UNITED STATES GOVERNMENT
MEMORANDUM

December 20, 2005

To: Public Information (MS 5030)

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

Subject: Public Information copy of plan

- Control # - S-06793
- Type - Supplemental Development Operations Coordinations Document
- Lease(s) - OCS-G21120 Block - 187 South Timbalier Area
- Operator - LLOG Exploration Offshore, Inc.
- Description - Platform B and Wells A and B
- Rig Type - JACKUP

Attached is a copy of the subject plan.

It has been deemed submitted as of ~~this date~~ 12/6/05 and is under review for approval.

MT

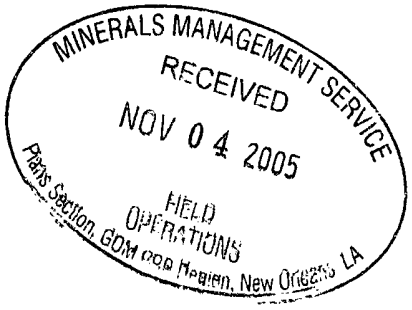
Michael Tolbert
Plan Coordinator

Site Type/Name	Botm Lse/Area/Blk	Surface Location	Surf Lse/Area/Blk
FIXED/B		3331 FNL, 2312 FEL	G21120/ST/187
WELL/A	G21120/ST/187	3331 FNL, 2312 FEL	G21120/ST/187
WELL/B	G21120/ST/187	3331 FNL, 2312 FEL	G21120/ST/187

NOTED-COHEN/NALDRE

PIRS
DEC 2 2 2005

LLOG
EXPLORATION OFFSHORE, INC.



November 2, 2005

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 Development Operations Coordination Document for Lease OCS-G 21120, South Timbalier Block 187, 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), LLOG Exploration Offshore, Inc. (LLOG) hereby submits for your review and approval a Supplemental Development Operations Coordination Document (Plan) for Lease OCS-G 21120, South Timbalier Block 187, Offshore, Louisiana. Excluded from the Public Information copies are certain geologic and geophysical discussions and attachments.

Based on NTL 2005-G18, enclosed are two Proprietary Information copies (one hard copy and one CD) and three Public Information copies (one hard copy and two CD's) of the Plan.

Contingent upon receiving regulatory approvals and based on equipment and personnel availability, LLOG anticipates operations under this Plan commencing as early as March 1, 2006.

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

Sincerely,

LLOG Exploration Offshore, Inc.

John M. Guidry
Petroleum Engineer

JMG:CAG
Attachments

Public Information

433 METAIRIE ROAD, SUITE 600
METAIRIE, LA 70005
PHONE: (504) 833-7700 FAX: (504) 833-8064

LLOG EXPLORATION OFFSHORE, INC.
433 Metairie Road, Suite 600
Metairie, Louisiana 70005

John M. Guidry
johng@llog.com

SUPPLEMENTAL DEVELOPMENT OPERATIONS COORDINATION DOCUMENT

LEASE OCS-G 21120

SOUTH TIMBALIER BLOCK 187

PREPARED BY:

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

DATED:

November 2, 2005

SECTION A
Plan Contents

A. Description, Objectives and Schedule

Lease OCS-G 21120, South Timbalier Block 187 was acquired by LLOG Exploration Company LLC the Central Gulf of Mexico Lease Sale No. 172 held on March 20, 2002. The lease was issued with an effective date of July 1, 1999 and a primary term ending date of June 30, 2004.

The current lease operatorship and ownership are as follows:

Area/Block Lease No.	Operator	Ownership
South Timbalier Block 187 Lease OCS-G 21120	LLOG Exploration Company LLC	LLOG Exploration Company LLC

Minerals Management Service approved a Supplemental Exploration Plan (Control No. S-5857) on February 13, 2002 which provided for the drilling and completion of Well Location F which was completed and left with a well protector type structure. Effective August 25, 2003, Minerals Management Service approved an Initial Development Operations Coordination Document (Control No. N-7836) providing for the commencement of production from Platform A.

LLOG proposes to drill, complete and test two wells from a common surface location, install a tripod type structure (to be designated as Platform B), lay a lease term pipeline and commence production under this proposed Development Operations Coordination Document (Plan). Included as *Attachment A-1* is a geological discussion of the trapping features.

B. Location

Included as *Attachments A-2 through A-4* is Form MMS-137 "OCS Plan Information Form, well location plat, and a bathymetry map detailing the proposed well surface location disturbance areas and anchor radius of barge for the structure installation.

C. Drilling Unit

LLOG will utilize a typical jack-up drilling rig for the proposed drilling, completion and 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 LLOG, 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, 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, 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 (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.

D. Production Facility

A tripod structure will be installed over the proposed wells and will be designated as Platform B. A typical elevation view is included as *Attachment A-4.*

South Timbalier Block 187, Platform No. B will be an unmanned structure. This structure will be considered the central processing facility for the subject wells on South Timbalier Block 187, Platform B. Following separation and measurement, the combined gas and liquid hydrocarbons from the respective platform will be transported via a proposed lease term pipeline to a subsea tie in point with LLOG's existing 6-inch right-of-way pipeline (Segment No. 14244) in South Timbalier Block 187.

Geological Targets and Trapping Features

Attachment A-1
(Proprietary Information)

OCS Plan Information Form

Attachment A-2
(Public Information)

U.S. Department of the Interior
Minerals Management Service

OMB Control Number: 1010-0049
OMB Approval Expires: August 31, 2006

OCS PLAN INFORMATION FORM

General Information

Type of OCS Plan		Exploration Plan (EP)	X	Development Operations Coordination Document (DOCD)	
Company Name:	LLOG Exploration Offshore, Inc.		MMS Operation Number:	02058	
Address:	433 Metairie Road, Suite 600		Contact Person:	Christine Groth, R.E.M. Solutions, Inc.	
	Metairie, Louisiana 70005		Phone Number:	(281) 492.8562	
			E-Mail Address:	christine@remsolutionsinc.com	

Lease(s): OCS-G 21120	Area: ST	Block(s): 187	Project Name (If Applicable): NA

Objective(s):		Oil	X	Gas		Sulphur		Salt	Onshore Base: Fourchon, LA	Distance to Closes Land (Miles): 39	

Description of Proposed Activities (Mark all that apply)

	Exploration drilling	X	Development drilling
X	Well completion	X	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	X	Commence production
X	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 A	**03/01/06**	**05/29/06**	**90**
Drill, Complete, and Test Well Location B	**05/30/06**	**08/26/06**	**90**
Install Platform B	**08/27/06**	**09/02/06**	**7**
Lay Lease Term Pipeline to ST 187 Platform A	**09/03/06**	**09/07/06**	**7**
Hook-up and Commence Production	**09/08/06**		

Description of Drilling Rig

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

Description of Production Platform

Description of Lease Term Pipelines

From (Facility/Area/Block)	To (Facility/Area/Block)	Diameter (Inch)	Length (Feet)
A ST 187	B ST 187	6"	8000'

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 A/ Platform B**		Subsea Completion	
Anchor Radius (if applicable) in feet: **NA**		Yes	**X** No

	Surface Location	Bottom-Hole Location (For Wells)
Lease No.	**OCS-G 21120**	**OCS-G 21120**
Area Name	**South Timbalier**	**South Timbalier**
Block No.	**187**	**187**
Blockline Departures (in feet)	N/S Departure **3331' FNL**	N/S Departure
	E/W Departure **2312' FEL**	E/W Departure
Lambert X-Y coordinates	X: **2,332,300.00**	X:
	Y: **-60,885.00**	Y:
Latitude/Longitude	Latitude **28°29'42.756"**	Latitude
	Longitude **-90°17'56.859"**	Longitude
	TVD (Feet):	MD (Feet):	Water Depth (Feet): **153'**

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

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.

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 B**		Subsea Completion	
Anchor Radius (if applicable) in feet: **NA**		Yes	**X** No

	Surface Location	Bottom-Hole Location (For Wells)
Lease No.	**OCS-G 21120**	**OCS-G 21120**
Area Name	**South Timbalier**	**South Timbalier**
Block No.	**187**	**187**
Blockline Departures (in feet)	N/S Departure **3331' FNL**	N/S Departure
	E/W Departure **2312' FEL**	E/W Departure
Lambert X-Y coordinates	X: **2,332,300.00**	X:
	Y: **-60,885.00**	Y:
Latitude/ Longitude	Latitude **28°29'42.756"**	Latitude
	Longitude **-90°17'56.859"**	Longitude
	TVD (Feet):	MD (Feet): / Water Depth (Feet): **153'**

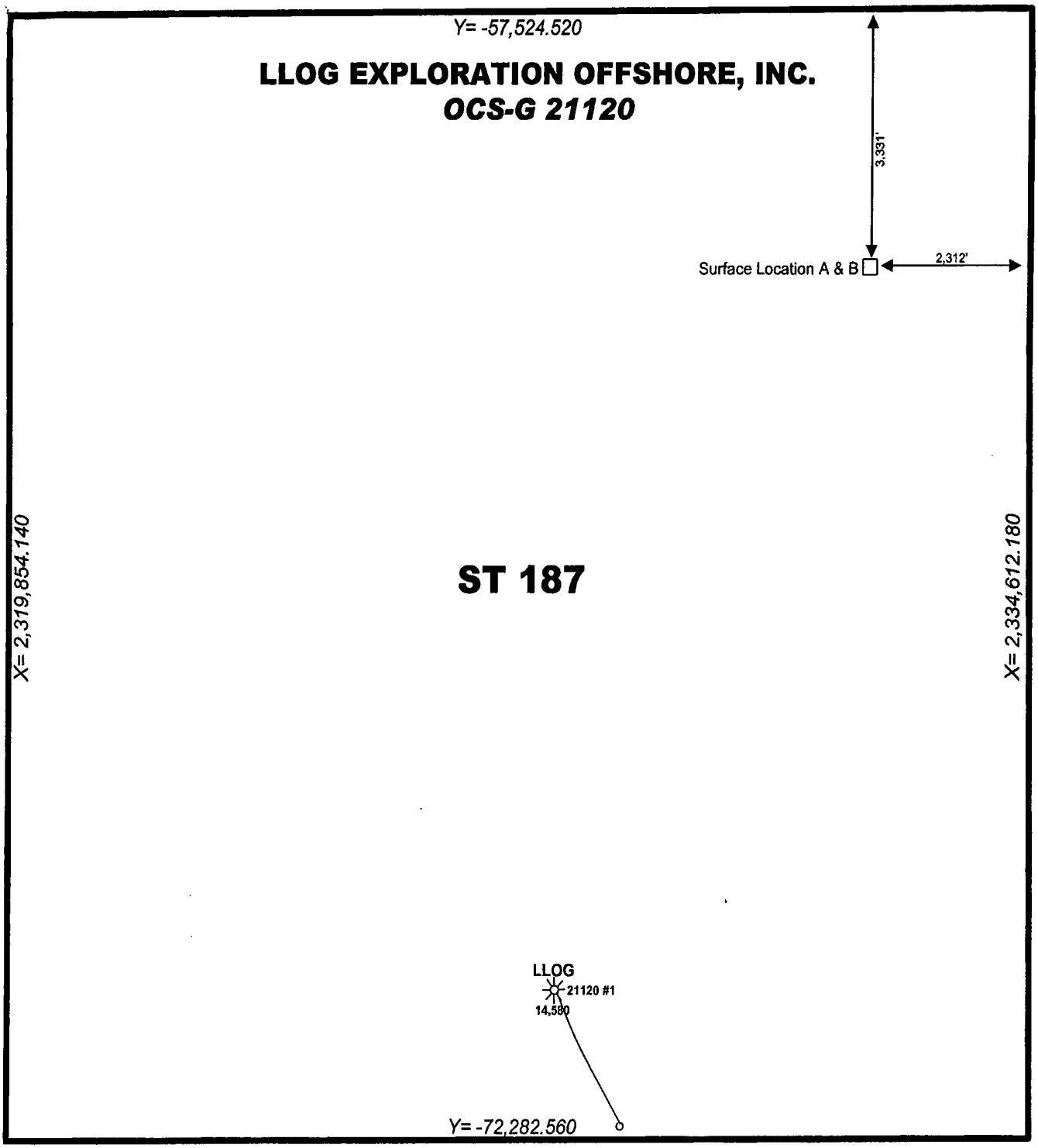
Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)

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

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 Plat

Attachment A-3
(Public Information)



SURFACE LOCATION A:
X: 2,332,300 Y: -60,885
Long:28deg,29 min,42.765 sec
Lat:-90deg,17 min,56.859 sec
(NAD27)

SURFACE LOCATION B:
X: 2,332,300 Y: -60,885
Long: 28deg, 29min, 42.765sec
Lat: -90deg, 17min, 56.859sec
(NAD27)

LLOG EXPL OFFSHORE

SOUTH TIMBALIER BLOCK 187

Gulf of Mexico

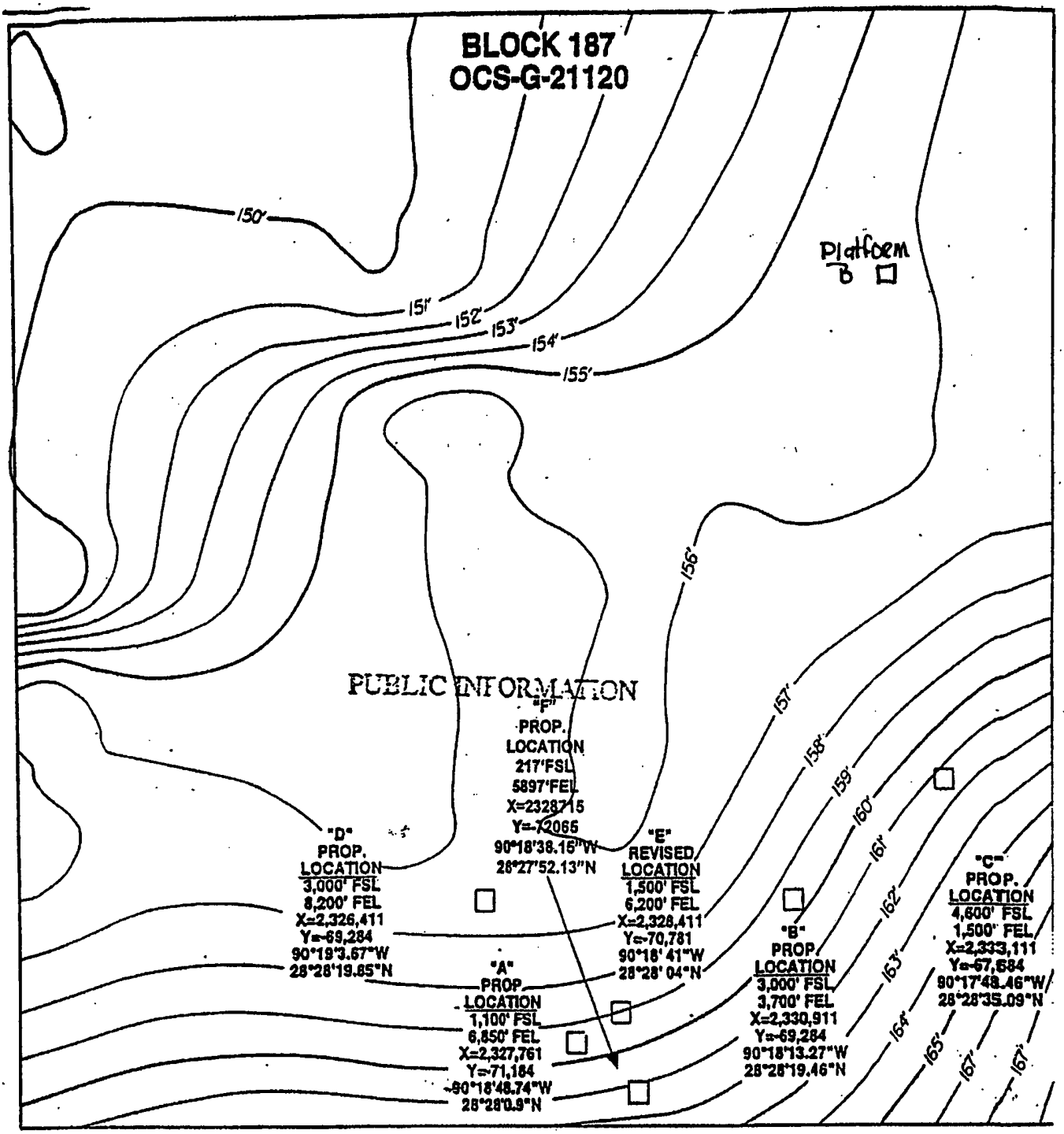
Location Map

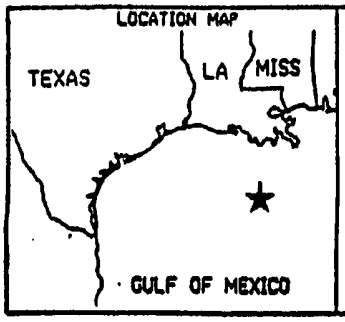
Scale: 1" = 2,000' **9/05**

Bathymetry Map

Attachment A-4
(Public Information)

8 8





LEGEND

□ SURFACE LOCATION

PUBLIC

LLOG EXPLORATION OFFSHORE INC.

UNITED STATES OFFSHORE EXPLORATION

SOUTH TIMBALIER
BLOCK 187

BATHYMETRY MAP

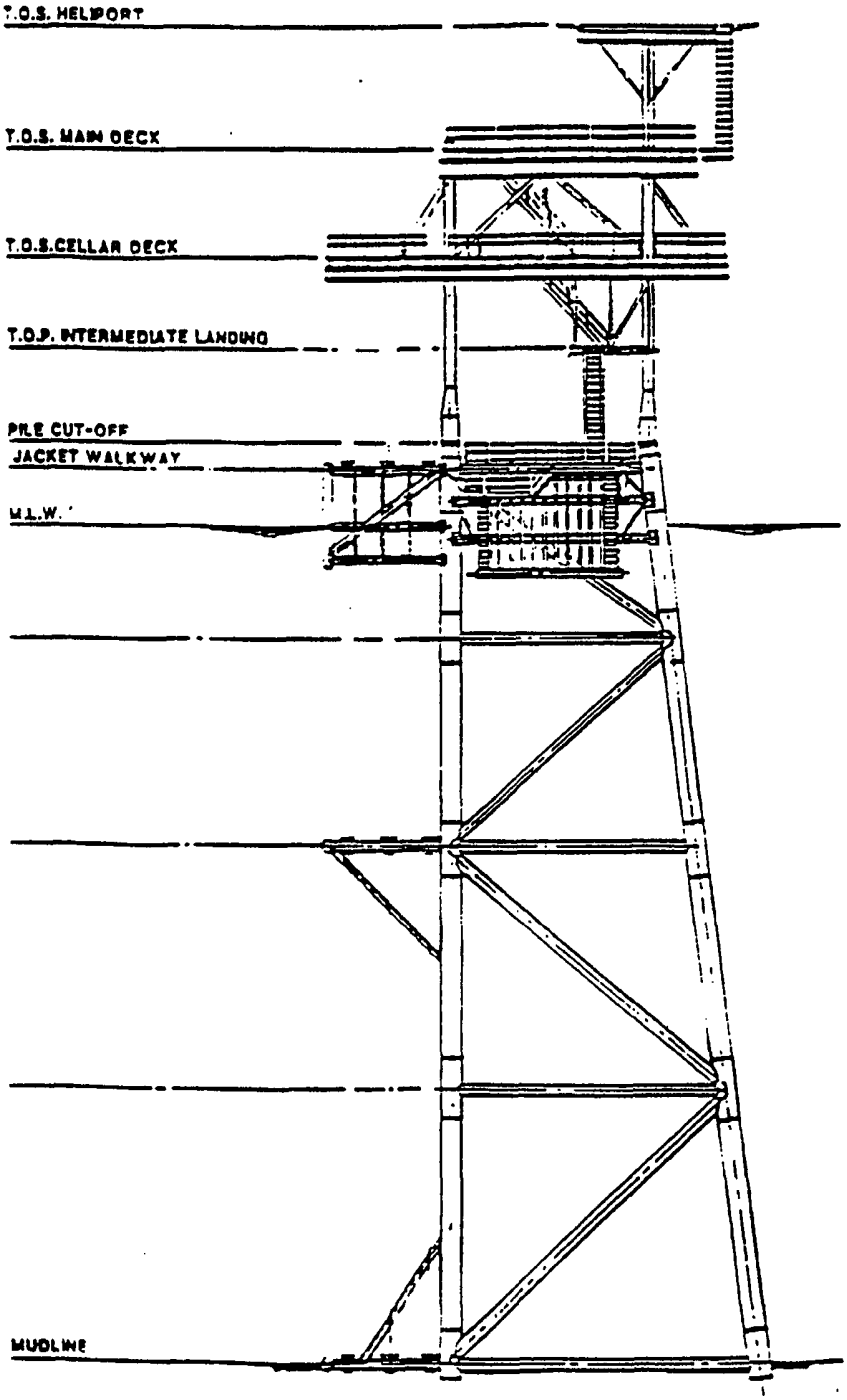
0' 2,000' 4,000'

C.I. = 1' | DATE 1/2002

Structure Elevation Drawing

Attachment A-5
(Public Information)

TYPICAL TRIPOD PRODUCTION PLATFORM SCHEMATIC



SCALE:1/16"=1'-0"

SECTION B
General Information

A. Contact

Questions or requests for additional information should be made to LLOG's authorized representative for this project:

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

B. Project Name

LLOG does not typically provide project names to their development activity.

C. Production Rates and Life of Reserves

LLOG estimates the life of reserves for the proposed development activity to be_____, with the following estimated combined production rates:

Product	*Average Rates*	*Peak Rates*
Gas		
Condensate		

D. New or Unusual Technology

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

E. Bonding Information

In accordance with Title 30 CFR Part 256, Subpart I, LLOG Exploration Company LLC 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.

SECTION B
General Information - Continued

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

F. Onshore Base and Support Vessels

The surface disturbance in South Timbalier Block 187 is located approximately 39 miles from the nearest Louisiana shoreline, and approximately 44 miles from the onshore support base to be located in Fourchon, Louisiana.

LLOG will use an existing onshore base to accomplish the following routine operations, and does not anticipate the need for any expansion of the selected facilities as a result of the activities proposed in this Plan:

- Loading/Offloading point for equipment supporting the offshore operations,
- Dispatching personnel and equipment,
- 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 field via the transportation methods and frequencies shown below, taking the most direct route feasible as mandated by weather and traffic conditions:

Support Vessel	Drilling/Completion Trips Per Week	Production Trips Per Week
Crew Boat	4	5
Supply Boat	2	0
Helicopter	1	3

A Vicinity Plat showing the location of South Timbalier Block 187 relative to the shoreline and onshore base is included as ***Attachment B-1.***

G. 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.

Minerals Management Service did not invoke any stipulations for Lease OCS-G 21120, South Timbalier Block 187.

Special Conditions

The proposed surface disturbance activity in South Timbalier Block 187 will not be affected by any special conditions and/or multiple uses, such as designated shipping/anchorage areas, lightering zones, rigs-to-reef zone, or ordnance disposal zones.

MMS has issued Notice to Lessees NTL 2004-G01 "Implementation of Seismic Mitigation Measures and Protected Species Observer Program", NTL 2003-G10 "Vessel Strike Avoidance and Injured/Dead Protected Species Reporting" and NTL 2003-G11 "Marine Trash and Debris Awareness and Elimination".

H. Related OCS Facilities and Operations

As addressed earlier in this Plan, LLOG is proposing installation of Platform B and a lease term pipeline to transport production from Platform B to a subsea tie-in point with LLOG's 6" right-of-way pipeline (Segment No. 14244) in South Timbalier Block 187, the production will be further transported to a subsea tie-in point in South Timbalier Block 178.

The anticipated flow rates and shut-in times for the proposed pipeline are as follows:

Origination Point	*Flow Rates*	*Shut In Time*
Platform B		

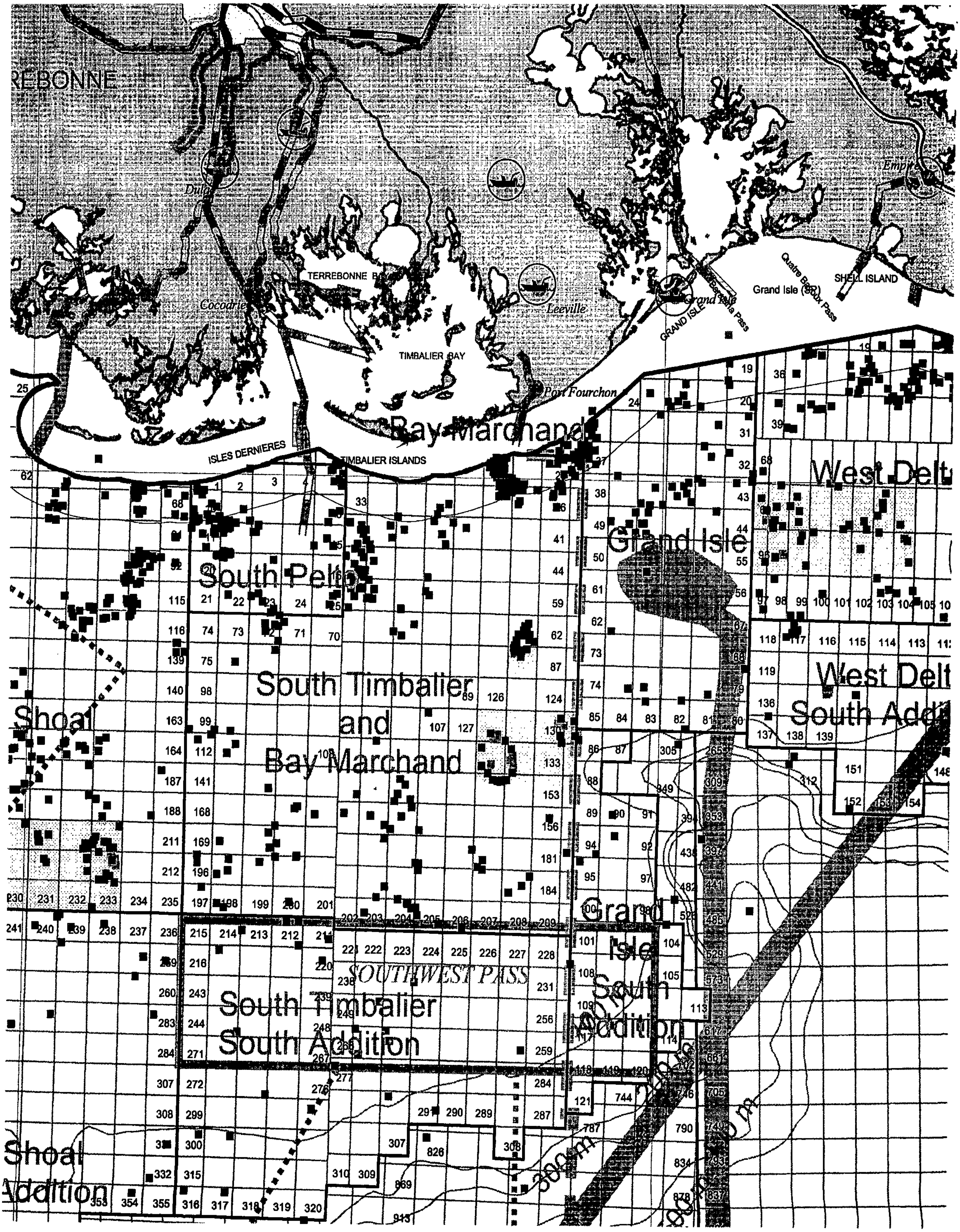
I. Transportation Information

Produced hydrocarbons from the respective structure addressed above will be further transported via Trunkline's existing 12-inch pipeline (Segment No. 1662).

LLOG does not anticipate installation of any new and/or modified onshore facilities to accommodate the production of South Timbalier Block 187.

Vicinity Plat

Attachment B-1
(Public Information)



TERREBONNE BAY
TIMBALIER BAY
Cocodrie
Leeville
Port Fourchon
Grand Isle
GRAND ISLE
SHELL ISLAND
ISLES DERNIERES
TIMBALIER ISLANDS
Bay Marchand
West Delta
South Pelto
Grand Isle
South Timbalier
and
Bay Marchand
West Delta
South Addition
Shoal
SOUTHWEST PASS
South Timbalier
South Addition
Grand
Isle
South
Addition
Shoal
Addition
300m

SECTION C
Geological, Geophysical & H2S Information

A. Structure Contour Maps

Included as *Attachment C-1* is a current structure map (depth base and expressed in feet subsea) depicting the entire lease coverage area; drawn on the top of each prospective hydrocarbon sand. The map depicts the bottom hole locations for each respective well provided for in this Plan.

B. Interpreted Deep Seismic Lines

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

C. Geological Structure Cross Sections

An interpreted geological cross section depicting the proposed well locations and depth of the proposed wells is included as *Attachment C-3.* Such cross section corresponds to each seismic line being submitted.

D. Shallow Hazards Report

Fugro GeoServices, Inc. conducted a high resolution geophysical survey in South Timbalier Block 187 during February 2000 on behalf of Amerada Hess 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

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 C-4.*

F. High Resolution Seismic Lines

Included as *Attachment C-5* is a copy of the transmittal letter for the annotated high resolution survey data lines for each surface location disturbance proposed in this Plan.

G. Stratigraphic Column

A generalized biostratigraphic/lithostratigraphic column from the seafloor to the total depth of the proposed wells is included as *Attachment C-6.*

SECTION C
Geological, Geophysical & H2S Information-Continued

H. Hydrogen Sulfide Classification

In accordance with Title 30 CFR 250.490, LLOG requests that South Timbalier Block 187 be classified by the Minerals Management Service as an area where the absence of hydrogen sulfide has been confirmed based on the following well which was drilled to the stratigraphic equivalent of the wells proposed in this Plan:

Lease	*Area/Block*	*Well No.*
OCS-G 21120	ST 187	A001

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 Assessment

Attachment C-4
(Public Information)

LLOG
EXPLORATION COMPANY, L.L.C.

October 21, 2005

Mr. Don Howard
Regional Supervisor-Field Operations
Mineral Management Service
1201 Elmwood Park Boulevard
New Orleans, Louisiana 70123-2394

RE: Shallow Hazard Study
South Timbalier 187 OCS-G 21120

Dear Mr. Howard,

Based upon the Shallow Hazard Study of South Timbalier 187 conducted by Fugro Geoservices, Inc., during February 2000, there are no shallow hazards that will interfere with the drilling operations at the proposed well locations. LLOG Exploration is aware of this potential gas zone and will be take appropriate measures when drilling through it.

Well Location:

Well	Surface Location
A	2312'FEL,3331'FNL
B	Same as A

Please refer to the hazard survey previously submitted with the initial POE submitted on August 29, 2000 by Amerada Hess Corporation.

Sincerely,

Eric Rhoden
Geologist

ER/mw

Enclosure

11700 OLD KATY ROAD, SUITE 295
HOUSTON, TX 77079
BUS. (281) 752-1100 FAX (281) 596-0219

Shallow Hazards Lines

Attachment C-5
(Proprietary Information)

LLOG
EXPLORATION OFFSHORE, INC.

November 3, 2005

U. S. Department of the Interior
Minerals Management Service
16855 Northchase
Houston, Texas 77060

Attention: Bill Kou

RE: High Resolution Geophysical Survey and Deep Seismic Lines Applicable to Supplemental Development Operations Coordination Document for Lease OCS-G 21120, South Marsh Island Block 187, OCS Federal Waters, Gulf of Mexico, Offshore, Louisiana

Gentlemen:

LLOG Exploration Offshore, Inc. (LLOG) has submitted under separate cover this date, a Supplemental Development Operations Coordination Document (Plan) covering Lease OCS-G 21120, South Marsh Island Block 187, Offshore, Louisiana.

In further support of the referenced Plan, LLOG is enclosing one copy each of the closest north-south and east-west shallow hazard line data sets, and a deep seismic line for each surface location addressed in this Plan.

Should you have any questions or requests for additional information, please contact the undersigned, or our regulatory representative, Christine Groth, R.E.M. Solutions, Inc. at 281.492.8562.

Sincerely,

LLOG Exploration Offshore, Inc.

John M. Guidry/CAG

John M. Guidry
Petroleum Engineer

JMG:CAG
Enclosures

433 METAIRIE ROAD, SUITE 600
METAIRIE, LA 70005
PHONE: (504) 833-7700 FAX: (504) 833-8064

Stratigraphic Column

Attachment C-6
(Proprietary Information)

SECTION D
Biological and Physical Information

A. Chemosynthetic Information

The proposed seafloor disturbing activities are in water depths less than 400 meters (1312 feet); therefore, this section of the Plan is not applicable.

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.

South Timbalier Block 187 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 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.

South Timbalier Block 187 is not located within an area where ROV Surveys are required.

SECTION D
Biological and Physical Information - Continued

E. Archaeological Reports

MMS has issued NTL 2002-G01, 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.

South Timbalier Block 187 is classified by MMS as a low probability area for archaeological resources; therefore, an archaeological survey is not required.

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. LLOG has requested coverage under the Region VI NPDES General Permit GMG290000 for discharges associated with exploration and development activities in South Timbalier Block 187 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

Associated solid and liquid wastes generated during the proposed activities addressed in this Plan are well treatment/completion/workover fluids, with associated wastes such as chemicals, cement wastes, sanitary and domestic waste, trash and debris, ballast water, storage displacement water, deck drainage, hydraulic fluids, used oil, oily water and filters, and other miscellaneous minor discharges.

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.

B. Overboard Discharges

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

C. 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.

LLOG 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, LLOG will comply with any approvals or reporting and recordkeeping requirements imposed by the State where ultimate disposal will occur.

Waste & Discharge Tables

Attachment E-1
(Public Information)

LLOG Exploration Company LLC
South Timbalier Block 187
Examples of Wastes and Discharges Information

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

Type of Waste Approximate Composition	Amount*	Rate per day	Location of Disposal Facility	Treatment and/or Storage, Transport and Disposal Method
Spent oil-based drilling fluids and cuttings	1,000 bbl/well	200 bbl/day	Newpark Environmental Fourchon, LA	Transport to shore in barge tanks to a land farm
Spent synthetic-based drilling fluids and cuttings	1,000 bbl/well	200 bbl/day	Newpark Environmental Fourchon, LA	Transport to shore base in cuttings boxes on crew boat then inject down hole at offshore waste disposal facility
Oil-contaminated produced sand	200 lb/yr	0.6 bbl/day	Newpark Environmental Fourchon, LA	Store in a cuttings box and transport to a land farm
Waste Oil	200 bbl/yr	0.5 bbl/yr	Newpark Environmental Fourchon, LA	Pack in drums and transported to an onshore Incineration site
Produced Water	250,000 bbl/yr	1,000 bbl/day	South Timbalier Block 187	Transport by vessel and inject at South Timbalier Block 187
Produced Water	250,000 bbl/yr	1,000 bbl/day	South Timbalier Block 187	Pipe to a well on-lease, inject down hole
Norm – contaminated wastes	1 ton	Not applicable	Newpark Environmental Fourchon, LA	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

Minerals Management Service approved LLOG Exploration Offshore, Inc.'s (LLOG) modification to their Regional Oil Spill Response Plan (OSRP) on December 2, 2004. Activities proposed in this Supplemental Development Operations Coordination Document will be covered by the Regional OSRP.

B. Oil Spill Removal Organizations (OSRO)

LLOG 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 Development WCD*
Type of Activity	Development	Development
Facility Surface Location	Vermilion Block 272	South Timbalier Block 187
Facility Description	Platform	Platform
Distance to Nearest Shoreline (Miles)	73 Miles	39 Miles
Volume: Storage Tanks (total) Facility Piping (total) Lease Term Pipeline Uncontrolled Blowout (day) **Potential 24 Hour Volume (Bbls.)**	13,356	500
Type of Liquid Hydrocarbon	Condensate	Condensate
API Gravity	50°	53.5°

Since LLOG has the capability to respond to the worst-case discharge (WCD) spill scenario included in its Regional OSRP approved on December 2, 2004, 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 LLOG 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 DOCD.

SECTION F
Oil Spill Response and Chemical Information-Continued

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. 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	Fourchon, LA Grand Isle, LA

F. Diesel Oil Supply Vessels

The following table details the vessels to be used for purposes other than fuel (i.e., corrosion control):

Size of Fuel Supply Vessel	Capacity of Fuel Supply Vessel	Frequency of Fuel Transfers	Route Fuel Supply Vessel Will Take
180' feet	1500 bbls	Weekly	From the shorebase to ST 187 and onto other fields in vicinity

G. Support Vessel Fuel Tanks

The following table details the vessel and fuel tanks on supply, service and/or crew vessels to be used to support the proposed activities:

Type of Vessel	Number in Field Simultaneously	Estimated Maximum Fuel Tank Capacity (bbls)
Tug Boats	2	3000
Supply Vessels	2	500
Service Vessels	1	500
Crew Vessels	1	500

SECTION F
Oil Spill Response and Chemical Information (Continued)

H. Produced Liquid Hydrocarbon Transportation Vessels

LLOG 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.

I. Oil and Synthetic-Based Drilling Fluids

LLOG will use either oil-based or synthetic based fluids for the proposed drilling activities as detailed in the following table:

Type of Drilling Fluid	Est. Volume of Mud Used Per Well	Mud Disposal Method	Est. Volume of Cutting Generated Per Well	Cuttings Disposal Method
Oil-Base	500 bbls	Onshore Disposal	1000 bbls.	Onshore Disposal
Synthetic-Base	20000 bbls.	Recycle	18000 bbls.	Discharge

J. Oil Characteristics

According to NTL 2003-G17, this section of the Plan is not applicable to the proposed operations.

K. Blowout Scenario

LLOG will drill to the objective sands outlined in Section C of this Plan utilizing a typical structural, conductor and surface casing program. If mandated by wellbore conditions, an intermediate casing string will be set prior to drilling through the objective sand. In the event of a blowout during the course of drilling open hole in the objective sands, LLOG anticipates a rate of 230 MMCFD and 2100 BCPD with an anticipated gravity of 53.5°. The wellbore would most likely bridge over in approximately 2 days. LLOG would immediately activate its Regional Oil Spill Response Plan and Spill Management Team to initiate potential recovery of liquid hydrocarbons on the receiving water and review potential well intervention options. In the event a relief well is initiated, LLOG does not anticipate any delays in acquiring a jack-up type rig to conduct the proposed operations.

SECTION F
Oil Spill Response and Chemical Information (Continued)

L. Spill Discussion for NEPA Analysis

In the event of an uncontrolled spill release resulting from the activities proposed in this Plan, LLOG's Person-In-Charge on the MODU or the Shorebase Dispatcher would most likely be the initial individuals to contact the Qualified Individual (QI) or our Spill Management Team (SMT) detailed in the Regional OSRP. The QI would immediately activate the SMT to ascertain the severity of the spill incident. LLOG's SMT Incident Command Center is located at O'Brien's Oil Pollution Services temporary office in Houston, Texas.

Dependent upon the severity of the spill incident, a trajectory analysis would be conducted utilizing the MMS Oil Spill Risk Analysis Model (OSRAM) as referenced in our approved Regional OSRP. This trajectory would provide the required information on percentage and timing of potential impact to the shoreline impact areas. The SMT would then identify the areas of sensitivities at potential landfall segment(s), so additional planning may be conducted for shoreline protection strategies. If surveillance indicates a potential threat to shoreline; the appropriate equipment and personnel would be deployed, as outlined in our Regional OSRP.

An overflight may be conducted to determine the extent and dissipation rate of the spill, with potential sampling of the spill release. Mechanical recovery equipment may also be dispatched to the leading edge of the spill, as outlined in our Regional OSRP. If additional offshore response is required, the SMT would initiate the Dispersant Use Plan of the Regional OSRP and utilize the services of Airborne Support Inc.'s aircraft and personnel.

M. Pollution Prevention Measures

As indicated in the volumes noted above, LLOG does not anticipate a potential for initiating additional safety, pollution prevention and/or early spill detection measures beyond those already required by Title 30 CFR Part 250.

N. FGBNMS Monitoring Plans

According to NTL 2003-G17, this section of the Plan is not applicable to the proposed operations.

SECTION G
Air Emissions Information

The primary air pollutants associated with OCS development 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 jack-up drilling unit, 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

LLOG 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)

DOCD AIR QUALITY SCREENING CHECKLIST

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

COMPANY	LLOG Exploration Offshore, Inc.
AREA	South Timbalier
BLOCK	187
LEASE	OCS-G 21120
PLATFORM	B
WELL	A & B
COMPANY CONTACT	Christine Groth at R.E.M. Solutions, Inc.
TELEPHONE NO.	281.492.8562
REMARKS	Drill, complete and test two (2) well locations, install platform, lay lease term pipeline and commence production.

LEASE TERM PIPELINE CONSTRUCTION INFORMATION:

YEAR	NUMBER OF PIPELINES	TOTAL NUMBER OF CONSTRUCTION DAYS
1999		
2000		
2001		
2002		
2003		
2004		
2005		
2006	1	7
2007		
2008		
2009		

Screening Questions for DOCD'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
Does or will the facility complex associated with your proposed development and production activities process production from eight or more wells?		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 in excess of the criteria set forth under 250.1105(a)(2) and (3)?		X
Do you propose to burn produced hydrocarbon liquids?	X	
Are your proposed development and production activities located within 25 miles from shore?		X
Are your proposed development and production activities located within 200 kilometers of the Breton Wilderness Area?		X

Air Pollutant		Plan Emission Amounts[1] (tons)	Calculated Exemption Amounts[2] (tons)		Calculated Complex Total Emission Amounts[3] (tons)
Carbon monoxide (CO)		147.73	39101.17		NA
Particulate matter (PM)		19.7	1298.7		NA
Sulphur dioxide (SO_2)		90.36	1298.7		NA
Nitrogen oxides (NOx)		677.1	1298.7		NA
Volatile organic compounds (VOC)		21	1298.7		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.

AIR EMISSION CALCULATIONS - FIRST YEAR

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL		CONTACT	PHONE	REMARKS
LLOG Exploration Offsho	South Timbalier	187	OCS-G 21120	B	A & B		Christine Groth at R.E.M. Soluti	281.492.8562	#REF!

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	11400	550.62	13214.88	24	180	8.04	36.86	276.21	8.29	60.26	17.36	79.62	596.62	17.90	130.17
	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 diese	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	103	1.46	6.68	50.03	1.50	10.92	0.60	2.75	20.61	0.62	4.50
	VESSELS>600hp diesel(supply)	2065	99.7395	2393.75	10	51	1.46	6.68	50.03	1.50	10.92	0.37	1.70	12.76	0.38	2.78
	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
PIPELINE INSTALLATION	PIPELINE LAY/BURY BARGE dies	2000	96.6	2318.40	24	7	1.41	6.47	48.46	1.45	10.57	0.12	0.54	4.07	0.12	0.89
	SUPPORT VESSEL diesel	2500	120.75	2898.00	24	7	1.76	8.08	60.57	1.82	13.22	0.15	0.68	5.09	0.15	1.11
	VESSELS>600hp diesel(crew)	2065	99.7395	2393.75	8	3	1.46	6.68	50.03	1.50	10.92	0.02	0.08	0.60	0.02	0.13
	VESSELS>600hp diesel(supply)	2065	99.7395	2393.75	10	1	1.46	6.68	50.03	1.50	10.92	0.01	0.03	0.25	0.01	0.05
FACILITY INSTALLATION	DERRICK BARGE diese	7000	338.1	8114.40	24	7	4.93	22.63	169.60	5.09	37.00	0.41	1.90	14.25	0.43	3.11
	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	2065	99.7395	2393.75	24	7	1.46	6.68	50.03	1.50	10.92	0.12	0.56	4.20	0.13	0.92
PRODUCTION	RECIP.<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
	RECIP.>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
	SUPPORT VESSEL diesel	2065	99.7395	2393.75	8	81	1.46	6.68	50.03	1.50	10.92	0.47	2.16	16.21	0.49	3.54
	TURBINE nat gas	0	0	0.00	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	RECIP.2 cycle lean nat gas	0	0	0.00	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	RECIP.4 cycle lean nat gas	0	0	0.00	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	RECIP.4 cycle rich nat gas	0	0	0.00	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	BURNER nat gas	0	0.00	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	
	FLARE-		0		0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	PROCESS VENT-		0		0	0				0.00					0.00	
	FUGITIVES-			1000.0		114				0.50					0.68	
	GLYCOL STILL VENT-		0		0	0				0.00					0.00	
DRILLING WELL TEST	OIL BURN	0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	GAS FLARE		0		0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
2006 YEAR TOTAL							27.83	127.69	956.81	29.20	208.76	19.70	90.36	677.10	21.00	147.73
EXEMPTION CALCULATION	DISTANCE FROM LAND IN MILES											1298.70	1298.70	1298.70	1298.70	39101.07
	39.0															

AIR EMISSIONS CALCULATIONS - SECOND YEAR

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL		CONTACT	PHONE	REMARKS
LLOG Exploration Offsho	South Timbalier	187	OCS-G 21120	B	A & B		Christine Groth at R.E.M. Solutio	281.492.8562	#REF!

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	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
	PRIME MOVER>600hp diesel	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
	PRIME MOVER>600hp diesel	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
	PRIME MOVER>600hp diesel	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
	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	0.00	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	0.00	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	0.00	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(tugs)	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
PIPELINE INSTALLATION	PIPELINE LAY 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
	SUPPORT VESSEL 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
	PIPELINE BURY 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
	SUPPORT VESSEL 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	0.00	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	0.00	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PRODUCTION	RECIP.<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
	RECIP.>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
	SUPPORT VESSEL diesel	2065	99.7395	2393.75	8	261	1.46	6.68	50.03	1.50	10.92	1.52	6.97	52.23	1.57	11.40
	TURBINE nat gas	0	0	0.00	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	RECIP.2 cycle lean nat gas	0	0	0.00	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	RECIP.4 cycle lean nat gas	0	0	0.00	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	RECIP.4 cycle rich nat gas	0	0	0.00	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	BURNER nat gas	0	0.00	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	
	FLARE-		0		0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	PROCESS VENT-		0		0	0				0.00					0.00	
	FUGITIVES-			1000.0		365				0.50					2.19	
	GLYCOL STILL VENT-		0		0	0				0.00					0.00	
DRILLING WELL TEST	OIL BURN	0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	GAS FLARE		0		0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
2007	YEAR TOTAL						1.46	6.68	50.03	2.00	10.92	1.52	6.97	52.23	3.76	11.40
EXEMPTION CALCULATION	DISTANCE FROM LAND IN MILES											1298.70	1298.70	1298.70	1298.70	39101.07
	39.0															

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 LLOG 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					X	
Wetlands					X	
Shorebirds and coastal nesting birds					X	
Coastal wildlife refuges					X	
Wilderness areas					X	
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 disturbance within South Timbalier Block 187 is located approximately 35 miles away from the closest designated topographic feature (Diaphus 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 disturbance within South Timbalier Block 187 is 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 disturbance within South Timbalier Block 187 is 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 South Timbalier Block 187 range from 155 feet to 167 feet. Therefore, the proposed activities are not located within the vicinity of any known chemosynthetic communities, which typically occur in water depths greater than 400 meters.

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

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 LLOG's Regional Oil Spill Response Plan which address available equipment and personnel, techniques for containment and recovery, and removal of the oil spill. LLOG 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, LLOG 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 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 LLOG's Regional Oil Spill Response Plan which address available equipment and personnel, techniques for containment and recovery, and removal of the oil spill. LLOG 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, LLOG 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 39 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.

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 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.

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

SECTION H
Environmental Impact Analysis-Continued

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 LLOG'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. LLOG 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 39 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 LLOG'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 39 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 LLOG'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 39 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 LLOG'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 39 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 LLOG'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 39 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.

SECTION H
Environmental Impact Analysis-Continued

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 LLOG'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

LLOG 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 2005-G07 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. LLOG will institute procedures to avoid pipelines and abandoned wells within the vicinity of the proposed operations.

Alternatives

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

Mitigation Measures

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

Consultation

LLOG 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	Fugro GeoServices	2000
MMS Environmental Impact Statement Report No. 2002-15	Minerals Management Service	2002
NTL 2003-N06 "Supplemental Bond Procedures"	Minerals Management Service	2003
NTL 2004-G01 "Implementation of Seismic Survey Mitigation Measures and Protected Species Observer Program"	Minerals Management Service	2004
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 2005-G07 "Archaeological Resource Surveys and Reports"	Minerals Management Service	2005
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 98-16 "Hydrogen Sulfide Requirements"	Minerals Management Service	1998
NPDES General Permit GMG290000	EPA - Region VI	2004
Regional Oil Spill Response Plan	LLOG Exploration Offshore, Inc.	2004

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.

A certificate of Coastal Zone Management Consistency for the State of Louisiana is enclosed as *Attachment I-1.*

LLOG Exploration Offshore, Inc. has considered all of Louisiana's enforceable policies and certifies the consistency for the proposed operations

Louisiana Coastal Zone Consistency Statement

Attachment I-1
(Public Information)

COASTAL ZONE MANAGEMENT CONSISTENCY CERTIFICATION

SUPPLEMENTAL DEVELOPMENT OPERATIONS COORDINATION DOCUMENT

SOUTH TIMBALIER BLOCK 187

LEASE OCS-G 21120

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

By: LLOG Exploration Company, Inc.

Signed By: Carol Eaton

Dated: 11/03/05