is not being provided.

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## **G. Preparers**

Questions or requests for additional information should be made to Phoenix's authorized representative/preparer of this Plan:

Natalie Schumann

**R.E.M. Solutions, Inc.**

16290 Katy Freeway, Suite 150

Houston, Texas 77094

281.492.3243 (Phone)

281.492.6117 (Fax)

[natalie@remsolutionsinc.com](mailto:natalie@remsolutionsinc.com)

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## H. References

The following documents were utilized in preparing the Environmental Impact Assessment:

<i>Document</i>	<i>Author</i>	<i>Dated</i>
Shallow Hazards Survey	Tesla Offshore, LLC	2010
MMS Environmental Impact Statement Report No. 2007-003	Minerals Management Service	2007
Title 30 CFR Part 250 Subpart B (250.241/250.247/250.252/250.254)	Minerals Management Service	2006
NTL 2006-N06 "Flaring and Venting Regulations"	Minerals Management Service	2005
NTL 2009-G39 "Biologically Sensitive Underwater Features and Areas"	Minerals Management Service	2009
NTL 2007-G04 "Vessel Strike Avoidance and Injured/Dead Protective Species"	Minerals Management Service	2007
NTL 2007-G03 "Marine Trash & Debris Awareness & Elimination"	Minerals Management Service	2007
NTL 2005-G07 "Archaeological Resource Surveys and Reports"	Minerals Management Service	2005
NTL 2008-G20 "Revisions to the List of OCS Lease Blocks Requiring Archaeological Resource Surveys and Reports"	Minerals Management Service	2008
NTL 2009-G40 "Deepwater Benthic Communities"	Minerals Management Service	2009
NTL 2009-G26 "U.S. Air Force Communication Towers"	Minerals Management Service	2009
NTL 2009-G27 "Submitting Exploration Plans and Development Operations Coordination Documents"	Minerals Management Service	2009
NTL 2009-G29 "Implementation Plan for Transition from North American Datum 27 to North American Datum 83"	Minerals Management Service	2009
NTL 2009-G31 "Hydrogen Sulfide"	Minerals Management Service	2009
NTL 2009-G34 "Ancillary Activities"	Minerals Management Service	2009
NTL 2009-G38 "Drilling Windows, Eastern Gulf of Mexico"	Minerals Management Service	2009
NTL 2009-G39 "Biologically-Sensitive Underwater Features and Areas"	Minerals Management Service	2009
NTL 2009-G40 "Deepwater Benthic Communities"	Minerals Management Service	2009
NTL 2009-N11 "Air Quality Jurisdiction on the OCS"	Minerals Management Service	2009
NPDES General Permit GMG290000	EPA – Region VI	2007
Regional Oil Spill Response Plan	Phoenix Exploration Company LP	2009

## Administrative Information

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### A. Exempted Information Description (Public Information Copies Only)

Excluded from the Public Information copies are the following:

- Proposed bottomhole location information
- Proposed total well depths (measured and true vertical depth)
- New and Unusual Technology
- Geological and Geophysical Attachments

### B. Bibliography

The following documents were utilized in preparing the Plan:

<i>Document</i>	<i>Author</i>	<i>Dated</i>
Shallow Hazards Survey	Tesla Offshore, LLC	2010
MMS Environmental Impact Statement Report No. 2007-003	Minerals Management Service	2007
Regional Oil Spill Response Plan	Phoenix Exploration Company LP	2010