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UNITED STATES GOVERNMENT
MEMORANDUM

November 24, 2003

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

Subject: Public Information copy of plan

Control #	-	S-06311
Type	-	Supplemental Exploration Plan
Lease(s)	-	OCS-G22987 Block - 680 Green Canyon Area
Operator	-	Kerr-McGee Corporation
Description	-	Wells E and F
Rig Type	-	SEMISUBMERSIBLE

Attached is a copy of the subject plan.

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

Elmo Cooper
Plan Coordinator

Site Type/Name	Botm Lse/Area/Blk	Surface Location	Surf Lse/Area/Blk
WELL/E	G22987/GC/680	6820 FNL, 3465 FWL	G22987/GC/680
WELL/F	G22987/GC/680	6890 FNL, 3405 FWL	G22987/GC/680

KERR-McGEE OIL & GAS CORPORATION
16666 Northchase · Houston, Texas 77060

Cary V. Bradford
Manager of Regulatory Affairs
GOM and North America Region

Phone: 281/618-6338
Fax: 281/673-4338

November 7, 2003

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

Attention: Mr. Nick Wetzel
Plans Unit

RE: Supplemental Exploration Plan for Lease OCS-G 22987, Green Canyon Block 680, OCS Federal Waters, Gulf of Mexico, Offshore, Louisiana

Gentlemen:

In accordance with the provisions of Title 30 CFR 250.203 and that certain Notice to Lessees (NTL 2003-G17), Kerr McGee Oil & Gas Corporation (Kerr McGee) hereby submits for your review and approval a Supplemental Exploration Plan (Plan) for Lease OCS-G 22987, Green Canyon Block 680, Offshore, Louisiana. 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 two Public Information copies (one hard copy and one CD) of the Plan.

Contingent upon receiving regulatory approvals and based on equipment and personnel availability, Kerr McGee anticipates operations under this Plan commencing as early as January 1, 2004.

Should additional information be required, please contact the undersigned, or our regulatory consultant, Connie Goers or Christine Groth, R.E.M. Solutions, Inc., at 281.492.8562.

Sincerely,

Cary V. Bradford

Public Information

CVB:CAG
Attachments

KERR MCGEE OIL & GAS CORPORATION
16666 Northchase
Houston, Texas 77060

Cary V. Bradford
cbradford@kmg.com

SUPPLEMENTAL EXPLORATION PLAN

LEASE OCS-G 22987

GREEN CANYON BLOCK 680

PREPARED BY:

Connie Goers and Christine Groth
R.E.M. Solutions, Inc.
17171 Park Row, Suite 390
Houston, Texas 77084
281.492.8562 (Phone)
281.492.6117 (Fax)
connie@remsolutionsinc.com
christine@remsolutionsinc.com

DATED:

November 12, 2003

SECTION A
PLAN CONTENTS

A. Description, Objectives and Schedule

Lease OCS-G 22987, Green Canyon Block 680 was acquired by Kerr McGee Oil & Gas Corporation at the Central Gulf of Mexico Lease Sale No. 178-1 held on March 28, 2001. The lease was issued with an effective date of June 1, 2001 and a primary term ending date of May 31, 2011.

The current lease operatorship and ownership are as follows:

Area/Block Lease No.	Operator	Ownership
Green Canyon Block 680 Lease OCS-G 22987	Kerr McGee Oil & Gas Corporation	Kerr McGee Oil & Gas Corporation

Kerr McGee proposes to drill, complete and potentially test Well Locations E and F from an existing surface location (Control No. S-6025) in Green Canyon Block 680. Information pertaining to the geological targets, including a narrative of trapping features, is included as ***Attachment A-1.***

B. Location

Included as ***Attachments A-2 through A-4*** are Form MMS-137 "OCS Plan Information Form", Well Location Plats and the Bathymetry Map detailing the proposed well surface location disturbances with proposed anchors of the semi-submersible drilling rig.

C. Drilling Unit

Kerr McGee will utilize a typical semi-submersible drilling rig for the proposed drilling, completion and potential testing operations provided for in this Plan. Actual rig specifications will be included with the Applications for Permit to Drill.

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

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

SECTION A
Contents of Plan - Continued

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 (PINC) 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.

Geological Targets and Trapping Features

Attachment A-1
(Proprietary Information)

OCS Plan Information Form

Attachment A-2
(Public Information)

OCS PLAN INFORMATION FORM

General Information

Type of OCS Plan	X	Exploration Plan (EP)		Development Operations Coordination Document (DOCD)	
Company Name:	**Kerr McGee Oil & Gas Corporation**		MMS Operation Number:	**02219**	
Address:	**16666 Northchase**		Contact Person:	**Connie Goers or Christine Groth** **R.E.M. Solutions, Inc.**	
	Houston, Texas 77060		Phone Number:	**281.492.8562**	
			E-Mail Address:	connie@remsolutionsinc.com christine@remsolutionsinc.com	

Lease(s):	**OCS-G 22987**	Area:	**GC**	Block(s):	**680**	Project Name (If Applicable): **N/A**							
Objective(s):		Oil	X	Gas		Sulphur		Salt	Onshore Base:	**Fourchon, LA**	Distance to Closes Land (Miles):	**120**	

Description of Proposed Activities (Mark all that apply)

X	Exploration drilling		Development drilling
X	Well completion		Installation of production platform
X	Well test flaring (for more than 48 hours)		Installation of production facilities
	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	X	No
Do you propose to use new or unusual technology to conduct your activities?		Yes	X	No
Do you propose any facility that will serve as a host facility for deepwater subsea development?		Yes	X	No
Do you propose any activities that may disturb an MMS-designated high-probability archaeological area?		Yes	X	No
Have all of the surface locations of your proposed activities been previously reviewed and approved by MMS?		Yes	X	No

Tentative Schedule of Proposed Activities

Proposed Activity	Start Date	End Date	No. of Days
Drill, Complete and Test Well Location E	**01/01/2004**	**02/24/2004**	**55**
Drill, Complete and Test Well Location F	**02/25/2004**	**04/19/2004**	**55**

Description of Drilling Rig

	Jackup		Drillship		Caisson		Tension Leg Platform
	Gorilla Jackup		Platform rig		Well protector		Compliant tower
X	Semi-submersible		Submersible		Fixed Platform		Guyed tower
	DP Semi-submersible		Other (Attach description)		Subsea manifold		Floating production system
Drilling Rig Name (if known): **Unknown**					Spar		Other (Attach Description)

Description of Production Platform

Description of Lease Term Pipelines

From (Facility/Area/Block)	To (Facility/Area/Block)	Diameter (Feet)	Length (Feet)
N/A			

OCS PLAN INFORMATION FORM (CONTINUED)

Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location							
Well or Structure Name/Number (If renaming well or structure, reference previous name): **Well Location E**					Subsea Completion		
Anchor Radius (if applicable) in feet:					X	Yes		No
	Surface Location			Bottom-Hole Location (For Wells)			
Lease No.	OCS-G 22987			OCS-G 22987			
Area Name	Green Canyon			Green Canyon			
Block No.	680			680			
Blockline Departures (in feet)	N/S Departure	6820' FNL		N/S Departure:			
	E/W Departure	3465' FWL		E/W Departure:			
Lambert X-Y coordinates	X:	2,300,265.00		X:			
	Y:	9,909,020.00		Y:			
Latitude / Longitude	Latitude:	27°17'32.19"		Latitude			
	Longitude	90°58'04.35"		Longitude			
	TVD (Feet):		MD (Feet):		Water Depth (Feet): 4964'		

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
1	GC	635	2,289,390	9,910,963	2254'
2	GC	635	2,293,589	9,916,950	1677'
3	GC	636	2,300,129	9,920,162	2488'
4	GC	636	2,307,470	9,917,303	2337'
5	GC	680	2,311,498	9,910,888	2620'
6	GC	680	2,309,992	9,903,290	2628'
7	GC	724	2,303,885	9,898,386	2352'
8	GC	723	2,296,394	9,898,326	2616'
9	GC	679	2,290,751	9,903,270	2440'

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): **Well Location F**					Subsea Completion		
Anchor Radius (if applicable) in feet:					**X**	Yes		No
	Surface Location			**Bottom-Hole Location (For Wells)**			
Lease No.	**OCS-G 22987**			**OCS-G 22987**			
Area Name	**Green Canyon**			**Green Canyon**			
Block No.	**680**			**680**			
Blockline Departures (in feet)	N/S Departure	**6890' FNL**		N/S Departure:			
	E/W Departure	**3405' FWL**		E/W Departure:			
Lambert X-Y coordinates	X:	**2,300,205.00**		X:			
	Y:	**9,908,950.00**		Y:			
Latitude / Longitude	Latitude:	**27°17'31.50"**		Latitude			
	Longitude	**90°58'05.03"**		Longitude			
	TVD (Feet):		MD (Feet):		Water Depth (Feet):	**4964'**	

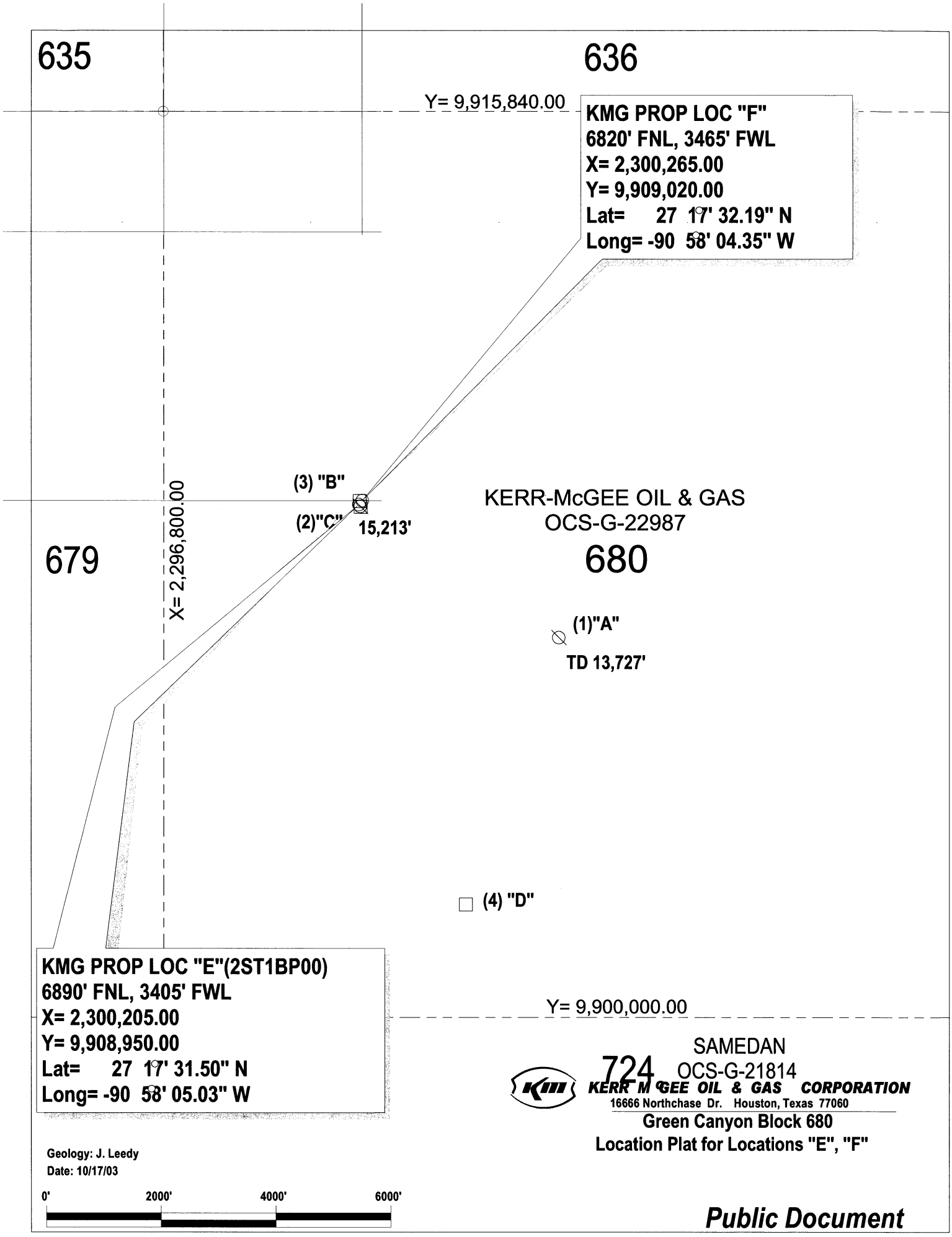
Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)

Anchor Name or No.	Area	Block	X Coordinate	Y Coordinate	Length of Anchor Chain on Seafloor
1	GC	635	2,289,390	9,910,963	2254'
2	GC	635	2,293,589	9,916,950	1677'
3	GC	636	2,300,129	9,920,162	2488'
4	GC	636	2,307,470	9,917,303	2337'
5	GC	680	2,311,498	9,910,888	2620'
6	GC	680	2,309,992	9,903,290	2628'
7	GC	724	2,303,885	9,898,386	2352'
8	GC	723	2,296,394	9,898,326	2616'
9	GC	679	2,290,751	9,903,270	2440'

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 250.196. 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 580 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, Mail Stop 4230, Minerals Management Service, 1849 C Street, N.W., Washington, DC 20240.

Well Location Plats

Attachment A-3
(Public Information)


635
636
Y= 9,915,840.00
KMG PROP LOC "F"
6820' FNL, 3465' FWL
X= 2,300,265.00
Y= 9,909,020.00
Lat= 27 17' 32.19" N
Long= -90 58' 04.35" W
(3) "B"
(2)"C"
15,213'
KERR-McGEE OIL & GAS
OCS-G-22987
679
680
X= 2,296,800.00
(1)"A"
TD 13,727'
(4) "D"
KMG PROP LOC "E"(2ST1BP00)
6890' FNL, 3405' FWL
X= 2,300,205.00
Y= 9,908,950.00
Lat= 27 17' 31.50" N
Long= -90 58' 05.03" W
Y= 9,900,000.00
SAMEDAN
724
OCS-G-21814
KERR McGEE OIL & GAS CORPORATION
16666 Northchase Dr. Houston, Texas 77060
Green Canyon Block 680
Location Plat for Locations "E", "F"
Geology: J. Leedy
Date: 10/17/03
0'
2000'
4000'
6000'
Public Document

Bathymetry Map

Attachment A-4
(Public Information)

635

636

637

UNOCAL
OCS-G-18409

DOMINION
OCS-G-21811

679

KERR-McGEE OIL & GAS
OCS-G-22987

680

681

SAMEDAN
OCS-G-21813

723

724

SAMEDAN
OCS-G-21814

725

-4300'
-4400'
-4100'
-4600'
-4700'
-4800'
-4900'
-5000'
-5100'
-5200'
-5300'
-5400'
-5500'
-4500'
-5600'

X= 2,296,800.00
X= 2,312,640.00

Y= 9,915,840.00
Y= 9,900,000.00

6890'

3405'

1 — 10,850.8' HD @ 280
8597' TD, 2253.8' GROUNDED
X=2,289,390
Y=9,910,963

2 — 10,167.3' HD @ 320
8490' TD, 1677.3' GROUNDED
X=2,293,589
Y=9,916,950

3 — 11,011.1 HD @ 0
8523' TD, 2488.1' GROUNDED
X=2,300,129
Y=9,920,162

4 — 10,858.7' HD @ 40
8523' TD, 2335.7' GROUNDED
X=2,307,470
Y=9,917,303

5 — 11,234.6' HD @ 80
8615' TD, 2619.6' GROUNDED
X=2,311,498
Y=9,910,888

6 — 11,150.6' HD @ 120
8523' TD, 2627.6' GROUNDED
X=2,309,992
Y=9,903,290

7 — 11,054.6' HD @ 160
8523' TD, 2531.6' GROUNDED
X=2,303,885
Y=9,898,386

8 — 11,139.0' HD @ 200
8523' TD, 2616.0' GROUNDED
X=2,296,394
Y=9,898,326

9 — 10,908.7' HD @ 240
8469' TD, 2439.7' GROUNDED
X=2,290,751
Y=9,903,270

(1)"A"
TD 13,727'

(2) "C"
15,213'

(3) "B"
X=2,300,265
Y=9,909,020

(4) "D"

KMG 679 #2
OCS-G-21811
Proposed SL

W-E Hazard Inline 8375
Location"E", "F"

Hazard Crossline 10428
Location "E", "F"

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

GULLY

BURIED FAULT WITH SEAFLOOR EXPRESSION.

SEAFLOOR FAULT OR SLUMP SCARP.

POSSIBLE MACRO-SEEPAGE FEATURE.

SEAFLOOR HIGH-AMPLITUDE ANOMALIES.

AREA OF SEAFLOOR MOUNDS AND DEPRESSIONS. POSSIBLY RELATED TO PAST OR PRESENT HYDROCARBON VENTING.

AREA OF POSSIBLE SEAFLOOR SLUMPS OR LANDSLIDES. MAY BE SHALLOW BURIED.

AREA OF SHALLOW BURIED SLUMPS OR LANDSLIDES.

AREA OF NUMEROUS SHALLOW BURIED FAULTS.

AREA OF NUMEROUS SEAFLOOR FAULTS AND FRACTURES ABOVE SHALLOW SALT.

Geology: J. Leedy
Date: 10/22/03

0' 1000' 2000' 3000'

KERR McGEE OIL & GAS CORPORATION
16666 Northchase Dr. Houston, Texas 77060

Green Canyon Block 680

Water Depth and
Seafloor Features

Public Document

SECTION B
General Information

A. Contact

Questions or requests for additional information should be made to Kerr McGee's authorized representatives for this project:

Connie Goers and Christine Groth
R.E.M. Solutions, Inc.
17171 Park Row, Suite 390
Houston, Texas 77084
281.492.8562 (Phone)
281.492.6117 (Fax)
connie@remsolutionsinc.com
christine@remsolutionsinc.com

B. Prospect Name

Kerr McGee does not refer to prospect names for their exploratory activities.

C. New or Unusual Technology

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

D. Bonding Information

In accordance with Title 30 CFR Part 256, Subpart I, Kerr McGee elected and has on file with the Minerals Management Service Gulf of Mexico Regional Office a $3,000,000 Areawide Development Bond.

As deemed warranted, Minerals Management Service will contact the designated operator in the event a supplemental bond is required for the proposed operations, as outlined in Notice to Lessees (NTL) 2003-N06 to cover plugging liability of the wellbores, removal of associated well protector structures and site clearance.

Kerr McGee is on the exempt list with the Minerals Management Service for supplemental bonding.

SECTION B
General Information - Continued

E. Onshore Base and Support Vessels

The surface disturbances in Green Canyon Block 680 will be located approximately 120 miles from the nearest Louisiana shoreline, and approximately 135 miles from the onshore support base to be located in Fourchon, Louisiana.

Kerr McGee 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

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:

Support Vessel	Drilling and Completion Trips Per Week
Crew Boat	7
Supply Boat	3
Helicopter	3

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

A Vicinity Plat showing the location of Green Canyon Block 680 relative to the shoreline and onshore base is included as *Attachment B-1.*

F. 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.

SECTION B
General Information - Continued

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.

Lease OCS-G 22987, Green Canyon Block 680 is subject to the following such stipulation and conditions:

Military Warning Area

The hold and save harmless section of the Military Areas Stipulation serves to protect the U.S. Government from liability in the event of an accident involving the designated oil and gas lease operator and military activities.

The electromagnetic emissions section of the stipulation requires the operator and its agents to reduce and curtail the use of radio or other equipment emitting electromagnetic energy within some areas.

This serves to reduce the impact of oil and gas activity on the communications of military missions and reduces the possible effects of electromagnetic energy transmissions on missile testing, tracking, and detonation.

The operational section requires notification to the military of oil and gas activity to take place within a military use area. This allows the base commander to plan military missions and maneuvers that may avoid the areas where oil and gas activities are taking place or to schedule around these activities. Prior notification helps reduce the potential impacts associated with vessels and helicopters traveling unannounced through areas where military activities are underway.

The Military Areas Stipulation reduces potential impacts, particularly in regards to safety, but does not reduce or eliminate the actual physical presence of oil and gas operations in areas where military operations are conducted.

The reduction in potential impacts resulting from this stipulation makes multiple-use conflicts most unlikely. Without the stipulation, some potential conflict is likely. The best indicator of the overall effectiveness of the stipulation may be that there has never been an accident involving a conflict between military operations and oil and gas activities.

SECTION B
General Information - Continued

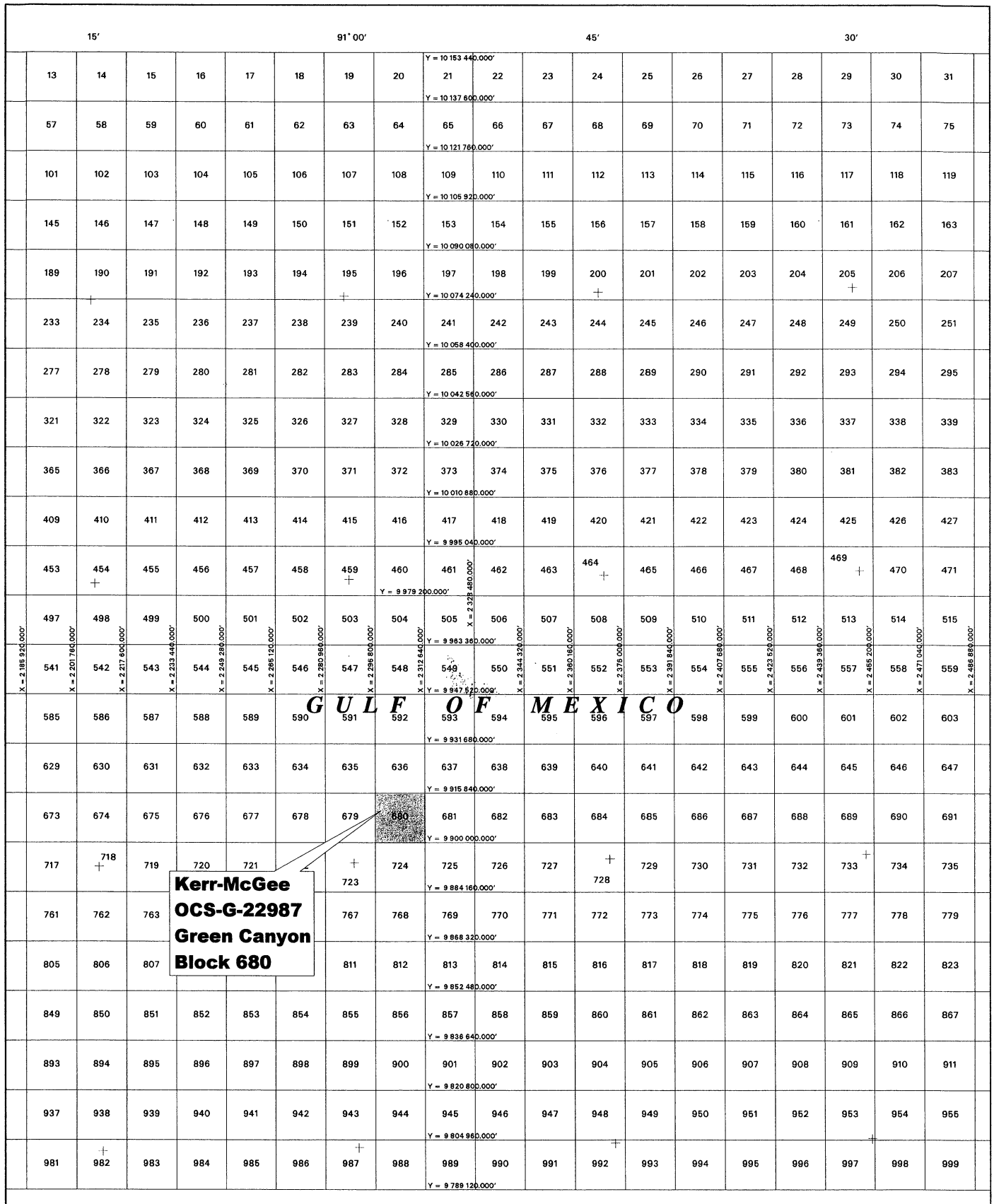
The proposed surface disturbances in Green Canyon Block 680 are located within Military Warning Area W-59. Therefore, in accordance with the requirements of the referenced stipulation, Kerr McGee will contact the Naval Air Station in order to coordinate and control the electromagnetic emissions during the proposed operations.

Special Conditions

Kerr McGee may potentially complete Well Locations E and F as subsea completions. In this event, Kerr McGee will follow the guidelines of the applicable Notice to Lessees (NTL's) 2000-N05 and 2000-N06, which mandates the submittal and approval of separate regulatory filings entitled a "Conservation Information Document" and a "Deepwater Operations Plan", respectively.

Vicinity Plat

Attachment B-1
(Public Information)



KERR McGEE OIL & GAS CORPORATION

Green Canyon Area Block 680
OCS-G-22987
POE Locations E, F
MMS Area Map

SECTION C
Geological, Geophysical & H2S Information

A. Structure Contour Maps

Included as *Attachment C-1* are current structure maps (depth base and expressed in feet subsea) depicting the entire lease coverage area; drawn on the top of each prospective hydrocarbon sand. The maps depict each proposed bottom hole location and applicable geological cross section.

B. Interpreted Deep Seismic Lines

Included as *Attachment C-2* are page size copies of the migrated and annotated (shot point, time lines, well paths) deep seismic lines within 500 feet of the surface location.

C. Geological Structure Cross Sections

Interpreted geological cross sections depicting the proposed well locations and depth of the proposed wells is included as *Attachment C-3*. Such cross sections correspond to each seismic line being submitted.

D. Shallow Hazards Report

Western Geophysical conducted a survey in Green Canyon Block 680 during April 1998 on behalf of Kerr McGee Oil & Gas Corporation. The purpose of the survey was to evaluate geologic conditions and inspect for potential hazards or constraints to lease development.

Copies of these reports have been previously submitted to the Minerals Management Service under separate cover.

E. Shallow Hazards Assessment

Utilizing the 3D deep seismic exploration data a shallow hazards analysis was prepared for the proposed surface locations, evaluating seafloor and subsurface geologic and manmade features and conditions, and is included as *Attachment C-4*.

F. High Resolution Seismic Lines

The proposed operations will be conducted from a surface location under a previously approved Supplemental Exploration Plan (Control No. S-6025); therefore a shallow hazards analysis is not required.

SECTION C
Geological, Geophysical & H2S Information-Continued

G. Stratigraphic Column

A generalized biostratigraphic/lithostratigraphic column from the seafloor to the total depth of the proposed wells is included as *Attachment C-5.*

H. Time Vs. Depth Tables

Kerr McGee has determined that there is existing sufficient well control data for the target areas proposed in this plan; therefore, tables providing seismic time versus depth for the proposed well locations are not required.

I. Hydrogen Sulfide Classification

In accordance with Title 30 CFR 250.417, Kerr McGee requests that Green Canyon Block 680 be classified by the Minerals Management Service as an area where the absence of hydrogen sulfide has been confirmed based on the following wells which are addressed in *Attachment C-6.*

Structure Maps

Attachment C-1
(Proprietary Information)

Deep Seismic Lines

Attachment C-2
(Proprietary Information)

Cross Section Maps

Attachment C-3
(Proprietary Information)

Shallow Hazards Statement

Attachment C-4
(Public Information)

INTERNAL CORRESPONDENCE

	TO	C.V. Bradford	**DATE**	October 21, 2003
Gulf of Mexico Deepwater Exploration	**FROM**	Jack Leedy Carlos Morris	**SUBJECT**	POE Submittal Green Canyon 680 OCS-G-22987

Kerr-McGee Oil and Gas Corporation proposes to drill wells OCS-G-22987 "E" and "F". The respective well locations and PTVD's are as follows:

Block	Well	SL
GC 680	Loc. "E"	6890' FNL 3405' FWL
GC 680	Loc. "F"	6820' FNL 3465' FWL

The Kerr-McGee geotechnical staff has reviewed the 3D seismic data and has positioned the surface locations of the proposed wells to avoid hazardous seafloor or near-surface features. These "E" and "F" surface locations are clustered around previously drilled POE locations "B" and "C" (GC 680 #2 and #3 wells).

Hazard Studies

A 3D geophysical survey was acquired by Western Geophysical over the Gulf of Mexico OCS area Green Canyon Block 680 (OCS-G-18683) in approximately April 1998, with fully processed data available in October 1998. We feel the data is of such a high quality that it is sufficient for use as shallow hazard survey. The data was turned over to Fugro Geoservices, Inc. which agreed the data was of excellent quality for such use and they subsequently completed a detailed shallow hazard study and report. The shallow hazard report and selected data from the shallow hazard survey for Green Canyon Block 680 including the Bathymetry, Hazard, Structure, and Amplitude Anomaly Maps, were reviewed and are included with this POE submittal.

We have reviewed the data and the report and found the contract interpretation of the shallow hazards is sound. Based on these data and interpretations it is our opinion that there are no near-surface hazards that will have any significant impact on Kerr-McGee operations at these proposed locations. The MMS approved of the use of this survey for locations "A", "B", "C", and "D".

Stratigraphic Column

Attachment C-5
(Proprietary Information)

H2S Classification

Attachment C-6
(Public Information)

INTERNAL CORRESPONDENCE

	TO	Mr. Cary Bradford	**DATE**	October 21, 2003
Gulf of Mexico Deepwater Exploration	**FROM**	Jack Leedy Carlos Morris	**SUBJECT**	Plan of Exploration H_2S Statement Green Canyon Block 680

REQUEST FOR CLASSIFICATION OF PROBABILITY OF ENCOUNTERING H_2S DURING OPERATIONS

The proposed locations "E" and "F", submitted in the Plan of Exploration for Green Canyon 680 will test similar stratigraphic section penetrated within the same mini-basin as the wells listed below:

Green Canyon Block 680 KMG #1
Green Canyon Block 680 KMG #2
Green Canyon Block 680 KMG #2ST1
Green Canyon Block 680 KMG #2ST2
Green Canyon Block 680 KMG #3
Green Canyon Block 680 KMG #4
Green Canyon Block 680 KMG #4ST1
Green Canyon Block 680 KMG #4ST2
Green Canyon Block 679 KMG #1ST1

Since no (H_2S) was encountered in these wells, we request the area be classified as a "zone where the absence of H2s has been confirmed."

SECTION D
Biological and Physical Information

A. Chemosynthetic Information

The proposed seafloor disturbing activities vary in water depths from 4990 feet to 5080 feet.

MAPS

Submitted under separate cover are the maps prepared using high resolution seismic information and/or 3-D seismic data to depict bathymetry, seafloor and shallow geological features, surface location of each proposed well and platform, positions of anchors and chains relative to the proposed operations.

ANALYSIS

Submitted under separate cover is the analysis of seafloor features and areas that could be disturbed by the activities proposed in this Plan.

Features or areas that could support high-density chemosynthetic communities are not located within 500 feet of each proposed muds and cuttings discharge location.

Features or areas that could support high-density chemosynthetic communities are not located within 500 feet of any seafloor disturbances resulting from our use of anchors (including those caused by anchors, anchor chains, and wire ropes).

B. Topographic Features Information

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 anchors or cables from a semi-submersible drilling rig, may occur within 500 feet of the 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. Live Bottom (Pinnacle Trend) Information

Certain leases are located in areas characterized by the existence of live bottoms. Live bottom areas are defined as 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 the lithotope favors the accumulation of turtles, fishes, or other fauna. 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 99-G16.

Green Canyon Block 680 is not located within the vicinity of a proposed live bottom area.

D. Remotely Operated Vehicle (ROV Surveys)

Pursuant to NTL No. 2003-G03, operators my be required to conduct remote operated vehicle (ROV) surveys during pre-spudding and post-drilling operations for the purpose of biological and physical observations.

An ROV Survey is not required for the proposed supplemental exploratory operations in Green Canyon Block 680.

E. Archaeological Reports

In conjunction with this geophysical survey, an archaeological survey and report was also prepared to comply with the requirements of NTL 2002-G01, as Green Canyon Block 680 is located within a low probability area for potential archaeological resources.

SECTION E
Wastes and Discharge/Disposal Information

The Minerals Management Service (MMS), U. S. Coast Guard (USCG) and the U.S. Environmental Protection Agency (EPA) regulate the overboard discharge and/or disposal of operational waste associated with drilling, completing, testing and/or production operations from oil and gas exploration and production activities.

Minerals Management Service regulations contained in Title 30 CFR 250.300 require operators to "prevent the unauthorized discharge of pollutants into offshore waters". These same regulations prohibit the intentional disposal of "equipment, cables, chains, containers, or other materials" offshore. Small items must be stored and transported in clearly marked containers and large objects must be individually marked. Additionally, items lost overboard must be recorded in the facility's daily log and reported to MMS as appropriate.

U. S. Coast Guard regulations implement the Marine Pollution Research and Control Act (MARPOL) of 1987 requiring manned offshore rigs, platforms and associated vessels prohibit the dumping of all forms of solid waste at sea with the single exception of ground food wastes, which can be discharged if the facility is beyond 12 nautical miles from the nearest shore. This disposal ban covers all forms of solid waste including plastics, packing material, paper, glass, metal, and other refuse. These regulations also require preparation, monitoring and record keeping requirements for garbage generated on board these facilities. The drilling contractor must maintain a Waste Management Plan, in addition to preparation of a Daily Garbage Log for the handling of these types of waste. MODU's are equipped with bins for temporary storage of certain garbage. Other types of waste, such as food, may be discharged overboard if the discharge can pass through 25-millimeter type mesh screen. Prior to off loading and/or overboard disposal, an entry will be made in the Daily Garbage Log stating the approximate volume, the date of action, name of the vessel, and destination point.

U. S. Environmental Protection Agency regulations address the disposal of oil and gas operational wastes under three Federal Acts. The Resource Conservation and Recovery Act (RCRA) which provides a framework for the safe disposal of discarded materials, regulating the management of solid and hazardous wastes. The direct disposal of operational wastes into offshore waters is limited under the authority of the Clean Water Act. And, when injected underground, oil and gas operational wastes are regulated by the Underground Injection Control program. If any wastes are classified as hazardous, they are to be properly transported using a uniform hazardous waste manifest, documented, and disposed at an approved hazardous waste facility.

A National Pollutant Discharge Elimination System (NPDES) permit, based on effluent limitation guidelines, is required for any discharges into offshore waters. Kerr McGee has requested coverage under the Region VI NPDES General Permit GMG290000 for discharges associated with exploration and development activities in Green Canyon Block 680 and will take applicable steps to ensure all offshore discharges associated with the proposed operations will be conducted in accordance with the permit.

SECTION E
Wastes and Discharge/Disposal Information-Continued

A. Composition of Solid and Liquid Wastes

The major operational solid waste in the largest quantities generated from the proposed operations will be the drill cuttings, drilling and/or completion fluids. Other associated wastes include waste chemicals, cement wastes, sanitary and domestic waste, trash and debris, ballast water, storage displacement water, rig wash and deck drainage, hydraulic fluids, used oil, oily water and filters, and other miscellaneous minor discharges.

These wastes are generated into categories, being solid waste (trash and debris), nonhazardous oilfield waste (drilling fluids, nonhazardous waste including cement and oil filters), and hazardous wastes (waste paint or thinners).

The type of discharges included in this permit application allow for the following effluents to be discharged overboard, subject to certain limitations, prohibitions and recordkeeping requirements.

Overboard Discharges

In accordance with NTL 2003-G17, overboard discharges generated by the activities are not required for submittal in this Plan.

Disposed Wastes

The wastes detailed in ***Attachment E-1*** are those wastes generated by our proposed activities that are disposed of by means of offsite release, injection, encapsulation, or placement at either onshore or offshore permitted locations for the purpose of returning them back to the environment.

Kerr McGee will manifest these wastes prior to being offloaded from the MODU, and transported to shore for disposal at approved sites regulated by the applicable State. Additionally, Kerr McGee will comply with any approvals or reporting and recordkeeping requirements imposed by the State where ultimate disposal will occur.

In accordance with NTL 2002-G18, overboard discharges generated by the activities are not required for submittal in this Plan.

Waste Disposal Tables

Attachment E-1
(Public Information)

Kerr McGee Oil & Gas Corporation
Green Canyon Block 680
Examples of Wastes and Discharges Information

Table 2. Disposal Table (Wastes to be disposed of, not discharged)

Type of Waste Approximate Composition	Amount*	Rate per day	Name/Location of Disposal Facility	Treatment and/or Storage, Transport and Disposal Method
Norm – contaminated wastes	1 ton	Not applicable	Green Canyon Block 680	Transport to a transfer station via dedicated barge
Trash and debris	1,000 ft^3	3 ft^3/day	Newpark Environmental Fourchon, LA	Transport in storage bins on crew boat to disposal facility
Chemical product wastes	50 bbl/yr	2 bbl/day	Newpark Environmental Fourchon, LA	Transport in containers to shore location
Chemical product wastes	100 bbl	2 bbl/day	Newpark Environmental Fourchon, LA	Transport in barrels on crew boat to shore location

*can be expressed as a volume, weight, or rate

SECTION F
Oil Spill Response and Chemical Information

A. Regional Oil Spill Response Plan (OSRP) Information

Effective August 5, 2002, Minerals Management Service approved Kerr McGee Oil & Gas Corporation's Regional Oil Spill Response Plan (OSRP). Activities proposed in this Supplemental Unit Exploration Plan will be covered by the Regional OSRP.

B. Oil Spill Removal Organizations (OSRO)

Kerr McGee 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.

C. Worst-Case Scenario Comparison (WCD)

Category	*Current Regional OSRP WCD*	*Proposed Exploration Plan WCD*
Type of Activity	Production	Drilling/Completion/Testing
Facility Surface Location	East Breaks Block 602	Green Canyon Block 680
Facility Description	Platform A	Semi-Submersible
Distance to Nearest Shoreline (Miles)	175 Miles	120 Miles
Volume: Storage Tanks (total) Facility Piping (total) Lease Term Pipeline Uncontrolled Blowout (day) **Potential 24 Hour Volume (Bbls.)**	13771	1600
Type of Liquid Hydrocarbon	Crude	Condensate
API Gravity	50°	46°

SECTION F
Oil Spill Response and Chemical Information-Continued

Due to the estimated flow rates from an exploratory well blowout are speculative and temporary in nature, Kerr McGee will not modify their Regional OSRP to change the WCD.

Since Kerr McGee has the capability to respond to the worst-case discharge (WCD) spill scenario included in its Regional OSRP approved on August 5, 2002, and since the worst-case scenario determined for our EP does not replace the worst-case scenario in our Regional OSRP, I hereby certify that Kerr McGee has the capability to respond, to the maximum extent practicable, to a worst-case discharge, or a substantial threat of such a discharge, resulting from the activities proposed in our EP.

D. Facility Tanks, Production Vessels

The following table details the ***tanks*** (capacity greater than 25 bbls. or more) to be used to support the proposed activities (MODU and barges):

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	38° (Diesel)

E. Diesel Oil Supply Vessels

In accordance with NTL 2003-G17, this section of the Plan is not applicable to the proposed activities.

F. Support Vessel Fuel Tanks

In accordance with NTL 2003-G17, this section of the Plan is not applicable to the proposed activities.

G. Produced Liquid Hydrocarbon Transportation Vessels

Kerr McGee is proposing to conduct well testing operations on the proposed well locations. This process will include flaring the produced gas hydrocarbons and burning the liquid hydrocarbons.

H. Oil and Synthetic-Based Drilling Fluids

In accordance with NTL 2003-G17, this section of the Plan is not applicable to the proposed activities.

SECTION F
Oil Spill Response and Chemical Information (Continued)

I. Blowout Scenario

In accordance with NTL 2003-G17, this section of the Plan is not applicable to the proposed activities.

J. Oil Characteristics

In accordance with NTL 2003-G17, this section of the Plan is not applicable to the proposed activities.

K. Spill Response Sites

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

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

L. Spill Discussion for NEPA Analysis

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

M. Pollution Prevention Measures

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

N. FGBNMS Monitoring Plans

Green Canyon Block 680 is not located within the vicinity of the Flower Garden National Marine Sanctuary.

SECTION G
Air Emissions Information

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. Calculating Emissions

Included as *Attachment G-1* is the Projected Air Quality Emissions Report (Form MMS-138) addressing the drilling, completion and testing operations utilizing a typical semi-submersible drilling rig, with related support vessels and construction barge information.

B. Screening Questions

As evidenced by *Attachment G-1,* the worksheets were completed based on the proposed flaring and burning operations.

C. Emission Reduction Measures

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

D. Verification of Non-Default Emissions Factors

Kerr McGee has elected to use the default emission factors as provided in *Attachment G-1.*

E. Non-Exempt Activities

The proposed activities are within the exemption amount as provided in *Attachment G-1.*

SECTION G
Air Emissions Information-Continued

F. Review of Activities with Emissions Below the Exemption Level

The proposed activities are below the exemption amount and should not affect the air quality of an onshore area, as provided in *Attachment G-1.*

G. Modeling Report

The proposed activities are below the exemption amount and should not affect the air quality of an onshore area.

Air Quality Emissions Report

Attachment G-1
(Public Information)

EXPLORATION PLAN (EP)
AIR QUALITY SCREENING CHECKLIST

OMB Control No. 1010-0049
OMB Approval Expires: September 30, 2003

COMPANY	Kerr McGee Oil & Gas Corporation
AREA	Green Canyon
BLOCK	680
LEASE	OCS-G 22987
RIG	Semi-Submersible
WELL	E & F
COMPANY CONTACT	Connie Goers and Christine Groth, R.E.M. Solutions, Inc.
TELEPHONE NO.	281.492.8562
REMARKS	Drill, complete and potentially test Well Locations E and F.

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_2S at concentrations greater than 20 parts per million (ppm)?		X
Do you propose to flare or vent natural gas for more than 48 continuous hours from any proposed well?	X	
Do you propose to burn produced hydrocarbon liquids?	X	

Air Pollutant		Plan Emission Amounts[1] (tons)	Calculated Exemption Amounts[2] (tons)		Calculated Complex Total Emission Amounts[3] (tons)
Carbon monoxide (CO)		287.91	82717.95		NA
Particulate matter (PM)		38.07	3996		NA
Sulphur dioxide (SO_2)		177.08	3996		NA
Nitrogen oxides (NOx)		1302.99	3996		NA
Volatile organic compounds (VOC)		39.64	3996		NA

[1] For activities proposed in your EP or DOCD, list the projected emissions calculated from the worksheets.
[2] List the exemption amounts in your proposed activities calculated using the formulas in 30 CFR 250.303(d).
[3] 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
Kerr McGee Oil & Gas Co	Green Canyon	680	OCS-G 22987	Semi-Submersibl	E & F		Connie Goers and Christine Groth	281.492.8562	

OPERATIONS	EQUIPMENT	RATING	MAX. FUEL	ACT. FUEL	RUN TIME		MAXIMUM POUNDS PER HOUR					ESTIMATED TONS				
	Diesel Engines	HP	GAL/HR	GAL/D												
	Nat. Gas Engines	HP	SCF/HR	SCF/D												
	Burners	MMBTU/HR	SCF/HR	SCF/D	HR/D	DAYS	PM	SOx	NOx	VOC	CO	PM	SOx	NOx	VOC	CO
DRILLING	PRIME MOVER>600hp diesel	39555	1910.5065	45852.16	24	110	27.88	127.90	958.38	28.75	209.10	36.80	168.83	1265.06	37.95	276.01
	PRIME MOVER>600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	PRIME MOVER>600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	PRIME MOVER>600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	BURNER diesel	0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	AUXILIARY EQUIP<600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(crew)	2065	99.7395	2393.75	8	110	1.46	6.68	50.03	1.50	10.92	0.64	2.94	22.01	0.66	4.80
	VESSELS>600hp diesel(supply)	2065	99.7395	2393.75	10	47	1.46	6.68	50.03	1.50	10.92	0.34	1.57	11.76	0.35	2.57
	VESSELS>600hp diesel(tugs)	4200	202.86	4868.64	12	4	2.96	13.58	101.76	3.05	22.20	0.07	0.33	2.44	0.07	0.53
FACILITY INSTALLATION	DERRICK BARGE diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	MATERIAL TUG diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(crew)	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(supply)	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	MISC.	BPD	SCF/HR	COUNT												
	TANK-	0			0	0				0.00					0.00	
DRILLING WELL TEST	OIL BURN	250			24	4	4.38	71.15	20.83	0.10	2.19	0.21	3.42	1.00	0.00	0.11
	GAS FLARE		208333.33		24	4		0.12	14.87	12.56	80.94		0.01	0.71	0.60	3.88
2004	**YEAR TOTAL**						**38.13**	**226.10**	**1195.92**	**47.47**	**336.26**	**38.07**	**177.08**	**1302.99**	**39.64**	**287.91**
EXEMPTION CALCULATION	**DISTANCE FROM LAND IN MILES**											**3996.00**	**3996.00**	**3996.00**	**3996.00**	**82717.95**
	120.0															

SUMMARY

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL
Kerr McGee Oil & Gas Corporation	Green Canyon	680	OCS-G 22987	Semi-Submersible	E & F

Year	Emitted Substance				
	PM	SOx	NOx	VOC	CO
2004	38.07	177.08	1302.99	39.64	287.91
Allowable	3996.00	3996.00	3996.00	3996.00	82717.95

SECTION H
Environmental Impact Analysis

A. IMPACT PRODUCING FACTORS (IPF'S)

The following matrix is utilized to identify the environmental resources that could be impacted by these IPF's. An "x" has been marked for each IPF category that Kerr McGee has determined may impact a particular environmental resource 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	Emissions (air, noise, light, etc.)	Effluents (muds, cuttings, other discharges to the water column or seafloor	Physical Disturbances To the seafloor (rig or anchor emplacement, etc.)	Wastes Sent to Shore for Treatment Or disposal	Accidents (e.g. oil spills, chemical spills, H2S releases)	Other IPF's identified
Site Specific at Offshore Location						
Designated topographic feature						
Pinnacle Trend area live bottoms						
Eastern Gulf live bottoms						
Chemosynthetic communities						
Water quality		X			X	
Fisheries		X			X	
Marine mammals	X	X			X	
Sea turtles	X	X			X	
Air quality						
Shipwreck sites (known or potential)						
Prehistoric archaeological sites						
Vicinity of Offshore Location						
Essential fish habitat					X	
Marine and pelagic birds					X	
Public health and safety						
Coastal and Onshore						
Beaches						
Wetlands						
Shorebirds and coastal nesting birds						
Coastal wildlife refuges						
Wilderness areas						
Other Resources						

SECTION H
Environmental Impact Analysis-Continued

B. VICINITY OF OFFSHORE LOCATION ANALYSES

1. Designated Topographic Features

There are no anticipated effluents, physical disturbances to the seafloor, and accidents from the proposed activities that could cause impacts to topographic features. The proposed surface disturbances within Green Canyon Block 680 are located approximately 57 miles away from the closest designated topographic feature (Ewing 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.

2. Pinnacle Trend Live Bottoms

There are no anticipated effluents, physical disturbances to the seafloor, and accidents from the proposed activities that could cause impacts to a pinnacle trend area. The proposed surface disturbances within Green Canyon Block 680 are located a significant distance (> 100 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.

3. Eastern Gulf Live Bottoms

There are no anticipated effluents, physical disturbances to the seafloor, and accidents from the proposed activities that could cause impacts to Eastern Gulf live bottoms. The proposed surface disturbances within Green Canyon Block 680 are located a significant distance (>100 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.

4. Chemosynthetic Communities

Water depths in Green Canyon Block 680 range from 4990 feet to 5080 feet. The proposed activities are not located within the vicinity of any known chemosynthetic community.

SECTION H
Environmental Impact Analysis-Continued

5. 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 Kerr McGee's Regional Oil Spill Response Plan which address available equipment and personnel, techniques for containment and recovery, and removal of the oil spill. Kerr McGee 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.

6. 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 sublethal 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 Kerr McGee's Regional Oil Spill Response Plan which address available equipment and personnel, techniques for containment and recovery, and removal of the oil spill. Kerr McGee 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.

SECTION H
Environmental Impact Analysis-Continued

7. Marine Mammals

As a result of the proposed activities, marine mammals may be adversely impacted by traffic, noise, accidental oil spills, cumulative similar discharge activity, and loss of trash and debris. Chronic and sporadic sublethal effects could occur that may stress and/or weaken individuals of a local group or population and make them more susceptible to infection from natural or anthropogenic sources. Few lethal effects are expected from 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 Kerr McGee's Regional Oil Spill Response Plan which address available equipment and personnel, techniques for containment and recovery, and removal of the oil spill. Kerr McGee 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, Kerr McGee and its contractors will conduct the proposed activities under the additional criteria addressed by MMS in Notice to Lessee's (NTL's) 2003-G10 "Vessel Strike Avoidance and Injured/Dead Protective Species" and NTL 2003-G11 "Marine Trash & Debris Awareness & Elimination".

8. Sea Turtles

As a result of the proposed activities, sea turtles may be adversely impacted by traffic, noise, accidental oil spills, cumulative similar discharges, and loss of trash and debris. 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 barges) produce noise that could disrupt normal behavior patterns and crease 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

spill release would occur; however, if a spill were to occur in close proximity to finfish or shellfish, the effects would likely be sublethal 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. on sea turtles are expected to be sublethal. 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 Kerr McGee's Regional Oil Spill Response Plan which address available equipment and personnel, techniques for containment and recovery, and removal of the oil spill. Kerr McGee 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, Kerr McGee and its contractors will conduct the proposed activities under the additional criteria addressed by MMS in Notice to Lessee's (NTL's) 2003-G10 "Vessel Strike Avoidance and Injured/Dead Protective Species" and NTL 2003-G11 "Marine Trash & Debris Awareness & Elimination".

9. Air Quality

The proposed activities are located approximately 120 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.

10. Shipwreck Site (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.

11. 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 studies did not reflect the occurrence of prehistoric archaeological sites.

SECTION H
Environmental Impact Analysis-Continued

Site Specific Offshore Location Analyses

1. Essential Fish Habitat

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

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 Kerr McGee's Regional Oil Spill Response Plan which address available equipment and personnel, techniques for containment and recovery, and removal of the oil spill.

2. Marine and Pelagic Birds

An accidental oil spill that may occur as a result of the proposed activities has potential to impact marine and pelagic birds, 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 Kerr McGee's Regional Oil Spill Response Plan which address available equipment and personnel, techniques for containment and recovery, and removal of the oil spill.

3. Public Health and Safety Due to Accidents

There are no anticipated IPF's from the proposed activities that could impact the public health and safety. Kerr McGee has requested MMS approval to classify the proposed objective area as absent of hydrogen sulfide.

Coastal and Onshore Analyses

1. Beaches

An accidental oil spill release from the proposed activities could cause impacts to beaches. However, due to the distance from shore (approximately 120 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 Kerr McGee's Regional Oil Spill Response Plan which address available equipment and personnel, techniques for containment and recovery, and removal of the oil spill.

2. Wetlands

An accidental oil spill release from the proposed activities could cause impacts to wetlands. However, due to the distance from shore (approximately 120 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 Kerr McGee's Regional Oil Spill Response Plan which address available equipment and personnel, techniques for containment and recovery, and removal of the oil spill.

3. Shore Birds and Coastal Nesting Birds

An accidental oil spill release from the proposed activities could cause impacts to shore birds and coastal nesting birds. However, due to the distance from shore (approximately 120 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 Kerr McGee's Regional Oil Spill Response Plan which address available equipment and personnel, techniques for containment and recovery, and removal of the oil spill.

4. Coastal Wildlife Refuges

An accidental oil spill release from the proposed activities could cause impacts to coastal wildlife refuges. However, due to the distance from shore (approximately 120 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 Kerr McGee's Regional Oil Spill Response Plan which address available equipment and personnel, techniques for containment and recovery, and removal of the oil spill.

5. Wilderness Areas

An accidental oil spill release from the proposed activities could cause impacts to wilderness areas. However, due to the distance from shore (approximately 120 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 Kerr McGee's Regional Oil Spill Response Plan which address available equipment and personnel, techniques for containment and recovery, and removal of the oil spill.

Other Identified Environmental Resources

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

Impacts on Proposed Activities

No impacts are expected on the proposed activities as a result of taking into consideration the site specific environmental conditions.

A High Resolution Shallow Hazards Survey was conducted, a report prepared in accordance with NTL 2002-G01 and NTL 98-20.

Based on the analysis of the referenced data, there are no surface or subsurface geological and manmade features and conditions that may adversely affect the proposed activities. Kerr McGee will institute procedures to avoid pipelines and abandoned wells within the vicinity of the proposed operations.

SECTION H
Environmental Impact Analysis-Continued

Alternatives

Kerr McGee did not consider any alternatives to reduce environmental impacts as a result of the proposed activities.

Mitigation Measures

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

Consultation

Kerr McGee 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.

SECTION H
Environmental Impact Analysis-Continued

References

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

Document	*Author*	*Dated*
Shallow Hazards Survey	Western Geophysical	1998
MMS Environmental Impact Statement Report No. 2002-15	Minerals Management Service	2002
NTL 2003-G10 "Vessel Strike Avoidance and Injured/Dead Protective Species"	Minerals Management Service	2003
NTL 2003-G11 "Marine Trash & Debris Awareness & Elimination"	Minerals Management Service	2003
NTL 2002-G09 "Regional and Subregional Oil Spill Response Plans"	Minerals Management Service	2002
NTL 2003-G17 "Guidance for Submitting Exploration Plans and Development Operations Coordination Documents"	Minerals Management Service	2003
NTL 2002-G01 "Archaeological Resource Surveys and Reports"	Minerals Management Service	2002
NTL 2000-G16 "Guidelines for General Lease Surety Bonds"	Minerals Management Service	2000
NTL 98-20 "Shallow Hazards Survey Requirements"	Minerals Management Service	1998
NTL 2003-N06 "Supplemental Bond Procedures"	Minerals Management Service	2003
NTL 98-16 "Hydrogen Sulfide Requirements"	Minerals Management Service	1998
NPDES General Permit GMG290000	EPA – Region VI	1998
Regional Oil Spill Response Plan	Kerr McGee Oil & Gas Corporation	2002

SECTION I
CZM Consistency

Under direction of the Coastal Zone Management Act (CMZA), 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.

Costal Zone Management Consistency is not required for the proposed supplemental operations.