

UNITED STATES GOVERNMENT  
MEMORANDUM

April 26, 2004

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

Subject: Public Information copy of plan

Control #	-	N-08058
Type	-	Initial Exploration Plan
Lease(s)	-	OCS-G23256 Block - 991 East Breaks Area OCS-G23257 Block - 992 East Breaks Area
Operator	-	Exxon Mobil Corporation
Description	-	Wells A, B, and C
Rig Type	-	DRILLSHIP

Attached is a copy of the subject plan.

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

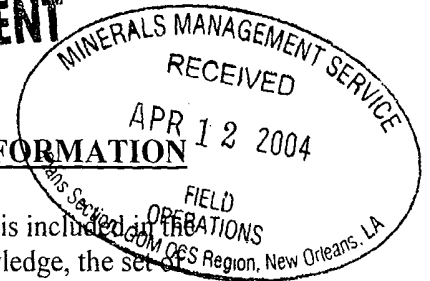
  
Karen Dunlap  
Plan Coordinator

Site Type/Name	Botm Lse/Area/Blk	Surface Location	Surf Lse/Area/Blk
WELL/A	G23256/EB/991	6955 FSL, 844 FEL	G23256/EB/991
WELL/B	G23257/EB/992	476 FSL, 993 FWL	G23257/EB/992
WELL/C	G23257/EB/992	658 FSL, 12258 FEL	G23257/EB/992

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AMENDMENT



**SECTION 1 COASTAL ZONE CONSISTENCY INFORMATION**

The Coastal Zone Management Consistency Certification is included in the document as **Attachment # I-1**. To the best of our knowledge, the set of findings included in the Environmental Impact Analysis and Exploration Plan indicates that the proposed activity and its associated facilities and effects are all consistent with, and comply with, the provisions and guidelines of the Texas Coastal Management Program (TCMP). The proposed activity will be conducted in a manner consistent with such programs. Specific categories addressed:

**Texas Coastal Management Program (TCMP)**

- Category 2** Construction, Operation and Maintenance of Oil and Gas Exploration and Production Facilities  
*Not Applicable*
- Category 3** Discharges of Wastewater and Disposal of Waste from Oil and Gas Exploration and Production  
Activities- *See Section V*
- Category 4** Construction and Operation of Solid Waste Treatment, Storage and Disposal Facilities-  
*Not Applicable*
- Category 5** Prevention, Response and Remediation of Oil Spills - *Not Applicable*
- Category 6** Discharge of Municipal and Industrial Waste Water to Coastal Waters - *Not Applicable*
- Category 8** Development in Critical Areas - *Not Applicable*
- Category 9** Construction of Waterfront Facilities and Other Structures on Submerged Lands - *Not Applicable*
- Category 10** Dredging and Dredged Material Disposal and Placement - *Not Applicable*
- Category 11** Construction in the Beach/Dune System - *Not Applicable*
- Category 15** alteration of coastal Historic Areas - *Not Applicable*
- Category 16** Transportation - *Not Applicable*
- Category 17** Emission of Air Pollutants - *See Section VII*
- Category 18** Appropriations of Water- *Not Applicable*
- Category 20** Marine Fishery Management - *See Section III*
- Category 22** Administrative Policies - *As a prudent operator, ExxonMobil Corporation will strictly adhere to all applicable administrative policies.*

M-8058

Initial EXPLORATION PLAN (EP)  
EAST BREAKS BLOCKS 991 AND 992.  
LEASES OCS-G 23256 AND OCS-G 23257

## Air Quality Report Summary



COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL
ExxonMobil	East Breaks	991, 992	OCS-G 23256, OCS-G 23257	N/A	EB 992C, EB 992B, EB 991A
Year	Emitted Substance				
	PM	SOx	NOx	VOC	CO
2000	0.00	0.00	0.00	0.00	0.00
2001	0.00	0.00	0.00	0.00	0.00
2002	0.00	0.00	0.00	0.00	0.00
2003	0.00	0.00	0.00	0.00	0.00
2004	56.79	260.50	1951.99	58.57	425.89
2005	52.05	238.79	1789.28	53.68	390.39
2006	56.78	260.50	1951.94	58.56	425.88
2007	0.00	0.00	0.00	0.00	0.00
2008	0.00	0.00	0.00	0.00	0.00
2009	0.00	0.00	0.00	0.00	0.00
Allowable	4462.20	4462.20	4462.20	4462.20	89032.54

N-8058

Initial EXPLORATION PLAN (EP)  
EAST BREAKS BLOCKS 991 AND 992,  
LEASES OCS-G 23256 AND OCS-G 23257



**I. CONTENTS OF THE PLAN**

**A. Description, Geologic Objectives, and Tentative Schedule:**

**Description**

This Initial Exploration Plan for East Breaks Block 991, Lease OCS-G 23256 and East Breaks Block 992, Leases OCS-G 23257, covers the drilling of the proposed well listed below:

- ◆ Lease OCS-G 23256, East Breaks Block 991 : A
- ◆ Lease OCS-G 23257, East Breaks Block 992 : B
- ◆ Lease OCS-G 23257, East Breaks Block 992 : C

ExxonMobil, as operator of the **Bat-Man** Prospect (lease OCS-G 23256 and OCS-G 23257), intends to conduct exploratory drilling operations to evaluate the potential for commercial quantities of oil and / or gas.

**Geologic Objectives**

The objective of the exploratory well on EB-991 and EB-992, Leases OCS-G 23256 and OCS-G 23257, is the Paleogene section. Sub-regional well control indicates two reservoir targets: the Lower Eocene through Paleocene section (onshore Wilcox Fm. equivalent) and the lower Oligocene section (onshore Vicksburg Fm. equivalent).

The Lower Tertiary interval in this area is in trap configuration as a series of thrust-faulted 4-way and 3-way folds associated with Oligo-Miocene age contractional deformation.

A deep detachment level has likely facilitated HC migration from Mesozoic source rock intervals. The presence of Mesozoic source rocks and migration in the Diana Basin is documented by surface seeps, wellbore shows, and reservoired thermogenic hydrocarbons.

Shale-rich mid-Eocene and upper Oligocene-Miocene sections are interpreted to be sub-regional seals for the target sections.

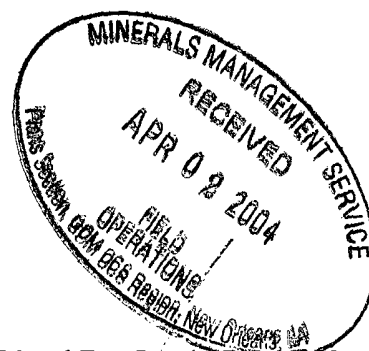
**Tentative Well Schedule**

Plans are to spud the East Breaks Block 992 Lease OCS-G-23257 Well - C on or about **June 1, 2004**. Drilling time is estimated to be **120 days**. The **EB 992 - Well B** is scheduled for **January 2005** and the **EB-991 - Well A** is scheduled for **January 2006**.

**WELL SCHEDULE**

Well	OCS #	DURATION (DAYS)	START	FINISH	COMMENTS
EB 992 C	OCS-G-23257		1-Jun-04	28-Nov-04	Bat-Man Well #1
EB 992 B	OCS-G-23257		1-Jan-05	15-Jun-05	Bat-Man Well #2
EB 991 A	OCS-G-23256		1-Jun-06	30-Nov-06	Bat-Man Well #3

Initial EXPLORATION PLAN (EP)  
EAST BREAKS BLOCKS 991 AND 992,  
LEASES OCS-G 23256 AND OCS-G 23257



**I. CONTENTS OF THE PLAN**

**A. Description, Geologic Objectives, and Tentative Schedule:**

**Description**

This Initial Exploration Plan for East Breaks Block 991, Lease OCS-G 23256 and East Breaks Block 992, Leases OCS-G 23257, covers the drilling of the proposed well listed below:

- ♦ Lease OCS-G 23256, East Breaks Block 991 : A
- ♦ Lease OCS-G 23257, East Breaks Block 992 : B
- ♦ Lease OCS-G 23257, East Breaks Block 992 : C

ExxonMobil, as operator of the **Bat-Man** Prospect (lease OCS-G 23256 and OCS-G 23257), intends to conduct exploratory drilling operations to evaluate the potential for commercial quantities of oil and / or gas.

**Geologic Objectives**

**Tentative Well Schedule**

**WELL SCHEDULE**

Well	OCS #	DURATION (DAYS)	START	FINISH	COMMENTS
EB 992 C	OCS-G-23257				Bat-Man Well #1
EB 992 B	OCS-G-23257				Bat-Man Well #2
EB 991 A	OCS-G-23256				Bat-Man Well #3

## APPENDIX F OIL SPILL INFORMATION



### *A. Regional OSRP Information*

ExxonMobil Corporation's Regional Oil Spill Response Plan (OSRP) was approved on October 22, 2003, and is approved through September 30, 2005. The most recent updates to this plan were approved on January 14, 2004. Activities proposed in this EP will be covered by the Regional OSRP.

### *B. OSRO Information*

ExxonMobil's primary equipment providers are Clean Gulf Associates (CGA) and the Marine Spill Response Corporation (MSRC). MSRC's STARS network will provide closest available personnel, as well as an MSRC supervisor to operate the equipment.

### *C. Worst-Case Scenario Comparison*

Category	Regional OSRP WCD	EP WCD
Type of Activity	Exploratory Drilling	Exploratory Drilling
Facility Location (Area/Block)	MC 508/509	EB 991/992
Facility Designation	Hawkes	Batman
Distance to Nearest Shoreline (miles)	43	134
Volume Uncontrolled blowout Total Volume	86,000 BBLS	
Type of Oil(s) (crude, condensate, diesel)	Crude Oil	Crude Oil
API Gravity	34°	

ExxonMobil has determined that the worst-case scenario from the activities proposed in this EP do not supercede the worst-case scenario from our approved regional OSRP for exploratory drilling activities.

Since ExxonMobil has the capability to respond to the worst-case spill scenario included in our Regional OSRP approved on October 22, 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

ExxonMobil has the capability to respond, to the maximum extent practicable, to a worst-case discharge, or a substantial threat of such a discharge, resulting from the activities proposed in our EP.

***D. FACILITY TANKS, PRODUCTION FACILITIES***

There are no production vessels associated with the activities in this EP. All facility tanks are associated with the drillship as follows:

Type Storage Tank	Largest Tank Capacity (bbls)	Number of Tanks	Total Capacity (bbls)	Fluid Gravity (API)
Fuel Oil (Marine Diesel)	6,702.9	12	48,365.5	32.4°
Oil Based Mud	NA			

***E. SPILL RESPONSE SITES***

In the event of a spill, mechanical response equipment located in MSRC and CGA's bases located in Houma and Lake Charles, Louisiana, and Galveston and Ingleside, Texas would be activated (see Figure F.2).

***F. DIESEL OIL SUPPLY VESSELS***

NA for the purposes of this plan as per NTL 2003-G17

***G. SUPPORT VESSEL FUEL TANKS***

NA for the purposes of this plan as per NTL 2003-G17

***H. PRODUCED LIQUID HYDROCARBONS TRANSPORTATION VESSELS***

ExxonMobil does not propose well testing operations and/or transfer of stored production under this EP.

***I. OIL- AND SYNTHETIC-BASED DRILLING FLUIDS***

ExxonMobil does not propose use of oil-based drilling fluids for this EP. Synthetic-based drilling fluids are discussed in Section V of this EP.

***J. OILS CHARACTERISTICS***

NA for the purposes of this plan as per NTL 2003-G17

#### ***K. BLOWOUT SCENARIO***

NA for the purposes of this plan as per NTL 2003-G17

#### ***L. SPILL RESPONSE DISCUSSION***

The largest spill response originating from the proposed activity would be a well blowout during drilling operations, estimated to be 86,000 BOPD of crude with an API gravity of 32°.

##### Land Segment and Resource Identification

Trajectories of a spill and the probability of it impacting a land segment have been projected utilizing information in MMS Oil Spill Risk Analysis Model (OSRAM) for the Central and Western Gulf of Mexico available on MMS website. The results are shown in Figure F-1.

The MMS OSRAM identifies a nine percent probability of impact to the shorelines of Matagorda County, Texas within thirty days. Matagorda County stretches from Matagorda Bay, across the Colorado River and up to the border of San Bernard Wildlife Refuge (immediately west of the San Bernard River). The county includes Matagorda Peninsula on the Gulf coast and Matagorda Bay. This area is primarily open beach. However, marshland exists along the east side of Matagorda Bay. Several bird rookeries are present around the peninsula. Seagrass is present off of Matagorda Peninsula on the bay side. Additional discussion of protection strategies for potentially affected resources is included in ExxonMobil's Regional Oil Spill Response Plan.

##### Response

ExxonMobil will make every effort to respond to the Worst Case Discharge as effectively as possible. A description of the response equipment available to contain and recover the Worst Case Discharge is shown in Figure F-2.

Using the estimated chemical and physical characteristics of diesel fuel, an ADIOS weathering model was run on a similar product from the ADIOS oil database (Viosca Knoll 826 Oil API gravity 33.3°). The results indicate 26% of the product would be evaporated/dispersed within 24 hours, leaving approximately 63,640 barrels on the water.

Figure F-2 outlines equipment, personnel, materials and support vessels as well as temporary storage equipment to be considered in order to cope with an initial spill of 86,000 bbls. The list estimates individual times needed for procurement, load out, travel time to the site and deployment. If appropriate, 5 sorties (10,000 gallons) from the DC-4 and 10 sorties (10,000 gallons) from the DC-3s should disperse approximately 8,571 barrels of oil.

Offshore response strategies may also include attempting to skim utilizing the CGA HOSS barge, two (2) Fast Response Units (FRUs), the Texas Responder, the Gulf Coast Responder, one OSR Barge with Transrec 350 skimmer, and one OSR Barge with Stress 1 Skimmer, with a total derated skimming capacity of 97,341 barrels. Temporary storage associated with the identified



skimming equipment equals 109,730 barrels. If additional temporary storage is needed, a temporary storage barge may be mobilized. **SAFETY IS FIRST PRIORITY. AIR MONITORING WILL BE ACCOMPLISHED AND OPERATIONS DEEMED SAFE PRIOR TO ANY CONTAINMENT/SKIMMING ATTEMPTS**

If the spill went unabated, shoreline impact in coastal environments would depend upon existing environmental conditions. Onshore response may include the deployment of shoreline boom on beach areas, or protection and sorbent boom in vegetated areas. Strategies would be based upon surveillance and real time trajectories that depict areas of potential impact given actual sea and weather conditions. Strategies from the Western Gulf Area Contingency Plans (ACP), and Unified Command would be consulted to ensure that environmental and special economic resources would be correctly identified and prioritized to ensure optimal protection. ACPs depict the protection response modes applicable for oil spill clean-up operations. Each response mode is schematically represented to show optimum deployment and operation of the equipment in areas of environmental concern. Supervisory personnel have the option to modify the deployment and operation of equipment allowing a more effective response to site-specific circumstances.

**FIGURE F-1  
TRAJECTORY BY LAND SEGMENT**

Trajectory of a spill and the probability of it impacting a land segment have been projected utilizing ExxonMobil's WCD and information in MMS Oil Spill Risk Analysis Model (OSRAM) for the Central and Western Gulf of Mexico available on MMS website using thirty (30) day impact. The results are tabulated below.

Area/Block	OCS-G	Launch Area	Land Segment and/or Resource	Conditional Probability (%) within 30 days
Exploratory Operations East Breaks 991-992 134 miles from shore	23256	W21	Cameron, TX	2
	23257		Willacy, TX	1
			Kenedy, TX	4
			Kleberg, TX	3
			Nueces, TX	3
			Aransas, TX	4
			Calhoun, TX	5
			<b>Matagorda, TX</b>	<b>9</b>
			Brazoria, TX	3
			Galveston, TX	5
			Jefferson, TX	2
			Cameron, LA	5
Vermilion, LA	1			

WCD Scenario - Exploratory Operations  
 EB 991/992  
 86,000 bbls of crude oil  
 API Gravity 32°

FIGURE F.2 - Equipment Response Time to: East Breaks 991/992

EQUIPMENT					Owner/ Location	Staging [NOTE: Staging for initial load-out at nearest port; response staging via Venice]	PROCUREMENT TIME (Hours)			TOTAL Time to Procure (1)	Time to Load Out (2)	TOTAL Travel Time (3)	Time to Deploy (4)	TOTAL Estimated Response Time
TYPE		Derated Capacity (BBLs)	Storage (BBLs)	No. of Units			Assemble Equipment	Personnel	Vessel					
A	DC 3 Spray Aircraft	--		2	ASI/HOUMA	HOUMA	1	2		2	0	5.5	.5	8
	DC 4 Spray Aircraft	--	--	1	ASI/HOUMA	HOUMA	1	2						
	Spotter Plane	--	--	1	ASI/HOUMA	HOUMA	1	2						
	Spotter Personnel	--	--	2	ASI/HOUMA	HOUMA	1	2						
	Dispersant	--	--		ASI/HOUMA	HOUMA	1	2						
B	Gulf Coast Responder OSRV Operators	10,567	4,000	1	MSRC/Lake Charles	Cameron	0	2	0	2	1	28	1	32
				10	MSRC/STARS	Cameron	0	2	0					
C	Texas Responder OSRV Operators	10,567	4,000	1	MSRC/Galveston	Galveston	0	2	0	2	1	21	1	25
				10	MSRC/STARS	Galveston	0	2	0					
D	OSR Barge w/ Stress I skimmer Tug Operators	15,840	56,900	1	MSRC/Ingleside	Ingleside	1	--	--	4	1	21	1	27
				1	Vessel of Opportunity	Ingleside	--	--	4					
				8	MSRC/STARS	Ingleside	--	2	--					
E	OSR Barge w/Transrec skimmer Tug Operators	10,567	40,300	1	MSRC/Galveston	Galveston	1	--	--	4	1	10	1	16
				1	Vessel of Opportunity	Galveston	--	--	4					
				8	MSRC/STARS	Galveston	--	2	--					
F	HOSS Barge Tugs Operators	43,000	4,130	1	CGA/Houma	Houma	1	--	--	4	1	50	1	56
				3	Cenac Towing/Houma	Houma	--	4	--					
				12	STARS	Houma	--	--	2					
G	FRU/Expandi Boom Operators Utility Boat Crew Boat	3,400	200	1	CGA/Ingleside	Ingleside	1	--	--	2	1	12	1	16
				6	STARS	Ingleside	--	2	--					
				1	Vessel of Opportunity	Ingleside	--	--	2					
				1	Vessel of Opportunity	Ingleside	--	--	2					
H	FRU/Expandi Boom Operators Utility Boat Crew Boat	3,400	200	1	CGA/Galveston	Galveston	1	--	--	2	1	12	1	16
				6	STARS	Galveston	--	2	--					
				1	Vessel of Opportunity	Galveston	--	--	2					
				1	Vessel of Opportunity	Galveston	--	--	2					
I	INITIAL SUPPORT	--	--	8	PHI/Galveston	Spill Site	1	1	--	1	--	1	--	2
	Spotter Helo	--	--	1	PHI/Galveston	Spill Site	1	1	--	1	--	1	--	2
	Surveillance Helo	--	--											
	Hand Held Radios	--	--	30	STARS/Various	Galveston	2	--	--	2	--	1	--	3
TOTALS		97,341	109,730	* STARS contractor called out by MSRC										

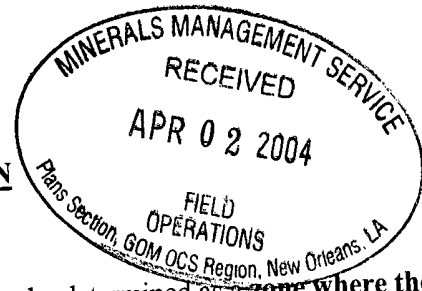
***M. POLLUTION PREVENTION MEASURES***

Best management practices for safety, pollution prevention, and early spill detection measures are discussed in Section 6 of the Regional OSRP. No pollution prevention measures beyond those required by 30 CFR Part 250 are proposed for this activity.

***N. FGBNMS MONITORING PLANS***

NA for the purposes of this plan as per NTL 2003-G17

Initial EXPLORATION PLAN (EP)  
EAST BREAKS BLOCKS 991 AND 992,  
LEASES OCS-G 23256 AND OCS-G 23257

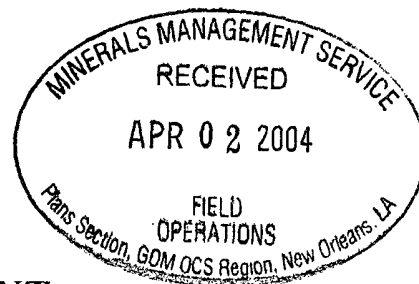


III. GEOLOGICAL, GEOPHYSICAL, AND H<sub>2</sub>S INFORMATION

B. H<sub>2</sub>S Information

ExxonMobil, therefore, requests that this area of drilling activity be determined as a ~~zone~~ where the absence of H<sub>2</sub>S has been confirmed.

Initial EXPLORATION PLAN (EP)  
EAST BREAKS BLOCKS 991 AND 992,  
LEASES OCS-G 23256 AND OCS-G 23257



## **COSTAL ZONE MANAGEMENT CONSISTENCY CERTIFICATION**

**Initial Exploration Plan**

Type of OCS Plan

**East Breaks, Block 991**

**East Breaks, Block 992**

Area and Block

**OCS-G 23256**

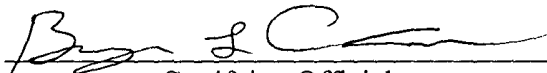
**OCS-G 23257**

Lease Number

The proposed activities described in detail in this OCS Plan comply with  
Texas approved Coastal Management Program(s) and  
Will be conducted in a manner consistent with such Program(s).

**Exxon Mobil Corporation**

Lessee or Operator



Certifying Official

3/24/04

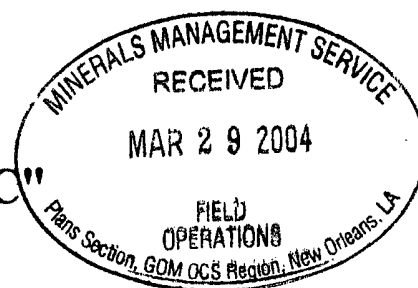
Date

# **ExxonMobil Production Company**

## ***Initial* EXPLORATION PLAN (EP)**

### **BAT-MAN Prospect**

**Locations "A", "B", and "C"**



**EAST BREAKS BLOCKS 991 AND 992,**

**LEASE OCS-G 23256 AND OCS-G 23257**

**Offshore, Texas**

**March 24, 2004**

**PUBLIC INFORMATION**

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*Initial* **EXPLORATION PLAN (EP)**  
**EAST BREAKS BLOCKS 991 AND 992,**  
**LEASES OCS-G 23256 AND OCS-G 23257**

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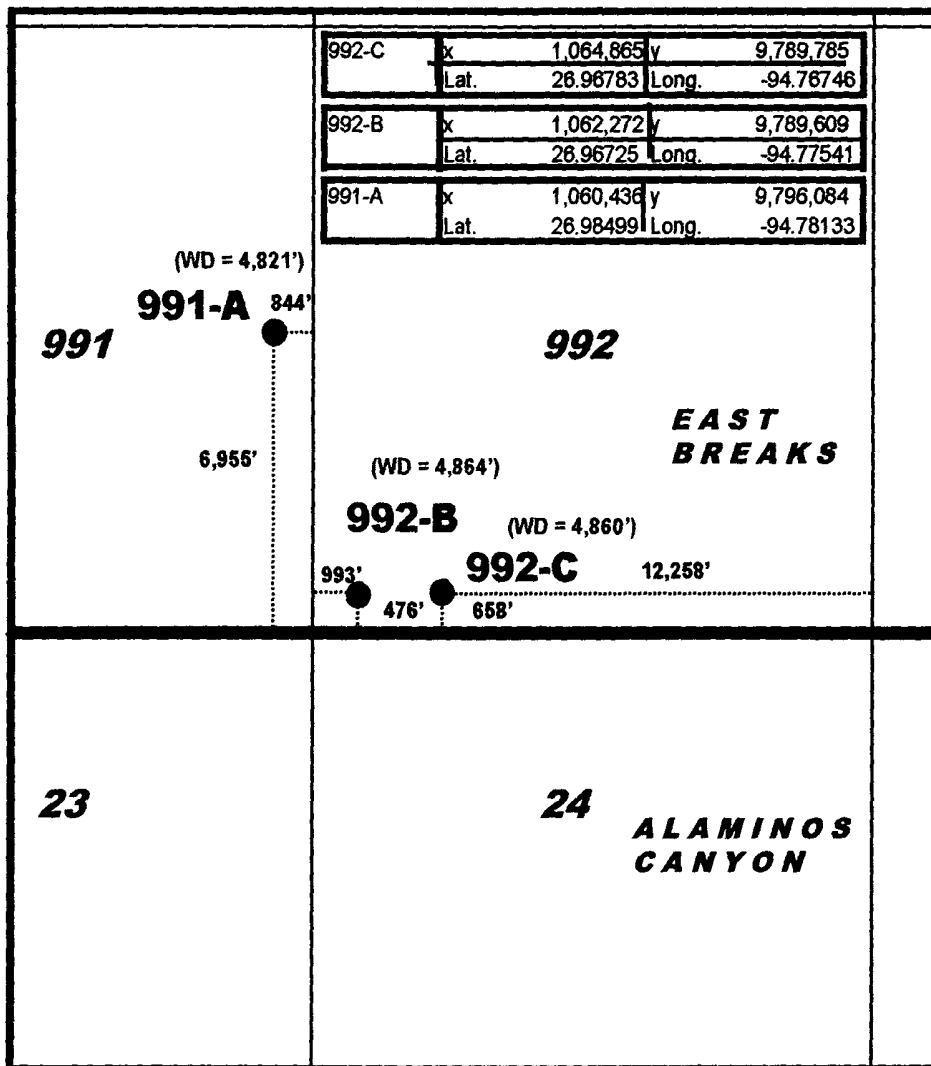


Initial EXPLORATION PLAN (EP)  
EAST BREAKS BLOCKS 991 AND 992,  
LEASES OCS-G 23256 AND OCS-G 23257

**B. Proposed Well Locations:**

Lease Block/ OCS-G	Well	Surface Location	Surface Location X & Y	Latitude & Longitude	Bottom Hole Location	Bottom Hole Location X & Y	MD / TVD Depth	Est . Days	Water Depth
EB 992 G-23257	EB 992 C	658' FSL 12,258' FEL of EB 992	X=1,064,865 Y=9,789,785	26° 58' 04.19" N  94° 46' 02.86" W					4860'
EB 992 G-23257	EB 992 B	476' FSL 993' FWL of EB 992	X=1,062,272 Y=9,789,609	26° 58' 02.10" N  94° 46' 31.48" W					4864'
EB 991 G-23256	EB 991 A	6,955' FSL 844' FEL of EB 991	X=1,060,436 Y=9,796,084	26° 59' 05.96" N  94° 46' 52.79" W					4821'

A Location Plat is included:



1:63360  
0 1.0 STATUTE MILES

ExxonMobil Exploration Co.  
East Breaks 991, 992  
Location Plat

FILED IN 11-000000000000

**C. Drilling Unit (Appendix B)**

**Description**

The use of the *Glomar Explorer*, a dynamically positioned drill ship, is planned for the drilling activity for the *Bat-Man* prospect. There is therefore no associated anchor pattern.

The *Glomar Explorer* is a Global Marine Hull 456 Design dynamically positioned drill ship designed to drill to 30,000 feet in water depths up to 7500 feet, which can be upgraded to 10,000 feet. The *Glomar Explorer* has an overall length of 618.8 feet, a beam of 115.8 feet, and a hull depth of 50.10 feet. It is anticipated the maximum variable load will be 23,533 metric tons. The rig has been designed, built and classed in accordance with the International Maritime Organization (IMO), Resolution A 414 (xi) Code for the construction and equipment of Mobil Offshore Drilling Units 1989, and has the classification designation of ABS Maltese Cross A1(E) Drilling Unit, Maltese Cross AMS, ACCU, DPS-3 and R2-S+.

**Emergency Plan**

Global Marine has written safety and emergency operations instructions to cover the foreseeable emergencies that may be encountered onboard the *Glomar Explorer*. These instructions are provided in the rig's Operating Manual and Emergency Response Manual 4.1, as well as in Global Marine Procedure Manual 2.4 (Safety Procedures Manual). Other rig safety equipment as described below.

**Safety Features**

The *Glomar Explorer* is equipped with well control and personal safety equipment as required to meet the codes, rules and regulations of ABS, SOLAS, and IMO (MODU 1989). A listing of key elements of the rig's well control and personnel safety equipment are as follows:

**Well Control**

The *Glomar Explorer* utilizes a Cameron 18-3/4 inch 15,000 psi WP guidelineless BOP system (suitable for H2S service) consisting of two (2) 15,000 psi WP type "TL" double ram preventers, one (1) 15,000 psi WP type "TL" single ram preventer, two (2) 10,000 psi WP Shaffer annular preventers and a Vetco Super HD-H4 15,000 psi WP wellhead connector. The marine riser system consists of Stewart and Stevenson 22 inch OD riser, with 4-1/2" ID 15,000 psi choke and kill lines, 4 inch ID 5,000 psi mud booster line and 4 inch ID 5,000 psi BOP hydraulic fluid conduit line. The rig choke manifold (suitable for H2S service), complete with two (2) 3-1/16 inch adjustable chokes, two (2) 3-1/16 inch hydraulic chokes and two (2) 10,000 psi WP Buffer Tanks.

**Personal Safety**

The *Glomar Explorer* is equipped with two (2) 80 person covered self propelled life boats, and two (2) 60 person covered self propelled life boats, sufficient approved inflatable life rafts to accommodate all persons on board, life jackets for 150 percent of the vessels rated capacity, as well as other safety features to meet the requirements of ABS, the rig's certifying authority.

**Initial EXPLORATION PLAN (EP)**  
**EAST BREAKS BLOCKS 991 AND 992,**  
**LEASES OCS-G 23256 AND OCS-G 23257**

**Pollution Plan**

Global Marine is committed to the well being of all employees and to the protection of the environment in which we operate and live. It is the clear intention of the Company to conduct all operations in a manner that will comply with all environmental laws, rules and regulations applicable to our operations. The *Glomar Explorer* is designed and operated to meet or exceed acceptable environmental regulatory standards to ensure protection of human health and the environment. The vessel has been designed, built and classed in accordance with the rules of the International Maritime Organization (IMO) and complies with the regulations of the International Convention of the Prevention of Pollution from Ships (MARPOL) 1974/1978, Consolidated Edition, IMO, 1991, including 1992 amendments to Annex I. The vessel has also been designed and constructed in accordance with United States Coast Guard (USCG) Rules and Regulations pertaining to foreign flag vessels.

**Remotely Operated Vehicle (ROV) Survey Plan**

ExxonMobil is familiar with the ROV survey and reporting provisions of NTL 2001-G04.

ExxonMobil will, if required, conduct surveys immediately prior to commencing drilling operations of the Location A well on the East Breaks 990 Block, which may begin as early as June 4, 2002, and following the completion of drilling operations on this well, approximately 67 days later.

ExxonMobil will use the Global Marine, *Glomar Explorer* 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 bearings of 30 degrees, 90 degrees, 150 degrees, 210 degrees, 270 degrees and 330 degrees. The seafloor will be videotaped continuously along each track.

ExxonMobil will make biological and physical observations as described in the NTL 2001-G04 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.

**ExxonMobil Mud Program**

A potential **mud additive list** for the drilling of the well covered by this Exploration Plan is included. Either a synthetic based mud or a water-based mud could be used.

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## **SYNTHETIC MUD ADDITIVES**

### **BASIC ACCOLADE SYSTEM:**

ACCOLADE (Internal Olefin, ester based)  
LE MUL (Blend of oxidized tall oil and polyaminated fatty acid)  
LE SUPERMUL (Polyaminated fatty acid)  
RHEMOD L (Viscosifier/Suspension)  
TEMPERUS (Temporary Viscosifier)  
ADAPTA HP (Filtration Agent)  
FACTANT (Surfactant)  
Lime (calcium hydroxide)  
OMC 2 (Oligomeric Fatty Acid)  
COLDTROL (Fatty Alcholo)  
ATC (Fatty Acid Ester)  
GELTONE II (organophilic clay)  
VIS PLUS (carboxylic acid)  
Calcium Chloride (calcium chloride)  
DEEPTREAT (sulfonate sodium salt)  
RM-63 (blend of dimer and trimer fatty acids)  
X-VIS (dimerized fatty acids)  
Barite (barium sulfate)

### **SPECIAL PURPOSE ADDITIVES-ACCOLADE:**

#### **Lost Circulation Materials:**

BARACARB (sized calcium carbonate)  
BAROFIBRE (fibrous cellulosic material)  
STEELSEAL (granular graphite)  
BAROID Oil Absorbant (granular calcined clay)  
BARAPLUG 6/300 (sized salts)  
BARAPLUG 50 (sized salts)  
N-SQUEEZE (sized cellulose fibers and crosslinkable water soluble polymer)  
N-PLEX (liquid alkaline salt)  
N-SEAL (specially formulated extrusion material)  
PIPE RUBBER (Granular Rubber)  
FLEX PLUG (Reactive Polymer Aggregate)

#### **Weighting Agents/Viscosifiers:**

BARACARB 5, 25, 50, 150 (sized calcium carbonate)  
N-VIS (xanthan product)  
BARAPLUG 20 (sized salts)  
N-VIS HB (xanthan product)

#### **Thinners/Filtration Reducing Agents:**

N-DRIL HT PLUS (nonionic starch)  
N-VIS PLUS (xanthan product)

## **WATER BASE MUD ADDITIVES**

### **BASIC MUD COMPONENTS:**

Attapulgate (Attapulgate Clay)  
Barite (Barium Sulfate)  
Bentonite (Sodium Montmorillonite Clay)  
Lignosulfonate (Chrome Lignosulfonate)  
Lignite (Leonardite = Brown Coal)  
Caustic Soda (Sodium Hydroxide)  
Gypsum (Calcium Sulfate)  
Salt (Sodium Chloride)  
KCL (Potassium Chloride)

### **MUD ADDITIVES:**

Soda Ash (Sodium Carbonate)  
Sodium Bicarbonate  
Lime (Calcium Hydroxide)  
XCD Polymer (Water Dispersible Biopolymer)  
PAC L (Polyanionic Clay)  
BARAZAN D PLUS (Xanthan gum)  
BARASCAV D (Powdered sodium sulfate)  
EZ Mud (PHPA)  
New VIS (Blended Organic Polymers)  
SAPP (Sodium Acid Pyrophosphate)  
XC Polymer (Xanthan Gum Biopolymer)  
Flowzan (Xanthan Gum Biopolymer)  
Flowdrill S (Xanthan Gum Biopolymer)  
NEW-THIN (Polyacrylate Deflocculant)  
Acetic Acid ( $C_2H_4O_2$ ) (Vinegar)  
Aqualon HP-007 (Cellulose Viscosifier)  
Therma Thin (Anionic Acrylic Copolymer)  
Poly Plus (Partially Hydrolyzed Polyacrylimide)  
Hydra Fluids HF-100N (Glycerin, Polyglycerin, and Mixture thereof)  
Alplex (Aluminate Suspension)  
Drill and Slide (blended organics)

### **FRICTION REDUCERS:**

Copolymer beads or glass beads  
Vegetable Oil Base  
Non-toxic Broad Spectrum Synthetic Lubricant  
Glycol or polyalcohols  
Amide/Ester Complex

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### **LOST CIRCULATION MATERIALS:**

Mica  
Nut Hulls  
Diaseal M  
BARACARB (sized calcium carbonate)  
BAROFIBRE (fibrous cellulosic material)  
STEELSEAL (granular graphite)  
Ground Rubber materials  
Premium Seal (Micronized Cellulose Fibers)  
Liquid Casing (Cellulose Fibers)  
Check-Loss (Ultra fine Complexed Cellulosic Material, Water Insoluble)  
Kwik Seal (Blended Fibrous/Granular LCM)  
SoluFlake (Flaked Calcium Carbonate)  
Blen-Plug / Blen-Plex (Cellulose Fibers)

### **FLUID LOSS CONTROL AGENTS:**

Starch (all types)  
Polyanionic Cellulose Polymers  
CMC (Carbonxymethyl Cellulose)  
Resinex (Sulfonated Lignites and Resin)  
Drispac (Polyanionic Cellulose Polymer)  
Chemtrol - X (Selected Polymer Blend)  
Floplex (Modified Polysaccharide Polymerh)  
Aquadac (Polyanionic Cellulose Polymer)  
Soltex (Sulfonated asphalt)

### **FLUID LOSS CONTROL AGENTS (CONT'D):**

Shale-Gard (Water Dispersible Natural Asphaltic Compound)  
Gilsonite  
Premium Seal (Cellulose fibre)  
Bio-lose (Modified Polysaccharide Cellulose)  
PAC (Polyanionic Cellulose Polymer)

### **DEFOAMING AGENTS:**

Vegetable Oil  
Aluminum Stearate  
Magconol (2-Ethyl Hexanol)  
LD-8 (Non-Hydrocarbon Base Defoamer)  
LD-9 (Non-Hydrocarbon Defoamer)  
SDI (Silicon Based Defoamer)  
BARABRINE DEFOAM (liquid blend of nonionic surfactants)

### **BRINE BASE FLUIDS:**

NaCl / NaBr Liquid Brine  
CaCl<sub>2</sub> Liquid Brine  
KCL Brine

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### **SPOTTING FLUIDS:**

Bio-Spot (Non-Hydrocarbon Low Toxic Spotting Fluid)  
Cesco A-25 Spot (Water Based Spotting Fluid & Additive)  
Black Magic Clean (Synthetic base spotting fluid)  
Coastal Spot (Synthetic base spotting fluid)

### **PRESERVATIVES:**

Mil-Bio (Biodegradable Biocide)  
X-Cide 207 (Chloromethyl-Isouthiazolone and Methlisothiazolone)  
Aldacide G (glutaraldehyde biocide)

### **CORING/LOGGING TRACERS:**

Potassium Iodide

### **CORROSION INHIBITOR:**

Noxygen (Ammonium Bisulfite, Oxygen Scavenger)  
EC-1120A (amine corrosion inhibitor)

### **MISCELLANEOUS:**

CLAYSEAL (low molecular weight amphoteric material)  
GEM GP (polyalkylene glycol)  
DRIL-N-SLIDE (blend of organics)  
BARABUF (alkaline material)

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## APPENDIX B

Part 1  
EQUIPMENT FURNISHED*Glomar Explorer*1. DRILLING UNIT DESCRIPTION AND SPECIFICATIONS:

The *Glomar Explorer*, will be as described in Part 2 attached hereto and will be equipped with all equipment, listed herein.

2. DRILLING EQUIPMENT:

- a. Drawworks: National 2040, 4,000 HP drawworks fitted with dual disc brakes, Elmagco Model 15050 electric brake, powered by three (3) GE 752 high torque electric motors.
- b. Drill Line: 2" — 6 x 25 EIPS IWRC.
- c. Wire Line Anchor: National type H190.
- d. Derrick: M.I.L. 170' high, bolted, galvanized steel derrick with 2,000,000 lb. static hook load capacity.
- e. Drill Pipe Racker: Westech horizontal drill pipe racker capable of handling and racking 30,000' of 5-7/8" drill pipe in trebles.
- f. Vertical Pipe Racker: Varco PRS-4i vertical pipe racker capable of handling and racking 30,000' of 5-7/8" drill pipe or equivalent in other sizes of drill pipe, casing (13-3/8" or smaller), tubing and bottom hole assembly.
- g. Mud Pumps: Three (3) National 14 P-220 triplex pumps, each powered by two (2) GE 752 high torque electric motors (2,200 total continuous hp). Equipped with 6-1/2" and 7-1/2" liners. One (1) National 12 P-160 triplex riser boost pump powered by two (2) GE 752 electric motors.
- h. Rotary Table: National C-495, 49-1/2" rotary table with hydraulic drive, rated at 30,000 ft./lbs. of torque at 30 rpm.
- i. Motion Compensator: Shaffer 1,000,000 lb. crown-mounted compensator with 25' stroke and 2,000,000 lb. static load capacity.
- j. Traveling Block: National model 780 H-1000, 1,000 ton capacity for 2" wire rope.
- k. Top Drive: Varco TDS-4S with shunt wound, high torque GE 752 motor, producing 1100 HP (continuous) with a two (2) speed gearbox. Equipped with a PH-85 pipe handler and remotely operated upper inside BOP rate for 15,000 psi WP. Main load bearing components are rated to 650 tons. In low gear, unit is rated to 45,500 continuous ft. lbs. of torque at 130 rpm. In high gear, unit is rated to 29,100 ft. lbs. of torque at 205 rpm.
- l. Rotary Hose: Two (2) 3-1/2" ID, 7,500 psi WP with 4" male thread coupling.
- m. Weight Indicator: Martin-Decker type E-80 sensor.
- n. Iron Roughneck: Varco BJ model AR-3200.
- o. Hydraulic Cathead: Varco HC 22.

- p. Pipe Stabber: Westech design, tailing arm for drill pipe stands for use with Westech drill pipe racker and when racking drill collar stands in derrick.
- q. Drilling Instrumentation: Hitec SDI data acquisition system which records and displays drilling data such as ROP, WOB, Pump Pressure, Torque, RPM, SPM, ROP and PVT. Monitors are located at the drill floor, Company man's office and Toolpusher's office. Failure of data acquisition system does not compromise drill floor controls.
- r. Mathey electric/hydraulic wireline measuring unit with 30,000 ft. of 3/16" braided steel line.

### 3. DRILL STRING:

#### a. Drill Pipe:

- (1) 16,000', 5-7/8" OD, Grade S-135, 23.40 lb/ft. range 2 drill pipe with 7" OD x 4-1/4" ID tool joints and XT-57 connections, standard bevel diameter, 18 degree taper tool joints with TCSTi (Titanium hardbanding), internally plastic coated.
- (4) 10,000', 5-7/8" OD, Grade S-135, 26.3 lb/ft. range 2 drill pipe with 7" OD x 4-1/4" ID tool joints and XT-57 connections, standard bevel diameter, 18 degree taper tool joints with TCSTi (Titanium hardbanding), internally plastic coated.
- (5) Pup Joints, 5-7/8" OD integral with 7" OD x 4-1/4" ID tool joints, XT-57 connections, standard bevel diameter, 18 degree taper tool joints with internal plastic coating; (1)20', (1)15', (2)10', and (2)5' lengths.
- (6) Thirty (30) joints, 5-7/8" OD, 65.38 lb/ft. heavy weight drill pipe with 7" OD x 4" ID tool joints and XT-57 connections, standard bevel diameter, 18 degree taper tool joints with TCSTi (Titanium hardbanding), internally plastic coated.

#### b. Drill Collars:

- (1) Six (6) 9-1/2" OD x 3-1/4" ID x 30' long spiral drill collars with 7-5/8" API Reg connections.
- (2) Twenty (20) 8-1/4" OD x 3" ID x 30' long spiral drill collars with 6-5/8" API Reg connections.
- (3) Thirty (30) 6-1/2" OD x 3" ID x 30' long spiral drill collars with 4" IF connections.
- (4) Stub drill collars, two (2) each (8-1/4" and 6-1/2"), 15' length, as described in Item 3.b above.

c. Subs: Sufficient for Contractor-furnished drill pipe, drill collars, and drill tools.

d. Drill pipe wipers for 5" and 5-7/8" drill pipe.

e. Thread protectors: Sufficient for Contractor furnished drill string.

### 4. BLOWOUT PREVENTERS, SUBSEA EQUIPMENT AND CONTROL EQUIPMENT, H<sub>2</sub>S CERTIFIED:

a. Diverter System: 62" I.D. bore, 500 psi WP, consisting of the following components:

- (1) One (1) ABB Vetco diverter support housing, 62" minimum bore with diverter assembly removed, with four (4) "J" slots for acceptance of the diverter insert adapter, two (2) 14" nom. ANSI Class 300# (740 psi WP) flanged outlets for diverter

line connection, one (1) 6" nominal threaded connection for fill-up line connection, one (1) 14" nominal ANSI class 300# (740 psi) flanged outlet for flow line and one (1) flanged connection for trip tank.

- (2) One (1) diverter insert adapter, externally configured to land inside the 62" I.D. diverter support housing, internally prepared to accept the 47" I.D. "CSO" diverter assembly, and complete with a lower bolt on flowline seal retainer.
  - (3) One (1) diverter assembly, Type "CSO", having closure capability 20" through-bore and is rated to 500 psi when closed on open hole, and complete with flowline seals. All wellbore seals are manufactured from Nitrile rubber compound which is rated for oil base mud service.
  - (4) One (1) Oil States upper flex joint, 19.75" min. I.D., with maximum internal pressure rating of 500 psi, maximum single tension of 1.0 million lbs., with maximum cocking angle of  $\pm 15^\circ$ , and cocking stiffness of 6,500 ft.-lbs. / degree.
  - (5) One (1) Stewart & Stevenson Type "SSQR-F" flanged riser box down crossover adapter.
  - (6) Three (3) ball valves, 14" bore, ANSI Class 300# (740 psi WP), with 14" nom. ANSI Class 300# (740 psi WP) flanged end connections, complete with double acting hydraulic actuator for flowline and diverter line outlets on diverter support housing.
  - (7) One (1) ANSI 6" nom. Class 300# non-return check valve for fill-up line.
- b. Blowout Preventer: 18-3/4" bore, 15,000 psi WP, 5-ram, guidelineless BOP, consisting of the following from bottom to top:
- (1) One (1) connector, wellhead, ABB Vetco Type HDH4, 18-3/4" bore, 15,000 psi WP.
  - (2) One (1) lower choke line valve assembly, Cameron "MCS" 3- 1/16" bore, 15,000 psi WP, double master target valve; complete with double-acting hydraulic failsafe close actuator, and with all necessary lead-filled target flange(s). Assembly is attached to the BOP stack between the lower pipe ram and wellhead connector cavities.
  - (3) One (1) ram-type blowout preventer, Cameron Type "TL" double unit, 18-3/4" bore, 15,000 psi WP; complete with four (4) 3-1/16" bore, 15,000 psi WP side outlets fitted with standard pipe ram bonnets and "ST" locks. The lower ram cavity is fitted with 3-1/2" x 5-7/8" variable bore rams and the upper ram cavity is fitted with 3-1/2" x 5-7/8" variable bore packer pipe rams.
  - (4) One (1) lower kill line valve assembly, Cameron "MCS" 3-1/16" bore, 15,000 psi WP, double master target valve; complete with double-acting hydraulic failsafe close actuator, and with all necessary lead-filled target flange(s). Assembly is attached to the BOP stack between the lower and middle pipe ram cavities.
  - (5) One (1) ram-type blowout preventer, Cameron Type "TL" double unit, 18-3/4" bore, 15,000 psi WP; complete with (4) 3-1/16" bore, 15,000 psi WP side outlets. The lower ram cavity is fitted with 3-1/2" x 5-7/8" variable bore rams and standard pipe ram bonnets complete with "ST" locks. The upper ram cavity is fitted with non-sealing super shear rams and super shear ram bonnets.
  - (6) One (1) upper choke line valve assembly, Cameron "MCS" 3-1/16" bore, 15,000 psi WP, double master target valve; complete with double-acting hydraulic failsafe close actuator and all necessary lead-filled target flange(s). Assembly is attached to the BOP stack between the middle and upper pipe ram cavities.

- (7) One (1) upper kill line valve assembly, Cameron "MCS" 3-1/16" bore, 15,000 psi WP, double master target valve; complete with double-acting hydraulic failsafe close actuator and with all necessary lead-filled target flange(s). Assembly is attached to the BOP stack between the shearing blind ram and upper pipe ram cavities.
  - (8) One (1) ram-type blowout preventer, Cameron Type "TL" single unit, 18-3/4" bore, 15,000 psi WP; complete with two (2) 3-1/16" bore, 15,000 psi WP side outlets. The ram cavity is fitted with shearing blind rams and standard pipe ram bonnets complete with "ST" locks.
  - (9) One (1) spherical-type blowout preventer, Shaffer Type SL 18-3/4" bore, 5,000 psi WP, 18-3/4"-10,000 studded top x 18-3/4"-15,000 flanged bottom, one (1) 3-1/16" bore, 15,000 psi WP studded side outlet.
  - (10) One (1) adapter spool, 18-3/4" bore, 10,000 psi WP, with four (4) alignment dogs for Cameron design "passive" guidelineless re-entry system between the BOP stack and the LMRP.
  - (11) One (1) BOP stack structure frame assembly, Cameron, with design of wellhead connector to wellhead to be used with funnel-up wellhead guidance system.
  - (12) One (1) connector, LMRP, Cameron 18-3/4" bore, 15,000 psi WP Model "HC", with secondary unlock piston.
  - (13) One (1) spherical-type blowout preventer; Shaffer Type SL 18-3/4" bore, 5,000 psi WP; 18-3/4"-10,000 studded top x 18-3/4"-15,000 flanged bottom; one (1) 3-1/16" bore, 15,000 psi WP studded side outlet.
  - (14) One (1) lower flex joint assembly, Oil States, high pressure, with maximum internal pressure rating of 3,500 psi, with maximum working tension of 1.0 million lbs., maximum single tension of 2.0 million lbs, with maximum cocking angle of  $\pm 10^\circ$ , and cocking stiffness of 30,000 ft.-lbs./degree up to  $5^\circ$  and 20,000 ft.-lbs./degree at  $10^\circ$ .
  - (15) One (1) riser adapter, Stewart & Stevenson 21" nom. Type "SSQR-F" flange top x special 18-3/4" bore flange bottom, complete with two (2) 3-1/16" bore, 15,000 psi WP 45° kickout subs for choke and kill lines, and one (1) 3" bore, 5,000 psi WP 45° kickout sub for rigid conduit supply. Adapter to be complete with 3" bore, 5,000 psi WP gate valve with double-acting hydraulic failsafe close operator for termination of mud circulation line.
  - (16) Two (2) choke/kill line hydraulic operated connectors, Cameron, 3-1/16" bore, 15,000 psi WP.
  - (17) Two (2) choke and kill line isolation valves, Cameron "MCS" 3-1/16" bore, 15,000 psi WP, single valve; complete with double-acting hydraulic failsafe open actuator.
  - (18) Two (2) spherical preventer sweep line valves, Cameron "MCS" 3-1/16" bore, 15,000 psi WP, single cavity target valve; complete with double-acting hydraulic failsafe close actuator, and with all necessary lead-filled target flange(s). Assembly is to be attached to the outlet on the upper spherical blowout preventer and connected back in to LMRP choke line.
  - (19) One (1) LMRP guidelineless guidance system, Cameron passive re-entry.
- c. Choke and Kill Manifold: 3-1/16" API bore 15,000 psi WP choke and kill manifold, H<sub>2</sub>S certified, consisting of:
- (1) Twenty (20) gate valves, manually operated, 3-1/16" API bore, 15,000 psi WP.

- (2) Four (4) gate valves, manually operated, 4-1/16" API bore, 15,000 psi WP.
- (3) Two (2) gate valves, manually operated, 4-1/16" API bore, 5,000 psi WP.
- (4) One (1) check valve, 3-1/16" API bore, 15,000 psi WP.
- (5) Two (2) chokes, manually operated 2" maximum orifice, 15,000 psi WP.
- (6) Two (2) chokes, Stewart and Stevenson, hydraulically operated, 2" maximum orifice, 15,000 psi WP with one (1) remote control panel.
- d. Mud Manifold: 5" API bore 7,500 psi WP mud manifold consisting of seven (7) Demco 5" API bore, 7,500 psi WP manually operated gate valves.
- e. BOP Handling System: Victoria Machine, complete BOP handling system for running and retrieving BOP with elevator. Wellhead connector test stump mounted on elevator.
- f. Marine Riser: Stewart & Stevenson Type "SSQR-F" 21" OD, with integral 15,000 psi WP 3" bore choke and kill lines, one (1) 3" bore, 5,000 psi WP hydraulic fluid line and one (1) 4" bore, 5,000 psi WP mud circulating line, certified for H<sub>2</sub>S with the following:
  - (1) One hundred and two (102) 75' joints with Syntactic foam buoyancy modules.
  - (2) One (1) each 50', 40', 20', 15', 10' and 5' pup joints.
  - (3) One (1) intermediate flex joint riser joint, 75' length, complete with choke, kill, hydraulic fluid and mud circulating line gooseneck terminations, and with one (1) flex joint assembly, Oil States, with maximum internal pressure rating of 500 psi, with maximum single tension of 2.0 million lbs., with maximum cocking angle of  $\pm 20^\circ$ , and cocking stiffness of 10,000 ft.-lbs. / degree.
- g. Riser Handling System: Victoria Machine remote operated semi-automatic riser handling system consisting of bridge crane, elevator and carts to transport riser from storage hold to rig floor gimbal.
- h. Telescopic Joints: Two (2) Stewart & Stevenson 21" ID with 65' stroke and dual packer.
- i. Handling tools for riser, telescopic joints and diverter.
- j. Transition Hoses:
  - (1) Two (2) 3" bore, 15,000 psi WP hoses for surface choke and kill transition.
  - (2) One (1) 4" bore, 5,000 psi WP hose for surface and mud circulating line transition.
  - (3) One (1) 3" bore, 5,000 psi WP hose for surface hydraulic fluid supply transition.
- k. Riser Tensioners: Ten (10) 200,000 lb single Shaffer riser tensioners with maximum pull of 2,000,000 lbs., 50' wireline travel.
- l. BOP Control System: Cameron multiplex system, complete with remote panels on rig floor and toolpushers office, emergency power pack and dual multiplex reels with spare functions for subsea tree controls.
- m. Hot Line System: Hydraulic hose and reel system connected to BOP supply fluid to provide live reel function while running BOP.

- n. Emergency BOP Shut In System: Electro Hydraulic BOP shut in system to close super shear rams, blind shear rams and stack mounted choke and kill valves.
- o. Testing for BOP stack: Electric driven pump with maximum 15,000 psi WP.
- p. Subsea Tree Handling System: Victoria Machine subsea tree handling and running system with storage for two complete trees rated for a hang-off capacity to 250,000 lbs.
- q. Riser Gimbal and Spider: One (1) Riser Gimbal/Spider assembly, Stewart & Stevenson, 2 million lbs. static load capacity design, with 65" clear ID. Gimbal designed shock absorbing, self leveling, with  $\pm 5^\circ$  gimbal capacity. Spider design is hydraulic gate with mechanical lock in close position. Assembly is complete with control console for all necessary remote operated hydraulic functions.

## 5. DOWNHOLE TOOLS AND EQUIPMENT:

- a. Inside BOP/Stab-in valve:
  - (1) Two (2) inside blowout preventers for 5" and 5-7/8" drill pipe, 15,000 psi WP.
  - (2) One (1) full opening stab-in valve for 5" and 5-7/8" drill pipe, 15,000 psi WP.
- b. Float Valve: Baker model G full flow, for Contractor's drill string.
- c. Drift Indicator: Totco, 0-8 degrees and 0-16 degrees for Contractor furnished equipment.

## 6. FISHING TOOLS:

- a. Overshots:
  - (1) One (1) 11-1/4" OD Bowen full strength series "150" overshot with 7-5/8" API Reg. connections to catch 9-1/2" OD drill collars.
  - (2) One (1) 10-5/8" OD Bowen full strength series "150" overshot with 6-5/8" Reg. connections to catch 8-1/4" OD drill collars.
  - (3) One (1) 9-1/8" OD Bowen full strength series "150" overshot with 5-1/2" FH connections to catch 5-7/8" OD drill pipe.
  - (4) One (1) 8-1/8" OD Bowen full strength series "150" overshot with 5-1/2" FH connections to catch 6-1/2" OD drill collars.
- b. Taper Taps:
  - (1) One (1) 7-3/4" OD Bowen rotary taper tap with 6-5/8" Reg. connections.
  - (2) One (1) 6-1/2" OD Bowen rotary taper tap with 5-1/2" FH connections.
- c. Junk Baskets:
  - (1) One (1) 15" OD Bowen reverse circulating basket equipped to catch 11-1/8" OD core in 17-1/2" hole.
  - (2) One (1) 11" OD Bowen reverse circulating basket equipped to catch 8-5/16" OD core in 12-1/4" hole.
  - (3) One (1) 7-7/8" OD Bowen reverse circulating basket equipped to catch 6-1/16" OD core in 8-1/2" hole.

## d. Magnets:

- (1) One (1) 10-1/2" OD Bowen fishing magnet, with 6-5/8" OD Reg. connections with flush guide for 12-1/4" hole.
- (2) One (1) 7" OD Bowen fishing magnet, 5-1/2" FH connections, with flush guide for 8-1/2" hole.

7. **DRILL STRING HANDLING TOOLS:**

## a. Slips, Drill Pipe:

- (1) Varco type SDHL 5" and 5-7/8"; two sets each.
- (2) Blohm and Voss Type PS-750 hydraulic operated power slip, 750 ton capacity equipped to handle 5-7/8" drill pipe.

## b. Slips, Drill Collar: One set each:

- (1) Varco type DCS-L: 8" — 9-1/2".
- (2) Varco Type DCS-L: 6-3/4" — 8-1/4".
- (3) Varco Type DCS-R: 5-1/2" — 7".

## c. Elevators, Drill Pipe:

- (1) Blohm and Voss type ACL 500, 500 ton, two sets with inserts to fit 5" and 5-7/8" drill pipe.
- (2) Blohm and Voss type ACL 350, 350 ton, one set with inserts to fit 5" and 5-7/8" drill pipe.

## d. Elevators, Drill Collar: BJ type SLX 150 ton. Side door for 9-1/2", 8-1/4" and 6-1/2" drill collars; one set each.

## e. Links, one set each:

- (1) BJ 3-1/2" x 180" — 500 ton.
- (2) BJ 2-3/4" x 180" — 350 ton.

## f. Tongs, Drill Pipe / Drill Collars:

- (1) BJ type SDD Range 4" — 15"; one set.
- (2) BJ type DB Range 3-1/2" — 8-1/4"; one set.

## g. Safety Clamps:

- (1) Varco Type MP-R Range 5-1/2" — 7".
- (2) Varco Type MP-R Range 6-3/4" — 8-1/2".
- (3) Varco Type MP-R Range 9-1/2" — 10-1/2".

- h. Bit Breakers: Bit breakers for sizes: 26", 17-1/2", 12-1/4", 8-1/2" and 6" bits; one set.
- i. Air Tuggers: Three (3) Ingersoll-Rand Type K5UL on rig floor, four (4) K6UL or equivalent on main deck around moon pool.

## 8. MUD FACILITIES AND EQUIPMENT:

- a. Mud Storage Tanks: 6,499 bbls. (total)
  - Mix Pit: 532 bbls.
  - Suction Pit: 481 bbls.
  - Reserve Mud Pit #1: 1,200 bbls.
  - Reserve Mud Pit #2: 1,200 bbls.
  - Reserve Mud Pit #3: 1,200 bbls.
  - Active Reserve: 600 bbls.
  - Premix Pit #1: 300 bbls.
  - Premix Pit #2: 300 bbls.
  - Slugging Pit #1: 100 bbls.
  - Slugging Pit #2: 100 bbls.
  - Solids Control Pits: 416 bbls.
  - Sand Trap: 10 bbls.
  - Trip Tank: 60 bbls.
- b. Trip Tank: 60 bbls. capacity, with Halco 6 x 5 centrifugal pump driven by a 40 hp explosion-proof electric motor.
- c. Mud Flow Pipe: 16" nominal OD from diverter ball valve to shale shaker.
- d. Shale Shakers: Five (5) each Brandt deep sump ATL-CS shale shakers.
- e. Desanders: Two (2) each Brandt SRS 2 with Halco 8 x 6 centrifugal pumps driven by 100 hp explosion-proof electric motors.
- f. Mud Cleaner: Brandt Model DMC 32 with Halco 8 x 6 centrifugal pump driven by 100 hp explosion-proof motor.
- g. Degassers: Two (2) Brandt DG-10, with Halco 8 x 6 centrifugal pumps driven by 100 HP explosion-proof electric motors.
- h. Mud Agitators:
  - (1) Two (2) Brandt 25-hp mud mixers for active tanks, two (2) 3-hp mud mixers for mixing tanks, and two (2) 5 hp mud mixers for pre-mix tanks.
  - (2) Four (4) Brandt 25-hp dual blade mud mixers for reserve tanks.
  - (3) Four (4) Brandt 3-hp mud mixers for slug tank, clean mud tank, desilter tank and desander tank.
- i. Mud-Gas Separator: GlobalSantaFe design, 350 cu. ft. with 10" vent line up derrick.
- j. Mud Testing Facilities: Basic kit for viscosity, filtration, weight, and titration.
- k. Mud Mixing Pumps: Four (4) Halco 8 x 6R centrifugal pumps driven by 100-hp explosion-proof electric motors. One (1) fitted as shear pump, one (1) located at active pits.
- l. Salt Hopper: Portable funnel type salt hopper with two (2) feed stations.



- m. Charging Pumps: Three (3) Halco 8 x 6R centrifugal pumps, each driven by 50-hp electric motors.
- n. Pit Level Indicator on active and reserve system tanks and trip tank with totalizer at drilling position.
- o. Ability to transfer liquid mud to cement unit.
- p. Gas Detection System: Gastech fixed combustible and H<sub>2</sub>S gas detection system (14 point H<sub>2</sub>S and 12 point combustible) complete with central control and alarm panel located in ship's office. Remote alarm located on drill floor; one (1) each sensor located at quarters inlet ventilation ducts, near shale shaker, moon pool area, in mud pit rooms, and on drill floor.
- q. Flowline Mud Flow Indicator.

**9. CASING AND RELATED TOOLS:**

- a. Casing elevator, Varco, slip type, 500 ton capacity, pneumatic, for 13-3/8", 9-5/8", and 7" casing.
- b. Power slip, Varco BJ, for use in National 49-1/2" Rotary, 500 ton capacity, hydraulic for 13-3/8", 9-5/8", and 7" casing.
- c. Side door elevators, BJ 150 ton for: 20", 13-3/8", 9-5/8", and 7" casing; one set each.
- d. Single joint elevator, BJ type SJ center latch for: 13-3/8", 9-5/8", and 7" casing; one set each.
- e. Casing slips, Varco type CMS-XL, adaptable for: 20", 13-3/8", 9-5/8", and 7" casing.
- f. Manual casing tongs, BJ type B, for: 20", 13-3/8", 9-5/8", and 7" casing.
- g. Master casing bushing with split type insert bowls for: 20", 13-3/8", 9-5/8", and 7" casing.

**10. CEMENTING UNIT:**

Dowell cementing unit. Rental fees, installation, and maintenance costs to be paid by Operator.

**11. SPECIAL SERVICES AND EQUIPMENT:**

- a. Well Testing Burner Booms
  - (1) Port and starboard burner booms for well testing.
  - (2) Piping as listed below on booms for oil, gas, water and air (compressed air supplied by Operator).
    - (a) Low Pressure Gas Line — 4" XH rated at 1,500 psi.
    - (b) High Pressure Gas Line — 4" XXH rated at 5,000 psi.
    - (c) Low Pressure Oil Line — 3" XH rated at 1500 psi.
    - (d) Water — 3" XH.
    - (e) Air — 3" XH.
  - (3) Salt water cooling system on booms.

- b. ROV System: ROV moonpool with moonpool guidance system. Rental fees, installation, and maintenance costs to be paid by Operator.

**APPENDIX B****Part 2  
RIG DESCRIPTION*****Glomar Explorer*****A. DRILLING CAPABILITIES:**

- |    |                                |            |
|----|--------------------------------|------------|
| 1. | Maximum Design Drilling Depth: | 30,000 ft. |
| 2. | Maximum Water Depth:           | 10,000 ft. |
|    | As Presently Equipped:         | 7,500 ft.  |

**B. MAJOR DIMENSIONS:**

- |    |                                   |                       |
|----|-----------------------------------|-----------------------|
| 1. | Length:                           | 618 ft. 8 in.         |
| 2. | Beam:                             | 115 ft. 8 in.         |
| 3. | Depth (at side):                  | 50 ft. 10 in.         |
| 4. | Operating Draft (bottom of hull): | 35 ft. 0 in.          |
| 5. | Drill Well:                       | 74 ft. x 41 ft. 8 in. |
| 6. | ROV Moon Pool:                    | 16 ft. x 18 ft.       |

**C. DRILLING UNIT STATION KEEPING EQUIPMENT**

1. Propulsion and Fore and Aft Station Keeping: Two (2) fixed pitch variable speed reversing propellers, each powered by three (3) General Electric type MCF, 2,200 hp, 800 rpm DC motors through two (2) Philadelphia Gear reduction units.
2. Tunnel Thrusters: Three (3) bow and two (2) stern, Murray and Tragurtha model BT-15 tunnel thrusters with fixed pitch propellers, each driven by a 2,000 hp DC motor.
3. Retractable Thrusters: Four (4) Lips 3,000 hp fixed pitch, variable speed, azimuthing thrusters.
4. Dynamic Positioning System: Nautronix ASK 4003, triple redundant DP system with dual DGPS position reference system, short baseline acoustic backup positioning system, and three gyro compasses for heading control.
5. Vessel Management System: GMDC design. System integrator Automation Solutions.
6. Estimated Speed: 10 knots with 13,200 shaft horsepower.

**D. LOADING DATA:**

- |    |                                       |                |
|----|---------------------------------------|----------------|
| 1. | Lightship Displacement (approximate): | 27,000 L. Tons |
| 2. | Loaded Displacement:                  | 50,533 L. Tons |
| 3. | Maximum Variable Load (approximate):  | 23,533 L. Tons |

**E. STORAGE CAPACITY:**

1.	Sack material, mud, chemicals (approximate):	7,000 sacks
2.	Bulk Mud:	36,000 cu. ft.
3.	Drilling Mud:	6,499 bbls.
4.	Bulk Cement:	11,160 cu. ft.
5.	Potable Water:	2,530 bbls.
6.	Drilling Water:	47,500 bbls.
7.	Wash Water:	6,800 bbls.
8.	Diesel Fuel:	49,500 bbls.
9.	Lube Oil:	2,000 bbls.
10.	Completion Fluid (calcium chloride tanks):	4,000 bbls.
11.	Base Oil:	1,538 bbls.
12.	Tubular goods — casing rack:	900 L. Tons
13.	Tubular goods — drill pipe rack:	30,000 ft.
14.	Tubular goods — vertical tubular rack	30, 000 ft.
15.	Drilling Riser — riser storage hold:	7,500 ft.

Note: Any combination of the above cannot exceed the maximum allowable variable load.

**F. HELIPORT:**

1. Dimension: 76 ft. x 76 ft.
2. Load Capacity: Meets loading requirements for Sikorsky S-61 helicopter.
3. Helicopter Refueling System: One (1) 1,132 gallon tank.

**G. LIVING QUARTERS:**

Air-conditioned quarters and dining facilities certified for one hundred forty (140) persons plus six (6) hospital berths. Maximum on-board complement 140 persons.

**H. METEOROLOGICAL INSTRUMENTS:**

1. Barometer.
2. Thermometer.
3. Anemometer.

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**I. COMMUNICATIONS EQUIPMENT:**

1. Sound-powered system.
2. Dial telephone system with general announcing system and E-Call.
3. General alarm system.
4. VHF radio at critical vessel control stations, lifeboats and cranes.
5. VHF/AM aircraft station.
6. GMDSS distress system.
7. Radiotelephone.
8. Satellite communication (MARISAT) — EB Saturn — 3S.
9. Portable VHF and UHF radios (4 ea.).
10. Facsimile receiver/recorder.
11. LF aircraft beacon.
12. Radio direction finder.
13. EPIRB.
14. Portable lifeboat radio.
15. MF watch transceivers.

**J. ELECTRONIC NAVIGATIONAL AIDS:**

1. Radar system consisting of three separate units; gyro stabilized.
2. Sperry-Mark 37 gyrocompass and accessories.
3. Fathometer.
4. Rudder angle indicator system.

**K. POWER EQUIPMENT**

1. Main Power:
  - a. AC Power: The main power plant consists of five (5) Nordberg Model FS-1316-HSC, 4,900 hp diesel engines, and four (4) EMD Model MD16E9B, 3,070 hp diesel engines.  
  
Each Nordberg engine drives a General Electric 3,500 KW, 60 Hertz 4160 VAC generator.  
  
Each EMD engine drives a Baylor 2,200 KW, 60 Hertz, 4160 VAC generator.  
  
Total horsepower available: 36,780.

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## b. DC Power Conversion:

- (1) Nine (9) each thyristor AC-DC 6-pulse converters rated 2,500 amperes, 750 volts DC each for propulsion and tunnel thruster system.
  - (2) Four (4) each thyristor AC-DC 12-pulse converters rated 3,000 amperes, 750 volts DC each for azimuthing thrusters.
  - (3) Nine (9) each thyristor AC-DC 6-pulse converters rated 1,600 amperes, 750 volts DC each for drilling motors.
2. Emergency Generator: One (1) 825 KW continuous duty at 0.8 PF, 1800 RPM, 3-phase, 480V, 60 Hz generator, powered by Detroit Diesel 16V-149 diesel engine.

L. **COMPRESSED AIR SYSTEMS:**

1. General service system (125 psi).
2. Engine cold start air system (250 psi for Nordbergs, 200 psi for EMDs).
3. Bulk air system (40 psi).
4. Motion compensator and riser tensioner air system (3,000 psi).

M. **WATER DISTILLATION UNITS:**

Two (2) Alfa Laval Nirex waste heat distillation unit, 417 gph.

N. **VESSEL PUMPS:**

Two (2) pumps each for fuel, fresh water circulating, salt water cooling system, salt water circulating service, fire, bilge, drill water, and sanitary. One (1) pump each for helicopter foam supply and deluge system serving drill floor, moon pool and active pits.

O. **FIRE-FIGHTING AND SAFETY EQUIPMENT:**

1. Salt water fire main system; deluge system for rig floor, moon pool and active pits.
2. Foam system for heliport.
3. CO<sub>2</sub> extinguishing systems for engine rooms, emergency generator room, SCR rooms, propulsion room and paint locker.
4. Dry chemical and portable CO<sub>2</sub> extinguishers on helicopter deck.
5. Fixed dry chemical suppression system in galley exhaust hood.
6. Automatic fire detection and alarm system for selected machinery spaces and service areas.
7. Miscellaneous items such as axes, lamps, masks, etc. as required by U.S.C.G.

P. **LIFESAVING EQUIPMENT:**

1. Lifeboats: Two (2) lifeboats, 31 ft., 80-person capacity, and two (2) lifeboats 28 ft., 60-person capacity reinforced fiberglass, totally enclosed, diesel powered, and fitted with "on-load" release mechanisms.

2. Liferrafts: Sufficient U.S.C.G. approved inflatable liferafts to accommodate all personnel on board.
3. Life Jackets: Sufficient to furnish all personnel with one (1) each, plus excess as required by U.S.C.G.

**Q. MEDICAL FACILITIES:**

1. First aid supplies and equipment.
2. Hospital accommodations per U.S.C.G. requirements.

**R. CRANES/MATERIAL HANDLING EQUIPMENT:**

1. Two (2) Seatrax Model 7228 diesel hydraulic cranes, one (1) with 100' boom and one (1) with 110' boom.
2. Two (2) Seatrax Model 4220 diesel hydraulic cranes, one (1) with 90' boom and one (1) with 110' boom.

**S. WELDING MACHINES:**

Two (2) Lincoln 300-amp, electric welding machines.

**T. SEWAGE TREATMENT PLANT:**

1. Omnipure 12MC, 120-man capacity rating.
2. Omnipure 8MC, 60-man capacity rating.

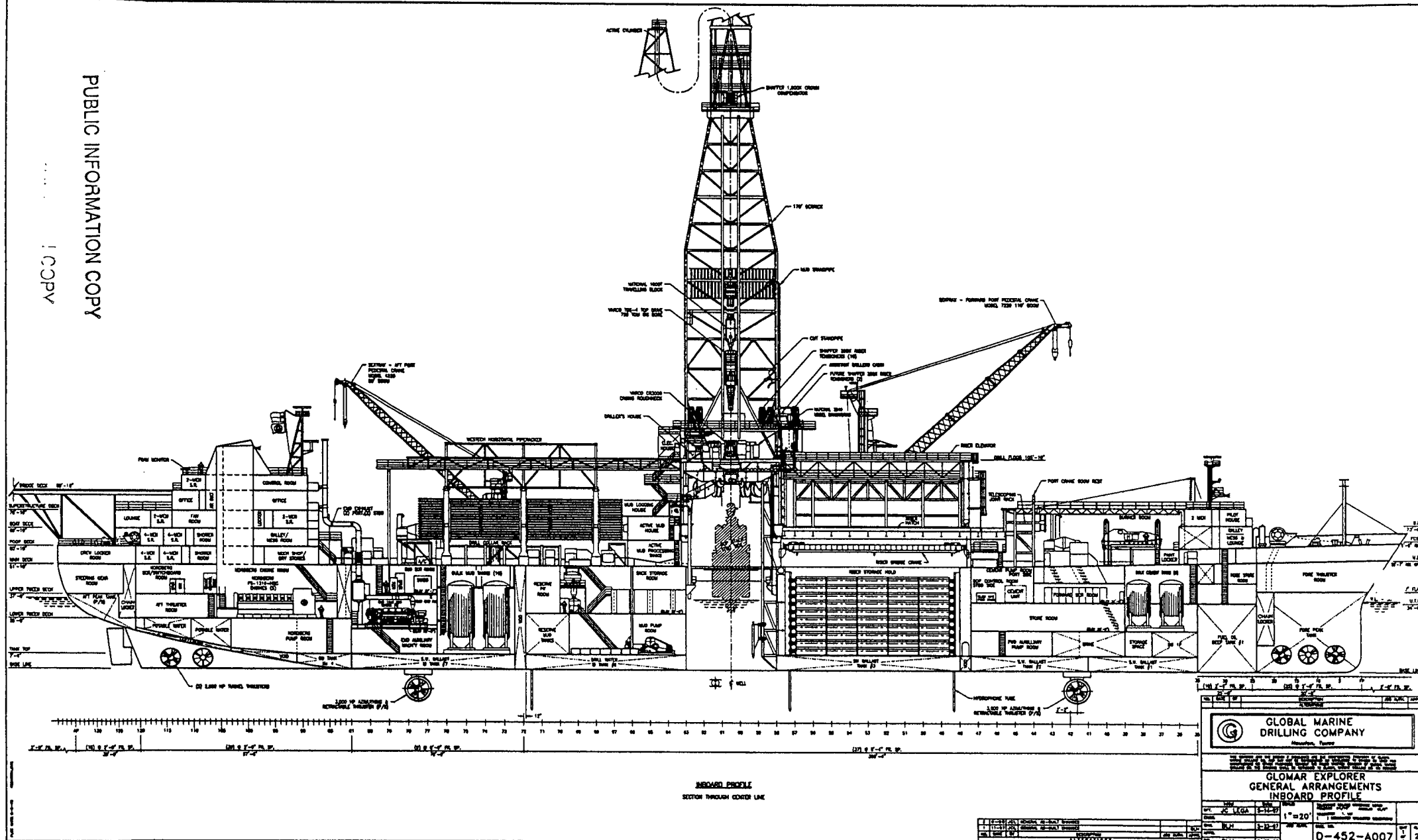
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iCCPV



**CHARACTERISTICS**

TYPE :	
TYPE :	TWIN SCREW - DIESEL ELECTRIC
DYNAMICALLY POSITIONED	
LENGTH OVERALL	616'-8"
LENGTH BETWEEN PERPENDICULARS	586'-7"
BREADTH MOULDED	115'-8 1/2"
DEPTH MOULDED TO MAIN DECK AT SIDE	30'-10"
DRAFT AT SUMMER FREEBOARD	APPROX 35'-0"
DISPLACEMENT @ 35'	APPROX 30,533 LT
VARIABLE LOAD	APPROX 23,533 LT
ESTIMATED HORSEPOWER	34,780 HP
HELIDECK	SIROCKS S-61
NUMBER OF BERTHS	140
SERVICE SPEED	10.0 KNOTS
CONSTRUCTION	WELDED STEEL
DRILL WELL	74' x 41'-8"
FUEL OIL	49,500 BBL'S
DRILL WATER	47,500 BBL'S
POTABLE WATER	2,530 BBL'S
LUBE OIL	2,000 BBL'S
WASH WATER	6,800 BBL'S
LIQUID MUD (ACTIVE - MAIN DECK)	1,430 BBL'S
LIQUID MUD (RESERVE - 4 x 1200)	4,800 BBL'S
BASE OIL	1,538 BBL'S
BRINE	4,000 BBL'S
BULK MUD & CEMENT	47,160 CF
SACK MATERIAL, MUD, CHEMICAL (APPROXIMATE)	7,000 SACKS
TUBULAR GOODS - CASINO RACK	500 L TONS

**GLOBAL MARINE DRILLING COMPANY**  
Houston, Texas

**GLOMAR EXPLORER**  
GENERAL ARRANGEMENTS  
OUTBOARD PROFILE

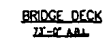
Scale: 1" = 20'

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CHARACTERISTICS	
TYPE :	THIN SHEET - DESIGNED ELECTRIC DYNAMICALLY DEFORMED
LENGTH OVERALL	818" - 8"
LENGTH BETWEEN PERFORICULARS	586" - 7"
BREADTH	115" - 8 1/2"
DEPTH WOLDED TO MAIN DECK AT SIDE	58" - 10"
DRIFT AT SUMMER PEAKBOND	APPROX 35" - 4"
EXPLOSIONPROOF @ 35	APPROX. 50,553 LT
WINDABLE LOAD	APPROX. 52,553 LT
ESTIMATED HORSEPOWER	34,780 HP
WELDED	SHOCKPROOF S-61
NUMBER OF BIRTHS	140
SOURCE SPEED	16.0 KNOTS
CONSTRUCTION	WELDED STEEL
DRILL WELL	74" x 41" - 8"
FUEL OIL	46,500 BBL'S
DRILL TOWER	47,200 BBL'S
POTABLE WATER	2,500 BBL'S
LUBRIC OIL	2,000 BBL'S
WASH WATER	4,000 BBL'S
LIQUID WELD (ACTIVE - MAIN DECK)	1,400 BBL'S
LIQUID WELD (RESERVE - 4 x 1200)	4,000 BBL'S
BASE OIL	1,500 BBL'S
BRINE	4,000 BBL'S
WELD WELD & CONDUIT	47,140 FT
WASH MATERIAL, WELD, CHEMICAL (APPROXIMATE)	2,000 SACKS
SUBSEA STOCK - (DEMO) STOCK	3,000 LT, TONS



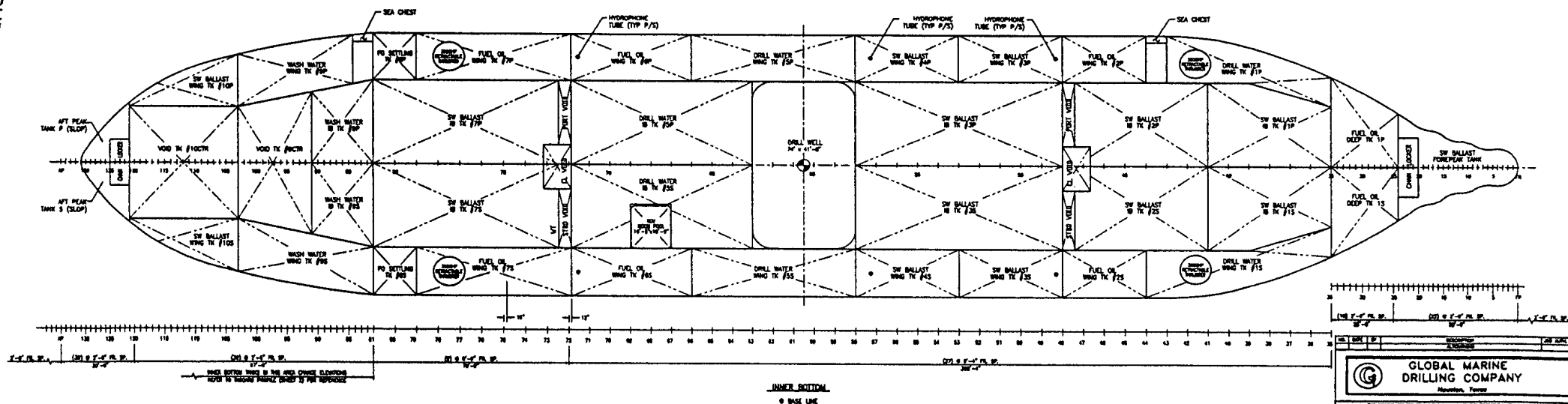
### AET QUARTERS ARRANGEMENTS



FWD QUARTERS ARRANGEMENTS

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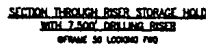
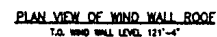
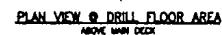
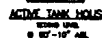

**GLOBAL MARINE  
DRILLING COMPANY**

THE ABOVE IS A SUMMARY OF THE INFORMATION CONTAINED IN THE ATTACHED DOCUMENTS. THE INFORMATION IS UNCLASSIFIED EXCEPT WHERE SHOWN OTHERWISE.

GLOMAR EXPLORER  
GENERAL ARRANGEMENTS  
TANK TOP & INNER BOTTOM

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BLH 5-13-77 D-452-A010



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2	1 (7-22-78)	GLOBAL, 00-0002	ARMED			
3	1 (7-22-78)	GLOBAL, 00-0003	ARMED			
4	1 (7-22-78)	GLOBAL, 00-0004	ARMED			
5	1 (7-22-78)	GLOBAL, 00-0005	ARMED			
6	1 (7-22-78)	GLOBAL, 00-0006	ARMED			
7	1 (7-22-78)	GLOBAL, 00-0007	ARMED			
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60	1 (7-22-78)					

## GLOBAL MARINE DRILLING COMPANY

Hesperian, Texas

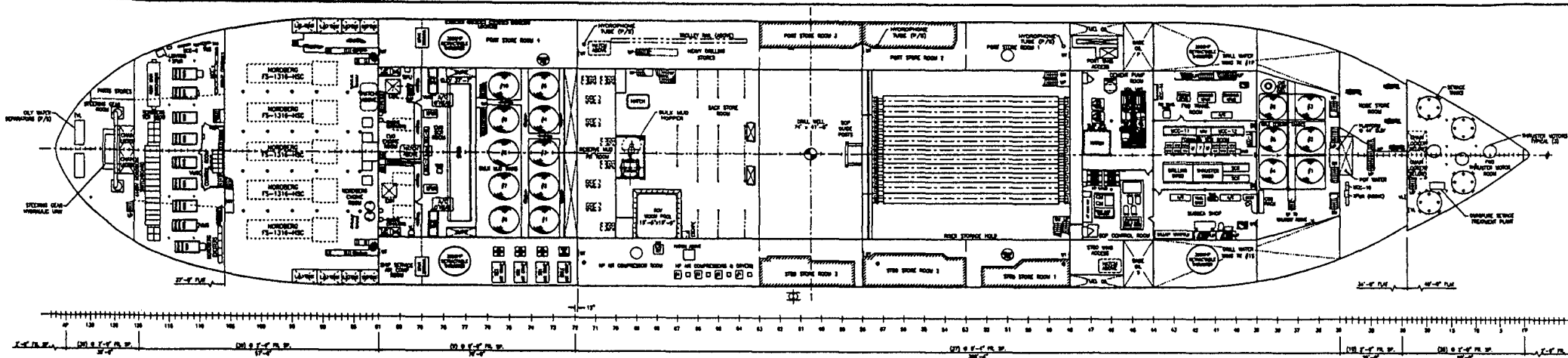
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## GLOMAR EXPLORER

### GENERAL ARRANGEMENTS

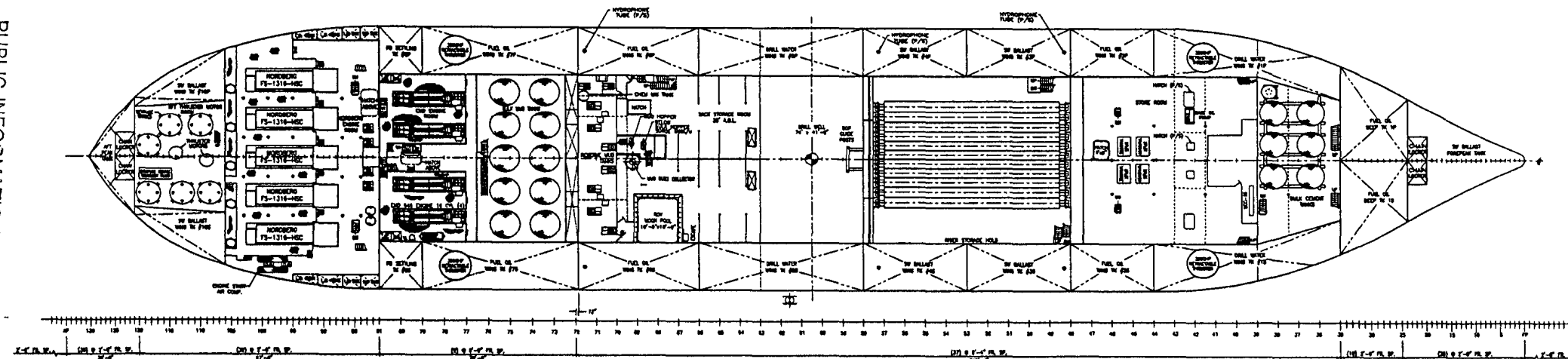
### TRANSVERSE SECTIONS & RIG FLOOR

<div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">           STA. 2 LGA         </div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">           STA. RJN         </div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">           STA. BLH         </div>	<div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">           1" = 20'         </div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">           1" = 20'         </div>	<div style="border: 1px solid black; padding: 10px; margin: 0 auto; width: 80%;"> <h1 style="margin: 0;">D-452-A011</h1> </div>	<div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">           STA. 2         </div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">           STA. 3         </div>
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UPPER TWEEN DECK

© 34'-0" AB



LOWER TWEEN DECK

© 25'-0" AB

<b>GLOBAL MARINE DRILLING COMPANY</b> Houston, Texas	
<b>GLOMAR EXPLORER</b> <b>GENERAL ARRANGEMENTS</b> <b>UPPER &amp; LOWER TWEEN DECKS</b>	
DATE: 11-1-79 BY: J.E. LEON CHECKED: J.E. LEON SCALE: 1"=20' SHEET NO: 0-452-A009	SHEET NO: 2 OF: 2



7310452-6  
Certificate No.

## INTERNATIONAL LOAD LINE CERTIFICATE

ISSUED UNDER THE PROVISIONS OF THE INTERNATIONAL CONVENTION ON LOAD LINES, 1966, AS MODIFIED BY THE PROTOCOL OF 1988 RELATING THERETO UNDER THE AUTHORITY OF THE GOVERNMENT OF

**UNITED STATES OF AMERICA**  
**Commandant, U.S. Coast Guard**

By the American Bureau of Shipping

### Particulars of Ship

Name of Ship	Distinctive Number or Letters	Port of Registry	Length(L) as defined in Article 2(8) (feet)	IMO Number <sup>1</sup>
GLOMAR EXPLORER	547527/WCHG	HOUSTON	577'-0-1/2"	7233292

Freeboard assigned as:

A new ship  
An existing ship

Type of Ship.

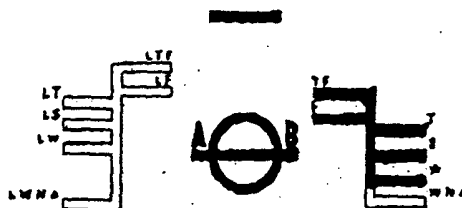
Type "A"  
Type "B"  
Type "B" with reduced freeboard  
Type "B" with increased freeboard

\* Delete whatever is inapplicable

Freeboard from Deck Line				Load Line	
Tropical	12	feet	2-1/4 inches (T)	9-1/2	inches above (S)
Summer	12	feet	11-3/4 inches (S)	Upper edge of line through center of ring	
Winter	13	feet	9-1/4 inches (W)	9-1/2	inches below (S)
Winter North Atlantic	N/A	feet	N/A inches (WNA)	N/A	inches below (S)
Timber tropical	N/A	feet	N/A inches (LT)	N/A	inches above (LS)
Timber summer	N/A	feet	N/A inches (LS)	N/A	inches above (S)
Timber winter	N/A	feet	N/A inches (LW)	N/A	inches below (LS)
Timber winter North Atlantic	N/A	feet	N/A inches (LWNA)	N/A	inches below (LS)
Allowance for fresh water for all freeboards other than timber	10-1/4	inches			
For timber freeboards	N/A	inches			

The upper edge of the deck line from which these freeboards are measured is: OPPOSITE TOP OF STEEL UPPER deck at side

THIS CERTIFICATE IS VALID ONLY SO LONG AS THE OPERATING RESTRICTIONS IN THE UNIT'S STABILITY LETTER, ISSUED BY ABS AMERICAS ON BEHALF OF THE USCG MARINE SAFETY CENTER, AND DATED 09 DECEMBER 1998, ARE OBSERVED.



ABS

<sup>1</sup> In accordance with the IMO Ship Identification Number Scheme, adopted by resolution A.600(15)



**THIS IS TO CERTIFY:**

- 1 That the ship has been surveyed in accordance with the requirements of article 14 of the Convention.
- 2 That the survey showed that the freeboards have been assigned and load lines shown above have been marked in accordance with the Convention.

This certificate is valid until 31<sup>st</sup> JULY 2007<sup>2</sup> subject to the annual surveys in accordance with article 14(1)(c) of the Convention

Completion date of survey on which this certificate is based: 30<sup>th</sup> SEPTEMBER 2002

Issued at HOUSTON TEXAS

Place of issue of Certificate

25<sup>th</sup> FEBRUARY 2003

Date of issue

E.L. Becht

Surveyor, American Bureau of Shipping

**NOTES.**

1. When a ship departs from a port situated on a river or inland waters, deeper loading shall be permitted corresponding to the weight of fuel and all other materials required for consumption between the point of departure and the sea.
2. When a ship is in fresh water of unit density the appropriate load line may be submerged by the amount of fresh water allowance shown above. Where the density is other than unity, an allowance shall be made proportional to the difference between 1.025 and the actual density.
3. It is the owner's responsibility to furnish the master with approved information and instructions for loading and ballasting this vessel to provide guidance as to stability of the vessel under varying conditions of service and to avoid unacceptable stresses in the vessel's structure, as defined in 46 CFR 42.09-1.
4. The Winter North Atlantic Load Line applies only to vessels of 328 ft. in length or less, which enter any part of the North Atlantic Ocean during the winter months as defined by the Load Line Regulations in 46 CFR 42.30-5 and 42.30-35. The periods during which the other seasonal load lines apply in different parts of the world are stated in the Load Line Regulations 46 CFR 42.30-5 to 42.30-30, inclusive.
5. This Load Line Certificate will be cancelled by the Commandant, U. S. Coast Guard, if...
  - a) The annual surveys have not been carried out with three months either way of each anniversary date of the certificate.
  - b) The certificate is not endorsed to show that the ship has been surveyed as indicated in (a).
  - c) Material alterations have been made to the hull or superstructures such as would necessitate the assignment of an increased freeboard.
  - d) The fittings and appliance for the protection of the openings, guardrails, freeing ports, or the means of access to the crew's quarters have not been in as effective a condition as they were when the Certificate was issued.
  - e) The structural strength of the ship is lowered to such an extent that the ship is unsafe.
6. When this Certificate has expired or been cancelled, it must be delivered to the Assigning Authority.



<sup>2</sup> Insert the date of expiry as specified by the Administration in accordance with article 19(1) of the Convention. The day and the month of this date correspond to the anniversary date as defined in article 2(9) of the Convention, unless amended in accordance with article 19(8) of the Convention.

## ENDORSEMENT FOR ANNUAL SURVEYS

**THIS IS TO CERTIFY** that, at an annual survey required by article 4(1)(c) of the Convention, the ship was found to comply with the relevant requirements of the Convention.

Annual Survey:

Signed:

Surveyor, American Bureau of Shipping

Place:

Date:

Annual Survey:

Signed:

Surveyor, American Bureau of Shipping

Place:

Date:

Annual Survey:

Signed:

Surveyor, American Bureau of Shipping

Place:

Date:

Annual Survey:

Signed:

Surveyor, American Bureau of Shipping

Place:

Date:

## ANNUAL SURVEY IN ACCORDANCE WITH ARTICLE 19(8)(c)

**THIS IS TO CERTIFY** that, at a survey in accordance with article 19(8)(c) of the Convention, the ship was found to comply with the relevant requirements of the Convention.

Signed:

Surveyor, American Bureau of Shipping

Place:

Date:

*Endorsement to extend the certificate if valid for less than 5 years where article 19(3) applies*

The ship complies with the relevant requirements of the Convention, and this certificate shall, in accordance with article 19(3) of the Convention, be accepted as valid until \_\_\_\_\_



Signed:

Surveyor, American Bureau of Shipping

Place:

Date:

*Endorsement where the renewal survey has been completed and article 19(4) applies*

The ship complies with the relevant requirements of the Convention, and this certificate shall, in accordance with article 19(4) of the Convention, be accepted as valid until \_\_\_\_\_

Signed: \_\_\_\_\_  
Surveyor, American Bureau of Shipping  
Place: \_\_\_\_\_  
Date: \_\_\_\_\_

*Endorsement to extend the validity of the certificate until reaching the port of survey or for a period of grace where article 19(5) or 19(6) applies.*

This certificate shall, in accordance with article 19(5)/19(6)<sup>3</sup> of the Convention, be accepted as valid until \_\_\_\_\_

Signed: \_\_\_\_\_  
Surveyor, American Bureau of Shipping  
Place: \_\_\_\_\_  
Date: \_\_\_\_\_

*Endorsement for advancement of anniversary date where article 19(8) applies*

In accordance with article 19(8) of the Convention, the new anniversary date is \_\_\_\_\_


Signed: \_\_\_\_\_  
Surveyor, American Bureau of Shipping  
Place: \_\_\_\_\_  
Date: \_\_\_\_\_

In accordance with article 19(8) of the Convention, the new anniversary date is \_\_\_\_\_

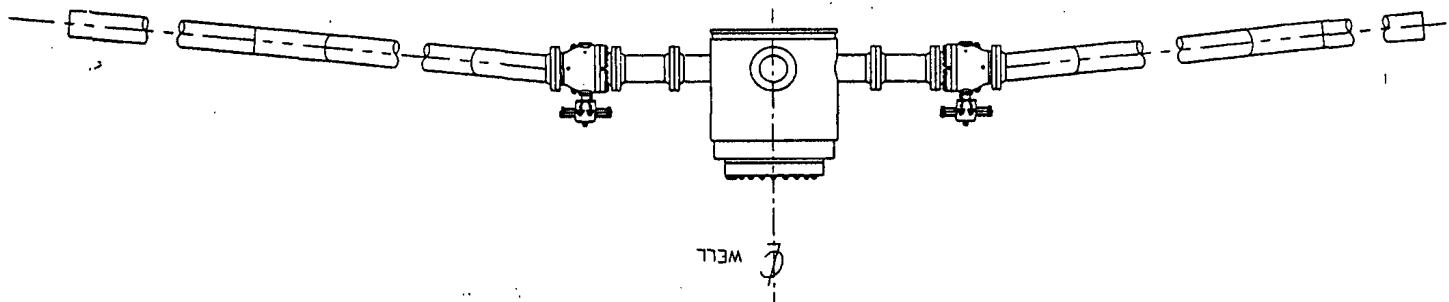
Signed: \_\_\_\_\_  
Surveyor, American Bureau of Shipping  
Place: \_\_\_\_\_  
Date: \_\_\_\_\_



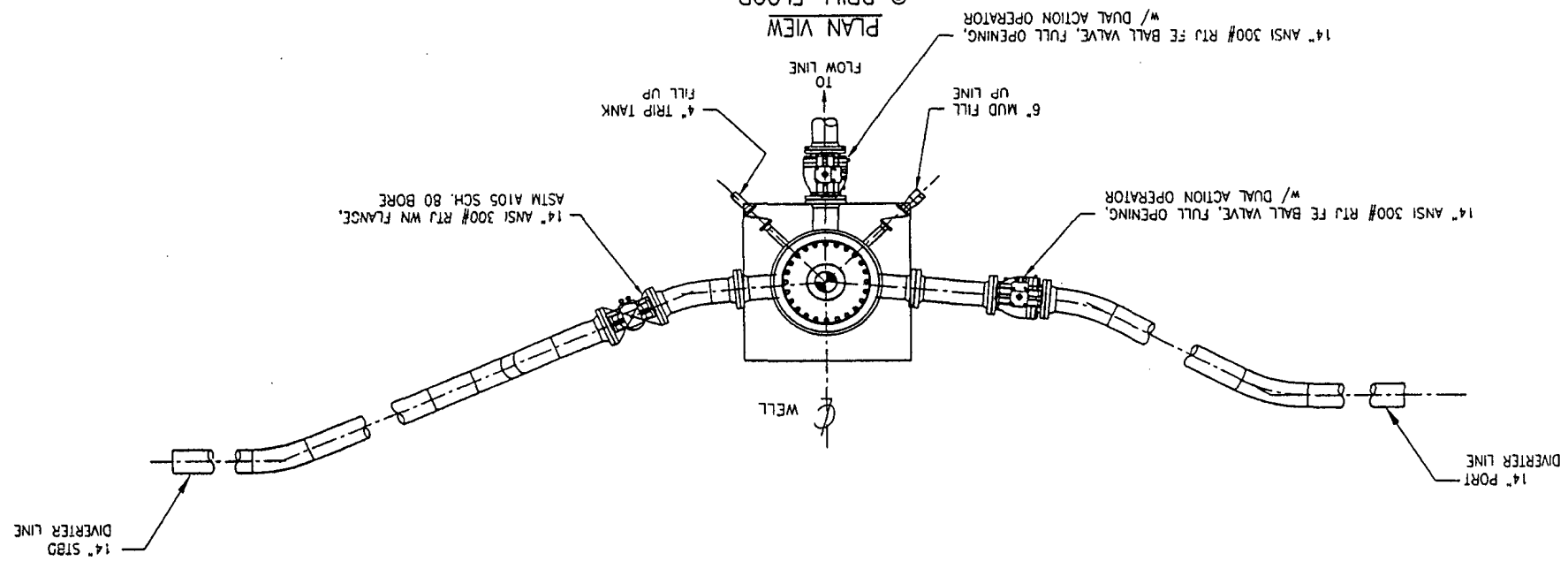
<sup>3</sup> Delete as appropriate

 <b>GLOBAL MARINE DRILLING COMPANY</b>	
GLOMAR EXPLORER DIVERter SYSTEM ARRANGEMENT	
8-452-X025	3/16"

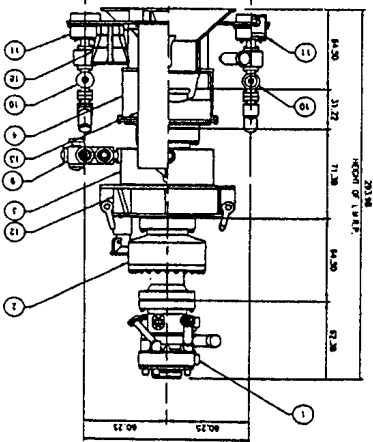
**ELEVATION VIEW  
LOOKING FWD**



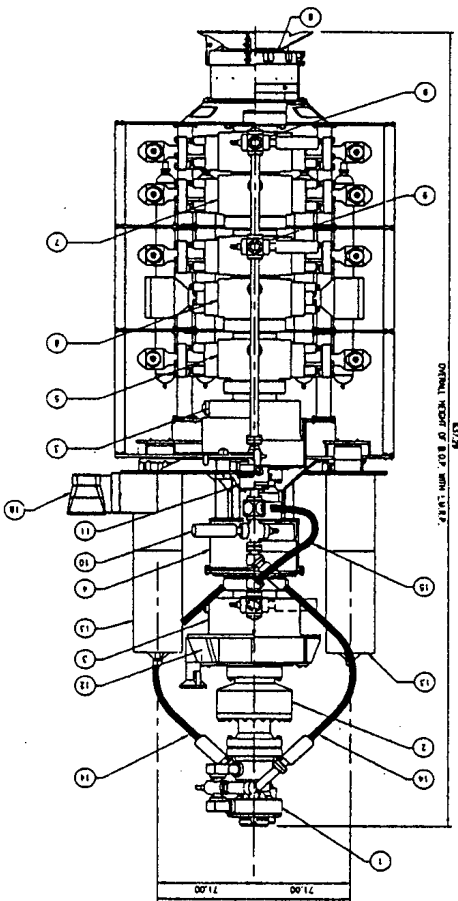
**PLAN VIEW  
@ DRILL FLOOR**



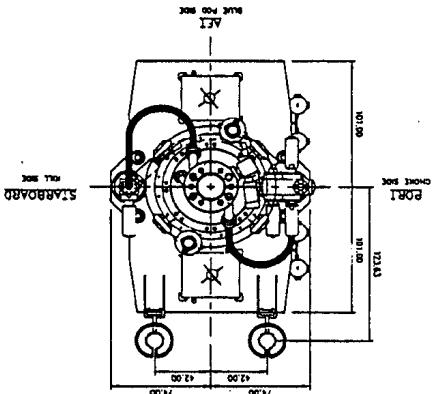
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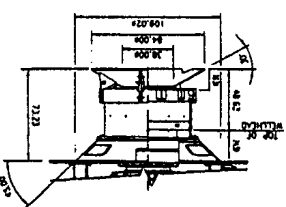
~~KILL SIDE ELEVATION VIEW~~



PLAN VIEW - TOP OF L.M.R.P.



**WELLHEAD CONNECTOR CAGE DIMENSIONS**

[illegible]

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ESTIMATED WEIGHTS:

**GENERAL NOTES:**

**REFERENCE DRAWINGS:**

[illegible]

PUBLIC INFORMATION COPY



- EXEMPT INFORMATION COPY

**CARGO SHIP SAFETY CONSTRUCTION CERTIFICATE**

ISSUED UNDER THE PROVISIONS OF THE

INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974,  
AS MODIFIED BY THE PROTOCOL OF 1988 RELATING THERETO

UNDER THE AUTHORITY OF THE GOVERNMENT OF

UNITED STATES OF AMERICA

(name of the State)

by E. L. Beche

Surveyor, American Bureau of Shipping

## Particulars of Ship

Name of Ship	Distinctive Number or Letters	Port of Registry	Gross Tonnage <sup>1</sup> a) According to tonnage <sup>2</sup> b) According to tonnage <sup>3</sup>
GLOMAR EXPLORER	547527/WCHG	HOUSTON	27,686
Deadweight of Ship (Metric Tons) <sup>4</sup>	IMO Number		Date on which keel was laid <sup>5</sup>
N/A	7233292		01 JANUARY 1973

Type of ship:<sup>1</sup>

Bulk Carrier

Oil tanker

Chemical tanker

Gas Carrier

Cargo ship other than any of the above

## THIS IS TO CERTIFY:

1. That the ship has been surveyed in accordance with the requirements of regulation I/10 of the Convention.
2. That the survey showed that the condition of the structure, machinery and equipment as defined in the above Regulation was satisfactory and the ship complied with the relevant requirements of chapters II-1 and II-2 of the Convention (other than those relating to fire safety systems and appliances and fire control plans).
3. That the last two inspections of the outside of the ship's bottom took place on 30 SEPTEMBER 2002  
and 02 JULY 2000
4. That an Exemption Certificate has not<sup>1</sup> been issued.

This certificate is valid until 31<sup>st</sup> JULY 2007<sup>6</sup> subject to the annual and intermediate surveys and inspections of the outside of the ship's bottom in accordance with regulation I/10 of the Convention.

Completion date of the survey on which this certificate is based: 30<sup>th</sup> SEPTEMBER 2002Issued at HOUSTON TEXASPlace of issue Certificate25<sup>th</sup> FEBRUARY 2003

Date of issue

E. L. BECHE Surveyor, American Bureau of Shipping<sup>1</sup> Delete as appropriate<sup>2</sup> The above gross tonnage has been determined in accordance with the International Convention on Tonnage Measurement of Ships, 1969.<sup>3</sup> The above gross tonnage has been determined by the authorities of the Administration in accordance with the national tonnage rules which were in force prior to the coming into force for existing ships of the International Convention on Tonnage Measurement of Ships, 1969.<sup>4</sup> For oil tankers, chemical tankers and gas carriers only.<sup>5</sup> Date on which keel was laid or ship was at a similar stage of construction or, where applicable, date on which work for a conversion or an alteration or modification of a major character was commenced<sup>6</sup> Insert the date of expiry as specified by the Administration in accordance with Regulation I/14(a) of the Convention. The day and the month of this date correspond to the anniversary date as defined in Regulation I/2(n) of the Convention, unless amended in accordance with Regulation I/14(h)

**ENDORSEMENT FOR ANNUAL AND INTERMEDIATE SURVEYS**

**THIS IS TO CERTIFY** that, at a survey required by Regulation 1/10 of the Convention, the ship was found to comply with the relevant requirements of the Convention.

Annual Survey:

Signed:

\_\_\_\_\_  
Surveyor, American Bureau of Shipping

Place: \_\_\_\_\_

Date: \_\_\_\_\_

Annual/Intermediate<sup>7</sup> Survey:

Signed:

\_\_\_\_\_  
Surveyor, American Bureau of Shipping

Place: \_\_\_\_\_

Date: \_\_\_\_\_

Annual/Intermediate<sup>7</sup> Survey:

Signed:

\_\_\_\_\_  
Surveyor, American Bureau of Shipping

Place: \_\_\_\_\_

Date: \_\_\_\_\_

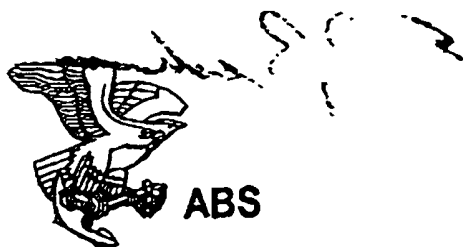
Annual Survey:

Signed:

\_\_\_\_\_  
Surveyor, American Bureau of Shipping

Place: \_\_\_\_\_

Date: \_\_\_\_\_



<sup>7</sup> Delete as appropriate



**ANNUAL/INTERMEDIATE SURVEY IN ACCORDANCE WITH REGULATION I/14(h)(III)**

**THIS IS TO CERTIFY** that, at the annual/intermediate<sup>8</sup> survey in accordance with regulation I/14(h)(iii) of the Convention, the ship was found to comply with the relevant requirements of the Convention

Signed: \_\_\_\_\_  
Surveyor, American Bureau of Shipping

Place: \_\_\_\_\_

Date: \_\_\_\_\_

**ENDORSEMENT FOR INSPECTIONS OF THE OUTSIDE OF THE SHIP'S BOTTOM<sup>9</sup>**

**THIS IS TO CERTIFY** that, at an inspection required by regulation I/10 of the Convention, the ship was found to comply with the relevant requirements of the Convention.

First Inspection.

Signed: \_\_\_\_\_  
Surveyor, American Bureau of Shipping

Place: \_\_\_\_\_

Date: \_\_\_\_\_

Second Inspection:

Signed: \_\_\_\_\_  
Surveyor, American Bureau of Shipping

Place: \_\_\_\_\_

Date: \_\_\_\_\_

*Endorsement to extend the certificate if valid for less than 5 years where regulation I/14(c) applies*

The ship complies with the relevant requirements of the Convention, and this certificate shall, in accordance with Regulation I/14(c) of the Convention, be accepted as valid until \_\_\_\_\_

Signed: \_\_\_\_\_  
Surveyor, American Bureau of Shipping

Place: \_\_\_\_\_

Date: \_\_\_\_\_



<sup>8</sup> Delete as appropriate  
<sup>9</sup> Provision may be made for additional inspections.

*Endorsement where the renewal survey has been completed and Regulation I/14(d) applies*

The ship complies with the relevant requirements of the Convention, and this certificate shall, in accordance with Regulation I/14(d) of the Convention, be accepted as valid until \_\_\_\_\_

Signed: \_\_\_\_\_

Surveyor, American Bureau of Shipping

Place: \_\_\_\_\_

Date: \_\_\_\_\_

*Endorsement to extend the validity of the certificate until reaching the port of survey or for a period of grace where regulation I/14(e) or I/14(f) applies.*

This certificate shall, in accordance with Regulation I/14(e)/I/14(f)<sup>10</sup> of the Convention, be accepted as valid until \_\_\_\_\_

Signed: \_\_\_\_\_

Surveyor, American Bureau of Shipping

Place: \_\_\_\_\_

Date: \_\_\_\_\_

*Endorsement for advancement of anniversary date where Regulation I/14(h) applies*

In accordance with Regulation I/14(h) of the Convention, the new anniversary date is \_\_\_\_\_

Signed: \_\_\_\_\_

Surveyor, American Bureau of Shipping

Place: \_\_\_\_\_

Date: \_\_\_\_\_

In accordance with Regulation I/14(h) of the Convention, the new anniversary date is \_\_\_\_\_

Signed: \_\_\_\_\_

Surveyor, American Bureau of Shipping

Place: \_\_\_\_\_

Date: \_\_\_\_\_



<sup>10</sup> Delete as appropriate

# CARGO SHIP SAFETY EQUIPMENT CERTIFICATE

This Certificate shall be supplemented by a Record of Equipment (Form E)

*Issued under the provisions of the*

## INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974

as modified by the Protocol of 1988 relating thereto



*under the authority of the Government of*

**THE UNITED STATES OF AMERICA**

by the UNITED STATES COAST GUARD

### Particulars of Ship

Name of Ship	Distinctive Number or Letters	Port of Registry	Gross Tonnage
GLOMAR EXPLORER	547527	NATIONAL VESSEL DOCUMENTATION CENTR	27,686
Deadweight of Ship (metric tons) (Note 1)	Length of Ship (regulation III/3.10)	IMO Number (Note 2)	Date on which keel was laid (Note 3)
35,264	577	-----	1973

### Type of Ship

- ☐ Oil Tanker  
☐ Chemical Tanker  
☐ Gas Carrier  
☒ Cargo ship other than any of the above.

### THIS IS TO CERTIFY:

1. That the ship has been surveyed in accordance with the requirements of regulation I/8 of the Convention.

### Notes:

1. For Oil Tankers, Chemical Tankers and Gas Carriers only.
2. In accordance with resolution A.600(15):IMO Ship Identification Number Scheme, this information may be included voluntarily.
3. Date on which keel was laid or ship was at a similar stage of construction or, where applicable, date on which work for a conversion or an alteration or modification of a major character was commenced.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number.

The Coast Guard estimates that the average burden for this report is 5 minutes. You may submit any comments concerning the accuracy of this burden estimate or any suggestions for reducing the burden to: Commandant (G-MOC), U.S. Coast Guard, Washington, DC 20593-0001 or Office of Management and Budget, Paperwork Reduction Project (2115-0056), Washington DC 20503.

## CARGO SHIP SAFETY EQUIPMENT CERTIFICATE

2. That the survey showed that:

- 2.1 the ship complied with the requirements of the Convention as regards fire safety systems and appliances and fire control plans;
- 2.2 the life-saving appliances and the equipment of the lifeboats, liferafts and rescue boats were provided in accordance with the requirements of the Convention;
- 2.3 the ship was provided with a line-throwing appliance and radio installations used in life-saving appliances in accordance with the requirements of the Convention;
- 2.4 the ship complied with the requirements of the Convention as regards shipborne navigational equipment, means of embarkation for pilots and nautical publications;
- 2.5 the ship was provided with lights, shapes, means of making sound signals and distress signals in accordance with the requirements of the Convention and the International Regulations for Preventing Collisions at Sea in force;
- 2.6 in all other respects the ship complied with the relevant requirements of the Convention.

3. That the ship operates in accordance with regulation III/26.1.1.1 within the limits of the trade area: \_\_\_\_\_

4. That an Exemption Certificate has been issued

This certificate is valid until: JULY 31, 2008 subject to the annual and periodical surveys in accordance with regulation I/8 of the Convention.

Issued at: MORGAN CITY, LOUISIANA  
*Place of issue of certificate*

JULY 31, 2003  
*Date of Issue*

S. P. GARRITY, CAPTAIN  
*Officer in Charge, Marine Inspection, U.S. Coast Guard*



Note:

- 4. Insert the date of expiry as specified by the Administration in accordance with regulation I/14(a) of the Convention. The day and the month of this date correspond to the anniversary date as defined in regulation I/2(n) of the Convention, unless amended in accordance with regulation I/14(h).

CARGO SHIP SAFETY EQUIPMENT CERTIFICATE

Endorsement for annual and periodical surveys

THIS IS TO CERTIFY that, at a survey required by regulation I/8 of the Convention, the ship was found to comply with the relevant requirements of the Convention.

Annual survey:



Signed: \_\_\_\_\_  
(Signature of authorized official)

Place: \_\_\_\_\_

Date: \_\_\_\_\_

Annual/Periodical<sup>5</sup> survey:



Signed: \_\_\_\_\_  
(Signature of authorized official)

Place: \_\_\_\_\_

Date: \_\_\_\_\_

Annual/Periodical<sup>5</sup> survey:



Signed: \_\_\_\_\_  
(Signature of authorized official)

Place: \_\_\_\_\_

Date: \_\_\_\_\_

Annual survey:



Signed: \_\_\_\_\_  
(Signature of authorized official)

Place: \_\_\_\_\_

Date: \_\_\_\_\_

Note:

5. Delete as appropriate

## CARGO SHIP SAFETY EQUIPMENT CERTIFICATE

Annual/periodical survey in accordance with regulation I/14(h)(iii)

**THIS IS TO CERTIFY** that, at the annual/periodical<sup>6</sup> survey in accordance with regulation I/14(h)(iii) of the Convention, the ship was found to comply with the relevant requirements of the Convention.



Signed: \_\_\_\_\_  
(Signature of authorized official)

Place: \_\_\_\_\_

Date: \_\_\_\_\_

*Endorsement to extend the certificate if valid for less than 5 years where regulation I/14(c) applies*

The ship complies with the relevant requirements of the Convention, and this certificate shall, in accordance with regulation I/14(c) of the Convention, be accepted as valid until \_\_\_\_\_



Signed: \_\_\_\_\_  
(Signature of authorized official)

Place: \_\_\_\_\_

Date: \_\_\_\_\_

*Endorsement where the renewal survey has been completed and regulation I/14(d) applies*

The ship complies with the relevant requirements of the Convention, and this certificate shall, in accordance with regulation I/14(d) of the Convention, be accepted as valid until \_\_\_\_\_



Signed: \_\_\_\_\_  
(Signature of authorized official)

Place: \_\_\_\_\_

Date: \_\_\_\_\_

Note:

6. Delete as appropriate

## CARGO SHIP SAFETY EQUIPMENT CERTIFICATE

*Endorsement to extend the validity of the certificate until reaching the port of survey or for a period of grace where regulation I/14(e) or I/14(f) applies*

This certificate shall, in accordance with regulation I/14(e) or I/14(f)<sup>7</sup> of the Convention, be accepted as valid until \_\_\_\_\_



Signed: \_\_\_\_\_  
(Signature of authorized official)

Place: \_\_\_\_\_

Date: \_\_\_\_\_

*Endorsement for advancement of anniversary date where regulation I/14(h) applies*

In accordance with regulation I/14(h) of the Convention, the new anniversary date is \_\_\_\_\_



Signed: \_\_\_\_\_  
(Signature of authorized official)

Place: \_\_\_\_\_

Date: \_\_\_\_\_

In accordance with regulation I/14(h) of the Convention, the new anniversary date is \_\_\_\_\_



Signed: \_\_\_\_\_  
(Signature of authorized official)

Place: \_\_\_\_\_

Date: \_\_\_\_\_

Note:

7. Delete as appropriate

# RECORD OF EQUIPMENT FOR THE CARGO SHIP SAFETY EQUIPMENT CERTIFICATE

(Form E)



*This record shall be permanently attached to the  
Cargo Ship Safety Equipment Certificate*

## RECORD OF EQUIPMENT FOR COMPLIANCE WITH THE

## INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974, as modified by the protocol of 1988 relating thereto

### 1. Particulars of Ship

Name of Ship	Distinctive Number or Letters
GLOMAR EXPLORER	547527

### 2. Details of life-saving appliances:

1. Total number of persons for which life-saving appliances are provided:--	140	
	Port Side	Starboard Side
2. Total number of lifeboats:-----	2	2
2.1 Total number of persons accommodated by them:-----	140	140
2.2 Number of self-righting partially enclosed lifeboats (regulation III/43):-----	-----	-----
2.3 Number of totally enclosed lifeboats (regulation III/44):-----	2	2
2.4 Number of lifeboats with a self-contained air support system (regulation III/45):-----	2	2
2.5 Number of fire-protected lifeboats(regulation III/46):-----	2	2
2.6 Other lifeboats:-----		
2.6.1 Number :-----	-----	-----
2.6.2 Type:-----	-----	-----
2.7 Number of free-fall lifeboats:-----		
2.7.1 Totally enclosed (regulation III/44):-----	-----	-----
2.7.2 Self-contained (regulation III/45):-----	-----	-----
2.7.3 Fire-protected (regulation III/46):-----	-----	-----

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number.

The Coast Guard estimates that the average burden for this report is 5 minutes. You may submit any comments concerning the accuracy of this burden estimate or any suggestions for reducing the burden to: Commandant (G-MOC), U.S. Coast Guard, Washington, DC 20593-0001 or Office of Management and Budget, Paperwork Reduction Project (2115-0056), Washington DC 20503.

DEPT. OF TRANSP., USCG, CG-3347B (Rev. 02-00)  
PREVIOUS EDITIONS ARE OBSOLETE

Page 1 of 2

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# **RECORD OF EQUIPMENT FOR THE CARGO SHIP SAFETY EQUIPMENT CERTIFICATE**

## **2. Details of life-saving appliances (continued):**

3.	Number of motor lifeboats (included in the total lifeboats shown above):----	4
3.1	Number of lifeboats fitted with searchlights:-----	4
4.	Number of rescue boats:-----	1
4.1	Number of boats which are included in the total lifeboats shown above:-----	1
5.	Liferafts:-----	
5.1	Those for which approved launching appliances are required:-----	
5.1.1	Number of liferafts:-----	-----
5.1.2	Number of persons accommodated by them:-----	-----
5.2	Those for which approved launching appliances are not required:-----	
5.2.1	Number of liferafts:-----	12
5.2.2	Number of persons accommodated by them:-----	300
5.3	Number of liferafts required by regulation III/26.1.4:-----	-----
6.	Number of lifebuoys:-----	12
7.	Number of lifejackets:-----	152
8.	Immersion suits:-----	
8.1	Total number:-----	-----
8.2	Number of suits complying with the requirements for lifejackets:-----	-----
9.	Number of thermal protective aids (note 1):-----	28
10.	Radio installations used in lifesaving appliances:-----	
10.1	Number of radar transponders:-----	2
10.2	Number of two-way VHF radiotelephone apparatus:-----	3

**THIS IS TO CERTIFY** that this Record is correct in all respects.

**Issued at:** MORGAN CITY, LOUISIANA

*Place of issue of the Record*

JULY 31, 2003

*Date of Issue*

*S. P. Garrity*

**S. P. GARRITY, CAPTAIN**

*Officer in Charge, Marine Inspection, U.S. Coast Guard*



**Note:**

1. Excluding those required by regulations III/38.5.1.24 , III/41.8.31 and III/47.2.2.13.

## CARGO SHIP SAFETY RADIO CERTIFICATE United States of America

Issued Under the Provisions of the

International Convention for  
the Safety of Life at Sea, 1974, as amended in 1988

Name of Ship	Distinctive Number or Letters	Port of Registry	Gross Tonnage	Date on Which Keel was Laid (see note below)
GLONAR EXPLORER	547527	Houston TX	27686	1973

The Government of the United States of America certifies:

1. That the above named ship has been surveyed in accordance with the requirements of regulation 1/9 of the Convention;
2. That the survey showed that the ship complies with the requirements of the Convention as regards to radio installations;
3. That the vessel is certified to operate in Sea Areas A1+A2+A3 (regulation IV/2);
4. That the functioning of the radio installations used on life-saving appliances complies with the requirements of the Convention;
5. That the details of the radio equipment installation conform to the accompanying Record of Equipment of Radio Facilities that accompanies this Certificate;
6. That an Exemption Certificate has (has not) been issued.

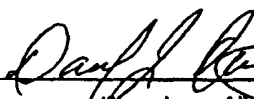
This Certificate will remain in force until: 23 JUNE 2004

Issued at: LEEVILLE CA

(Place of issue of certificate)

23 JUNE 2003

(Date of Issue)



(Signature of licensed inspector)

DARREL J. OWENS DB-GB-064026

(Typed or Printed Name of licensed inspector)

(FCC license number of issuing inspector)

Note: It will be sufficient to indicate the year in which the keel was laid except for 1952, 1965, 1980, 1992, and 1995 in which cases the actual date should be given.

**RECORD OF EQUIPMENT OF RADIO FACILITIES FOR  
COMPLIANCE WITH THE INTERNATIONAL CONVENTION FOR THE  
SAFETY OF LIFE AT SEA, 1974, AS AMENDED IN 1988**

**1. Particulars of ship**

Name of Ship GLOMAR EXPLORER Call Sign WEX 5333  
Official Number 547527 Port of Registry HOUSTON TX  
Minimum number of persons with required qualifications to operate the radio installations 2

**2. Details of radio facilities**

Item	Actual Provision
1 Primary Systems	
1.1 VHF radio installation	
1.1.1 DSC encoder	<u>PROVIDED</u>
1.1.2 DSC watch receiver	<u>PROVIDED</u>
1.1.3 Radiotelephony	<u>PROVIDED</u>
1.2 MF radio installation	<u>—</u>
1.2.1 DSC encoder	<u>—</u>
1.2.2 DSC watch receiver	<u>—</u>
1.2.3 Radiotelephony	<u>—</u>
1.3 MF/HF radio installation	
1.3.1 DSC encoder	<u>PROVIDED</u>
1.3.2 DSC watch receiver	<u>PROVIDED</u>
1.3.3 Radiotelephony	<u>PROVIDED</u>
1.3.4 Direct printing radiotelegraphy	<u>PROVIDED</u>
1.4 INMARSAT ship earth station	<u>PROVIDED</u>
2 Secondary means of alerting	<u>PROVIDED</u>
3 Facilities for reception of maritime safety information	
3.1 NAVTEX receiver	<u>PROVIDED</u>
3.2 EGC receiver	<u>PROVIDED</u>
3.3 HF direct printing radiotelegraph receiver	<u>PROVIDED</u>
4 Satellite EPIRB	
4.1 COSPAS-SARSAT	<u>PROVIDED</u>
4.2 INMARSAT	<u>—</u>
5 VHF EPIRB	<u>—</u>
6 Ship's radar transponder	<u>PROVIDED</u>
7 Radiotelephone distress frequency watch receiver on 2182 kHz	<u>—</u>
8 Device for generating the radiotelephone alarm signal on 2182 kHz	<u>PROVIDED</u>

**3. Methods used to ensure availability of radio facilities (regulations IV/15.6 and 15.7)  
(at least one required for sea areas A1 and A2, at least two for A3 and A4)**

Item	Actual Provision
3.1 Duplication of equipment .....	<u>PROVIDED</u>
3.2 Shore-based maintenance .....	<u>PROVIDED</u>
3.3 At-sea maintenance capability .....	

**4. Ships constructed before 1 February 1995 which do not comply with all the applicable requirements of Chapter IV of the convention as amended in 1988**

4.1 For ships required to be fitted with radiotelegraphy in accordance with the Convention in force prior to 1 February 1992.

Item	Requirements of regulations	Actual Provision
Hours of listening by operator .....	<u>N/A</u>	
Number of operators .....		
Whether auto alarm fitted .....		
Whether main installation fitted .....		
Whether reserve installation fitted .....		
Whether main and reserve transmitters electrically separated or combined .....		

4.2 For ships required to be fitted with radiotelephony in accordance with the Convention in force prior to 1 February 1992.

Item	Requirements of regulations	Actual Provision
Hours of listening by operator .....	<u>N/A</u>	
Number of operators .....		

THIS IS TO CERTIFY that this record is correct in all respects

Issued at LEEVILLE LA  
(Place of issue of the Record)

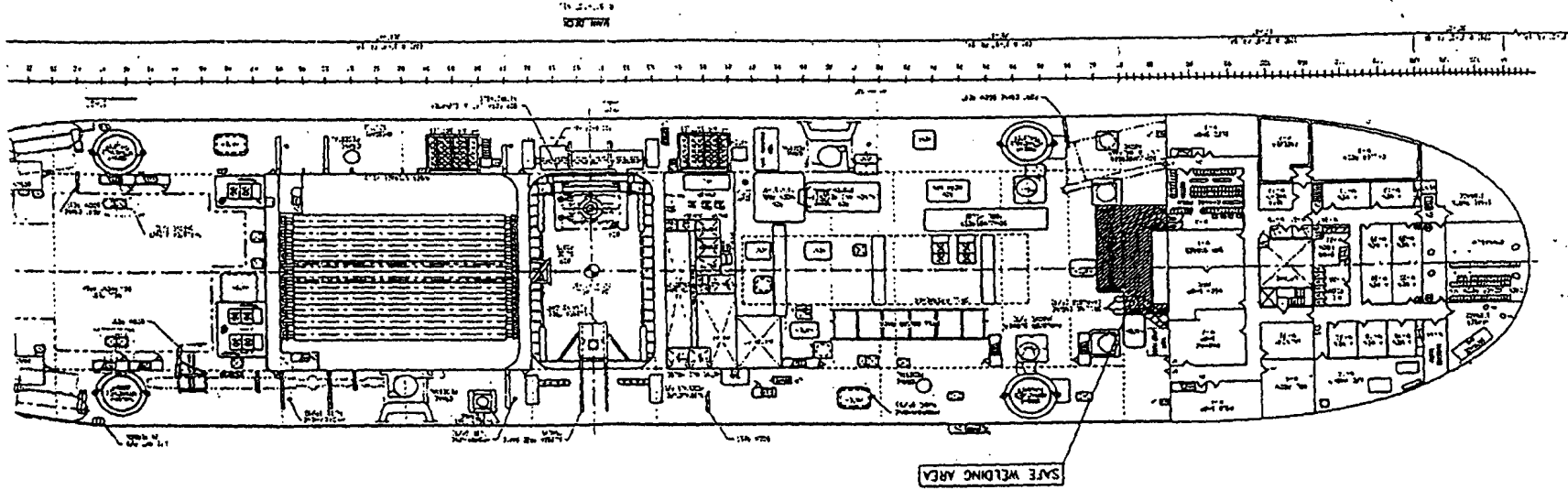
6/23/2003  
(Date of issue)

[Signature]  
(Signature of inspector)

DB-GB-064020  
(FCC license number of Issuing inspector)

THE DESIGNATED SAFE  
WELDING AREA SHALL BE  
CLEARLY MARKED AND  
IDENTIFIED ON THE MAP

THE DESIGNATED SAFE  
WELDING AREA SHALL BE  
CLEARLY MARKED AND  
IDENTIFIED ON THE MAP



Approved subject to field inspection  
LARS T. HERBST  
District Supervisor  
New Orleans District  
Date: 4/20/98

# AMERICAN BUREAU OF SHIPPING



CHARTERED  
1862

NUMBER  
7310452

## CERTIFICATE OF CLASSIFICATION

GLOMAR EXPLORER

of HOUSTON, TX, UNITED STATES OF AMERICA  
*Description* DRILLING VESSEL  
*Dimensions, Length* 577.04' *Breadth* 115.71' *Depth* 50.83'  
*Tonnage, Gross* 27686 *Net* 8305.1  
*Owner* U.S. D.O.T., MARITIME ADMINISTRATION  
*Shipbuilder* SUN SHIPBUILDING & DRYDOCK CO.  
*Engine Builder* NORDBERG MANUFACTURING CO.  
*Year of Build* 1973 *Hull Number* 661

*This is to Certify that the above has been surveyed in accordance with the Rules of this Bureau and entered in the Record with the Class*

☒ A1, Drilling Vessel, ☒ AMS, DPS - 2

08 September 2003

Issue Date

*Wes E. Kamm*

Chief Surveyor/Director  
of Classification

31 July 2007

Expiration Date

*M. C. Adams*

Assistant Secretary

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of American Bureau of Shipping and is issued solely for the use of the Bureau, its committees, its clients or other authorized entities. The classification certificate is a representation only that the vessel, structure, item of material, equipment or machinery or any other item covered by this certificate has met one or more of the Rules of American Bureau of Shipping. The certificate is governed by the terms and conditions on the reverse side hereof, and governed by the Rules and standards of American Bureau of Shipping who shall remain the sole judge thereof.

AMERICAN BANK NOTE COMPANY.

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## TERMS AND CONDITIONS

1. The issuance and interpretation of the class certificate is subject to the terms and conditions of the "Request for Classification and Agreement" (hereinafter "the Agreement") which are hereby incorporated by reference.

### 2. REPRESENTATIONS AS TO CLASSIFICATION

Classification is a representation by ABS as to the structural and mechanical fitness for a particular use or service in accordance with its Rules and standards. The Rules of American Bureau of Shipping are not meant as a substitute for the independent judgment of professional designers, naval architects and marine engineers nor as a substitute for the quality control procedures of shipbuilders, engine builders, steel makers, suppliers, manufacturers and sellers of marine vessels, materials, machinery or equipment. ABS being a technical society can only act through Surveyors or others who are believed by it to be skilled and competent.

ABS represents solely to the vessel Owner or other client (hereinafter "Client") of ABS that when assigning class it will use due diligence in the development of Rules, Guides and standards and in using normally applied testing standards, procedures and techniques as called for by the Rules, Guides, standards or other criteria of ABS for the purpose of assigning and maintaining class. ABS further represents to the Client of ABS that its certificates and reports evidence compliance only with one or more of the Rules, Guides, standards or other criteria of ABS in accordance with the terms of such certificate or report. Under no circumstances whatsoever are these representations to be deemed to relate to any third party.

### 3. RESPONSIBILITY AND LIABILITY

It is understood and agreed that the class certificate (hereinafter referred to as "certificate") issued as part of the services rendered under the Agreement is a representation only that the vessel, structure, item of material, equipment or machinery or any other item covered by a certificate has met one or more of the Rules or standards of American Bureau of Shipping and issued solely for the use of ABS, its committees, clients or other authorized entities. The validity, applicability and interpretation of a certificate issued under the terms of or in contemplation of the Agreement is governed by the Rules and standards of American Bureau of Shipping who shall remain the sole judge thereof. Nothing contained in this certificate or in any report issued in contemplation of this certificate shall be deemed to relieve any designer, builder, owner, manufacturer, seller, supplier, repairer, operator or other entity of any warranty express or implied nor to create any interest, right, claim or benefit in any third party. It is understood and agreed that nothing expressed herein is intended or shall be construed to give any person, firm or corporation, other than the parties hereto, any right, remedy or claim hereunder or under any provisions herein contained; all provisions hereof are for the sole and exclusive benefit of the parties hereto.

### 4. SUSPENSION AND CANCELLATION OF CLASS

The continuance of the Classification of any vessel is conditional upon the Rule requirements for periodical, damage and other surveys being duly carried out. The Committee reserves the right to reconsider, withhold, suspend, or cancel the class of any vessel or any part of the machinery for noncompliance with the Rules for defects reported by the Surveyors which have not been rectified in accordance with their recommendations, or for nonpayment of fees which are due on account of Classification, Statutory and Cargo Gear Surveys. Suspension or cancellation of class may take effect immediately or after a specified period of time.

### 5. LIMITATION

ABS makes no representations beyond those contained herein and in the provisions of the request for classification regarding its reports, statements, plan review, surveys, certificates or other services.

### 6. HOLD HARMLESS

THE PARTY TO WHOM THIS CERTIFICATE IS ISSUED, OR HIS ASSIGNEE OR SUCCESSOR IN INTEREST, AGREES TO RELEASE ABS AND TO INDEMNIFY AND HOLD HARMLESS ABS FROM AND AGAINST ANY AND ALL CLAIMS, DEMANDS, LAWSUITS, OR ACTIONS FOR DAMAGES, INCLUDING LEGAL FEES, TO PERSONS OR OTHER LEGAL ENTITIES AND/OR PROPERTY, TANGIBLE, INTANGIBLE OR OTHERWISE WHICH MAY BE BROUGHT AGAINST ABS INCIDENTAL TO, ARISING OUT OF OR IN CONNECTION WITH THE WORK DONE, SERVICES PERFORMED OR MATERIAL TO BE FURNISHED UNDER THIS CERTIFICATE, EXCEPT FOR THOSE CLAIMS CAUSED SOLELY AND COMPLETELY BY THE NEGLIGENCE OF ABS, ITS AGENTS, EMPLOYEES, OFFICERS, DIRECTORS OR SUBCONTRACTORS.

ANY OTHER INDIVIDUAL OR PARTY WHO CLAIMS A RIGHT HEREUNDER OR WHO CLAIMS TO BE A BENEFICIARY OF ANY PORTION OF THE SERVICES RENDERED IN CONTEMPLATION OF THIS CERTIFICATE SHALL INDEMNIFY AND HOLD ABS HARMLESS FROM AND AGAINST ALL CLAIMS, DEMANDS, LAWSUITS OR ACTIONS FOR DAMAGES, INCLUDING LEGAL FEES, TO PERSONS AND/OR PROPERTY, TANGIBLE, INTANGIBLE OR OTHERWISE WHICH MAY BE BROUGHT AGAINST ABS BY ANY PERSON OR ENTITY AS A RESULT OF THE SERVICES PERFORMED IN CONTEMPLATION OF THIS CERTIFICATE, EXCEPT FOR THOSE CLAIMS CAUSED SOLELY AND COMPLETELY BY THE NEGLIGENCE OF ABS, ITS AGENTS, EMPLOYEES, OFFICERS, DIRECTORS, OR SUBCONTRACTORS.

### 7. LIMITATION OF LIABILITY

THE COMBINED LIABILITY OF AMERICAN BUREAU OF SHIPPING, ITS COMMITTEES, OFFICERS, EMPLOYEES, AGENTS OR SUBCONTRACTORS FOR ANY LOSS, CLAIM OR DAMAGE ARISING FROM ITS NEGLIGENT PERFORMANCE OR NONPERFORMANCE OF ANY OF ITS SERVICES OR FROM BREACH OF ANY IMPLIED OR EXPRESS WARRANTY OF WORKMANLIKE PERFORMANCE IN CONNECTION WITH THOSE SERVICES, OR FROM ANY OTHER REASON, TO ANY PERSON, CORPORATION, PARTNERSHIP, BUSINESS ENTITY, SOVEREIGN, COUNTRY OR NATION, WILL BE LIMITED TO THE GREATER OF A) \$100,000 OR B) AN AMOUNT EQUAL TO TEN TIMES THE SUM ACTUALLY PAID FOR SERVICES ALLEGED TO BE DEFICIENT.

THE LIMITATION OF LIABILITY MAY BE INCREASED UP TO AN AMOUNT TWENTY-FIVE TIMES THAT SUM PAID FOR SERVICES UPON RECEIPT OF CLIENT'S WRITTEN REQUEST AT OR BEFORE THE TIME OF PERFORMANCE OF SERVICES AND UPON PAYMENT BY CLIENT OF AN ADDITIONAL FEE OF \$10.00 FOR EVERY \$1,000.00 INCREASE IN THE LIMITATION.

### 8. ARBITRATION

Any and all differences and disputes of whatsoever nature arising out of this certificate shall be put to arbitration before a board of three persons. One member of the arbitrator to be appointed by ABS, one by Client and one by the two so chosen. The decision of any two of the three or any one of them shall be final, until such time as the arbitrators finally close the hearings either party shall have the right by written notice served on the arbitrators and on an officer of the other party to specify further disputes or differences under this certificate for hearing and determination. The arbitrators shall grant any relief other than punitive damages which they or a majority of them deem just and equitable and within the scope of the agreement of the parties, including, but not limited to specific performance. Awards made in pursuance to this clause may include costs including a reasonable attorney's fee and judgment may be entered upon any award made hereunder in any court having jurisdiction. ABS and Client hereby irrevocably waive any and all claims to punitive damages in any forum.

Client and its officers shall be required to notify ABS within thirty (30) days of the commencement of any arbitration between it and third parties which may affect ABS's reputation or involve with its certificate and shall afford ABS an opportunity, at ABS's sole option, to participate in the arbitration.

ANNUAL SURVEY ENDORSEMENT

Place \_\_\_\_\_

Date \_\_\_\_\_

\_\_\_\_\_  
(Signature)

Surveyor to the American Bureau of Shipping

Place \_\_\_\_\_

Date \_\_\_\_\_

\_\_\_\_\_  
(Signature)

Surveyor to the American Bureau of Shipping

Place \_\_\_\_\_

Date \_\_\_\_\_

\_\_\_\_\_  
(Signature)

Surveyor to the American Bureau of Shipping

Place \_\_\_\_\_

Date \_\_\_\_\_

\_\_\_\_\_  
(Signature)

Surveyor to the American Bureau of Shipping

EXTENSION OF CLASS CERTIFICATE  
THIS CLASSIFICATION CERTIFICATE IS EXTENDED UNTIL

\_\_\_\_\_  
Date

Place \_\_\_\_\_

Date \_\_\_\_\_

\_\_\_\_\_  
(Signature)

Surveyor to the American Bureau of Shipping

Please note that the classification of this vessel is automatically suspended and the certificate automatically becomes invalid,  
if not endorsed annually within three months of due date of the annual survey.

THIS CERTIFICATE IS NOT A CONFIRMATION OF CLASS





UNITED STATES OF AMERICA  
DEPARTMENT OF TRANSPORTATION  
UNITED STATES COAST GUARD

CERTIFICATION DATE: 24 JUL 00

EXPIRATION DATE: 24 JUL 05

IMO NUMBER: 7233292

# Certificate of Inspection

VESSEL NAME GLOMAR EXPLORER	OFFICIAL NUMBER D547527	CALL SIGN WCX5333	SERVICE MODU		
HOME PORT NATL VESSEL DOC CTR	HULL MATERIAL STEEL	HORSEPOWER 13500	PROPULSION DIESEL ELECTRIC		
PLACE BUILT CHESTER PA	DATE BUILT 21 JUN 73	GROSS TONS 27686	NET TONS 8305	DWT 35264	LENGTH 577.50
OWNER U S DEPT DEFENSE DEPT OF NAVY NAVAL SEA SYSTEMS COMMAND WASHINGTON, DC 20362		OPERATOR GLOBAL MARINE DRILLING CO 777 N ELDRIDGE PKWY HOUSTON, TX 77079			

THIS VESSEL MUST BE MANNED WITH THE FOLLOWING LICENSED AND UNLICENSED PERSONNEL, INCLUDED IN WHICH THERE MUST BE 8 CERTIFICATED LIFEBOATMEN AND 0 CERTIFICATED TANKERMAN.

<u>1</u> MASTER	<u>0</u> MASTER & 1ST CLASS PILOT	<u>4</u> ABLE SEAMEN	<u>1</u> CHIEF ENGINEER	<u>0</u> FIREMEN-WATERTENDERS
<u>1</u> CHIEFMATE	<u>0</u> CLASS PILOT	<u>2</u> ORDINARY SEAMEN	<u>0</u> 1ST ASST. ENGINEER	<u>3</u> OILERS
<u>1</u> 2ND MATE	<u>0</u> RADIO OFFICER(S)	<u>0</u> DECKHANDS	<u>0</u> 2ND ASST. ENGINEER	<u>0</u>
<u>1</u> 3RD MATE	<u>0</u> OPERATOR(S)	<u>0</u>	<u>3</u> ASST ENGRS.	<u>0</u>

IN ADDITION, THIS VESSEL MAY CARRY 0 PASSENGERS, 9 OTHER PERSONS IN CREW, 0 PERSONS IN ADDITION TO CREW, AND 114 INDUSTRIAL PERSONS. TOTAL PERSONS ALLOWED: 140

ROUTE PERMITTED AND CONDITIONS OF OPERATION:

\*\*\*OCEANS\*\*\*

CONDITION I- WHEN VESSEL IS UNDERWAY ON A VOYAGE OF MORE THAN 16 BUT LESS THAN 72 HOURS DURATION:

ONE (1) MASTER (WITH OIM ENDORSEMENT)  
TWO (2) MATES  
FOUR (4) ABLE SEAMEN

ONE (1) CHIEF ENGINEER  
TWO (2) ASST. ENGINEERS  
THREE (3) OILERS  
TWO (2) ORDINARY SEAMEN

CONDITION II- WHEN VESSEL IS UNDERWAY ON A VOYAGE OF LESS THAN 16 HOURS DURATION:

ONE (1) MASTER (WITH OIM ENDORSEMENT)  
ONE (1) MATE  
FOUR (4) ABLE SEAMEN

ONE (1) CHIEF ENGINEER  
ONE (1) ASST. ENGINEER  
TWO (2) OILERS  
ONE (1) ORDINARY SEAMEN

\*\*\* SEE NEXT PAGE FOR ADDITIONAL CERTIFICATE INFORMATION \*\*\*

WITH THIS INSPECTION HAVING BEEN COMPLETED AT GULF OF MEXICO WR456 ON 24 JUL 00, THIS VESSEL IS CERTIFIED BY THE OFFICER IN CHARGE, MARINE INSPECTION, MORGAN CITY, LOUISIANA, TO BE IN ALL RESPECTS IN CONFORMITY WITH THE APPLICABLE VESSEL INSPECTION LAWS AND THE RULES AND REGULATIONS PRESCRIBED THEREUNDER.

PERIODIC REINSPECTIONS			THIS CERTIFICATE ISSUED BY:  D. F. RYAN, II, CAPTAIN, USCG OFFICER IN CHARGE, MARINE INSPECTION MORGAN CITY, LOUISIANA INSPECTION ZONE
DATE	ZONE	SIGNATURE	



# Certificate of Inspection

GLOMAR EXPLORER

PAGE 2

CERTIFICATION DATE: 24JUL00

--- ROUTE PERMITTED AND CONDITIONS OF OPERATION, CONTINUED ---

CONDITION III- WHEN VESSEL IS ON LOCATION:

ONE (1) MASTER (WITH OIM ENDORSEMENT)	ONE (1) CHIEF ENGINEER
ONE (1) MATE	ONE (1) ASSISTANT ENGINEER
TWO (2) ABLE SEAMEN	TWO (2) OILERS
	ONE (1) ORDINARY SEAMAN

AFT CONTROL HOUSE MUST BE CONTINUOUSLY MANNED WHEN ON LOCATION.

TWO (2) DYNAMIC POSITIONING SYSTEM OPERATORS MUST BE DESIGNATED IN WRITING BY MASTER.

THIS VESSEL IS EQUIPPED WITH GMDSS AND SHALL BE PROVIDED WITH A MINIMUM OF TWO PERSONS WHO POSSESS CERTIFICATES ISSUED TO THEM FROM THE FEDERAL COMMUNICATIONS COMMISSION ATTESTING TO THEIR QUALIFICATION IN THE OPERATION OF GMDSS, AND IF THE AT-SEA MAINTENANCE METHOD IS CHOSEN, AT LEAST ONE PERSON POSSESSING A CERTIFICATE ISSUED TO THEM FROM THE FEDERAL COMMUNICATIONS COMMISSION ATTESTING TO THEIR QUALIFICATION IN THE MAINTAINING OF GMDSS.

WHEN VESSEL IS OPERATING IN LATITUDES NORTH OF 32 DEGREES NORTH OR SOUTH OF 32 DEGREES SOUTH, IMMERSION SUITS SHALL BE PROVIDED.

IN ORDER TO ENSURE THE SAFETY OF CREW FROM MIGRATION OF CO2 IF ACCIDENTALLY DISCHARGED FROM THE FIXED FIRE FIGHTING SYSTEM, VESSEL'S MANUAL WATERTIGHT DOORS SERVING EMD ROOM, SCR ROOM, AND NORDBERG ROOM ARE TO BE KEPT CLOSED AT ALL TIMES EXCEPT WHEN PERSONNEL ARE IN TRANSIT BETWEEN SPACES.

--- ITC TONNAGES ---

GROSS/ 27686 NET/ 8305

--- HULL EXAMS ---

-EXAM TYPE-	-NEXT EXAM-	-LAST EXAM-	-PRIOR EXAM-
DRYDOCK	30JUN02	29JUN00	30JUN97
INTERNAL STRUCTURAL	30JUN02	29JUN00	30JUN97

--- STABILITY ---

LETTER APPROVAL DATE/ 01MAY98 OFFICE/ ABS

--- INSPECTION STATUS ---

\*FUEL TANKS\*

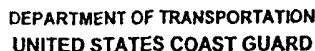
-TANK IDENTIFICATION-  
ALL FUEL OIL/DIESEL TANKS

-DATE EXAMINED-  
06FEB97

\*PRESSURE VESSELS\*

TYPE	LOCATION	LAST	NEXT
INDUST SYSTM	STBD FWD MAIN D	04AUG98	04AUG03
AIR RECEIVER	STBD ENGINE ROOM	30JUN97	30JUN02

\*\*\* SEE NEXT PAGE PLEASE \*\*\*



## GLOMAR EXPLORER

PAGE 3

CERTIFICATION DATE: 24JUL00

**\*PRESSURE VESSELS\***

[illegible]

DEPT. OF TRANSP., USCG, CG-841 (Rev 3-85) (v12)

\*\*\* SEE NEXT PAGE PLEASE \*\*\*

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## GLOMAR EXPLORER

PAGE 4

CERTIFICATION DATE: 24JUL00

**\*PRESSURE VESSELS\***

[illegible]

\*TAILSHAFT(S)\*

TAILSHAFT ID  
PORT  
STARBOARD

DATE DRAWN  
29JUN00  
29JUN00

NEXT DUE DATE  
29JUN05  
29JUN05

DEPT. OF TRANSP., USCG, CO-841 (Rev 3-85) (v12)

\*\*\* SEE NEXT PAGE PLEASE \*\*\*

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DEPARTMENT OF TRANSPORTATION  
UNITED STATES COAST GUARD

# Certificate of Inspection

GLOMAR EXPLORER

PAGE 5

CERTIFICATION DATE: 24JUL00

LIFEBOAT/RAFT IDENTIFICATION	SERVICED/ REFURBISHED	*LIFESAVING*		FALLS RENEWED	FALLS END/END
		WEIGHT TEST			
L/B FWD STBD	01JUL00	16JAN00		23MAY97	
L/B FWD PORT	01JUL00	21JAN00		23MAY97	
L/B AFT STBD	01JUL00	22JAN00		23MAY97	
L/B AFT PORT	01JUL00	23JAN00		23MAY97	
L/R #1, 2, 3, 4, 9	01JUN00				
L/R #11, 12	01JUN00				
L/R #5, 6, 7, 8, 10	01JUL00				

--- LIFESAVING EQUIPMENT ---  
NUMBER PERSONS

				REQUIRED	
TOTAL EQUIPMENT FOR		140	LIFE PRESERVERS (ADULT) ...	152	
LIFEBOATS (TOTAL) .....	4	280	LIFE PRESERVERS (CHILD) ...		
LIFEBOATS (PORT) * .....	2	140	RING BUOYS (TOTAL) .....	8	
LIFEBOATS (STARBD) * .....	2	140	WITH LIGHTS * .....	4	
MOTOR LIFEBOATS * .....	4	280	WITH LINE ATTACHED * .....	2	
LIFEBOATS W/RADIO * .....	4		OTHER * .....	2	
RESCUE BOATS/PLATFORMS.	1		IMMERSION SUITS .....		
INFLATABLE RAFTS .....	12	300	PORTABLE LIFEBOAT RADIOS.		
LIFE FLOATS/BUOYANT APP			EQUIPPED WITH EPIRB? .....	YES	
WORKBOATS (NOT REQUIRED)			(* INCLUDED IN TOTALS)		

--- FIRE FIGHTING EQUIPMENT ---

TOTAL HOSE LENGTH/ 4300    NUMBER OF FIRE AXES/ 9    NUMBER OF FIRE PUMPS/

\*FIXED EXTINGUISHING SYSTEMS\*

SPACE PROTECTED	AGENT	CAPACITY
EMERGENCY GEN.	CO2	300
PROP./EMD ER, NORDBERG SCR RM	CO2	10900
5 THRUSTER CANS (CAP. FOR EA.)	CO2	200
FWD SCR RM.	CO2	700
NORDBERG/EMD GENERATORS (9)	CO2	1275
NORDBERG ENGINE ROOM	CO2	200

\*FIRE EXTINGUISHERS - HAND PORTABLE AND SEMI-PORTABLE\*

23 A-II	B-I	18 B-II	2 B-III
1 B-IV	1 B-V	4 C-I	20 C-II

\*\*\* END \*\*\*

U.S. Department  
of Transportation

United States  
Coast Guard



## CERTIFICATE OF INSPECTION AMENDMENT

MORMS - 858 (Rev 5-99)

NAME OF VESSEL:

Glomar Explorer

OFFICIAL NUMBER:

1547527

CLASS:

MODU

GROSS TONS:

27686

HOME PORT:

National Vessel Doc Center

WHEN AND WHERE BUILT:

21 Jun 73 / Chester PA

DATE CURRENT CERTIFICATE OF INSPECTION EXPIRES:

24 Jul 2005

DATE/PLACE CURRENT CERTIFICATE OF INSPECTION ISSUED:

24 July 2006

THE CERTIFICATE OF INSPECTION ISSUED TO THE VESSEL DESCRIBED ABOVE IS AMENDED AS FOLLOWS:

1. Completed Re inspection AND weight TEST ON LIFEBOAT FAILS.

LIFEBOAT  
FWD STD  
FWD PORT  
AFT STD  
AFT PORT

Weight TEST  
15 Aug 01  
15 Aug 01  
15 Aug 01  
15 Aug 01

Falls Renewed  
01 Feb 01  
01 Feb 01  
01 Feb 01  
01 Feb 01

This/These amendment(s) shall appear on the next Certificate of Inspection that is issued for this vessel. Please attach this form to the current Certificate of Inspection for reference by any concerned party.

DATE OF ISSUE:

20 Aug 2001

INSPECTION ZONE:

MORMS

OFFICER IN CHARGE, MARINE INSPECTION

Chief, Inspection Department

### INSTRUCTIONS

By direction of the Officer in Charge  
Marine Inspection, Morgan City

1. This amendment shall be issued to authorize changes to the conditions or particulars entered on a current, valid Certificate of Inspection form or to the conditions or particulars entered on a current, valid amendment to such Certificate of Inspection. When issued it shall become a part of the Certificate of Inspection which it amends.
2. The original of this amendment shall be delivered to the master or owner of the vessel named herein & must be framed under glass with or near the vessel's Certificate of Inspection. If the Certificate of Inspection is not required to be posted, this amendment must be kept onboard with the Certificate of Inspection & shown on demand.
3. One copy of this amendment shall be filed in the office of the issuing Officer in Charge, Marine Inspection. In addition, one copy shall be distributed to each of the following:
  - a. The Officer in Charge, Marine Inspection who issued the current Certificate of Inspection.
  - b. The owner or agent of the vessel named herein.

MAY 12 '98 05:21 FR

TO 7480

P.01/05



## United States Department of the Interior

### MINERALS MANAGEMENT SERVICE

Gulf of Mexico OCS Region  
New Orleans District  
1201 Elmwood Park Boulevard  
New Orleans, Louisiana 70123-2390

In Reply Refer To: MS 5250

MAY 07 1998

Ms. S. M. Bergeron  
Chevron USA Production Company  
935 Gravier Street  
New Orleans, Louisiana 70112

Dear Ms. Bergeron:

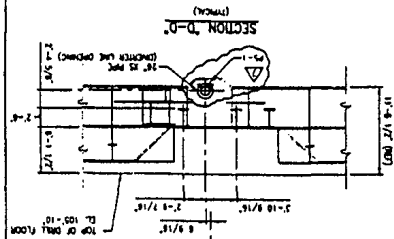
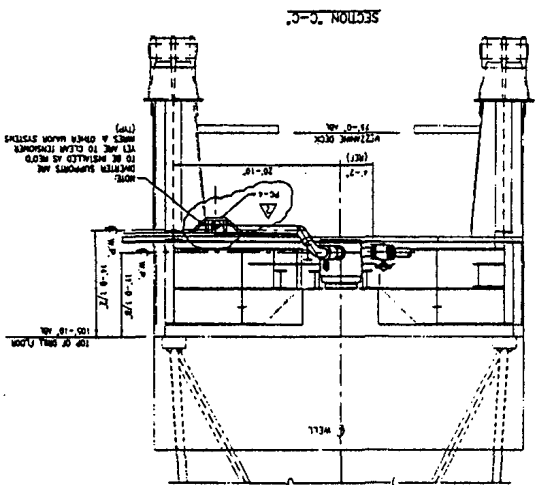
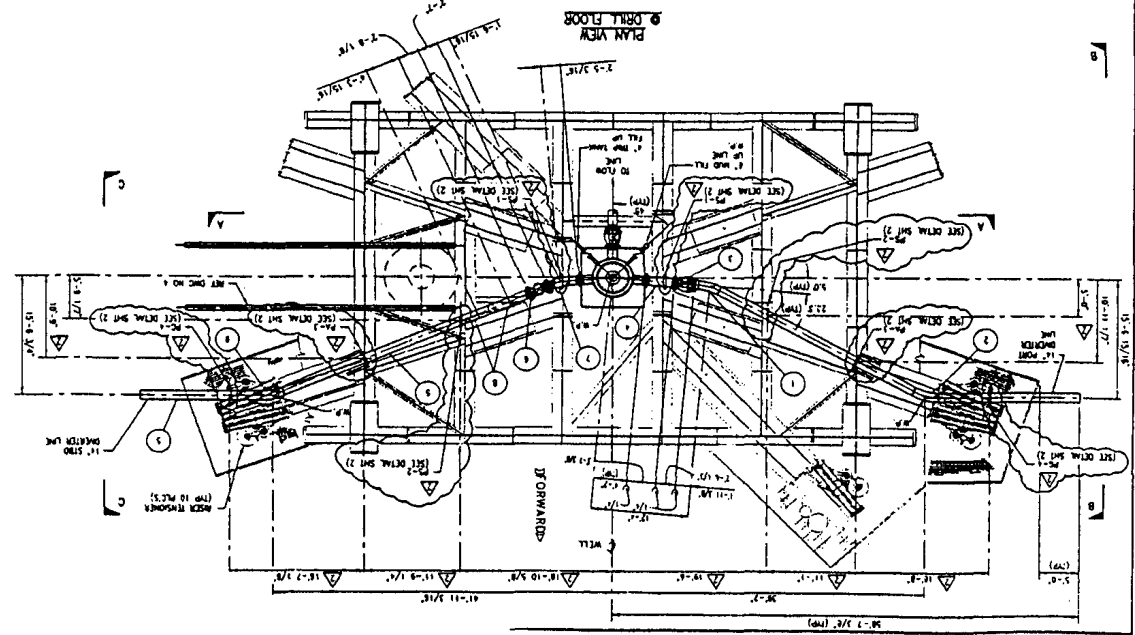
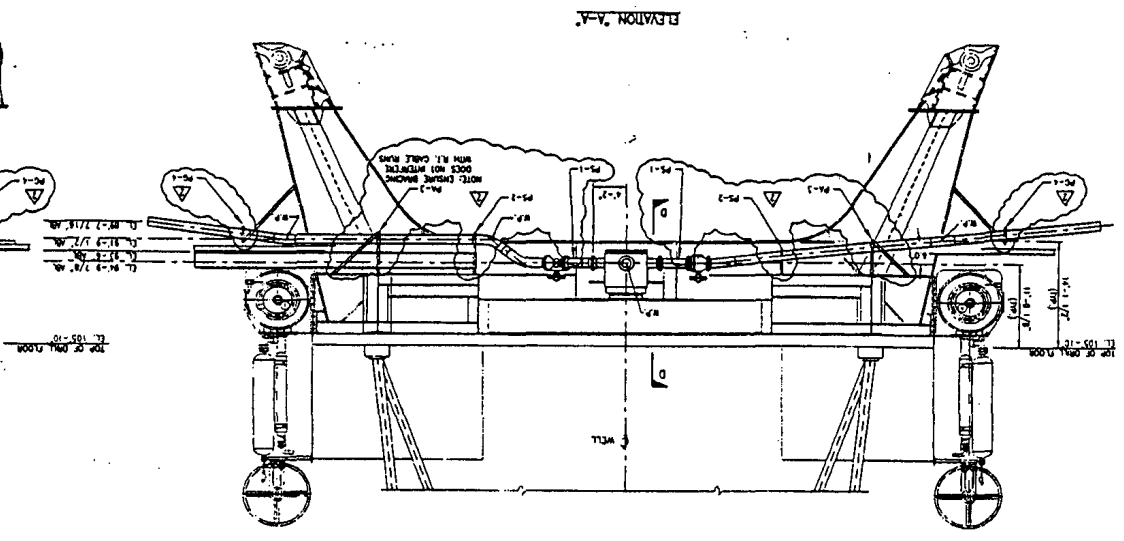
In accordance with the enclosed Letter to Lessees dated January 25, 1995, concerning designated safe welding and burning areas and the provisions of 30 CFR 250.52(c), attached is a copy of the approved drawing outlining the designated safe welding and burning area for Rig "Glomar Explorer" which you are presently using at Lease OCS-G 16647, Well No. 1, Mississippi Canyon Block 772. This drawing, signed and dated by the Minerals Management Service (MMS) District Supervisor, as well as the conditions of approval, shall be maintained on the rig.

If you have any questions concerning this matter, please contact Lynard Carter at (504)736-2854.

Sincerely,

Lars Herbst  
District Supervisor  
New Orleans District

Enclosures

[illegible]

**REFERENCE DRAWINGS**

1. NEW VECO CRAY (480287-1)
2. DUTCHEN SYSTEM MODEL HTCS/CSO
3. C.M.D.C. D-152-S047
4. C.M.D.C. D-152-P008
5. C.M.D.C. D-152-P009
6. C.M.D.C. D-152-S008
7. SGP BRIDGE (Drawn ASPECT & DETAILS)

**GENERAL NOTES**

[illegible]



## II. GENERAL INFORMATION

### A. ExxonMobil Contact Person for the Activity Proposed in this Initial EP

**Bryan L. Chapman** Phone: (281) 654-1941, Fax: (281) 654-1940  
bryan.l.chapman@exxonmobil.com

or

**Roxanne Tack** Phone: (281) 654-1883, Fax: (281) 654-1940  
roxanne.tack@exxonmobil.com

ExxonMobil Production Company  
USP Production  
P.O. Box 4358  
Houston, TX 77210-4358

### B. Project Name

*Bat-Man - Locations "A", "B", and "C"*

### C. New or Unusual Technology

No new or unusual technology will be employed during drilling of the *Bat-Man* Prospect on East Breaks Block 991 and 992.

### D. Bonding Information

Exxon Mobil's \$3,000,000.00 Surety Bond was accepted by the Mineral Management Service Adjudication Group on January 5, 1994.

### E. Onshore Base and Support Vessels

Helicopters and boats will move supplies and personnel to and from the offshore and onshore locations. *Helicopters* will make approximately 45 round trips per month to and from the drilling rig. *Work boats* will make approximately 15 round trips per month, and *crew boats* will make approximately 4 round trips per month. If servicing only this lease in the subject area, helicopters and boats will normally take the most direct route, traffic and weather conditions permitting.

A copy of the **vicinity map** for East Breaks Block 991 and East Breaks Block 992 areas is included.

The air onshore support base for helicopters and the marine onshore support base for the work and crew boats will be **Tesoro Base in Galveston, Texas**. This base is capable of providing the services necessary for the proposed activities. No new facilities or workers will be needed for the proposed activities.

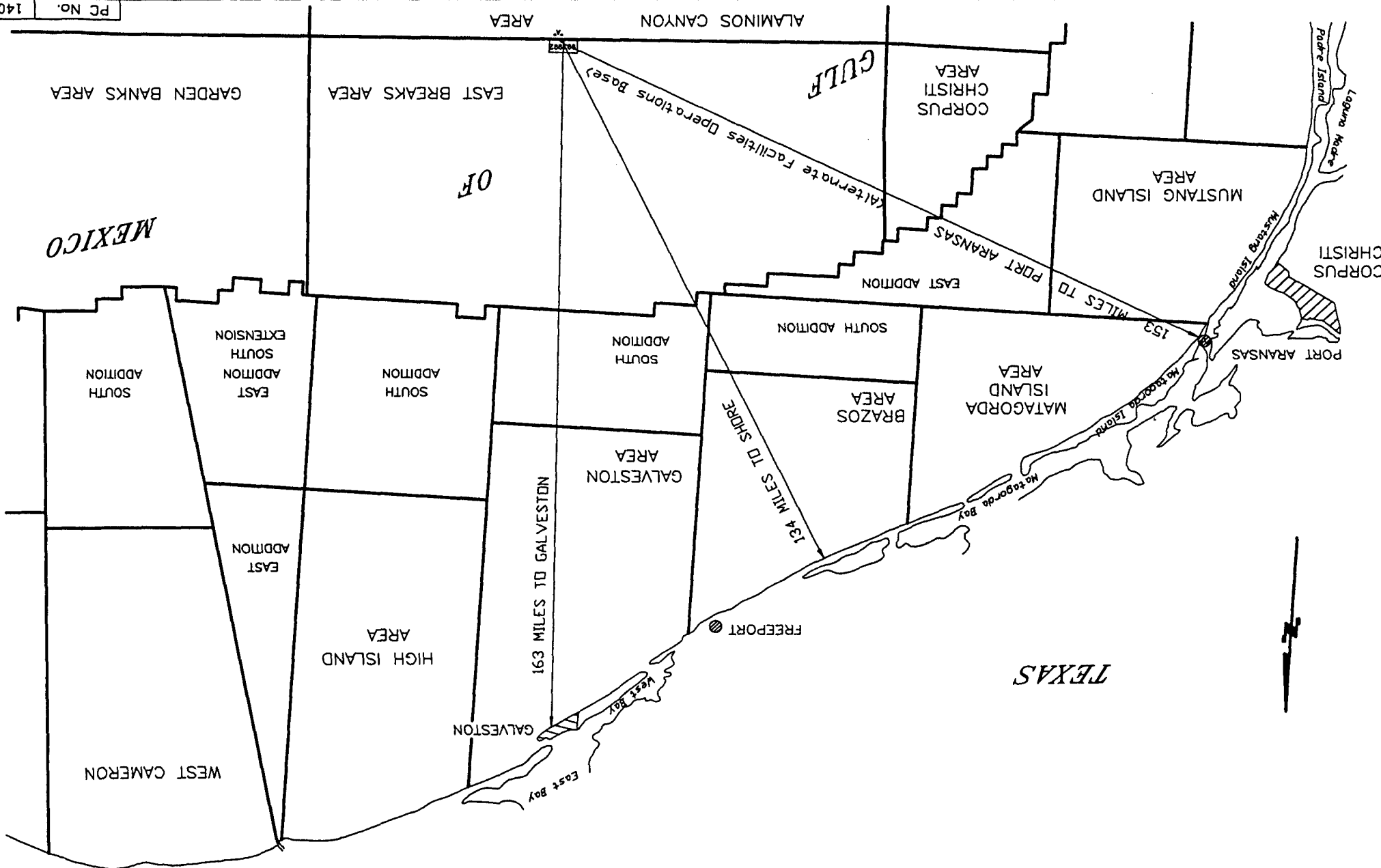
EA-6838

FILE NO.	JOB NO.	DATE	SCALE	REVISED	DRAWN	CHECKED
		9/27/96	1" = 30 MI.	2/02/04	S. LOFAVER	SM

**VICINITY MAP**  
**EAST BREAKS BLOCK 991 and 992 AREA**  
**GULF OF MEXICO**

Exxon Mobil Corporation  
Prepared by:  
U. S. Production Company  
ExxonMobil Production Company  
Houston, TX

PC No. 140-1918



PUBLIC INFORMATION COPY

Initial EXPLORATION PLAN (EP)  
EAST BREAKS BLOCKS 991 AND 992,  
LEASES OCS-G 23256 AND OCS-G 23257

**F. Lease Stipulations**

OCS-G 23256  
OCS-G 23257

East Breaks Block 991  
East Breaks Block 992

Effective December 1, 2001

**Stipulation No. 2 - Military Areas**

**(a) Hold and Save Harmless**

The lessee assumes all risks of damage and injury to persons or property, which occurs in, on or above the Outer Continental Shelf (OCS). The lessee agrees to indemnify and save harmless the United States against all claims.

**(b) Electromagnetic Emissions**

The lessee agrees to control electromagnetic emissions emanating from individual designated defense warning areas, in accordance with requirements specified by the commander of the command headquarters, to the degree necessary to prevent damage to, or unacceptable interference with, Department of Defense flight, testing, or operational activities, conducted within individual designated warning areas.

Necessary monitoring control and coordination will be effected by the commander of appropriate onshore military installation conducting operations in the particular warning area.

**(c) Operational**

The lessee, when operating or causing to be operated on its' behalf, boat, ship, or aircraft traffic into the individual designated warning areas, shall enter into an agreement with the commander of the individual command headquarters upon utilizing an individual designated warning area prior to commencing such traffic. Such an agreement will provide for positive control of boats, ships and aircraft operating into the warning areas at all times.

W-147 147<sup>th</sup> Fighter Wing  
147 OSF/CC  
14657 Sneider Street  
Houston, Texas 77034-5586  
Telephone: (281) 929-2716/2683

W-602 Headquarters ACC/DOR, Detachment 1  
Operations Headquarters, Air Combat Command  
Offutt AFB, Nebraska, 68113-5550  
Telephone: (402) 294-2334

**III. GEOLOGICAL, GEOPHYSICAL, AND H2S INFORMATION**

**A. Geological and Geophysical Data**

**Structure Contour Map**

**ExxonMobil considers this data to be Proprietary.**

III. GEOLOGICAL, GEOPHYSICAL, AND H2S INFORMATION

Interpreted 2-D and/or 3-D Seismic Lines

ExxonMobil considers this data to be proprietary.

III. GEOLOGICAL, GEOPHYSICAL, AND H2S INFORMATION

Geological Structure Cross-Section

ExxonMobil considers this data to be proprietary.

III. GEOLOGICAL, GEOPHYSICAL, AND H2S INFORMATION

Shallow Hazards Report

ExxonMobil considers this data to be proprietary.

Shallow Hazards Assessment

Attached are shallow hazard reports for the well locations EB-991 and EB-992.

III. GEOLOGICAL, GEOPHYSICAL, AND H2S INFORMATION

Stratigraphic Column

ExxonMobil considers this data to be proprietary.



III. GEOLOGICAL, GEOPHYSICAL, AND H2S INFORMATION

Time Vs. Depth Tables

ExxonMobil considers this data to be proprietary.

### III. GEOLOGICAL, GEOPHYSICAL, AND H2S INFORMATION

#### Geological and Geophysical Survey Results and Shallow Hazards Reports

All anticipated geophysical and geotechnical work preparatory to initiation of exploratory drilling operations has been completed. The following proposed surface locations have been reviewed for potential shallow and intermediate depth drilling hazards:

Lease Block	Surface Location	Lease Line Calls	UTM 16 Grid Coordinates	Water Depth (feet)
EB 991	A	6955' FSL & 844' FEL	X=1060436 Y=9796084	4828
EB 992	B	476' FSL & 993' FWL	X=1062272 Y=9789609	4864
EB 992	C	658' FSL & 12258' FEL	X=1064865 Y=9789785	4862

The database for this shallow hazards report includes geophysical site-survey data, 3D seismic, seabed piston cores and offset well information. The geophysical site survey, conducted in December 1994 by Kinsella, Cook & Associates, Inc., covers all or portions of East Breaks Blocks 947, 948, 991, 992, 993 and Alaminos Canyon Blocks 23 and 24. The geophysical instruments included an echosounder, subbottom profiler and a single channel seismic profiling seismic system. Neurauter & Associates was contracted to interpret these data and compile a geohazards report\*. [\*A High Resolution Geophysical Report; Rockefeller Prospect East Breaks Blocks 991 and 992 & Alaminos Canyon Block 24 (OCS-G-10324, G-10325 & G-10379); for Exxon Exploration Company; by Thomas W. Neurauter, Ph.D., March 1995] That report was submitted to the MMS August, 1995 in support of an Exploration Plan for the Exxon OCS-G-10325 #1 well (Rockefeller Prospect EB 992-1). The 3D seismic data set was specially reprocessed as a resolute (2ms processing sample rate) short-offset 3-fold cube with a CDP interval of 41.0ft (12.5m) and an interpolated inline spacing of 65.6ft (20.0m). For this study the 3D short-offset cube covers portions of East Breaks Blocks 991, 992 and Alaminos Canyon Blocks 23, 24. Five piston cores, with soil sample recoveries ranging from 14.4-15.1ft (4.4-4.6m), were acquired at various locations within the study area in order to identify seafloor hydrocarbon seeps and to assess foundation/anchor-holding conditions. All the before mentioned data were used in support of Exploration Plans for the Exxon OCS-G-10325 #1 (Rockefeller Prospect EB 992-1) and the Exxon OCS-G-10379 #1 (Madison Prospect AC 24-1). Information from these two wells were included in preparing this Exploration Plan.

Water depths across the study area range from 4730 feet in the northeastern corner of East Breaks Block 992 to about 4930 feet in the northeast corner of Alaminos Canyon Block 23. The seafloor morphology of the survey area includes a southwestern dipping slope in the northeast that merges into a nearly flat and featureless central bench area. Small re-entrant valleys form the northern margin of the bench area and the southern margin is interrupted by two northeast-southwest trending en echelon fault escarpments. The two northwest facing escarpments have maximum local seafloor relief of ~55ft. South of the escarpments the seafloor gently dips south to southeast.

**Initial EXPLORATION PLAN (EP)  
EAST BREAKS BLOCKS 991 AND 992,  
LEASES OCS-G 23256 AND OCS-G 23257**

Other noteworthy features include:

- ✧ Seafloor gradient in the area varies from 1.1 degrees in the northeast corner to less than 0.3 degrees in the southeast corner.
- ✧ The re-entrant valleys themselves are not erosional features but instead reflect the relief of underlying mass-transport deposits that are covered by a 250 to 300ft thick drape of hemi-pelagic clay. This clay drape implies a seafloor that has been stable during recent times.

Five piston cores were acquired in the immediate vicinity, one in East Breaks Block 992, three in Alaminos Canyon Block 24 and one in Alaminos Canyon Block 23 (shown in blue on the Bathymetry map constructed from the 3D Short-Offset data). The piston cores were placed proximal to the fault escarpments and three are ~1500 to ~4200ft from two of the proposed surface locations. Geochemical analysis from two of the five piston cores indicated the likely presence of micro-seeps associated with the fault escarpments. None of the cores showed evidence of macro-seepage, such as oil staining above molecular levels, gas expansion pockets, gas hydrates, authigenic carbonates, odor or anomalous headspace gas values. Based on published organic geochemical characteristics of sediments from complex high-density chemosynthetic communities on the Gulf slope (Sassen et al., 1994) and results of the geochemical testing of the cores; hydrocarbon concentrations capable of supporting high-density chemosynthetic communities are unlikely to be present in the study area, including all areas of the seafloor that may be impacted by drilling operations.

Sediments from the mudline to ~5000ft BML are expected to be similar at all three proposed surface locations.

**Location EB 991A:** Water depth at this location is expected to be ~4828ft. The shallow section from the seafloor to ~250ft BML consists of well-bedded hemi-pelagic clay. The interval from ~250 to ~4550ft BML is dominated by mass-transport deposits consisting of clay and thin sand or silt units. These mass-transport deposits are interrupted at ~2100ft BML by a ~500ft thick interval of thin well-bedded sands and shale's, representing a period of slope stability. Below ~4550ft BML, the sediments are comprised of predominately thick bedded sands and shale's.

**Location EB 992B:** Water depth at this location is expected to be ~4864ft. The shallow section from the seafloor to ~300ft BML consists of well-bedded hemi-pelagic clay. The interval from ~300 to ~4200ft BML is dominated by mass-transport deposits consisting of clay and thin sand or silt units. These mass-transport deposits are interrupted by two brief intervals of thin well-bedded sands and shale's, representing periods of slope stability. The first at ~900ft BML is ~230ft thick and the second at ~2250ft BML is ~400ft thick. Below ~4200ft BML, the sediments are comprised of predominately thick bedded sands and shale's.

**Location EB 992C:** Water depth at this location is expected to be ~4862ft. The shallow section from the seafloor to ~300ft BML consists of well-bedded hemi-pelagic clay. The interval from ~300 to ~4200ft BML is dominated by mass-transport deposits consisting of clay and thin sand or silt units. These mass-transport deposits are interrupted by two brief intervals of thin well-bedded sands and shale's, representing periods of slope stability. The first at ~925ft BML is ~210ft thick and the second at ~2225ft BML is ~380ft thick. Below ~4200ft BML, the sediments are comprised of predominately thick bedded sands and shale's.

The two near offset wells, Exxon OCS-G-10325 #1 (EB 992-1) and Exxon OCS-G-10379 #1 (AC 24-1) indicate that occasional intervals within the mass-transport sediments between ~1700 to ~3800ft BML contain thin sands and silts with minor amounts of gas or dissolved gas at normal to near normal pressures. There have been no drilling problems associated with these minor mud gas shows. The only significant gas bearing sands are expected at ~4700 to 4800ft BML at surface locations EB 992B and EB 992C respectively. These gas bearing sands were penetrated in the Exxon OCS-G-10325 #1 (EB 992-1) and the EB 992B and EB992C are expected to be within the productive limits. No drilling problems were experienced, and the gas bearing sands are well below surface casing. The equivalent interval is expected to be at ~5100ft BML at the 991A surface

Initial EXPLORATION PLAN (EP)  
EAST BREAKS BLOCKS 991 AND 992,  
LEASES OCS-G 23256 AND OCS-G 23257

location. An amplitude anomaly similar to that seen in the productive area indicates that the sands are likely productive at the 991A location. As with the Exxon OCS-G-10325 #1 (EB 992-1), no drilling problems are anticipated while drilling these sands. No seafloor or buried faults are present in the top-hole section at any of the three proposed surface locations. Additionally, no shallow water flows were observed in the nearest offset wells and none are expected at the proposed surface locations.

In 1998 Exxon drilled and completed the OCS-G-10379 #1 well (Madison Prospect AC 24-1) as a gas discovery. Subsequently, this well was tied into a production system with flowlines to the AC 25 "Hoover" DDCV floating production system. The locations of the offset wells and the pipelines are shown on the bathymetry map, constructed from the 3D Short Offset data. The proposed EB 992B and EB 992C surface locations are ~3500 and 4800ft from these pipelines respectively. Since a dynamically positioned rig will be used, interference from drilling operations is not likely. An ROV survey will be performed prior to positioning the rig on location.

*In accordance with the guidelines set forth in Notice to Lessees and Operators 98-20 (effective date September 15, 1998) and Notice to Lessees and Operators 2000-G20 (effective December 6, 2000), all relevant Geophysical Site-Survey data, 3D Short Offset seismic, seabed piston core data and offset well data have been evaluated. No prohibitive top-hole conditions exist at any of these proposed locations. All Company drilling and operations personnel will be apprised of these conditions.*

Michael D. Crumley  
Site Investigation Specialist  
ExxonMobil Exploration Company  
5 March, 2004

#### IV. BIOLOGICAL INFORMATION

##### Chemosynthetic Information

##### Seafloor and Surficial Sediments

There is no geomorphological or geophysical evidence for prolific seafloor hydrocarbon seeps, capable of supporting high-density communities of chemosynthetic benthic fauna within the East Breaks Blocks 991 and 992 study area. Seafloor morphological features, commonly associated with macro-hydrocarbon seeps, such as mud mounds, mudvolcanoes, surface mudflows, gas-vent craters, and authigenic carbonate hardground are not observed in the study area. Two northeast-southwest trending en echelon fault escarpments are located ~3500 and ~4800ft southeast of the proposed EB 992C and EB 992B surface locations respectively. Seafloor and near sub-seafloor amplitude, velocity, or frequency ("acoustic void zones") anomalies, commonly associated with prolific seafloor hydrocarbon seeps, are not associated with these faults, nor are they observed elsewhere in the study area. These seafloor faults, with maximum relief of ~55ft, appear to offset flat-lying hemi-pelagic clays free of any significant hydrocarbon charge.

Five piston cores were placed proximal to the fault escarpments and three are ~1500 to ~4200ft from the proposed EB 992B and EB 992C surface locations. Geochemical analysis from two of the five piston cores indicates the likely presence of micro-seeps associated with the fault escarpments. None of the cores, however, showed evidence of macro-seepage, such as oil staining above molecular levels, gas expansion pockets, gas hydrates, authigenic carbonates, odor or anomalous headspace gas values. Based on published organic geochemical characteristics of sediments from complex high-density chemosynthetic communities on the Gulf slope (Sassen et al., 1994) and results of the geochemical testing of the cores; hydrocarbon concentrations capable of supporting high-density chemosynthetic communities are unlikely to be present in the study area, including all areas of the seafloor that may be impacted by drilling operations.

##### Anchoring Considerations

The surface locations proposed in this Exploration Plan will be drilled by a dynamically positioned drillship. This mobile drilling unit will not use a mooring system for station keeping. Therefore, anchoring considerations are not applicable. Seafloor impact will be limited to the point of emplacement of the structural casing, wellhead, and BOP stack.

No high-density chemosynthetic communities occur within a 1,500-foot radius of each proposed surface location.

Therefore, incidental discharges during drilling operations will have no adverse affect on chemosynthetic benthic fauna.

##### Analysis and Summary Statement

##### **Location EB 991A**

- ❖ NO ASSOCIATED ANCHORS -- NO DISTURBANCE WITHIN 1,500 FEET OF CHEMOSYNTHETIC COMMUNITIES.
- ❖ Features or areas that could support high-density chemosynthetic communities are *not* located within 1,500 feet of the proposed mud and cuttings discharge location.

Initial EXPLORATION PLAN (EP)  
EAST BREAKS BLOCKS 991 AND 992,  
LEASES OCS-G 23256 AND OCS-G 23257

**Location EB 992B**

- ❖ NO ASSOCIATED ANCHORS -- NO DISTURBANCE WITHIN 1,500 FEET OF CHEMOSYNTHETIC COMMUNITIES.
- ❖ Features or areas that could support high-density chemosynthetic communities are *not* located within 1,500 feet of the proposed mud and cuttings discharge location.

**Location EB 992C**

- ❖ NO ASSOCIATED ANCHORS -- NO DISTURBANCE WITHIN 1,500 FEET OF CHEMOSYNTHETIC COMMUNITIES.
- ❖ Features or areas that could support high-density chemosynthetic communities are *not* located within 1,500 feet of the proposed mud and cuttings discharge location.

Included herein is a **bathymetry map** showing the proposed surface locations.

The drilling operations covered in this Exploration Plan will have no impact on Topographic Features, as stipulated in NTL 98-12, as East Breaks Blocks 991 and 992 are not affected.

The drilling operations covered in this Exploration Plan will have no impact on Live Bottom (Pinnacle Trend), as stipulated in NTL 99-16, as East Breaks Blocks 991 and 992 are not affected.

*In accordance with the guidelines set forth in Notice to Lessees and Operators 98-12 (effective August 10, 1998), Notice to Lessees and Operators 99-16 (effective July 8, 1999) and Notice to Lessees and Operators 2000-G20 (effective December 6, 2000); all relevant Geophysical Site-Survey data, 3D Short Offset seismic, seabed piston core data and offset well data have been evaluated. No prohibitive top-hole conditions exist at any of these proposed locations. All Company drilling and operations personnel will be apprised of these conditions.*

Michael D. Crumley  
Site Investigation Specialist  
ExxonMobil Exploration Company  
5 March, 2004

946

NOTE: PORTION OF BATHYMETRY MAP PREPARED BY K.C. OFFSHORE FEB. 1995. WATER DEPTHS CONTOURED FROM MEAN SEA LEVEL. CONTOUR INTERVAL: 10 FEET.

947

Y = 9804960



UTM - 15  
NAD-27

X = 1045440

X = 1061280

X = 1077120

948

990

991

EB991\_A

992

EB992\_B

EB992\_C

EAST BREAKS  
ALAMINOS CANYON

Y = 9789120

BATHYMETRY MAP

EAST BREAKS BLOCKS 991 & 992

GULF OF MEXICO

Exxon Mobil Corporation

Prepared by:  
ExxonMobil Production Company  
U. S. Production  
Houston, TX

DRAWN JKM

APPROVED

REVISED

00/00/03

CHECKED

PUBLIC INFORMATION COPY

SCALE:

1"=3000'

DATE:

3/24/04

FILE NO.

EB-3136

## **V. WASTE AND DISCHARGE INFORMATION**

### **Compliance**

All discharges associated with drilling and potentially completing/testing of the subject wells will be in accordance with regulations implemented by the Minerals Management Service (MMS), U.S. Coast Guard (USCG), and the U.S. Environmental Protection Agency (EPA).

ExxonMobil will strictly adhere to the National Pollutant Discharge Elimination System-NPDES permit #290000 for Region VI of the Gulf of Mexico in regards to discharges into offshore waters. The types and amounts of planned discharges are outlined in the waste and discharge spreadsheets included herein and there is a general discussion of each below. Wastes that are not discharged overboard will be transported to an appropriate treatment or disposal site, in accordance with all federal, state, and local rules and regulations. Any wastes classified as hazardous will be properly transported using a uniform hazardous waste manifest, documented, and disposed of at an approved hazardous waste facility.

### **Drill Cuttings**

An estimated 9620 barrels of drill cuttings per well with a total of 28861 barrels of drill cuttings for all three wells will be discharged. This assumes a 1.5 X GA. HOLE washout in each hole-section of the wells. The cuttings will consist primarily of native solids, shale's, clays, and sands. In the event that synthetic base drilling fluids (SBM) are used, the discharge of these cuttings will meet the NPDES permit criteria for stock and effluent limitations.

### **Sanitary Waste**

An estimated amount of sanitary waste per well to be discharged is estimated to be 1,890,00 gallons for all wells. This assumes a 120-man crew on board the vessel, with an average usage of 30 gals per day per man. This waste will be collected and treated on board in an USCG approved sewage treatment plant prior to discharge.

### **Deck Drainage**

Deck drainage consists primarily of water and wash liquids. An estimated 131,250 barrels of this type fluid will be discharged overboard for all wells. Prior to being discharged, the fluid will be collected and processed through an oil-water separator. Recovered oil will be recycled or properly disposed of as appropriate. The processed water will be discharged, meeting MARPOL 73/78 regulations.

### **Drilling Fluids**

Water and synthetic base drilling fluids will be used on the subject wells. In the course of drilling the wells, it is estimated that 21000 barrels of water base mud will be discharged. No discharge of synthetic base fluid is planned. Strict adherence to the NPDES permit will be followed in discharging drilling fluids.

### **Domestic Waste**

Domestic waste/trash will be collected and transported to shore for disposal at an authorized disposal site. Food solids consisting of leftover scraps will be disposed of under the requirements of MARPOL 73/78 as implemented by the U.S. Coast Guard. Approximately 105,000 pounds of domestic waste is expected to be generated on the subject wells.

### **Waste and Discharge Calculations**

Solid and liquid wastes predicted to be generated from the drilling of this *Bat-Man* Prospect well are indicated on the spreadsheet contained in this Exploration Plan.



**Table 1. Discharges Table (Wastes to be discharged overboard)**

<b>Type of Waste Approximate Composition</b>	<b>Amount to be Discharged (volume or rate)</b>	<b>Maximum Discharge Rate</b>	<b>Treatment and/or Storage, Discharge Location*, and Discharge Method</b>
Water-based drilling fluids	7,000 bbl/well	300 bbl/hr	EB 991/992 Shunt through downpipe to 10 feet below sea level
Drill cuttings associated with water based fluids	2,500 bbl/well	100 bbl/hr	EB 991/992 Shunt through downpipe to 10 feet below sea level
Drill cuttings associated with synthetic drilling fluids	5,000 bbl/well	50 bbl/hr	EB 991/992 Shunt through downpipe to 10 feet below sea level
Muds, cuttings and cement at the seafloor	Gel – 3,000 bbl WBM – 21,000 bbl Cuttings – 2,500 bbl Cement – 100 bbl	Not applicable	EB 991/992 Discharged at seafloor
Sanitary wastes	30 gal/person/day	Not applicable	EB 991/992 Chlorinate and discharge
Domestic waste	200 lbs/day	Not applicable	EB 991/992 Remove floating solids and discharge
Deck Drainage	0-2,000 bbl/day Dependant upon rainfall	15 bbl per hour (maximum separator discharge)	EB 991/992 Remove oil and grease and discharge
Desalinization Unit water	700 bbl/day	Not applicable	EB 991/992 Discharged overboard
Uncontaminated bilge water	2,000 bbl	260 m <sup>3</sup> /hr	EB 991/992 Discharged overboard
Uncontaminated ballast water	20,000 bbl	2,600 m <sup>3</sup> /hr	EB 991/992 Discharged overboard

Note: Above table shows discharge volume / well.

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

<b>Type of Waste Approximate Composition</b>	<b>Amount*</b>	<b>Rate per Day</b>	<b>Name/Location of Disposal Facility</b>	<b>Treatment and/or Storage, Transport and Disposal Method</b>
Spent synthetic-based drilling fluids	8,000 bbl/well	3,000 bbl/day	MI Drilling Fluids, Galveston Base	Transport to shore in supply boat tanks to process and re-use.
Waste oil	66.3 bbl/well	0.51 bbl/ day	Asco Environmental, Lake Charles LA	Transported by boat then truck in 55 gallon drums
Trash and debris	25427 ft <sup>3</sup> /yr	69.66 ft <sup>3</sup> /day	Asco Environmental, Lake Charles LA	Transport in storage bins on work boat to a landfill
Recyclable Waste		zero		
Chemical product wastes		zero		

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

Initial EXPLORATION PLAN (EP)  
EAST BREAKS BLOCKS 991 AND 992,  
LEASES OCS-G 23256 AND OCS-G 23257

VI. OIL SPILL RESPONSE AND CHEMICAL INFORMATION (Appendix F)

## APPENDIX "F"

### REGIONAL RESPONSE PLAN INFORMATION

The Exxon Mobil Corporation Gulf of Mexico Regional Oil Spill Response Plan (OSRP) was approved by Minerals Management Service on October 18, 2001. The companies that may be associated with exploration activities in East Breaks 991/992 and covered by the OSRP are ExxonMobil Development Company, ExxonMobil Exploration Company, Exxon Asset Management Company, and Exxon Asset Holdings LLC. The activities proposed in East Breaks 991/992 will be covered under the Exxon Mobil Corporation Gulf of Mexico Regional Oil Spill Response Plan.

### OSRO INFORMATION

The primary spill response equipment providers are Clean Gulf Associates and Marine Spill Response Corporation. Marine Spill Response Corporation and its STARS network will provide personnel to operate the equipment. Additional response resources are listed in the OSRP.

### WORST CASE DISCHARGE SCENARIO COMPARISON

The current regional OSRP worst case discharge scenarios remains the worst case discharge scenario for an exploration well, as estimated flow rates from an exploration well blowout are speculative and the contracted oil spill response organization (OSRO) resources are sufficient to respond to the worst case volumes shown below. Since Exxon Mobil Corporation has the capability to respond to the worst case spill scenario included in its regional OSRP approved on October 18, 2001, and the worst case scenario determined for this EP does not replace the worst case scenario in the above OSRP, I hereby certify Exxon Mobil Corporation has the capability to respond, to the maximum extent practicable, to a worst case discharge, or a substantial threat of such a discharge, resulting from the activities proposed in this EP.

Category	Regional OSRP	EP
Type of Activity:	Exploration Well	Exploration Well
Facility Location (area/block):	Mississippi Canyon 554	EastBreaks 991&992
Facility Designation:	Timber Wolf	Batman
Distance to Nearest Shoreline (miles):	52	134
WCD Volume (bpd):	245,000	
Type of Oil(s) - (crude oil, condensate, diesel):	Crude Oil	Crude Oil
API° Gravity(s):	29	

**5. FACILITY TANKS, PRODUCTION FACILITIES**

NA for the purposes of this plan as per NTL 2003-G17

**6. SPILL RESPONSE SITES**

NA for the purposes of this plan as per NTL 2003-G17

**7. DIESEL OIL SUPPLY VESSELS**

NA for the purposes of this plan as per NTL 2003-G17

**8. SUPPORT VESSEL FUEL TANKS**

NA for the purposes of this plan as per NTL 2003-G17

**9. PRODUCED LIQUID HYDROCARBONS TRANSPORTATION VESSELS**

NA for the purposes of this plan as per NTL 2003-G17

**10. OIL- AND SYNTHETIC-BASED DRILLING FLUIDS**

NA for the purposes of this plan as per NTL 2003-G17

**11. OILS CHARACTERISTICS**

NA for the purposes of this plan as per NTL 2003-G17

**12. BLOWOUT SCENARIO**

NA for the purposes of this plan as per NTL 2003-G17

**13. SPILL RESPONSE DISCUSSION FOR NEPA ANALYSIS**

NA for the purposes of this plan as per NTL 2003-G17

**14. POLLUTION PREVENTION MEASURES**

NA for the purposes of this plan as per NTL 2003-G17

**15. FGBNMS MONITORING PLANS**

NA for the purposes of this plan as per NTL 2003-G17

**VII. AIR EMISSIONS INFORMATION**

The *Glomar Explorer*, a dynamically positioned drill ship, is to be used to drill the ***Bat-Man*** prospect, and drill sites at East Breaks Block 991, and East Breaks Block 992 are located greater than 120 miles from shore, accordingly a full set of spreadsheets is not required and only a coversheet is being submitted.

The nearest shoreline to the ***Bat-Man*** Prospect at East Breaks Block 991 and East Breaks Block 992 is a distance of approximately 134 miles, per the vicinity map that is included in this Exploration Plan.

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

OMB Control No. XXX-XXX  
Expiration Date: Pending

COMPANY	ExxonMobil
AREA	East Breaks
BLOCK	991, 992
LEASE	OCS-G 23256, OCS-G 23257
PLATFORM	N/A
WELL	EB 992C, EB 992B, EB 991A
COMPANY CONTACT	Bryan L Chapman
TELEPHONE NO.	281 654 1941
REMARKS	Bat-Man Wells

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

If ALL questions are answered "No":

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

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

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

If question number 8 is answered "Yes":

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

**VIII. ENVIRONMENTAL IMPACT ANALYSIS**

**A. ENVIRONMENTAL IMPACT ANALYSIS REPORT**

Nine (9) copies of the *Environmental Impact Analysis Report (Exploration Plan) Gulf of Mexico: Offshore Texas, East Breaks Area, Block 991 and 992 (OCS-G 23256 and 23257)* are being submitted to the MMS with this Exploration Plan.

This Environmental Report was prepared March 2004, for Exxon Mobil Corporation by Continental Shelf Associates, Inc., of Jupiter, Florida.

**B. CONSISTENCY CERTIFICATION**

The Minerals Management Service forwards a copy of this Exploration Plan to the State of Texas for review using registered mail with a returned receipt requested.

Fifteen (15) days after the date on the registered mail receipt from the Postal Service, concurrence of the State of Texas is presumed by the Minerals Management Service.



## **ENVIRONMENTAL IMPACT ANALYSIS**

Exploration Plan

East Breaks Block 991 (OCS-G 23256)

East Breaks Block 992 (OCS-G 23257)

March 2004

### **Prepared for:**

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### **Prepared by:**

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## A. IMPACT-PRODUCING FACTORS

This Environmental Impact Analysis (EIA) evaluates the potential impacts of exploratory drilling in East Breaks (EB) Blocks 991 and 992. There are three wells planned for this Exploration Plan. The first well is in EB 992 (Well C) and is expected to be spudded in May 2004. The second is in EB 992 (Well B) and is scheduled to be drilled in 2005. The third well, in EB 991 (Well A), is scheduled to be drilled in 2006. The drilling unit will be the Glomar Explorer, or a similar type drillship. Water depths in EB 991 and 992 range from about 1,410 to 1,500 m (4,630 to 4,920 ft). Water depths at the three wellsites range from 1,472 to 1,482 m (4,828 to 4,864 ft).

The leases are approximately 134 statute miles from the nearest shoreline (Texas) and 163 statute miles from the Tesoro Base in Galveston, Texas, which will be the onshore operations base for work boats, crew boats, and helicopters. No new facilities or workers will be needed for the proposed activities. Helicopters and boats will move supplies and personnel between the offshore and onshore locations. Helicopters will make approximately 45 round trips per month. Work boats will make approximately 15 round trips per month, and crew boats will make approximately 4 round trips per month. Helicopters and boats will normally take the most direct route, traffic and weather conditions permitting.

**Table 1** is a matrix of impact-producing factors (IPFs) and potentially affected environmental resources. The table is based on the matrix provided by the Minerals Management Service (MMS). An "X" in a table cell indicates that an IPF could affect a certain resource, and a dash (--) indicates no impact or negligible impact. Where there may be an effect, an analysis is provided in **EIA Section B**. For those cells that are footnoted, a statement has been provided after the table as to the applicability of the proposed operations.

The following IPFs applicable to the proposed activity have been identified:

- Drillship presence, noise, and lights;
- Air pollutant emissions (from drillship, support vessels, and helicopters);
- Effluent discharges (drilling fluids and cuttings, sanitary and domestic wastes, deck drainage, etc.);
- Trash and debris;
- Support vessel and helicopter traffic; and
- Accidents (oil spills).

Physical disturbance to the seafloor was determined not to be a relevant IPF for the proposed action because a drillship will be used, with no anchoring or rig emplacement on the seafloor. This IPF was included in the matrix, but all of the entries in the column indicate no impact.

Accidents include the worst case discharge, which is a crude oil spill of 86,000 barrels. An H<sub>2</sub>S release was not considered as an IPF because the drilling activity will take place in an area classified as "H<sub>2</sub>S absent."

**Table 1.** Matrix of impact-producing factors and environmental resources.

Environmental Resources	Impact-Producing Factors						
	Drillship Presence, Noise, and Lights	Air Pollutant Emissions (drillship, support vessels, and helicopters)	Effluent Discharges (cuttings, sanitary & domestic wastes, deck drainage, etc.)	Physical Disturbances to the Seafloor (anchoring)	Trash and Debris	Support Vessel and Helicopter Traffic	Accidents (oil spills)
<b>Site-specific at Offshore Location</b>							
Designated topographic features	--	--	--(1)	--(1)	--	--	--(1)
Pinnacle trend area live bottoms	--	--	--(2)	--(2)	--	--	--(2)
Eastern Gulf live bottoms	--	--	--(3)	--(3)	--	--	--(3)
Chemosynthetic communities	--	--	--	--(4)	--	--	--
Water quality	--	--	X	--	--	--	X
Fisheries	X	--	--	--	--	--	X
Marine mammals	X(8)	--	--	--	X	X	X(8)
Sea turtles	X(8)	--	--	--	X	X	X(8)
Air quality	--	X(9)	--	--	--	--	X
Shipwreck sites (known/potential)	--	--	--	--(7)	--	--	--
Prehistoric archaeological sites	--	--	--	--(7)	--	--	--
<b>Vicinity of Offshore Location</b>							
Essential fish habitat	X	--	X	--	--	--	X(6)
Marine and pelagic birds	X	--	--	--	X	--	X
Public health and safety	--	--	--	--	--	--	--(5)
<b>Coastal and Onshore</b>							
Beaches	--	--	--	--	--	--	--(6)
Wetlands	--	--	--	--	--	--	--(6)
Shore birds and coastal nesting birds	--	--	--	--	--	X	--(6)
Coastal wildlife refuges	--	--	--	--	--	--	--(6)
Wilderness areas	--	--	--	--	--	--	--(6)
<b>Other Resources</b>							
Non-chemosynthetic benthic communities	--	--	X	--	--	--	X
Pelagic communities	X	--	X	--	--	--	X

### Table Footnotes and Applicability:

- (1) Activities that may affect a marine sanctuary or topographic feature. Specifically, if the well or platform site or any anchors will be on the seafloor within the:
  - (a) 4-mile zone of the Flower Garden Banks, or the 3-mile zone of Stetson Bank;
  - (b) 1,000-m, 1-mile, or 3-mile zone of any topographic feature (submarine bank) protected by the Topographic Features Stipulation attached to an Outer Continental Shelf (OCS) lease;
  - (c) Essential Fish Habitat (EFH) criteria of 500 ft from any no-activity zone; or
  - (d) Proximity of any submarine bank (500-ft buffer zone) with relief greater than 2 m that is not protected by the Topographic Features Stipulation attached to an OCS lease.

*- This footnote does not apply because the leases are not within or near any marine sanctuary, topographic feature, or no-activity zone. There are no submarine banks in the leases. There will be no anchoring in the leases.*
- (2) Activities with any bottom disturbance within an OCS lease block protected through the Live Bottom (Pinnacle Trend) Stipulation attached to an OCS lease.

*- The Live Bottom (Pinnacle Trend) Stipulation is not applicable to the leases.*
- (3) Activities within any Eastern Gulf OCS block where seafloor habitats are protected by the Live Bottom (Low-Relief) Stipulation attached to an OCS lease.

*- The Live Bottom (Low-Relief) Stipulation is not applicable to the leases.*
- (4) Activities on blocks designated by the MMS as being in water depths 400 m or greater.

*- The leases are in water depths greater than 400 m, but the chemosynthetic community review indicates that the potential for significant chemosynthetic communities is very low. There are no areas that could support high-density chemosynthetic communities within 1,500 ft of any mud and cuttings discharge location. There will be no anchoring in the leases.*
- (5) Exploration or production activities where H<sub>2</sub>S concentrations greater than 500 ppm might be encountered.

*- This footnote is not applicable because the leases have been classified as "H<sub>2</sub>S absent."*
- (6) All activities that could result in an accidental spill of produced liquid hydrocarbons or diesel fuel that you determine would impact these environmental resources. If the proposed action is located a sufficient distance from a resource that no impact would occur, the EIA can note that in a sentence or two.

*- Accidental spills could affect the resources marked (X) in the matrix, and impacts are analyzed in **EIA Section B**. Due to spill response measures, weathering, and the distance from shore, impacts on coastal resources and biota are highly unlikely.*
- (7) All activities that involve seafloor disturbances, including anchor emplacements, in any OCS block designated by the MMS as having high-probability for the occurrence of shipwrecks or prehistoric sites, including such blocks that will be affected that are adjacent to the lease block in which your planned activity will occur. If the proposed activities are located a sufficient distance from a shipwreck or prehistoric site that no impact would occur, the EIA can note that in a sentence or two.

*- The leases are not on the MMS list of blocks determined to have a high probability of archaeological resources. Moreover, there will be no anchoring. Therefore, no impacts on historic or prehistoric sites are expected.*
- (8) All activities that you determine might have an adverse effect on endangered or threatened marine mammals or sea turtles or their critical habitats.

*- IPFs that may affect endangered or threatened marine mammals, sea turtles, or their critical habitats include drillship presence, noise, and lights; trash and debris; support vessel and helicopter traffic; and accidents. Impacts are analyzed in **EIA Section B**.*
- (9) Production activities that involve transportation of produced fluids to shore using shuttle tankers or barges.

*- This footnote is not applicable. The proposed activity does not involve transportation of produced fluids using shuttle tankers or barges.*

## **B. ANALYSIS**

### **B.1 SITE-SPECIFIC AT OFFSHORE LOCATION**

#### **B.1.1 Designated Topographic Features**

There are no IPFs that could cause impacts to designated topographic features. The blocks are not within or near an MMS-designated topographic feature or no-activity zone. The nearest designated topographic feature is Appelbaum Bank, which is about 60 miles away.

An oil spill is unlikely to occur during the proposed activities. Because of spill response measures described in the ExxonMobil Corporation Gulf of Mexico Regional Oil Spill Response Plan (OSRP) as well as natural weathering processes, significant quantities of oil would be unlikely to reach the vicinity of any topographic feature. Since the crests of designated topographic features in the northern Gulf are at least 10 m below the sea surface, concentrated oil would not be expected to reach their sessile biota. No impacts would be expected.

#### **B.1.2 Pinnacle Trend Area Live Bottoms**

There are no IPFs that could cause impacts to pinnacle trend live bottoms. The Live Bottom (Pinnacle Trend) Stipulation does not apply to these leases. The pinnacle trend is located along the shelf edge offshore of the Mississippi River delta, several hundred miles from the lease area.

An oil spill is unlikely to occur during the proposed activities. Because of spill response measures described in the Regional OSRP as well as natural weathering processes, significant quantities of oil would be unlikely to reach the vicinity of the pinnacle trend area. Further, since the crests of pinnacle features are more than 50 m below the sea surface, concentrated oil would not be expected to reach their sessile biota. No impacts would be expected.

#### **B.1.3 Eastern Gulf Live Bottoms**

There are no IPFs that could cause impacts to low-relief Eastern Gulf live bottoms. The nearest Eastern Gulf live bottom areas as defined by MMS stipulation (Eastern Planning Area leases in water depths of 100 m or less) are several hundred miles from the project area.

An oil spill is unlikely to occur during the proposed activities. Because of spill response measures described in the Regional OSRP as well as natural weathering processes, significant quantities of oil would be unlikely to reach the vicinity of Eastern Gulf live bottom areas. Further, since these are low-relief features on the seafloor, concentrated oil would not be expected to reach these communities. No impacts would be expected.

#### **B.1.4 Chemosynthetic Communities**

The shallow hazards assessment concludes that the potential for significant chemosynthetic communities in the leases is very low. There are no IPFs likely to cause impacts to chemosynthetic communities. The nearest reported chemosynthetic site is about 30 miles away in EB 602 in a water depth of 1,111 m (MacDonald, 2002). It is possible that undiscovered chemosynthetic communities exist in nearby lease blocks. However, a subsurface spill (e.g., a

blowout) would be unlikely to affect benthic communities beyond a few hundred meters from the wellsite. Therefore, no impacts on chemosynthetic communities would be expected.

#### **B.1.5 Water Quality**

IPFs potentially affecting water quality include:

- Effluent discharges; and
- Accidents (oil spills).

Effluent Discharges. Effluents to be discharged will include water-based drilling fluids and associated cuttings; cuttings with adhering synthetic drilling fluids; sanitary and domestic wastes; deck drainage; desalinization unit brine; and uncontaminated bilge and ballast water. Since all routine discharges from the drillship will be made in accordance with the general National Pollutant Discharge Elimination System (NPDES) permit issued by the U.S. Environmental Protection Agency (USEPA), they are not expected to cause significant impacts to water quality. Discharges of sanitary and domestic wastes from support vessels will be in accordance with U.S. Coast Guard (USCG) regulations and also would not cause significant impacts on water quality.

Accidents (oil spills). It is unlikely that an oil spill would occur from the proposed activities. If a spill were to occur, marine water quality would be temporarily affected by the dissolved components and small oil droplets. Spill response measures detailed in the Regional OSRP as well as natural weathering processes would remove the oil from the water column and dilute the constituents to background levels.

#### **B.1.6 Fisheries**

The main commercial fishing activity in deepwaters of the northern Gulf of Mexico is pelagic longlining for tuna, swordfish, and other billfishes (Continental Shelf Associates, Inc., 2002). While most recreational fishing activity occurs in depths less than about 200 m, deepwater petroleum platforms attract considerable recreational fishing activity offshore of Texas and Louisiana.

IPFs potentially affecting fisheries include:

- Drillship presence, noise, and lights; and
- Accidents (oil spills).

Drillship Presence, Noise, and Lights. Drillship presence is the only routine IPF that may have an impact on commercial fishing. There is a slight possibility of pelagic longlines becoming entangled in the drillship; however, longline fishers use radar and generally are aware of offshore structures when placing their sets. Therefore, little or no impact on pelagic longlining is expected. Other routine factors such as effluent discharges are likely to have negligible impacts on commercial or recreational fisheries due to rapid dispersion, the small area of ocean affected, and the intermittent nature of the discharges.

Accidents (oil spills). In the event of a large oil spill, fishing activities near the project area could be temporarily disrupted. The area affected would be relatively small, and the duration presumably would be a few days. Due to spill response measures and natural weathering processes, little or no disruption of fishing activities in coastal waters would be expected.

### **B.1.7 Marine Mammals**

The only endangered marine mammal likely to be present near the project area is the sperm whale (Davis et al., 2000). Five endangered baleen whales (northern right whale, blue whale, fin whale, sei whale, and humpback whale) have been reported from the northern Gulf but are either extralimital or uncommon (Jefferson and Schiro, 1997) and are not discussed further. Another endangered marine mammal, the West Indian manatee, is a coastal species that does not occur in or near the project area, although manatees occasionally occur in Texas and Louisiana coastal waters during summer months. The most common nonendangered cetaceans in the deepwater environment are odontocetes such as pantropical spotted dolphin, spinner dolphin, and clymene dolphin. Other odontocetes that may be present include dwarf and pygmy sperm whales, four species of beaked whales, and 14 species of dolphins and porpoises (Jefferson and Schiro, 1997).

IPFs potentially affecting marine mammals include:

- Drillship presence, noise, and lights;
- Trash and debris;
- Support vessel and helicopter traffic; and
- Accidents (oil spills).

Other factors such as effluent discharges are likely to have negligible impacts on marine mammals due to rapid dispersion, the small area of ocean affected, and the intermittent nature of the discharges.

Drillship Presence, Noise, and Lights. The behavior of marine mammals could be affected by noise and light emitted from the drillship, as well as the presence of fish populations associated with the drillship. Drilling-related noise is of relatively low frequency (Richardson et al., 1995). The sperm whale appears to have good low frequency hearing, but the available data do not indicate a consistent response to anthropogenic noise (National Marine Fisheries Service [NMFS], 2001). The other marine mammals commonly seen in deepwater are odontocetes, which have their best hearing in high frequencies and are less likely to be disturbed by low frequency noise. Little is known of the effects of offshore structures and activities on marine mammals, but in any case such effects would likely consist of short-term behavioral changes and would not be expected to harm the animals.

Trash and Debris. Ingestion of, or entanglement with, accidentally discarded debris can kill or injure marine mammals. The disposal of solid waste from drilling rigs and vessels is prohibited by the MMS and the USCG under MARPOL regulations. In addition, MMS has issued Notice to Lessees (NTL) 2003-G11, which instructs operators to exercise caution in the handling and disposal of small items and packaging materials, requires posting of placards at prominent locations on offshore vessels and structures, and requires a marine trash and debris awareness training and certification process. Compliance with this NTL and any related MMS requirements is assumed to be effective in minimizing the potential for debris-related impacts on marine mammals.

Support Vessel and Helicopter Traffic. Vessel and helicopter traffic may startle or disturb marine mammals. Reactions may range from apparent indifference to evasive moves (e.g., turns, diving, etc.) (Richardson et al., 1995). Many of the reactions of marine mammals to vessel traffic appear to be primarily a result of noise, though there may be visual or other cues as well.



There is a small risk of a supply or crew boat striking a sperm whale. To reduce the potential for vessel strikes, the MMS has issued NTL 2003-G10, which recommends protected species identification training, specifies ways for vessel operators and crews to avoid vessel strikes, and requires operators to report sightings of any injured or dead protected species. Compliance with this NTL and any related MMS requirements is assumed to be effective in minimizing the likelihood of vessel strikes.

Accidents (oil spills). The sperm whale is the only endangered marine mammal likely to come into contact with an oil spill at the project area. Sperm whales are widely distributed in the Gulf of Mexico, but concentrations occur in the Mississippi Canyon area south of the Mississippi River Delta (Davis et al., 2000). Common nonendangered cetaceans in the deepwater environment, such as pantropical spotted dolphin, spinner dolphin, and clymene dolphin, also could come into contact with spilled oil. However, the total area of a slick would be small relative to the available deepwater habitat. Oil exposure would not persist in the open ocean, and the animals could avoid oiled areas. Although individual marine mammals may be affected if exposed to oil, no significant population-level impacts on any marine mammal species would be expected.

The West Indian manatee occasionally occurs in Texas, Louisiana, and other northern Gulf states during summer months. It is assumed that natural weathering processes and spill response measures as detailed in the Regional OSRP would remove most or all of the spilled oil before it could contact manatee habitats. The historical spill data and trajectory/risk calculations referenced in a recent Environmental Impact Statement (EIS) (MMS, 2002) indicate there is little risk of contact or impact to the coastline or associated environmental resources. Therefore, no significant impacts on manatees are expected.

#### **B.1.8 Sea Turtles**

Five species of endangered or threatened sea turtles may be found near the project area. Endangered species are the leatherback, Kemp's ridley, and hawksbill sea turtles. The loggerhead sea turtle is a threatened species. The green sea turtle is listed as threatened, except for the Florida breeding population, which is listed as endangered. Leatherbacks and loggerheads are the turtles most likely to be present as adults near the project area. Green, hawksbill, and Kemp's ridley turtles are typically inshore species that are unlikely to occur near the project area as adults. Hatchlings or juveniles of any of the sea turtles may be present in deepwater areas, where they may be associated with sargassum and other flotsam.

Loggerhead turtles nest in significant numbers along the Florida Panhandle and to a limited extent in other northern Gulf coast states including Texas (e.g., North and South Padre Islands). Green turtles infrequently nest on Florida Panhandle and Alabama beaches. Very few leatherback nests have been documented along the northern Gulf coast (e.g., Florida Panhandle). Kemp's ridley turtles nest mainly near Rancho Nuevo in northeastern Mexico and also in South Texas (Padre and Mustang Islands). Hawksbill turtles do not nest anywhere near the project area. Due to the distance from shore, nesting beaches are highly unlikely to be affected by the project.

IPFs potentially affecting sea turtles include:

- Drillship presence, noise, and lights;
- Trash and debris;
- Support vessel and helicopter traffic; and
- Accidents (oil spills).

Other factors such as effluent discharges are likely to have negligible impacts on sea turtles due to rapid dispersion, the small area of ocean affected, and the intermittent nature of the discharges.

Drillship Presence, Noise, and Lights. Little is known of how turtles may respond to noise from offshore drilling activities. Helicopters and service vessels also may affect sea turtles due to machinery noise and/or visual disturbances. The most likely impacts would be short-term behavioral changes such as diving and evasive swimming, disruption of activities, or departure from the area.

Turtle hatchlings may be attracted to brightly lit offshore platforms, where they may be subject to increased predation by birds and fishes that are also attracted to offshore structures. However, NMFS (2001) states that attraction to offshore platforms is unlikely to appreciably reduce the reproduction, numbers, or distribution of sea turtles in the wild.

Trash and Debris. Ingestion of, or entanglement with, accidentally discarded solid debris can kill or injure sea turtles (Lutcavage et al., 1997). Some adult sea turtles such as loggerheads and leatherbacks may ingest plastic debris. The disposal of solid waste from drilling rigs and vessels is prohibited. Also, MMS has issued NTL 2003-G11, which instructs operators to exercise caution in the handling and disposal of small items and packaging materials, requires posting of placards at prominent locations on offshore vessels and structures, and requires a marine trash and debris awareness training and certification process. Compliance with this NTL and any related MMS requirements is assumed to be effective in minimizing the potential for debris-related impacts on sea turtles.

Support Vessel and Helicopter Traffic. There is a chance of collision between service vessels and sea turtles. While adult turtles are visible at the surface during the day and in clear weather, they can be difficult to spot from a moving vessel when resting below the water surface or during nighttime or periods of inclement weather. To reduce the potential for vessel strikes, the MMS has issued NTL 2003-G10, which recommends protected species identification training, specifies ways for vessel operators and crews to avoid vessel strikes, and requires operators to report sightings of any injured or dead protected species. Compliance with this NTL and any related MMS requirements is assumed to be effective in minimizing the likelihood of striking sea turtles.

Accidents (oil spills). Sea turtles could be affected by an oil spill in offshore waters. Leatherbacks and loggerheads are the most common adult turtles in offshore waters and the most likely to be affected. They are regularly sighted within deepwater areas. In addition, juvenile turtles of any species may be found within convergence zones in deepwater areas. While some turtles may come into contact with spilled oil, the total area affected would be small relative to the available deepwater habitat, and the viability of sea turtle populations as a whole would not likely be threatened.

It is assumed that most or all of the spill volume would be removed due to weathering and spill response measures prior to reaching turtle nesting beaches. The historical spill data and trajectory/risk calculations referenced in a recent EIS (MMS, 2002) indicate there is little risk of contact or impact to the coastline or associated environmental resources. Therefore, no significant impacts on turtle nesting beaches would be expected.

#### **B.1.9 Air Quality**

There are no site-specific air quality data for the project area. The attainment status of Federal OCS waters is unclassified due to the lack of representative air quality data. Due to the distance from shore-based pollution sources, offshore air quality is expected to be good.

IPFs potentially affecting air quality include:

- Air pollutant emissions; and
- Accidents.

Air Pollutant Emissions. Routine offshore air pollutant emissions will result from drillship operations and from helicopters and service 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. Air pollutants associated with OCS activities are nitrogen oxides, carbon monoxide, sulfur oxides, volatile organic compounds, and suspended particulate matter.

Due to the distance from shore, routine operations in the project area will have no impact on air quality conditions along the coast. The Projected Air Quality Emissions Report prepared in accordance with NTL 2002-G08 shows that emissions are below the annual exemption levels set by MMS based on the distance from shore. Therefore, no further analysis is required.

Accidents (oil spills). An oil spill would affect air quality in the vicinity of the oil slick by introducing volatile organic compounds through evaporation. The emissions would not last long due to rapid volatilization of hydrocarbons. Evaporation is greatest within the first 24 hours. The extent and persistence of impacts would depend on the meteorological and oceanographic conditions at the time. Little or no impact on air quality in coastal areas would be expected.

#### **B.1.10 Shipwreck Sites (known or potential)**

There are no IPFs that are likely to cause impacts to shipwreck sites. There will be no anchoring around the wellsites, and the leases are not on the MMS list of blocks determined to have a high probability of archaeological resources. Therefore, no impacts on shipwreck sites are expected. Further, due to natural weathering processes and spill response measures as detailed in the Regional OSRP, it is highly unlikely that significant quantities of oil from a spill in the project area would reach coastal areas and contaminate shipwreck sites.

#### **B.1.11 Prehistoric Archaeological Sites**

There are no IPFs that are likely to cause impacts to prehistoric archaeological sites. There will be no anchoring around the wellsites, and the leases are not on the MMS list of blocks determined to have a high probability of archaeological resources. Therefore, no impacts on prehistoric archaeological resources are

expected. Further, due to natural weathering processes and spill response measures as detailed in the Regional OSRP, it is highly unlikely that significant quantities of oil from a spill in the project area would reach coastal areas and contaminate prehistoric sites.

## **B.2 VICINITY OF OFFSHORE LOCATION**

### **B.2.1 Essential Fish Habitat**

The Gulf of Mexico Fishery Management Council (GMFMC) has prepared fishery management plans (FMPs) identifying EFH for corals and coral reefs, shrimp, stone crab, spiny lobster, reef fishes, coastal pelagic fishes, and red drum, none of which occur in waters overlying the lease area.

Another group of exploited species, the highly migratory pelagic fishes, are managed by NMFS. NMFS (1999) defined EFH for managed highly migratory species, which include 10 shark, 3 tuna, and a single swordfish species of concern. These species may occur as transients in the project area. EFH includes most of the substrate and water column of the Gulf of Mexico where the managed species commonly occur. Although billfishes are now managed as highly migratory species, there were no EFH designations given in NMFS (1999).

Spatially limited EFH called habitat areas of particular concern (HAPC) have been identified in the Gulf of Mexico by the GMFMC. These include the Flower Garden Banks National Marine Sanctuary, Florida Middle Grounds, Florida Keys National Marine Sanctuary, and Dry Tortugas (Fort Jefferson National Monument). The nearest of these, the Flower Garden Banks, is about 80 miles from the leases.

IPFs potentially affecting EFH include:

- Drillship presence, noise, and lights;
- Effluent discharges; and
- Accidents (oil spills).

Drillship Presence, Noise, and Lights. The drillship will attract fishes, particularly epipelagic fishes such as tunas, dolphin, billfishes, and jacks (e.g., Holland et al., 1990; Higashi, 1994). This effect could enhance feeding of epipelagic predators by attracting and concentrating smaller fish species. Because the drillship is a single, temporary structure, impacts on EFH, whether beneficial or adverse, are considered minor.

Effluent Discharges. Discharges of water-based drilling fluids and associated cuttings will produce temporary, localized increases in suspended solids in the water column around the drillship. Turbid water will persist for minutes to a few hours during and after each discharge and will have a negligible impact on EFH. Other effluent discharges such as sanitary and domestic wastes, deck drainage, desalinization unit brine, and uncontaminated bilge and ballast water will have negligible impacts on ambient water quality. No significant impacts on EFH are expected from these discharges.

Accidents (oil spills). An oil spill in offshore waters would produce a slick and temporarily increase hydrocarbon concentrations. Given that EFH includes most of the substrate and water column of the Gulf of Mexico where highly migratory managed species commonly occur, some impact on EFH would be unavoidable. However, the area affected would be a small percentage of the EFH in the Gulf of Mexico, and the duration would be brief (few hours to a few days).

A large spill could affect biota including phytoplankton, zooplankton, and nekton. Eggs and larvae of fishes will die if exposed to certain toxic fractions of spilled oil. Most of the fishes inhabiting shelf or oceanic waters of the Gulf of Mexico have planktonic eggs and larvae. However, due to the wide dispersal of early life history stages of fishes in the surface waters of the Gulf of Mexico, an oil spill is not expected to have significant impacts at the population level.

### **B.2.2 Marine and Pelagic Birds**

A variety of seabirds such as terns, storm-petrels, shearwaters, and jaegers occur in the deepwater environment (Peake, 1996; Hess and Ribic, 2000). Powers (1987) indicates that seabird densities over the open ocean typically are <10 birds/km<sup>2</sup>. Seabirds spend much of their lives offshore over the open ocean, except during breeding season when they nest along the coast. Other birds such as waterfowl, marsh birds, and shore birds may occasionally be present over open ocean areas, but no endangered or threatened birds are likely to occur at the project area due to the distance from shore. **EIA Section B.3.3** discusses Shore Birds and Coastal Nesting Birds.

IPFs potentially affecting marine and pelagic birds include:

- Drillship presence, noise, and lights;
- Trash and debris; and
- Accidents.

Other factors such as effluent discharges are likely to have negligible impacts on marine birds due to rapid dispersion, the small area of ocean affected, and the intermittent nature of the discharges.

Drillship Presence, Noise, and Lights. Pelagic seabirds and trans-Gulf migrant birds may be present at the project area. Birds may use offshore drilling rigs and platforms for resting, feeding, or as temporary shelter from inclement weather (Russell, 2001). Some birds may be attracted to offshore structures because of the lights and the fish populations that aggregate around these structures. Birds that frequent platforms may be exposed to contaminants including air pollutants and routine discharges, but significant impacts are unlikely due to rapid dispersion of effluents. Birds migrating over water at night have been known to strike offshore structures, resulting in death or injury (Wiese et al., 2001). A study of migrant bird interactions with offshore platforms is being conducted by the MMS (Russell, 2001).

Trash and Debris. Debris lost overboard from offshore operations can injure or kill birds that ingest or become entangled in it. MMS regulations and Federal law prohibit disposal of trash and debris in the ocean. In addition, MMS has issued NTL 2003-G11, which instructs operators to exercise caution in the handling and disposal of small items and packaging materials, requires posting of placards at prominent locations on offshore vessels and structures, and requires a marine trash and debris awareness training and certification process. Compliance with this NTL and any related MMS requirements is assumed to be effective in minimizing the potential for debris-related impacts on birds.

Accidents (oil spills). Pelagic seabirds could be exposed to oil from a spill at the project area. Presumably, birds such as terns, storm-petrels, shearwaters, and jaegers would be the most likely to be present, but in low densities. Due to these low densities and the relatively small percentage of deepwater habitat that

would be affected by a spill, total numbers of birds affected would be small, and no significant population-level impacts on any bird species would be expected.

### **B.2.3 Public Health and Safety**

There are no IPFs associated with routine operations that are expected to affect public health and safety. An H<sub>2</sub>S release was not considered as an IPF because the leases are classified as “H<sub>2</sub>S absent.”

In the event of a major spill, the main safety and health concerns are those of the offshore personnel responding to the spill. The proposed activities will be covered by the Regional OSRP, and in addition, the drillship maintains a Shipboard Oil Pollution Emergency Plan as required under MARPOL. Based on the spill volumes, weathering rates, and response measures as detailed in the Regional OSRP, it is expected that most or all of the spilled oil would be removed before reaching coastal waters or shorelines. Therefore, no impacts on public health and safety would be expected.

## **B.3 COASTAL AND ONSHORE**

Coastal habitats in the northeastern Gulf of Mexico that may be affected by oil and gas activities are described in a recent Gulf EIS (MMS, 2002). Sensitive coastal habitats are also tabulated in the Regional OSRP. Coastal habitats inshore of the project area include barrier beaches and dunes, wetlands, and submerged seagrass beds. Generally, most of the northern Gulf is fringed by barrier beaches, with wetlands and/or submerged seagrass beds occurring in sheltered areas behind the barrier islands and in estuaries.

### **B.3.1 Beaches**

There are no IPFs associated with routine activities that could affect beaches due to the distance from shore.

Accidents (oil spills). A large oil spill is unlikely, and it is assumed that most or all of the spill volume would be removed due to weathering and spill response measures, as detailed in the Regional OSRP, before reaching the coast. The historical spill data and trajectory/risk calculations referenced in a recent EIS (MMS, 2002) indicate there is little risk of contact or impact to the coastline or associated environmental resources. Therefore, no significant impacts on beaches are expected.

### **B.3.2 Wetlands**

Coastal wetlands are unlikely to be affected by any routine IPF due to the distance from shore. Support operations including crew boats and supply boats may have a minor incremental impact on coastal wetlands. Over time with a large number of vessel trips, vessel wakes can erode shorelines along inlets, channels, and harbors. Impacts are assumed to be minimized by following the speed and wake restrictions in harbors and channels.

Accidents (oil spills). A large oil spill is unlikely, and it is assumed that most or all of the spill volume would be removed due to weathering and spill response measures, as detailed in the Regional OSRP, before reaching the coast. The historical spill data and trajectory/risk calculations referenced in a recent EIS (MMS, 2002) indicate there is little risk of contact or impact to the coastline or associated environmental resources. Therefore, no significant impacts on wetlands are expected.

### **B.3.3 Shore Birds and Coastal Nesting Birds**

Bird species of concern in inshore waters or onshore areas include the bald eagle, brown pelican, and piping plover. Also, whooping cranes overwinter at Aransas National Wildlife Refuge in Texas. Various species of nonendangered birds are also found along the Texas coast, including diving birds, shore birds, marsh birds, wading birds, and waterfowl (MMS, 2002).

IPFs potentially affecting shore birds and coastal nesting birds include:

- Support vessel and helicopter traffic; and
- Accidents (oil spills).

Support Vessel and Helicopter Traffic. Due to the distance from shore, the only routine IPF that may affect shore birds and coastal nesting birds is support operations. Support vessels and helicopters will transit coastal areas in Texas where shore birds and nesting birds may be found. Helicopter and vessel traffic could periodically disturb individuals or groups of birds within sensitive coastal habitats (e.g., wetlands that may support feeding, resting, or breeding birds). However, existing mitigation measures requiring aircraft to maintain minimum altitudes over sensitive habitats such as wildlife refuges and park properties would minimize any potential impacts. Similarly, vessel operators are required to use designated navigation channels and comply with posted speed and wake restrictions while transiting sensitive inland waterways. With these measures in effect, it is likely that individual birds would experience at most only short-term, behavioral disruption.

Accidents (oil spills). A large oil spill is unlikely, and it is assumed that most or all of the spill volume would be removed due to weathering and spill response measures, as detailed in the Regional OSRP, before reaching the coast. The historical spill data and trajectory/risk calculations referenced in a recent EIS (MMS, 2002) indicate there is little risk of contact or impact to the coastline or associated environmental resources. Therefore, no significant impacts on shore birds or coastal nesting birds are expected.

### **B.3.4 Coastal Wildlife Refuges**

Coastal national wildlife refuges (NWRs) in Texas include Texas Point, McFaddin, Anahuac, Brazoria, San Bernard, Big Boggy, Aransas, Matagorda Island, and Laguna Atoscosa. In addition, there are various state wildlife management areas and private refuges in coastal areas.

Due to the distance from shore, there are no IPFs associated with routine activities that are likely to affect coastal wildlife refuges.

Accidents (oil spills). A large spill is unlikely, and it is assumed that most or all of the spill volume would be removed due to weathering and spill response measures, as detailed in the Regional OSRP, before reaching the coast. The historical spill data and trajectory/risk calculations referenced in a recent EIS (MMS, 2002) indicate there is little risk of contact or impact to the coastline or associated environmental resources. Therefore, no significant impacts on coastal wildlife refuges are expected.

### **B.3.5 Wilderness Areas**

There are no IPFs associated with routine activities that are likely to affect wilderness areas in Texas, Louisiana, or other coastal states.

Accidents (oil spills). A large spill is unlikely, and it is assumed that most or all of the spill volume would be removed due to weathering and spill response measures, as detailed in the Regional OSRP, before reaching the coast. The historical spill data and trajectory/risk calculations referenced in a recent EIS (MMS, 2002) indicate there is little risk of contact or impact to the coastline or associated environmental resources. Therefore, no significant impacts on coastal wilderness areas are expected.

## **B.4 OTHER RESOURCES**

### **B.4.1 Non-Chemosynthetic Benthic Communities**

Benthic communities in the project area are expected to consist of soft bottom infauna and epifauna. No chemosynthetic communities are expected in the leases (see **Section B.1.4**). Drilling activities and anchoring will affect a small area of seafloor around the wellsite. Disturbed bottom sediments will be recolonized through larval settlement and migration from adjacent areas. Because some deepsea biota grow and reproduce slowly, recovery may require several years.

Water depths at the three wellsites range from 1,472 to 1,482 m (4,828 to 4,864 ft). Therefore, the area falls within the Lower Archibenthal Zone (800 to 1,650 m) defined by Gallaway (1988). Macroinfaunal densities for this depth are likely to be about 5,000 individuals/m<sup>2</sup> (Rowe and Kennicutt, 2002). There are no individual dominant species in the deepsea macroinfauna, but polychaetes are the most abundant and diverse group (Pequegnat et al., 1990). Meiofauna and microbiota are also important components of the deepsea benthos. Rowe (2000) indicates that little information is available on either group for the deep Gulf. A deep Gulf of Mexico benthos program is now underway that expands upon the depth range and geographic coverage of the previous MMS continental slope study (Rowe and Kennicutt, 2002). The study includes stations at depths from 300 m to greater than 3,000 m. Only preliminary results are available to date (Rowe and Kennicutt, 2002).

Under NTL 2003-G03, the MMS requires remotely operated vehicle (ROV) surveys in deepwater blocks in the Central and Western Planning Areas. If required by the MMS, an ROV survey will be conducted as specified under this NTL. ROV surveys provide information about the extent of drilling-related impacts on deepwater benthic communities.

The IPFs potentially affecting benthic communities are

- Effluent discharges; and
- Accidents (seafloor blowout).

Effluent Discharges. Cuttings associated with both water-based and synthetic drilling fluids will be discharged from the drillship. All discharges will be in accordance with the NPDES general permit. Cuttings from synthetic drilling fluid systems tend to clump together and form cuttings piles close to the discharge point (Neff et al., 2000). Where these cuttings accumulate in concentrations of about 1,000 mg/kg or higher, benthic infaunal communities may be adversely affected (Neff et al., 2000). Some benthic organisms will be



buried or smothered by cuttings accumulations. Infaunal numbers may increase, and diversity may decrease as opportunistic species that tolerate low oxygen and high H<sub>2</sub>S predominate. Neff et al. (2000) estimated the area affected around a drilling rig on the Gulf of Mexico continental slope to be about 1 hectare (10,000 m<sup>2</sup>), or about 0.04 percent of a lease block. As the base synthetic fluid is decomposed by microbes, the area will gradually return to pre-drilling conditions. Disturbed soft bottom sediments will be recolonized through larval settlement and migration from adjacent areas.

Accidents (seafloor blowout). A seafloor blowout resulting in an oil spill could affect benthic communities within a few hundred meters of the wellsite. While some oil could initially adhere to surface sediments surrounding the wellsite, resulting in smothering and/or toxicity to benthic organisms, most of the oil is assumed to rise rapidly through the water column. The physical impacts of a seafloor blowout are also a consideration. The MMS (2002) estimates that a seafloor blowout could resuspend and disperse sediments within a 300-m radius. While coarse sediments (sands) would probably settle at a rapid rate near the blowout site, fine sediments (silts and clays) could be resuspended for more than 30 days and dispersed over a much wider area. Surface sediments at the project area are assumed to be largely silt and clay. The affected area would be recolonized by benthic organisms over a period of months to years.

#### **B.4.2 Pelagic Communities**

IPFs potentially affecting pelagic communities include:

- Drillship presence, noise, and lights;
- Effluent discharges; and
- Accidents (oil spills).

Drillship Presence, Noise, and Lights. The drillship will attract epipelagic fishes such as tunas, dolphin, billfishes, and jacks (e.g., Holland et al., 1990; Higashi, 1994). This effect might enhance feeding of epipelagic predators by attracting and concentrating smaller fish species. Because the drillship is a single, temporary structure, impacts on fish populations, whether beneficial or adverse, are considered minor.

Effluent Discharges. Discharges of drilling muds and associated cuttings are likely to have little or no impact on pelagic biota due to the low toxicity and rapid dispersion of these discharges (National Research Council, 1983; Neff, 1987; Hinwood et al., 1994). Other effluent discharges in accordance with the NPDES permit, such as sanitary and domestic wastes, deck drainage, desalinization unit brine, and uncontaminated bilge and ballast water, are expected to be diluted and mixed rapidly with ambient waters and would have little or no impact on water column biota.

Accidents (oil spills). A large spill could affect water column biota including phytoplankton, zooplankton, and nekton. While adult and juvenile fishes may actively avoid a large spill, planktonic eggs and larvae would be unable to avoid contact. Eggs and larvae of fishes will die if exposed to certain toxic fractions of spilled oil. Most fishes inhabiting shelf or oceanic waters of the Gulf of Mexico have planktonic eggs and larvae. However, due to the wide dispersal of early life history stages of fishes in the Gulf of Mexico, a large spill would not be expected to have significant impacts at the population level.

### **C. IMPACTS ON PROPOSED ACTIVITIES**

A shallow hazards assessment was prepared in accordance with Appendix C of NTL 2002-G08, and NTL 98-20. The analysis concluded that the drillsites are free of any major constraints to drilling.

Under most circumstances, meteorological and oceanographic conditions are not expected to have any effect on the proposed activities. Extreme weather, including high winds, strong currents, and large waves, has been taken into account in the design criteria for the drillship. High winds, waves, and limited visibility during a severe storm could disrupt support activities (vessel and helicopter traffic) and might make it necessary to suspend some activities for safety reasons until the storm or weather event passes.

### **D. ALTERNATIVES**

Various technical and operational options have been considered in developing the proposed action, including the selection of a drilling unit, the selection of drilling fluids, and the drilling locations required to meet the objectives. No formal alternatives to the proposed action were evaluated.

### **E. MITIGATION MEASURES**

The proposed action does not involve any mitigation measures other than those required by laws and regulations, including all applicable Federal, State, and local requirements concerning air emissions, discharges to water, and solid waste disposal, as well as any additional permit requirements. All project activities will be conducted under the ExxonMobil Corporation Gulf of Mexico Regional OSRP.

### **F. CONSULTATION**

No persons or agencies were consulted during the preparation of this EIA.

## G. REFERENCES

Although not always cited, the following references were used in preparing the EIA.

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## **COSTAL ZONE MANAGEMENT CONSISTENCY CERTIFICATION**

**Initial Exploration Plan**

Type of OCS Plan

**East Breaks, Block 991**

**East Breaks, Block 992**

Area and Block

**OCS-G 23256**

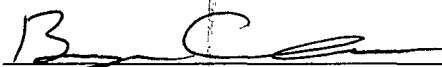
**OCS-G 23257**

Lease Number

The proposed activities described in detail in this OCS Plan comply with  
Louisiana approved Coastal Management Program(s) and  
Will be conducted in a manner consistent with such Program(s).

**Exxon Mobil Corporation**

Lessee or Operator



Certifying Official

3-24-04

Date