UNITED STATES GOVERNMENT
MEMORANDUM

September 26, 2003

To: Public Information (MS 5034)

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

Subject: Public Information copy of plan

Control #	-	N-07909
Type	-	Initial Exploration Plan
Lease(s)	-	OCS-G25123 Block - 178 Green Canyon Area
Operator	-	Mariner Energy, Inc.
Description	-	Wells A and B
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.

Michelle Griffitt
Plan Coordinator

Site Type/Name	Botm Lse/Area/Blk	Surface Location	Surf Lse/Area/Blk
WELL/A	G25123/GC/178	3463 FNL, 2360 FWL	G25123/GC/178
WELL/B	G25123/GC/178	3463 FNL, 2360 FWL	G25123/GC/178

MARINER ENERGY, INC.
2101 Citywest Blvd. Suite 1900 Houston, Texas 77042-3020 Tel (281) 584-5500 Fax (281) 584-5555

September 17, 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: Initial Exploration Plan for Lease OCS-G 25123, Green Canyon Block 178, 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), Mariner Energy, Inc. (Mariner) hereby submits for your review and approval nine (9) copies of an Initial Exploration Plan (Plan) for Lease OCS-G 25123, Green Canyon Block 178, Offshore, Louisiana. Five (5) copies are "Proprietary Information", and four (4) copies are "Public Information".

Excluded from the Public Information copies are certain geologic and geophysical discussions and attachments.

Contingent upon receiving regulatory approvals and based on equipment and personnel availability, Mariner 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, R.E.M. Solutions, Inc., Attention: Christine Groth or Connie Goers at 281.492.8562.

Sincerely,

MARINER ENERGY, INC.

Blaine E. Dinger

Blaine E. Dinger
Manager, Environmental, Health & Safety

BED:CJG
Attachments

CONTROL No. N-7905
REVIEWER: Michelle Griffitt
PHONE: (504) 736-2975

Public Information

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.***

Mariner Energy, Inc. certifies that consistency with the State of Louisiana's enforceable policies has been considered.

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Blaine E. Dinger

Blaine E. Dinger
Manager, Environmental, Health & Safety

Public Information

BED:CJG
Attachments

MARINER ENERGY, INC.
2101 Citywest Boulevard, Suite 1900
Houston, Texas 77042-3020

Blaine E. Dinger
bdinger@mariner-energy.com

INITIAL EXPLORATION PLAN

LEASE OCS-G 25123

GREEN CANYON BLOCK 178

PROSPECT NAME: BACCARAT

PREPARED BY:

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

DATED:

September 17, 2003

SECTION A
PLAN CONTENTS

A. Description, Objectives and Schedule

Lease OCS-G 25123, Green Canyon Block 178 was acquired by Mariner Energy, Inc. at the Central Gulf of Mexico Lease Sale No. 185 held on March 19, 2003. The lease was issued with an effective date of July 1, 2003 and a primary term ending date of June 30, 2011.

The current lease operatorship and ownership are as follows:

Area/Block Lease No.	Operator	Ownership
Green Canyon Block 178 Lease OCS-G 25123	Mariner Energy, Inc.	Mariner Energy, Inc.

Mariner proposes to drill, potentially complete and test Well Locations A and B from a common surface location in Green Canyon Block 178. Information pertaining to the geological targets, including a narrative of trapping features, is included as ***Attachment A-1.***

Mariner proposes to conduct these operations as outlined in the following activity schedule:

Proposed Activity	*Start Up Date*	*Completion Date*
Drill Well Location A	01/01/2004	01/20/2004
Complete Well Location A	01/21/2004	02/07/2004
Test Well Location A	02/08/2004	02/09/2004
Drill Well Location B	02/10/2004	03/05/2004
Complete Well Location B	03/06/2004	03/23/2004
Test Well Location B	03/24/2004	03/25/2004

B. Location

Included as ***Attachments A-2 through A-4*** is Form MMS-137 "OCS Plan Information Form", Well Location Plat and the Bathymetry Map detailing the proposed well surface location disturbance area and the proposed anchor radius of semi-submersible.

C. Drilling Unit

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

SECTION A
Contents of Plan - Continued

Safety of personnel and protection of the environment during the proposed operations is of primary concern with Mariner, 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.

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)

OMB Control No. 1010-0049
Expiration Date: September 30, 2003

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

EXPLORATION PLAN	x	DEVELOPMENT OPERATIONS COORDINATION DOCUMENT		DEVELOPMENT & PRODUCTION PLAN	

OPERATOR:	**Mariner Energy, Inc.**	ADDRESS:	**2101 Citywest Boulevard, Suite 1900, Houston, Texas 77042**
MMS OPERATOR NO.:	**00818**		
CONTACT PERSON:	**Christine Groth or Connie Goers** **R.E.M. Solutions, Inc.**	PHONE NO.	**281.492.8562**

PROPOSED START DATE:	**01/01/2004**	RIG TYPE:	**SS**			DISTANCE TO CLOSEST LAND (IN MILES):	**103**
NEW OR UNUSUAL TECHNOLOGY	YES		NO	**X**	ONSHORE SUPPORT BASE:	**Fourchon, Louisiana**	

NARRATIVE DESCRIPTION PROPOSED ACTIVITIES: **Drill, potentially complete and test Wells Locations A and B**

PROJECT NAME, IF APPLICABLE: **Baccarat**

PROPOSED WELL/STRUCTURE LOCATIONS

WELL / STRUCTURE NAME	SURFACE LOCATION	BOTTOM-HOLE LOCATION (FOR WELLS)
Well A Name:	CALLS: **3463'** F **N** L and **2360'** F **W** L OF LEASE OCS **G 25123** , **Green Canyon** AREA, BLOCK **178**	CALLS: **3463'** F **N** L and **2360'** F **W** L OF LEASE OCS **G 25123** , **Green Canyon** AREA, BLOCK **178**
	X: **2,014,040'** Y: **10,086.617'**	X: Y:
	LAT: **27°47'27.3205"** LONG: **91°50'38.5972"**	LAT: LONG:
	TVD (IN FEET):	MD (IN FEET):
		WATER DEPTH (IN FEET): **1014'**

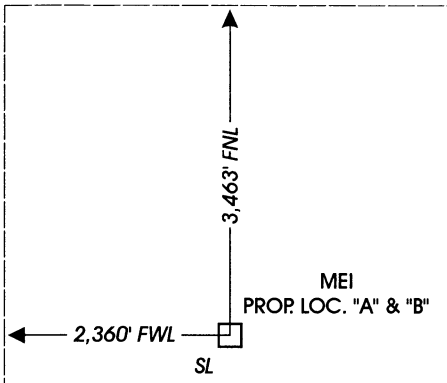
WELL / STRUCTURE NAME	SURFACE LOCATION	BOTTOM-HOLE LOCATION (FOR WELLS)
Well B Name:	CALLS: **3463** F **N** L and **2360'** F **W** L OF LEASE OCS **G 25123** , **Green Canyon** AREA, BLOCK **178**	CALLS: **3363'** F **N** L and **5160'** F **W** L OF LEASE OCS **G 25123** , **Green Canyon** AREA, BLOCK **178**
	X: **2,014,040'** Y: **10,086.617'**	X: Y:
	LAT: **27°47'27.3205"** LONG: **91°50'38.5972"**	LAT: LONG:
	TVD (IN FEET):	MD (IN FEET):
		WATER DEPTH (IN FEET): **1014'**

Well Location Plat

Attachment A-3
(Public Information)

Y = 10,090,080'

178



MEI Proposed Surface Locations "A" & "B"

3,463' FNL & 2,360' FWL
X = 2,014,040'
Y = 10,086,617'
Lat. = 27° 47' 27.3205"
Long. = -91° 50' 38.5972"

X = 2,011,680'

X = 2,027,520'

Y = 10,074,240'

MARINER ENERGY, INC.

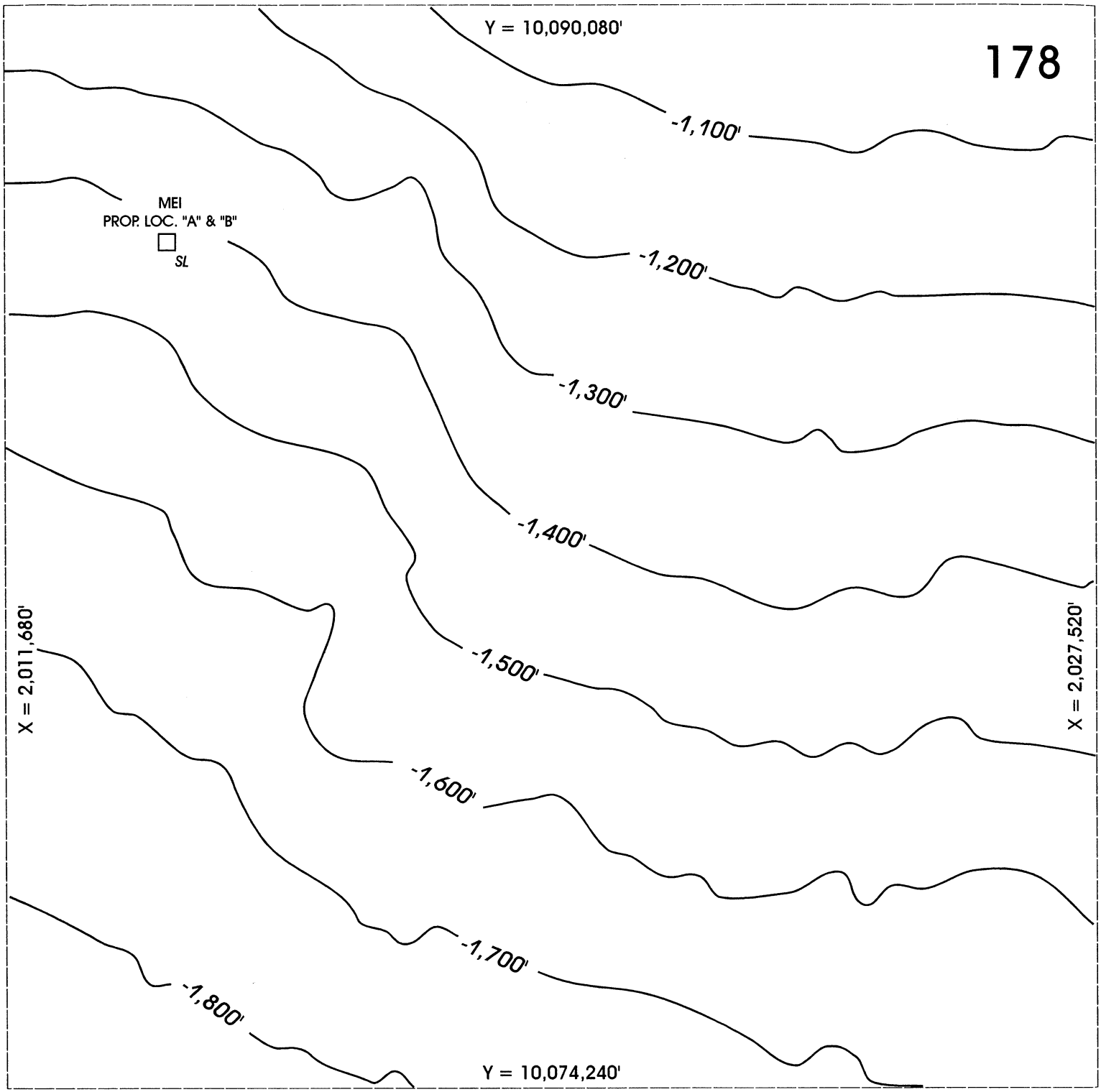
GREEN CANYON 178
OCS-G 25123
Locations "A" & "B"
PROPOSED SURFACE LOCATION

1" = 2000'

09-04-03

Bathymetry Map

Attachment A-4
(Public Information)



MARINER ENERGY, INC.

GREEN CANYON 178

OCS-G 25123

Locations "A" & "B"

BATHYMETRY MAP

1" = 2000'

C.I. = 100'

09-04-03

SECTION B
General Information

A. Contact

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

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

B. Prospect Name

The prospect name assigned to Green Canyon Block 178 is Baccarat.

C. New or Unusual Technology

Mariner 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, Mariner 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.

Mariner 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 proposed surface disturbance in Green Canyon Block 178 will be located approximately 103 miles from the nearest Louisiana shoreline, and approximately 135 miles from the onshore support base to be located in Fourchon, Louisiana

Mariner 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	4
Supply Boat	7
Helicopter	10

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 surface location in Green Canyon Block 178 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 25123, Green Canyon Block 178 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.

The proposed surface disturbance in Green Canyon Block 178 is located within Military Warning Area W-59A.

SECTION B
General Information - Continued

Therefore, in accordance with the requirements of the referenced stipulation, Mariner will contact the Naval Air Station in order to coordinate and control the electromagnetic emissions during the proposed operations.

Marine Protected Species

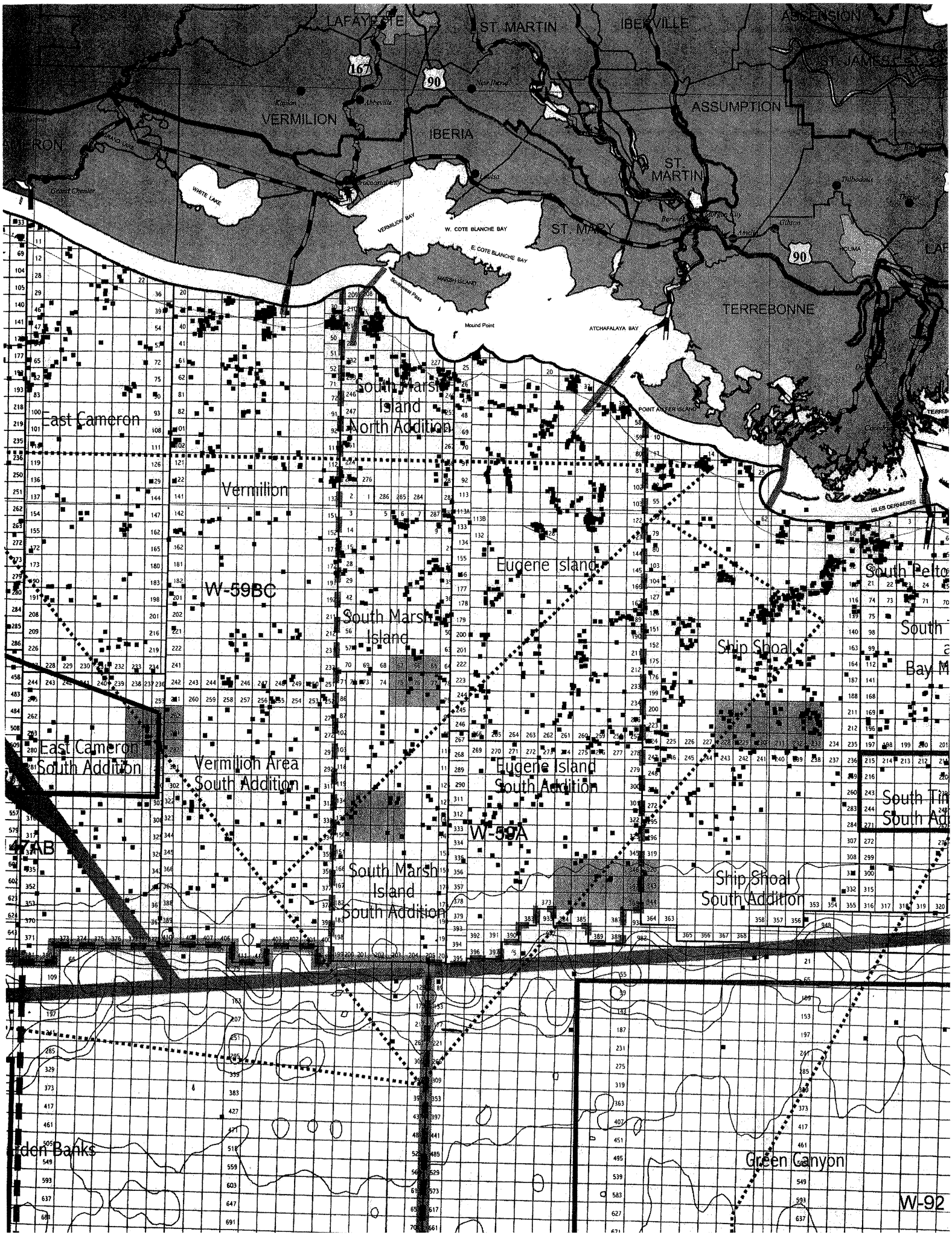
Lease Stipulation No. 6 is to reference measures to minimize or avoid potential adverse impacts to protected species (sea turtles, marine mammals, gulf sturgeon, and other federally protected species). MMS has issued Notice to Lessees NTL 2003-G08 "Implementation of Seismic Mitigation Measures", NTL 2003-G10 "Vessel Strike Avoidance and Injured/Dead Protected Species Reporting" and NTL 2003-G11 "Marine Trash and Debris Awareness and Elimination".

Special Conditions

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

Vicinity Plat

Attachment B-1
(Public Information)


LAFAYETTE
ST. MARTIN
IBERVILLE
ASCENSION
ST. JAMES
VERMILION
IBERIA
ASSUMPTION
ST. MARY
TERREBONNE
LAFOURCHE
WHITE LAKE
VERMILION BAY
W. COTE BLANCHE BAY
E. COTE BLANCHE BAY
MARSH ISLAND
Southwest Pass
Mound Point
ATCHAFALAYA BAY
POINT AU FER ISLAND
ISLES DERNIERES
167
90
East Cameron
Vermilion
South Marsh Island North Addition
W-59BC
Eugene Island
South Marsh Island
Ship Shoal
East Cameron South Addition
Vermilion Area South Addition
Eugene Island South Addition
W-59A
47AB
South Marsh Island South Addition
Ship Shoal South Addition
Green Canyon
W-92

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 maps depict each proposed bottom hole location and applicable geological cross section.

B. Interpreted Deep Seismic Lines

Included as ***Attachment C-2*** is a page size copy of the migrated and annotated deep seismic line within 500 feet of the surface location.

C. Geological Structure Cross Sections

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

D. Shallow Hazards Report

Mariner contracted the services of P. Trabant, Ph.D to perform a shallow hazards and shallow water flow study for the proposed surface disturbances in Green Canyon Block 178. The purpose of these studies was to assess 3D exploration seismic to evaluate geologic conditions and inspect for potential hazards or constraints to lease development.

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

E. Shallow Hazards Assessment

Utilizing the 3D deep seismic exploration data a shallow hazards analysis was 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

Utilizing the 3D seismic exploration data, a shallow hazards analysis was prepared for the proposed surface location, evaluating seafloor and subsurface geologic and manmade features and conditions, and copies of the deep seismic lines submitted as Attachment C-2 referenced above.

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

Mariner 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, Mariner requests that Green Canyon Block 178 be classified by the Minerals Management Service as an area where the absence of hydrogen sulfide has been confirmed based on the narrative 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)

V. DRILL-SITE EVALUATION

Site evaluation assesses shallow drilling hazards and constraints from the seafloor to approximately one-second two-way time below the seafloor (~3,000 feet BML). Top hole diagram, Figure 5, identifies drilling hazards and their approximate depth referenced to mud line (BML) and sea level (BSL). Potential shallow water flow zones are assigned a risk level based on seismic stratigraphic interpretation and well control according to the factors listed below.

Determinants	***SWF Risk Level***	***Shallow Gas Risk Level***
Geologic		
Highly permeable sands (stratigraphic)	High	High
Highly permeable sands (well log)	High	High
Seal	High	High
Ties directly to a SWF zone	High	High
Ties directly to a blowout zone	Moderate	High
Breached sands (faulted)	Moderate-low	Moderate
Geophysical		
Bright Spots	High	High
High amp. Reflectors (subsurface)	High	Moderate

Hazards Map 3 has a 1,500-foot radius circle around the well's surface location to outline the ecological area that could be impacted by drilling muds and cuttings discharge activity, and to evaluate potential seafloor hazards and sensitive environments.

The proposed drilling location is in the northwestern quadrant of Block 178 and is to be drilled vertically from an anchored drilling vessel. A generic anchor pattern, based on mooring lengths 2.5 times the water depth, suggests a 4,200-foot spread and recommended anchor coordinates (Map 10). Water depths extracted from the 3D seismic cube are approximate by about one percent.

The closest wells are in adjacent Blocks 134, 177 and 179. A pipeline links the Sangria field in western half of Green Canyon Block 177 to shelf infrastructure. No man made features are present in Green Canyon Block 178 (MMS GIS download of May 2003).

Site 178-A

Well	Depth	Calls		Line	Trace	X: UTM 15	Y: UTM 15
GC 178 A	~1,421'	2,355' FWL	3,459' FNL	1509	6907	2,014,035	10,086,621

Proposed site is in the block's northwest quadrant where the water depth is approximately **1,421 feet** (Map 2). The seafloor is smooth and slopes to the southwest at a moderate gradient of 250 feet per mile (2.7° or 4.6%). Seafloor sediments are expected to consist of fine-grained pelagic and hemi-pelagic muddy clays.

Shallow hazards, Map 3, shows a seep depression 2,800 feet northeast of site. Its diameter is ~600-feet by 40-feet deep. No strong seafloor reflectors are associated with this seep. The seafloor is offset 3,800 to the east above the eastern margin of a buried slump scarp. Along the slump's buried margin the seafloor steepens slightly to 660-feet per mile (7.1°) forming slopes between 6 and 10 degrees.

There are no active or inactive faults within the study area. No seafloor features such as fluid expulsion mounds or strong seafloor seismic reflectors suggesting the presence of potential chemosynthetic habitats are within 1,500 feet of the proposed drill-site.

Top hole diagram, Figure 7

Structurally, the site is located between a salt structure to the north and TAMU Basin to the south. The area has received massive amounts of sediment from the shelf edge ten miles north. The 3D visualization of Figure 2 displays a 2,000 foot-square column centered on the drill site and emphasizes the presence of strong negative seismic amplitudes associated with fluids in depositional Units IV and V.

Seismic stratigraphic interpretation from the seafloor to ~3,200 feet BML identified two sand-prone deposits that could be overpressured and produce shallow water flows. Both zones have been assigned a high risk potential due to the sand, well tie to GC 134 and knowledge of a SWF flow in the GC 181No. 2 well eight miles to the east. The first zone of sand is in Unit IV between 1,176 and 1,576 feet BML and the other zone in Unit V lies between 2,379 and 3,006 feet BML.

Aside from small amplitude anomalies indicative of fluid-saturated sands in Units IV and V no bright spot amplitude anomalies indicative of significant shallow gas will be intercepted by the well bore.

No faults are present or will be intercepted by the well bore within top hole range, and no other hazards to drilling operations have been identified along the well bore's path to ~3,200 feet BML.

Mooring Pattern, Map 9

The eight-point mooring pattern shows all anchors and ground tackle clear of seafloor features that might indicate the presence of environmentally sensitive areas. A small depression 600 feet wide by 40 feet deep is located 2,800 feet northeast of site. The seep is the product of fluid seepage from recently deposited shallow sediments, and shows no seismic reflector indicators associated with chemosynthetic habitats, such as, high amplitudes and reversed phase seafloor reflector. Prudence dictates that the area around the fluid seeps remain clear of anchors and ground tackle by ~500-feet.

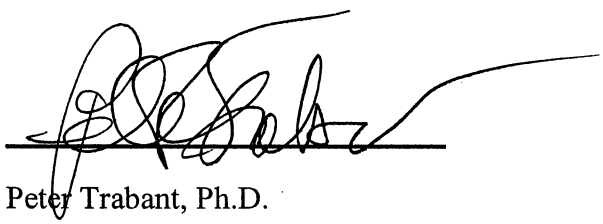
Features or areas that could support high-density chemosynthetic communities are ***not*** present. No potential chemosynthetic habitats are within 1,500 feet of the drilling rig's surface location or 500 feet of all anchors and ground tackle.

VI. CONCLUSIONS AND RECOMMENDATIONS

This shallow geohazards study of Green Canyon Block 178 was undertaken to assess drilling hazards and constraints to exploration drilling operations at one proposed drill site and mitigate or reduce their impact. Specific objectives were the detection of sands that could cause a shallow water flow, shallow geological hazards and gas, and environmentally sensitive areas that could support chemosynthetic organism growth at the seafloor. Results of this study identified the following.

- Amplitude anomalies indicative of fluid-bearing sands within top hole range.
- Two high risk shallow water flow zones associated with sand-prone deposits between approximately 1,100 and 3,006 feet BML at proposed drill site GC 178-A.
- No significant shallow gas indicators are present.
- No seafloor areas within 1,500 feet of the well and 500 feet of suggested anchors and ground tackle layout display evidence of fluid seeps or chemosynthetic habitats, and risk of their occurrence is considered low due to high sedimentation rates.

This drilling hazards assessment was performed by Peter Trabant, Ph.D., for Joe Ozment at Mariner Energy, Inc., Houston, Texas.



Peter Trabant, Ph.D.
Consultant Oceanographer - *Marine Geohazards Specialist*
Tel: (713) 956-5404 - e-mail: pete@marinegeohazards.com
July 30, 2003

Stratigraphic Column

Attachment C-5
(Proprietary Information)

H2S Classification

Attachment C-6
(Public Information)

Hydrogen Sulfide Determination

Mariner's proposed locations " A " and " B " on GC 178 will drill Pleistocene sediments to approximately -8500. This interval has been penetrated by numerous wells in a 40 mile radius with no hydrogen sulfide reported. In particular the GC 134 Exxon Nos. 1 and 2 and GC 177 Spinnaker No. 1 on adjacent blocks have reported no hydrogen sulfide in the section to be tested by locations " A " and " B ". On this basis we anticipate no hydrogen sulfide to be encountered at either location " A " or " B ".

SECTION D
Biological and Physical Information

A. Chemosynthetic Information

The water depths in Green Canyon Block 178 range from approximately 1014 feet to 1852 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, and a radius circle of 500 feet around each such location.

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 178 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.

Mariner is familiar with the ROV survey and reporting provisions of this NTL; and if required, will conduct surveys immediately prior to commencing drilling operations on Well Location A with an anticipated spud date of January 1, 2004, and following the completion of drilling operations approximately 38 days later.

Mariner will utilize a semi-submersible rig based ROV equipped with video imaging capabilities. The survey pattern will consist of six transects centered on the well location with tracks extending approximately 100 meters away from the well on bearing of 30 degrees, 90 degrees, 150 degrees, 210 degrees, 270 degrees and 330 degrees. The seafloor will be videotaped continuously along each track.

Mariner will make biological and physical observations as described in the subject NTL and Form MMS-141 prior to commencing drilling operations and also following the completion of drilling operations, but prior to moving the rig off location. The observations will be documented using Form MMS-141 or a facsimile and submitted to the MMS within 60 days after the second survey is completed.

E. Archaeological Reports

Green Canyon Block 178 is not located within an area designated as a high probability for historic and/or pre-historic cultural resources. Therefore, an Archaeological Report 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. Mariner has requested coverage under the Region VI NPDES General Permit GMG290000 for discharges associated with exploration and development activities in Green Canyon Block 178 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.

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

Waste Disposal Table

Attachment E-1
(Public Information)

Mariner Energy, Inc.
Green Canyon Block 178
Examples of Wastes and Discharges Information

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 178	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

Regional Oil Spill Response Plan (OSRP) Information

Effective July 28, 2003, Minerals Management Service approved Mariner Energy, Inc.'s most recent modification to their Regional Oil Spill Response Plan (OSRP). Mariner Energy, Inc. is the only entity covered under this OSRP. Activities proposed in this Initial Exploration Plan will be covered by the Regional OSRP.

B. Oil Spill Removal Organizations (OSRO)

Mariner 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	Drilling/Completion/Testing	Drilling/Completion/Testing
Facility Surface Location	Mississippi Canyon Block 66	Green Canyon Block 178
Facility Description	MODU	MODU
Distance to Nearest Shoreline (Miles)	17	103
Volume: Storage Tanks (total) Facility Piping (total) Lease Term Pipeline Uncontrolled Blowout (day) **Potential 24 Hour Volume (Bbls.)**	12000	110
Type of Liquid Hydrocarbon	Crude	Condensate
API Gravity	25°	45°

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, Mariner Energy, Inc. will not modify their Regional OSRP to change the WCD.

Since Mariner Energy, Inc. has the capability to respond to the worst-case discharge (WCD) spill scenario included in its Regional OSRP approved on July 28, 2003, 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 Mariner Energy, Inc. has the capability to respond, to the maximum extent practicable, to a worst-case discharge, or a substantial 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. Spill Response Sites

According to NTL G2003-G17, this section of the Plan is not applicable to the proposed operations.

F. Diesel Oil Supply Vessels

According to NTL G2003-G17, this section of the Plan is not applicable to the proposed operations.

G. Support Vessel Fuel Tanks

According to NTL G2003-G17, this section of the Plan is not applicable to the proposed operations.

H. Produced Liquid Hydrocarbon Transportation Vessels

Mariner 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.

SECTION F
Oil Spill Response and Chemical Information-Continued

I. Oil and Synthetic-Based Drilling Fluids

According to NTL G2003-G17, this section of the Plan is not applicable to the proposed operations.

J. Oil Characteristics

According to NTL G2003-G17, this section of the Plan is not applicable to the proposed operations.

K. Blowout Scenario

According to NTL G2003-G17, this section of the Plan is not applicable to the proposed operations.

L. Spill Discussion for NEPA Analysis

According to NTL G2003-G17, this section of the Plan is not applicable to the proposed operations.

M. Pollution Prevention Measures

According to NTL G2003-G17, this section of the Plan is not applicable to the proposed operations.

N. FGBNMS Monitoring Plans

Green Canyon Block 178 is not located within the vicinity of the Flower Garden Banks 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 drilling, potential completion and testing operations utilizing a typical semi-submersible, type drilling unit, with related support vessels 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

Mariner 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 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	Mariner Energy, Inc.
AREA	Green Canyon
BLOCK	178
LEASE	OCS-G 25123
RIG	Semi-Submersible
WELL	A & B
COMPANY CONTACT	Christine Groth and Connie Goers, R.E.M. Solutions, Inc.
TELEPHONE NO.	281.492.8562
REMARKS	Drill, potentially complete and test Well Locations A and B from a common surface location.

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)		224.59	74708.57		NA
Particulate matter (PM)		29.62	3429.9		NA
Sulphur dioxide (SO_2)		138.35	3429.9		NA
Nitrogen oxides (NOx)		1012.78	3429.9		NA
Volatile organic compounds (VOC)		30.94	3429.9		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
Mariner Energy, Inc.	Green Canyon	178	OCS-G 25123	Semi-Submersibl	A & B		Christine Groth and Connie Goers	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	85	27.88	127.90	958.38	28.75	209.10	28.44	130.46	977.55	29.33	213.28
	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	49	1.46	6.68	50.03	1.50	10.92	0.29	1.31	9.81	0.29	2.14
	VESSELS>600hp diesel(supply)	2065	99.7395	2393.75	10	85	1.46	6.68	50.03	1.50	10.92	0.62	2.84	21.26	0.64	4.64
	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	29.62	138.35	1012.78	30.94	224.59
EXEMPTION CALCULATION	DISTANCE FROM LAND IN MILES											3429.90	3429.90	3429.90	3429.90	74708.57
	103.0															

SUMMARY

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL
Mariner Energy, Inc.	Green Canyon	178	OCS-G 25123	Semi-Submersible	A & B

Year	Emitted Substance				
	PM	SOx	NOx	VOC	CO
2004	29.62	138.35	1012.78	30.94	224.59
Allowable	3429.90	3429.90	3429.90	3429.90	74708.57

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 Mariner 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	
Sea turtles		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 178 are located approximately 15 miles away from the closest designated topographic feature (Sweet 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 178 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 178 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 range from 1014 to 1852 feet. A review of the 3-D exploration seismic data do not indicate the presence of any 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 Mariner's Regional Oil Spill Response Plan which address available equipment and personnel, techniques for containment and recovery, and removal of the oil spill. Mariner 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 Mariner's Regional Oil Spill Response Plan which address available equipment and personnel, techniques for containment and recovery, and removal of the oil spill. Mariner 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 antrhropogenic 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 Mariner's Regional Oil Spill Response Plan which address available equipment and personnel, techniques for containment and recovery, and removal of the oil spill. Mariner 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, Mariner 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 Mariner's Regional Oil Spill Response Plan which

address available equipment and personnel, techniques for containment and recovery, and removal of the oil spill. Mariner 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, Mariner 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 103 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.

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 Mariner'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 Mariner'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. Mariner has requested MMS approval to classify the proposed objective area as absent of hydrogen sulfide.

Coastal and Onshore Analyses

1. Beaches

Due to the distance from shore (approximately 103 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 2202-052 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 Mariner'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. Wetlands

Due to the distance from shore (approximately 103 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 2202-052 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 Mariner'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

Due to the distance from shore (approximately 103 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 2202-052 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 Mariner'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

Due to the distance from shore (approximately 103 miles) and the response capabilities that would be implemented, no significant adverse impacts are expected as a result of an accidental oil spill release. Both historical spill data and the combined trajectory/risk calculations referenced in the publication of OCS EIA /EA MMS 2202-052 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 Mariner'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

Due to the distance from shore (approximately 103 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 2202-052 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 Mariner'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

Mariner 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 2003-G17 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. Mariner will institute procedures to avoid pipelines and abandoned wells within the vicinity of the proposed operations.

Alternatives

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

SECTION H
Environmental Impact Analysis-Continued

Mitigation Measures

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

Consultation

Mariner 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.

References

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

Document	*Author*	*Dated*
Shallow Hazards and Shallow Water Flow Survey	Peter Trabant, Ph.D	2003
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	Mariner Energy, Inc.	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.

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

Louisiana CZM Statement

Attachment I-1
(Public Information)

COASTAL ZONE MANAGEMENT CONSISTENCY CERTIFICATION

INITIAL EXPLORATION PLAN

GREEN CANYON BLOCK 178

LEASE OCS-G 25123

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: **Mariner Energy, Inc.**

Signed By: _____

Dated: 9/17/2003